Citrix XenServer ® Management API

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Chapter 1. API Basics

This document defines the XenServer Management API - an interface for remotely configuring and controlling virtualised guests running on a Xen-enabled host.

The API is presented here as a set of Remote Procedure Calls (RPCs), with a wire format based upon XML-RPC. No specific language bindings are prescribed, although examples will be given in the python programming language.

Although we adopt some terminology from object-oriented programming, future client language bindings may or may not be object oriented. The API reference uses the terminology *classes* and *objects*. For our purposes a *class* is simply a hierarchical namespace; an *object* is an instance of a class with its fields set to specific values. Objects are persistent and exist on the server-side. Clients may obtain opaque references to these server-side objects and then access their fields via get/set RPCs.

For each class we specify a list of fields along with their *types* and *qualifiers*. A qualifier is one of:

- `RO/runtime`: the field is Read Only. Furthermore, its value is automatically computed at runtime. For example, current CPU load and disk IO throughput.
- `RO/constructor`: the field must be manually set when a new object is created, but is then Read Only for the duration of the object's life. For example, the maximum memory addressable by a guest is set before the guest boots.
- `RW`: the field is Read/Write. For example, the name of a VM.

1.1. Types

The following types are used to specify methods and fields in the API Reference:

- `string`: Text strings.
- `int`: 64-bit integers.
- `float`: IEEE double-precision floating-point numbers.
- `bool`: Boolean.
- `datetime`: Date and timestamp.
- `c ref`: Reference to an object of class `c`.
- `t set`: Arbitrary-length set of values of type `t`.
- `(k -> v) map`: Mapping from values of type `k` to values of type `v`.
- `e enum`: Enumeration type with name `e`. Enums are defined in the API reference together with classes that use them.

Note that there are a number of cases where `ref`s are *doubly linked*. For example, a `VM` has a field called `VIFs` of type `VIF ref set`; this field lists the network interfaces attached to a particular VM. Similarly, the `VIF` class has a field called `VM` of type `VM ref` which references the VM to which the interface is connected. These two fields are *bound together*, in the sense that creating a new VIF causes the `VIFs` field of the corresponding VM object to be updated automatically.

The API reference lists explicitly the fields that are bound together in this way. It also contains a diagram that shows relationships between classes. In this diagram an edge signifies the existence of a pair of fields that are bound together, using standard crows-foot notation to signify the type of relationship (e.g. one-many, many-many).

1.2. RPCs associated with fields

Each field, `f`, has an RPC accessor associated with it that returns `f`'s value:

- `get_f (r)`: takes a `ref`, `r` that refers to an object and returns the value of `f`.

Each field, `f`, with qualifier `RW` and whose outermost type is `set` has the following additional RPCs associated with it:

- `add_f(r, v)`: adds a new element `v` to the set. Note that sets cannot contain duplicate values, hence this operation has no action in the case that `v` is already in the set.
- `remove_f(r, v)`: removes element `v` from the set.

Each field, `f`, with qualifier `RW` and whose outermost type is `map` has the following additional RPCs associated with it:

- `add_to_f(r, k, v)`: adds new pair `k -> v` to the mapping stored in `f` in object`r`. Attempting to add a new pair for duplicate key, `k`, fails with a `MAP_DUPLICATE_KEY` error.
- `remove_from_f(r, k)`: removes the pair with key `k` from the mapping stored in `f` in object `r`.

Each field whose outermost type is neither `set` nor `map`, but whose qualifier is `RW` has an RPC accessor associated with it that sets its value:

- `set_f(r, v)`: sets the field `f` on object `r` to value `v`.

1.3. RPCs associated with classes

- Most classes have a *constructor* RPC named `create` that takes as parameters all fields marked `RW` and `RO/constructor`. The result of this RPC is that a new *persistent* object is created on the server-side with the specified field values.
- Each class has a `get_by_uuid(uuid)` RPC that returns the object of that class that has the specified `uuid`.
- Each class that has a `name_label` field has a `get_by_name_label(name_label)` RPC that returns a set of objects of that class that have the specified `name_label`.
- Most classes have a `destroy(r)` RPC that explicitly deletes the persistent object specified by `r` from the system. This is a non-cascading delete - if the object being removed is referenced by another object then the `destroy` call will fail.

Apart from the RPCs enumerated above, some classes have additional RPCs associated with them. For example, the `VM` class has RPCs for cloning, suspending, starting etc. Such additional RPCs are described explicitly in the API reference.

Chapter 2. Wire Protocol for Remote API Calls

API calls are sent over a network to a Xen-enabled host using the XML-RPC protocol. Here we describe how the higher-level types used in our API Reference are mapped to primitive XML-RPC types.

We specify the signatures of API functions in the following style:

```
(VM ref set)  VM.get_all()
```

This specifies that the function with name `VM.get_all` takes no parameters and returns a `set` of `VM ref`. These types are mapped onto XML-RPC types in a straight-forward manner:

- the types `float`, `bool`, `datetime`, and `string` map directly to the XML-RPC `<double>`, `<boolean>`, `<dateTime.iso8601>`, and `<string>` elements.
- all `ref` types are opaque references, encoded as the XML-RPC's `<string>` type. Users of the API should not make assumptions about the concrete form of these strings and should not expect them to remain valid after the client's session with the server has terminated.
- fields named `uuid` of type `string` are mapped to the XML-RPC `<string>` type. The string itself is the OSF DCE UUID presentation format (as output by `uuidgen`).
- `int` is assumed to be 64-bit in our API and is encoded as a string of decimal digits (rather than using XML-RPC's built-in 32-bit `<i4>` type).
- values of `enum` types are encoded as strings. For example, the value `destroy` of `enum on_normal_exit`, would be conveyed as:

  ```
  <value><string>destroy</string></value>
  ```

- for all our types, `t`, our type `t set` simply maps to XML-RPC's `<array>` type, so, for example, a value of type `string set` would be transmitted like this:

  ```
  <array>
    <data>
      <value><string>CX8</string></value>
      <value><string>PSE36</string></value>
      <value><string>FPU</string></value>
    </data>
  </array>
  ```

- for types `k` and `v`, our type `(k -> v) map` maps onto an XML-RPC `<struct>`, with the key as the name of the struct. Note that the `(k -> v) map` type is only valid when `k` is a `string`, `ref`, or `int`, and in each case the keys of the maps are stringified as above. For example, the `(string -> double) map` containing the mappings *Mike -> 2.3* and *John -> 1.2* would be represented as:

  ```
  <value>
    <struct>
      <member>
        <name>Mike</name>
        <value><double>2.3</double></value>
      </member>
      <member>
        <name>John</name>
        <value><double>1.2</double></value>
      </member>
    </struct>
  </value>
  ```

- our void type is transmitted as an empty string.

2.1. Note on References vs UUIDs

References are opaque types - encoded as XML-RPC strings on the wire - understood only by the particular server which generated them. Servers are free to choose any concrete representation they find convenient; clients should not make any assumptions or attempt to parse the string contents. References are not guaranteed to be permanent identifiers for objects; clients should not assume that references generated during one session are valid for any future session. References do not allow objects to be compared for equality. Two references to the same object are not guaranteed to be textually identical.

UUIDs are intended to be permanent names for objects. They are guaranteed to be in the OSF DCE UUID presentation format (as output by uuidgen). Clients may store UUIDs on disk and use them to lookup objects in subsequent sessions with the server. Clients may also test equality on objects by comparing UUID strings.

The API provides mechanisms for translating between UUIDs and opaque references. Each class that contains a UUID field provides:

- A get_by_uuid method that takes a UUID and returns an opaque reference to the server-side object that has that UUID;
- A get_uuid function (a regular "field getter" RPC) that takes an opaque reference and returns the UUID of the server-side object that is referenced by it.

2.2. Return Values and Status Codes

The return value of an RPC call is an XML-RPC <struct>.

- The first element of the struct is named Status; it contains a string value indicating whether the result of the call was a Success or a Failure.

If the Status is Success then the struct contains a second element named Value:

- The element of the struct named Value contains the function's return value.

If the Status is Failure then the struct contains a second element named ErrorDescription:

- The element of the struct named ErrorDescription contains an array of string values. The first element of the array is an error code; the rest of the elements are strings representing error parameters relating to that code.

For example, an XML-RPC return value from the host.get_resident_VMs function may look like this:

```
<struct>
   <member>
     <name>Status</name>
     <value>Success</value>
   </member>
   <member>
      <name>Value</name>
      <value>
        <array>
           <data>
             <value>81547a35-205c-a551-c577-00b982c5fe00</value>
             <value>61c85a22-05da-b8a2-2e55-06b0847da503</value>
             <value>1d401ec4-3c17-35a6-fc79-cee6bd9811fe</value>
           </data>
        </array>
     </value>
   </member>
</struct>
```

2.3. Making XML-RPC Calls

2.3.1. Transport Layer

The following transport layers are currently supported:

- HTTP/HTTPS for remote administration
- HTTP over Unix domain sockets for local administration

2.3.2. Session Layer

The XML-RPC interface is session-based; before you can make arbitrary RPC calls you must login and initiate a session. For example:

```
(session ref) session.login_with_password(string uname, string pwd,
                string version, string originator)
```

where `uname` and `password` refer to your username and password, as defined by the Xen administrator, while `version` and `originator` are optional. The `session  ref` returned by `session.login_with_password` is passed to subequent RPC calls as an authentication token.

A session can be terminated with the `session.logout` function:

```
void  session.logout(session ref session_id)
```

2.3.3. Synchronous and Asynchronous invocation

Each method call (apart from methods on the `Session` and `Task` objects and "getters" and "setters" derived from fields) can be made either synchronously or asynchronously. A synchronous RPC call blocks until the return value is received; the return value of a synchronous RPC call is exactly as specified above.

Only synchronous API calls are listed explicitly in this document. All their asynchronous counterparts are in the special `Async` namespace. For example, the synchronous call `VM.clone(...)` has an asynchronous counterpart, `Async.VM.clone(...)`, that is non-blocking.

Instead of returning its result directly, an asynchronous RPC call returns an identifier of type `task  ref` which is subsequently used to track the status of a running asynchronous RPC. Note that an asychronous call may fail immediately, before a task has even been created; to represent this eventuality, the returned `task  ref` is wrapped in an XML-RPC struct with a `Status`, `ErrorDescription`, and `Value` fields, exactly as specified above.

The `task  ref` is provided in the `Value` field if `Status` is set to `Success`.

The RPC call

```
(task ref set)  Task.get_all(session ref session_id)
```

returns a set of all task identifiers known to the system. The status (including any returned result and error codes) of these can then be queried by accessing the fields of the `Task` object in the usual way. Note that, in order to get a consistent snapshot of a task's state, it is advisable to call the `get_record` function.

2.4. Example interactive session

This section describes how an interactive session might look, using the python XML-RPC client library.

First, initialise python:

```
$ python2.7
>>>
```

and import the library `xmlrpclib`:

```
>>> import xmlrpclib
```

Create a python object referencing the remote server:

```
>>> xen = xmlrpclib.Server("https://localhost:443")
```

Acquire a session reference by logging in with a username and password; the session reference is returned under the key `Value` in the resulting dictionary (error-handling ommitted for brevity):

```
>>> session = xen.session.login_with_password("user", "passwd")['Value']
```

When serialised, this call looks like the following:

```
    <?xml version='1.0'?>
    <methodCall>
      <methodName>session.login_with_password</methodName>
      <params>
        <param>
          <value><string>user</string></value>
        </param>
        <param>
          <value><string>passwd</string></value>
        </param>
        <param>
          <value><string>version</string></value>
        </param>
        <param>
          <value><string>originator</string></value>
        </param>
      </params>
    </methodCall>
```

Next, the user may acquire a list of all the VMs known to the system (note the call takes the session reference as the only parameter):

```
>>> all_vms = xen.VM.get_all(session)['Value']
>>> all_vms
['OpaqueRef:1', 'OpaqueRef:2', 'OpaqueRef:3', 'OpaqueRef:4' ]
```

The VM references here have the form `OpaqueRef:X` (though they may not be that simple in reality) and you should treat them as opaque strings. *Templates* are VMs with the `is_a_template` field set to `true`. We can find the subset of template VMs using a command like the following:

```
>>> all_templates = filter(lambda x: xen.VM.get_is_a_template(session, x)['Value'],
                              all_vms)
```

Once a reference to a VM has been acquired, a lifecycle operation may be invoked:

```
>>> xen.VM.start(session, all_templates[0], False, False)
{'Status': 'Failure', 'ErrorDescription': ['VM_IS_TEMPLATE', 'OpaqueRef:X']}
```

In this case the `start` message has been rejected, because the VM is a template, and so an error response has been returned. These high-level errors are returned as structured data (rather than as XML-RPC faults), allowing them to be internationalised.

Rather than querying fields individually, whole *records* may be returned at once. To retrieve the record of a single object as a python dictionary:

```
>>> record = xen.VM.get_record(session, all_templates[0])['Value']
>>> record['power_state']
'Halted'
>>> record['name_label']
'Windows 10 (64-bit)'
```

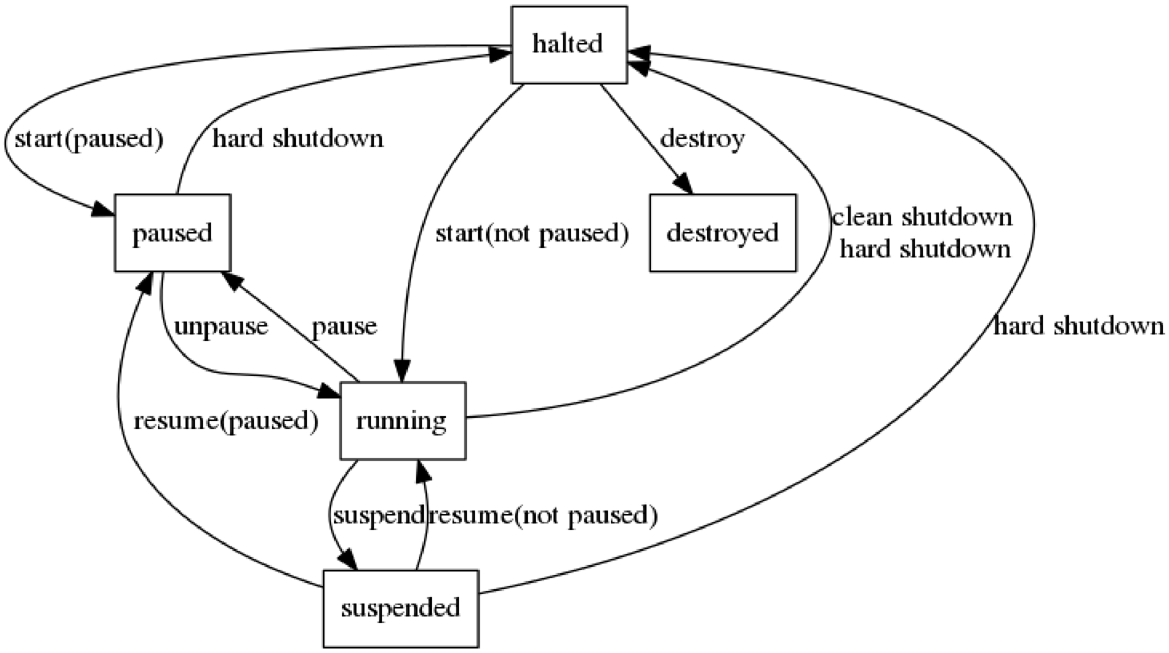
To retrieve all the VM records in a single call:

```
>>> records = xen.VM.get_all_records(session)['Value']
>>> records.keys()
['OpaqueRef:1', 'OpaqueRef:2', 'OpaqueRef:3', 'OpaqueRef:4' ]
>>> records['OpaqueRef:1']['name_label']
'Red Hat Enterprise Linux 7'
```

Chapter 3. VM Lifecycle

The following diagram shows the states that a VM can be in and the API calls that can be used to move the VM between these states.

Figure 3.1. VM lifecycle



3.1. VM boot parameters

The VM class contains a number of fields that control the way in which the VM is booted. With reference to the fields defined in the VM class (see later in this document), this section outlines the boot options available and the mechanisms provided for controlling them.

VM booting is controlled by setting one of the two mutually exclusive groups: "PV" and "HVM". If `HVM.boot_policy` is an empty string, then paravirtual domain building and booting will be used; otherwise the VM will be loaded as a HVM domain, and booted using an emulated BIOS.

When paravirtual booting is in use, the `PV_bootloader` field indicates the bootloader to use. It may be "pygrub", in which case the platform's default installation of pygrub will be used, or a full path within the control domain to some other bootloader. The other fields, `PV_kernel`, `PV_ramdisk`, `PV_args`, and `PV_bootloader_args` will be passed to the bootloader unmodified, and interpretation of those fields is then specific to the bootloader itself, including the possibility that the bootloader will ignore some or all of those given values. Finally the paths of all bootable disks are added to the bootloader commandline (a disk is bootable if its VBD has the bootable flag set). There may be zero, one, or many bootable disks; the bootloader decides which disk (if any) to boot from.

If the bootloader is pygrub, then the menu.lst is parsed, if present in the guest's filesystem, otherwise the specified kernel and ramdisk are used, or an autodetected kernel is used if nothing is specified and autodetection is possible. `PV_args` is appended to the kernel command line, no matter which mechanism is used for finding the kernel.

If `PV_bootloader` is empty but `PV_kernel` is specified, then the kernel and ramdisk values will be treated as paths within the control domain. If both `PV_bootloader` and `PV_kernel` are empty, then the behaviour is as if `PV_bootloader` were specified as "pygrub".

When using HVM booting, `HVM_boot_policy` and `HVM_boot_params` specify the boot handling. Only one policy is currently defined, "BIOS order". In this case, `HVM_boot_params` should contain one key-value pair "order" = "N" where N is the string that will be passed to QEMU.

Chapter 4. API Reference

4.1. Classes

The following classes are defined:

Name	Description
auth	Management of remote authentication services
blob	A placeholder for a binary blob
Bond	
console	A console
crashdump	**Deprecated**. A VM crashdump
data_source	Data sources for logging in RRDs
DR_task	DR task
event	Asynchronous event registration and handling
Feature	A new piece of functionality
GPU_group	A group of compatible GPUs across the resource pool
host	A physical host
host_cpu	**Deprecated**. A physical CPU
host_crashdump	Represents a host crash dump
host_metrics	The metrics associated with a host
host_patch	**Deprecated**. Represents a patch stored on a server
LVHD	LVHD SR specific operations
message	An message for the attention of the administrator
network	A virtual network
PBD	The physical block devices through which hosts access SRs
PCI	A PCI device
PGPU	A physical GPU (pGPU)
PIF	A physical network interface (note separate VLANs are represented as several PIFs)
PIF_metrics	The metrics associated with a physical network interface
pool	Pool-wide information

Name	Description
pool_patch	**Deprecated**. Pool-wide patches
pool_update	Pool-wide updates to the host software
PUSB	A physical USB device
PVS_cache_storage	Describes the storage that is available to a PVS site for caching purposes
PVS_proxy	a proxy connects a VM/VIF with a PVS site
PVS_server	individual machine serving provisioning (block) data
PVS_site	machines serving blocks of data for provisioning VMs
role	A set of permissions associated with a subject
SDN_controller	Describes the SDN controller that is to connect with the pool
secret	A secret
session	A session
SM	A storage manager plugin
SR	A storage repository
subject	A user or group that can log in xapi
task	A long-running asynchronous task
tunnel	A tunnel for network traffic
USB_group	A group of compatible USBs across the resource pool
user	**Deprecated**. A user of the system
VBD	A virtual block device
VBD_metrics	**Removed**. The metrics associated with a virtual block device
VDI	A virtual disk image
vdi_nbd_server_info	Details for connecting to a VDI using the Network Block Device protocol
VGPU	A virtual GPU (vGPU)
VGPU_type	A type of virtual GPU
VIF	A virtual network interface
VIF_metrics	**Removed**. The metrics associated with a virtual network device
VLAN	A VLAN mux/demux

Name	Description
VM	A virtual machine (or 'guest').
VM_appliance	VM appliance
VM_guest_metrics	The metrics reported by the guest (as opposed to inferred from outside)
VM_metrics	The metrics associated with a VM
VMPP	**Removed**. VM Protection Policy
VMSS	VM Snapshot Schedule
VTPM	A virtual TPM device
VUSB	Describes the vusb device

4.2. Relationships Between Classes

Fields that are bound together are shown in the following table:

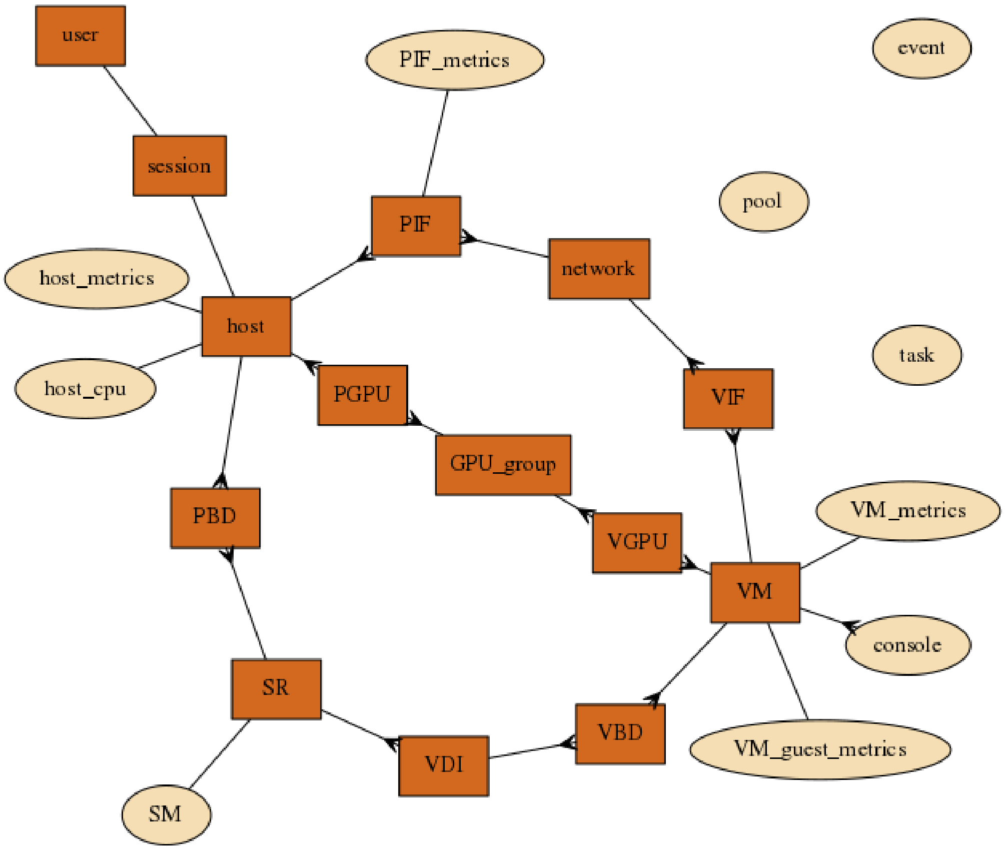
object.field	*object.field*	*relationship*
VM.snapshot_of	VM.snapshots	one-to-many
VDI.snapshot_of	VDI.snapshots	one-to-many
VM.parent	VM.children	one-to-many
task.subtask_of	task.subtasks	one-to-many
PIF.bond_slave_of	Bond.slaves	one-to-many
Bond.master	PIF.bond_master_of	one-to-many
VLAN.tagged_PIF	PIF.VLAN_slave_of	one-to-many
tunnel.access_PIF	PIF.tunnel_access_PIF_of	one-to-many
tunnel.transport_PIF	PIF.tunnel_transport_PIF_	one-to-many
PBD.host	host.PBDs	one-to-many
PBD.SR	SR.PBDs	one-to-many
VBD.VDI	VDI.VBDs	one-to-many
crashdump.VDI	VDI.crash_dumps	one-to-many
VBD.VM	VM.VBDs	one-to-many
crashdump.VM	VM.crash_dumps	one-to-many
VIF.VM	VM.VIFs	one-to-many
VIF.network	network.VIFs	one-to-many
PIF.host	host.PIFs	one-to-many

object.field	*object.field*	*relationship*
PIF.network	network.PIFs	one-to-many
VDI.SR	SR.VDIs	one-to-many
VTPM.VM	VM.VTPMs	one-to-many
console.VM	VM.consoles	one-to-many
VM.resident_on	host.resident_VMs	one-to-many
host_cpu.host	host.host_CPUs	one-to-many
host_crashdump.host	host.crashdumps	one-to-many
host_patch.host	host.patches	one-to-many
host_patch.pool_patch	pool_patch.host_patches	one-to-many
host.updates	pool_update.hosts	many-to-many
subject.roles	subject.roles	unknown type
role.subroles	role.subroles	many-to-many
VM.protection_policy	VMPP.VMs	one-to-many
VM.snapshot_schedule	VMSS.VMs	one-to-many
VM.appliance	VM_appliance.VMs	one-to-many
PGPU.GPU_group	GPU_group.PGPUs	one-to-many
VGPU.GPU_group	GPU_group.VGPUs	one-to-many
VGPU.type	VGPU_type.VGPUs	one-to-many
VGPU.VM	VM.VGPUs	one-to-many
VGPU.resident_on	PGPU.resident_VGPUs	one-to-many
PGPU.supported_VGPU_type	VGPU_type.supported_on_P	many-to-many
PGPU.enabled_VGPU_types	VGPU_type.enabled_on_PGP	many-to-many
GPU_group.supported_VGPU_	VGPU_type.supported_on_G	many-to-many
GPU_group.enabled_VGPU_t	VGPU_type.enabled_on_GPU_	many-to-many
PCI.host	host.PCIs	one-to-many
PGPU.host	host.PGPUs	one-to-many
VDI.metadata_of_pool	pool.metadata_VDIs	one-to-many
SR.introduced_by	DR_task.introduced_SRs	one-to-many
PVS_server.site	PVS_site.servers	one-to-many
PVS_proxy.site	PVS_site.proxies	one-to-many

object.field	*object.field*	*relationship*
`PVS_cache_storage.site`	`PVS_site.cache_storage`	one-to-many
`PUSB.host`	`host.PUSBs`	one-to-many
`PUSB.USB_group`	`USB_group.PUSBs`	one-to-many
`VUSB.USB_group`	`USB_group.VUSBs`	one-to-many
`VUSB.VM`	`VM.VUSBs`	one-to-many
`Feature.host`	`host.features`	one-to-many

The following figure represents bound fields (as specified above) diagramatically, using crow's foot notation to specify one-to-one, one-to-many or many-to-many relationships:

Figure 4.1. Class relationships



4.3. Types

4.3.1. Primitives

The following primitive types are used to specify methods and fields in the API Reference:

Type	Description
string	text strings

Type	Description
int	64-bit integers
float	IEEE double-precision floating-point numbers
bool	boolean
datetime	date and timestamp

4.3.2. Higher-order types

The following type constructors are used:

Type	Description
c ref	reference to an object of class *c*
t set	a set of elements of type *t*
(*a* -> *b*) map	a table mapping values of type *a* to values of type *b*

4.3.3. Enumeration types

The following enumeration types are used:

`enum after_apply_guidance`	
`restartHost`	This patch requires the host to be restarted once applied.
`restartHVM`	This patch requires HVM guests to be restarted once applied.
`restartPV`	This patch requires PV guests to be restarted once applied.
`restartXAPI`	This patch requires XAPI to be restarted once applied.

`enum allocation_algorithm`	
`breadth_first`	vGPUs of a given type are allocated evenly across supporting pGPUs.
`depth_first`	vGPUs of a given type are allocated on supporting pGPUs until they are full.

`enum bond_mode`	
`active-backup`	Active/passive bonding: only one NIC is carrying traffic
`balance-slb`	Source-level balancing

enum bond_mode	
lacp	Link aggregation control protocol

enum cls	
Host	Host
Pool	Pool
PVS_proxy	PVS_proxy
SR	SR
VDI	VDI
VM	VM
VMPP	VMPP
VMSS	VMSS

enum console_protocol	
rdp	Remote Desktop Protocol
rfb	Remote FrameBuffer protocol (as used in VNC)
vt100	VT100 terminal

enum event_operation	
add	An object has been created
del	An object has been deleted
mod	An object has been modified

enum host_allowed_operations	
evacuate	Indicates this host is evacuating
power_on	Indicates this host is in the process of being powered on
provision	Indicates this host is able to provision another VM
reboot	Indicates this host is in the process of rebooting
shutdown	Indicates this host is in the process of shutting itself down
vm_migrate	This host is the migration target of a VM
vm_resume	This host is resuming a VM

enum host_allowed_operations	
vm_start	This host is starting a VM

enum host_display	
disable_on_reboot	The host will stop outputting its console to a physical display device on next boot
disabled	This host is not outputting its console to a physical display device
enable_on_reboot	The host will start outputting its console to a physical display device on next boot
enabled	This host is outputting its console to a physical display device

enum ip_configuration_mode	
DHCP	Acquire an IP address by DHCP
None	Do not acquire an IP address
Static	Static IP address configuration

enum ipv6_configuration_mode	
Autoconf	Router assigned prefix delegation IPv6 allocation
DHCP	Acquire an IPv6 address by DHCP
None	Do not acquire an IPv6 address
Static	Static IPv6 address configuration

enum livepatch_status	
ok	There is no applicable live patch
ok_livepatch_complete	An applicable live patch exists for every required component
ok_livepatch_incomplete	An applicable live patch exists but it is not sufficient

enum network_default_locking_mode	
disabled	Treat all VIFs on this network with locking_mode = 'default' as if they have locking_mode = 'disabled'
unlocked	Treat all VIFs on this network with locking_mode = 'default' as if they have locking_mode = 'unlocked'

enum network_operations	
attaching	Indicates this network is attaching to a VIF or PIF

enum network_purpose	
insecure_nbd	Network Block Device service without integrity or confidentiality: NOT RECOMMENDED
nbd	Network Block Device service using TLS

enum on_boot	
persist	Standard behaviour.
reset	When a VM containing this VDI is started, the contents of the VDI are reset to the state they were in when this flag was last set.

enum on_crash_behaviour	
coredump_and_destroy	record a coredump and then destroy the VM state
coredump_and_restart	record a coredump and then restart the VM
destroy	destroy the VM state
preserve	leave the crashed VM paused
rename_restart	rename the crashed VM and start a new copy
restart	restart the VM

enum on_normal_exit	
destroy	destroy the VM state
restart	restart the VM

enum pgpu_dom0_access	
disable_on_reboot	On host reboot dom0 will be blocked from accessing this device
disabled	dom0 cannot access this device
enable_on_reboot	On host reboot dom0 will be allowed to access this device
enabled	dom0 can access this device as normal

enum pif_igmp_status	
disabled	IGMP Snooping is disabled in the corresponding backend bridge.'
enabled	IGMP Snooping is enabled in the corresponding backend bridge.'
unknown	IGMP snooping status is unknown. If this is a VLAN master, then please consult the underlying VLAN slave PIF.

enum pool_allowed_operations	
ha_disable	Indicates this pool is in the process of disabling HA
ha_enable	Indicates this pool is in the process of enabling HA

enum primary_address_type	
IPv4	Primary address is the IPv4 address
IPv6	Primary address is the IPv6 address

enum pvs_proxy_status	
caching	The proxy is currently caching data
incompatible_protocol_version	The PVS protocol in use is not compatible with the PVS proxy
incompatible_write_cache_mode	The PVS device is configured to use an incompatible write-cache mode
initialised	The proxy is setup but has not yet cached anything
stopped	The proxy is not currently running

enum sdn_controller_protocol	
pssl	Passive ssl connection
ssl	Active ssl connection

enum storage_operations	
destroy	Destroying the SR
forget	Forgetting about SR
pbd_create	Creating a PBD for this SR
pbd_destroy	Destroying one of this SR's PBDs
plug	Plugging a PBD into this SR

enum storage_operations	
scan	Scanning backends for new or deleted VDIs
unplug	Unplugging a PBD from this SR
update	Refresh the fields on the SR
vdi_clone	Cloneing a VDI
vdi_create	Creating a new VDI
vdi_data_destroy	Deleting the data of the VDI
vdi_destroy	Destroying a VDI
vdi_disable_cbt	Disabling changed block tracking for a VDI
vdi_enable_cbt	Enabling changed block tracking for a VDI
vdi_introduce	Introducing a new VDI
vdi_list_changed_blocks	Exporting a bitmap that shows the changed blocks between two VDIs
vdi_mirror	Mirroring a VDI
vdi_resize	Resizing a VDI
vdi_set_on_boot	Setting the on_boot field of the VDI
vdi_snapshot	Snapshotting a VDI

enum task_allowed_operations	
cancel	refers to the operation "cancel"
destroy	refers to the operation "destroy"

enum task_status_type	
cancelled	task has been cancelled
cancelling	task is being cancelled
failure	task has failed
pending	task is in progress
success	task was completed successfully

enum tristate_type	
no	Known to be false
unspecified	Unknown or unspecified

enum tristate_type	
yes	Known to be true

enum update_after_apply_guidance	
restartHost	This update requires the host to be restarted once applied.
restartHVM	This update requires HVM guests to be restarted once applied.
restartPV	This update requires PV guests to be restarted once applied.
restartXAPI	This update requires XAPI to be restarted once applied.

enum vbd_mode	
RO	only read-only access will be allowed
RW	read-write access will be allowed

enum vbd_operations	
attach	Attempting to attach this VBD to a VM
eject	Attempting to eject the media from this VBD
insert	Attempting to insert new media into this VBD
pause	Attempting to pause a block device backend
plug	Attempting to hotplug this VBD
unpause	Attempting to unpause a block device backend
unplug	Attempting to hot unplug this VBD
unplug_force	Attempting to forcibly unplug this VBD

enum vbd_type	
CD	VBD will appear to guest as CD
Disk	VBD will appear to guest as disk
Floppy	VBD will appear as a floppy

enum vdi_operations	
blocked	Operations on this VDI are temporarily blocked
clone	Cloning the VDI

enum vdi_operations	
copy	Copying the VDI
data_destroy	Deleting the data of the VDI
destroy	Destroying the VDI
disable_cbt	Disabling changed block tracking for a VDI
enable_cbt	Enabling changed block tracking for a VDI
force_unlock	Forcibly unlocking the VDI
forget	Forget about the VDI
generate_config	Generating static configuration
list_changed_blocks	Exporting a bitmap that shows the changed blocks between two VDIs
mirror	Mirroring the VDI
resize	Resizing the VDI
resize_online	Resizing the VDI which may or may not be online
set_on_boot	Setting the on_boot field of the VDI
snapshot	Snapshotting the VDI
update	Refreshing the fields of the VDI

enum vdi_type	
cbt_metadata	Metadata about a snapshot VDI that has been deleted: the set of blocks that changed between some previous version of the disk and the version tracked by the snapshot.
crashdump	a disk that stores VM crashdump information
ephemeral	a disk that may be reformatted on upgrade
ha_statefile	a disk used for HA storage heartbeating
metadata	a disk used for HA Pool metadata
pvs_cache	a disk that stores PVS cache data
redo_log	a disk used for a general metadata redo-log
rrd	a disk that stores SR-level RRDs
suspend	a disk that stores a suspend image
system	a disk that may be replaced on upgrade
user	a disk that is always preserved on upgrade

enum vgpu_type_implementation	
gvt_g	vGPU using Intel GVT-g
mxgpu	vGPU using AMD MxGPU
nvidia	vGPU using NVIDIA hardware
passthrough	Pass through an entire physical GPU to a guest

enum vif_ipv4_configuration_mode	
None	Follow the default IPv4 configuration of the guest (this is guest-dependent)
Static	Static IPv4 address configuration

enum vif_ipv6_configuration_mode	
None	Follow the default IPv6 configuration of the guest (this is guest-dependent)
Static	Static IPv6 address configuration

enum vif_locking_mode	
disabled	No traffic is permitted
locked	Only traffic to a specific MAC and a list of IPv4 or IPv6 addresses is permitted
network_default	No specific configuration set - default network policy applies
unlocked	All traffic is permitted

enum vif_operations	
attach	Attempting to attach this VIF to a VM
plug	Attempting to hotplug this VIF
unplug	Attempting to hot unplug this VIF

enum vm_appliance_operation	
clean_shutdown	Clean shutdown
hard_shutdown	Hard shutdown
shutdown	Shutdown

enum vm_appliance_operation	
start	Start

enum vm_operations	
assert_operation_valid	
awaiting_memory_live	Waiting for the memory settings to change
call_plugin	refers to the operation "call_plugin"
changing_dynamic_range	Changing the memory dynamic range
changing_memory_limits	Changing the memory limits
changing_memory_live	Changing the memory settings
changing_shadow_memory	Changing the shadow memory for a halted VM.
changing_shadow_memory_live	Changing the shadow memory for a running VM.
changing_static_range	Changing the memory static range
changing_VCPUs	Changing VCPU settings for a halted VM.
changing_VCPUs_live	Changing VCPU settings for a running VM.
checkpoint	refers to the operation "checkpoint"
clean_reboot	refers to the operation "clean_reboot"
clean_shutdown	refers to the operation "clean_shutdown"
clone	refers to the operation "clone"
copy	refers to the operation "copy"
create_template	refers to the operation "create_template"
csvm	refers to the operation "csvm"
data_source_op	Add, remove, query or list data sources
destroy	refers to the act of uninstalling the VM
export	exporting a VM to a network stream
get_boot_record	refers to the operation "get_boot_record"
hard_reboot	refers to the operation "hard_reboot"
hard_shutdown	refers to the operation "hard_shutdown"
import	importing a VM from a network stream
make_into_template	Turning this VM into a template
metadata_export	exporting VM metadata to a network stream

enum vm_operations	
migrate_send	refers to the operation "migrate_send"
pause	refers to the operation "pause"
pool_migrate	refers to the operation "pool_migrate"
power_state_reset	refers to the operation "power_state_reset"
provision	refers to the operation "provision"
query_services	refers to the operation "query_services"
resume	refers to the operation "resume"
resume_on	refers to the operation "resume_on"
revert	refers to the operation "revert"
reverting	Reverting the VM to a previous snapshotted state
send_sysrq	refers to the operation "send_sysrq"
send_trigger	refers to the operation "send_trigger"
shutdown	refers to the operation "shutdown"
snapshot	refers to the operation "snapshot"
snapshot_with_quiesce	refers to the operation "snapshot_with_quiesce"
start	refers to the operation "start"
start_on	refers to the operation "start_on"
suspend	refers to the operation "suspend"
unpause	refers to the operation "unpause"
update_allowed_operations	

enum vm_power_state	
Halted	VM is offline and not using any resources
Paused	All resources have been allocated but the VM itself is paused and its vCPUs are not running
Running	Running
Suspended	VM state has been saved to disk and it is nolonger running. Note that disks remain in-use while the VM is suspended.

enum vmpp_archive_frequency	
always_after_backup	Archive after backup

enum vmpp_archive_frequency	
daily	Daily archives
never	Never archive
weekly	Weekly backups

enum vmpp_archive_target_type	
cifs	CIFS target config
nfs	NFS target config
none	No target config

enum vmpp_backup_frequency	
daily	Daily backups
hourly	Hourly backups
weekly	Weekly backups

enum vmpp_backup_type	
checkpoint	The backup is a checkpoint
snapshot	The backup is a snapshot

enum vmss_frequency	
daily	Daily snapshots
hourly	Hourly snapshots
weekly	Weekly snapshots

enum vmss_type	
checkpoint	The snapshot is a checkpoint
snapshot	The snapshot is a disk snapshot
snapshot_with_quiesce	The snapshot is a VSS

enum vusb_operations	
attach	Attempting to attach this VUSB to a VM
plug	Attempting to plug this VUSB into a VM
unplug	Attempting to hot unplug this VUSB

4.4. Class: auth

Management of remote authentication services

4.4.1. Fields for class: auth

Class auth has no fields.

4.4.2. RPCs associated with class: auth

4.4.2.1. RPC name: get_group_membership

Overview:

This calls queries the external directory service to obtain the transitively-closed set of groups that the the subject_identifier is member of.

Signature:

```
string set get_group_membership (session ref session_id, string subject_identifier)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	subject_identifier	A string containing the subject_identifier, unique in the external directory service

Return Type: `string set`

set of subject_identifiers that provides the group membership of subject_identifier passed as argument, it contains, recursively, all groups a subject_identifier is member of.

4.4.2.2. RPC name: get_subject_identifier

Overview:

This call queries the external directory service to obtain the subject_identifier as a string from the human-readable subject_name

Signature:

```
string get_subject_identifier (session ref session_id, string subject_name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	subject_name	The human-readable subject_name, such as a username or a groupname

Return Type: `string`

the subject_identifier obtained from the external directory service

4.4.2.3. RPC name: get_subject_information_from_identifier

Overview:

This call queries the external directory service to obtain the user information (e.g. username, organization etc) from the specified subject_identifier

Signature:

```
(string -> string) map get_subject_information_from_identifier (session ref
 session_id, string subject_identifier)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	subject_identifier	A string containing the subject_identifier, unique in the external directory service

Return Type: `(string -> string) map`

key-value pairs containing at least a key called subject_name

4.5. Class: blob

A placeholder for a binary blob

4.5.1. Fields for class: blob

Field	Type	Qualifier	Description
last_updated	`datetime`	*RO/constructor*	Time at which the data in the blob was last updated
mime_type	`string`	*RO/constructor*	The mime type associated with this object. Defaults to 'application/octet-stream' if the empty string is supplied
name_description	`string`	*RW*	a notes field containing human-readable description
name_label	`string`	*RW*	a human-readable name
public	`bool`	*RW*	True if the blob is publicly accessible

Field	Type	Qualifier	Description
size	`int`	*RO/runtime*	Size of the binary data, in bytes
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.5.2. RPCs associated with class: blob

4.5.2.1. RPC name: create

Overview:

Create a placeholder for a binary blob

Signature:

```
blob ref create (session ref session_id, string mime_type, bool public)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	mime_type	The mime-type of the blob. Defaults to 'application/octet-stream' if the empty string is supplied
`bool`	public	True if the blob should be publicly available

Return Type: `blob ref`

The reference to the created blob

4.5.2.2. RPC name: destroy

Overview:

Signature:

```
void destroy (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	The reference of the blob to destroy

Return Type: `void`

4.5.2.3. RPC name: get_all

Overview:

Return a list of all the blobs known to the system.

Signature:

```
blob ref set get_all (session ref session_id)
```

4.5.2.4. RPC name: get_all_records

Overview:

Return a map of blob references to blob records for all blobs known to the system.

Signature:

```
(blob ref -> blob record) map get_all_records (session ref session_id)
```

4.5.2.5. RPC name: get_by_name_label

Overview:

Get all the blob instances with the given label.

Signature:

```
blob ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `blob ref set`

references to objects with matching names

4.5.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the blob instance with the specified UUID.

Signature:

```
blob ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`string`	uuid	UUID of object to return

Return Type: `blob ref`

reference to the object

4.5.2.7. RPC name: get_last_updated

Overview:

Get the last_updated field of the given blob.

Signature:

```
datetime get_last_updated (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.5.2.8. RPC name: get_mime_type

Overview:

Get the mime_type field of the given blob.

Signature:

```
string get_mime_type (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `string`

value of the field

4.5.2.9. RPC name: get_name_description

Overview:

Get the name/description field of the given blob.

Signature:

```
string get_name_description (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `string`

value of the field

4.5.2.10. RPC name: get_name_label

Overview:

Get the name/label field of the given blob.

Signature:

```
string get_name_label (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `string`

value of the field

4.5.2.11. RPC name: get_public

Overview:

Get the public field of the given blob.

Signature:

```
bool get_public (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `bool`

value of the field

4.5.2.12. RPC name: get_record

Overview:

Get a record containing the current state of the given blob.

Signature:

```
blob record get_record (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `blob record`

all fields from the object

4.5.2.13. RPC name: get_size

Overview:

Get the size field of the given blob.

Signature:

```
int get_size (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `int`

value of the field

4.5.2.14. RPC name: get_uuid

Overview:

Get the uuid field of the given blob.

Signature:

```
string get_uuid (session ref session_id, blob ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object

Return Type: `string`

value of the field

4.5.2.15. RPC name: set_name_description

Overview:

Set the name/description field of the given blob.

Signature:

```
void set_name_description (session ref session_id, blob ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.5.2.16. RPC name: set_name_label

Overview:

Set the name/label field of the given blob.

Signature:

```
void set_name_label (session ref session_id, blob ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.5.2.17. RPC name: set_public

Overview:

Set the public field of the given blob.

Signature:

```
void set_public (session ref session_id, blob ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`blob ref`	self	reference to the object
`bool`	value	New value to set

Return Type: `void`

4.6. Class: Bond

4.6.1. Fields for class: Bond

Field	Type	Qualifier	Description
links_up	`int`	*RO/runtime*	Number of links up in this bond
master	`PIF ref`	*RO/constructor*	The bonded interface
mode	`bond_mode`	*RO/runtime*	The algorithm used to distribute traffic among the bonded NICs
other_config	`(string -> string) map`	*RW*	additional configuration
primary_slave	`PIF ref`	*RO/runtime*	The PIF of which the IP configuration and MAC were copied to the bond, and which will receive all configuration/VLANs/ VIFs on the bond if the bond is destroyed
properties	`(string -> string) map`	*RO/runtime*	Additional configuration properties specific to the bond mode.
slaves	`PIF ref set`	*RO/runtime*	The interfaces which are part of this bond
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.6.2. RPCs associated with class: Bond

4.6.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given Bond.

Signature:

```
void add_to_other_config (session ref session_id, Bond ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Bond ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.6.2.2. RPC name: create

Overview:

Create an interface bond

Signature:

```
Bond ref create (session ref session_id, network ref network, PIF ref set members,
 string MAC, bond_mode mode, (string -> string) map properties)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
network ref	network	Network to add the bonded PIF to
PIF ref set	members	PIFs to add to this bond
string	MAC	The MAC address to use on the bond itself. If this parameter is the empty string then the bond will inherit its MAC address from the primary slave.
bond_mode	mode	Bonding mode to use for the new bond

type	name	description
(string -> string) map	properties	Additional configuration parameters specific to the bond mode

Return Type: `Bond ref`

The reference of the created Bond object

4.6.2.3. RPC name: destroy

Overview:

Destroy an interface bond

Signature:

```
void destroy (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Bond ref	self	Bond to destroy

Return Type: `void`

4.6.2.4. RPC name: get_all

Overview:

Return a list of all the Bonds known to the system.

Signature:

```
Bond ref set get_all (session ref session_id)
```

4.6.2.5. RPC name: get_all_records

Overview:

Return a map of Bond references to Bond records for all Bonds known to the system.

Signature:

```
(Bond ref -> Bond record) map get_all_records (session ref session_id)
```

4.6.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the Bond instance with the specified UUID.

Signature:

```
Bond ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `Bond ref`

reference to the object

4.6.2.7. RPC name: get_links_up

Overview:

Get the links_up field of the given Bond.

Signature:

```
int get_links_up (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Bond ref`	self	reference to the object

Return Type: `int`

value of the field

4.6.2.8. RPC name: get_master

Overview:

Get the master field of the given Bond.

Signature:

```
PIF ref get_master (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Bond ref`	self	reference to the object

Return Type: `PIF ref`

value of the field

4.6.2.9. RPC name: get_mode

Overview:

Get the mode field of the given Bond.

Signature:

```
bond_mode get_mode (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Bond ref`	self	reference to the object

Return Type: `bond_mode`

value of the field

4.6.2.10. RPC name: get_other_config

Overview:

Get the other_config field of the given Bond.

Signature:

```
(string -> string) map get_other_config (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Bond ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.6.2.11. RPC name: get_primary_slave

Overview:

Get the primary_slave field of the given Bond.

Signature:

```
PIF ref get_primary_slave (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Bond ref	self	reference to the object

Return Type: `PIF ref`

value of the field

4.6.2.12. RPC name: get_properties

Overview:

Get the properties field of the given Bond.

Signature:

```
(string -> string) map get_properties (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Bond ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.6.2.13. RPC name: get_record

Overview:

Get a record containing the current state of the given Bond.

Signature:

```
Bond record get_record (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Bond ref	self	reference to the object

Return Type: `Bond record`

all fields from the object

4.6.2.14. RPC name: get_slaves

Overview:

Get the slaves field of the given Bond.

Signature:

```
PIF ref set get_slaves (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Bond ref`	self	reference to the object

Return Type: `PIF ref set`

value of the field

4.6.2.15. RPC name: get_uuid

Overview:

Get the uuid field of the given Bond.

Signature:

```
string get_uuid (session ref session_id, Bond ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Bond ref`	self	reference to the object

Return Type: `string`

value of the field

4.6.2.16. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given Bond. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, Bond ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
Bond ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.6.2.17. RPC name: set_mode

Overview:

Change the bond mode

Signature:

```
void set_mode (session ref session_id, Bond ref self, bond_mode value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Bond ref	self	The bond
bond_mode	value	The new bond mode

Return Type: void

4.6.2.18. RPC name: set_other_config

Overview:

Set the other_config field of the given Bond.

Signature:

```
void set_other_config (session ref session_id, Bond ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Bond ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.6.2.19. RPC name: set_property

Overview:

Set the value of a property of the bond

Signature:

```
void set_property (session ref session_id, Bond ref self, string name, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Bond ref`	self	The bond
`string`	name	The property name
`string`	value	The property value

Return Type: `void`

4.7. Class: console

A console

4.7.1. Fields for class: console

Field	Type	Qualifier	Description
location	`string`	*RO/runtime*	URI for the console service
other_config	`(string -> string) map`	*RW*	additional configuration
protocol	`console_protocol`	*RO/runtime*	the protocol used by this console
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VM	`VM ref`	*RO/runtime*	VM to which this console is attached

4.7.2. RPCs associated with class: console

4.7.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given console.

Signature:

```
void add_to_other_config (session ref session_id, console ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.7.2.2. RPC name: create

Overview:

Create a new console instance, and return its handle.

Signature:

```
console ref create (session ref session_id, console record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console record`	args	All constructor arguments

Return Type: `console ref`

reference to the newly created object

4.7.2.3. RPC name: destroy

Overview:

Destroy the specified console instance.

Signature:

```
void destroy (session ref session_id, console ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console ref`	self	reference to the object

Return Type: `void`

4.7.2.4. RPC name: get_all

Overview:

Return a list of all the consoles known to the system.

Signature:

```
console ref set get_all (session ref session_id)
```

4.7.2.5. RPC name: get_all_records

Overview:

Return a map of console references to console records for all consoles known to the system.

Signature:

```
(console ref -> console record) map get_all_records (session ref session_id)
```

4.7.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the console instance with the specified UUID.

Signature:

```
console ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `console ref`

reference to the object

4.7.2.7. RPC name: get_location

Overview:

Get the location field of the given console.

Signature:

```
string get_location (session ref session_id, console ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
console ref	self	reference to the object

Return Type: `string`

value of the field

4.7.2.8. RPC name: get_other_config

Overview:

Get the other_config field of the given console.

Signature:

```
(string -> string) map get_other_config (session ref session_id, console ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
console ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.7.2.9. RPC name: get_protocol

Overview:

Get the protocol field of the given console.

Signature:

```
console_protocol get_protocol (session ref session_id, console ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
console ref	self	reference to the object

Return Type: `console_protocol`

value of the field

4.7.2.10. RPC name: get_record

Overview:

Get a record containing the current state of the given console.

Signature:

```
console record get_record (session ref session_id, console ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console ref`	self	reference to the object

Return Type: `console record`

all fields from the object

4.7.2.11. RPC name: get_uuid

Overview:

Get the uuid field of the given console.

Signature:

```
string get_uuid (session ref session_id, console ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console ref`	self	reference to the object

Return Type: `string`

value of the field

4.7.2.12. RPC name: get_VM

Overview:

Get the VM field of the given console.

Signature:

```
VM ref get_VM (session ref session_id, console ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console ref`	self	reference to the object

Return Type: `VM ref`

value of the field

4.7.2.13. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given console. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, console ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.7.2.14. RPC name: set_other_config

Overview:

Set the other_config field of the given console.

Signature:

```
void set_other_config (session ref session_id, console ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`console ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.8. Class: crashdump

This class is deprecated.

A VM crashdump

4.8.1. Fields for class: crashdump

Field	Type	Qualifier	Description
other_config	`(string -> string) map`	*RW*	**Deprecated**. additional configuration
uuid	`string`	*RO/runtime*	**Deprecated**. Unique identifier/object reference
VDI	`VDI ref`	*RO/constructor*	**Deprecated**. the virtual disk
VM	`VM ref`	*RO/constructor*	**Deprecated**. the virtual machine

4.8.2. RPCs associated with class: crashdump

4.8.2.1. RPC name: add_to_other_config

This message is deprecated.

Overview:

Add the given key-value pair to the other_config field of the given crashdump.

Signature:

```
void add_to_other_config (session ref session_id, crashdump ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`crashdump ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.8.2.2. RPC name: destroy

This message is deprecated.

Overview:

Destroy the specified crashdump

Signature:

```
void destroy (session ref session_id, crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`crashdump ref`	self	The crashdump to destroy

Return Type: `void`

4.8.2.3. RPC name: get_all

This message is deprecated.

Overview:

Return a list of all the crashdumps known to the system.

Signature:

```
crashdump ref set get_all (session ref session_id)
```

4.8.2.4. RPC name: get_all_records

This message is deprecated.

Overview:

Return a map of crashdump references to crashdump records for all crashdumps known to the system.

Signature:

```
(crashdump ref -> crashdump record) map get_all_records (session ref session_id)
```

4.8.2.5. RPC name: get_by_uuid

This message is deprecated.

Overview:

Get a reference to the crashdump instance with the specified UUID.

Signature:

```
crashdump ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `crashdump ref`

reference to the object

4.8.2.6. RPC name: get_other_config

This message is deprecated.

Overview:

Get the other_config field of the given crashdump.

Signature:

```
(string -> string) map get_other_config (session ref session_id, crashdump ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`crashdump ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.8.2.7. RPC name: get_record

This message is deprecated.

Overview:

Get a record containing the current state of the given crashdump.

Signature:

```
crashdump record get_record (session ref session_id, crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`crashdump ref`	self	reference to the object

Return Type: `crashdump record`

all fields from the object

4.8.2.8. RPC name: get_uuid

This message is deprecated.

Overview:

Get the uuid field of the given crashdump.

Signature:

```
string get_uuid (session ref session_id, crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
crashdump ref	self	reference to the object

Return Type: `string`

value of the field

4.8.2.9. RPC name: get_VDI

This message is deprecated.

Overview:

Get the VDI field of the given crashdump.

Signature:

```
VDI ref get_VDI (session ref session_id, crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
crashdump ref	self	reference to the object

Return Type: `VDI ref`

value of the field

4.8.2.10. RPC name: get_VM

This message is deprecated.

Overview:

Get the VM field of the given crashdump.

Signature:

```
VM ref get_VM (session ref session_id, crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
crashdump ref	self	reference to the object

Return Type: `VM ref`

value of the field

4.8.2.11. RPC name: remove_from_other_config

This message is deprecated.

Overview:

Remove the given key and its corresponding value from the other_config field of the given crashdump. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, crashdump ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`crashdump ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.8.2.12. RPC name: set_other_config

This message is deprecated.

Overview:

Set the other_config field of the given crashdump.

Signature:

```
void set_other_config (session ref session_id, crashdump ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`crashdump ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.9. Class: data_source

Data sources for logging in RRDs

4.9.1. Fields for class: data_source

Field	Type	Qualifier	Description
enabled	`bool`	*RO/runtime*	true if the data source is being logged
max	`float`	*RO/runtime*	the maximum value of the data source
min	`float`	*RO/runtime*	the minimum value of the data source
name_description	`string`	*RO/runtime*	a notes field containing human-readable description
name_label	`string`	*RO/runtime*	a human-readable name
standard	`bool`	*RO/runtime*	true if the data source is enabled by default. Non-default data sources cannot be disabled
units	`string`	*RO/runtime*	the units of the value
value	`float`	*RO/runtime*	current value of the data source

4.9.2. RPCs associated with class: data_source

Class data_source has no additional RPCs associated with it.

4.10. Class: DR_task

DR task

4.10.1. Fields for class: DR_task

Field	Type	Qualifier	Description
introduced_SRs	`SR ref set`	*RO/runtime*	All SRs introduced by this appliance
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.10.2. RPCs associated with class: DR_task

4.10.2.1. RPC name: create

Overview:

Create a disaster recovery task which will query the supplied list of devices

Signature:

```
DR_task ref create (session ref session_id, string type, (string -> string) map
 device_config, string set whitelist)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	type	The SR driver type of the SRs to introduce
`(string -> string) map`	device_config	The device configuration of the SRs to introduce
`string set`	whitelist	The devices to use for disaster recovery

Return Type: `DR_task ref`

The reference to the created task

4.10.2.2. RPC name: destroy

Overview:

Destroy the disaster recovery task, detaching and forgetting any SRs introduced which are no longer required

Signature:

```
void destroy (session ref session_id, DR_task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`DR_task ref`	self	The disaster recovery task to destroy

Return Type: `void`

4.10.2.3. RPC name: get_all

Overview:

Return a list of all the DR_tasks known to the system.

Signature:

```
DR_task ref set get_all (session ref session_id)
```

4.10.2.4. RPC name: get_all_records

Overview:

Return a map of DR_task references to DR_task records for all DR_tasks known to the system.

Signature:

```
(DR_task ref -> DR_task record) map get_all_records (session ref session_id)
```

4.10.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the DR_task instance with the specified UUID.

Signature:

```
DR_task ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `DR_task ref`

reference to the object

4.10.2.6. RPC name: get_introduced_SRs

Overview:

Get the introduced_SRs field of the given DR_task.

Signature:

```
SR ref set get_introduced_SRs (session ref session_id, DR_task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
DR_task ref	self	reference to the object

Return Type: `SR ref set`

value of the field

4.10.2.7. RPC name: get_record

Overview:

Get a record containing the current state of the given DR_task.

Signature:

```
DR_task record get_record (session ref session_id, DR_task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`DR_task ref`	self	reference to the object

Return Type: `DR_task record`

all fields from the object

4.10.2.8. RPC name: get_uuid

Overview:

Get the uuid field of the given DR_task.

Signature:

```
string get_uuid (session ref session_id, DR_task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`DR_task ref`	self	reference to the object

Return Type: `string`

value of the field

4.11. Class: event

Asynchronous event registration and handling

4.11.1. Fields for class: event

Field	Type	Qualifier	Description
class	`string`	*RO/constructor*	The name of the class of the object that changed
id	`int`	*RO/constructor*	An ID, monotonically increasing, and local to the current session
obj_uuid	`string`	*RO/constructor*	The uuid of the object that changed

Field	Type	Qualifier	Description
operation	`event_operation`	*RO/constructor*	The operation that was performed
ref	`string`	*RO/constructor*	A reference to the object that changed
timestamp	`datetime`	*RO/constructor*	The time at which the event occurred

4.11.2. RPCs associated with class: event

4.11.2.1. RPC name: from

Overview:

Blocking call which returns a new token and a (possibly empty) batch of events. The returned token can be used in subsequent calls to this function.

Signature:

```
event record set from (session ref session_id, string set classes, string token,
 float timeout)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string set`	classes	register for events for the indicated classes
`string`	token	A token representing the point from which to generate database events. The empty string represents the beginning.
`float`	timeout	Return after this many seconds if no events match

Return Type: `event record set`

the batch of events

Possible Error Codes: SESSION_NOT_REGISTERED, EVENTS_LOST

4.11.2.2. RPC name: get_current_id

Overview:

Return the ID of the next event to be generated by the system

Signature:

```
int get_current_id (session ref session_id)
```

4.11.2.3. RPC name: inject

Overview:

Injects an artificial event on the given object and return the corresponding ID

Signature:

```
string inject (session ref session_id, string class, string ref)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	class	class of the object
`string`	ref	A reference to the object that will be changed.

Return Type: `string`

the event ID

4.11.2.4. RPC name: next

Overview:

Blocking call which returns a (possibly empty) batch of events. This method is only recommended for legacy use. New development should use event.from which supercedes this method.

Signature:

```
event record set next (session ref session_id)
```

Possible Error Codes: `SESSION_NOT_REGISTERED`, `EVENTS_LOST`

4.11.2.5. RPC name: register

Overview:

Registers this session with the event system. Specifying * as the desired class will register for all classes.

Signature:

```
void register (session ref session_id, string set classes)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string set`	classes	register for events for the indicated classes

Return Type: `void`

4.11.2.6. RPC name: unregister

Overview:

Unregisters this session with the event system

Signature:

```
void unregister (session ref session_id, string set classes)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string set`	classes	remove this session's registration for the indicated classes

Return Type: `void`

4.12. Class: Feature

A new piece of functionality

4.12.1. Fields for class: Feature

Field	Type	Qualifier	Description
enabled	`bool`	*RO/runtime*	Indicates whether the feature is enabled
experimental	`bool`	*RO/constructor*	Indicates whether the feature is experimental (as opposed to stable and fully supported)
host	`host ref`	*RO/runtime*	The host where this feature is available
name_description	`string`	*RO/constructor*	a notes field containing human-readable description
name_label	`string`	*RO/constructor*	a human-readable name
uuid	`string`	*RO/runtime*	Unique identifier/object reference
version	`string`	*RO/constructor*	The version of this feature

4.12.2. RPCs associated with class: Feature

4.12.2.1. RPC name: get_all

Overview:

Return a list of all the Features known to the system.

Signature:

```
Feature ref set get_all (session ref session_id)
```

4.12.2.2. RPC name: get_all_records

Overview:

Return a map of Feature references to Feature records for all Features known to the system.

Signature:

```
(Feature ref -> Feature record) map get_all_records (session ref session_id)
```

4.12.2.3. RPC name: get_by_name_label

Overview:

Get all the Feature instances with the given label.

Signature:

```
Feature ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	label of object to return

Return Type: `Feature ref set`

references to objects with matching names

4.12.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the Feature instance with the specified UUID.

Signature:

```
Feature ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `Feature ref`

reference to the object

4.12.2.5. RPC name: get_enabled

Overview:

Get the enabled field of the given Feature.

Signature:

```
bool get_enabled (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Feature ref	self	reference to the object

Return Type: `bool`

value of the field

4.12.2.6. RPC name: get_experimental

Overview:

Get the experimental field of the given Feature.

Signature:

```
bool get_experimental (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
Feature ref	self	reference to the object

Return Type: `bool`

value of the field

4.12.2.7. RPC name: get_host

Overview:

Get the host field of the given Feature.

Signature:

```
host ref get_host (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Feature ref`	self	reference to the object

Return Type: `host ref`

value of the field

4.12.2.8. RPC name: get_name_description

Overview:

Get the name/description field of the given Feature.

Signature:

```
string get_name_description (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Feature ref`	self	reference to the object

Return Type: `string`

value of the field

4.12.2.9. RPC name: get_name_label

Overview:

Get the name/label field of the given Feature.

Signature:

```
string get_name_label (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Feature ref`	self	reference to the object

Return Type: `string`

value of the field

4.12.2.10. RPC name: get_record

Overview:

Get a record containing the current state of the given Feature.

Signature:

```
Feature record get_record (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Feature ref`	self	reference to the object

Return Type: `Feature record`

all fields from the object

4.12.2.11. RPC name: get_uuid

Overview:

Get the uuid field of the given Feature.

Signature:

```
string get_uuid (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`Feature ref`	self	reference to the object

Return Type: `string`

value of the field

4.12.2.12. RPC name: get_version

Overview:

Get the version field of the given Feature.

Signature:

```
string get_version (session ref session_id, Feature ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`Feature ref`	self	reference to the object

Return Type: `string`

value of the field

4.13. Class: GPU_group

A group of compatible GPUs across the resource pool

4.13.1. Fields for class: GPU_group

Field	Type	Qualifier	Description
allocation_algorithm	`allocation_algorit`	*RW*	Current allocation of vGPUs to pGPUs for this group
enabled_VGPU_types	`VGPU_type ref set`	*RO/runtime*	vGPU types supported on at least one of the pGPUs in this group
GPU_types	`string set`	*RO/runtime*	List of GPU types (vendor +device ID) that can be in this group
name_description	`string`	*RW*	a notes field containing human-readable description
name_label	`string`	*RW*	a human-readable name
other_config	`(string -> string) map`	*RW*	Additional configuration
PGPUs	`PGPU ref set`	*RO/runtime*	List of pGPUs in the group
supported_VGPU_types	`VGPU_type ref set`	*RO/runtime*	vGPU types supported on at least one of the pGPUs in this group
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VGPUs	`VGPU ref set`	*RO/runtime*	List of vGPUs using the group

4.13.2. RPCs associated with class: GPU_group

4.13.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given GPU_group.

Signature:

```
void add_to_other_config (session ref session_id, GPU_group ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.13.2.2. RPC name: create

Overview:

Signature:

```
GPU_group ref create (session ref session_id, string name_label, string
 name_description, (string -> string) map other_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	name_label	
`string`	name_description	
`(string -> string) map`	other_config	

Return Type: `GPU_group ref`

4.13.2.3. RPC name: destroy

Overview:

Signature:

```
void destroy (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
GPU_group ref	self	The GPU group to destroy

Return Type: `void`

4.13.2.4. RPC name: get_all

Overview:

Return a list of all the GPU_groups known to the system.

Signature:

```
GPU_group ref set get_all (session ref session_id)
```

4.13.2.5. RPC name: get_all_records

Overview:

Return a map of GPU_group references to GPU_group records for all GPU_groups known to the system.

Signature:

```
(GPU_group ref -> GPU_group record) map get_all_records (session ref session_id)
```

4.13.2.6. RPC name: get_allocation_algorithm

Overview:

Get the allocation_algorithm field of the given GPU_group.

Signature:

```
allocation_algorithm get_allocation_algorithm (session ref session_id, GPU_group
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
GPU_group ref	self	reference to the object

Return Type: `allocation_algorithm`

value of the field

4.13.2.7. RPC name: get_by_name_label

Overview:

Get all the GPU_group instances with the given label.

Signature:

```
GPU_group ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	label of object to return

Return Type: `GPU_group ref set`

references to objects with matching names

4.13.2.8. RPC name: get_by_uuid

Overview:

Get a reference to the GPU_group instance with the specified UUID.

Signature:

```
GPU_group ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `GPU_group ref`

reference to the object

4.13.2.9. RPC name: get_enabled_VGPU_types

Overview:

Get the enabled_VGPU_types field of the given GPU_group.

Signature:

```
VGPU_type ref set get_enabled_VGPU_types (session ref session_id, GPU_group ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object

Return Type: `VGPU_type ref set`

value of the field

4.13.2.10. RPC name: get_GPU_types

Overview:

Get the GPU_types field of the given GPU_group.

Signature:

```
string set get_GPU_types (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object

Return Type: `string set`

value of the field

4.13.2.11. RPC name: get_name_description

Overview:

Get the name/description field of the given GPU_group.

Signature:

```
string get_name_description (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object

Return Type: `string`

value of the field

4.13.2.12. RPC name: get_name_label

Overview:

Get the name/label field of the given GPU_group.

Signature:

```
string get_name_label (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
GPU_group ref	self	reference to the object

Return Type: `string`

value of the field

4.13.2.13. RPC name: get_other_config

Overview:

Get the other_config field of the given GPU_group.

Signature:

```
(string -> string) map get_other_config (session ref session_id, GPU_group ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
GPU_group ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.13.2.14. RPC name: get_PGPUs

Overview:

Get the PGPUs field of the given GPU_group.

Signature:

```
PGPU ref set get_PGPUs (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
GPU_group ref	self	reference to the object

Return Type: `PGPU ref set`

value of the field

4.13.2.15. RPC name: get_record

Overview:

Get a record containing the current state of the given GPU_group.

Signature:

```
GPU_group record get_record (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object

Return Type: `GPU_group record`

all fields from the object

4.13.2.16. RPC name: get_remaining_capacity

Overview:

Signature:

```
int get_remaining_capacity (session ref session_id, GPU_group ref self, VGPU_type
 ref vgpu_type)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	The GPU group to query
`VGPU_type ref`	vgpu_type	The VGPU_type for which the remaining capacity will be calculated

Return Type: `int`

The number of VGPUs of the given type which can still be started on the PGPUs in the group

4.13.2.17. RPC name: get_supported_VGPU_types

Overview:

Get the supported_VGPU_types field of the given GPU_group.

Signature:

```
VGPU_type ref set get_supported_VGPU_types (session ref session_id, GPU_group ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object

Return Type: `VGPU_type ref set`

value of the field

4.13.2.18. RPC name: get_uuid

Overview:

Get the uuid field of the given GPU_group.

Signature:

```
string get_uuid (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object

Return Type: `string`

value of the field

4.13.2.19. RPC name: get_VGPUs

Overview:

Get the VGPUs field of the given GPU_group.

Signature:

```
VGPU ref set get_VGPUs (session ref session_id, GPU_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object

Return Type: `VGPU ref set`

value of the field

4.13.2.20. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given GPU_group. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, GPU_group ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.13.2.21. RPC name: set_allocation_algorithm

Overview:

Set the allocation_algorithm field of the given GPU_group.

Signature:

```
void set_allocation_algorithm (session ref session_id, GPU_group ref self,
 allocation_algorithm value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`GPU_group ref`	self	reference to the object
`allocation_algorithm`	value	New value to set

Return Type: `void`

4.13.2.22. RPC name: set_name_description

Overview:

Set the name/description field of the given GPU_group.

Signature:

```
void set_name_description (session ref session_id, GPU_group ref self, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
GPU_group ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.13.2.23. RPC name: set_name_label

Overview:

Set the name/label field of the given GPU_group.

Signature:

```
void set_name_label (session ref session_id, GPU_group ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
GPU_group ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.13.2.24. RPC name: set_other_config

Overview:

Set the other_config field of the given GPU_group.

Signature:

```
void set_other_config (session ref session_id, GPU_group ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
GPU_group ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: `void`

4.14. Class: host

A physical host

4.14.1. Fields for class: host

Field	Type	Qualifier	Description
address	`string`	*RW*	The address by which this host can be contacted from any other host in the pool
allowed_operations	`host_allowed_opera set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
API_version_major	`int`	*RO/runtime*	major version number
API_version_minor	`int`	*RO/runtime*	minor version number
API_version_vendor	`string`	*RO/runtime*	identification of vendor
API_version_vendor_imple	`(string -> string) map`	*RO/runtime*	details of vendor implementation
bios_strings	`(string -> string) map`	*RO/runtime*	BIOS strings
blobs	`(string -> blob ref) map`	*RO/runtime*	Binary blobs associated with this host
capabilities	`string set`	*RO/constructor*	Xen capabilities
chipset_info	`(string -> string) map`	*RO/runtime*	Information about chipset features
control_domain	`VM ref`	*RO/runtime*	The control domain (domain 0)
cpu_configuration	`(string -> string) map`	*RO/runtime*	The CPU configuration on this host. May contain keys such as "nr_nodes", "sockets_per_node", "cores_per_socket", or "threads_per_core"
cpu_info	`(string -> string) map`	*RO/runtime*	Details about the physical CPUs on this host
crash_dump_sr	`SR ref`	*RW*	The SR in which VDIs for crash dumps are created
crashdumps	`host_crashdump ref set`	*RO/runtime*	Set of host crash dumps

Field	Type	Qualifier	Description
current_operations	`(string -> host_allowed_opera map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
display	`host_display`	*RW*	indicates whether the host is configured to output its console to a physical display device
edition	`string`	*RO/runtime*	Product edition
enabled	`bool`	*RO/runtime*	True if the host is currently enabled
external_auth_configuratio	`(string -> string) map`	*RO/runtime*	configuration specific to external authentication service
external_auth_service_nar	`string`	*RO/runtime*	name of external authentication service configured; empty if none configured.
external_auth_type	`string`	*RO/runtime*	type of external authentication service configured; empty if none configured.
features	`Feature ref set`	*RO/runtime*	List of features available on this host
guest_VCPUs_params	`(string -> string) map`	*RW*	VCPUs params to apply to all resident guests
ha_network_peers	`string set`	*RO/runtime*	The set of hosts visible via the network from this host
ha_statefiles	`string set`	*RO/runtime*	The set of statefiles accessible from this host
host_CPUs	`host_cpu ref set`	*RO/runtime*	The physical CPUs on this host
hostname	`string`	*RW*	The hostname of this host
license_params	`(string -> string) map`	*RO/runtime*	State of the current license
license_server	`(string -> string) map`	*RW*	Contact information of the license server

Field	Type	Qualifier	Description
local_cache_sr	`SR ref`	*RO/constructor*	The SR that is used as a local cache
logging	`(string -> string) map`	*RW*	logging configuration
memory_overhead	`int`	*RO/runtime*	Virtualization memory overhead (bytes).
metrics	`host_metrics ref`	*RO/runtime*	metrics associated with this host
name_description	`string`	*RW*	a notes field containing human-readable description
name_label	`string`	*RW*	a human-readable name
other_config	`(string -> string) map`	*RW*	additional configuration
patches	`host_patch ref set`	*RO/runtime*	**Deprecated**. Set of host patches
PBDs	`PBD ref set`	*RO/runtime*	physical blockdevices
PCIs	`PCI ref set`	*RO/runtime*	List of PCI devices in the host
PGPUs	`PGPU ref set`	*RO/runtime*	List of physical GPUs in the host
PIFs	`PIF ref set`	*RO/runtime*	physical network interfaces
power_on_config	`(string -> string) map`	*RO/runtime*	The power on config
power_on_mode	`string`	*RO/runtime*	The power on mode
PUSBs	`PUSB ref set`	*RO/runtime*	List of physical USBs in the host
resident_VMs	`VM ref set`	*RO/runtime*	list of VMs currently resident on host
sched_policy	`string`	*RO/runtime*	Scheduler policy currently in force on this host
software_version	`(string -> string) map`	*RO/constructor*	version strings

Field	Type	Qualifier	Description
ssl_legacy	bool	*RO/constructor*	Allow SSLv3 protocol and ciphersuites as used by older XenServers. This controls both incoming and outgoing connections. When this is set to a different value, the host immediately restarts its SSL/TLS listening service; typically this takes less than a second but existing connections to it will be broken. XenAPI login sessions will remain valid.
supported_bootloaders	string set	*RO/runtime*	a list of the bootloaders installed on the machine
suspend_image_sr	SR ref	*RW*	The SR in which VDIs for suspend images are created
tags	string set	*RW*	user-specified tags for categorization purposes
updates	pool_update ref set	*RO/runtime*	Set of updates
updates_requiring_reboot	pool_update ref set	*RO/runtime*	List of updates which require reboot
uuid	string	*RO/runtime*	Unique identifier/object reference
virtual_hardware_platform	int set	*RO/runtime*	The set of versions of the virtual hardware platform that the host can offer to its guests

4.14.2. RPCs associated with class: host

4.14.2.1. RPC name: add_tags

Overview:

Add the given value to the tags field of the given host. If the value is already in that Set, then do nothing.

Signature:

```
void add_tags (session ref session_id, host ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
string	value	New value to add

Return Type: void

4.14.2.2. RPC name: add_to_guest_VCPUs_params

Overview:

Add the given key-value pair to the guest_VCPUs_params field of the given host.

Signature:

```
void add_to_guest_VCPUs_params (session ref session_id, host ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.14.2.3. RPC name: add_to_license_server

Overview:

Add the given key-value pair to the license_server field of the given host.

Signature:

```
void add_to_license_server (session ref session_id, host ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: `void`

4.14.2.4. RPC name: add_to_logging

Overview:

Add the given key-value pair to the logging field of the given host.

Signature:

```
void add_to_logging (session ref session_id, host ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: `void`

4.14.2.5. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given host.

Signature:

```
void add_to_other_config (session ref session_id, host ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.14.2.6. RPC name: apply_edition

Overview:

Change to another edition, or reactivate the current edition after a license has expired. This may be subject to the successful checkout of an appropriate license.

Signature:

```
void apply_edition (session ref session_id, host ref host, string edition, bool
 force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host
string	edition	The requested edition
bool	force	Update the license params even if the apply call fails

Return Type: void

4.14.2.7. RPC name: assert_can_evacuate

Overview:

Check this host can be evacuated.

Signature:

```
void assert_can_evacuate (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	host	The host to evacuate

Return Type: void

4.14.2.8. RPC name: backup_rrds

Overview:

This causes the RRDs to be backed up to the master

Signature:

```
void backup_rrds (session ref session_id, host ref host, float delay)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	Schedule a backup of the RRDs of this host
float	delay	Delay in seconds from when the call is received to perform the backup

Return Type: void

4.14.2.9. RPC name: bugreport_upload

Overview:

Run xen-bugtool --yestoall and upload the output to support

Signature:

```
void bugreport_upload (session ref session_id, host ref host, string url, (string -
> string) map options)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host on which to run xen-bugtool
string	url	The URL to upload to

type	name	description
(string -> string) map	options	Extra configuration operations

Return Type: void

4.14.2.10. RPC name: call_extension

Overview:

Call a XenAPI extension on this host

Signature:

```
string call_extension (session ref session_id, host ref host, string call)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host
string	call	Rpc call for the extension

Return Type: string

Result from the extension

4.14.2.11. RPC name: call_plugin

Overview:

Call a XenAPI plugin on this host

Signature:

```
string call_plugin (session ref session_id, host ref host, string plugin, string
 fn, (string -> string) map args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host
string	plugin	The name of the plugin
string	fn	The name of the function within the plugin

type	name	description
`(string -> string) map`	args	Arguments for the function

Return Type: `string`

Result from the plugin

4.14.2.12. RPC name: compute_free_memory

Overview:

Computes the amount of free memory on the host.

Signature:

```
int compute_free_memory (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host to send the request to

Return Type: `int`

the amount of free memory on the host.

4.14.2.13. RPC name: compute_memory_overhead

Overview:

Computes the virtualization memory overhead of a host.

Signature:

```
int compute_memory_overhead (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host for which to compute the memory overhead

Return Type: `int`

the virtualization memory overhead of the host.

4.14.2.14. RPC name: create_new_blob

Overview:

Create a placeholder for a named binary blob of data that is associated with this host

Signature:

```
blob ref create_new_blob (session ref session_id, host ref host, string name,
 string mime_type, bool public)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host
string	name	The name associated with the blob
string	mime_type	The mime type for the data. Empty string translates to application/octet-stream
bool	public	True if the blob should be publicly available

Return Type: `blob ref`

The reference of the blob, needed for populating its data

4.14.2.15. RPC name: declare_dead

Overview:

Declare that a host is dead. This is a dangerous operation, and should only be called if the administrator is absolutely sure the host is definitely dead

Signature:

```
void declare_dead (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The Host to declare is dead

Return Type: `void`

4.14.2.16. RPC name: destroy

Overview:

Destroy specified host record in database

Signature:

```
void destroy (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	The host record to remove

Return Type: `void`

4.14.2.17. RPC name: disable

Overview:

Puts the host into a state in which no new VMs can be started. Currently active VMs on the host continue to execute.

Signature:

```
void disable (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The Host to disable

Return Type: `void`

4.14.2.18. RPC name: disable_display

Overview:

Disable console output to the physical display device next time this host boots

Signature:

```
host_display disable_display (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	host	The host

Return Type: `host_display`

This host's physical display usage

4.14.2.19. RPC name: disable_external_auth

Overview:

This call disables external authentication on the local host

Signature:

```
void disable_external_auth (session ref session_id, host ref host, (string ->
 string) map config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host whose external authentication should be disabled
(string -> string) map	config	Optional parameters as a list of key-values containing the configuration data

Return Type: `void`

4.14.2.20. RPC name: disable_local_storage_caching

Overview:

Disable the use of a local SR for caching purposes

Signature:

```
void disable_local_storage_caching (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host

Return Type: `void`

4.14.2.21. RPC name: dmesg

Overview:

Get the host xen dmesg.

Signature:

```
string dmesg (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The Host to query

Return Type: `string`

dmesg string

4.14.2.22. RPC name: dmesg_clear

Overview:

Get the host xen dmesg, and clear the buffer.

Signature:

```
string dmesg_clear (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The Host to query

Return Type: `string`

dmesg string

4.14.2.23. RPC name: emergency_ha_disable

Overview:

This call disables HA on the local host. This should only be used with extreme care.

Signature:

```
void emergency_ha_disable (session ref session_id, bool soft)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`bool`	soft	Disable HA temporarily, revert upon host reboot or further changes, idempotent

Return Type: `void`

4.14.2.24. RPC name: enable

Overview:

Puts the host into a state in which new VMs can be started.

Signature:

```
void enable (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The Host to enable

Return Type: `void`

4.14.2.25. RPC name: enable_display

Overview:

Enable console output to the physical display device next time this host boots

Signature:

```
host_display enable_display (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host

Return Type: `host_display`

This host's physical display usage

4.14.2.26. RPC name: enable_external_auth

Overview:

This call enables external authentication on a host

Signature:

```
void enable_external_auth (session ref session_id, host ref host, (string ->
 string) map config, string service_name, string auth_type)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host whose external authentication should be enabled
(string -> string) map	config	A list of key-values containing the configuration data
string	service_name	The name of the service
string	auth_type	The type of authentication (e.g. AD for Active Directory)

Return Type: void

4.14.2.27. RPC name: enable_local_storage_caching

Overview:

Enable the use of a local SR for caching purposes

Signature:

```
void enable_local_storage_caching (session ref session_id, host ref host, SR ref
 sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host
SR ref	sr	The SR to use as a local cache

Return Type: void

4.14.2.28. RPC name: evacuate

Overview:

Migrate all VMs off of this host, where possible.

Signature:

```
void evacuate (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host to evacuate

Return Type: `void`

4.14.2.29. RPC name: forget_data_source_archives

Overview:

Forget the recorded statistics related to the specified data source

Signature:

```
void forget_data_source_archives (session ref session_id, host ref host, string
 data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host
string	data_source	The data source whose archives are to be forgotten

Return Type: `void`

4.14.2.30. RPC name: get_address

Overview:

Get the address field of the given host.

Signature:

```
string get_address (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `string`

value of the field

4.14.2.31. RPC name: get_all

Overview:

Return a list of all the hosts known to the system.

Signature:

```
host ref set get_all (session ref session_id)
```

4.14.2.32. RPC name: get_all_records

Overview:

Return a map of host references to host records for all hosts known to the system.

Signature:

```
(host ref -> host record) map get_all_records (session ref session_id)
```

4.14.2.33. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given host.

Signature:

```
host_allowed_operations set get_allowed_operations (session ref session_id, host
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `host_allowed_operations set`

value of the field

4.14.2.34. RPC name: get_API_version_major

Overview:

Get the API_version/major field of the given host.

Signature:

```
int get_API_version_major (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `int`

value of the field

4.14.2.35. RPC name: get_API_version_minor

Overview:

Get the API_version/minor field of the given host.

Signature:

```
int get_API_version_minor (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `int`

value of the field

4.14.2.36. RPC name: get_API_version_vendor

Overview:

Get the API_version/vendor field of the given host.

Signature:

```
string get_API_version_vendor (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string`

value of the field

4.14.2.37. RPC name: get_API_version_vendor_implementation

Overview:

Get the API_version/vendor_implementation field of the given host.

Signature:

```
(string -> string) map get_API_version_vendor_implementation (session ref
 session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.38. RPC name: get_bios_strings

Overview:

Get the bios_strings field of the given host.

Signature:

```
(string -> string) map get_bios_strings (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.39. RPC name: get_blobs

Overview:

Get the blobs field of the given host.

Signature:

```
(string -> blob ref) map get_blobs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `(string -> blob ref) map`

value of the field

4.14.2.40. RPC name: get_by_name_label

Overview:

Get all the host instances with the given label.

Signature:

```
host ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `host ref set`

references to objects with matching names

4.14.2.41. RPC name: get_by_uuid

Overview:

Get a reference to the host instance with the specified UUID.

Signature:

```
host ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `host ref`

reference to the object

4.14.2.42. RPC name: get_capabilities

Overview:

Get the capabilities field of the given host.

Signature:

```
string set get_capabilities (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string set`

value of the field

4.14.2.43. RPC name: get_chipset_info

Overview:

Get the chipset_info field of the given host.

Signature:

```
(string -> string) map get_chipset_info (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.44. RPC name: get_control_domain

Overview:

Get the control_domain field of the given host.

Signature:

```
VM ref get_control_domain (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `VM ref`

value of the field

4.14.2.45. RPC name: get_cpu_configuration

Overview:

Get the cpu_configuration field of the given host.

Signature:

```
(string -> string) map get_cpu_configuration (session ref session_id, host ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.46. RPC name: get_cpu_info

Overview:

Get the cpu_info field of the given host.

Signature:

```
(string -> string) map get_cpu_info (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.47. RPC name: get_crash_dump_sr

Overview:

Get the crash_dump_sr field of the given host.

Signature:

```
SR ref get_crash_dump_sr (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: SR `ref`

value of the field

4.14.2.48. RPC name: get_crashdumps

Overview:

Get the crashdumps field of the given host.

Signature:

```
host_crashdump ref set get_crashdumps (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `host_crashdump ref set`

value of the field

4.14.2.49. RPC name: get_current_operations

Overview:

Get the current_operations field of the given host.

Signature:

```
(string -> host_allowed_operations) map get_current_operations (session ref
 session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> host_allowed_operations) map`

value of the field

4.14.2.50. RPC name: get_data_sources

Overview:

Signature:

```
data_source record set get_data_sources (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	host	The host to interrogate

Return Type: `data_source record set`

A set of data sources

4.14.2.51. RPC name: get_display

Overview:

Get the display field of the given host.

Signature:

```
host_display get_display (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `host_display`

value of the field

4.14.2.52. RPC name: get_edition

Overview:

Get the edition field of the given host.

Signature:

```
string get_edition (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string`

value of the field

4.14.2.53. RPC name: get_enabled

Overview:

Get the enabled field of the given host.

Signature:

```
bool get_enabled (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `bool`

value of the field

4.14.2.54. RPC name: get_external_auth_configuration

Overview:

Get the external_auth_configuration field of the given host.

Signature:

```
(string -> string) map get_external_auth_configuration (session ref session_id,
 host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.55. RPC name: get_external_auth_service_name

Overview:

Get the external_auth_service_name field of the given host.

Signature:

```
string get_external_auth_service_name (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string`

value of the field

4.14.2.56. RPC name: get_external_auth_type

Overview:

Get the external_auth_type field of the given host.

Signature:

```
string get_external_auth_type (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string`

value of the field

4.14.2.57. RPC name: get_features

Overview:

Get the features field of the given host.

Signature:

```
Feature ref set get_features (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object

Return Type: `Feature ref set`

value of the field

4.14.2.58. RPC name: get_guest_VCPUs_params

Overview:

Get the guest_VCPUs_params field of the given host.

Signature:

```
(string -> string) map get_guest_VCPUs_params (session ref session_id, host ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.59. RPC name: get_ha_network_peers

Overview:

Get the ha_network_peers field of the given host.

Signature:

```
string set get_ha_network_peers (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string set`

value of the field

4.14.2.60. RPC name: get_ha_statefiles

Overview:

Get the ha_statefiles field of the given host.

Signature:

```
string set get_ha_statefiles (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string set`

value of the field

4.14.2.61. RPC name: get_host_CPUs

Overview:

Get the host_CPUs field of the given host.

Signature:

```
host_cpu ref set get_host_CPUs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `host_cpu ref set`

value of the field

4.14.2.62. RPC name: get_hostname

Overview:

Get the hostname field of the given host.

Signature:

```
string get_hostname (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `string`

value of the field

4.14.2.63. RPC name: get_license_params

Overview:

Get the license_params field of the given host.

Signature:

```
(string -> string) map get_license_params (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.64. RPC name: get_license_server

Overview:

Get the license_server field of the given host.

Signature:

```
(string -> string) map get_license_server (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.65. RPC name: get_local_cache_sr

Overview:

Get the local_cache_sr field of the given host.

Signature:

```
SR ref get_local_cache_sr (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: SR `ref`

value of the field

4.14.2.66. RPC name: get_log

Overview:

Get the host's log file

Signature:

```
string get_log (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The Host to query

Return Type: `string`

The contents of the host's primary log file

4.14.2.67. RPC name: get_logging

Overview:

Get the logging field of the given host.

Signature:

```
(string -> string) map get_logging (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.68. RPC name: get_management_interface

Overview:

Returns the management interface for the specified host

Signature:

```
PIF ref get_management_interface (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	Which host's management interface is required

Return Type: `PIF ref`

The management interface for the host

4.14.2.69. RPC name: get_memory_overhead

Overview:

Get the memory/overhead field of the given host.

Signature:

```
int get_memory_overhead (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object

Return Type: `int`

value of the field

4.14.2.70. RPC name: get_metrics

Overview:

Get the metrics field of the given host.

Signature:

```
host_metrics ref get_metrics (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `host_metrics ref`

value of the field

4.14.2.71. RPC name: get_name_description

Overview:

Get the name/description field of the given host.

Signature:

```
string get_name_description (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string`

value of the field

4.14.2.72. RPC name: get_name_label

Overview:

Get the name/label field of the given host.

Signature:

```
string get_name_label (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `string`

value of the field

4.14.2.73. RPC name: get_other_config

Overview:

Get the other_config field of the given host.

Signature:

```
(string -> string) map get_other_config (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.74. RPC name: get_patches

This message is deprecated.

Overview:

Get the patches field of the given host.

Signature:

```
host_patch ref set get_patches (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `host_patch ref set`

value of the field

4.14.2.75. RPC name: get_PBDs

Overview:

Get the PBDs field of the given host.

Signature:

```
PBD ref set get_PBDs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `PBD ref set`

value of the field

4.14.2.76. RPC name: get_PCIs

Overview:

Get the PCIs field of the given host.

Signature:

```
PCI ref set get_PCIs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object

Return Type: `PCI ref set`

value of the field

4.14.2.77. RPC name: get_PGPUs

Overview:

Get the PGPUs field of the given host.

Signature:

```
PGPU ref set get_PGPUs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `PGPU ref set`

value of the field

4.14.2.78. RPC name: get_PIFs

Overview:

Get the PIFs field of the given host.

Signature:

```
PIF ref set get_PIFs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `PIF ref set`

value of the field

4.14.2.79. RPC name: get_power_on_config

Overview:

Get the power_on_config field of the given host.

Signature:

```
(string -> string) map get_power_on_config (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.80. RPC name: get_power_on_mode

Overview:

Get the power_on_mode field of the given host.

Signature:

```
string get_power_on_mode (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string`

value of the field

4.14.2.81. RPC name: get_PUSBs

Overview:

Get the PUSBs field of the given host.

Signature:

```
PUSB ref set get_PUSBs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: PUSB ref set

value of the field

4.14.2.82. RPC name: get_record

Overview:

Get a record containing the current state of the given host.

Signature:

```
host record get_record (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: host record

all fields from the object

4.14.2.83. RPC name: get_resident_VMs

Overview:

Get the resident_VMs field of the given host.

Signature:

```
VM ref set get_resident_VMs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: VM ref set

value of the field

4.14.2.84. RPC name: get_sched_policy

Overview:

Get the sched_policy field of the given host.

Signature:

```
string get_sched_policy (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `string`

value of the field

4.14.2.85. RPC name: get_server_certificate

Overview:

Get the installed server public TLS certificate.

Signature:

```
string get_server_certificate (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host

Return Type: `string`

The installed server public TLS certificate, in PEM form.

4.14.2.86. RPC name: get_server_localtime

Overview:

This call queries the host's clock for the current time in the host's local timezone

Signature:

```
datetime get_server_localtime (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host whose clock should be queried

Return Type: `datetime`

The current local time

4.14.2.87. RPC name: get_servertime

Overview:

This call queries the host's clock for the current time

Signature:

```
datetime get_servertime (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host whose clock should be queried

Return Type: `datetime`

The current time

4.14.2.88. RPC name: get_software_version

Overview:

Get the software_version field of the given host.

Signature:

```
(string -> string) map get_software_version (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.14.2.89. RPC name: get_ssl_legacy

Overview:

Get the ssl_legacy field of the given host.

Signature:

```
bool get_ssl_legacy (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `bool`

value of the field

4.14.2.90. RPC name: get_supported_bootloaders

Overview:

Get the supported_bootloaders field of the given host.

Signature:

```
string set get_supported_bootloaders (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string set`

value of the field

4.14.2.91. RPC name: get_suspend_image_sr

Overview:

Get the suspend_image_sr field of the given host.

Signature:

```
SR ref get_suspend_image_sr (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: SR ref

value of the field

4.14.2.92. RPC name: get_system_status_capabilities

Overview:

Signature:

```
string get_system_status_capabilities (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host to interrogate

Return Type: string

An XML fragment containing the system status capabilities.

4.14.2.93. RPC name: get_tags

Overview:

Get the tags field of the given host.

Signature:

```
string set get_tags (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string set`

value of the field

4.14.2.94. RPC name: get_uncooperative_resident_VMs

This message is deprecated.

Overview:

Return a set of VMs which are not co-operating with the host's memory control system

Signature:

```
VM ref set get_uncooperative_resident_VMs (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	The host to query

Return Type: `VM ref set`

VMs which are not co-operating

4.14.2.95. RPC name: get_updates

Overview:

Get the updates field of the given host.

Signature:

```
pool_update ref set get_updates (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object

Return Type: `pool_update ref set`

value of the field

4.14.2.96. RPC name: get_updates_requiring_reboot

Overview:

Get the updates_requiring_reboot field of the given host.

Signature:

```
pool_update ref set get_updates_requiring_reboot (session ref session_id, host ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `pool_update ref set`

value of the field

4.14.2.97. RPC name: get_uuid

Overview:

Get the uuid field of the given host.

Signature:

```
string get_uuid (session ref session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object

Return Type: `string`

value of the field

4.14.2.98. RPC name: get_virtual_hardware_platform_versions

Overview:

Get the virtual_hardware_platform_versions field of the given host.

Signature:

```
int set get_virtual_hardware_platform_versions (session ref session_id, host ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object

Return Type: `int set`

value of the field

4.14.2.99. RPC name: get_vms_which_prevent_evacuation

Overview:

Return a set of VMs which prevent the host being evacuated, with per-VM error codes

Signature:

```
(VM ref -> string set) map get_vms_which_prevent_evacuation (session ref
 session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	The host to query

Return Type: `(VM ref -> string set) map`

VMs which block evacuation together with reasons

4.14.2.100. RPC name: has_extension

Overview:

Return true if the extension is available on the host

Signature:

```
bool has_extension (session ref session_id, host ref host, string name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host
`string`	name	The name of the API call

Return Type: `bool`

True if the extension exists, false otherwise

4.14.2.101. RPC name: license_add

Overview:

Apply a new license to a host

Signature:

```
void license_add (session ref session_id, host ref host, string contents)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host to upload the license to
`string`	contents	The contents of the license file, base64 encoded

Return Type: `void`

Possible Error Codes: `LICENSE_PROCESSING_ERROR`

4.14.2.102. RPC name: license_apply

This message is removed.

Overview:

Apply a new license to a host

Signature:

```
void license_apply (session ref session_id, host ref host, string contents)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host to upload the license to
`string`	contents	The contents of the license file, base64 encoded

Return Type: `void`

Possible Error Codes: `LICENSE_PROCESSING_ERROR`

4.14.2.103. RPC name: license_remove

Overview:

Remove any license file from the specified host, and switch that host to the unlicensed edition

Signature:

```
void license_remove (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host from which any license will be removed

Return Type: `void`

4.14.2.104. RPC name: list_methods

Overview:

List all supported methods

Signature:

```
string set list_methods (session ref session_id)
```

4.14.2.105. RPC name: local_management_reconfigure

Overview:

Reconfigure the management network interface. Should only be used if Host.management_reconfigure is impossible because the network configuration is broken.

Signature:

```
void local_management_reconfigure (session ref session_id, string interface)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	interface	name of the interface to use as a management interface

Return Type: `void`

4.14.2.106. RPC name: management_disable

Overview:

Disable the management network interface

Signature:

```
void management_disable (session ref session_id)
```

4.14.2.107. RPC name: management_reconfigure

Overview:

Reconfigure the management network interface

Signature:

```
void management_reconfigure (session ref session_id, PIF ref pif)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	pif	reference to a PIF object corresponding to the management interface

Return Type: `void`

4.14.2.108. RPC name: migrate_receive

Overview:

Prepare to receive a VM, returning a token which can be passed to VM.migrate.

Signature:

```
(string -> string) map migrate_receive (session ref session_id, host ref host,
 network ref network, (string -> string) map options)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The target host
`network ref`	network	The network through which migration traffic should be received.
`(string -> string) map`	options	Extra configuration operations

Return Type: `(string -> string) map`

A value which should be passed to VM.migrate

4.14.2.109. RPC name: power_on

Overview:

Attempt to power-on the host (if the capability exists).

Signature:

```
void power_on (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The Host to power on

Return Type: `void`

4.14.2.110. RPC name: query_data_source

Overview:

Query the latest value of the specified data source

Signature:

```
float query_data_source (session ref session_id, host ref host, string data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host
string	data_source	The data source to query

Return Type: `float`

The latest value, averaged over the last 5 seconds

4.14.2.111. RPC name: reboot

Overview:

Reboot the host. (This function can only be called if there are no currently running VMs on the host and it is disabled.)

Signature:

```
void reboot (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The Host to reboot

Return Type: `void`

4.14.2.112. RPC name: record_data_source

Overview:

Start recording the specified data source

Signature:

```
void record_data_source (session ref session_id, host ref host, string data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host

type	name	description
`string`	data_source	The data source to record

Return Type: `void`

4.14.2.113. RPC name: refresh_pack_info

This message is deprecated.

Overview:

Refresh the list of installed Supplemental Packs.

Signature:

```
void refresh_pack_info (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The Host to modify

Return Type: `void`

4.14.2.114. RPC name: remove_from_guest_VCPUs_params

Overview:

Remove the given key and its corresponding value from the guest_VCPUs_params field of the given host. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_guest_VCPUs_params (session ref session_id, host ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.14.2.115. RPC name: remove_from_license_server

Overview:

Remove the given key and its corresponding value from the license_server field of the given host. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_license_server (session ref session_id, host ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.14.2.116. RPC name: remove_from_logging

Overview:

Remove the given key and its corresponding value from the logging field of the given host. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_logging (session ref session_id, host ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.14.2.117. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given host. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, host ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.14.2.118. RPC name: remove_tags

Overview:

Remove the given value from the tags field of the given host. If the value is not in that Set, then do nothing.

Signature:

```
void remove_tags (session ref session_id, host ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`string`	value	Value to remove

Return Type: `void`

4.14.2.119. RPC name: reset_cpu_features

This message is removed.

Overview:

Remove the feature mask, such that after a reboot all features of the CPU are enabled.

Signature:

```
void reset_cpu_features (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	host	The host

Return Type: `void`

4.14.2.120. RPC name: restart_agent

Overview:

Restarts the agent after a 10 second pause. WARNING: this is a dangerous operation. Any operations in progress will be aborted, and unrecoverable data loss may occur. The caller is responsible for ensuring that there are no operations in progress when this method is called.

Signature:

```
void restart_agent (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The Host on which you want to restart the agent

Return Type: `void`

4.14.2.121. RPC name: retrieve_wlb_evacuate_recommendations

Overview:

Retrieves recommended host migrations to perform when evacuating the host from the wlb server. If a VM cannot be migrated from the host the reason is listed instead of a recommendation.

Signature:

```
(VM ref -> string set) map retrieve_wlb_evacuate_recommendations (session ref
 session_id, host ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	The host to query

Return Type: `(VM ref -> string set) map`

VMs and the reasons why they would block evacuation, or their target host recommended by the wlb server

4.14.2.122. RPC name: send_debug_keys

Overview:

Inject the given string as debugging keys into Xen

Signature:

```
void send_debug_keys (session ref session_id, host ref host, string keys)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host
`string`	keys	The keys to send

Return Type: `void`

4.14.2.123. RPC name: set_address

Overview:

Set the address field of the given host.

Signature:

```
void set_address (session ref session_id, host ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.14.2.124. RPC name: set_cpu_features

This message is removed.

Overview:

Set the CPU features to be used after a reboot, if the given features string is valid.

Signature:

```
void set_cpu_features (session ref session_id, host ref host, string features)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host
`string`	features	The features string (32 hexadecimal digits)

Return Type: `void`

4.14.2.125. RPC name: set_crash_dump_sr

Overview:

Set the crash_dump_sr field of the given host.

Signature:

```
void set_crash_dump_sr (session ref session_id, host ref self, SR ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`SR ref`	value	New value to set

Return Type: `void`

4.14.2.126. RPC name: set_display

Overview:

Set the display field of the given host.

Signature:

```
void set_display (session ref session_id, host ref self, host_display value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host ref	self	reference to the object
host_display	value	New value to set

Return Type: void

4.14.2.127. RPC name: set_guest_VCPUs_params

Overview:

Set the guest_VCPUs_params field of the given host.

Signature:

```
void set_guest_VCPUs_params (session ref session_id, host ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.14.2.128. RPC name: set_hostname

Overview:

Set the hostname field of the given host.

Signature:

```
void set_hostname (session ref session_id, host ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
string	value	New value to set

Return Type: void

4.14.2.129. RPC name: set_hostname_live

Overview:

Sets the host name to the specified string. Both the API and lower-level system hostname are changed immediately.

Signature:

```
void set_hostname_live (session ref session_id, host ref host, string hostname)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host whose host name to set
string	hostname	The new host name

Return Type: void

Possible Error Codes: HOST_NAME_INVALID

4.14.2.130. RPC name: set_license_server

Overview:

Set the license_server field of the given host.

Signature:

```
void set_license_server (session ref session_id, host ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.14.2.131. RPC name: set_logging

Overview:

Set the logging field of the given host.

Signature:

```
void set_logging (session ref session_id, host ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.14.2.132. RPC name: set_name_description

Overview:

Set the name/description field of the given host.

Signature:

```
void set_name_description (session ref session_id, host ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	self	reference to the object
string	value	New value to set

Return Type: void

4.14.2.133. RPC name: set_name_label

Overview:

Set the name/label field of the given host.

Signature:

```
void set_name_label (session ref session_id, host ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`host ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.14.2.134. RPC name: set_other_config

Overview:

Set the other_config field of the given host.

Signature:

```
void set_other_config (session ref session_id, host ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.14.2.135. RPC name: set_power_on_mode

Overview:

Set the power-on-mode, host, user and password

Signature:

```
void set_power_on_mode (session ref session_id, host ref self, string
 power_on_mode, (string -> string) map power_on_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	The host
`string`	power_on_mode	power-on-mode can be empty,iLO,wake-on-lan, DRAC or other

type	name	description
`(string -> string) map`	power_on_config	Power on config

Return Type: `void`

4.14.2.136. RPC name: set_ssl_legacy

Overview:

Enable/disable SSLv3 for interoperability with older versions of XenServer. When this is set to a different value, the host immediately restarts its SSL/TLS listening service; typically this takes less than a second but existing connections to it will be broken. XenAPI login sessions will remain valid.

Signature:

```
void set_ssl_legacy (session ref session_id, host ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	The host
`bool`	value	True to allow SSLv3 and ciphersuites as used in old XenServer versions

Return Type: `void`

4.14.2.137. RPC name: set_suspend_image_sr

Overview:

Set the suspend_image_sr field of the given host.

Signature:

```
void set_suspend_image_sr (session ref session_id, host ref self, SR ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`SR ref`	value	New value to set

Return Type: `void`

4.14.2.138. RPC name: set_tags

Overview:

Set the tags field of the given host.

Signature:

```
void set_tags (session ref session_id, host ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	self	reference to the object
`string set`	value	New value to set

Return Type: `void`

4.14.2.139. RPC name: shutdown

Overview:

Shutdown the host. (This function can only be called if there are no currently running VMs on the host and it is disabled.)

Signature:

```
void shutdown (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The Host to shutdown

Return Type: `void`

4.14.2.140. RPC name: shutdown_agent

Overview:

Shuts the agent down after a 10 second pause. WARNING: this is a dangerous operation. Any operations in progress will be aborted, and unrecoverable data loss may occur. The caller is responsible for ensuring that there are no operations in progress when this method is called.

Signature:

```
void shutdown_agent (session ref session_id)
```

4.14.2.141. RPC name: sync_data

Overview:

This causes the synchronisation of the non-database data (messages, RRDs and so on) stored on the master to be synchronised with the host

Signature:

```
void sync_data (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host to whom the data should be sent

Return Type: `void`

4.14.2.142. RPC name: syslog_reconfigure

Overview:

Re-configure syslog logging

Signature:

```
void syslog_reconfigure (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	Tell the host to reread its Host.logging parameters and reconfigure itself accordingly

Return Type: `void`

4.15. Class: host_cpu

This class is deprecated.

A physical CPU

4.15.1. Fields for class: host_cpu

Field	Type	Qualifier	Description
family	`int`	*RO/runtime*	**Deprecated**. the family (number) of the physical CPU
features	`string`	*RO/runtime*	**Deprecated**. the physical CPU feature bitmap
flags	`string`	*RO/runtime*	**Deprecated**. the flags of the physical CPU (a decoded version of the features field)
host	`host ref`	*RO/runtime*	**Deprecated**. the host the CPU is in
model	`int`	*RO/runtime*	**Deprecated**. the model number of the physical CPU
modelname	`string`	*RO/runtime*	**Deprecated**. the model name of the physical CPU
number	`int`	*RO/runtime*	**Deprecated**. the number of the physical CPU within the host
other_config	`(string -> string) map`	*RW*	**Deprecated**. additional configuration
speed	`int`	*RO/runtime*	**Deprecated**. the speed of the physical CPU
stepping	`string`	*RO/runtime*	**Deprecated**. the stepping of the physical CPU
utilisation	`float`	*RO/runtime*	**Deprecated**. the current CPU utilisation
uuid	`string`	*RO/runtime*	**Deprecated**. Unique identifier/object reference
vendor	`string`	*RO/runtime*	**Deprecated**. the vendor of the physical CPU

4.15.2. RPCs associated with class: host_cpu

4.15.2.1. RPC name: add_to_other_config

This message is deprecated.

Overview:

Add the given key-value pair to the other_config field of the given host_cpu.

Signature:

```
void add_to_other_config (session ref session_id, host_cpu ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.15.2.2. RPC name: get_all

This message is deprecated.

Overview:

Return a list of all the host_cpus known to the system.

Signature:

```
host_cpu ref set get_all (session ref session_id)
```

4.15.2.3. RPC name: get_all_records

This message is deprecated.

Overview:

Return a map of host_cpu references to host_cpu records for all host_cpus known to the system.

Signature:

```
(host_cpu ref -> host_cpu record) map get_all_records (session ref session_id)
```

4.15.2.4. RPC name: get_by_uuid

This message is deprecated.

Overview:

Get a reference to the host_cpu instance with the specified UUID.

Signature:

```
host_cpu ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `host_cpu ref`

reference to the object

4.15.2.5. RPC name: get_family

This message is deprecated.

Overview:

Get the family field of the given host_cpu.

Signature:

```
int get_family (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object

Return Type: `int`

value of the field

4.15.2.6. RPC name: get_features

This message is deprecated.

Overview:

Get the features field of the given host_cpu.

Signature:

```
string get_features (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_cpu ref	self	reference to the object

Return Type: `string`

value of the field

4.15.2.7. RPC name: get_flags

This message is deprecated.

Overview:

Get the flags field of the given host_cpu.

Signature:

```
string get_flags (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_cpu ref	self	reference to the object

Return Type: `string`

value of the field

4.15.2.8. RPC name: get_host

This message is deprecated.

Overview:

Get the host field of the given host_cpu.

Signature:

```
host ref get_host (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`host_cpu ref`	self	reference to the object

Return Type: `host ref`

value of the field

4.15.2.9. RPC name: get_model

This message is deprecated.

Overview:

Get the model field of the given host_cpu.

Signature:

```
int get_model (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object

Return Type: `int`

value of the field

4.15.2.10. RPC name: get_modelname

This message is deprecated.

Overview:

Get the modelname field of the given host_cpu.

Signature:

```
string get_modelname (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object

Return Type: `string`

value of the field

4.15.2.11. RPC name: get_number

This message is deprecated.

Overview:

Get the number field of the given host_cpu.

Signature:

```
int get_number (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_cpu ref	self	reference to the object

Return Type: `int`

value of the field

4.15.2.12. RPC name: get_other_config

This message is deprecated.

Overview:

Get the other_config field of the given host_cpu.

Signature:

```
(string -> string) map get_other_config (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_cpu ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.15.2.13. RPC name: get_record

This message is deprecated.

Overview:

Get a record containing the current state of the given host_cpu.

Signature:

```
host_cpu record get_record (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object

Return Type: `host_cpu record`

all fields from the object

4.15.2.14. RPC name: get_speed

This message is deprecated.

Overview:

Get the speed field of the given host_cpu.

Signature:

```
int get_speed (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object

Return Type: `int`

value of the field

4.15.2.15. RPC name: get_stepping

This message is deprecated.

Overview:

Get the stepping field of the given host_cpu.

Signature:

```
string get_stepping (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object

Return Type: `string`

value of the field

4.15.2.16. RPC name: get_utilisation

This message is deprecated.

Overview:

Get the utilisation field of the given host_cpu.

Signature:

```
float get_utilisation (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_cpu ref`	self	reference to the object

Return Type: `float`

value of the field

4.15.2.17. RPC name: get_uuid

This message is deprecated.

Overview:

Get the uuid field of the given host_cpu.

Signature:

```
string get_uuid (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host_cpu ref	self	reference to the object

Return Type: `string`

value of the field

4.15.2.18. RPC name: get_vendor

This message is deprecated.

Overview:

Get the vendor field of the given host_cpu.

Signature:

```
string get_vendor (session ref session_id, host_cpu ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_cpu ref	self	reference to the object

Return Type: `string`

value of the field

4.15.2.19. RPC name: remove_from_other_config

This message is deprecated.

Overview:

Remove the given key and its corresponding value from the other_config field of the given host_cpu. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, host_cpu ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_cpu ref	self	reference to the object

type	name	description
string	key	Key to remove

Return Type: void

4.15.2.20. RPC name: set_other_config

This message is deprecated.

Overview:

Set the other_config field of the given host_cpu.

Signature:

```
void set_other_config (session ref session_id, host_cpu ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_cpu ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.16. Class: host_crashdump

Represents a host crash dump

4.16.1. Fields for class: host_crashdump

Field	Type	Qualifier	Description
host	host ref	*RO/constructor*	Host the crashdump relates to
other_config	(string -> string) map	*RW*	additional configuration
size	int	*RO/runtime*	Size of the crashdump
timestamp	datetime	*RO/runtime*	Time the crash happened
uuid	string	*RO/runtime*	Unique identifier/object reference

4.16.2. RPCs associated with class: host_crashdump

4.16.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given host_crashdump.

Signature:

```
void add_to_other_config (session ref session_id, host_crashdump ref self, string
 key, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_crashdump ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.16.2.2. RPC name: destroy

Overview:

Destroy specified host crash dump, removing it from the disk.

Signature:

```
void destroy (session ref session_id, host_crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_crashdump ref	self	The host crashdump to destroy

Return Type: void

4.16.2.3. RPC name: get_all

Overview:

Return a list of all the host_crashdumps known to the system.

Signature:

```
host_crashdump ref set get_all (session ref session_id)
```

4.16.2.4. RPC name: get_all_records

Overview:

Return a map of host_crashdump references to host_crashdump records for all host_crashdumps known to the system.

Signature:

```
(host_crashdump ref -> host_crashdump record) map get_all_records (session ref
 session_id)
```

4.16.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the host_crashdump instance with the specified UUID.

Signature:

```
host_crashdump ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `host_crashdump ref`

reference to the object

4.16.2.6. RPC name: get_host

Overview:

Get the host field of the given host_crashdump.

Signature:

```
host ref get_host (session ref session_id, host_crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`host_crashdump ref`	self	reference to the object

Return Type: `host ref`

value of the field

4.16.2.7. RPC name: get_other_config

Overview:

Get the other_config field of the given host_crashdump.

Signature:

```
(string -> string) map get_other_config (session ref session_id, host_crashdump ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_crashdump ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.16.2.8. RPC name: get_record

Overview:

Get a record containing the current state of the given host_crashdump.

Signature:

```
host_crashdump record get_record (session ref session_id, host_crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_crashdump ref`	self	reference to the object

Return Type: `host_crashdump record`

all fields from the object

4.16.2.9. RPC name: get_size

Overview:

Get the size field of the given host_crashdump.

Signature:

```
int get_size (session ref session_id, host_crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_crashdump ref	self	reference to the object

Return Type: `int`

value of the field

4.16.2.10. RPC name: get_timestamp

Overview:

Get the timestamp field of the given host_crashdump.

Signature:

```
datetime get_timestamp (session ref session_id, host_crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_crashdump ref	self	reference to the object

Return Type: `datetime`

value of the field

4.16.2.11. RPC name: get_uuid

Overview:

Get the uuid field of the given host_crashdump.

Signature:

```
string get_uuid (session ref session_id, host_crashdump ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_crashdump ref`	self	reference to the object

Return Type: `string`

value of the field

4.16.2.12. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given host_crashdump. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, host_crashdump ref self,
 string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_crashdump ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.16.2.13. RPC name: set_other_config

Overview:

Set the other_config field of the given host_crashdump.

Signature:

```
void set_other_config (session ref session_id, host_crashdump ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`host_crashdump ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.16.2.14. RPC name: upload

Overview:

Upload the specified host crash dump to a specified URL

Signature:

```
void upload (session ref session_id, host_crashdump ref self, string url, (string -
> string) map options)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_crashdump ref`	self	The host crashdump to upload
`string`	url	The URL to upload to
`(string -> string) map`	options	Extra configuration operations

Return Type: `void`

4.17. Class: host_metrics

The metrics associated with a host

4.17.1. Fields for class: host_metrics

Field	Type	Qualifier	Description
last_updated	`datetime`	*RO/runtime*	Time at which this information was last updated
live	`bool`	*RO/runtime*	Pool master thinks this host is live
memory_free	`int`	*RO/runtime*	**Removed**. Free host memory (bytes)
memory_total	`int`	*RO/runtime*	Total host memory (bytes)

Field	Type	Qualifier	Description
other_config	(string -> string) map	*RW*	additional configuration
uuid	string	*RO/runtime*	Unique identifier/object reference

4.17.2. RPCs associated with class: host_metrics

4.17.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given host_metrics.

Signature:

```
void add_to_other_config (session ref session_id, host_metrics ref self, string
 key, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_metrics ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.17.2.2. RPC name: get_all

Overview:

Return a list of all the host_metrics instances known to the system.

Signature:

```
host_metrics ref set get_all (session ref session_id)
```

4.17.2.3. RPC name: get_all_records

Overview:

Return a map of host_metrics references to host_metrics records for all host_metrics instances known to the system.

Signature:

```
(host_metrics ref -> host_metrics record) map get_all_records (session ref
 session_id)
```

4.17.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the host_metrics instance with the specified UUID.

Signature:

```
host_metrics ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `host_metrics ref`

reference to the object

4.17.2.5. RPC name: get_last_updated

Overview:

Get the last_updated field of the given host_metrics.

Signature:

```
datetime get_last_updated (session ref session_id, host_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_metrics ref	self	reference to the object

Return Type: `datetime`

value of the field

4.17.2.6. RPC name: get_live

Overview:

Get the live field of the given host_metrics.

Signature:

```
bool get_live (session ref session_id, host_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_metrics ref`	self	reference to the object

Return Type: `bool`

value of the field

4.17.2.7. RPC name: get_memory_free

This message is removed.

Overview:

Get the memory/free field of the given host_metrics.

Signature:

```
int get_memory_free (session ref session_id, host_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_metrics ref`	self	reference to the object

Return Type: `int`

value of the field

4.17.2.8. RPC name: get_memory_total

Overview:

Get the memory/total field of the given host_metrics.

Signature:

```
int get_memory_total (session ref session_id, host_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_metrics ref	self	reference to the object

Return Type: `int`

value of the field

4.17.2.9. RPC name: get_other_config

Overview:

Get the other_config field of the given host_metrics.

Signature:

```
(string -> string) map get_other_config (session ref session_id, host_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_metrics ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.17.2.10. RPC name: get_record

Overview:

Get a record containing the current state of the given host_metrics.

Signature:

```
host_metrics record get_record (session ref session_id, host_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
host_metrics ref	self	reference to the object

Return Type: `host_metrics record`

all fields from the object

4.17.2.11. RPC name: get_uuid

Overview:

Get the uuid field of the given host_metrics.

Signature:

```
string get_uuid (session ref session_id, host_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_metrics ref	self	reference to the object

Return Type: `string`

value of the field

4.17.2.12. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given host_metrics. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, host_metrics ref self,
 string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_metrics ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.17.2.13. RPC name: set_other_config

Overview:

Set the other_config field of the given host_metrics.

Signature:

```
void set_other_config (session ref session_id, host_metrics ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_metrics ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.18. Class: host_patch

This class is deprecated.

Represents a patch stored on a server

4.18.1. Fields for class: host_patch

Field	Type	Qualifier	Description
applied	`bool`	*RO/runtime*	**Deprecated**. True if the patch has been applied
host	`host ref`	*RO/constructor*	**Deprecated**. Host the patch relates to
name_description	`string`	*RO/constructor*	**Deprecated**. a notes field containing human-readable description
name_label	`string`	*RO/constructor*	**Deprecated**. a human-readable name
other_config	`(string -> string) map`	*RW*	**Deprecated**. additional configuration
pool_patch	`pool_patch ref`	*RO/constructor*	**Deprecated**. The patch applied

Field	Type	Qualifier	Description
size	`int`	*RO/runtime*	**Deprecated**. Size of the patch
timestamp_applied	`datetime`	*RO/runtime*	**Deprecated**. Time the patch was applied
uuid	`string`	*RO/runtime*	**Deprecated**. Unique identifier/object reference
version	`string`	*RO/constructor*	**Deprecated**. Patch version number

4.18.2. RPCs associated with class: host_patch

4.18.2.1. RPC name: add_to_other_config

This message is deprecated.

Overview:

Add the given key-value pair to the other_config field of the given host_patch.

Signature:

```
void add_to_other_config (session ref session_id, host_patch ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.18.2.2. RPC name: apply

This message is deprecated.

Overview:

Apply the selected patch and return its output

Signature:

```
string apply (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	The patch to apply

Return Type: `string`

the output of the patch application process

4.18.2.3. RPC name: destroy

This message is deprecated.

Overview:

Destroy the specified host patch, removing it from the disk. This does NOT reverse the patch

Signature:

```
void destroy (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	The patch to destroy

Return Type: `void`

4.18.2.4. RPC name: get_all

This message is deprecated.

Overview:

Return a list of all the host_patchs known to the system.

Signature:

```
host_patch ref set get_all (session ref session_id)
```

4.18.2.5. RPC name: get_all_records

This message is deprecated.

Overview:

Return a map of host_patch references to host_patch records for all host_patchs known to the system.

Signature:

```
(host_patch ref -> host_patch record) map get_all_records (session ref session_id)
```

4.18.2.6. RPC name: get_applied

This message is deprecated.

Overview:

Get the applied field of the given host_patch.

Signature:

```
bool get_applied (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	reference to the object

Return Type: `bool`

value of the field

4.18.2.7. RPC name: get_by_name_label

This message is deprecated.

Overview:

Get all the host_patch instances with the given label.

Signature:

```
host_patch ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	label of object to return

Return Type: `host_patch ref set`

references to objects with matching names

4.18.2.8. RPC name: get_by_uuid

This message is deprecated.

Overview:

Get a reference to the host_patch instance with the specified UUID.

Signature:

```
host_patch ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `host_patch ref`

reference to the object

4.18.2.9. RPC name: get_host

This message is deprecated.

Overview:

Get the host field of the given host_patch.

Signature:

```
host ref get_host (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	reference to the object

Return Type: `host ref`

value of the field

4.18.2.10. RPC name: get_name_description

This message is deprecated.

Overview:

Get the name/description field of the given host_patch.

Signature:

```
string get_name_description (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_patch ref	self	reference to the object

Return Type: `string`

value of the field

4.18.2.11. RPC name: get_name_label

This message is deprecated.

Overview:

Get the name/label field of the given host_patch.

Signature:

```
string get_name_label (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_patch ref	self	reference to the object

Return Type: `string`

value of the field

4.18.2.12. RPC name: get_other_config

This message is deprecated.

Overview:

Get the other_config field of the given host_patch.

Signature:

```
(string -> string) map get_other_config (session ref session_id, host_patch ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.18.2.13. RPC name: get_pool_patch

This message is deprecated.

Overview:

Get the pool_patch field of the given host_patch.

Signature:

```
pool_patch ref get_pool_patch (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	reference to the object

Return Type: `pool_patch ref`

value of the field

4.18.2.14. RPC name: get_record

This message is deprecated.

Overview:

Get a record containing the current state of the given host_patch.

Signature:

```
host_patch record get_record (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_patch ref	self	reference to the object

Return Type: `host_patch record`

all fields from the object

4.18.2.15. RPC name: get_size

This message is deprecated.

Overview:

Get the size field of the given host_patch.

Signature:

```
int get_size (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_patch ref	self	reference to the object

Return Type: `int`

value of the field

4.18.2.16. RPC name: get_timestamp_applied

This message is deprecated.

Overview:

Get the timestamp_applied field of the given host_patch.

Signature:

```
datetime get_timestamp_applied (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`host_patch ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.18.2.17. RPC name: get_uuid

This message is deprecated.

Overview:

Get the uuid field of the given host_patch.

Signature:

```
string get_uuid (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	reference to the object

Return Type: `string`

value of the field

4.18.2.18. RPC name: get_version

This message is deprecated.

Overview:

Get the version field of the given host_patch.

Signature:

```
string get_version (session ref session_id, host_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host_patch ref`	self	reference to the object

Return Type: `string`

value of the field

4.18.2.19. RPC name: remove_from_other_config

This message is deprecated.

Overview:

Remove the given key and its corresponding value from the other_config field of the given host_patch. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, host_patch ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_patch ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.18.2.20. RPC name: set_other_config

This message is deprecated.

Overview:

Set the other_config field of the given host_patch.

Signature:

```
void set_other_config (session ref session_id, host_patch ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host_patch ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.19. Class: LVHD

LVHD SR specific operations

4.19.1. Fields for class: LVHD

Field	Type	Qualifier	Description
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.19.2. RPCs associated with class: LVHD

4.19.2.1. RPC name: enable_thin_provisioning

Overview:

Upgrades an LVHD SR to enable thin-provisioning. Future VDIs created in this SR will be thinly-provisioned, although existing VDIs will be left alone. Note that the SR must be attached to the SRmaster for upgrade to work.

Signature:

```
string enable_thin_provisioning (session ref session_id, host ref host, SR ref SR,
 int initial_allocation, int allocation_quantum)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The LVHD Host to upgrade to being thin-provisioned.
`SR ref`	SR	The LVHD SR to upgrade to being thin-provisioned.
`int`	initial_allocation	The initial amount of space to allocate to a newly-created VDI in bytes
`int`	allocation_quantum	The amount of space to allocate to a VDI when it needs to be enlarged in bytes

Return Type: `string`

Message from LVHD.enable_thin_provisioning extension

4.19.2.2. RPC name: get_by_uuid

Overview:

Get a reference to the LVHD instance with the specified UUID.

Signature:

```
LVHD ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `LVHD ref`

reference to the object

4.19.2.3. RPC name: get_record

Overview:

Get a record containing the current state of the given LVHD.

Signature:

```
LVHD record get_record (session ref session_id, LVHD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`LVHD ref`	self	reference to the object

Return Type: `LVHD record`

all fields from the object

4.19.2.4. RPC name: get_uuid

Overview:

Get the uuid field of the given LVHD.

Signature:

```
string get_uuid (session ref session_id, LVHD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
LVHD ref	self	reference to the object

Return Type: `string`

value of the field

4.20. Class: message

An message for the attention of the administrator

4.20.1. Fields for class: message

Field	Type	Qualifier	Description
body	`string`	*RO/runtime*	The body of the message
cls	`cls`	*RO/runtime*	The class of the object this message is associated with
name	`string`	*RO/runtime*	The name of the message
obj_uuid	`string`	*RO/runtime*	The uuid of the object this message is associated with
priority	`int`	*RO/runtime*	The message priority, 0 being low priority
timestamp	`datetime`	*RO/runtime*	The time at which the message was created
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.20.2. RPCs associated with class: message

4.20.2.1. RPC name: create

Overview:

Signature:

```
message ref create (session ref session_id, string name, int priority, cls cls,
 string obj_uuid, string body)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
string	name	The name of the message
int	priority	The priority of the message
cls	cls	The class of object this message is associated with
string	obj_uuid	The uuid of the object this message is associated with
string	body	The body of the message

Return Type: `message ref`

The reference of the created message

4.20.2.2. RPC name: destroy

Overview:

Signature:

```
void destroy (session ref session_id, message ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
message ref	self	The reference of the message to destroy

Return Type: `void`

4.20.2.3. RPC name: get

Overview:

Signature:

```
(message ref -> message record) map get (session ref session_id, cls cls, string
 obj_uuid, datetime since)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
cls	cls	The class of object

type	name	description
string	obj_uuid	The uuid of the object
datetime	since	The cutoff time

Return Type: `(message ref -> message record) map`

The relevant messages

4.20.2.4. RPC name: get_all

Overview:

Signature:

```
message ref set get_all (session ref session_id)
```

4.20.2.5. RPC name: get_all_records

Overview:

Signature:

```
(message ref -> message record) map get_all_records (session ref session_id)
```

4.20.2.6. RPC name: get_all_records_where

Overview:

Signature:

```
(message ref -> message record) map get_all_records_where (session ref session_id,
 string expr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	expr	The expression to match (not currently used)

Return Type: `(message ref -> message record) map`

The messages

4.20.2.7. RPC name: get_by_uuid

Overview:

Signature:

```
message ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	The uuid of the message

Return Type: `message ref`

The message reference

4.20.2.8. RPC name: get_record

Overview:

Signature:

```
message record get_record (session ref session_id, message ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`message ref`	self	The reference to the message

Return Type: `message record`

The message record

4.20.2.9. RPC name: get_since

Overview:

Signature:

```
(message ref -> message record) map get_since (session ref session_id, datetime
 since)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`datetime`	since	The cutoff time

Return Type: `(message ref -> message record) map`

The relevant messages

4.21. Class: network

A virtual network

4.21.1. Fields for class: network

Field	Type	Qualifier	Description
allowed_operations	`network_operations set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
assigned_ips	`(VIF ref -> string) map`	*RO/runtime*	The IP addresses assigned to VIFs on networks that have active xapi-managed DHCP
blobs	`(string -> blob ref) map`	*RO/runtime*	Binary blobs associated with this network
bridge	`string`	*RO/constructor*	name of the bridge corresponding to this network on the local host
current_operations	`(string -> network_operations map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
default_locking_mode	`network_default_lo`	*RO/runtime*	The network will use this value to determine the behaviour of all VIFs where locking_mode = default
managed	`bool`	*RO/constructor*	true if the bridge is managed by xapi
MTU	`int`	*RW*	MTU in octets
name_description	`string`	*RW*	a notes field containing human-readable description

Field	Type	Qualifier	Description
name_label	`string`	*RW*	a human-readable name
other_config	`(string -> string) map`	*RW*	additional configuration
PIFs	`PIF ref set`	*RO/runtime*	list of connected pifs
purpose	`network_purpose set`	*RO/runtime*	Set of purposes for which the server will use this network
tags	`string set`	*RW*	user-specified tags for categorization purposes
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VIFs	`VIF ref set`	*RO/runtime*	list of connected vifs

4.21.2. RPCs associated with class: network

4.21.2.1. RPC name: add_purpose

Overview:

Give a network a new purpose (if not present already)

Signature:

```
void add_purpose (session ref session_id, network ref self, network_purpose value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	The network
`network_purpose`	value	The purpose to add

Return Type: `void`

Possible Error Codes: `NETWORK_INCOMPATIBLE_PURPOSES`

4.21.2.2. RPC name: add_tags

Overview:

Add the given value to the tags field of the given network. If the value is already in that Set, then do nothing.

Signature:

```
void add_tags (session ref session_id, network ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`string`	value	New value to add

Return Type: `void`

4.21.2.3. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given network.

Signature:

```
void add_to_other_config (session ref session_id, network ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.21.2.4. RPC name: create

Overview:

Create a new network instance, and return its handle.

Signature:

```
network ref create (session ref session_id, network record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
network record	args	All constructor arguments

Return Type: `network ref`

reference to the newly created object

4.21.2.5. RPC name: create_new_blob

Overview:

Create a placeholder for a named binary blob of data that is associated with this pool

Signature:

```
blob ref create_new_blob (session ref session_id, network ref network, string name,
 string mime_type, bool public)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
network ref	network	The network
string	name	The name associated with the blob
string	mime_type	The mime type for the data. Empty string translates to application/octet-stream
bool	public	True if the blob should be publicly available

Return Type: `blob ref`

The reference of the blob, needed for populating its data

4.21.2.6. RPC name: destroy

Overview:

Destroy the specified network instance.

Signature:

```
void destroy (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`network ref`	self	reference to the object

Return Type: `void`

4.21.2.7. RPC name: get_all

Overview:

Return a list of all the networks known to the system.

Signature:

```
network ref set get_all (session ref session_id)
```

4.21.2.8. RPC name: get_all_records

Overview:

Return a map of network references to network records for all networks known to the system.

Signature:

```
(network ref -> network record) map get_all_records (session ref session_id)
```

4.21.2.9. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given network.

Signature:

```
network_operations set get_allowed_operations (session ref session_id, network ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `network_operations set`

value of the field

4.21.2.10. RPC name: get_assigned_ips

Overview:

Get the assigned_ips field of the given network.

Signature:

```
(VIF ref -> string) map get_assigned_ips (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `(VIF ref -> string) map`

value of the field

4.21.2.11. RPC name: get_blobs

Overview:

Get the blobs field of the given network.

Signature:

```
(string -> blob ref) map get_blobs (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `(string -> blob ref) map`

value of the field

4.21.2.12. RPC name: get_bridge

Overview:

Get the bridge field of the given network.

Signature:

```
string get_bridge (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
network ref	self	reference to the object

Return Type: `string`

value of the field

4.21.2.13. RPC name: get_by_name_label

Overview:

Get all the network instances with the given label.

Signature:

```
network ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `network ref set`

references to objects with matching names

4.21.2.14. RPC name: get_by_uuid

Overview:

Get a reference to the network instance with the specified UUID.

Signature:

```
network ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `network ref`

reference to the object

4.21.2.15. RPC name: get_current_operations

Overview:

Get the current_operations field of the given network.

Signature:

```
(string -> network_operations) map get_current_operations (session ref session_id,
 network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `(string -> network_operations) map`

value of the field

4.21.2.16. RPC name: get_default_locking_mode

Overview:

Get the default_locking_mode field of the given network.

Signature:

```
network_default_locking_mode get_default_locking_mode (session ref session_id,
 network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `network_default_locking_mode`

value of the field

4.21.2.17. RPC name: get_managed

Overview:

Get the managed field of the given network.

Signature:

```
bool get_managed (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `bool`

value of the field

4.21.2.18. RPC name: get_MTU

Overview:

Get the MTU field of the given network.

Signature:

```
int get_MTU (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `int`

value of the field

4.21.2.19. RPC name: get_name_description

Overview:

Get the name/description field of the given network.

Signature:

```
string get_name_description (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `string`

value of the field

4.21.2.20. RPC name: get_name_label

Overview:

Get the name/label field of the given network.

Signature:

```
string get_name_label (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
network ref	self	reference to the object

Return Type: `string`

value of the field

4.21.2.21. RPC name: get_other_config

Overview:

Get the other_config field of the given network.

Signature:

```
(string -> string) map get_other_config (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
network ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.21.2.22. RPC name: get_PIFs

Overview:

Get the PIFs field of the given network.

Signature:

```
PIF ref set get_PIFs (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `PIF ref set`

value of the field

4.21.2.23. RPC name: get_purpose

Overview:

Get the purpose field of the given network.

Signature:

```
network_purpose set get_purpose (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `network_purpose set`

value of the field

4.21.2.24. RPC name: get_record

Overview:

Get a record containing the current state of the given network.

Signature:

```
network record get_record (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`network ref`	self	reference to the object

Return Type: `network record`

all fields from the object

4.21.2.25. RPC name: get_tags

Overview:

Get the tags field of the given network.

Signature:

```
string set get_tags (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `string set`

value of the field

4.21.2.26. RPC name: get_uuid

Overview:

Get the uuid field of the given network.

Signature:

```
string get_uuid (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object

Return Type: `string`

value of the field

4.21.2.27. RPC name: get_VIFs

Overview:

Get the VIFs field of the given network.

Signature:

```
VIF ref set get_VIFs (session ref session_id, network ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
network ref	self	reference to the object

Return Type: `VIF ref set`

value of the field

4.21.2.28. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given network. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, network ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
network ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.21.2.29. RPC name: remove_purpose

Overview:

Remove a purpose from a network (if present)

Signature:

```
void remove_purpose (session ref session_id, network ref self, network_purpose
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	The network
`network_purpose`	value	The purpose to remove

Return Type: `void`

4.21.2.30. RPC name: remove_tags

Overview:

Remove the given value from the tags field of the given network. If the value is not in that Set, then do nothing.

Signature:

```
void remove_tags (session ref session_id, network ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`string`	value	Value to remove

Return Type: `void`

4.21.2.31. RPC name: set_default_locking_mode

Overview:

Set the default locking mode for VIFs attached to this network

Signature:

```
void set_default_locking_mode (session ref session_id, network ref network,
 network_default_locking_mode value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`network ref`	network	The network
`network_default_locking_`	value	The default locking mode for VIFs attached to this network.

Return Type: `void`

4.21.2.32. RPC name: set_MTU

Overview:

Set the MTU field of the given network.

Signature:

```
void set_MTU (session ref session_id, network ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`int`	value	New value to set

Return Type: `void`

4.21.2.33. RPC name: set_name_description

Overview:

Set the name/description field of the given network.

Signature:

```
void set_name_description (session ref session_id, network ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.21.2.34. RPC name: set_name_label

Overview:

Set the name/label field of the given network.

Signature:

```
void set_name_label (session ref session_id, network ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.21.2.35. RPC name: set_other_config

Overview:

Set the other_config field of the given network.

Signature:

```
void set_other_config (session ref session_id, network ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.21.2.36. RPC name: set_tags

Overview:

Set the tags field of the given network.

Signature:

```
void set_tags (session ref session_id, network ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	self	reference to the object
`string set`	value	New value to set

Return Type: `void`

4.22. Class: PBD

The physical block devices through which hosts access SRs

4.22.1. Fields for class: PBD

Field	Type	Qualifier	Description
currently_attached	`bool`	*RO/runtime*	is the SR currently attached on this host?
device_config	`(string -> string) map`	*RO/constructor*	a config string to string map that is provided to the host's SR-backend-driver
host	`host ref`	*RO/constructor*	physical machine on which the pbd is available
other_config	`(string -> string) map`	*RW*	additional configuration
SR	`SR ref`	*RO/constructor*	the storage repository that the pbd realises
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.22.2. RPCs associated with class: PBD

4.22.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given PBD.

Signature:

```
void add_to_other_config (session ref session_id, PBD ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PBD ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.22.2.2. RPC name: create

Overview:

Create a new PBD instance, and return its handle.

Signature:

```
PBD ref create (session ref session_id, PBD record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PBD record`	args	All constructor arguments

Return Type: `PBD ref`

reference to the newly created object

4.22.2.3. RPC name: destroy

Overview:

Destroy the specified PBD instance.

Signature:

```
void destroy (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`PBD ref`	self	reference to the object

Return Type: `void`

4.22.2.4. RPC name: get_all

Overview:

Return a list of all the PBDs known to the system.

Signature:

```
PBD ref set get_all (session ref session_id)
```

4.22.2.5. RPC name: get_all_records

Overview:

Return a map of PBD references to PBD records for all PBDs known to the system.

Signature:

```
(PBD ref -> PBD record) map get_all_records (session ref session_id)
```

4.22.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the PBD instance with the specified UUID.

Signature:

```
PBD ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PBD ref`

reference to the object

4.22.2.7. RPC name: get_currently_attached

Overview:

Get the currently_attached field of the given PBD.

Signature:

```
bool get_currently_attached (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	reference to the object

Return Type: `bool`

value of the field

4.22.2.8. RPC name: get_device_config

Overview:

Get the device_config field of the given PBD.

Signature:

```
(string -> string) map get_device_config (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.22.2.9. RPC name: get_host

Overview:

Get the host field of the given PBD.

Signature:

```
host ref get_host (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PBD ref	self	reference to the object

Return Type: `host ref`

value of the field

4.22.2.10. RPC name: get_other_config

Overview:

Get the other_config field of the given PBD.

Signature:

```
(string -> string) map get_other_config (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.22.2.11. RPC name: get_record

Overview:

Get a record containing the current state of the given PBD.

Signature:

```
PBD record get_record (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	reference to the object

Return Type: `PBD record`

all fields from the object

4.22.2.12. RPC name: get_SR

Overview:

Get the SR field of the given PBD.

Signature:

```
SR ref get_SR (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	reference to the object

Return Type: SR ref

value of the field

4.22.2.13. RPC name: get_uuid

Overview:

Get the uuid field of the given PBD.

Signature:

```
string get_uuid (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	reference to the object

Return Type: string

value of the field

4.22.2.14. RPC name: plug

Overview:

Activate the specified PBD, causing the referenced SR to be attached and scanned

Signature:

```
void plug (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PBD ref`	self	The PBD to activate

Return Type: `void`

Possible Error Codes: `SR_UNKNOWN_DRIVER`

4.22.2.15. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given PBD. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, PBD ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PBD ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.22.2.16. RPC name: set_device_config

Overview:

Sets the PBD's device_config field

Signature:

```
void set_device_config (session ref session_id, PBD ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PBD ref	self	The PBD to modify
(string -> string) map	value	The new value of the PBD's device_config

Return Type: void

4.22.2.17. RPC name: set_other_config

Overview:

Set the other_config field of the given PBD.

Signature:

```
void set_other_config (session ref session_id, PBD ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.22.2.18. RPC name: unplug

Overview:

Deactivate the specified PBD, causing the referenced SR to be detached and nolonger scanned

Signature:

```
void unplug (session ref session_id, PBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PBD ref	self	The PBD to deactivate

Return Type: void

4.23. Class: PCI

A PCI device

4.23.1. Fields for class: PCI

Field	Type	Qualifier	Description
class_name	`string`	*RO/constructor*	PCI class name
dependencies	`PCI ref set`	*RO/runtime*	List of dependent PCI devices
device_name	`string`	*RO/constructor*	Device name
host	`host ref`	*RO/constructor*	Physical machine that owns the PCI device
other_config	`(string -> string) map`	*RW*	Additional configuration
pci_id	`string`	*RO/constructor*	PCI ID of the physical device
subsystem_device_name	`string`	*RO/constructor*	Subsystem device name
subsystem_vendor_name	`string`	*RO/constructor*	Subsystem vendor name
uuid	`string`	*RO/runtime*	Unique identifier/object reference
vendor_name	`string`	*RO/constructor*	Vendor name

4.23.2. RPCs associated with class: PCI

4.23.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given PCI.

Signature:

```
void add_to_other_config (session ref session_id, PCI ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object

type	name	description
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.23.2.2. RPC name: get_all

Overview:

Return a list of all the PCIs known to the system.

Signature:

```
PCI ref set get_all (session ref session_id)
```

4.23.2.3. RPC name: get_all_records

Overview:

Return a map of PCI references to PCI records for all PCIs known to the system.

Signature:

```
(PCI ref -> PCI record) map get_all_records (session ref session_id)
```

4.23.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the PCI instance with the specified UUID.

Signature:

```
PCI ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PCI ref`

reference to the object

4.23.2.5. RPC name: get_class_name

Overview:

Get the class_name field of the given PCI.

Signature:

```
string get_class_name (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object

Return Type: `string`

value of the field

4.23.2.6. RPC name: get_dependencies

Overview:

Get the dependencies field of the given PCI.

Signature:

```
PCI ref set get_dependencies (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object

Return Type: `PCI ref set`

value of the field

4.23.2.7. RPC name: get_device_name

Overview:

Get the device_name field of the given PCI.

Signature:

```
string get_device_name (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PCI ref	self	reference to the object

Return Type: `string`

value of the field

4.23.2.8. RPC name: get_host

Overview:

Get the host field of the given PCI.

Signature:

```
host ref get_host (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PCI ref	self	reference to the object

Return Type: `host ref`

value of the field

4.23.2.9. RPC name: get_other_config

Overview:

Get the other_config field of the given PCI.

Signature:

```
(string -> string) map get_other_config (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PCI ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.23.2.10. RPC name: get_pci_id

Overview:

Get the pci_id field of the given PCI.

Signature:

```
string get_pci_id (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object

Return Type: `string`

value of the field

4.23.2.11. RPC name: get_record

Overview:

Get a record containing the current state of the given PCI.

Signature:

```
PCI record get_record (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object

Return Type: `PCI record`

all fields from the object

4.23.2.12. RPC name: get_subsystem_device_name

Overview:

Get the subsystem_device_name field of the given PCI.

Signature:

```
string get_subsystem_device_name (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object

Return Type: `string`

value of the field

4.23.2.13. RPC name: get_subsystem_vendor_name

Overview:

Get the subsystem_vendor_name field of the given PCI.

Signature:

```
string get_subsystem_vendor_name (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object

Return Type: `string`

value of the field

4.23.2.14. RPC name: get_uuid

Overview:

Get the uuid field of the given PCI.

Signature:

```
string get_uuid (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PCI ref	self	reference to the object

Return Type: `string`

value of the field

4.23.2.15. RPC name: get_vendor_name

Overview:

Get the vendor_name field of the given PCI.

Signature:

```
string get_vendor_name (session ref session_id, PCI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PCI ref	self	reference to the object

Return Type: `string`

value of the field

4.23.2.16. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given PCI. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, PCI ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PCI ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.23.2.17. RPC name: set_other_config

Overview:

Set the other_config field of the given PCI.

Signature:

```
void set_other_config (session ref session_id, PCI ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PCI ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.24. Class: PGPU

A physical GPU (pGPU)

4.24.1. Fields for class: PGPU

Field	Type	Qualifier	Description
compatibility_metadata	`(string -> string) map`	*RO/runtime*	PGPU metadata to determine whether a VGPU can migrate between two PGPUs
dom0_access	`pgpu_dom0_access`	*RO/runtime*	The accessibility of this device from dom0
enabled_VGPU_types	`VGPU_type ref set`	*RO/runtime*	List of VGPU types which have been enabled for this PGPU
GPU_group	`GPU_group ref`	*RO/constructor*	GPU group the pGPU is contained in
host	`host ref`	*RO/runtime*	Host that owns the GPU
is_system_display_device	`bool`	*RO/runtime*	Is this device the system display device
other_config	`(string -> string) map`	*RW*	Additional configuration

Field	Type	Qualifier	Description
PCI	`PCI ref`	*RO/constructor*	Link to underlying PCI device
resident_VGPUs	`VGPU ref set`	*RO/runtime*	List of VGPUs running on this PGPU
supported_VGPU_max_ca	`(VGPU_type ref -> int) map`	*RO/runtime*	A map relating each VGPU type supported on this GPU to the maximum number of VGPUs of that type which can run simultaneously on this GPU
supported_VGPU_types	`VGPU_type ref set`	*RO/runtime*	List of VGPU types supported by the underlying hardware
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.24.2. RPCs associated with class: PGPU

4.24.2.1. RPC name: add_enabled_VGPU_types

Overview:

Signature:

```
void add_enabled_VGPU_types (session ref session_id, PGPU ref self, VGPU_type ref
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	The PGPU to which we are adding an enabled VGPU type
`VGPU_type ref`	value	The VGPU type to enable

Return Type: `void`

4.24.2.2. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given PGPU.

Signature:

```
void add_to_other_config (session ref session_id, PGPU ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.24.2.3. RPC name: disable_dom0_access

Overview:

Signature:

```
pgpu_dom0_access disable_dom0_access (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	The PGPU to which dom0 will be denied access

Return Type: `pgpu_dom0_access`

The accessibility of this PGPU from dom0

4.24.2.4. RPC name: enable_dom0_access

Overview:

Signature:

```
pgpu_dom0_access enable_dom0_access (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PGPU ref	self	The PGPU to which dom0 will be granted access

Return Type: pgpu_dom0_access

The accessibility of this PGPU from dom0

4.24.2.5. RPC name: get_all

Overview:

Return a list of all the PGPUs known to the system.

Signature:

```
PGPU ref set get_all (session ref session_id)
```

4.24.2.6. RPC name: get_all_records

Overview:

Return a map of PGPU references to PGPU records for all PGPUs known to the system.

Signature:

```
(PGPU ref -> PGPU record) map get_all_records (session ref session_id)
```

4.24.2.7. RPC name: get_by_uuid

Overview:

Get a reference to the PGPU instance with the specified UUID.

Signature:

```
PGPU ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: PGPU ref

reference to the object

4.24.2.8. RPC name: get_compatibility_metadata

Overview:

Get the compatibility_metadata field of the given PGPU.

Signature:

```
(string -> string) map get_compatibility_metadata (session ref session_id, PGPU ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.24.2.9. RPC name: get_dom0_access

Overview:

Get the dom0_access field of the given PGPU.

Signature:

```
pgpu_dom0_access get_dom0_access (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	reference to the object

Return Type: `pgpu_dom0_access`

value of the field

4.24.2.10. RPC name: get_enabled_VGPU_types

Overview:

Get the enabled_VGPU_types field of the given PGPU.

Signature:

```
VGPU_type ref set get_enabled_VGPU_types (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object

Return Type: `VGPU_type ref set`

value of the field

4.24.2.11. RPC name: get_GPU_group

Overview:

Get the GPU_group field of the given PGPU.

Signature:

```
GPU_group ref get_GPU_group (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object

Return Type: `GPU_group ref`

value of the field

4.24.2.12. RPC name: get_host

Overview:

Get the host field of the given PGPU.

Signature:

```
host ref get_host (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object

Return Type: `host ref`

value of the field

4.24.2.13. RPC name: get_is_system_display_device

Overview:

Get the is_system_display_device field of the given PGPU.

Signature:

```
bool get_is_system_display_device (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object

Return Type: `bool`

value of the field

4.24.2.14. RPC name: get_other_config

Overview:

Get the other_config field of the given PGPU.

Signature:

```
(string -> string) map get_other_config (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.24.2.15. RPC name: get_PCI

Overview:

Get the PCI field of the given PGPU.

Signature:

```
PCI ref get_PCI (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	reference to the object

Return Type: `PCI ref`

value of the field

4.24.2.16. RPC name: get_record

Overview:

Get a record containing the current state of the given PGPU.

Signature:

```
PGPU record get_record (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	reference to the object

Return Type: `PGPU record`

all fields from the object

4.24.2.17. RPC name: get_remaining_capacity

Overview:

Signature:

```
int get_remaining_capacity (session ref session_id, PGPU ref self, VGPU_type ref
 vgpu_type)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	The PGPU to query

type	name	description
VGPU_type ref	vgpu_type	The VGPU type for which we want to find the number of VGPUs which can still be started on this PGPU

Return Type: `int`

The number of VGPUs of the specified type which can still be started on this PGPU

4.24.2.18. RPC name: get_resident_VGPUs

Overview:

Get the resident_VGPUs field of the given PGPU.

Signature:

```
VGPU ref set get_resident_VGPUs (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object

Return Type: `VGPU ref set`

value of the field

4.24.2.19. RPC name: get_supported_VGPU_max_capacities

Overview:

Get the supported_VGPU_max_capacities field of the given PGPU.

Signature:

```
(VGPU_type ref -> int) map get_supported_VGPU_max_capacities (session ref
 session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object

Return Type: `(VGPU_type ref -> int) map`

value of the field

4.24.2.20. RPC name: get_supported_VGPU_types

Overview:

Get the supported_VGPU_types field of the given PGPU.

Signature:

```
VGPU_type ref set get_supported_VGPU_types (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	reference to the object

Return Type: `VGPU_type ref set`

value of the field

4.24.2.21. RPC name: get_uuid

Overview:

Get the uuid field of the given PGPU.

Signature:

```
string get_uuid (session ref session_id, PGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PGPU ref`	self	reference to the object

Return Type: `string`

value of the field

4.24.2.22. RPC name: remove_enabled_VGPU_types

Overview:

Signature:

```
void remove_enabled_VGPU_types (session ref session_id, PGPU ref self, VGPU_type
 ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	The PGPU from which we are removing an enabled VGPU type
VGPU_type ref	value	The VGPU type to disable

Return Type: `void`

4.24.2.23. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given PGPU. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, PGPU ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.24.2.24. RPC name: set_enabled_VGPU_types

Overview:

Signature:

```
void set_enabled_VGPU_types (session ref session_id, PGPU ref self, VGPU_type ref
 set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	The PGPU on which we are enabling a set of VGPU types

type	name	description
VGPU_type ref set	value	The VGPU types to enable

Return Type: void

4.24.2.25. RPC name: set_GPU_group

Overview:

Signature:

```
void set_GPU_group (session ref session_id, PGPU ref self, GPU_group ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	The PGPU to move to a new group
GPU_group ref	value	The group to which the PGPU will be moved

Return Type: void

4.24.2.26. RPC name: set_other_config

Overview:

Set the other_config field of the given PGPU.

Signature:

```
void set_other_config (session ref session_id, PGPU ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PGPU ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.25. Class: PIF

A physical network interface (note separate VLANs are represented as several PIFs)

4.25.1. Fields for class: PIF

Field	Type	Qualifier	Description
bond_master_of	`Bond ref set`	*RO/runtime*	Indicates this PIF represents the results of a bond
bond_slave_of	`Bond ref`	*RO/runtime*	Indicates which bond this interface is part of
capabilities	`string set`	*RO/runtime*	Additional capabilities on the interface.
currently_attached	`bool`	*RO/runtime*	true if this interface is online
device	`string`	*RO/constructor*	machine-readable name of the interface (e.g. eth0)
disallow_unplug	`bool`	*RW*	Prevent this PIF from being unplugged; set this to notify the management tool-stack that the PIF has a special use and should not be unplugged under any circumstances (e.g. because you're running storage traffic over it)
DNS	`string`	*RO/runtime*	IP address of DNS servers to use
gateway	`string`	*RO/runtime*	IP gateway
host	`host ref`	*RO/constructor*	physical machine to which this pif is connected
igmp_snooping_status	`pif_igmp_status`	*RO/runtime*	The IGMP snooping status of the corresponding network bridge
IP	`string`	*RO/runtime*	IP address
ip_configuration_mode	`ip_configuration_m`	*RO/runtime*	Sets if and how this interface gets an IP address
IPv6	`string set`	*RO/runtime*	IPv6 address
ipv6_configuration_mode	`ipv6_configuration`	*RO/runtime*	Sets if and how this interface gets an IPv6 address
ipv6_gateway	`string`	*RO/runtime*	IPv6 gateway

Field	Type	Qualifier	Description
MAC	`string`	*RO/constructor*	ethernet MAC address of physical interface
managed	`bool`	*RO/constructor*	Indicates whether the interface is managed by xapi. If it is not, then xapi will not configure the interface, the commands PIF.plug/ unplug/ reconfigure_ip(v6) can not be used, nor can the interface be bonded or have VLANs based on top through xapi.
management	`bool`	*RO/runtime*	Indicates whether the control software is listening for connections on this interface
metrics	`PIF_metrics ref`	*RO/runtime*	metrics associated with this PIF
MTU	`int`	*RO/constructor*	MTU in octets
netmask	`string`	*RO/runtime*	IP netmask
network	`network ref`	*RO/constructor*	virtual network to which this pif is connected
other_config	`(string -> string) map`	*RW*	Additional configuration
physical	`bool`	*RO/runtime*	true if this represents a physical network interface
primary_address_type	`primary_address_ty`	*RO/runtime*	Which protocol should define the primary address of this interface
properties	`(string -> string) map`	*RO/runtime*	Additional configuration properties for the interface.
tunnel_access_PIF_of	`tunnel ref set`	*RO/runtime*	Indicates to which tunnel this PIF gives access
tunnel_transport_PIF_of	`tunnel ref set`	*RO/runtime*	Indicates to which tunnel this PIF provides transport
uuid	`string`	*RO/runtime*	Unique identifier/object reference

Field	Type	Qualifier	Description
VLAN	`int`	*RO/constructor*	VLAN tag for all traffic passing through this interface
VLAN_master_of	`VLAN ref`	*RO/runtime*	Indicates wich VLAN this interface receives untagged traffic from
VLAN_slave_of	`VLAN ref set`	*RO/runtime*	Indicates which VLANs this interface transmits tagged traffic to

4.25.2. RPCs associated with class: PIF

4.25.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given PIF.

Signature:

```
void add_to_other_config (session ref session_id, PIF ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.25.2.2. RPC name: create_VLAN

This message is deprecated.

Overview:

Create a VLAN interface from an existing physical interface. This call is deprecated: use VLAN.create instead

Signature:

```
PIF ref create_VLAN (session ref session_id, string device, network ref network,
 host ref host, int VLAN)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	device	physical interface on which to create the VLAN interface
network ref	network	network to which this interface should be connected
host ref	host	physical machine to which this PIF is connected
int	VLAN	VLAN tag for the new interface

Return Type: `PIF ref`

The reference of the created PIF object

Possible Error Codes: `VLAN_TAG_INVALID`

4.25.2.3. RPC name: db_forget

Overview:

Destroy a PIF database record.

Signature:

```
void db_forget (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	The ref of the PIF whose database record should be destroyed

Return Type: `void`

4.25.2.4. RPC name: db_introduce

Overview:

Create a new PIF record in the database only

Signature:

```
PIF ref db_introduce (session ref session_id, string device, network ref
 network, host ref host, string MAC, int MTU, int VLAN, bool physical,
 ip_configuration_mode ip_configuration_mode, string IP, string netmask,
 string gateway, string DNS, Bond ref bond_slave_of, VLAN ref VLAN_master_of,
 bool management, (string -> string) map other_config, bool disallow_unplug,
 ipv6_configuration_mode ipv6_configuration_mode, string set IPv6, string
 ipv6_gateway, primary_address_type primary_address_type, bool managed, (string ->
 string) map properties)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	device	
`network ref`	network	
`host ref`	host	
`string`	MAC	
`int`	MTU	
`int`	VLAN	
`bool`	physical	
`ip_configuration_mode`	ip_configuration_mode	
`string`	IP	
`string`	netmask	
`string`	gateway	
`string`	DNS	
`Bond ref`	bond_slave_of	
`VLAN ref`	VLAN_master_of	
`bool`	management	
`(string -> string) map`	other_config	
`bool`	disallow_unplug	
`ipv6_configuration_mode`	ipv6_configuration_mode	
`string set`	IPv6	
`string`	ipv6_gateway	
`primary_address_type`	primary_address_type	
`bool`	managed	
`(string -> string) map`	properties	

Return Type: `PIF ref`

The ref of the newly created PIF record.

4.25.2.5. RPC name: destroy

This message is deprecated.

Overview:

Destroy the PIF object (provided it is a VLAN interface). This call is deprecated: use VLAN.destroy or Bond.destroy instead

Signature:

```
void destroy (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	the PIF object to destroy

Return Type: `void`

Possible Error Codes: `PIF_IS_PHYSICAL`

4.25.2.6. RPC name: forget

Overview:

Destroy the PIF object matching a particular network interface

Signature:

```
void forget (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	The PIF object to destroy

Return Type: `void`

Possible Error Codes: `PIF_TUNNEL_STILL_EXISTS`

4.25.2.7. RPC name: get_all

Overview:

Return a list of all the PIFs known to the system.

Signature:

```
PIF ref set get_all (session ref session_id)
```

4.25.2.8. RPC name: get_all_records

Overview:

Return a map of PIF references to PIF records for all PIFs known to the system.

Signature:

```
(PIF ref -> PIF record) map get_all_records (session ref session_id)
```

4.25.2.9. RPC name: get_bond_master_of

Overview:

Get the bond_master_of field of the given PIF.

Signature:

```
Bond ref set get_bond_master_of (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `Bond ref set`

value of the field

4.25.2.10. RPC name: get_bond_slave_of

Overview:

Get the bond_slave_of field of the given PIF.

Signature:

```
Bond ref get_bond_slave_of (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `Bond ref`

value of the field

4.25.2.11. RPC name: get_by_uuid

Overview:

Get a reference to the PIF instance with the specified UUID.

Signature:

```
PIF ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PIF ref`

reference to the object

4.25.2.12. RPC name: get_capabilities

Overview:

Get the capabilities field of the given PIF.

Signature:

```
string set get_capabilities (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `string set`

value of the field

4.25.2.13. RPC name: get_currently_attached

Overview:

Get the currently_attached field of the given PIF.

Signature:

```
bool get_currently_attached (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `bool`

value of the field

4.25.2.14. RPC name: get_device

Overview:

Get the device field of the given PIF.

Signature:

```
string get_device (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.25.2.15. RPC name: get_disallow_unplug

Overview:

Get the disallow_unplug field of the given PIF.

Signature:

```
bool get_disallow_unplug (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `bool`

value of the field

4.25.2.16. RPC name: get_DNS

Overview:

Get the DNS field of the given PIF.

Signature:

```
string get_DNS (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.25.2.17. RPC name: get_gateway

Overview:

Get the gateway field of the given PIF.

Signature:

```
string get_gateway (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.25.2.18. RPC name: get_host

Overview:

Get the host field of the given PIF.

Signature:

```
host ref get_host (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `host ref`

value of the field

4.25.2.19. RPC name: get_igmp_snooping_status

Overview:

Get the igmp_snooping_status field of the given PIF.

Signature:

```
pif_igmp_status get_igmp_snooping_status (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `pif_igmp_status`

value of the field

4.25.2.20. RPC name: get_IP

Overview:

Get the IP field of the given PIF.

Signature:

```
string get_IP (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `string`

value of the field

4.25.2.21. RPC name: get_ip_configuration_mode

Overview:

Get the ip_configuration_mode field of the given PIF.

Signature:

```
ip_configuration_mode get_ip_configuration_mode (session ref session_id, PIF ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `ip_configuration_mode`

value of the field

4.25.2.22. RPC name: get_IPv6

Overview:

Get the IPv6 field of the given PIF.

Signature:

```
string set get_IPv6 (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `string set`

value of the field

4.25.2.23. RPC name: get_ipv6_configuration_mode

Overview:

Get the ipv6_configuration_mode field of the given PIF.

Signature:

```
ipv6_configuration_mode get_ipv6_configuration_mode (session ref session_id, PIF
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `ipv6_configuration_mode`

value of the field

4.25.2.24. RPC name: get_ipv6_gateway

Overview:

Get the ipv6_gateway field of the given PIF.

Signature:

```
string get_ipv6_gateway (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `string`

value of the field

4.25.2.25. RPC name: get_MAC

Overview:

Get the MAC field of the given PIF.

Signature:

```
string get_MAC (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `string`

value of the field

4.25.2.26. RPC name: get_managed

Overview:

Get the managed field of the given PIF.

Signature:

```
bool get_managed (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `bool`

value of the field

4.25.2.27. RPC name: get_management

Overview:

Get the management field of the given PIF.

Signature:

```
bool get_management (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `bool`

value of the field

4.25.2.28. RPC name: get_metrics

Overview:

Get the metrics field of the given PIF.

Signature:

```
PIF_metrics ref get_metrics (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `PIF_metrics ref`

value of the field

4.25.2.29. RPC name: get_MTU

Overview:

Get the MTU field of the given PIF.

Signature:

```
int get_MTU (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `int`

value of the field

4.25.2.30. RPC name: get_netmask

Overview:

Get the netmask field of the given PIF.

Signature:

```
string get_netmask (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.25.2.31. RPC name: get_network

Overview:

Get the network field of the given PIF.

Signature:

```
network ref get_network (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `network ref`

value of the field

4.25.2.32. RPC name: get_other_config

Overview:

Get the other_config field of the given PIF.

Signature:

```
(string -> string) map get_other_config (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.25.2.33. RPC name: get_physical

Overview:

Get the physical field of the given PIF.

Signature:

```
bool get_physical (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `bool`

value of the field

4.25.2.34. RPC name: get_primary_address_type

Overview:

Get the primary_address_type field of the given PIF.

Signature:

```
primary_address_type get_primary_address_type (session ref session_id, PIF ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `primary_address_type`

value of the field

4.25.2.35. RPC name: get_properties

Overview:

Get the properties field of the given PIF.

Signature:

```
(string -> string) map get_properties (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.25.2.36. RPC name: get_record

Overview:

Get a record containing the current state of the given PIF.

Signature:

```
PIF record get_record (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `PIF record`

all fields from the object

4.25.2.37. RPC name: get_tunnel_access_PIF_of

Overview:

Get the tunnel_access_PIF_of field of the given PIF.

Signature:

```
tunnel ref set get_tunnel_access_PIF_of (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	reference to the object

Return Type: `tunnel ref set`

value of the field

4.25.2.38. RPC name: get_tunnel_transport_PIF_of

Overview:

Get the tunnel_transport_PIF_of field of the given PIF.

Signature:

```
tunnel ref set get_tunnel_transport_PIF_of (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `tunnel ref set`

value of the field

4.25.2.39. RPC name: get_uuid

Overview:

Get the uuid field of the given PIF.

Signature:

```
string get_uuid (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `string`

value of the field

4.25.2.40. RPC name: get_VLAN

Overview:

Get the VLAN field of the given PIF.

Signature:

```
int get_VLAN (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `int`

value of the field

4.25.2.41. RPC name: get_VLAN_master_of

Overview:

Get the VLAN_master_of field of the given PIF.

Signature:

```
VLAN ref get_VLAN_master_of (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `VLAN ref`

value of the field

4.25.2.42. RPC name: get_VLAN_slave_of

Overview:

Get the VLAN_slave_of field of the given PIF.

Signature:

```
VLAN ref set get_VLAN_slave_of (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

Return Type: `VLAN ref set`

value of the field

4.25.2.43. RPC name: introduce

Overview:

Create a PIF object matching a particular network interface

Signature:

```
PIF ref introduce (session ref session_id, host ref host, string MAC, string
 device, bool managed)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host on which the interface exists
string	MAC	The MAC address of the interface
string	device	The device name to use for the interface
bool	managed	Indicates whether the interface is managed by xapi (defaults to "true")

Return Type: `PIF ref`

The reference of the created PIF object

4.25.2.44. RPC name: plug

Overview:

Attempt to bring up a physical interface

Signature:

```
void plug (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	the PIF object to plug

Return Type: `void`

Possible Error Codes: `TRANSPORT_PIF_NOT_CONFIGURED`

4.25.2.45. RPC name: reconfigure_ip

Overview:

Reconfigure the IP address settings for this interface

Signature:

```
void reconfigure_ip (session ref session_id, PIF ref self, ip_configuration_mode
 mode, string IP, string netmask, string gateway, string DNS)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	the PIF object to reconfigure
`ip_configuration_mode`	mode	whether to use dynamic/static/no-assignment
`string`	IP	the new IP address
`string`	netmask	the new netmask
`string`	gateway	the new gateway
`string`	DNS	the new DNS settings

Return Type: `void`

4.25.2.46. RPC name: reconfigure_ipv6

Overview:

Reconfigure the IPv6 address settings for this interface

Signature:

```
void reconfigure_ipv6 (session ref session_id, PIF ref self,
 ipv6_configuration_mode mode, string IPv6, string gateway, string DNS)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	self	the PIF object to reconfigure
`ipv6_configuration_mode`	mode	whether to use dynamic/static/no-assignment
`string`	IPv6	the new IPv6 address (in <addr>/<prefix length> format)
`string`	gateway	the new gateway
`string`	DNS	the new DNS settings

Return Type: `void`

4.25.2.47. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given PIF. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, PIF ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.25.2.48. RPC name: scan

Overview:

Scan for physical interfaces on a host and create PIF objects to represent them

Signature:

```
void scan (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host on which to scan

Return Type: `void`

4.25.2.49. RPC name: set_disallow_unplug

Overview:

Set the disallow_unplug field of the given PIF.

Signature:

```
void set_disallow_unplug (session ref session_id, PIF ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object

type	name	description
bool	value	New value to set

Return Type: `void`

4.25.2.50. RPC name: set_other_config

Overview:

Set the other_config field of the given PIF.

Signature:

```
void set_other_config (session ref session_id, PIF ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: `void`

4.25.2.51. RPC name: set_primary_address_type

Overview:

Change the primary address type used by this PIF

Signature:

```
void set_primary_address_type (session ref session_id, PIF ref self,
 primary_address_type primary_address_type)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	the PIF object to reconfigure
primary_address_type	primary_address_type	Whether to prefer IPv4 or IPv6 connections

Return Type: `void`

4.25.2.52. RPC name: set_property

Overview:

Set the value of a property of the PIF

Signature:

```
void set_property (session ref session_id, PIF ref self, string name, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	The PIF
string	name	The property name
string	value	The property value

Return Type: void

4.25.2.53. RPC name: unplug

Overview:

Attempt to bring down a physical interface

Signature:

```
void unplug (session ref session_id, PIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	self	the PIF object to unplug

Return Type: void

4.26. Class: PIF_metrics

The metrics associated with a physical network interface

4.26.1. Fields for class: PIF_metrics

Field	Type	Qualifier	Description
carrier	bool	*RO/runtime*	Report if the PIF got a carrier or not
device_id	string	*RO/runtime*	Report device ID
device_name	string	*RO/runtime*	Report device name

Field	Type	Qualifier	Description
duplex	`bool`	*RO/runtime*	Full duplex capability of the link (if available)
io_read_kbs	`float`	*RO/runtime*	**Removed**. Read bandwidth (KiB/s)
io_write_kbs	`float`	*RO/runtime*	**Removed**. Write bandwidth (KiB/s)
last_updated	`datetime`	*RO/runtime*	Time at which this information was last updated
other_config	`(string -> string) map`	*RW*	additional configuration
pci_bus_path	`string`	*RO/runtime*	PCI bus path of the pif (if available)
speed	`int`	*RO/runtime*	Speed of the link (if available)
uuid	`string`	*RO/runtime*	Unique identifier/object reference
vendor_id	`string`	*RO/runtime*	Report vendor ID
vendor_name	`string`	*RO/runtime*	Report vendor name

4.26.2. RPCs associated with class: PIF_metrics

4.26.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given PIF_metrics.

Signature:

```
void add_to_other_config (session ref session_id, PIF_metrics ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.26.2.2. RPC name: get_all

Overview:

Return a list of all the PIF_metrics instances known to the system.

Signature:

```
PIF_metrics ref set get_all (session ref session_id)
```

4.26.2.3. RPC name: get_all_records

Overview:

Return a map of PIF_metrics references to PIF_metrics records for all PIF_metrics instances known to the system.

Signature:

```
(PIF_metrics ref -> PIF_metrics record) map get_all_records (session ref
 session_id)
```

4.26.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the PIF_metrics instance with the specified UUID.

Signature:

```
PIF_metrics ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PIF_metrics ref`

reference to the object

4.26.2.5. RPC name: get_carrier

Overview:

Get the carrier field of the given PIF_metrics.

Signature:

```
bool get_carrier (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`PIF_metrics ref`	self	reference to the object

Return Type: `bool`

value of the field

4.26.2.6. RPC name: get_device_id

Overview:

Get the device_id field of the given PIF_metrics.

Signature:

```
string get_device_id (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.26.2.7. RPC name: get_device_name

Overview:

Get the device_name field of the given PIF_metrics.

Signature:

```
string get_device_name (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.26.2.8. RPC name: get_duplex

Overview:

Get the duplex field of the given PIF_metrics.

Signature:

```
bool get_duplex (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `bool`

value of the field

4.26.2.9. RPC name: get_io_read_kbs

This message is removed.

Overview:

Get the io/read_kbs field of the given PIF_metrics.

Signature:

```
float get_io_read_kbs (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `float`

value of the field

4.26.2.10. RPC name: get_io_write_kbs

This message is removed.

Overview:

Get the io/write_kbs field of the given PIF_metrics.

Signature:

```
float get_io_write_kbs (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PIF_metrics ref	self	reference to the object

Return Type: `float`

value of the field

4.26.2.11. RPC name: get_last_updated

Overview:

Get the last_updated field of the given PIF_metrics.

Signature:

```
datetime get_last_updated (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF_metrics ref	self	reference to the object

Return Type: `datetime`

value of the field

4.26.2.12. RPC name: get_other_config

Overview:

Get the other_config field of the given PIF_metrics.

Signature:

```
(string -> string) map get_other_config (session ref session_id, PIF_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF_metrics ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.26.2.13. RPC name: get_pci_bus_path

Overview:

Get the pci_bus_path field of the given PIF_metrics.

Signature:

```
string get_pci_bus_path (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.26.2.14. RPC name: get_record

Overview:

Get a record containing the current state of the given PIF_metrics.

Signature:

```
PIF_metrics record get_record (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `PIF_metrics record`

all fields from the object

4.26.2.15. RPC name: get_speed

Overview:

Get the speed field of the given PIF_metrics.

Signature:

```
int get_speed (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `int`

value of the field

4.26.2.16. RPC name: get_uuid

Overview:

Get the uuid field of the given PIF_metrics.

Signature:

```
string get_uuid (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.26.2.17. RPC name: get_vendor_id

Overview:

Get the vendor_id field of the given PIF_metrics.

Signature:

```
string get_vendor_id (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.26.2.18. RPC name: get_vendor_name

Overview:

Get the vendor_name field of the given PIF_metrics.

Signature:

```
string get_vendor_name (session ref session_id, PIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.26.2.19. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given PIF_metrics. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, PIF_metrics ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.26.2.20. RPC name: set_other_config

Overview:

Set the other_config field of the given PIF_metrics.

Signature:

```
void set_other_config (session ref session_id, PIF_metrics ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF_metrics ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.27. Class: pool

Pool-wide information

4.27.1. Fields for class: pool

Field	Type	Qualifier	Description
allowed_operations	`pool_allowed_opera set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
blobs	`(string -> blob ref) map`	*RO/runtime*	Binary blobs associated with this pool
cpu_info	`(string -> string) map`	*RO/runtime*	Details about the physical CPUs on the pool
crash_dump_SR	`SR ref`	*RW*	The SR in which VDIs for crash dumps are created
current_operations	`(string -> pool_allowed_opera map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
default_SR	`SR ref`	*RW*	Default SR for VDIs
guest_agent_config	`(string -> string) map`	*RO/runtime*	Pool-wide guest agent configuration information
gui_config	`(string -> string) map`	*RW*	gui-specific configuration for pool
ha_allow_overcommit	`bool`	*RW*	If set to false then operations which would cause the Pool to become overcommitted will be blocked.
ha_cluster_stack	`string`	*RO/runtime*	The HA cluster stack that is currently in use. Only valid when HA is enabled.
ha_configuration	`(string -> string) map`	*RO/runtime*	The current HA configuration
ha_enabled	`bool`	*RO/runtime*	true if HA is enabled on the pool, false otherwise

Field	Type	Qualifier	Description
ha_host_failures_to_tolera	`int`	*RO/runtime*	Number of host failures to tolerate before the Pool is declared to be overcommitted
ha_overcommitted	`bool`	*RO/runtime*	True if the Pool is considered to be overcommitted i.e. if there exist insufficient physical resources to tolerate the configured number of host failures
ha_plan_exists_for	`int`	*RO/runtime*	Number of future host failures we have managed to find a plan for. Once this reaches zero any future host failures will cause the failure of protected VMs.
ha_statefiles	`string set`	*RO/runtime*	HA statefile VDIs in use
health_check_config	`(string -> string) map`	*RW*	Configuration for the automatic health check feature
igmp_snooping_enabled	`bool`	*RO/runtime*	true if IGMP snooping is enabled in the pool, false otherwise.
live_patching_disabled	`bool`	*RW*	The pool-wide flag to show if the live patching feauture is disabled or not.
master	`host ref`	*RO/runtime*	The host that is pool master
metadata_VDIs	`VDI ref set`	*RO/runtime*	The set of currently known metadata VDIs for this pool
name_description	`string`	*RW*	Description
name_label	`string`	*RW*	Short name
other_config	`(string -> string) map`	*RW*	additional configuration

Field	Type	Qualifier	Description
policy_no_vendor_device	`bool`	*RW*	The pool-wide policy for clients on whether to use the vendor device or not on newly created VMs. This field will also be consulted if the 'has_vendor_device' field is not specified in the VM.create call.
redo_log_enabled	`bool`	*RO/runtime*	true a redo-log is to be used other than when HA is enabled, false otherwise
redo_log_vdi	`VDI ref`	*RO/runtime*	indicates the VDI to use for the redo-log other than when HA is enabled
restrictions	`(string -> string) map`	*RO/runtime*	Pool-wide restrictions currently in effect
suspend_image_SR	`SR ref`	*RW*	The SR in which VDIs for suspend images are created
tags	`string set`	*RW*	user-specified tags for categorization purposes
uuid	`string`	*RO/runtime*	Unique identifier/object reference
vswitch_controller	`string`	*RO/runtime*	**Deprecated**. address of the vswitch controller
wlb_enabled	`bool`	*RW*	true if workload balancing is enabled on the pool, false otherwise
wlb_url	`string`	*RO/runtime*	Url for the configured workload balancing host
wlb_username	`string`	*RO/runtime*	Username for accessing the workload balancing host
wlb_verify_cert	`bool`	*RW*	true if communication with the WLB server should enforce SSL certificate verification.

4.27.2. RPCs associated with class: pool

4.27.2.1. RPC name: add_tags

Overview:

Add the given value to the tags field of the given pool. If the value is already in that Set, then do nothing.

Signature:

```
void add_tags (session ref session_id, pool ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	value	New value to add

Return Type: void

4.27.2.2. RPC name: add_to_guest_agent_config

Overview:

Add a key-value pair to the pool-wide guest agent configuration

Signature:

```
void add_to_guest_agent_config (session ref session_id, pool ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	The pool
string	key	The key to add
string	value	The value to add

Return Type: void

4.27.2.3. RPC name: add_to_gui_config

Overview:

Add the given key-value pair to the gui_config field of the given pool.

Signature:

```
void add_to_gui_config (session ref session_id, pool ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.27.2.4. RPC name: add_to_health_check_config

Overview:

Add the given key-value pair to the health_check_config field of the given pool.

Signature:

```
void add_to_health_check_config (session ref session_id, pool ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.27.2.5. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given pool.

Signature:

```
void add_to_other_config (session ref session_id, pool ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	key	Key to add

type	name	description
string	value	Value to add

Return Type: void

4.27.2.6. RPC name: apply_edition

Overview:

Apply an edition to all hosts in the pool

Signature:

```
void apply_edition (session ref session_id, pool ref self, string edition)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	Reference to the pool
string	edition	The requested edition

Return Type: void

4.27.2.7. RPC name: certificate_install

Overview:

Install an SSL certificate pool-wide.

Signature:

```
void certificate_install (session ref session_id, string name, string cert)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	name	A name to give the certificate
string	cert	The certificate

Return Type: void

4.27.2.8. RPC name: certificate_list

Overview:

List all installed SSL certificates.

Signature:

```
string set certificate_list (session ref session_id)
```

4.27.2.9. RPC name: certificate_sync

Overview:

Sync SSL certificates from master to slaves.

Signature:

```
void certificate_sync (session ref session_id)
```

4.27.2.10. RPC name: certificate_uninstall

Overview:

Remove an SSL certificate.

Signature:

```
void certificate_uninstall (session ref session_id, string name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	name	The certificate name

Return Type: `void`

4.27.2.11. RPC name: create_new_blob

Overview:

Create a placeholder for a named binary blob of data that is associated with this pool

Signature:

```
blob ref create_new_blob (session ref session_id, pool ref pool, string name,
 string mime_type, bool public)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	pool	The pool
string	name	The name associated with the blob
string	mime_type	The mime type for the data. Empty string translates to application/ octet-stream

type	name	description
`bool`	public	True if the blob should be publicly available

Return Type: `blob ref`

The reference of the blob, needed for populating its data

4.27.2.12. RPC name: create_VLAN

Overview:

Create PIFs, mapping a network to the same physical interface/VLAN on each host. This call is deprecated: use Pool.create_VLAN_from_PIF instead.

Signature:

```
PIF ref set create_VLAN (session ref session_id, string device, network ref
 network, int VLAN)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	device	physical interface on which to create the VLAN interface
`network ref`	network	network to which this interface should be connected
`int`	VLAN	VLAN tag for the new interface

Return Type: `PIF ref set`

The references of the created PIF objects

Possible Error Codes: `VLAN_TAG_INVALID`

4.27.2.13. RPC name: create_VLAN_from_PIF

Overview:

Create a pool-wide VLAN by taking the PIF.

Signature:

```
PIF ref set create_VLAN_from_PIF (session ref session_id, PIF ref pif, network ref
 network, int VLAN)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PIF ref	pif	physical interface on any particular host, that identifies the PIF on which to create the (pool-wide) VLAN interface
network ref	network	network to which this interface should be connected
int	VLAN	VLAN tag for the new interface

Return Type: `PIF ref set`

The references of the created PIF objects

Possible Error Codes: `VLAN_TAG_INVALID`

4.27.2.14. RPC name: crl_install

Overview:

Install an SSL certificate revocation list, pool-wide.

Signature:

```
void crl_install (session ref session_id, string name, string cert)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	name	A name to give the CRL
string	cert	The CRL

Return Type: `void`

4.27.2.15. RPC name: crl_list

Overview:

List all installed SSL certificate revocation lists.

Signature:

```
string set crl_list (session ref session_id)
```

4.27.2.16. RPC name: crl_uninstall

Overview:

Remove an SSL certificate revocation list.

Signature:

```
void crl_uninstall (session ref session_id, string name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	name	The CRL name

Return Type: `void`

4.27.2.17. RPC name: deconfigure_wlb

Overview:

Permanently deconfigures workload balancing monitoring on this pool

Signature:

```
void deconfigure_wlb (session ref session_id)
```

4.27.2.18. RPC name: designate_new_master

Overview:

Perform an orderly handover of the role of master to the referenced host.

Signature:

```
void designate_new_master (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host who should become the new master

Return Type: `void`

4.27.2.19. RPC name: detect_nonhomogeneous_external_auth

Overview:

This call asynchronously detects if the external authentication configuration in any slave is different from that in the master and raises appropriate alerts

Signature:

```
void detect_nonhomogeneous_external_auth (session ref session_id, pool ref pool)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	pool	The pool where to detect non-homogeneous external authentication configuration

Return Type: void

4.27.2.20. RPC name: disable_external_auth

Overview:

This call disables external authentication on all the hosts of the pool

Signature:

```
void disable_external_auth (session ref session_id, pool ref pool, (string ->
 string) map config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	pool	The pool whose external authentication should be disabled
(string -> string) map	config	Optional parameters as a list of key-values containing the configuration data

Return Type: void

4.27.2.21. RPC name: disable_ha

Overview:

Turn off High Availability mode

Signature:

```
void disable_ha (session ref session_id)
```

4.27.2.22. RPC name: disable_local_storage_caching

Overview:

This call disables pool-wide local storage caching

Signature:

```
void disable_local_storage_caching (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	Reference to the pool

Return Type: `void`

4.27.2.23. RPC name: disable_redo_log

Overview:

Disable the redo log if in use, unless HA is enabled.

Signature:

```
void disable_redo_log (session ref session_id)
```

4.27.2.24. RPC name: disable_ssl_legacy

Overview:

Sets ssl_legacy true on each host, pool-master last. See Host.ssl_legacy and Host.set_ssl_legacy.

Signature:

```
void disable_ssl_legacy (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	(ignored)

Return Type: `void`

4.27.2.25. RPC name: eject

Overview:

Instruct a pool master to eject a host from the pool

Signature:

```
void eject (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host to eject

Return Type: `void`

4.27.2.26. RPC name: emergency_reset_master

Overview:

Instruct a slave already in a pool that the master has changed

Signature:

```
void emergency_reset_master (session ref session_id, string master_address)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	master_address	The hostname of the master

Return Type: `void`

4.27.2.27. RPC name: emergency_transition_to_master

Overview:

Instruct host that's currently a slave to transition to being master

Signature:

```
void emergency_transition_to_master (session ref session_id)
```

4.27.2.28. RPC name: enable_external_auth

Overview:

This call enables external authentication on all the hosts of the pool

Signature:

```
void enable_external_auth (session ref session_id, pool ref pool, (string ->
 string) map config, string service_name, string auth_type)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	pool	The pool whose external authentication should be enabled
`(string -> string) map`	config	A list of key-values containing the configuration data
`string`	service_name	The name of the service

type	name	description
string	auth_type	The type of authentication (e.g. AD for Active Directory)

Return Type: void

4.27.2.29. RPC name: enable_ha

Overview:

Turn on High Availability mode

Signature:

```
void enable_ha (session ref session_id, SR ref set heartbeat_srs, (string ->
 string) map configuration)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref set	heartbeat_srs	Set of SRs to use for storage heartbeating
(string -> string) map	configuration	Detailed HA configuration to apply

Return Type: void

4.27.2.30. RPC name: enable_local_storage_caching

Overview:

This call attempts to enable pool-wide local storage caching

Signature:

```
void enable_local_storage_caching (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	Reference to the pool

Return Type: void

4.27.2.31. RPC name: enable_redo_log

Overview:

Enable the redo log on the given SR and start using it, unless HA is enabled.

Signature:

```
void enable_redo_log (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	SR to hold the redo log.

Return Type: `void`

4.27.2.32. RPC name: enable_ssl_legacy

Overview:

Sets ssl_legacy true on each host, pool-master last. See Host.ssl_legacy and Host.set_ssl_legacy.

Signature:

```
void enable_ssl_legacy (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	(ignored)

Return Type: `void`

4.27.2.33. RPC name: get_all

Overview:

Return a list of all the pools known to the system.

Signature:

```
pool ref set get_all (session ref session_id)
```

4.27.2.34. RPC name: get_all_records

Overview:

Return a map of pool references to pool records for all pools known to the system.

Signature:

```
(pool ref -> pool record) map get_all_records (session ref session_id)
```

4.27.2.35. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given pool.

Signature:

```
pool_allowed_operations set get_allowed_operations (session ref session_id, pool
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `pool_allowed_operations set`

value of the field

4.27.2.36. RPC name: get_blobs

Overview:

Get the blobs field of the given pool.

Signature:

```
(string -> blob ref) map get_blobs (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `(string -> blob ref) map`

value of the field

4.27.2.37. RPC name: get_by_uuid

Overview:

Get a reference to the pool instance with the specified UUID.

Signature:

```
pool ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
string	uuid	UUID of object to return

Return Type: pool ref

reference to the object

4.27.2.38. RPC name: get_cpu_info

Overview:

Get the cpu_info field of the given pool.

Signature:

```
(string -> string) map get_cpu_info (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: (string -> string) map

value of the field

4.27.2.39. RPC name: get_crash_dump_SR

Overview:

Get the crash_dump_SR field of the given pool.

Signature:

```
SR ref get_crash_dump_SR (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: SR ref

value of the field

4.27.2.40. RPC name: get_current_operations

Overview:

Get the current_operations field of the given pool.

Signature:

```
(string -> pool_allowed_operations) map get_current_operations (session ref
 session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `(string -> pool_allowed_operations) map`

value of the field

4.27.2.41. RPC name: get_default_SR

Overview:

Get the default_SR field of the given pool.

Signature:

```
SR ref get_default_SR (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `SR ref`

value of the field

4.27.2.42. RPC name: get_guest_agent_config

Overview:

Get the guest_agent_config field of the given pool.

Signature:

```
(string -> string) map get_guest_agent_config (session ref session_id, pool ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
pool ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.27.2.43. RPC name: get_gui_config

Overview:

Get the gui_config field of the given pool.

Signature:

```
(string -> string) map get_gui_config (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.27.2.44. RPC name: get_ha_allow_overcommit

Overview:

Get the ha_allow_overcommit field of the given pool.

Signature:

```
bool get_ha_allow_overcommit (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.45. RPC name: get_ha_cluster_stack

Overview:

Get the ha_cluster_stack field of the given pool.

Signature:

```
string get_ha_cluster_stack (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `string`

value of the field

4.27.2.46. RPC name: get_ha_configuration

Overview:

Get the ha_configuration field of the given pool.

Signature:

```
(string -> string) map get_ha_configuration (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.27.2.47. RPC name: get_ha_enabled

Overview:

Get the ha_enabled field of the given pool.

Signature:

```
bool get_ha_enabled (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.48. RPC name: get_ha_host_failures_to_tolerate

Overview:

Get the ha_host_failures_to_tolerate field of the given pool.

Signature:

```
int get_ha_host_failures_to_tolerate (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `int`

value of the field

4.27.2.49. RPC name: get_ha_overcommitted

Overview:

Get the ha_overcommitted field of the given pool.

Signature:

```
bool get_ha_overcommitted (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.50. RPC name: get_ha_plan_exists_for

Overview:

Get the ha_plan_exists_for field of the given pool.

Signature:

```
int get_ha_plan_exists_for (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `int`

value of the field

4.27.2.51. RPC name: get_ha_statefiles

Overview:

Get the ha_statefiles field of the given pool.

Signature:

```
string set get_ha_statefiles (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `string set`

value of the field

4.27.2.52. RPC name: get_health_check_config

Overview:

Get the health_check_config field of the given pool.

Signature:

```
(string -> string) map get_health_check_config (session ref session_id, pool ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.27.2.53. RPC name: get_igmp_snooping_enabled

Overview:

Get the igmp_snooping_enabled field of the given pool.

Signature:

```
bool get_igmp_snooping_enabled (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: bool

value of the field

4.27.2.54. RPC name: get_license_state

Overview:

This call returns the license state for the pool

Signature:

```
(string -> string) map get_license_state (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	Reference to the pool

Return Type: (string -> string) map

The pool's license state

4.27.2.55. RPC name: get_live_patching_disabled

Overview:

Get the live_patching_disabled field of the given pool.

Signature:

```
bool get_live_patching_disabled (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.56. RPC name: get_master

Overview:

Get the master field of the given pool.

Signature:

```
host ref get_master (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `host ref`

value of the field

4.27.2.57. RPC name: get_metadata_VDIs

Overview:

Get the metadata_VDIs field of the given pool.

Signature:

```
VDI ref set get_metadata_VDIs (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `VDI ref set`

value of the field

4.27.2.58. RPC name: get_name_description

Overview:

Get the name_description field of the given pool.

Signature:

```
string get_name_description (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `string`

value of the field

4.27.2.59. RPC name: get_name_label

Overview:

Get the name_label field of the given pool.

Signature:

```
string get_name_label (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `string`

value of the field

4.27.2.60. RPC name: get_other_config

Overview:

Get the other_config field of the given pool.

Signature:

```
(string -> string) map get_other_config (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
pool ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.27.2.61. RPC name: get_policy_no_vendor_device

Overview:

Get the policy_no_vendor_device field of the given pool.

Signature:

```
bool get_policy_no_vendor_device (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.62. RPC name: get_record

Overview:

Get a record containing the current state of the given pool.

Signature:

```
pool record get_record (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `pool record`

all fields from the object

4.27.2.63. RPC name: get_redo_log_enabled

Overview:

Get the redo_log_enabled field of the given pool.

Signature:

```
bool get_redo_log_enabled (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.64. RPC name: get_redo_log_vdi

Overview:

Get the redo_log_vdi field of the given pool.

Signature:

```
VDI ref get_redo_log_vdi (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `VDI ref`

value of the field

4.27.2.65. RPC name: get_restrictions

Overview:

Get the restrictions field of the given pool.

Signature:

```
(string -> string) map get_restrictions (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.27.2.66. RPC name: get_suspend_image_SR

Overview:

Get the suspend_image_SR field of the given pool.

Signature:

```
SR ref get_suspend_image_SR (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `SR ref`

value of the field

4.27.2.67. RPC name: get_tags

Overview:

Get the tags field of the given pool.

Signature:

```
string set get_tags (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `string set`

value of the field

4.27.2.68. RPC name: get_uuid

Overview:

Get the uuid field of the given pool.

Signature:

```
string get_uuid (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `string`

value of the field

4.27.2.69. RPC name: get_vswitch_controller

This message is deprecated.

Overview:

Get the vswitch_controller field of the given pool.

Signature:

```
string get_vswitch_controller (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `string`

value of the field

4.27.2.70. RPC name: get_wlb_enabled

Overview:

Get the wlb_enabled field of the given pool.

Signature:

```
bool get_wlb_enabled (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.71. RPC name: get_wlb_url

Overview:

Get the wlb_url field of the given pool.

Signature:

```
string get_wlb_url (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `string`

value of the field

4.27.2.72. RPC name: get_wlb_username

Overview:

Get the wlb_username field of the given pool.

Signature:

```
string get_wlb_username (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `string`

value of the field

4.27.2.73. RPC name: get_wlb_verify_cert

Overview:

Get the wlb_verify_cert field of the given pool.

Signature:

```
bool get_wlb_verify_cert (session ref session_id, pool ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

Return Type: `bool`

value of the field

4.27.2.74. RPC name: ha_compute_hypothetical_max_host_failures_to_tolerate

Overview:

Returns the maximum number of host failures we could tolerate before we would be unable to restart the provided VMs

Signature:

```
int ha_compute_hypothetical_max_host_failures_to_tolerate (session ref session_id,
 (VM ref -> string) map configuration)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
(VM ref -> string) map	configuration	Map of protected VM reference to restart priority

Return Type: `int`

maximum value for ha_host_failures_to_tolerate given provided configuration

4.27.2.75. RPC name: ha_compute_max_host_failures_to_tolerate

Overview:

Returns the maximum number of host failures we could tolerate before we would be unable to restart configured VMs

Signature:

```
int ha_compute_max_host_failures_to_tolerate (session ref session_id)
```

4.27.2.76. RPC name: ha_compute_vm_failover_plan

Overview:

Return a VM failover plan assuming a given subset of hosts fail

Signature:

```
(VM ref -> (string -> string) map) map ha_compute_vm_failover_plan (session ref
 session_id, host ref set failed_hosts, VM ref set failed_vms)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref set	failed_hosts	The set of hosts to assume have failed
VM ref set	failed_vms	The set of VMs to restart

Return Type: `(VM ref -> (string -> string) map) map`

VM failover plan: a map of VM to host to restart the host on

4.27.2.77. RPC name: ha_failover_plan_exists

Overview:

Returns true if a VM failover plan exists for up to 'n' host failures

Signature:

```
bool ha_failover_plan_exists (session ref session_id, int n)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
int	n	The number of host failures to plan for

Return Type: `bool`

true if a failover plan exists for the supplied number of host failures

4.27.2.78. RPC name: ha_prevent_restarts_for

Overview:

When this call returns the VM restart logic will not run for the requested number of seconds. If the argument is zero then the restart thread is immediately unblocked

Signature:

```
void ha_prevent_restarts_for (session ref session_id, int seconds)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
int	seconds	The number of seconds to block the restart thread for

Return Type: `void`

4.27.2.79. RPC name: has_extension

Overview:

Return true if the extension is available on the pool

Signature:

```
bool has_extension (session ref session_id, pool ref self, string name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	The pool
string	name	The name of the API call

Return Type: bool

True if the extension exists, false otherwise

4.27.2.80. RPC name: initialize_wlb

Overview:

Initializes workload balancing monitoring on this pool with the specified wlb server

Signature:

```
void initialize_wlb (session ref session_id, string wlb_url, string wlb_username,
 string wlb_password, string xenserver_username, string xenserver_password)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	wlb_url	The ip address and port to use when accessing the wlb server
string	wlb_username	The username used to authenticate with the wlb server
string	wlb_password	The password used to authenticate with the wlb server
string	xenserver_username	The username used by the wlb server to authenticate with the xenserver
string	xenserver_password	The password used by the wlb server to authenticate with the xenserver

Return Type: `void`

4.27.2.81. RPC name: join

Overview:

Instruct host to join a new pool

Signature:

```
void join (session ref session_id, string master_address, string master_username,
 string master_password)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	master_address	The hostname of the master of the pool to join
`string`	master_username	The username of the master (for initial authentication)
`string`	master_password	The password for the master (for initial authentication)

Return Type: `void`

Possible Error Codes: `JOINING_HOST_CANNOT_CONTAIN_SHARED_SRS`

4.27.2.82. RPC name: join_force

Overview:

Instruct host to join a new pool

Signature:

```
void join_force (session ref session_id, string master_address, string
 master_username, string master_password)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	master_address	The hostname of the master of the pool to join
`string`	master_username	The username of the master (for initial authentication)
`string`	master_password	The password for the master (for initial authentication)

Return Type: `void`

4.27.2.83. RPC name: management_reconfigure

Overview:

Reconfigure the management network interface for all Hosts in the Pool

Signature:

```
void management_reconfigure (session ref session_id, network ref network)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`network ref`	network	The network

Return Type: `void`

Possible Error Codes: `HA_IS_ENABLED`, `PIF_NOT_PRESENT`, `CANNOT_PLUG_BOND_SLAVE`, `PIF_INCOMPATIBLE_PRIMARY_ADDRESS_TYPE`, `PIF_HAS_NO_NETWORK_CONFIGURATION`, `PIF_HAS_NO_V6_NETWORK_CONFIGURATION`

4.27.2.84. RPC name: recover_slaves

Overview:

Instruct a pool master, M, to try and contact its slaves and, if slaves are in emergency mode, reset their master address to M.

Signature:

```
host ref set recover_slaves (session ref session_id)
```

4.27.2.85. RPC name: remove_from_guest_agent_config

Overview:

Remove a key-value pair from the pool-wide guest agent configuration

Signature:

```
void remove_from_guest_agent_config (session ref session_id, pool ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	The pool

type	name	description
string	key	The key to remove

Return Type: void

4.27.2.86. RPC name: remove_from_gui_config

Overview:

Remove the given key and its corresponding value from the gui_config field of the given pool. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_gui_config (session ref session_id, pool ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.27.2.87. RPC name: remove_from_health_check_config

Overview:

Remove the given key and its corresponding value from the health_check_config field of the given pool. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_health_check_config (session ref session_id, pool ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.27.2.88. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given pool. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, pool ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.27.2.89. RPC name: remove_tags

Overview:

Remove the given value from the tags field of the given pool. If the value is not in that Set, then do nothing.

Signature:

```
void remove_tags (session ref session_id, pool ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object
`string`	value	Value to remove

Return Type: `void`

4.27.2.90. RPC name: retrieve_wlb_configuration

Overview:

Retrieves the pool optimization criteria from the workload balancing server

Signature:

```
(string -> string) map retrieve_wlb_configuration (session ref session_id)
```

4.27.2.91. RPC name: retrieve_wlb_recommendations

Overview:

Retrieves vm migrate recommendations for the pool from the workload balancing server

Signature:

```
(VM ref -> string set) map retrieve_wlb_recommendations (session ref session_id)
```

4.27.2.92. RPC name: send_test_post

Overview:

Send the given body to the given host and port, using HTTPS, and print the response. This is used for debugging the SSL layer.

Signature:

```
string send_test_post (session ref session_id, string host, int port, string body)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	host	
`int`	port	
`string`	body	

Return Type: `string`

The response

4.27.2.93. RPC name: send_wlb_configuration

Overview:

Sets the pool optimization criteria for the workload balancing server

Signature:

```
void send_wlb_configuration (session ref session_id, (string -> string) map config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`(string -> string) map`	config	The configuration to use in optimizing this pool

Return Type: `void`

4.27.2.94. RPC name: set_crash_dump_SR

Overview:

Set the crash_dump_SR field of the given pool.

Signature:

```
void set_crash_dump_SR (session ref session_id, pool ref self, SR ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
SR ref	value	New value to set

Return Type: void

4.27.2.95. RPC name: set_default_SR

Overview:

Set the default_SR field of the given pool.

Signature:

```
void set_default_SR (session ref session_id, pool ref self, SR ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
SR ref	value	New value to set

Return Type: void

4.27.2.96. RPC name: set_gui_config

Overview:

Set the gui_config field of the given pool.

Signature:

```
void set_gui_config (session ref session_id, pool ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object

type	name	description
(string -> string) map	value	New value to set

Return Type: `void`

4.27.2.97. RPC name: set_ha_allow_overcommit

Overview:

Set the ha_allow_overcommit field of the given pool.

Signature:

```
void set_ha_allow_overcommit (session ref session_id, pool ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
bool	value	New value to set

Return Type: `void`

4.27.2.98. RPC name: set_ha_host_failures_to_tolerate

Overview:

Set the maximum number of host failures to consider in the HA VM restart planner

Signature:

```
void set_ha_host_failures_to_tolerate (session ref session_id, pool ref self, int
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	The pool
int	value	New number of host failures to consider

Return Type: `void`

4.27.2.99. RPC name: set_health_check_config

Overview:

Set the health_check_config field of the given pool.

Signature:

```
void set_health_check_config (session ref session_id, pool ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.27.2.100. RPC name: set_igmp_snooping_enabled

Overview:

Enable or disable IGMP Snooping on the pool.

Signature:

```
void set_igmp_snooping_enabled (session ref session_id, pool ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	The pool
bool	value	Enable or disable IGMP Snooping on the pool

Return Type: void

4.27.2.101. RPC name: set_live_patching_disabled

Overview:

Set the live_patching_disabled field of the given pool.

Signature:

```
void set_live_patching_disabled (session ref session_id, pool ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
pool ref	self	reference to the object
bool	value	New value to set

Return Type: `void`

4.27.2.102. RPC name: set_name_description

Overview:

Set the name_description field of the given pool.

Signature:

```
void set_name_description (session ref session_id, pool ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.27.2.103. RPC name: set_name_label

Overview:

Set the name_label field of the given pool.

Signature:

```
void set_name_label (session ref session_id, pool ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.27.2.104. RPC name: set_other_config

Overview:

Set the other_config field of the given pool.

Signature:

```
void set_other_config (session ref session_id, pool ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.27.2.105. RPC name: set_policy_no_vendor_device

Overview:

Set the policy_no_vendor_device field of the given pool.

Signature:

```
void set_policy_no_vendor_device (session ref session_id, pool ref self, bool
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object
`bool`	value	New value to set

Return Type: `void`

4.27.2.106. RPC name: set_suspend_image_SR

Overview:

Set the suspend_image_SR field of the given pool.

Signature:

```
void set_suspend_image_SR (session ref session_id, pool ref self, SR ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
pool ref	self	reference to the object
SR ref	value	New value to set

Return Type: void

4.27.2.107. RPC name: set_tags

Overview:

Set the tags field of the given pool.

Signature:

```
void set_tags (session ref session_id, pool ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	reference to the object
string set	value	New value to set

Return Type: void

4.27.2.108. RPC name: set_vswitch_controller

This message is deprecated.

Overview:

Set the IP address of the vswitch controller.

Signature:

```
void set_vswitch_controller (session ref session_id, string address)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	address	IP address of the vswitch controller.

Return Type: void

4.27.2.109. RPC name: set_wlb_enabled

Overview:

Set the wlb_enabled field of the given pool.

Signature:

```
void set_wlb_enabled (session ref session_id, pool ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object
`bool`	value	New value to set

Return Type: `void`

4.27.2.110. RPC name: set_wlb_verify_cert

Overview:

Set the wlb_verify_cert field of the given pool.

Signature:

```
void set_wlb_verify_cert (session ref session_id, pool ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool ref`	self	reference to the object
`bool`	value	New value to set

Return Type: `void`

4.27.2.111. RPC name: sync_database

Overview:

Forcibly synchronise the database now

Signature:

```
void sync_database (session ref session_id)
```

4.27.2.112. RPC name: test_archive_target

Overview:

This call tests if a location is valid

Signature:

```
string test_archive_target (session ref session_id, pool ref self, (string ->
 string) map config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool ref	self	Reference to the pool
(string -> string) map	config	Location config settings to test

Return Type: string

An XMLRPC result

4.28. Class: pool_patch

This class is deprecated.

Pool-wide patches

4.28.1. Fields for class: pool_patch

Field	Type	Qualifier	Description
after_apply_guidance	after_apply_guidan set	*RO/runtime*	**Deprecated**. What the client should do after this patch has been applied.
host_patches	host_patch ref set	*RO/runtime*	**Deprecated**. This hosts this patch is applied to.
name_description	string	*RO/constructor*	**Deprecated**. a notes field containing human-readable description
name_label	string	*RO/constructor*	**Deprecated**. a human-readable name
other_config	(string -> string) map	*RW*	**Deprecated**. additional configuration
pool_applied	bool	*RO/runtime*	**Deprecated**. This patch should be applied across the entire pool
pool_update	pool_update ref	*RO/constructor*	**Deprecated**. A reference to the associated pool_update object
size	int	*RO/runtime*	**Deprecated**. Size of the patch

Field	Type	Qualifier	Description
uuid	`string`	*RO/runtime*	**Deprecated**. Unique identifier/object reference
version	`string`	*RO/constructor*	**Deprecated**. Patch version number

4.28.2. RPCs associated with class: pool_patch

4.28.2.1. RPC name: add_to_other_config

This message is deprecated.

Overview:

Add the given key-value pair to the other_config field of the given pool_patch.

Signature:

```
void add_to_other_config (session ref session_id, pool_patch ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.28.2.2. RPC name: apply

This message is deprecated.

Overview:

Apply the selected patch to a host and return its output

Signature:

```
string apply (session ref session_id, pool_patch ref self, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
pool_patch ref	self	The patch to apply
host ref	host	The host to apply the patch too

Return Type: `string`

the output of the patch application process

4.28.2.3. RPC name: clean

This message is deprecated.

Overview:

Removes the patch's files from the server

Signature:

```
void clean (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_patch ref	self	The patch to clean up

Return Type: `void`

4.28.2.4. RPC name: clean_on_host

This message is deprecated.

Overview:

Removes the patch's files from the specified host

Signature:

```
void clean_on_host (session ref session_id, pool_patch ref self, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_patch ref	self	The patch to clean up
host ref	host	The host on which to clean the patch

Return Type: `void`

4.28.2.5. RPC name: destroy

This message is deprecated.

Overview:

Removes the patch's files from all hosts in the pool, and removes the database entries. Only works on unapplied patches.

Signature:

```
void destroy (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	The patch to destroy

Return Type: `void`

4.28.2.6. RPC name: get_after_apply_guidance

This message is deprecated.

Overview:

Get the after_apply_guidance field of the given pool_patch.

Signature:

```
after_apply_guidance set get_after_apply_guidance (session ref session_id,
 pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object

Return Type: `after_apply_guidance set`

value of the field

4.28.2.7. RPC name: get_all

This message is deprecated.

Overview:

Return a list of all the pool_patchs known to the system.

Signature:

```
pool_patch ref set get_all (session ref session_id)
```

4.28.2.8. RPC name: get_all_records

This message is deprecated.

Overview:

Return a map of pool_patch references to pool_patch records for all pool_patchs known to the system.

Signature:

```
(pool_patch ref -> pool_patch record) map get_all_records (session ref session_id)
```

4.28.2.9. RPC name: get_by_name_label

This message is deprecated.

Overview:

Get all the pool_patch instances with the given label.

Signature:

```
pool_patch ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `pool_patch ref set`

references to objects with matching names

4.28.2.10. RPC name: get_by_uuid

This message is deprecated.

Overview:

Get a reference to the pool_patch instance with the specified UUID.

Signature:

```
pool_patch ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `pool_patch ref`

reference to the object

4.28.2.11. RPC name: get_host_patches

This message is deprecated.

Overview:

Get the host_patches field of the given pool_patch.

Signature:

```
host_patch ref set get_host_patches (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object

Return Type: `host_patch ref set`

value of the field

4.28.2.12. RPC name: get_name_description

This message is deprecated.

Overview:

Get the name/description field of the given pool_patch.

Signature:

```
string get_name_description (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object

Return Type: `string`

value of the field

4.28.2.13. RPC name: get_name_label

This message is deprecated.

Overview:

Get the name/label field of the given pool_patch.

Signature:

```
string get_name_label (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object

Return Type: `string`

value of the field

4.28.2.14. RPC name: get_other_config

This message is deprecated.

Overview:

Get the other_config field of the given pool_patch.

Signature:

```
(string -> string) map get_other_config (session ref session_id, pool_patch ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.28.2.15. RPC name: get_pool_applied

This message is deprecated.

Overview:

Get the pool_applied field of the given pool_patch.

Signature:

```
bool get_pool_applied (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_patch ref	self	reference to the object

Return Type: `bool`

value of the field

4.28.2.16. RPC name: get_pool_update

This message is deprecated.

Overview:

Get the pool_update field of the given pool_patch.

Signature:

```
pool_update ref get_pool_update (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_patch ref	self	reference to the object

Return Type: `pool_update ref`

value of the field

4.28.2.17. RPC name: get_record

This message is deprecated.

Overview:

Get a record containing the current state of the given pool_patch.

Signature:

```
pool_patch record get_record (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_patch ref	self	reference to the object

Return Type: `pool_patch record`

all fields from the object

4.28.2.18. RPC name: get_size

This message is deprecated.

Overview:

Get the size field of the given pool_patch.

Signature:

```
int get_size (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_patch ref	self	reference to the object

Return Type: `int`

value of the field

4.28.2.19. RPC name: get_uuid

This message is deprecated.

Overview:

Get the uuid field of the given pool_patch.

Signature:

```
string get_uuid (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_patch ref	self	reference to the object

Return Type: `string`

value of the field

4.28.2.20. RPC name: get_version

This message is deprecated.

Overview:

Get the version field of the given pool_patch.

Signature:

```
string get_version (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object

Return Type: `string`

value of the field

4.28.2.21. RPC name: pool_apply

This message is deprecated.

Overview:

Apply the selected patch to all hosts in the pool and return a map of host_ref -> patch output

Signature:

```
void pool_apply (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	The patch to apply

Return Type: `void`

4.28.2.22. RPC name: pool_clean

This message is deprecated.

Overview:

Removes the patch's files from all hosts in the pool, but does not remove the database entries

Signature:

```
void pool_clean (session ref session_id, pool_patch ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`pool_patch ref`	self	The patch to clean up

Return Type: `void`

4.28.2.23. RPC name: precheck

This message is deprecated.

Overview:

Execute the precheck stage of the selected patch on a host and return its output

Signature:

```
string precheck (session ref session_id, pool_patch ref self, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	The patch whose prechecks will be run
`host ref`	host	The host to run the prechecks on

Return Type: `string`

the output of the patch prechecks

4.28.2.24. RPC name: remove_from_other_config

This message is deprecated.

Overview:

Remove the given key and its corresponding value from the other_config field of the given pool_patch. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, pool_patch ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.28.2.25. RPC name: set_other_config

This message is deprecated.

Overview:

Set the other_config field of the given pool_patch.

Signature:

```
void set_other_config (session ref session_id, pool_patch ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_patch ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.29. Class: pool_update

Pool-wide updates to the host software

4.29.1. Fields for class: pool_update

Field	Type	Qualifier	Description
after_apply_guidance	`update_after_apply set`	*RO/constructor*	What the client should do after this update has been applied.
enforce_homogeneity	`bool`	*RO/constructor*	Flag - if true, all hosts in a pool must apply this update
hosts	`host ref set`	*RO/runtime*	The hosts that have applied this update.
installation_size	`int`	*RO/constructor*	Size of the update in bytes
key	`string`	*RO/constructor*	GPG key of the update
name_description	`string`	*RO/constructor*	a notes field containing human-readable description
name_label	`string`	*RO/constructor*	a human-readable name

Field	Type	Qualifier	Description
other_config	`(string -> string) map`	*RW*	additional configuration
uuid	`string`	*RO/runtime*	Unique identifier/object reference
vdi	`VDI ref`	*RO/constructor*	VDI the update was uploaded to
version	`string`	*RO/constructor*	Update version number

4.29.2. RPCs associated with class: pool_update

4.29.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given pool_update.

Signature:

```
void add_to_other_config (session ref session_id, pool_update ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.29.2.2. RPC name: apply

Overview:

Apply the selected update to a host

Signature:

```
void apply (session ref session_id, pool_update ref self, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
pool_update ref	self	The update to apply
host ref	host	The host to apply the update to.

Return Type: `void`

4.29.2.3. RPC name: destroy

Overview:

Removes the database entry. Only works on unapplied update.

Signature:

```
void destroy (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_update ref	self	The update to destroy

Return Type: `void`

4.29.2.4. RPC name: get_after_apply_guidance

Overview:

Get the after_apply_guidance field of the given pool_update.

Signature:

```
update_after_apply_guidance set get_after_apply_guidance (session ref session_id,
 pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_update ref	self	reference to the object

Return Type: `update_after_apply_guidance set`

value of the field

4.29.2.5. RPC name: get_all

Overview:

Return a list of all the pool_updates known to the system.

Signature:

```
pool_update ref set get_all (session ref session_id)
```

4.29.2.6. RPC name: get_all_records

Overview:

Return a map of pool_update references to pool_update records for all pool_updates known to the system.

Signature:

```
(pool_update ref -> pool_update record) map get_all_records (session ref
 session_id)
```

4.29.2.7. RPC name: get_by_name_label

Overview:

Get all the pool_update instances with the given label.

Signature:

```
pool_update ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `pool_update ref set`

references to objects with matching names

4.29.2.8. RPC name: get_by_uuid

Overview:

Get a reference to the pool_update instance with the specified UUID.

Signature:

```
pool_update ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `pool_update ref`

reference to the object

4.29.2.9. RPC name: get_enforce_homogeneity

Overview:

Get the enforce_homogeneity field of the given pool_update.

Signature:

```
bool get_enforce_homogeneity (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object

Return Type: `bool`

value of the field

4.29.2.10. RPC name: get_hosts

Overview:

Get the hosts field of the given pool_update.

Signature:

```
host ref set get_hosts (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object

Return Type: `host ref set`

value of the field

4.29.2.11. RPC name: get_installation_size

Overview:

Get the installation_size field of the given pool_update.

Signature:

```
int get_installation_size (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_update ref	self	reference to the object

Return Type: `int`

value of the field

4.29.2.12. RPC name: get_key

Overview:

Get the key field of the given pool_update.

Signature:

```
string get_key (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_update ref	self	reference to the object

Return Type: `string`

value of the field

4.29.2.13. RPC name: get_name_description

Overview:

Get the name/description field of the given pool_update.

Signature:

```
string get_name_description (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
pool_update ref	self	reference to the object

Return Type: `string`

value of the field

4.29.2.14. RPC name: get_name_label

Overview:

Get the name/label field of the given pool_update.

Signature:

```
string get_name_label (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object

Return Type: `string`

value of the field

4.29.2.15. RPC name: get_other_config

Overview:

Get the other_config field of the given pool_update.

Signature:

```
(string -> string) map get_other_config (session ref session_id, pool_update ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.29.2.16. RPC name: get_record

Overview:

Get a record containing the current state of the given pool_update.

Signature:

```
pool_update record get_record (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`pool_update ref`	self	reference to the object

Return Type: `pool_update record`

all fields from the object

4.29.2.17. RPC name: get_uuid

Overview:

Get the uuid field of the given pool_update.

Signature:

```
string get_uuid (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object

Return Type: `string`

value of the field

4.29.2.18. RPC name: get_vdi

Overview:

Get the vdi field of the given pool_update.

Signature:

```
VDI ref get_vdi (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object

Return Type: `VDI ref`

value of the field

4.29.2.19. RPC name: get_version

Overview:

Get the version field of the given pool_update.

Signature:

```
string get_version (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object

Return Type: `string`

value of the field

4.29.2.20. RPC name: introduce

Overview:

Introduce update VDI

Signature:

```
pool_update ref introduce (session ref session_id, VDI ref vdi)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	vdi	The VDI which contains a software update.

Return Type: `pool_update ref`

the introduced pool update

4.29.2.21. RPC name: pool_apply

Overview:

Apply the selected update to all hosts in the pool

Signature:

```
void pool_apply (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	The update to apply

Return Type: `void`

4.29.2.22. RPC name: pool_clean

Overview:

Removes the update's files from all hosts in the pool, but does not revert the update

Signature:

```
void pool_clean (session ref session_id, pool_update ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	The update to clean up

Return Type: `void`

4.29.2.23. RPC name: precheck

Overview:

Execute the precheck stage of the selected update on a host

Signature:

```
livepatch_status precheck (session ref session_id, pool_update ref self, host ref
 host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	The update whose prechecks will be run
`host ref`	host	The host to run the prechecks on.

Return Type: `livepatch_status`

The precheck pool update

4.29.2.24. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given pool_update. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, pool_update ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.29.2.25. RPC name: set_other_config

Overview:

Set the other_config field of the given pool_update.

Signature:

```
void set_other_config (session ref session_id, pool_update ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`pool_update ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.30. Class: PUSB

A physical USB device

4.30.1. Fields for class: PUSB

Field	Type	Qualifier	Description
description	`string`	*RO/constructor*	USB device description
host	`host ref`	*RO/constructor*	Physical machine that owns the USB device
other_config	`(string -> string) map`	*RW*	additional configuration
passthrough_enabled	`bool`	*RO/runtime*	enabled for passthrough

Field	Type	Qualifier	Description
path	`string`	*RO/constructor*	port path of USB device
product_desc	`string`	*RO/constructor*	product description of the USB device
product_id	`string`	*RO/constructor*	product id of the USB device
serial	`string`	*RO/constructor*	serial of the USB device
USB_group	`USB_group ref`	*RO/constructor*	USB group the PUSB is contained in
uuid	`string`	*RO/runtime*	Unique identifier/object reference
vendor_desc	`string`	*RO/constructor*	vendor description of the USB device
vendor_id	`string`	*RO/constructor*	vendor id of the USB device
version	`string`	*RO/constructor*	USB device version

4.30.2. RPCs associated with class: PUSB

4.30.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given PUSB.

Signature:

```
void add_to_other_config (session ref session_id, PUSB ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.30.2.2. RPC name: get_all

Overview:

Return a list of all the PUSBs known to the system.

Signature:

```
PUSB ref set get_all (session ref session_id)
```

4.30.2.3. RPC name: get_all_records

Overview:

Return a map of PUSB references to PUSB records for all PUSBs known to the system.

Signature:

```
(PUSB ref -> PUSB record) map get_all_records (session ref session_id)
```

4.30.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the PUSB instance with the specified UUID.

Signature:

```
PUSB ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PUSB ref`

reference to the object

4.30.2.5. RPC name: get_description

Overview:

Get the description field of the given PUSB.

Signature:

```
string get_description (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object

Return Type: `string`

value of the field

4.30.2.6. RPC name: get_host

Overview:

Get the host field of the given PUSB.

Signature:

```
host ref get_host (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object

Return Type: `host ref`

value of the field

4.30.2.7. RPC name: get_other_config

Overview:

Get the other_config field of the given PUSB.

Signature:

```
(string -> string) map get_other_config (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.30.2.8. RPC name: get_passthrough_enabled

Overview:

Get the passthrough_enabled field of the given PUSB.

Signature:

```
bool get_passthrough_enabled (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object

Return Type: `bool`

value of the field

4.30.2.9. RPC name: get_path

Overview:

Get the path field of the given PUSB.

Signature:

```
string get_path (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object

Return Type: `string`

value of the field

4.30.2.10. RPC name: get_product_desc

Overview:

Get the product_desc field of the given PUSB.

Signature:

```
string get_product_desc (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object

Return Type: `string`

value of the field

4.30.2.11. RPC name: get_product_id

Overview:

Get the product_id field of the given PUSB.

Signature:

```
string get_product_id (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object

Return Type: `string`

value of the field

4.30.2.12. RPC name: get_record

Overview:

Get a record containing the current state of the given PUSB.

Signature:

```
PUSB record get_record (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object

Return Type: `PUSB record`

all fields from the object

4.30.2.13. RPC name: get_serial

Overview:

Get the serial field of the given PUSB.

Signature:

```
string get_serial (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PUSB ref	self	reference to the object

Return Type: `string`

value of the field

4.30.2.14. RPC name: get_USB_group

Overview:

Get the USB_group field of the given PUSB.

Signature:

```
USB_group ref get_USB_group (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object

Return Type: `USB_group ref`

value of the field

4.30.2.15. RPC name: get_uuid

Overview:

Get the uuid field of the given PUSB.

Signature:

```
string get_uuid (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object

Return Type: `string`

value of the field

4.30.2.16. RPC name: get_vendor_desc

Overview:

Get the vendor_desc field of the given PUSB.

Signature:

```
string get_vendor_desc (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object

Return Type: `string`

value of the field

4.30.2.17. RPC name: get_vendor_id

Overview:

Get the vendor_id field of the given PUSB.

Signature:

```
string get_vendor_id (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object

Return Type: `string`

value of the field

4.30.2.18. RPC name: get_version

Overview:

Get the version field of the given PUSB.

Signature:

```
string get_version (session ref session_id, PUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object

Return Type: `string`

value of the field

4.30.2.19. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given PUSB. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, PUSB ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PUSB ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.30.2.20. RPC name: scan

Overview:

Signature:

```
void scan (session ref session_id, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host

Return Type: `void`

4.30.2.21. RPC name: set_other_config

Overview:

Set the other_config field of the given PUSB.

Signature:

```
void set_other_config (session ref session_id, PUSB ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: `void`

4.30.2.22. RPC name: set_passthrough_enabled

Overview:

Signature:

```
void set_passthrough_enabled (session ref session_id, PUSB ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PUSB ref	self	this PUSB
bool	value	passthrough is enabled when true and disabled with false

Return Type: `void`

4.31. Class: PVS_cache_storage

Describes the storage that is available to a PVS site for caching purposes

4.31.1. Fields for class: PVS_cache_storage

Field	Type	Qualifier	Description
host	host ref	*RO/constructor*	The host on which this object defines PVS cache storage
site	PVS_site ref	*RO/constructor*	The PVS_site for which this object defines the storage
size	int	*RO/constructor*	The size of the cache VDI (in bytes)
SR	SR ref	*RO/constructor*	SR providing storage for the PVS cache
uuid	string	*RO/runtime*	Unique identifier/object reference

Field	Type	Qualifier	Description
VDI	`VDI ref`	*RO/runtime*	The VDI used for caching

4.31.2. RPCs associated with class: PVS_cache_storage

4.31.2.1. RPC name: create

Overview:

Create a new PVS_cache_storage instance, and return its handle.

Signature:

```
PVS_cache_storage ref create (session ref session_id, PVS_cache_storage record
 args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_cache_storage record`	args	All constructor arguments

Return Type: `PVS_cache_storage ref`

reference to the newly created object

4.31.2.2. RPC name: destroy

Overview:

Destroy the specified PVS_cache_storage instance.

Signature:

```
void destroy (session ref session_id, PVS_cache_storage ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_cache_storage ref`	self	reference to the object

Return Type: `void`

4.31.2.3. RPC name: get_all

Overview:

Return a list of all the PVS_cache_storages known to the system.

Signature:

```
PVS_cache_storage ref set get_all (session ref session_id)
```

4.31.2.4. RPC name: get_all_records

Overview:

Return a map of PVS_cache_storage references to PVS_cache_storage records for all PVS_cache_storages known to the system.

Signature:

```
(PVS_cache_storage ref -> PVS_cache_storage record) map get_all_records (session
 ref session_id)
```

4.31.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the PVS_cache_storage instance with the specified UUID.

Signature:

```
PVS_cache_storage ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: PVS_cache_storage ref

reference to the object

4.31.2.6. RPC name: get_host

Overview:

Get the host field of the given PVS_cache_storage.

Signature:

```
host ref get_host (session ref session_id, PVS_cache_storage ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_cache_storage ref	self	reference to the object

Return Type: host ref

value of the field

4.31.2.7. RPC name: get_record

Overview:

Get a record containing the current state of the given PVS_cache_storage.

Signature:

```
PVS_cache_storage record get_record (session ref session_id, PVS_cache_storage ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_cache_storage ref	self	reference to the object

Return Type: `PVS_cache_storage record`

all fields from the object

4.31.2.8. RPC name: get_site

Overview:

Get the site field of the given PVS_cache_storage.

Signature:

```
PVS_site ref get_site (session ref session_id, PVS_cache_storage ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_cache_storage ref	self	reference to the object

Return Type: `PVS_site ref`

value of the field

4.31.2.9. RPC name: get_size

Overview:

Get the size field of the given PVS_cache_storage.

Signature:

```
int get_size (session ref session_id, PVS_cache_storage ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_cache_storage ref`	self	reference to the object

Return Type: `int`

value of the field

4.31.2.10. RPC name: get_SR

Overview:

Get the SR field of the given PVS_cache_storage.

Signature:

```
SR ref get_SR (session ref session_id, PVS_cache_storage ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_cache_storage ref`	self	reference to the object

Return Type: SR `ref`

value of the field

4.31.2.11. RPC name: get_uuid

Overview:

Get the uuid field of the given PVS_cache_storage.

Signature:

```
string get_uuid (session ref session_id, PVS_cache_storage ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_cache_storage ref`	self	reference to the object

Return Type: `string`

value of the field

4.31.2.12. RPC name: get_VDI

Overview:

Get the VDI field of the given PVS_cache_storage.

Signature:

```
VDI ref get_VDI (session ref session_id, PVS_cache_storage ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_cache_storage ref	self	reference to the object

Return Type: `VDI ref`

value of the field

4.32. Class: PVS_proxy

a proxy connects a VM/VIF with a PVS site

4.32.1. Fields for class: PVS_proxy

Field	Type	Qualifier	Description
currently_attached	bool	*RO/runtime*	true = VM is currently proxied
site	PVS_site ref	*RO/constructor*	PVS site this proxy is part of
status	pvs_proxy_status	*RO/runtime*	The run-time status of the proxy
uuid	string	*RO/runtime*	Unique identifier/object reference
VIF	VIF ref	*RO/constructor*	VIF of the VM using the proxy

4.32.2. RPCs associated with class: PVS_proxy

4.32.2.1. RPC name: create

Overview:

Configure a VM/VIF to use a PVS proxy

Signature:

```
PVS_proxy ref create (session ref session_id, PVS_site ref site, VIF ref VIF)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_site ref`	site	PVS site that we proxy for
`VIF ref`	VIF	VIF for the VM that needs to be proxied

Return Type: `PVS_proxy ref`

the new PVS proxy

4.32.2.2. RPC name: destroy

Overview:

remove (or switch off) a PVS proxy for this VM

Signature:

```
void destroy (session ref session_id, PVS_proxy ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_proxy ref`	self	this PVS proxy

Return Type: `void`

4.32.2.3. RPC name: get_all

Overview:

Return a list of all the PVS_proxys known to the system.

Signature:

```
PVS_proxy ref set get_all (session ref session_id)
```

4.32.2.4. RPC name: get_all_records

Overview:

Return a map of PVS_proxy references to PVS_proxy records for all PVS_proxys known to the system.

Signature:

```
(PVS_proxy ref -> PVS_proxy record) map get_all_records (session ref session_id)
```

4.32.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the PVS_proxy instance with the specified UUID.

Signature:

```
PVS_proxy ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PVS_proxy ref`

reference to the object

4.32.2.6. RPC name: get_currently_attached

Overview:

Get the currently_attached field of the given PVS_proxy.

Signature:

```
bool get_currently_attached (session ref session_id, PVS_proxy ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_proxy ref`	self	reference to the object

Return Type: `bool`

value of the field

4.32.2.7. RPC name: get_record

Overview:

Get a record containing the current state of the given PVS_proxy.

Signature:

```
PVS_proxy record get_record (session ref session_id, PVS_proxy ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PVS_proxy ref	self	reference to the object

Return Type: `PVS_proxy record`

all fields from the object

4.32.2.8. RPC name: get_site

Overview:

Get the site field of the given PVS_proxy.

Signature:

```
PVS_site ref get_site (session ref session_id, PVS_proxy ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_proxy ref	self	reference to the object

Return Type: `PVS_site ref`

value of the field

4.32.2.9. RPC name: get_status

Overview:

Get the status field of the given PVS_proxy.

Signature:

```
pvs_proxy_status get_status (session ref session_id, PVS_proxy ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_proxy ref	self	reference to the object

Return Type: `pvs_proxy_status`

value of the field

4.32.2.10. RPC name: get_uuid

Overview:

Get the uuid field of the given PVS_proxy.

Signature:

```
string get_uuid (session ref session_id, PVS_proxy ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_proxy ref`	self	reference to the object

Return Type: `string`

value of the field

4.32.2.11. RPC name: get_VIF

Overview:

Get the VIF field of the given PVS_proxy.

Signature:

```
VIF ref get_VIF (session ref session_id, PVS_proxy ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_proxy ref`	self	reference to the object

Return Type: `VIF ref`

value of the field

4.33. Class: PVS_server

individual machine serving provisioning (block) data

4.33.1. Fields for class: PVS_server

Field	Type	Qualifier	Description
addresses	`string set`	*RO/constructor*	IPv4 addresses of this server
first_port	`int`	*RO/constructor*	First UDP port accepted by this server
last_port	`int`	*RO/constructor*	Last UDP port accepted by this server

Field	Type	Qualifier	Description
site	`PVS_site ref`	*RO/constructor*	PVS site this server is part of
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.33.2. RPCs associated with class: PVS_server

4.33.2.1. RPC name: forget

Overview:

forget a PVS server

Signature:

```
void forget (session ref session_id, PVS_server ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_server ref`	self	this PVS server

Return Type: `void`

4.33.2.2. RPC name: get_addresses

Overview:

Get the addresses field of the given PVS_server.

Signature:

```
string set get_addresses (session ref session_id, PVS_server ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_server ref`	self	reference to the object

Return Type: `string set`

value of the field

4.33.2.3. RPC name: get_all

Overview:

Return a list of all the PVS_servers known to the system.

Signature:

```
PVS_server ref set get_all (session ref session_id)
```

4.33.2.4. RPC name: get_all_records

Overview:

Return a map of PVS_server references to PVS_server records for all PVS_servers known to the system.

Signature:

```
(PVS_server ref -> PVS_server record) map get_all_records (session ref session_id)
```

4.33.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the PVS_server instance with the specified UUID.

Signature:

```
PVS_server ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PVS_server ref`

reference to the object

4.33.2.6. RPC name: get_first_port

Overview:

Get the first_port field of the given PVS_server.

Signature:

```
int get_first_port (session ref session_id, PVS_server ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_server ref`	self	reference to the object

Return Type: `int`

value of the field

4.33.2.7. RPC name: get_last_port

Overview:

Get the last_port field of the given PVS_server.

Signature:

```
int get_last_port (session ref session_id, PVS_server ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_server ref`	self	reference to the object

Return Type: `int`

value of the field

4.33.2.8. RPC name: get_record

Overview:

Get a record containing the current state of the given PVS_server.

Signature:

```
PVS_server record get_record (session ref session_id, PVS_server ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_server ref`	self	reference to the object

Return Type: `PVS_server record`

all fields from the object

4.33.2.9. RPC name: get_site

Overview:

Get the site field of the given PVS_server.

Signature:

```
PVS_site ref get_site (session ref session_id, PVS_server ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_server ref`	self	reference to the object

Return Type: `PVS_site ref`

value of the field

4.33.2.10. RPC name: get_uuid

Overview:

Get the uuid field of the given PVS_server.

Signature:

```
string get_uuid (session ref session_id, PVS_server ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_server ref`	self	reference to the object

Return Type: `string`

value of the field

4.33.2.11. RPC name: introduce

Overview:

introduce new PVS server

Signature:

```
PVS_server ref introduce (session ref session_id, string set addresses, int
 first_port, int last_port, PVS_site ref site)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string set`	addresses	IPv4 addresses of the server
`int`	first_port	first UDP port accepted by this server
`int`	last_port	last UDP port accepted by this server

type	name	description
PVS_site ref	site	PVS site this server is a part of

Return Type: `PVS_server ref`

the new PVS server

4.34. Class: PVS_site

machines serving blocks of data for provisioning VMs

4.34.1. Fields for class: PVS_site

Field	Type	Qualifier	Description
cache_storage	PVS_cache_storage ref set	*RO/runtime*	The SR used by PVS proxy for the cache
name_description	string	*RW*	a notes field containing human-readable description
name_label	string	*RW*	a human-readable name
proxies	PVS_proxy ref set	*RO/runtime*	The set of proxies associated with the site
PVS_uuid	string	*RO/constructor*	Unique identifier of the PVS site, as configured in PVS
servers	PVS_server ref set	*RO/runtime*	The set of PVS servers in the site
uuid	string	*RO/runtime*	Unique identifier/object reference

4.34.2. RPCs associated with class: PVS_site

4.34.2.1. RPC name: forget

Overview:

Remove a site's meta data

Signature:

```
void forget (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
PVS_site ref	self	this PVS site

Return Type: `void`

Possible Error Codes: PVS_SITE_CONTAINS_RUNNING_PROXIES, PVS_SITE_CONTAINS_SERVERS

4.34.2.2. RPC name: get_all

Overview:

Return a list of all the PVS_sites known to the system.

Signature:

```
PVS_site ref set get_all (session ref session_id)
```

4.34.2.3. RPC name: get_all_records

Overview:

Return a map of PVS_site references to PVS_site records for all PVS_sites known to the system.

Signature:

```
(PVS_site ref -> PVS_site record) map get_all_records (session ref session_id)
```

4.34.2.4. RPC name: get_by_name_label

Overview:

Get all the PVS_site instances with the given label.

Signature:

```
PVS_site ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `PVS_site ref set`

references to objects with matching names

4.34.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the PVS_site instance with the specified UUID.

Signature:

```
PVS_site ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `PVS_site ref`

reference to the object

4.34.2.6. RPC name: get_cache_storage

Overview:

Get the cache_storage field of the given PVS_site.

Signature:

```
PVS_cache_storage ref set get_cache_storage (session ref session_id, PVS_site ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_site ref`	self	reference to the object

Return Type: `PVS_cache_storage ref set`

value of the field

4.34.2.7. RPC name: get_name_description

Overview:

Get the name/description field of the given PVS_site.

Signature:

```
string get_name_description (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PVS_site ref`	self	reference to the object

Return Type: `string`

value of the field

4.34.2.8. RPC name: get_name_label

Overview:

Get the name/label field of the given PVS_site.

Signature:

```
string get_name_label (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object

Return Type: `string`

value of the field

4.34.2.9. RPC name: get_proxies

Overview:

Get the proxies field of the given PVS_site.

Signature:

```
PVS_proxy ref set get_proxies (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object

Return Type: `PVS_proxy ref set`

value of the field

4.34.2.10. RPC name: get_PVS_uuid

Overview:

Get the PVS_uuid field of the given PVS_site.

Signature:

```
string get_PVS_uuid (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object

Return Type: `string`

value of the field

4.34.2.11. RPC name: get_record

Overview:

Get a record containing the current state of the given PVS_site.

Signature:

```
PVS_site record get_record (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object

Return Type: `PVS_site record`

all fields from the object

4.34.2.12. RPC name: get_servers

Overview:

Get the servers field of the given PVS_site.

Signature:

```
PVS_server ref set get_servers (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object

Return Type: `PVS_server ref set`

value of the field

4.34.2.13. RPC name: get_uuid

Overview:

Get the uuid field of the given PVS_site.

Signature:

```
string get_uuid (session ref session_id, PVS_site ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object

Return Type: `string`

value of the field

4.34.2.14. RPC name: introduce

Overview:

Introduce new PVS site

Signature:

```
PVS_site ref introduce (session ref session_id, string name_label, string
 name_description, string PVS_uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	name_label	name of the PVS site
string	name_description	description of the PVS site
string	PVS_uuid	unique identifier of the PVS site

Return Type: `PVS_site ref`

the new PVS site

4.34.2.15. RPC name: set_name_description

Overview:

Set the name/description field of the given PVS_site.

Signature:

```
void set_name_description (session ref session_id, PVS_site ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.34.2.16. RPC name: set_name_label

Overview:

Set the name/label field of the given PVS_site.

Signature:

```
void set_name_label (session ref session_id, PVS_site ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.34.2.17. RPC name: set_PVS_uuid

Overview:

Update the PVS UUID of the PVS site

Signature:

```
void set_PVS_uuid (session ref session_id, PVS_site ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PVS_site ref	self	this PVS site
string	value	PVS UUID to be used

Return Type: `void`

4.35. Class: role

A set of permissions associated with a subject

4.35.1. Fields for class: role

Field	Type	Qualifier	Description
name_description	`string`	*RO/constructor*	what this role is for
name_label	`string`	*RO/constructor*	a short user-friendly name for the role
subroles	`role ref set`	*RO/constructor*	a list of pointers to other roles or permissions
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.35.2. RPCs associated with class: role

4.35.2.1. RPC name: get_all

Overview:

Return a list of all the roles known to the system.

Signature:

```
role ref set get_all (session ref session_id)
```

4.35.2.2. RPC name: get_all_records

Overview:

Return a map of role references to role records for all roles known to the system.

Signature:

```
(role ref -> role record) map get_all_records (session ref session_id)
```

4.35.2.3. RPC name: get_by_name_label

Overview:

Get all the role instances with the given label.

Signature:

```
role ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`string`	label	label of object to return

Return Type: `role ref set`

references to objects with matching names

4.35.2.4. RPC name: get_by_permission

Overview:

This call returns a list of roles given a permission

Signature:

```
role ref set get_by_permission (session ref session_id, role ref permission)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`role ref`	permission	a reference to a permission

Return Type: `role ref set`

a list of references to roles

4.35.2.5. RPC name: get_by_permission_name_label

Overview:

This call returns a list of roles given a permission name

Signature:

```
role ref set get_by_permission_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	The short friendly name of the role

Return Type: `role ref set`

a list of references to roles

4.35.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the role instance with the specified UUID.

Signature:

```
role ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `role ref`

reference to the object

4.35.2.7. RPC name: get_name_description

Overview:

Get the name/description field of the given role.

Signature:

```
string get_name_description (session ref session_id, role ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`role ref`	self	reference to the object

Return Type: `string`

value of the field

4.35.2.8. RPC name: get_name_label

Overview:

Get the name/label field of the given role.

Signature:

```
string get_name_label (session ref session_id, role ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`role ref`	self	reference to the object

Return Type: `string`

value of the field

4.35.2.9. RPC name: get_permissions

Overview:

This call returns a list of permissions given a role

Signature:

```
role ref set get_permissions (session ref session_id, role ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`role ref`	self	a reference to a role

Return Type: `role ref set`

a list of permissions

4.35.2.10. RPC name: get_permissions_name_label

Overview:

This call returns a list of permission names given a role

Signature:

```
string set get_permissions_name_label (session ref session_id, role ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`role ref`	self	a reference to a role

Return Type: `string set`

a list of permission names

4.35.2.11. RPC name: get_record

Overview:

Get a record containing the current state of the given role.

Signature:

```
role record get_record (session ref session_id, role ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`role ref`	self	reference to the object

Return Type: `role record`

all fields from the object

4.35.2.12. RPC name: get_subroles

Overview:

Get the subroles field of the given role.

Signature:

```
role ref set get_subroles (session ref session_id, role ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`role ref`	self	reference to the object

Return Type: `role ref set`

value of the field

4.35.2.13. RPC name: get_uuid

Overview:

Get the uuid field of the given role.

Signature:

```
string get_uuid (session ref session_id, role ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
role ref	self	reference to the object

Return Type: `string`

value of the field

4.36. Class: SDN_controller

Describes the SDN controller that is to connect with the pool

4.36.1. Fields for class: SDN_controller

Field	Type	Qualifier	Description
address	string	*RO/constructor*	IP address of the controller
port	int	*RO/constructor*	TCP port of the controller
protocol	sdn_controller_pro	*RO/constructor*	Protocol to connect with SDN controller
uuid	string	*RO/runtime*	Unique identifier/object reference

4.36.2. RPCs associated with class: SDN_controller

4.36.2.1. RPC name: forget

Overview:

Remove the OVS manager of the pool and destroy the db record.

Signature:

```
void forget (session ref session_id, SDN_controller ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SDN_controller ref	self	this SDN controller

Return Type: `void`

4.36.2.2. RPC name: get_address

Overview:

Get the address field of the given SDN_controller.

Signature:

```
string get_address (session ref session_id, SDN_controller ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SDN_controller ref	self	reference to the object

Return Type: `string`

value of the field

4.36.2.3. RPC name: get_all

Overview:

Return a list of all the SDN_controllers known to the system.

Signature:

```
SDN_controller ref set get_all (session ref session_id)
```

4.36.2.4. RPC name: get_all_records

Overview:

Return a map of SDN_controller references to SDN_controller records for all SDN_controllers known to the system.

Signature:

```
(SDN_controller ref -> SDN_controller record) map get_all_records (session ref
 session_id)
```

4.36.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the SDN_controller instance with the specified UUID.

Signature:

```
SDN_controller ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `SDN_controller ref`

reference to the object

4.36.2.6. RPC name: get_port

Overview:

Get the port field of the given SDN_controller.

Signature:

```
int get_port (session ref session_id, SDN_controller ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SDN_controller ref	self	reference to the object

Return Type: `int`

value of the field

4.36.2.7. RPC name: get_protocol

Overview:

Get the protocol field of the given SDN_controller.

Signature:

```
sdn_controller_protocol get_protocol (session ref session_id, SDN_controller ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SDN_controller ref	self	reference to the object

Return Type: `sdn_controller_protocol`

value of the field

4.36.2.8. RPC name: get_record

Overview:

Get a record containing the current state of the given SDN_controller.

Signature:

```
SDN_controller record get_record (session ref session_id, SDN_controller ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SDN_controller ref	self	reference to the object

Return Type: `SDN_controller record`

all fields from the object

4.36.2.9. RPC name: get_uuid

Overview:

Get the uuid field of the given SDN_controller.

Signature:

```
string get_uuid (session ref session_id, SDN_controller ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SDN_controller ref	self	reference to the object

Return Type: `string`

value of the field

4.36.2.10. RPC name: introduce

Overview:

Introduce an SDN controller to the pool.

Signature:

```
SDN_controller ref introduce (session ref session_id, sdn_controller_protocol
 protocol, string address, int port)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
sdn_controller_protocol	protocol	Protocol to connect with the controller.
string	address	IP address of the controller.
int	port	TCP port of the controller.

Return Type: `SDN_controller ref`

the introduced SDN controller

4.37. Class: secret

A secret

4.37.1. Fields for class: secret

Field	Type	Qualifier	Description
other_config	`(string -> string) map`	*RW*	other_config
uuid	`string`	*RO/runtime*	Unique identifier/object reference
value	`string`	*RW*	the secret

4.37.2. RPCs associated with class: secret

4.37.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given secret.

Signature:

```
void add_to_other_config (session ref session_id, secret ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.37.2.2. RPC name: create

Overview:

Create a new secret instance, and return its handle.

Signature:

```
secret ref create (session ref session_id, secret record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret record`	args	All constructor arguments

Return Type: `secret ref`

reference to the newly created object

4.37.2.3. RPC name: destroy

Overview:

Destroy the specified secret instance.

Signature:

```
void destroy (session ref session_id, secret ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object

Return Type: `void`

4.37.2.4. RPC name: get_all

Overview:

Return a list of all the secrets known to the system.

Signature:

```
secret ref set get_all (session ref session_id)
```

4.37.2.5. RPC name: get_all_records

Overview:

Return a map of secret references to secret records for all secrets known to the system.

Signature:

```
(secret ref -> secret record) map get_all_records (session ref session_id)
```

4.37.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the secret instance with the specified UUID.

Signature:

```
secret ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `secret ref`

reference to the object

4.37.2.7. RPC name: get_other_config

Overview:

Get the other_config field of the given secret.

Signature:

```
(string -> string) map get_other_config (session ref session_id, secret ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.37.2.8. RPC name: get_record

Overview:

Get a record containing the current state of the given secret.

Signature:

```
secret record get_record (session ref session_id, secret ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object

Return Type: `secret record`

all fields from the object

4.37.2.9. RPC name: get_uuid

Overview:

Get the uuid field of the given secret.

Signature:

```
string get_uuid (session ref session_id, secret ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object

Return Type: `string`

value of the field

4.37.2.10. RPC name: get_value

Overview:

Get the value field of the given secret.

Signature:

```
string get_value (session ref session_id, secret ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object

Return Type: `string`

value of the field

4.37.2.11. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given secret. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, secret ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.37.2.12. RPC name: set_other_config

Overview:

Set the other_config field of the given secret.

Signature:

```
void set_other_config (session ref session_id, secret ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.37.2.13. RPC name: set_value

Overview:

Set the value field of the given secret.

Signature:

```
void set_value (session ref session_id, secret ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`secret ref`	self	reference to the object

type	name	description
string	value	New value to set

Return Type: void

4.38. Class: session

A session

4.38.1. Fields for class: session

Field	Type	Qualifier	Description
auth_user_name	string	*RO/runtime*	the subject name of the user that was externally authenticated. If a session instance has is_local_superuser set, then the value of this field is undefined.
auth_user_sid	string	*RO/runtime*	the subject identifier of the user that was externally authenticated. If a session instance has is_local_superuser set, then the value of this field is undefined.
is_local_superuser	bool	*RO/runtime*	true iff this session was created using local superuser credentials
last_active	datetime	*RO/runtime*	Timestamp for last time session was active
originator	string	*RO/runtime*	a key string provided by a API user to distinguish itself from other users sharing the same login name
other_config	(string -> string) map	*RW*	additional configuration
parent	session ref	*RO/constructor*	references the parent session that created this session
pool	bool	*RO/runtime*	True if this session relates to a intra-pool login, false otherwise
rbac_permissions	string set	*RO/constructor*	list with all RBAC permissions for this session

Field	Type	Qualifier	Description
subject	`subject ref`	*RO/runtime*	references the subject instance that created the session. If a session instance has is_local_superuser set, then the value of this field is undefined.
tasks	`task ref set`	*RO/runtime*	list of tasks created using the current session
this_host	`host ref`	*RO/runtime*	Currently connected host
this_user	`user ref`	*RO/runtime*	Currently connected user
uuid	`string`	*RO/runtime*	Unique identifier/object reference
validation_time	`datetime`	*RO/runtime*	time when session was last validated

4.38.2. RPCs associated with class: session

4.38.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given session.

Signature:

```
void add_to_other_config (session ref session_id, session ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.38.2.2. RPC name: change_password

Overview:

Change the account password; if your session is authenticated with root priviledges then the old_pwd is validated and the new_pwd is set regardless

Signature:

```
void change_password (session ref session_id, string old_pwd, string new_pwd)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	old_pwd	Old password for account
`string`	new_pwd	New password for account

Return Type: `void`

4.38.2.3. RPC name: create_from_db_file

Overview:

Signature:

```
session ref create_from_db_file (session ref session_id, string filename)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	filename	Database dump filename.

Return Type: `session ref`

ID of newly created session

4.38.2.4. RPC name: get_all_subject_identifiers

Overview:

Return a list of all the user subject-identifiers of all existing sessions

Signature:

```
string set get_all_subject_identifiers (session ref session_id)
```

4.38.2.5. RPC name: get_auth_user_name

Overview:

Get the auth_user_name field of the given session.

Signature:

```
string get_auth_user_name (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object

Return Type: `string`

value of the field

4.38.2.6. RPC name: get_auth_user_sid

Overview:

Get the auth_user_sid field of the given session.

Signature:

```
string get_auth_user_sid (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object

Return Type: `string`

value of the field

4.38.2.7. RPC name: get_by_uuid

Overview:

Get a reference to the session instance with the specified UUID.

Signature:

```
session ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `session ref`

reference to the object

4.38.2.8. RPC name: get_is_local_superuser

Overview:

Get the is_local_superuser field of the given session.

Signature:

```
bool get_is_local_superuser (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
session ref	self	reference to the object

Return Type: `bool`

value of the field

4.38.2.9. RPC name: get_last_active

Overview:

Get the last_active field of the given session.

Signature:

```
datetime get_last_active (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
session ref	self	reference to the object

Return Type: `datetime`

value of the field

4.38.2.10. RPC name: get_originator

Overview:

Get the originator field of the given session.

Signature:

```
string get_originator (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`session ref`	self	reference to the object

Return Type: `string`

value of the field

4.38.2.11. RPC name: get_other_config

Overview:

Get the other_config field of the given session.

Signature:

```
(string -> string) map get_other_config (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.38.2.12. RPC name: get_parent

Overview:

Get the parent field of the given session.

Signature:

```
session ref get_parent (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object

Return Type: `session ref`

value of the field

4.38.2.13. RPC name: get_pool

Overview:

Get the pool field of the given session.

Signature:

```
bool get_pool (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
session ref	self	reference to the object

Return Type: `bool`

value of the field

4.38.2.14. RPC name: get_rbac_permissions

Overview:

Get the rbac_permissions field of the given session.

Signature:

```
string set get_rbac_permissions (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
session ref	self	reference to the object

Return Type: `string set`

value of the field

4.38.2.15. RPC name: get_record

Overview:

Get a record containing the current state of the given session.

Signature:

```
session record get_record (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`session ref`	self	reference to the object

Return Type: `session record`

all fields from the object

4.38.2.16. RPC name: get_subject

Overview:

Get the subject field of the given session.

Signature:

```
subject ref get_subject (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object

Return Type: `subject ref`

value of the field

4.38.2.17. RPC name: get_tasks

Overview:

Get the tasks field of the given session.

Signature:

```
task ref set get_tasks (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object

Return Type: `task ref set`

value of the field

4.38.2.18. RPC name: get_this_host

Overview:

Get the this_host field of the given session.

Signature:

```
host ref get_this_host (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
session ref	self	reference to the object

Return Type: `host ref`

value of the field

4.38.2.19. RPC name: get_this_user

Overview:

Get the this_user field of the given session.

Signature:

```
user ref get_this_user (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
session ref	self	reference to the object

Return Type: `user ref`

value of the field

4.38.2.20. RPC name: get_uuid

Overview:

Get the uuid field of the given session.

Signature:

```
string get_uuid (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
session ref	self	reference to the object

Return Type: `string`

value of the field

4.38.2.21. RPC name: get_validation_time

Overview:

Get the validation_time field of the given session.

Signature:

```
datetime get_validation_time (session ref session_id, session ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.38.2.22. RPC name: local_logout

Overview:

Log out of local session.

Signature:

```
void local_logout (session ref session_id)
```

4.38.2.23. RPC name: login_with_password

Overview:

Attempt to authenticate the user, returning a session reference if successful

Signature:

```
session ref login_with_password (string uname, string pwd, string version, string
 originator)
```

Arguments:

type	name	description
`string`	uname	Username for login.
`string`	pwd	Password for login.
`string`	version	Client API version.

type	name	description
string	originator	Key string for distinguishing different API users sharing the same login name.

Return Type: `session ref`

reference of newly created session

Possible Error Codes: `SESSION_AUTHENTICATION_FAILED`, `HOST_IS_SLAVE`

4.38.2.24. RPC name: logout

Overview:

Log out of a session

Signature:

```
void logout (session ref session_id)
```

4.38.2.25. RPC name: logout_subject_identifier

Overview:

Log out all sessions associated to a user subject-identifier, except the session associated with the context calling this function

Signature:

```
void logout_subject_identifier (session ref session_id, string subject_identifier)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	subject_identifier	User subject-identifier of the sessions to be destroyed

Return Type: `void`

4.38.2.26. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given session. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, session ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.38.2.27. RPC name: set_other_config

Overview:

Set the other_config field of the given session.

Signature:

```
void set_other_config (session ref session_id, session ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`session ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.38.2.28. RPC name: slave_local_login_with_password

Overview:

Authenticate locally against a slave in emergency mode. Note the resulting sessions are only good for use on this host.

Signature:

```
session ref slave_local_login_with_password (string uname, string pwd)
```

Arguments:

type	name	description
`string`	uname	Username for login.
`string`	pwd	Password for login.

Return Type: `session ref`

ID of newly created session

4.39. Class: SM

A storage manager plugin

4.39.1. Fields for class: SM

Field	Type	Qualifier	Description
capabilities	`string set`	*RO/runtime*	**Deprecated**. capabilities of the SM plugin
configuration	`(string -> string) map`	*RO/runtime*	names and descriptions of device config keys
copyright	`string`	*RO/runtime*	Entity which owns the copyright of this plugin
driver_filename	`string`	*RO/runtime*	filename of the storage driver
features	`(string -> int) map`	*RO/runtime*	capabilities of the SM plugin, with capability version numbers
name_description	`string`	*RO/runtime*	a notes field containing human-readable description
name_label	`string`	*RO/runtime*	a human-readable name
other_config	`(string -> string) map`	*RW*	additional configuration
required_api_version	`string`	*RO/runtime*	Minimum SM API version required on the server
required_cluster_stack	`string set`	*RO/runtime*	The storage plugin requires that one of these cluster stacks is configured and running.
type	`string`	*RO/runtime*	SR.type
uuid	`string`	*RO/runtime*	Unique identifier/object reference
vendor	`string`	*RO/runtime*	Vendor who created this plugin
version	`string`	*RO/runtime*	Version of the plugin

4.39.2. RPCs associated with class: SM

4.39.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given SM.

Signature:

```
void add_to_other_config (session ref session_id, SM ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.39.2.2. RPC name: get_all

Overview:

Return a list of all the SMs known to the system.

Signature:

```
SM ref set get_all (session ref session_id)
```

4.39.2.3. RPC name: get_all_records

Overview:

Return a map of SM references to SM records for all SMs known to the system.

Signature:

```
(SM ref -> SM record) map get_all_records (session ref session_id)
```

4.39.2.4. RPC name: get_by_name_label

Overview:

Get all the SM instances with the given label.

Signature:

```
SM ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`string`	label	label of object to return

Return Type: `SM ref set`

references to objects with matching names

4.39.2.5. RPC name: get_by_uuid

Overview:

Get a reference to the SM instance with the specified UUID.

Signature:

```
SM ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `SM ref`

reference to the object

4.39.2.6. RPC name: get_capabilities

This message is deprecated.

Overview:

Get the capabilities field of the given SM.

Signature:

```
string set get_capabilities (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string set`

value of the field

4.39.2.7. RPC name: get_configuration

Overview:

Get the configuration field of the given SM.

Signature:

```
(string -> string) map get_configuration (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.39.2.8. RPC name: get_copyright

Overview:

Get the copyright field of the given SM.

Signature:

```
string get_copyright (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string`

value of the field

4.39.2.9. RPC name: get_driver_filename

Overview:

Get the driver_filename field of the given SM.

Signature:

```
string get_driver_filename (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
SM ref	self	reference to the object

Return Type: `string`

value of the field

4.39.2.10. RPC name: get_features

Overview:

Get the features field of the given SM.

Signature:

```
(string -> int) map get_features (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SM ref	self	reference to the object

Return Type: `(string -> int) map`

value of the field

4.39.2.11. RPC name: get_name_description

Overview:

Get the name/description field of the given SM.

Signature:

```
string get_name_description (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SM ref	self	reference to the object

Return Type: `string`

value of the field

4.39.2.12. RPC name: get_name_label

Overview:

Get the name/label field of the given SM.

Signature:

```
string get_name_label (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string`

value of the field

4.39.2.13. RPC name: get_other_config

Overview:

Get the other_config field of the given SM.

Signature:

```
(string -> string) map get_other_config (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.39.2.14. RPC name: get_record

Overview:

Get a record containing the current state of the given SM.

Signature:

```
SM record get_record (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `SM record`

all fields from the object

4.39.2.15. RPC name: get_required_api_version

Overview:

Get the required_api_version field of the given SM.

Signature:

```
string get_required_api_version (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string`

value of the field

4.39.2.16. RPC name: get_required_cluster_stack

Overview:

Get the required_cluster_stack field of the given SM.

Signature:

```
string set get_required_cluster_stack (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string set`

value of the field

4.39.2.17. RPC name: get_type

Overview:

Get the type field of the given SM.

Signature:

```
string get_type (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string`

value of the field

4.39.2.18. RPC name: get_uuid

Overview:

Get the uuid field of the given SM.

Signature:

```
string get_uuid (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string`

value of the field

4.39.2.19. RPC name: get_vendor

Overview:

Get the vendor field of the given SM.

Signature:

```
string get_vendor (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object

Return Type: `string`

value of the field

4.39.2.20. RPC name: get_version

Overview:

Get the version field of the given SM.

Signature:

```
string get_version (session ref session_id, SM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SM ref	self	reference to the object

Return Type: `string`

value of the field

4.39.2.21. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given SM. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, SM ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SM ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.39.2.22. RPC name: set_other_config

Overview:

Set the other_config field of the given SM.

Signature:

```
void set_other_config (session ref session_id, SM ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SM ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.40. Class: SR

A storage repository

4.40.1. Fields for class: SR

Field	Type	Qualifier	Description
allowed_operations	`storage_operations set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
blobs	`(string -> blob ref) map`	*RO/runtime*	Binary blobs associated with this SR
clustered	`bool`	*RO/runtime*	True if the SR is using aggregated local storage
content_type	`string`	*RO/constructor*	the type of the SR's content, if required (e.g. ISOs)
current_operations	`(string -> storage_operations map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
introduced_by	`DR_task ref`	*RO/runtime*	The disaster recovery task which introduced this SR
is_tools_sr	`bool`	*RO/runtime*	True if this is the SR that contains the Tools ISO VDIs
local_cache_enabled	`bool`	*RO/runtime*	True if this SR is assigned to be the local cache for its host
name_description	`string`	*RO/constructor*	a notes field containing human-readable description

Field	Type	Qualifier	Description
name_label	`string`	*RO/constructor*	a human-readable name
other_config	`(string -> string) map`	*RW*	additional configuration
PBDs	`PBD ref set`	*RO/runtime*	describes how particular hosts can see this storage repository
physical_size	`int`	*RO/constructor*	total physical size of the repository (in bytes)
physical_utilisation	`int`	*RO/runtime*	physical space currently utilised on this storage repository (in bytes). Note that for sparse disk formats, physical_utilisation may be less than virtual_allocation
shared	`bool`	*RO/runtime*	true if this SR is (capable of being) shared between multiple hosts
sm_config	`(string -> string) map`	*RW*	SM dependent data
tags	`string set`	*RW*	user-specified tags for categorization purposes
type	`string`	*RO/constructor*	type of the storage repository
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VDIs	`VDI ref set`	*RO/runtime*	all virtual disks known to this storage repository
virtual_allocation	`int`	*RO/runtime*	sum of virtual_sizes of all VDIs in this storage repository (in bytes)

4.40.2. RPCs associated with class: SR

4.40.2.1. RPC name: add_tags

Overview:

Add the given value to the tags field of the given SR. If the value is already in that Set, then do nothing.

Signature:

```
void add_tags (session ref session_id, SR ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object
`string`	value	New value to add

Return Type: `void`

4.40.2.2. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given SR.

Signature:

```
void add_to_other_config (session ref session_id, SR ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.40.2.3. RPC name: add_to_sm_config

Overview:

Add the given key-value pair to the sm_config field of the given SR.

Signature:

```
void add_to_sm_config (session ref session_id, SR ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

type	name	description
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.40.2.4. RPC name: assert_can_host_ha_statefile

Overview:

Returns successfully if the given SR can host an HA statefile. Otherwise returns an error to explain why not

Signature:

```
void assert_can_host_ha_statefile (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR to query

Return Type: `void`

4.40.2.5. RPC name: assert_supports_database_replication

Overview:

Returns successfully if the given SR supports database replication. Otherwise returns an error to explain why not.

Signature:

```
void assert_supports_database_replication (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR to query

Return Type: `void`

4.40.2.6. RPC name: create

Overview:

Create a new Storage Repository and introduce it into the managed system, creating both SR record and PBD record to attach it to current host (with specified device_config parameters)

Signature:

```
SR ref create (session ref session_id, host ref host, (string -> string) map
 device_config, int physical_size, string name_label, string name_description,
 string type, string content_type, bool shared, (string -> string) map sm_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host to create/make the SR on
(string -> string) map	device_config	The device config string that will be passed to backend SR driver
int	physical_size	The physical size of the new storage repository
string	name_label	The name of the new storage repository
string	name_description	The description of the new storage repository
string	type	The type of the SR; used to specify the SR backend driver to use
string	content_type	The type of the new SRs content, if required (e.g. ISOs)
bool	shared	True if the SR (is capable of) being shared by multiple hosts
(string -> string) map	sm_config	Storage backend specific configuration options

Return Type: SR ref

The reference of the newly created Storage Repository.

Possible Error Codes: SR_UNKNOWN_DRIVER

4.40.2.7. RPC name: create_new_blob

Overview:

Create a placeholder for a named binary blob of data that is associated with this SR

Signature:

```
blob ref create_new_blob (session ref session_id, SR ref sr, string name, string
 mime_type, bool public)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`SR ref`	sr	The SR
`string`	name	The name associated with the blob
`string`	mime_type	The mime type for the data. Empty string translates to application/octet-stream
`bool`	public	True if the blob should be publicly available

Return Type: `blob ref`

The reference of the blob, needed for populating its data

4.40.2.8. RPC name: destroy

Overview:

Destroy specified SR, removing SR-record from database and remove SR from disk. (In order to affect this operation the appropriate device_config is read from the specified SR's PBD on current host)

Signature:

```
void destroy (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR to destroy

Return Type: `void`

Possible Error Codes: SR_HAS_PBD

4.40.2.9. RPC name: disable_database_replication

Overview:

Signature:

```
void disable_database_replication (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR to which metadata should be no longer replicated

Return Type: `void`

4.40.2.10. RPC name: enable_database_replication

Overview:

Signature:

```
void enable_database_replication (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR to which metadata should be replicated

Return Type: `void`

4.40.2.11. RPC name: forget

Overview:

Removing specified SR-record from database, without attempting to remove SR from disk

Signature:

```
void forget (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR to destroy

Return Type: `void`

Possible Error Codes: SR_HAS_PBD

4.40.2.12. RPC name: forget_data_source_archives

Overview:

Forget the recorded statistics related to the specified data source

Signature:

```
void forget_data_source_archives (session ref session_id, SR ref sr, string
 data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	sr	The SR
string	data_source	The data source whose archives are to be forgotten

Return Type: `void`

4.40.2.13. RPC name: get_all

Overview:

Return a list of all the SRs known to the system.

Signature:

```
SR ref set get_all (session ref session_id)
```

4.40.2.14. RPC name: get_all_records

Overview:

Return a map of SR references to SR records for all SRs known to the system.

Signature:

```
(SR ref -> SR record) map get_all_records (session ref session_id)
```

4.40.2.15. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given SR.

Signature:

```
storage_operations set get_allowed_operations (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `storage_operations set`

value of the field

4.40.2.16. RPC name: get_blobs

Overview:

Get the blobs field of the given SR.

Signature:

```
(string -> blob ref) map get_blobs (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

Return Type: `(string -> blob ref) map`

value of the field

4.40.2.17. RPC name: get_by_name_label

Overview:

Get all the SR instances with the given label.

Signature:

```
SR ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	label of object to return

Return Type: SR `ref set`

references to objects with matching names

4.40.2.18. RPC name: get_by_uuid

Overview:

Get a reference to the SR instance with the specified UUID.

Signature:

```
SR ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
string	uuid	UUID of object to return

Return Type: `SR ref`

reference to the object

4.40.2.19. RPC name: get_clustered

Overview:

Get the clustered field of the given SR.

Signature:

```
bool get_clustered (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `bool`

value of the field

4.40.2.20. RPC name: get_content_type

Overview:

Get the content_type field of the given SR.

Signature:

```
string get_content_type (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `string`

value of the field

4.40.2.21. RPC name: get_current_operations

Overview:

Get the current_operations field of the given SR.

Signature:

```
(string -> storage_operations) map get_current_operations (session ref session_id,
 SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `(string -> storage_operations) map`

value of the field

4.40.2.22. RPC name: get_data_sources

Overview:

Signature:

```
data_source record set get_data_sources (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	sr	The SR to interrogate

Return Type: `data_source record set`

A set of data sources

4.40.2.23. RPC name: get_introduced_by

Overview:

Get the introduced_by field of the given SR.

Signature:

```
DR_task ref get_introduced_by (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `DR_task ref`

value of the field

4.40.2.24. RPC name: get_is_tools_sr

Overview:

Get the is_tools_sr field of the given SR.

Signature:

```
bool get_is_tools_sr (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `bool`

value of the field

4.40.2.25. RPC name: get_local_cache_enabled

Overview:

Get the local_cache_enabled field of the given SR.

Signature:

```
bool get_local_cache_enabled (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `bool`

value of the field

4.40.2.26. RPC name: get_name_description

Overview:

Get the name/description field of the given SR.

Signature:

```
string get_name_description (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `string`

value of the field

4.40.2.27. RPC name: get_name_label

Overview:

Get the name/label field of the given SR.

Signature:

```
string get_name_label (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `string`

value of the field

4.40.2.28. RPC name: get_other_config

Overview:

Get the other_config field of the given SR.

Signature:

```
(string -> string) map get_other_config (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.40.2.29. RPC name: get_PBDs

Overview:

Get the PBDs field of the given SR.

Signature:

```
PBD ref set get_PBDs (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `PBD ref set`

value of the field

4.40.2.30. RPC name: get_physical_size

Overview:

Get the physical_size field of the given SR.

Signature:

```
int get_physical_size (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `int`

value of the field

4.40.2.31. RPC name: get_physical_utilisation

Overview:

Get the physical_utilisation field of the given SR.

Signature:

```
int get_physical_utilisation (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
SR ref	self	reference to the object

Return Type: `int`

value of the field

4.40.2.32. RPC name: get_record

Overview:

Get a record containing the current state of the given SR.

Signature:

```
SR record get_record (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `SR record`

all fields from the object

4.40.2.33. RPC name: get_shared

Overview:

Get the shared field of the given SR.

Signature:

```
bool get_shared (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object

Return Type: `bool`

value of the field

4.40.2.34. RPC name: get_sm_config

Overview:

Get the sm_config field of the given SR.

Signature:

```
(string -> string) map get_sm_config (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.40.2.35. RPC name: get_supported_types

Overview:

Return a set of all the SR types supported by the system

Signature:

```
string set get_supported_types (session ref session_id)
```

4.40.2.36. RPC name: get_tags

Overview:

Get the tags field of the given SR.

Signature:

```
string set get_tags (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

Return Type: `string set`

value of the field

4.40.2.37. RPC name: get_type

Overview:

Get the type field of the given SR.

Signature:

```
string get_type (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

Return Type: `string`

value of the field

4.40.2.38. RPC name: get_uuid

Overview:

Get the uuid field of the given SR.

Signature:

```
string get_uuid (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

Return Type: `string`

value of the field

4.40.2.39. RPC name: get_VDIs

Overview:

Get the VDIs field of the given SR.

Signature:

```
VDI ref set get_VDIs (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

Return Type: `VDI ref set`

value of the field

4.40.2.40. RPC name: get_virtual_allocation

Overview:

Get the virtual_allocation field of the given SR.

Signature:

```
int get_virtual_allocation (session ref session_id, SR ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object

Return Type: `int`

value of the field

4.40.2.41. RPC name: introduce

Overview:

Introduce a new Storage Repository into the managed system

Signature:

```
SR ref introduce (session ref session_id, string uuid, string name_label, string
 name_description, string type, string content_type, bool shared, (string ->
 string) map sm_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	The uuid assigned to the introduced SR
`string`	name_label	The name of the new storage repository
`string`	name_description	The description of the new storage repository
`string`	type	The type of the SR; used to specify the SR backend driver to use
`string`	content_type	The type of the new SRs content, if required (e.g. ISOs)

type	name	description
bool	shared	True if the SR (is capable of) being shared by multiple hosts
(string -> string) map	sm_config	Storage backend specific configuration options

Return Type: SR `ref`

The reference of the newly introduced Storage Repository.

4.40.2.42. RPC name: make

This message is deprecated.

Overview:

Create a new Storage Repository on disk. This call is deprecated: use SR.create instead.

Signature:

```
string make (session ref session_id, host ref host, (string -> string) map
 device_config, int physical_size, string name_label, string name_description,
 string type, string content_type, (string -> string) map sm_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
host ref	host	The host to create/make the SR on
(string -> string) map	device_config	The device config string that will be passed to backend SR driver
int	physical_size	The physical size of the new storage repository
string	name_label	The name of the new storage repository
string	name_description	The description of the new storage repository
string	type	The type of the SR; used to specify the SR backend driver to use
string	content_type	The type of the new SRs content, if required (e.g. ISOs)
(string -> string) map	sm_config	Storage backend specific configuration options

Return Type: `string`

The uuid of the newly created Storage Repository.

4.40.2.43. RPC name: probe

Overview:

Perform a backend-specific scan, using the given device_config. If the device_config is complete, then this will return a list of the SRs present of this type on the device, if any. If the device_config is partial, then a backend-specific scan will be performed, returning results that will guide the user in improving the device_config.

Signature:

```
string probe (session ref session_id, host ref host, (string -> string) map
 device_config, string type, (string -> string) map sm_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`host ref`	host	The host to create/make the SR on
`(string -> string) map`	device_config	The device config string that will be passed to backend SR driver
`string`	type	The type of the SR; used to specify the SR backend driver to use
`(string -> string) map`	sm_config	Storage backend specific configuration options

Return Type: `string`

An XML fragment containing the scan results. These are specific to the scan being performed, and the backend.

4.40.2.44. RPC name: query_data_source

Overview:

Query the latest value of the specified data source

Signature:

```
float query_data_source (session ref session_id, SR ref sr, string data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR
`string`	data_source	The data source to query

Return Type: `float`

The latest value, averaged over the last 5 seconds

4.40.2.45. RPC name: record_data_source

Overview:

Start recording the specified data source

Signature:

```
void record_data_source (session ref session_id, SR ref sr, string data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	sr	The SR
string	data_source	The data source to record

Return Type: `void`

4.40.2.46. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given SR. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, SR ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.40.2.47. RPC name: remove_from_sm_config

Overview:

Remove the given key and its corresponding value from the sm_config field of the given SR. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_sm_config (session ref session_id, SR ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.40.2.48. RPC name: remove_tags

Overview:

Remove the given value from the tags field of the given SR. If the value is not in that Set, then do nothing.

Signature:

```
void remove_tags (session ref session_id, SR ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	reference to the object
string	value	Value to remove

Return Type: void

4.40.2.49. RPC name: scan

Overview:

Refreshes the list of VDIs associated with an SR

Signature:

```
void scan (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	sr	The SR to scan

Return Type: void

4.40.2.50. RPC name: set_name_description

Overview:

Set the name description of the SR

Signature:

```
void set_name_description (session ref session_id, SR ref sr, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR
`string`	value	The name description for the SR

Return Type: `void`

4.40.2.51. RPC name: set_name_label

Overview:

Set the name label of the SR

Signature:

```
void set_name_label (session ref session_id, SR ref sr, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR
`string`	value	The name label for the SR

Return Type: `void`

4.40.2.52. RPC name: set_other_config

Overview:

Set the other_config field of the given SR.

Signature:

```
void set_other_config (session ref session_id, SR ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
SR ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: `void`

4.40.2.53. RPC name: set_physical_size

Overview:

Sets the SR's physical_size field

Signature:

```
void set_physical_size (session ref session_id, SR ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	The SR to modify
int	value	The new value of the SR's physical_size

Return Type: `void`

4.40.2.54. RPC name: set_physical_utilisation

Overview:

Sets the SR's physical_utilisation field

Signature:

```
void set_physical_utilisation (session ref session_id, SR ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	The SR to modify
int	value	The new value of the SR's physical utilisation

Return Type: `void`

4.40.2.55. RPC name: set_shared

Overview:

Sets the shared flag on the SR

Signature:

```
void set_shared (session ref session_id, SR ref sr, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	sr	The SR
`bool`	value	True if the SR is shared

Return Type: `void`

4.40.2.56. RPC name: set_sm_config

Overview:

Set the sm_config field of the given SR.

Signature:

```
void set_sm_config (session ref session_id, SR ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`SR ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.40.2.57. RPC name: set_tags

Overview:

Set the tags field of the given SR.

Signature:

```
void set_tags (session ref session_id, SR ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
SR ref	self	reference to the object
string set	value	New value to set

Return Type: void

4.40.2.58. RPC name: set_virtual_allocation

Overview:

Sets the SR's virtual_allocation field

Signature:

```
void set_virtual_allocation (session ref session_id, SR ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	self	The SR to modify
int	value	The new value of the SR's virtual_allocation

Return Type: void

4.40.2.59. RPC name: update

Overview:

Refresh the fields on the SR object

Signature:

```
void update (session ref session_id, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
SR ref	sr	The SR whose fields should be refreshed

Return Type: void

4.41. Class: subject

A user or group that can log in xapi

4.41.1. Fields for class: subject

Field	Type	Qualifier	Description
other_config	`(string -> string) map`	*RO/constructor*	additional configuration
roles	`role ref set`	*RO/runtime*	the roles associated with this subject
subject_identifier	`string`	*RO/constructor*	the subject identifier, unique in the external directory service
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.41.2. RPCs associated with class: subject

4.41.2.1. RPC name: add_to_roles

Overview:

This call adds a new role to a subject

Signature:

```
void add_to_roles (session ref session_id, subject ref self, role ref role)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	The subject who we want to add the role to
`role ref`	role	The unique role reference

Return Type: `void`

4.41.2.2. RPC name: create

Overview:

Create a new subject instance, and return its handle.

Signature:

```
subject ref create (session ref session_id, subject record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
subject record	args	All constructor arguments

Return Type: `subject ref`

reference to the newly created object

4.41.2.3. RPC name: destroy

Overview:

Destroy the specified subject instance.

Signature:

```
void destroy (session ref session_id, subject ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
subject ref	self	reference to the object

Return Type: `void`

4.41.2.4. RPC name: get_all

Overview:

Return a list of all the subjects known to the system.

Signature:

```
subject ref set get_all (session ref session_id)
```

4.41.2.5. RPC name: get_all_records

Overview:

Return a map of subject references to subject records for all subjects known to the system.

Signature:

```
(subject ref -> subject record) map get_all_records (session ref session_id)
```

4.41.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the subject instance with the specified UUID.

Signature:

```
subject ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `subject ref`

reference to the object

4.41.2.7. RPC name: get_other_config

Overview:

Get the other_config field of the given subject.

Signature:

```
(string -> string) map get_other_config (session ref session_id, subject ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.41.2.8. RPC name: get_permissions_name_label

Overview:

This call returns a list of permission names given a subject

Signature:

```
string set get_permissions_name_label (session ref session_id, subject ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	The subject whose permissions will be retrieved

Return Type: `string set`

a list of permission names

4.41.2.9. RPC name: get_record

Overview:

Get a record containing the current state of the given subject.

Signature:

```
subject record get_record (session ref session_id, subject ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	reference to the object

Return Type: `subject record`

all fields from the object

4.41.2.10. RPC name: get_roles

Overview:

Get the roles field of the given subject.

Signature:

```
role ref set get_roles (session ref session_id, subject ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	reference to the object

Return Type: `role ref set`

value of the field

4.41.2.11. RPC name: get_subject_identifier

Overview:

Get the subject_identifier field of the given subject.

Signature:

```
string get_subject_identifier (session ref session_id, subject ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	reference to the object

Return Type: `string`

value of the field

4.41.2.12. RPC name: get_uuid

Overview:

Get the uuid field of the given subject.

Signature:

```
string get_uuid (session ref session_id, subject ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	reference to the object

Return Type: `string`

value of the field

4.41.2.13. RPC name: remove_from_roles

Overview:

This call removes a role from a subject

Signature:

```
void remove_from_roles (session ref session_id, subject ref self, role ref role)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`subject ref`	self	The subject from whom we want to remove the role
`role ref`	role	The unique role reference in the subject's roles field

Return Type: `void`

4.42. Class: task

A long-running asynchronous task

4.42.1. Fields for class: task

Field	Type	Qualifier	Description
allowed_operations	`task_allowed_opera set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
backtrace	`string`	*RO/runtime*	Function call trace for debugging.
created	`datetime`	*RO/runtime*	Time task was created
current_operations	`(string -> task_allowed_opera map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
error_info	`string set`	*RO/runtime*	if the task has failed, this field contains the set of associated error strings. Undefined otherwise.
finished	`datetime`	*RO/runtime*	Time task finished (i.e. succeeded or failed). If task-status is pending, then the value of this field has no meaning
name_description	`string`	*RO/runtime*	a notes field containing human-readable description
name_label	`string`	*RO/runtime*	a human-readable name
other_config	`(string -> string) map`	*RW*	additional configuration
progress	`float`	*RO/runtime*	This field contains the estimated fraction of the task which is complete. This field should not be used to determine whether the task is complete - for this the status field of the task should be used.

Field	Type	Qualifier	Description
resident_on	host ref	*RO/runtime*	the host on which the task is running
result	string	*RO/runtime*	if the task has completed successfully, this field contains the result value (either Void or an object reference). Undefined otherwise.
status	task_status_type	*RO/runtime*	current status of the task
subtask_of	task ref	*RO/runtime*	Ref pointing to the task this is a substask of.
subtasks	task ref set	*RO/runtime*	List pointing to all the substasks.
type	string	*RO/runtime*	if the task has completed successfully, this field contains the type of the encoded result (i.e. name of the class whose reference is in the result field). Undefined otherwise.
uuid	string	*RO/runtime*	Unique identifier/object reference

4.42.2. RPCs associated with class: task

4.42.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given task.

Signature:

```
void add_to_other_config (session ref session_id, task ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
task ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: `void`

4.42.2.2. RPC name: cancel

Overview:

Request that a task be cancelled. Note that a task may fail to be cancelled and may complete or fail normally and note that, even when a task does cancel, it might take an arbitrary amount of time.

Signature:

```
void cancel (session ref session_id, task ref task)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	task	The task

Return Type: `void`

Possible Error Codes: `OPERATION_NOT_ALLOWED`

4.42.2.3. RPC name: create

Overview:

Create a new task object which must be manually destroyed.

Signature:

```
task ref create (session ref session_id, string label, string description)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	short label for the new task
`string`	description	longer description for the new task

Return Type: `task ref`

The reference of the created task object

4.42.2.4. RPC name: destroy

Overview:

Destroy the task object

Signature:

```
void destroy (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	Reference to the task object

Return Type: `void`

4.42.2.5. RPC name: get_all

Overview:

Return a list of all the tasks known to the system.

Signature:

```
task ref set get_all (session ref session_id)
```

4.42.2.6. RPC name: get_all_records

Overview:

Return a map of task references to task records for all tasks known to the system.

Signature:

```
(task ref -> task record) map get_all_records (session ref session_id)
```

4.42.2.7. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given task.

Signature:

```
task_allowed_operations set get_allowed_operations (session ref session_id, task
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `task_allowed_operations set`

value of the field

4.42.2.8. RPC name: get_backtrace

Overview:

Get the backtrace field of the given task.

Signature:

```
string get_backtrace (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `string`

value of the field

4.42.2.9. RPC name: get_by_name_label

Overview:

Get all the task instances with the given label.

Signature:

```
task ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	label of object to return

Return Type: `task ref set`

references to objects with matching names

4.42.2.10. RPC name: get_by_uuid

Overview:

Get a reference to the task instance with the specified UUID.

Signature:

```
task ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`string`	uuid	UUID of object to return

Return Type: `task ref`

reference to the object

4.42.2.11. RPC name: get_created

Overview:

Get the created field of the given task.

Signature:

```
datetime get_created (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.42.2.12. RPC name: get_current_operations

Overview:

Get the current_operations field of the given task.

Signature:

```
(string -> task_allowed_operations) map get_current_operations (session ref
 session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `(string -> task_allowed_operations) map`

value of the field

4.42.2.13. RPC name: get_error_info

Overview:

Get the error_info field of the given task.

Signature:

```
string set get_error_info (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `string set`

value of the field

4.42.2.14. RPC name: get_finished

Overview:

Get the finished field of the given task.

Signature:

```
datetime get_finished (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.42.2.15. RPC name: get_name_description

Overview:

Get the name/description field of the given task.

Signature:

```
string get_name_description (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
task ref	self	reference to the object

Return Type: `string`

value of the field

4.42.2.16. RPC name: get_name_label

Overview:

Get the name/label field of the given task.

Signature:

```
string get_name_label (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
task ref	self	reference to the object

Return Type: `string`

value of the field

4.42.2.17. RPC name: get_other_config

Overview:

Get the other_config field of the given task.

Signature:

```
(string -> string) map get_other_config (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
task ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.42.2.18. RPC name: get_progress

Overview:

Get the progress field of the given task.

Signature:

```
float get_progress (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `float`

value of the field

4.42.2.19. RPC name: get_record

Overview:

Get a record containing the current state of the given task.

Signature:

```
task record get_record (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `task record`

all fields from the object

4.42.2.20. RPC name: get_resident_on

Overview:

Get the resident_on field of the given task.

Signature:

```
host ref get_resident_on (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
task ref	self	reference to the object

Return Type: host ref

value of the field

4.42.2.21. RPC name: get_result

Overview:

Get the result field of the given task.

Signature:

```
string get_result (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
task ref	self	reference to the object

Return Type: string

value of the field

4.42.2.22. RPC name: get_status

Overview:

Get the status field of the given task.

Signature:

```
task_status_type get_status (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
task ref	self	reference to the object

Return Type: task_status_type

value of the field

4.42.2.23. RPC name: get_subtask_of

Overview:

Get the subtask_of field of the given task.

Signature:

```
task ref get_subtask_of (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `task ref`

value of the field

4.42.2.24. RPC name: get_subtasks

Overview:

Get the subtasks field of the given task.

Signature:

```
task ref set get_subtasks (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object

Return Type: `task ref set`

value of the field

4.42.2.25. RPC name: get_type

Overview:

Get the type field of the given task.

Signature:

```
string get_type (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
task ref	self	reference to the object

Return Type: `string`

value of the field

4.42.2.26. RPC name: get_uuid

Overview:

Get the uuid field of the given task.

Signature:

```
string get_uuid (session ref session_id, task ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
task ref	self	reference to the object

Return Type: `string`

value of the field

4.42.2.27. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given task. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, task ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
task ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.42.2.28. RPC name: set_other_config

Overview:

Set the other_config field of the given task.

Signature:

```
void set_other_config (session ref session_id, task ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.42.2.29. RPC name: set_status

Overview:

Set the task status

Signature:

```
void set_status (session ref session_id, task ref self, task_status_type value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`task ref`	self	Reference to the task object
`task_status_type`	value	task status value to be set

Return Type: `void`

4.43. Class: tunnel

A tunnel for network traffic

4.43.1. Fields for class: tunnel

Field	Type	Qualifier	Description
access_PIF	`PIF ref`	*RO/constructor*	The interface through which the tunnel is accessed
other_config	`(string -> string) map`	*RW*	Additional configuration

Field	Type	Qualifier	Description
status	(string -> string) map	*RW*	Status information about the tunnel
transport_PIF	PIF ref	*RO/constructor*	The interface used by the tunnel
uuid	string	*RO/runtime*	Unique identifier/object reference

4.43.2. RPCs associated with class: tunnel

4.43.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given tunnel.

Signature:

```
void add_to_other_config (session ref session_id, tunnel ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
tunnel ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.43.2.2. RPC name: add_to_status

Overview:

Add the given key-value pair to the status field of the given tunnel.

Signature:

```
void add_to_status (session ref session_id, tunnel ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
tunnel ref	self	reference to the object

type	name	description
string	key	Key to add
string	value	Value to add

Return Type: void

4.43.2.3. RPC name: create

Overview:

Create a tunnel

Signature:

```
tunnel ref create (session ref session_id, PIF ref transport_PIF, network ref
 network)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
PIF ref	transport_PIF	PIF which receives the tagged traffic
network ref	network	Network to receive the tunnelled traffic

Return Type: tunnel ref

The reference of the created tunnel object

Possible Error Codes: OPENVSWITCH_NOT_ACTIVE, TRANSPORT_PIF_NOT_CONFIGURED, IS_TUNNEL_ACCESS_PIF

4.43.2.4. RPC name: destroy

Overview:

Destroy a tunnel

Signature:

```
void destroy (session ref session_id, tunnel ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
tunnel ref	self	tunnel to destroy

Return Type: void

4.43.2.5. RPC name: get_access_PIF

Overview:

Get the access_PIF field of the given tunnel.

Signature:

```
PIF ref get_access_PIF (session ref session_id, tunnel ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object

Return Type: `PIF ref`

value of the field

4.43.2.6. RPC name: get_all

Overview:

Return a list of all the tunnels known to the system.

Signature:

```
tunnel ref set get_all (session ref session_id)
```

4.43.2.7. RPC name: get_all_records

Overview:

Return a map of tunnel references to tunnel records for all tunnels known to the system.

Signature:

```
(tunnel ref -> tunnel record) map get_all_records (session ref session_id)
```

4.43.2.8. RPC name: get_by_uuid

Overview:

Get a reference to the tunnel instance with the specified UUID.

Signature:

```
tunnel ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
string	uuid	UUID of object to return

Return Type: `tunnel ref`

reference to the object

4.43.2.9. RPC name: get_other_config

Overview:

Get the other_config field of the given tunnel.

Signature:

```
(string -> string) map get_other_config (session ref session_id, tunnel ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
tunnel ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.43.2.10. RPC name: get_record

Overview:

Get a record containing the current state of the given tunnel.

Signature:

```
tunnel record get_record (session ref session_id, tunnel ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
tunnel ref	self	reference to the object

Return Type: `tunnel record`

all fields from the object

4.43.2.11. RPC name: get_status

Overview:

Get the status field of the given tunnel.

Signature:

```
(string -> string) map get_status (session ref session_id, tunnel ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.43.2.12. RPC name: get_transport_PIF

Overview:

Get the transport_PIF field of the given tunnel.

Signature:

```
PIF ref get_transport_PIF (session ref session_id, tunnel ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object

Return Type: `PIF ref`

value of the field

4.43.2.13. RPC name: get_uuid

Overview:

Get the uuid field of the given tunnel.

Signature:

```
string get_uuid (session ref session_id, tunnel ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object

Return Type: `string`

value of the field

4.43.2.14. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given tunnel. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, tunnel ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.43.2.15. RPC name: remove_from_status

Overview:

Remove the given key and its corresponding value from the status field of the given tunnel. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_status (session ref session_id, tunnel ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.43.2.16. RPC name: set_other_config

Overview:

Set the other_config field of the given tunnel.

Signature:

```
void set_other_config (session ref session_id, tunnel ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.43.2.17. RPC name: set_status

Overview:

Set the status field of the given tunnel.

Signature:

```
void set_status (session ref session_id, tunnel ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`tunnel ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.44. Class: USB_group

A group of compatible USBs across the resource pool

4.44.1. Fields for class: USB_group

Field	Type	Qualifier	Description
name_description	`string`	*RW*	a notes field containing human-readable description
name_label	`string`	*RW*	a human-readable name
other_config	`(string -> string) map`	*RW*	Additional configuration
PUSBs	`PUSB ref set`	*RO/runtime*	List of PUSBs in the group

Field	Type	Qualifier	Description
uuid	string	*RO/runtime*	Unique identifier/object reference
VUSBs	VUSB ref set	*RO/runtime*	List of VUSBs using the group

4.44.2. RPCs associated with class: USB_group

4.44.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given USB_group.

Signature:

```
void add_to_other_config (session ref session_id, USB_group ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
USB_group ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.44.2.2. RPC name: create

Overview:

Signature:

```
USB_group ref create (session ref session_id, string name_label, string
 name_description, (string -> string) map other_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	name_label	
string	name_description	
(string -> string) map	other_config	

Return Type: `USB_group ref`

4.44.2.3. RPC name: destroy

Overview:

Signature:

```
void destroy (session ref session_id, USB_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`USB_group ref`	self	The USB group to destroy

Return Type: `void`

4.44.2.4. RPC name: get_all

Overview:

Return a list of all the USB_groups known to the system.

Signature:

```
USB_group ref set get_all (session ref session_id)
```

4.44.2.5. RPC name: get_all_records

Overview:

Return a map of USB_group references to USB_group records for all USB_groups known to the system.

Signature:

```
(USB_group ref -> USB_group record) map get_all_records (session ref session_id)
```

4.44.2.6. RPC name: get_by_name_label

Overview:

Get all the USB_group instances with the given label.

Signature:

```
USB_group ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
string	label	label of object to return

Return Type: `USB_group ref set`

references to objects with matching names

4.44.2.7. RPC name: get_by_uuid

Overview:

Get a reference to the USB_group instance with the specified UUID.

Signature:

```
USB_group ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `USB_group ref`

reference to the object

4.44.2.8. RPC name: get_name_description

Overview:

Get the name/description field of the given USB_group.

Signature:

```
string get_name_description (session ref session_id, USB_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
USB_group ref	self	reference to the object

Return Type: `string`

value of the field

4.44.2.9. RPC name: get_name_label

Overview:

Get the name/label field of the given USB_group.

Signature:

```
string get_name_label (session ref session_id, USB_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`USB_group ref`	self	reference to the object

Return Type: `string`

value of the field

4.44.2.10. RPC name: get_other_config

Overview:

Get the other_config field of the given USB_group.

Signature:

```
(string -> string) map get_other_config (session ref session_id, USB_group ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`USB_group ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.44.2.11. RPC name: get_PUSBs

Overview:

Get the PUSBs field of the given USB_group.

Signature:

```
PUSB ref set get_PUSBs (session ref session_id, USB_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
USB_group ref	self	reference to the object

Return Type: PUSB ref set

value of the field

4.44.2.12. RPC name: get_record

Overview:

Get a record containing the current state of the given USB_group.

Signature:

```
USB_group record get_record (session ref session_id, USB_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
USB_group ref	self	reference to the object

Return Type: USB_group record

all fields from the object

4.44.2.13. RPC name: get_uuid

Overview:

Get the uuid field of the given USB_group.

Signature:

```
string get_uuid (session ref session_id, USB_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
USB_group ref	self	reference to the object

Return Type: string

value of the field

4.44.2.14. RPC name: get_VUSBs

Overview:

Get the VUSBs field of the given USB_group.

Signature:

```
VUSB ref set get_VUSBs (session ref session_id, USB_group ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
USB_group ref	self	reference to the object

Return Type: `VUSB ref set`

value of the field

4.44.2.15. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given USB_group. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, USB_group ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
USB_group ref	self	reference to the object
string	key	Key to remove

Return Type: `void`

4.44.2.16. RPC name: set_name_description

Overview:

Set the name/description field of the given USB_group.

Signature:

```
void set_name_description (session ref session_id, USB_group ref self, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`USB_group ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.44.2.17. RPC name: set_name_label

Overview:

Set the name/label field of the given USB_group.

Signature:

```
void set_name_label (session ref session_id, USB_group ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`USB_group ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.44.2.18. RPC name: set_other_config

Overview:

Set the other_config field of the given USB_group.

Signature:

```
void set_other_config (session ref session_id, USB_group ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`USB_group ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.45. Class: user

This class is deprecated.

A user of the system

4.45.1. Fields for class: user

Field	Type	Qualifier	Description
fullname	`string`	*RW*	**Deprecated**. full name
other_config	`(string -> string) map`	*RW*	**Deprecated**. additional configuration
short_name	`string`	*RO/constructor*	**Deprecated**. short name (e.g. userid)
uuid	`string`	*RO/runtime*	**Deprecated**. Unique identifier/object reference

4.45.2. RPCs associated with class: user

4.45.2.1. RPC name: add_to_other_config

This message is deprecated.

Overview:

Add the given key-value pair to the other_config field of the given user.

Signature:

```
void add_to_other_config (session ref session_id, user ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.45.2.2. RPC name: create

This message is deprecated.

Overview:

Create a new user instance, and return its handle.

Signature:

```
user ref create (session ref session_id, user record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user record`	args	All constructor arguments

Return Type: `user ref`

reference to the newly created object

4.45.2.3. RPC name: destroy

This message is deprecated.

Overview:

Destroy the specified user instance.

Signature:

```
void destroy (session ref session_id, user ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object

Return Type: `void`

4.45.2.4. RPC name: get_by_uuid

This message is deprecated.

Overview:

Get a reference to the user instance with the specified UUID.

Signature:

```
user ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `user ref`

reference to the object

4.45.2.5. RPC name: get_fullname

This message is deprecated.

Overview:

Get the fullname field of the given user.

Signature:

```
string get_fullname (session ref session_id, user ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object

Return Type: `string`

value of the field

4.45.2.6. RPC name: get_other_config

This message is deprecated.

Overview:

Get the other_config field of the given user.

Signature:

```
(string -> string) map get_other_config (session ref session_id, user ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.45.2.7. RPC name: get_record

This message is deprecated.

Overview:

Get a record containing the current state of the given user.

Signature:

```
user record get_record (session ref session_id, user ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object

Return Type: `user record`

all fields from the object

4.45.2.8. RPC name: get_short_name

This message is deprecated.

Overview:

Get the short_name field of the given user.

Signature:

```
string get_short_name (session ref session_id, user ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object

Return Type: `string`

value of the field

4.45.2.9. RPC name: get_uuid

This message is deprecated.

Overview:

Get the uuid field of the given user.

Signature:

```
string get_uuid (session ref session_id, user ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object

Return Type: `string`

value of the field

4.45.2.10. RPC name: remove_from_other_config

This message is deprecated.

Overview:

Remove the given key and its corresponding value from the other_config field of the given user. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, user ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.45.2.11. RPC name: set_fullname

This message is deprecated.

Overview:

Set the fullname field of the given user.

Signature:

```
void set_fullname (session ref session_id, user ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`user ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.45.2.12. RPC name: set_other_config

This message is deprecated.

Overview:

Set the other_config field of the given user.

Signature:

```
void set_other_config (session ref session_id, user ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
user ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: `void`

4.46. Class: VBD

A virtual block device

4.46.1. Fields for class: VBD

Field	Type	Qualifier	Description
allowed_operations	vbd_operations set	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
bootable	bool	*RW*	true if this VBD is bootable
current_operations	(string -> vbd_operations) map	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
currently_attached	bool	*RO/runtime*	is the device currently attached (erased on reboot)
device	string	*RO/runtime*	device seen by the guest e.g. hda1
empty	bool	*RO/constructor*	if true this represents an empty drive
metrics	VBD_metrics ref	*RO/runtime*	**Removed**. metrics associated with this VBD

Field	Type	Qualifier	Description
mode	`vbd_mode`	*RW*	the mode the VBD should be mounted with
other_config	`(string -> string) map`	*RW*	additional configuration
qos_algorithm_params	`(string -> string) map`	*RW*	parameters for chosen QoS algorithm
qos_algorithm_type	`string`	*RW*	QoS algorithm to use
qos_supported_algorithms	`string set`	*RO/runtime*	supported QoS algorithms for this VBD
runtime_properties	`(string -> string) map`	*RO/runtime*	Device runtime properties
status_code	`int`	*RO/runtime*	error/success code associated with last attach-operation (erased on reboot)
status_detail	`string`	*RO/runtime*	error/success information associated with last attach-operation status (erased on reboot)
storage_lock	`bool`	*RO/runtime*	true if a storage level lock was acquired
type	`vbd_type`	*RW*	how the VBD will appear to the guest (e.g. disk or CD)
unpluggable	`bool`	*RW*	true if this VBD will support hot-unplug
userdevice	`string`	*RW*	user-friendly device name e.g. 0,1,2,etc.
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VDI	`VDI ref`	*RO/constructor*	the virtual disk
VM	`VM ref`	*RO/constructor*	the virtual machine

4.46.2. RPCs associated with class: VBD

4.46.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VBD.

Signature:

```
void add_to_other_config (session ref session_id, VBD ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.46.2.2. RPC name: add_to_qos_algorithm_params

Overview:

Add the given key-value pair to the qos/algorithm_params field of the given VBD.

Signature:

```
void add_to_qos_algorithm_params (session ref session_id, VBD ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.46.2.3. RPC name: assert_attachable

Overview:

Throws an error if this VBD could not be attached to this VM if the VM were running. Intended for debugging.

Signature:

```
void assert_attachable (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VBD ref`	self	The VBD to query

Return Type: `void`

4.46.2.4. RPC name: create

Overview:

Create a new VBD instance, and return its handle.

Signature:

```
VBD ref create (session ref session_id, VBD record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD record`	args	All constructor arguments

Return Type: `VBD ref`

reference to the newly created object

4.46.2.5. RPC name: destroy

Overview:

Destroy the specified VBD instance.

Signature:

```
void destroy (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

Return Type: `void`

4.46.2.6. RPC name: eject

Overview:

Remove the media from the device and leave it empty

Signature:

```
void eject (session ref session_id, VBD ref vbd)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	vbd	The vbd representing the CDROM-like device

Return Type: `void`

Possible Error Codes: `VBD_NOT_REMOVABLE_MEDIA`, `VBD_IS_EMPTY`

4.46.2.7. RPC name: get_all

Overview:

Return a list of all the VBDs known to the system.

Signature:

```
VBD ref set get_all (session ref session_id)
```

4.46.2.8. RPC name: get_all_records

Overview:

Return a map of VBD references to VBD records for all VBDs known to the system.

Signature:

```
(VBD ref -> VBD record) map get_all_records (session ref session_id)
```

4.46.2.9. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given VBD.

Signature:

```
vbd_operations set get_allowed_operations (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

Return Type: `vbd_operations set`

value of the field

4.46.2.10. RPC name: get_bootable

Overview:

Get the bootable field of the given VBD.

Signature:

```
bool get_bootable (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `bool`

value of the field

4.46.2.11. RPC name: get_by_uuid

Overview:

Get a reference to the VBD instance with the specified UUID.

Signature:

```
VBD ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `VBD ref`

reference to the object

4.46.2.12. RPC name: get_current_operations

Overview:

Get the current_operations field of the given VBD.

Signature:

```
(string -> vbd_operations) map get_current_operations (session ref session_id, VBD
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `(string -> vbd_operations) map`

value of the field

4.46.2.13. RPC name: get_currently_attached

Overview:

Get the currently_attached field of the given VBD.

Signature:

```
bool get_currently_attached (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `bool`

value of the field

4.46.2.14. RPC name: get_device

Overview:

Get the device field of the given VBD.

Signature:

```
string get_device (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `string`

value of the field

4.46.2.15. RPC name: get_empty

Overview:

Get the empty field of the given VBD.

Signature:

```
bool get_empty (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `bool`

value of the field

4.46.2.16. RPC name: get_metrics

This message is removed.

Overview:

Get the metrics field of the given VBD.

Signature:

```
VBD_metrics ref get_metrics (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `VBD_metrics ref`

value of the field

4.46.2.17. RPC name: get_mode

Overview:

Get the mode field of the given VBD.

Signature:

```
vbd_mode get_mode (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VBD ref	self	reference to the object

Return Type: `vbd_mode`

value of the field

4.46.2.18. RPC name: get_other_config

Overview:

Get the other_config field of the given VBD.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.46.2.19. RPC name: get_qos_algorithm_params

Overview:

Get the qos/algorithm_params field of the given VBD.

Signature:

```
(string -> string) map get_qos_algorithm_params (session ref session_id, VBD ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.46.2.20. RPC name: get_qos_algorithm_type

Overview:

Get the qos/algorithm_type field of the given VBD.

Signature:

```
string get_qos_algorithm_type (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

Return Type: `string`

value of the field

4.46.2.21. RPC name: get_qos_supported_algorithms

Overview:

Get the qos/supported_algorithms field of the given VBD.

Signature:

```
string set get_qos_supported_algorithms (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

Return Type: `string set`

value of the field

4.46.2.22. RPC name: get_record

Overview:

Get a record containing the current state of the given VBD.

Signature:

```
VBD record get_record (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VBD ref	self	reference to the object

Return Type: `VBD record`

all fields from the object

4.46.2.23. RPC name: get_runtime_properties

Overview:

Get the runtime_properties field of the given VBD.

Signature:

```
(string -> string) map get_runtime_properties (session ref session_id, VBD ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.46.2.24. RPC name: get_status_code

Overview:

Get the status_code field of the given VBD.

Signature:

```
int get_status_code (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `int`

value of the field

4.46.2.25. RPC name: get_status_detail

Overview:

Get the status_detail field of the given VBD.

Signature:

```
string get_status_detail (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

Return Type: `string`

value of the field

4.46.2.26. RPC name: get_storage_lock

Overview:

Get the storage_lock field of the given VBD.

Signature:

```
bool get_storage_lock (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

Return Type: `bool`

value of the field

4.46.2.27. RPC name: get_type

Overview:

Get the type field of the given VBD.

Signature:

```
vbd_type get_type (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VBD ref	self	reference to the object

Return Type: `vbd_type`

value of the field

4.46.2.28. RPC name: get_unpluggable

Overview:

Get the unpluggable field of the given VBD.

Signature:

```
bool get_unpluggable (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `bool`

value of the field

4.46.2.29. RPC name: get_userdevice

Overview:

Get the userdevice field of the given VBD.

Signature:

```
string get_userdevice (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `string`

value of the field

4.46.2.30. RPC name: get_uuid

Overview:

Get the uuid field of the given VBD.

Signature:

```
string get_uuid (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `string`

value of the field

4.46.2.31. RPC name: get_VDI

Overview:

Get the VDI field of the given VBD.

Signature:

```
VDI ref get_VDI (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `VDI ref`

value of the field

4.46.2.32. RPC name: get_VM

Overview:

Get the VM field of the given VBD.

Signature:

```
VM ref get_VM (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object

Return Type: `VM ref`

value of the field

4.46.2.33. RPC name: insert

Overview:

Insert new media into the device

Signature:

```
void insert (session ref session_id, VBD ref vbd, VDI ref vdi)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	vbd	The vbd representing the CDROM-like device
`VDI ref`	vdi	The new VDI to 'insert'

Return Type: `void`

Possible Error Codes: `VBD_NOT_REMOVABLE_MEDIA`, `VBD_NOT_EMPTY`

4.46.2.34. RPC name: plug

Overview:

Hotplug the specified VBD, dynamically attaching it to the running VM

Signature:

```
void plug (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	The VBD to hotplug

Return Type: `void`

4.46.2.35. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VBD. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VBD ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.46.2.36. RPC name: remove_from_qos_algorithm_params

Overview:

Remove the given key and its corresponding value from the qos/algorithm_params field of the given VBD. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_qos_algorithm_params (session ref session_id, VBD ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.46.2.37. RPC name: set_bootable

Overview:

Set the bootable field of the given VBD.

Signature:

```
void set_bootable (session ref session_id, VBD ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

type	name	description
`bool`	value	New value to set

Return Type: `void`

4.46.2.38. RPC name: set_mode

Overview:

Set the mode field of the given VBD.

Signature:

```
void set_mode (session ref session_id, VBD ref self, vbd_mode value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object
`vbd_mode`	value	New value to set

Return Type: `void`

4.46.2.39. RPC name: set_other_config

Overview:

Set the other_config field of the given VBD.

Signature:

```
void set_other_config (session ref session_id, VBD ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.46.2.40. RPC name: set_qos_algorithm_params

Overview:

Set the qos/algorithm_params field of the given VBD.

Signature:

```
void set_qos_algorithm_params (session ref session_id, VBD ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.46.2.41. RPC name: set_qos_algorithm_type

Overview:

Set the qos/algorithm_type field of the given VBD.

Signature:

```
void set_qos_algorithm_type (session ref session_id, VBD ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.46.2.42. RPC name: set_type

Overview:

Set the type field of the given VBD.

Signature:

```
void set_type (session ref session_id, VBD ref self, vbd_type value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	reference to the object

type	name	description
vbd_type	value	New value to set

Return Type: void

4.46.2.43. RPC name: set_unpluggable

Overview:

Set the unpluggable field of the given VBD.

Signature:

```
void set_unpluggable (session ref session_id, VBD ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object
bool	value	New value to set

Return Type: void

4.46.2.44. RPC name: set_userdevice

Overview:

Set the userdevice field of the given VBD.

Signature:

```
void set_userdevice (session ref session_id, VBD ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD ref	self	reference to the object
string	value	New value to set

Return Type: void

4.46.2.45. RPC name: unplug

Overview:

Hot-unplug the specified VBD, dynamically unattaching it from the running VM

Signature:

```
void unplug (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	The VBD to hot-unplug

Return Type: `void`

Possible Error Codes: DEVICE_DETACH_REJECTED, DEVICE_ALREADY_DETACHED

4.46.2.46. RPC name: unplug_force

Overview:

Forcibly unplug the specified VBD

Signature:

```
void unplug_force (session ref session_id, VBD ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD ref`	self	The VBD to forcibly unplug

Return Type: `void`

4.47. Class: VBD_metrics

This class is removed.

The metrics associated with a virtual block device

4.47.1. Fields for class: VBD_metrics

Field	Type	Qualifier	Description
io_read_kbs	`float`	*RO/runtime*	**Removed**. Read bandwidth (KiB/s)
io_write_kbs	`float`	*RO/runtime*	**Removed**. Write bandwidth (KiB/s)
last_updated	`datetime`	*RO/runtime*	**Removed**. Time at which this information was last updated

Field	Type	Qualifier	Description
other_config	(string -> string) map	*RW*	**Removed**. additional configuration
uuid	string	*RO/runtime*	**Removed**. Unique identifier/object reference

4.47.2. RPCs associated with class: VBD_metrics

4.47.2.1. RPC name: add_to_other_config

This message is removed.

Overview:

Add the given key-value pair to the other_config field of the given VBD_metrics.

Signature:

```
void add_to_other_config (session ref session_id, VBD_metrics ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD_metrics ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.47.2.2. RPC name: get_all

This message is removed.

Overview:

Return a list of all the VBD_metrics instances known to the system.

Signature:

```
VBD_metrics ref set get_all (session ref session_id)
```

4.47.2.3. RPC name: get_all_records

This message is removed.

Overview:

Return a map of VBD_metrics references to VBD_metrics records for all VBD_metrics instances known to the system.

Signature:

```
(VBD_metrics ref -> VBD_metrics record) map get_all_records (session ref
 session_id)
```

4.47.2.4. RPC name: get_by_uuid

This message is removed.

Overview:

Get a reference to the VBD_metrics instance with the specified UUID.

Signature:

```
VBD_metrics ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VBD_metrics ref`

reference to the object

4.47.2.5. RPC name: get_io_read_kbs

This message is removed.

Overview:

Get the io/read_kbs field of the given VBD_metrics.

Signature:

```
float get_io_read_kbs (session ref session_id, VBD_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD_metrics ref`	self	reference to the object

Return Type: `float`

value of the field

4.47.2.6. RPC name: get_io_write_kbs

This message is removed.

Overview:

Get the io/write_kbs field of the given VBD_metrics.

Signature:

```
float get_io_write_kbs (session ref session_id, VBD_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD_metrics ref	self	reference to the object

Return Type: `float`

value of the field

4.47.2.7. RPC name: get_last_updated

This message is removed.

Overview:

Get the last_updated field of the given VBD_metrics.

Signature:

```
datetime get_last_updated (session ref session_id, VBD_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VBD_metrics ref	self	reference to the object

Return Type: `datetime`

value of the field

4.47.2.8. RPC name: get_other_config

This message is removed.

Overview:

Get the other_config field of the given VBD_metrics.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VBD_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.47.2.9. RPC name: get_record

This message is removed.

Overview:

Get a record containing the current state of the given VBD_metrics.

Signature:

```
VBD_metrics record get_record (session ref session_id, VBD_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD_metrics ref`	self	reference to the object

Return Type: `VBD_metrics record`

all fields from the object

4.47.2.10. RPC name: get_uuid

This message is removed.

Overview:

Get the uuid field of the given VBD_metrics.

Signature:

```
string get_uuid (session ref session_id, VBD_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.47.2.11. RPC name: remove_from_other_config

This message is removed.

Overview:

Remove the given key and its corresponding value from the other_config field of the given VBD_metrics. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VBD_metrics ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD_metrics ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.47.2.12. RPC name: set_other_config

This message is removed.

Overview:

Set the other_config field of the given VBD_metrics.

Signature:

```
void set_other_config (session ref session_id, VBD_metrics ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VBD_metrics ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.48. Class: VDI

A virtual disk image

4.48.1. Fields for class: VDI

Field	Type	Qualifier	Description
allow_caching	`bool`	*RO/runtime*	true if this VDI is to be cached in the local cache SR
allowed_operations	`vdi_operations set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
cbt_enabled	`bool`	*RO/runtime*	True if changed blocks are tracked for this VDI
crash_dumps	`crashdump ref set`	*RO/runtime*	list of crash dumps that refer to this disk
current_operations	`(string -> vdi_operations) map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
is_a_snapshot	`bool`	*RO/runtime*	true if this is a snapshot.
is_tools_iso	`bool`	*RO/runtime*	Whether this VDI is a Tools ISO
location	`string`	*RO/runtime*	location information
managed	`bool`	*RO/runtime*	
metadata_latest	`bool`	*RO/runtime*	Whether this VDI contains the latest known accessible metadata for the pool
metadata_of_pool	`pool ref`	*RO/runtime*	The pool whose metadata is contained in this VDI
missing	`bool`	*RO/runtime*	true if SR scan operation reported this VDI as not present on disk
name_description	`string`	*RO/constructor*	a notes field containing human-readable description
name_label	`string`	*RO/constructor*	a human-readable name
on_boot	`on_boot`	*RO/runtime*	The behaviour of this VDI on a VM boot

Field	Type	Qualifier	Description
other_config	(string -> string) map	*RW*	additional configuration
parent	VDI ref	*RO/runtime*	**Deprecated**. This field is always null. Deprecated
physical_utilisation	int	*RO/runtime*	amount of physical space that the disk image is currently taking up on the storage repository (in bytes)
read_only	bool	*RO/constructor*	true if this disk may ONLY be mounted read-only
sharable	bool	*RO/constructor*	true if this disk may be shared
sm_config	(string -> string) map	*RW*	SM dependent data
snapshot_of	VDI ref	*RO/runtime*	Ref pointing to the VDI this snapshot is of.
snapshot_time	datetime	*RO/runtime*	Date/time when this snapshot was created.
snapshots	VDI ref set	*RO/runtime*	List pointing to all the VDIs snapshots.
SR	SR ref	*RO/constructor*	storage repository in which the VDI resides
storage_lock	bool	*RO/runtime*	true if this disk is locked at the storage level
tags	string set	*RW*	user-specified tags for categorization purposes
type	vdi_type	*RO/constructor*	type of the VDI
uuid	string	*RO/runtime*	Unique identifier/object reference
VBDs	VBD ref set	*RO/runtime*	list of vbds that refer to this disk
virtual_size	int	*RO/constructor*	size of disk as presented to the guest (in bytes). Note that, depending on storage backend type, requested size may not be respected exactly

Field	Type	Qualifier	Description
xenstore_data	(string -> string) map	*RW*	data to be inserted into the xenstore tree (/local/domain/0/backend/vbd/<domid>/<device-id>/sm-data) after the VDI is attached. This is generally set by the SM backends on vdi_attach.

4.48.2. RPCs associated with class: VDI

4.48.2.1. RPC name: add_tags

Overview:

Add the given value to the tags field of the given VDI. If the value is already in that Set, then do nothing.

Signature:

```
void add_tags (session ref session_id, VDI ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object
string	value	New value to add

Return Type: `void`

4.48.2.2. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VDI.

Signature:

```
void add_to_other_config (session ref session_id, VDI ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

type	name	description
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.48.2.3. RPC name: add_to_sm_config

Overview:

Add the given key-value pair to the sm_config field of the given VDI.

Signature:

```
void add_to_sm_config (session ref session_id, VDI ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.48.2.4. RPC name: add_to_xenstore_data

Overview:

Add the given key-value pair to the xenstore_data field of the given VDI.

Signature:

```
void add_to_xenstore_data (session ref session_id, VDI ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.48.2.5. RPC name: clone

Overview:

Take an exact copy of the VDI and return a reference to the new disk. If any driver_params are specified then these are passed through to the storage-specific substrate driver that implements the clone operation. NB the clone lives in the same Storage Repository as its parent.

Signature:

```
VDI ref clone (session ref session_id, VDI ref vdi, (string -> string) map
 driver_params)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	vdi	The VDI to clone
`(string -> string) map`	driver_params	Optional parameters that are passed through to the backend driver in order to specify storage-type-specific clone options

Return Type: `VDI ref`

The ID of the newly created VDI.

4.48.2.6. RPC name: copy

Overview:

Copy either a full VDI or the block differences between two VDIs into either a fresh VDI or an existing VDI.

Signature:

```
VDI ref copy (session ref session_id, VDI ref vdi, SR ref sr, VDI ref base_vdi, VDI
 ref into_vdi)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	vdi	The VDI to copy
`SR ref`	sr	The destination SR (only required if the destination VDI is not specified
`VDI ref`	base_vdi	The base VDI (only required if copying only changed blocks, by default all blocks will be copied)

type	name	description
VDI ref	into_vdi	The destination VDI to copy blocks into (if omitted then a destination SR must be provided and a fresh VDI will be created)

Return Type: `VDI ref`

The reference of the VDI where the blocks were written.

Possible Error Codes: `VDI_READONLY`, `VDI_TOO_SMALL`, `VDI_NOT_SPARSE`

4.48.2.7. RPC name: create

Overview:

Create a new VDI instance, and return its handle.

Signature:

```
VDI ref create (session ref session_id, VDI record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI record	args	All constructor arguments

Return Type: `VDI ref`

reference to the newly created object

4.48.2.8. RPC name: data_destroy

Overview:

Delete the data of the snapshot VDI, but keep its changed block tracking metadata. When successful, this call changes the type of the VDI to cbt_metadata. This operation is idempotent: calling it on a VDI of type cbt_metadata results in a no-op, and no error will be thrown.

Signature:

```
void data_destroy (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	The VDI whose data should be deleted.

Return Type: `void`

Possible Error Codes: SR_OPERATION_NOT_SUPPORTED, VDI_MISSING, SR_NOT_ATTACHED, SR_HAS_NO_PBDS, OPERATION_NOT_ALLOWED, VDI_INCOMPATIBLE_TYPE, VDI_NO_CBT_METADATA, VDI_IN_USE, VDI_IS_A_PHYSICAL_DEVICE

4.48.2.9. RPC name: db_forget

Overview:

Removes a VDI record from the database

Signature:

```
void db_forget (session ref session_id, VDI ref vdi)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	vdi	The VDI to forget about

Return Type: void

4.48.2.10. RPC name: db_introduce

Overview:

Create a new VDI record in the database only

Signature:

```
VDI ref db_introduce (session ref session_id, string uuid, string name_label,
 string name_description, SR ref SR, vdi_type type, bool sharable, bool read_only,
 (string -> string) map other_config, string location, (string -> string) map
 xenstore_data, (string -> string) map sm_config, bool managed, int virtual_size,
 int physical_utilisation, pool ref metadata_of_pool, bool is_a_snapshot, datetime
 snapshot_time, VDI ref snapshot_of, bool cbt_enabled)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	The uuid of the disk to introduce
string	name_label	The name of the disk record
string	name_description	The description of the disk record
SR ref	SR	The SR that the VDI is in
vdi_type	type	The type of the VDI
bool	sharable	true if this disk may be shared
bool	read_only	true if this disk may ONLY be mounted read-only

type	name	description
`(string -> string) map`	other_config	additional configuration
`string`	location	location information
`(string -> string) map`	xenstore_data	Data to insert into xenstore
`(string -> string) map`	sm_config	Storage-specific config
`bool`	managed	Storage-specific config
`int`	virtual_size	Storage-specific config
`int`	physical_utilisation	Storage-specific config
`pool ref`	metadata_of_pool	Storage-specific config
`bool`	is_a_snapshot	Storage-specific config
`datetime`	snapshot_time	Storage-specific config
`VDI ref`	snapshot_of	Storage-specific config
`bool`	cbt_enabled	True if changed blocks are tracked for this VDI

Return Type: `VDI ref`

The ref of the newly created VDI record.

4.48.2.11. RPC name: destroy

Overview:

Destroy the specified VDI instance.

Signature:

```
void destroy (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `void`

4.48.2.12. RPC name: disable_cbt

Overview:

Disable changed block tracking for the VDI. This call is only allowed on VDIs that support enabling CBT. It is an idempotent operation - disabling CBT for a VDI for which CBT is not enabled results in a no-op, and no error will be thrown.

Signature:

```
void disable_cbt (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	The VDI for which CBT should be disabled

Return Type: void

Possible Error Codes: SR_OPERATION_NOT_SUPPORTED, VDI_MISSING, SR_NOT_ATTACHED, SR_HAS_NO_PBDS, OPERATION_NOT_ALLOWED, VDI_INCOMPATIBLE_TYPE, VDI_ON_BOOT_MODE_INCOMPATIBLE_WITH_OPERATION

4.48.2.13. RPC name: enable_cbt

Overview:

Enable changed block tracking for the VDI. This call is idempotent - enabling CBT for a VDI for which CBT is already enabled results in a no-op, and no error will be thrown.

Signature:

```
void enable_cbt (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	The VDI for which CBT should be enabled

Return Type: void

Possible Error Codes: SR_OPERATION_NOT_SUPPORTED, VDI_MISSING, SR_NOT_ATTACHED, SR_HAS_NO_PBDS, OPERATION_NOT_ALLOWED, VDI_INCOMPATIBLE_TYPE, VDI_ON_BOOT_MODE_INCOMPATIBLE_WITH_OPERATION

4.48.2.14. RPC name: forget

Overview:

Removes a VDI record from the database

Signature:

```
void forget (session ref session_id, VDI ref vdi)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	vdi	The VDI to forget about

Return Type: `void`

4.48.2.15. RPC name: get_all

Overview:

Return a list of all the VDIs known to the system.

Signature:

```
VDI ref set get_all (session ref session_id)
```

4.48.2.16. RPC name: get_all_records

Overview:

Return a map of VDI references to VDI records for all VDIs known to the system.

Signature:

```
(VDI ref -> VDI record) map get_all_records (session ref session_id)
```

4.48.2.17. RPC name: get_allow_caching

Overview:

Get the allow_caching field of the given VDI.

Signature:

```
bool get_allow_caching (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.18. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given VDI.

Signature:

```
vdi_operations set get_allowed_operations (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `vdi_operations set`

value of the field

4.48.2.19. RPC name: get_by_name_label

Overview:

Get all the VDI instances with the given label.

Signature:

```
VDI ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	label of object to return

Return Type: `VDI ref set`

references to objects with matching names

4.48.2.20. RPC name: get_by_uuid

Overview:

Get a reference to the VDI instance with the specified UUID.

Signature:

```
VDI ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VDI ref`

reference to the object

4.48.2.21. RPC name: get_cbt_enabled

Overview:

Get the cbt_enabled field of the given VDI.

Signature:

```
bool get_cbt_enabled (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.22. RPC name: get_crash_dumps

Overview:

Get the crash_dumps field of the given VDI.

Signature:

```
crashdump ref set get_crash_dumps (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `crashdump ref set`

value of the field

4.48.2.23. RPC name: get_current_operations

Overview:

Get the current_operations field of the given VDI.

Signature:

```
(string -> vdi_operations) map get_current_operations (session ref session_id, VDI
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `(string -> vdi_operations) map`

value of the field

4.48.2.24. RPC name: get_is_a_snapshot

Overview:

Get the is_a_snapshot field of the given VDI.

Signature:

```
bool get_is_a_snapshot (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.25. RPC name: get_is_tools_iso

Overview:

Get the is_tools_iso field of the given VDI.

Signature:

```
bool get_is_tools_iso (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.26. RPC name: get_location

Overview:

Get the location field of the given VDI.

Signature:

```
string get_location (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `string`

value of the field

4.48.2.27. RPC name: get_managed

Overview:

Get the managed field of the given VDI.

Signature:

```
bool get_managed (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.28. RPC name: get_metadata_latest

Overview:

Get the metadata_latest field of the given VDI.

Signature:

```
bool get_metadata_latest (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.29. RPC name: get_metadata_of_pool

Overview:

Get the metadata_of_pool field of the given VDI.

Signature:

```
pool ref get_metadata_of_pool (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `pool ref`

value of the field

4.48.2.30. RPC name: get_missing

Overview:

Get the missing field of the given VDI.

Signature:

```
bool get_missing (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.31. RPC name: get_name_description

Overview:

Get the name/description field of the given VDI.

Signature:

```
string get_name_description (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `string`

value of the field

4.48.2.32. RPC name: get_name_label

Overview:

Get the name/label field of the given VDI.

Signature:

```
string get_name_label (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `string`

value of the field

4.48.2.33. RPC name: get_nbd_info

Overview:

Get details specifying how to access this VDI via a Network Block Device server. For each of a set of NBD server addresses on which the VDI is available, the return value set contains a vdi_nbd_server_info object that contains an exportname to request once the NBD connection is established, and connection details for the address. An empty list is returned if there is no network that has a PIF on a host with access to the relevant SR, or if no such network has been assigned an NBD-related purpose in its purpose field. To access the given VDI, any of the vdi_nbd_server_info objects can be used to make a connection to a server, and then the VDI will be available by requesting the exportname.

Signature:

```
vdi_nbd_server_info record set get_nbd_info (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	The VDI to access via Network Block Device protocol

Return Type: `vdi_nbd_server_info record set`

The details necessary for connecting to the VDI over NBD. This includes an authentication token, so must be treated as sensitive material and must not be sent over insecure networks.

Possible Error Codes: `VDI_INCOMPATIBLE_TYPE`

4.48.2.34. RPC name: get_on_boot

Overview:

Get the on_boot field of the given VDI.

Signature:

```
on_boot get_on_boot (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `on_boot`

value of the field

4.48.2.35. RPC name: get_other_config

Overview:

Get the other_config field of the given VDI.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.48.2.36. RPC name: get_parent

This message is deprecated.

Overview:

Get the parent field of the given VDI.

Signature:

```
VDI ref get_parent (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `VDI ref`

value of the field

4.48.2.37. RPC name: get_physical_utilisation

Overview:

Get the physical_utilisation field of the given VDI.

Signature:

```
int get_physical_utilisation (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `int`

value of the field

4.48.2.38. RPC name: get_read_only

Overview:

Get the read_only field of the given VDI.

Signature:

```
bool get_read_only (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.39. RPC name: get_record

Overview:

Get a record containing the current state of the given VDI.

Signature:

```
VDI record get_record (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `VDI record`

all fields from the object

4.48.2.40. RPC name: get_sharable

Overview:

Get the sharable field of the given VDI.

Signature:

```
bool get_sharable (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.41. RPC name: get_sm_config

Overview:

Get the sm_config field of the given VDI.

Signature:

```
(string -> string) map get_sm_config (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.48.2.42. RPC name: get_snapshot_of

Overview:

Get the snapshot_of field of the given VDI.

Signature:

```
VDI ref get_snapshot_of (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `VDI ref`

value of the field

4.48.2.43. RPC name: get_snapshot_time

Overview:

Get the snapshot_time field of the given VDI.

Signature:

```
datetime get_snapshot_time (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `datetime`

value of the field

4.48.2.44. RPC name: get_snapshots

Overview:

Get the snapshots field of the given VDI.

Signature:

```
VDI ref set get_snapshots (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `VDI ref set`

value of the field

4.48.2.45. RPC name: get_SR

Overview:

Get the SR field of the given VDI.

Signature:

```
SR ref get_SR (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `SR ref`

value of the field

4.48.2.46. RPC name: get_storage_lock

Overview:

Get the storage_lock field of the given VDI.

Signature:

```
bool get_storage_lock (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `bool`

value of the field

4.48.2.47. RPC name: get_tags

Overview:

Get the tags field of the given VDI.

Signature:

```
string set get_tags (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `string set`

value of the field

4.48.2.48. RPC name: get_type

Overview:

Get the type field of the given VDI.

Signature:

```
vdi_type get_type (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `vdi_type`

value of the field

4.48.2.49. RPC name: get_uuid

Overview:

Get the uuid field of the given VDI.

Signature:

```
string get_uuid (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `string`

value of the field

4.48.2.50. RPC name: get_VBDs

Overview:

Get the VBDs field of the given VDI.

Signature:

```
VBD ref set get_VBDs (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `VBD ref set`

value of the field

4.48.2.51. RPC name: get_virtual_size

Overview:

Get the virtual_size field of the given VDI.

Signature:

```
int get_virtual_size (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object

Return Type: `int`

value of the field

4.48.2.52. RPC name: get_xenstore_data

Overview:

Get the xenstore_data field of the given VDI.

Signature:

```
(string -> string) map get_xenstore_data (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.48.2.53. RPC name: introduce

Overview:

Create a new VDI record in the database only

Signature:

```
VDI ref introduce (session ref session_id, string uuid, string name_label, string
 name_description, SR ref SR, vdi_type type, bool sharable, bool read_only,
 (string -> string) map other_config, string location, (string -> string) map
 xenstore_data, (string -> string) map sm_config, bool managed, int virtual_size,
 int physical_utilisation, pool ref metadata_of_pool, bool is_a_snapshot, datetime
 snapshot_time, VDI ref snapshot_of)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	The uuid of the disk to introduce
`string`	name_label	The name of the disk record
`string`	name_description	The description of the disk record
`SR ref`	SR	The SR that the VDI is in
`vdi_type`	type	The type of the VDI
`bool`	sharable	true if this disk may be shared
`bool`	read_only	true if this disk may ONLY be mounted read-only
`(string -> string) map`	other_config	additional configuration
`string`	location	location information
`(string -> string) map`	xenstore_data	Data to insert into xenstore

type	name	description
(string -> string) map	sm_config	Storage-specific config
bool	managed	Storage-specific config
int	virtual_size	Storage-specific config
int	physical_utilisation	Storage-specific config
pool ref	metadata_of_pool	Storage-specific config
bool	is_a_snapshot	Storage-specific config
datetime	snapshot_time	Storage-specific config
VDI ref	snapshot_of	Storage-specific config

Return Type: `VDI ref`

The ref of the newly created VDI record.

Possible Error Codes: SR_OPERATION_NOT_SUPPORTED

4.48.2.54. RPC name: list_changed_blocks

Overview:

Compare two VDIs in 64k block increments and report which blocks differ. This operation is not allowed when vdi_to is attached to a VM.

Signature:

```
string list_changed_blocks (session ref session_id, VDI ref vdi_from, VDI ref
 vdi_to)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	vdi_from	The first VDI.
VDI ref	vdi_to	The second VDI.

Return Type: `string`

A base64 string-encoding of the bitmap showing which blocks differ in the two VDIs.

Possible Error Codes: SR_OPERATION_NOT_SUPPORTED, VDI_MISSING, SR_NOT_ATTACHED, SR_HAS_NO_PBDS, VDI_IN_USE

4.48.2.55. RPC name: open_database

Overview:

Load the metadata found on the supplied VDI and return a session reference which can be used in XenAPI calls to query its contents.

Signature:

```
session ref open_database (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI which contains the database to open

Return Type: `session ref`

A session which can be used to query the database

4.48.2.56. RPC name: pool_migrate

Overview:

Migrate a VDI, which may be attached to a running guest, to a different SR. The destination SR must be visible to the guest.

Signature:

```
VDI ref pool_migrate (session ref session_id, VDI ref vdi, SR ref sr, (string ->
 string) map options)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	vdi	The VDI to migrate
`SR ref`	sr	The destination SR
`(string -> string) map`	options	Other parameters

Return Type: `VDI ref`

The new reference of the migrated VDI.

4.48.2.57. RPC name: read_database_pool_uuid

Overview:

Check the VDI cache for the pool UUID of the database on this VDI.

Signature:

```
string read_database_pool_uuid (session ref session_id, VDI ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	The metadata VDI to look up in the cache.

Return Type: string

The cached pool UUID of the database on the VDI.

4.48.2.58. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VDI. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VDI ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.48.2.59. RPC name: remove_from_sm_config

Overview:

Remove the given key and its corresponding value from the sm_config field of the given VDI. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_sm_config (session ref session_id, VDI ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.48.2.60. RPC name: remove_from_xenstore_data

Overview:

Remove the given key and its corresponding value from the xenstore_data field of the given VDI. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_xenstore_data (session ref session_id, VDI ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.48.2.61. RPC name: remove_tags

Overview:

Remove the given value from the tags field of the given VDI. If the value is not in that Set, then do nothing.

Signature:

```
void remove_tags (session ref session_id, VDI ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	reference to the object
string	value	Value to remove

Return Type: void

4.48.2.62. RPC name: resize

Overview:

Resize the VDI.

Signature:

```
void resize (session ref session_id, VDI ref vdi, int size)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	vdi	The VDI to resize
int	size	The new size of the VDI

Return Type: `void`

4.48.2.63. RPC name: resize_online

This message is removed.

Overview:

Resize the VDI which may or may not be attached to running guests.

Signature:

```
void resize_online (session ref session_id, VDI ref vdi, int size)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	vdi	The VDI to resize
int	size	The new size of the VDI

Return Type: `void`

4.48.2.64. RPC name: set_allow_caching

Overview:

Set the value of the allow_caching parameter. This value can only be changed when the VDI is not attached to a running VM. The caching behaviour is only affected by this flag for VHD-based VDIs that have one parent and no child VHDs. Moreover, caching only takes place when the host running the VM containing this VDI has a nominated SR for local caching.

Signature:

```
void set_allow_caching (session ref session_id, VDI ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VDI ref	self	The VDI to modify
bool	value	The value to set

Return Type: `void`

4.48.2.65. RPC name: set_is_a_snapshot

Overview:

Sets whether this VDI is a snapshot

Signature:

```
void set_is_a_snapshot (session ref session_id, VDI ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`bool`	value	The new value indicating whether this VDI is a snapshot

Return Type: `void`

4.48.2.66. RPC name: set_managed

Overview:

Sets the VDI's managed field

Signature:

```
void set_managed (session ref session_id, VDI ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`bool`	value	The new value of the VDI's managed field

Return Type: `void`

4.48.2.67. RPC name: set_metadata_of_pool

Overview:

Records the pool whose metadata is contained by this VDI.

Signature:

```
void set_metadata_of_pool (session ref session_id, VDI ref self, pool ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`pool ref`	value	The pool whose metadata is contained by this VDI

Return Type: `void`

4.48.2.68. RPC name: set_missing

Overview:

Sets the VDI's missing field

Signature:

```
void set_missing (session ref session_id, VDI ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`bool`	value	The new value of the VDI's missing field

Return Type: `void`

4.48.2.69. RPC name: set_name_description

Overview:

Set the name description of the VDI. This can only happen when its SR is currently attached.

Signature:

```
void set_name_description (session ref session_id, VDI ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`string`	value	The name description for the VDI

Return Type: `void`

4.48.2.70. RPC name: set_name_label

Overview:

Set the name label of the VDI. This can only happen when then its SR is currently attached.

Signature:

```
void set_name_label (session ref session_id, VDI ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`string`	value	The name lable for the VDI

Return Type: `void`

4.48.2.71. RPC name: set_on_boot

Overview:

Set the value of the on_boot parameter. This value can only be changed when the VDI is not attached to a running VM.

Signature:

```
void set_on_boot (session ref session_id, VDI ref self, on_boot value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`on_boot`	value	The value to set

Return Type: `void`

4.48.2.72. RPC name: set_other_config

Overview:

Set the other_config field of the given VDI.

Signature:

```
void set_other_config (session ref session_id, VDI ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.48.2.73. RPC name: set_physical_utilisation

Overview:

Sets the VDI's physical_utilisation field

Signature:

```
void set_physical_utilisation (session ref session_id, VDI ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`int`	value	The new value of the VDI's physical utilisation

Return Type: `void`

4.48.2.74. RPC name: set_read_only

Overview:

Sets the VDI's read_only field

Signature:

```
void set_read_only (session ref session_id, VDI ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`bool`	value	The new value of the VDI's read_only field

Return Type: `void`

4.48.2.75. RPC name: set_sharable

Overview:

Sets the VDI's sharable field

Signature:

```
void set_sharable (session ref session_id, VDI ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`bool`	value	The new value of the VDI's sharable field

Return Type: `void`

4.48.2.76. RPC name: set_sm_config

Overview:

Set the sm_config field of the given VDI.

Signature:

```
void set_sm_config (session ref session_id, VDI ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.48.2.77. RPC name: set_snapshot_of

Overview:

Sets the VDI of which this VDI is a snapshot

Signature:

```
void set_snapshot_of (session ref session_id, VDI ref self, VDI ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`VDI ref`	value	The VDI of which this VDI is a snapshot

Return Type: `void`

4.48.2.78. RPC name: set_snapshot_time

Overview:

Sets the snapshot time of this VDI.

Signature:

```
void set_snapshot_time (session ref session_id, VDI ref self, datetime value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`datetime`	value	The snapshot time of this VDI.

Return Type: `void`

4.48.2.79. RPC name: set_tags

Overview:

Set the tags field of the given VDI.

Signature:

```
void set_tags (session ref session_id, VDI ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object
`string set`	value	New value to set

Return Type: `void`

4.48.2.80. RPC name: set_virtual_size

Overview:

Sets the VDI's virtual_size field

Signature:

```
void set_virtual_size (session ref session_id, VDI ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	The VDI to modify
`int`	value	The new value of the VDI's virtual size

Return Type: `void`

4.48.2.81. RPC name: set_xenstore_data

Overview:

Set the xenstore_data field of the given VDI.

Signature:

```
void set_xenstore_data (session ref session_id, VDI ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.48.2.82. RPC name: snapshot

Overview:

Take a read-only snapshot of the VDI, returning a reference to the snapshot. If any driver_params are specified then these are passed through to the storage-specific substrate driver that takes the snapshot. NB the snapshot lives in the same Storage Repository as its parent.

Signature:

```
VDI ref snapshot (session ref session_id, VDI ref vdi, (string -> string) map
 driver_params)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	vdi	The VDI to snapshot
`(string -> string) map`	driver_params	Optional parameters that can be passed through to backend driver in order to specify storage-type-specific snapshot options

Return Type: `VDI ref`

The ID of the newly created VDI.

4.48.2.83. RPC name: update

Overview:

Ask the storage backend to refresh the fields in the VDI object

Signature:

```
void update (session ref session_id, VDI ref vdi)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VDI ref`	vdi	The VDI whose stats (eg size) should be updated

Return Type: `void`

Possible Error Codes: SR_OPERATION_NOT_SUPPORTED

4.49. Class: vdi_nbd_server_info

Details for connecting to a VDI using the Network Block Device protocol

4.49.1. Fields for class: vdi_nbd_server_info

Field	Type	Qualifier	Description
address	`string`	*RO/runtime*	An address on which the server can be reached; this can be IPv4, IPv6, or a DNS name.

Field	Type	Qualifier	Description
cert	`string`	*RO/runtime*	The TLS certificate of the server
exportname	`string`	*RO/runtime*	The exportname to request over NBD. This holds details including an authentication token, so it must be protected appropriately. Clients should regard the exportname as an opaque string or token.
port	`int`	*RO/runtime*	The TCP port
subject	`string`	*RO/runtime*	For convenience, this redundant field holds a DNS (hostname) subject of the certificate. This can be a wildcard, but only for a certificate that has a wildcard subject and no concrete hostname subjects.

4.49.2. RPCs associated with class: vdi_nbd_server_info

Class vdi_nbd_server_info has no additional RPCs associated with it.

4.50. Class: VGPU

A virtual GPU (vGPU)

4.50.1. Fields for class: VGPU

Field	Type	Qualifier	Description
currently_attached	`bool`	*RO/runtime*	Reflects whether the virtual device is currently connected to a physical device
device	`string`	*RO/runtime*	Order in which the devices are plugged into the VM
GPU_group	`GPU_group ref`	*RO/runtime*	GPU group used by the vGPU
other_config	`(string -> string) map`	*RW*	Additional configuration
resident_on	`PGPU ref`	*RO/runtime*	The PGPU on which this VGPU is running

Field	Type	Qualifier	Description
scheduled_to_be_resident	PGPU ref	*RO/runtime*	The PGPU on which this VGPU is scheduled to run
type	VGPU_type ref	*RO/runtime*	Preset type for this VGPU
uuid	string	*RO/runtime*	Unique identifier/object reference
VM	VM ref	*RO/runtime*	VM that owns the vGPU

4.50.2. RPCs associated with class: VGPU

4.50.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VGPU.

Signature:

```
void add_to_other_config (session ref session_id, VGPU ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.50.2.2. RPC name: create

Overview:

Signature:

```
VGPU ref create (session ref session_id, VM ref VM, GPU_group ref GPU_group, string
 device, (string -> string) map other_config, VGPU_type ref type)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	VM	

type	name	description
GPU_group ref	GPU_group	
string	device	
(string -> string) map	other_config	
VGPU_type ref	type	

Return Type: VGPU ref

reference to the newly created object

4.50.2.3. RPC name: destroy

Overview:

Signature:

```
void destroy (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU ref	self	The vGPU to destroy

Return Type: void

4.50.2.4. RPC name: get_all

Overview:

Return a list of all the VGPUs known to the system.

Signature:

```
VGPU ref set get_all (session ref session_id)
```

4.50.2.5. RPC name: get_all_records

Overview:

Return a map of VGPU references to VGPU records for all VGPUs known to the system.

Signature:

```
(VGPU ref -> VGPU record) map get_all_records (session ref session_id)
```

4.50.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the VGPU instance with the specified UUID.

Signature:

```
VGPU ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `VGPU ref`

reference to the object

4.50.2.7. RPC name: get_currently_attached

Overview:

Get the currently_attached field of the given VGPU.

Signature:

```
bool get_currently_attached (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU ref	self	reference to the object

Return Type: `bool`

value of the field

4.50.2.8. RPC name: get_device

Overview:

Get the device field of the given VGPU.

Signature:

```
string get_device (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VGPU ref	self	reference to the object

Return Type: `string`

value of the field

4.50.2.9. RPC name: get_GPU_group

Overview:

Get the GPU_group field of the given VGPU.

Signature:

```
GPU_group ref get_GPU_group (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU ref	self	reference to the object

Return Type: `GPU_group ref`

value of the field

4.50.2.10. RPC name: get_other_config

Overview:

Get the other_config field of the given VGPU.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.50.2.11. RPC name: get_record

Overview:

Get a record containing the current state of the given VGPU.

Signature:

```
VGPU record get_record (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object

Return Type: `VGPU record`

all fields from the object

4.50.2.12. RPC name: get_resident_on

Overview:

Get the resident_on field of the given VGPU.

Signature:

```
PGPU ref get_resident_on (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object

Return Type: `PGPU ref`

value of the field

4.50.2.13. RPC name: get_scheduled_to_be_resident_on

Overview:

Get the scheduled_to_be_resident_on field of the given VGPU.

Signature:

```
PGPU ref get_scheduled_to_be_resident_on (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object

Return Type: `PGPU ref`

value of the field

4.50.2.14. RPC name: get_type

Overview:

Get the type field of the given VGPU.

Signature:

```
VGPU_type ref get_type (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object

Return Type: `VGPU_type ref`

value of the field

4.50.2.15. RPC name: get_uuid

Overview:

Get the uuid field of the given VGPU.

Signature:

```
string get_uuid (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object

Return Type: `string`

value of the field

4.50.2.16. RPC name: get_VM

Overview:

Get the VM field of the given VGPU.

Signature:

```
VM ref get_VM (session ref session_id, VGPU ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object

Return Type: `VM ref`

value of the field

4.50.2.17. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VGPU. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VGPU ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.50.2.18. RPC name: set_other_config

Overview:

Set the other_config field of the given VGPU.

Signature:

```
void set_other_config (session ref session_id, VGPU ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.51. Class: VGPU_type

A type of virtual GPU

4.51.1. Fields for class: VGPU_type

Field	Type	Qualifier	Description
enabled_on_GPU_groups	`GPU_group ref set`	*RO/runtime*	List of GPU groups in which at least one have this VGPU type enabled
enabled_on_PGPUs	`PGPU ref set`	*RO/runtime*	List of PGPUs that have this VGPU type enabled
experimental	`bool`	*RO/constructor*	Indicates whether VGPUs of this type should be considered experimental
framebuffer_size	`int`	*RO/constructor*	Framebuffer size of the VGPU type, in bytes
identifier	`string`	*RO/constructor*	Key used to identify VGPU types and avoid creating duplicates - this field is used internally and not intended for interpretation by API clients
implementation	`vgpu_type_implemen`	*RO/constructor*	The internal implementation of this VGPU type
max_heads	`int`	*RO/constructor*	Maximum number of displays supported by the VGPU type
max_resolution_x	`int`	*RO/constructor*	Maximum resolution (width) supported by the VGPU type
max_resolution_y	`int`	*RO/constructor*	Maximum resolution (height) supported by the VGPU type
model_name	`string`	*RO/constructor*	Model name associated with the VGPU type
supported_on_GPU_group	`GPU_group ref set`	*RO/runtime*	List of GPU groups in which at least one PGPU supports this VGPU type
supported_on_PGPUs	`PGPU ref set`	*RO/runtime*	List of PGPUs that support this VGPU type
uuid	`string`	*RO/runtime*	Unique identifier/object reference

Field	Type	Qualifier	Description
vendor_name	`string`	*RO/constructor*	Name of VGPU vendor
VGPUs	`VGPU ref set`	*RO/runtime*	List of VGPUs of this type

4.51.2. RPCs associated with class: VGPU_type

4.51.2.1. RPC name: get_all

Overview:

Return a list of all the VGPU_types known to the system.

Signature:

```
VGPU_type ref set get_all (session ref session_id)
```

4.51.2.2. RPC name: get_all_records

Overview:

Return a map of VGPU_type references to VGPU_type records for all VGPU_types known to the system.

Signature:

```
(VGPU_type ref -> VGPU_type record) map get_all_records (session ref session_id)
```

4.51.2.3. RPC name: get_by_uuid

Overview:

Get a reference to the VGPU_type instance with the specified UUID.

Signature:

```
VGPU_type ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VGPU_type ref`

reference to the object

4.51.2.4. RPC name: get_enabled_on_GPU_groups

Overview:

Get the enabled_on_GPU_groups field of the given VGPU_type.

Signature:

```
GPU_group ref set get_enabled_on_GPU_groups (session ref session_id, VGPU_type ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `GPU_group ref set`

value of the field

4.51.2.5. RPC name: get_enabled_on_PGPUs

Overview:

Get the enabled_on_PGPUs field of the given VGPU_type.

Signature:

```
PGPU ref set get_enabled_on_PGPUs (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `PGPU ref set`

value of the field

4.51.2.6. RPC name: get_experimental

Overview:

Get the experimental field of the given VGPU_type.

Signature:

```
bool get_experimental (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `bool`

value of the field

4.51.2.7. RPC name: get_framebuffer_size

Overview:

Get the framebuffer_size field of the given VGPU_type.

Signature:

```
int get_framebuffer_size (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `int`

value of the field

4.51.2.8. RPC name: get_identifier

Overview:

Get the identifier field of the given VGPU_type.

Signature:

```
string get_identifier (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `string`

value of the field

4.51.2.9. RPC name: get_implementation

Overview:

Get the implementation field of the given VGPU_type.

Signature:

```
vgpu_type_implementation get_implementation (session ref session_id, VGPU_type ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU_type ref	self	reference to the object

Return Type: `vgpu_type_implementation`

value of the field

4.51.2.10. RPC name: get_max_heads

Overview:

Get the max_heads field of the given VGPU_type.

Signature:

```
int get_max_heads (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU_type ref	self	reference to the object

Return Type: `int`

value of the field

4.51.2.11. RPC name: get_max_resolution_x

Overview:

Get the max_resolution_x field of the given VGPU_type.

Signature:

```
int get_max_resolution_x (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU_type ref	self	reference to the object

Return Type: `int`

value of the field

4.51.2.12. RPC name: get_max_resolution_y

Overview:

Get the max_resolution_y field of the given VGPU_type.

Signature:

```
int get_max_resolution_y (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `int`

value of the field

4.51.2.13. RPC name: get_model_name

Overview:

Get the model_name field of the given VGPU_type.

Signature:

```
string get_model_name (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `string`

value of the field

4.51.2.14. RPC name: get_record

Overview:

Get a record containing the current state of the given VGPU_type.

Signature:

```
VGPU_type record get_record (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `VGPU_type record`

all fields from the object

4.51.2.15. RPC name: get_supported_on_GPU_groups

Overview:

Get the supported_on_GPU_groups field of the given VGPU_type.

Signature:

```
GPU_group ref set get_supported_on_GPU_groups (session ref session_id, VGPU_type
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU_type ref	self	reference to the object

Return Type: `GPU_group ref set`

value of the field

4.51.2.16. RPC name: get_supported_on_PGPUs

Overview:

Get the supported_on_PGPUs field of the given VGPU_type.

Signature:

```
PGPU ref set get_supported_on_PGPUs (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VGPU_type ref	self	reference to the object

Return Type: `PGPU ref set`

value of the field

4.51.2.17. RPC name: get_uuid

Overview:

Get the uuid field of the given VGPU_type.

Signature:

```
string get_uuid (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `string`

value of the field

4.51.2.18. RPC name: get_vendor_name

Overview:

Get the vendor_name field of the given VGPU_type.

Signature:

```
string get_vendor_name (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `string`

value of the field

4.51.2.19. RPC name: get_VGPUs

Overview:

Get the VGPUs field of the given VGPU_type.

Signature:

```
VGPU ref set get_VGPUs (session ref session_id, VGPU_type ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VGPU_type ref`	self	reference to the object

Return Type: `VGPU ref set`

value of the field

4.52. Class: VIF

A virtual network interface

4.52.1. Fields for class: VIF

Field	Type	Qualifier	Description
allowed_operations	`vif_operations set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
current_operations	`(string -> vif_operations) map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
currently_attached	`bool`	*RO/runtime*	is the device currently attached (erased on reboot)
device	`string`	*RO/constructor*	order in which VIF backends are created by xapi
ipv4_addresses	`string set`	*RO/runtime*	IPv4 addresses in CIDR format
ipv4_allowed	`string set`	*RO/constructor*	A list of IPv4 addresses which can be used to filter traffic passing through this VIF
ipv4_configuration_mode	`vif_ipv4_configura`	*RO/runtime*	Determines whether IPv4 addresses are configured on the VIF
ipv4_gateway	`string`	*RO/runtime*	IPv4 gateway (the empty string means that no gateway is set)
ipv6_addresses	`string set`	*RO/runtime*	IPv6 addresses in CIDR format
ipv6_allowed	`string set`	*RO/constructor*	A list of IPv6 addresses which can be used to filter traffic passing through this VIF
ipv6_configuration_mode	`vif_ipv6_configura`	*RO/runtime*	Determines whether IPv6 addresses are configured on the VIF

Field	Type	Qualifier	Description
ipv6_gateway	`string`	*RO/runtime*	IPv6 gateway (the empty string means that no gateway is set)
locking_mode	`vif_locking_mode`	*RO/constructor*	current locking mode of the VIF
MAC	`string`	*RO/constructor*	ethernet MAC address of virtual interface, as exposed to guest
MAC_autogenerated	`bool`	*RO/runtime*	true if the MAC was autogenerated; false indicates it was set manually
metrics	`VIF_metrics ref`	*RO/runtime*	**Removed**. metrics associated with this VIF
MTU	`int`	*RO/constructor*	MTU in octets
network	`network ref`	*RO/constructor*	virtual network to which this vif is connected
other_config	`(string -> string) map`	*RW*	additional configuration
qos_algorithm_params	`(string -> string) map`	*RW*	parameters for chosen QoS algorithm
qos_algorithm_type	`string`	*RW*	QoS algorithm to use
qos_supported_algorithms	`string set`	*RO/runtime*	supported QoS algorithms for this VIF
runtime_properties	`(string -> string) map`	*RO/runtime*	Device runtime properties
status_code	`int`	*RO/runtime*	error/success code associated with last attach-operation (erased on reboot)
status_detail	`string`	*RO/runtime*	error/success information associated with last attach-operation status (erased on reboot)
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VM	`VM ref`	*RO/constructor*	virtual machine to which this vif is connected

4.52.2. RPCs associated with class: VIF

4.52.2.1. RPC name: add_ipv4_allowed

Overview:

Associates an IPv4 address with this VIF

Signature:

```
void add_ipv4_allowed (session ref session_id, VIF ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	The VIF which the IP address will be associated with
`string`	value	The IP address which will be associated with the VIF

Return Type: `void`

4.52.2.2. RPC name: add_ipv6_allowed

Overview:

Associates an IPv6 address with this VIF

Signature:

```
void add_ipv6_allowed (session ref session_id, VIF ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	The VIF which the IP address will be associated with
`string`	value	The IP address which will be associated with the VIF

Return Type: `void`

4.52.2.3. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VIF.

Signature:

```
void add_to_other_config (session ref session_id, VIF ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.52.2.4. RPC name: add_to_qos_algorithm_params

Overview:

Add the given key-value pair to the qos/algorithm_params field of the given VIF.

Signature:

```
void add_to_qos_algorithm_params (session ref session_id, VIF ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.52.2.5. RPC name: configure_ipv4

Overview:

Configure IPv4 settings for this virtual interface

Signature:

```
void configure_ipv4 (session ref session_id, VIF ref self,
 vif_ipv4_configuration_mode mode, string address, string gateway)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	The VIF to configure
vif_ipv4_configuration_m	mode	Whether to use static or no IPv4 assignment
string	address	The IPv4 address in <addr>/<prefix length> format (for static mode only)
string	gateway	The IPv4 gateway (for static mode only; leave empty to not set a gateway)

Return Type: `void`

4.52.2.6. RPC name: configure_ipv6

Overview:

Configure IPv6 settings for this virtual interface

Signature:

```
void configure_ipv6 (session ref session_id, VIF ref self,
 vif_ipv6_configuration_mode mode, string address, string gateway)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	The VIF to configure
vif_ipv6_configuration_m	mode	Whether to use static or no IPv6 assignment
string	address	The IPv6 address in <addr>/<prefix length> format (for static mode only)
string	gateway	The IPv6 gateway (for static mode only; leave empty to not set a gateway)

Return Type: `void`

4.52.2.7. RPC name: create

Overview:

Create a new VIF instance, and return its handle.

Signature:

```
VIF ref create (session ref session_id, VIF record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF record`	args	All constructor arguments

Return Type: `VIF ref`

reference to the newly created object

4.52.2.8. RPC name: destroy

Overview:

Destroy the specified VIF instance.

Signature:

```
void destroy (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `void`

4.52.2.9. RPC name: get_all

Overview:

Return a list of all the VIFs known to the system.

Signature:

```
VIF ref set get_all (session ref session_id)
```

4.52.2.10. RPC name: get_all_records

Overview:

Return a map of VIF references to VIF records for all VIFs known to the system.

Signature:

```
(VIF ref -> VIF record) map get_all_records (session ref session_id)
```

4.52.2.11. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given VIF.

Signature:

```
vif_operations set get_allowed_operations (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `vif_operations set`

value of the field

4.52.2.12. RPC name: get_by_uuid

Overview:

Get a reference to the VIF instance with the specified UUID.

Signature:

```
VIF ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VIF ref`

reference to the object

4.52.2.13. RPC name: get_current_operations

Overview:

Get the current_operations field of the given VIF.

Signature:

```
(string -> vif_operations) map get_current_operations (session ref session_id, VIF
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VIF ref`	self	reference to the object

Return Type: `(string -> vif_operations) map`

value of the field

4.52.2.14. RPC name: get_currently_attached

Overview:

Get the currently_attached field of the given VIF.

Signature:

```
bool get_currently_attached (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `bool`

value of the field

4.52.2.15. RPC name: get_device

Overview:

Get the device field of the given VIF.

Signature:

```
string get_device (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.52.2.16. RPC name: get_ipv4_addresses

Overview:

Get the ipv4_addresses field of the given VIF.

Signature:

```
string set get_ipv4_addresses (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string set`

value of the field

4.52.2.17. RPC name: get_ipv4_allowed

Overview:

Get the ipv4_allowed field of the given VIF.

Signature:

```
string set get_ipv4_allowed (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string set`

value of the field

4.52.2.18. RPC name: get_ipv4_configuration_mode

Overview:

Get the ipv4_configuration_mode field of the given VIF.

Signature:

```
vif_ipv4_configuration_mode get_ipv4_configuration_mode (session ref session_id,
 VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VIF ref`	self	reference to the object

Return Type: `vif_ipv4_configuration_mode`

value of the field

4.52.2.19. RPC name: get_ipv4_gateway

Overview:

Get the ipv4_gateway field of the given VIF.

Signature:

```
string get_ipv4_gateway (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.52.2.20. RPC name: get_ipv6_addresses

Overview:

Get the ipv6_addresses field of the given VIF.

Signature:

```
string set get_ipv6_addresses (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string set`

value of the field

4.52.2.21. RPC name: get_ipv6_allowed

Overview:

Get the ipv6_allowed field of the given VIF.

Signature:

```
string set get_ipv6_allowed (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string set`

value of the field

4.52.2.22. RPC name: get_ipv6_configuration_mode

Overview:

Get the ipv6_configuration_mode field of the given VIF.

Signature:

```
vif_ipv6_configuration_mode get_ipv6_configuration_mode (session ref session_id,
 VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `vif_ipv6_configuration_mode`

value of the field

4.52.2.23. RPC name: get_ipv6_gateway

Overview:

Get the ipv6_gateway field of the given VIF.

Signature:

```
string get_ipv6_gateway (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.52.2.24. RPC name: get_locking_mode

Overview:

Get the locking_mode field of the given VIF.

Signature:

```
vif_locking_mode get_locking_mode (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `vif_locking_mode`

value of the field

4.52.2.25. RPC name: get_MAC

Overview:

Get the MAC field of the given VIF.

Signature:

```
string get_MAC (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.52.2.26. RPC name: get_MAC_autogenerated

Overview:

Get the MAC_autogenerated field of the given VIF.

Signature:

```
bool get_MAC_autogenerated (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

Return Type: `bool`

value of the field

4.52.2.27. RPC name: get_metrics

This message is removed.

Overview:

Get the metrics field of the given VIF.

Signature:

```
VIF_metrics ref get_metrics (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

Return Type: `VIF_metrics ref`

value of the field

4.52.2.28. RPC name: get_MTU

Overview:

Get the MTU field of the given VIF.

Signature:

```
int get_MTU (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VIF ref	self	reference to the object

Return Type: `int`

value of the field

4.52.2.29. RPC name: get_network

Overview:

Get the network field of the given VIF.

Signature:

```
network ref get_network (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

Return Type: `network ref`

value of the field

4.52.2.30. RPC name: get_other_config

Overview:

Get the other_config field of the given VIF.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.52.2.31. RPC name: get_qos_algorithm_params

Overview:

Get the qos/algorithm_params field of the given VIF.

Signature:

```
(string -> string) map get_qos_algorithm_params (session ref session_id, VIF ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.52.2.32. RPC name: get_qos_algorithm_type

Overview:

Get the qos/algorithm_type field of the given VIF.

Signature:

```
string get_qos_algorithm_type (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.52.2.33. RPC name: get_qos_supported_algorithms

Overview:

Get the qos/supported_algorithms field of the given VIF.

Signature:

```
string set get_qos_supported_algorithms (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VIF ref	self	reference to the object

Return Type: `string set`

value of the field

4.52.2.34. RPC name: get_record

Overview:

Get a record containing the current state of the given VIF.

Signature:

```
VIF record get_record (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

Return Type: `VIF record`

all fields from the object

4.52.2.35. RPC name: get_runtime_properties

Overview:

Get the runtime_properties field of the given VIF.

Signature:

```
(string -> string) map get_runtime_properties (session ref session_id, VIF ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.52.2.36. RPC name: get_status_code

Overview:

Get the status_code field of the given VIF.

Signature:

```
int get_status_code (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `int`

value of the field

4.52.2.37. RPC name: get_status_detail

Overview:

Get the status_detail field of the given VIF.

Signature:

```
string get_status_detail (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object

Return Type: `string`

value of the field

4.52.2.38. RPC name: get_uuid

Overview:

Get the uuid field of the given VIF.

Signature:

```
string get_uuid (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VIF ref	self	reference to the object

Return Type: `string`

value of the field

4.52.2.39. RPC name: get_VM

Overview:

Get the VM field of the given VIF.

Signature:

```
VM ref get_VM (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

Return Type: `VM ref`

value of the field

4.52.2.40. RPC name: move

Overview:

Move the specified VIF to the specified network, even while the VM is running

Signature:

```
void move (session ref session_id, VIF ref self, network ref network)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	The VIF to move
network ref	network	The network to move it to

Return Type: `void`

4.52.2.41. RPC name: plug

Overview:

Hotplug the specified VIF, dynamically attaching it to the running VM

Signature:

```
void plug (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	The VIF to hotplug

Return Type: void

4.52.2.42. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VIF. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VIF ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.52.2.43. RPC name: remove_from_qos_algorithm_params

Overview:

Remove the given key and its corresponding value from the qos/algorithm_params field of the given VIF. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_qos_algorithm_params (session ref session_id, VIF ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object

type	name	description
string	key	Key to remove

Return Type: void

4.52.2.44. RPC name: remove_ipv4_allowed

Overview:

Removes an IPv4 address from this VIF

Signature:

```
void remove_ipv4_allowed (session ref session_id, VIF ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	The VIF from which the IP address will be removed
string	value	The IP address which will be removed from the VIF

Return Type: void

4.52.2.45. RPC name: remove_ipv6_allowed

Overview:

Removes an IPv6 address from this VIF

Signature:

```
void remove_ipv6_allowed (session ref session_id, VIF ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	The VIF from which the IP address will be removed
string	value	The IP address which will be removed from the VIF

Return Type: void

4.52.2.46. RPC name: set_ipv4_allowed

Overview:

Set the IPv4 addresses to which traffic on this VIF can be restricted

Signature:

```
void set_ipv4_allowed (session ref session_id, VIF ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	The VIF which the IP addresses will be associated with
`string set`	value	The IP addresses which will be associated with the VIF

Return Type: `void`

4.52.2.47. RPC name: set_ipv6_allowed

Overview:

Set the IPv6 addresses to which traffic on this VIF can be restricted

Signature:

```
void set_ipv6_allowed (session ref session_id, VIF ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	The VIF which the IP addresses will be associated with
`string set`	value	The IP addresses which will be associated with the VIF

Return Type: `void`

4.52.2.48. RPC name: set_locking_mode

Overview:

Set the locking mode for this VIF

Signature:

```
void set_locking_mode (session ref session_id, VIF ref self, vif_locking_mode
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	The VIF whose locking mode will be set
`vif_locking_mode`	value	The new locking mode for the VIF

Return Type: `void`

4.52.2.49. RPC name: set_other_config

Overview:

Set the other_config field of the given VIF.

Signature:

```
void set_other_config (session ref session_id, VIF ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.52.2.50. RPC name: set_qos_algorithm_params

Overview:

Set the qos/algorithm_params field of the given VIF.

Signature:

```
void set_qos_algorithm_params (session ref session_id, VIF ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.52.2.51. RPC name: set_qos_algorithm_type

Overview:

Set the qos/algorithm_type field of the given VIF.

Signature:

```
void set_qos_algorithm_type (session ref session_id, VIF ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	reference to the object
string	value	New value to set

Return Type: void

4.52.2.52. RPC name: unplug

Overview:

Hot-unplug the specified VIF, dynamically unattaching it from the running VM

Signature:

```
void unplug (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF ref	self	The VIF to hot-unplug

Return Type: void

4.52.2.53. RPC name: unplug_force

Overview:

Forcibly unplug the specified VIF

Signature:

```
void unplug_force (session ref session_id, VIF ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VIF ref	self	The VIF to forcibly unplug

Return Type: `void`

4.53. Class: VIF_metrics

This class is removed.

The metrics associated with a virtual network device

4.53.1. Fields for class: VIF_metrics

Field	Type	Qualifier	Description
io_read_kbs	`float`	*RO/runtime*	**Removed**. Read bandwidth (KiB/s)
io_write_kbs	`float`	*RO/runtime*	**Removed**. Write bandwidth (KiB/s)
last_updated	`datetime`	*RO/runtime*	**Removed**. Time at which this information was last updated
other_config	`(string -> string) map`	*RW*	**Removed**. additional configuration
uuid	`string`	*RO/runtime*	**Removed**. Unique identifier/object reference

4.53.2. RPCs associated with class: VIF_metrics

4.53.2.1. RPC name: add_to_other_config

This message is removed.

Overview:

Add the given key-value pair to the other_config field of the given VIF_metrics.

Signature:

```
void add_to_other_config (session ref session_id, VIF_metrics ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF_metrics ref	self	reference to the object

type	name	description
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.53.2.2. RPC name: get_all

This message is removed.

Overview:

Return a list of all the VIF_metrics instances known to the system.

Signature:

```
VIF_metrics ref set get_all (session ref session_id)
```

4.53.2.3. RPC name: get_all_records

This message is removed.

Overview:

Return a map of VIF_metrics references to VIF_metrics records for all VIF_metrics instances known to the system.

Signature:

```
(VIF_metrics ref -> VIF_metrics record) map get_all_records (session ref
 session_id)
```

4.53.2.4. RPC name: get_by_uuid

This message is removed.

Overview:

Get a reference to the VIF_metrics instance with the specified UUID.

Signature:

```
VIF_metrics ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VIF_metrics ref`

reference to the object

4.53.2.5. RPC name: get_io_read_kbs

This message is removed.

Overview:

Get the io/read_kbs field of the given VIF_metrics.

Signature:

```
float get_io_read_kbs (session ref session_id, VIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF_metrics ref	self	reference to the object

Return Type: `float`

value of the field

4.53.2.6. RPC name: get_io_write_kbs

This message is removed.

Overview:

Get the io/write_kbs field of the given VIF_metrics.

Signature:

```
float get_io_write_kbs (session ref session_id, VIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF_metrics ref	self	reference to the object

Return Type: `float`

value of the field

4.53.2.7. RPC name: get_last_updated

This message is removed.

Overview:

Get the last_updated field of the given VIF_metrics.

Signature:

```
datetime get_last_updated (session ref session_id, VIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF_metrics ref	self	reference to the object

Return Type: `datetime`

value of the field

4.53.2.8. RPC name: get_other_config

This message is removed.

Overview:

Get the other_config field of the given VIF_metrics.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VIF_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF_metrics ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.53.2.9. RPC name: get_record

This message is removed.

Overview:

Get a record containing the current state of the given VIF_metrics.

Signature:

```
VIF_metrics record get_record (session ref session_id, VIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VIF_metrics ref`	self	reference to the object

Return Type: `VIF_metrics record`

all fields from the object

4.53.2.10. RPC name: get_uuid

This message is removed.

Overview:

Get the uuid field of the given VIF_metrics.

Signature:

```
string get_uuid (session ref session_id, VIF_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.53.2.11. RPC name: remove_from_other_config

This message is removed.

Overview:

Remove the given key and its corresponding value from the other_config field of the given VIF_metrics. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VIF_metrics ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VIF_metrics ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.53.2.12. RPC name: set_other_config

This message is removed.

Overview:

Set the other_config field of the given VIF_metrics.

Signature:

```
void set_other_config (session ref session_id, VIF_metrics ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VIF_metrics ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.54. Class: VLAN

A VLAN mux/demux

4.54.1. Fields for class: VLAN

Field	Type	Qualifier	Description
other_config	(string -> string) map	*RW*	additional configuration
tag	int	*RO/constructor*	VLAN tag in use
tagged_PIF	PIF ref	*RO/constructor*	interface on which traffic is tagged
untagged_PIF	PIF ref	*RO/runtime*	interface on which traffic is untagged
uuid	string	*RO/runtime*	Unique identifier/object reference

4.54.2. RPCs associated with class: VLAN

4.54.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VLAN.

Signature:

```
void add_to_other_config (session ref session_id, VLAN ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.54.2.2. RPC name: create

Overview:

Create a VLAN mux/demuxer

Signature:

```
VLAN ref create (session ref session_id, PIF ref tagged_PIF, int tag, network ref
 network)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`PIF ref`	tagged_PIF	PIF which receives the tagged traffic
`int`	tag	VLAN tag to use
`network ref`	network	Network to receive the untagged traffic

Return Type: `VLAN ref`

The reference of the created VLAN object

4.54.2.3. RPC name: destroy

Overview:

Destroy a VLAN mux/demuxer

Signature:

```
void destroy (session ref session_id, VLAN ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	VLAN mux/demuxer to destroy

Return Type: `void`

4.54.2.4. RPC name: get_all

Overview:

Return a list of all the VLANs known to the system.

Signature:

```
VLAN ref set get_all (session ref session_id)
```

4.54.2.5. RPC name: get_all_records

Overview:

Return a map of VLAN references to VLAN records for all VLANs known to the system.

Signature:

```
(VLAN ref -> VLAN record) map get_all_records (session ref session_id)
```

4.54.2.6. RPC name: get_by_uuid

Overview:

Get a reference to the VLAN instance with the specified UUID.

Signature:

```
VLAN ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VLAN ref`

reference to the object

4.54.2.7. RPC name: get_other_config

Overview:

Get the other_config field of the given VLAN.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VLAN ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.54.2.8. RPC name: get_record

Overview:

Get a record containing the current state of the given VLAN.

Signature:

```
VLAN record get_record (session ref session_id, VLAN ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	reference to the object

Return Type: `VLAN record`

all fields from the object

4.54.2.9. RPC name: get_tag

Overview:

Get the tag field of the given VLAN.

Signature:

```
int get_tag (session ref session_id, VLAN ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	reference to the object

Return Type: `int`

value of the field

4.54.2.10. RPC name: get_tagged_PIF

Overview:

Get the tagged_PIF field of the given VLAN.

Signature:

```
PIF ref get_tagged_PIF (session ref session_id, VLAN ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VLAN ref	self	reference to the object

Return Type: PIF ref

value of the field

4.54.2.11. RPC name: get_untagged_PIF

Overview:

Get the untagged_PIF field of the given VLAN.

Signature:

```
PIF ref get_untagged_PIF (session ref session_id, VLAN ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VLAN ref	self	reference to the object

Return Type: PIF ref

value of the field

4.54.2.12. RPC name: get_uuid

Overview:

Get the uuid field of the given VLAN.

Signature:

```
string get_uuid (session ref session_id, VLAN ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	reference to the object

Return Type: `string`

value of the field

4.54.2.13. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VLAN. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VLAN ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.54.2.14. RPC name: set_other_config

Overview:

Set the other_config field of the given VLAN.

Signature:

```
void set_other_config (session ref session_id, VLAN ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VLAN ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.55. Class: VM

A virtual machine (or 'guest').

4.55.1. Fields for class: VM

Field	Type	Qualifier	Description
actions_after_crash	`on_crash_behaviour`	*RW*	action to take if the guest crashes
actions_after_reboot	`on_normal_exit`	*RW*	action to take after the guest has rebooted itself
actions_after_shutdown	`on_normal_exit`	*RW*	action to take after the guest has shutdown itself
affinity	`host ref`	*RW*	A host which the VM has some affinity for (or NULL). This is used as a hint to the start call when it decides where to run the VM. Resource constraints may cause the VM to be started elsewhere.
allowed_operations	`vm_operations set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
appliance	`VM_appliance ref`	*RO/constructor*	the appliance to which this VM belongs
attached_PCIs	`PCI ref set`	*RO/runtime*	Currently passed-through PCI devices
bios_strings	`(string -> string) map`	*RO/runtime*	BIOS strings
blobs	`(string -> blob ref) map`	*RO/runtime*	Binary blobs associated with this VM
blocked_operations	`(vm_operations -> string) map`	*RW*	List of operations which have been explicitly blocked and an error code
children	`VM ref set`	*RO/runtime*	List pointing to all the children of this VM
consoles	`console ref set`	*RO/runtime*	virtual console devices
crash_dumps	`crashdump ref set`	*RO/runtime*	crash dumps associated with this VM

Field	Type	Qualifier	Description
current_operations	(string -> vm_operations) map	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
domarch	string	*RO/runtime*	Domain architecture (if available, null string otherwise)
domid	int	*RO/runtime*	domain ID (if available, -1 otherwise)
generation_id	string	*RO/constructor*	Generation ID of the VM
guest_metrics	VM_guest_metrics ref	*RO/runtime*	metrics associated with the running guest
ha_always_run	bool	*RO/constructor*	**Deprecated**. if true then the system will attempt to keep the VM running as much as possible.
ha_restart_priority	string	*RO/constructor*	has possible values: "best-effort" meaning "try to restart this VM if possible but don't consider the Pool to be overcommitted if this is not possible"; "restart" meaning "this VM should be restarted"; "" meaning "do not try to restart this VM"
hardware_platform_versio	int	*RW*	The host virtual hardware platform version the VM can run on
has_vendor_device	bool	*RO/constructor*	When an HVM guest starts, this controls the presence of the emulated C000 PCI device which triggers Windows Update to fetch or update PV drivers.
HVM_boot_params	(string -> string) map	*RW*	HVM boot params
HVM_boot_policy	string	*RW*	HVM boot policy

Field	Type	Qualifier	Description
HVM_shadow_multiplier	`float`	*RO/constructor*	multiplier applied to the amount of shadow that will be made available to the guest
is_a_snapshot	`bool`	*RO/runtime*	true if this is a snapshot. Snapshotted VMs can never be started, they are used only for cloning other VMs
is_a_template	`bool`	*RW*	true if this is a template. Template VMs can never be started, they are used only for cloning other VMs
is_control_domain	`bool`	*RO/runtime*	true if this is a control domain (domain 0 or a driver domain)
is_default_template	`bool`	*RO/runtime*	true if this is a default template. Default template VMs can never be started or migrated, they are used only for cloning other VMs
is_snapshot_from_vmpp	`bool`	*RO/constructor*	**Deprecated**. true if this snapshot was created by the protection policy
is_vmss_snapshot	`bool`	*RO/constructor*	true if this snapshot was created by the snapshot schedule
last_boot_CPU_flags	`(string -> string) map`	*RO/runtime*	describes the CPU flags on which the VM was last booted
last_booted_record	`string`	*RO/runtime*	marshalled value containing VM record at time of last boot, updated dynamically to reflect the runtime state of the domain
memory_dynamic_max	`int`	*RO/constructor*	Dynamic maximum (bytes)
memory_dynamic_min	`int`	*RO/constructor*	Dynamic minimum (bytes)
memory_overhead	`int`	*RO/runtime*	Virtualization memory overhead (bytes).

Field	Type	Qualifier	Description
memory_static_max	`int`	*RO/constructor*	Statically-set (i.e. absolute) maximum (bytes). The value of this field at VM start time acts as a hard limit of the amount of memory a guest can use. New values only take effect on reboot.
memory_static_min	`int`	*RO/constructor*	Statically-set (i.e. absolute) mininum (bytes). The value of this field indicates the least amount of memory this VM can boot with without crashing.
memory_target	`int`	*RO/constructor*	**Deprecated**. Dynamically-set memory target (bytes). The value of this field indicates the current target for memory available to this VM.
metrics	`VM_metrics ref`	*RO/runtime*	metrics associated with this VM
name_description	`string`	*RW*	a notes field containing human-readable description
name_label	`string`	*RW*	a human-readable name
order	`int`	*RO/constructor*	The point in the startup or shutdown sequence at which this VM will be started
other_config	`(string -> string) map`	*RW*	additional configuration
parent	`VM ref`	*RO/runtime*	Ref pointing to the parent of this VM
PCI_bus	`string`	*RW*	**Deprecated**. PCI bus path for pass-through devices
platform	`(string -> string) map`	*RW*	platform-specific configuration
power_state	`vm_power_state`	*RO/runtime*	Current power state of the machine

Field	Type	Qualifier	Description
protection_policy	`VMPP ref`	*RO/constructor*	**Deprecated**. Ref pointing to a protection policy for this VM
PV_args	`string`	*RW*	kernel command-line arguments
PV_bootloader	`string`	*RW*	name of or path to bootloader
PV_bootloader_args	`string`	*RW*	miscellaneous arguments for the bootloader
PV_kernel	`string`	*RW*	path to the kernel
PV_legacy_args	`string`	*RW*	to make Zurich guests boot
PV_ramdisk	`string`	*RW*	path to the initrd
recommendations	`string`	*RW*	An XML specification of recommended values and ranges for properties of this VM
reference_label	`string`	*RO/constructor*	Textual reference to the template used to create a VM. This can be used by clients in need of an immutable reference to the template since the latter's uuid and name_label may change, for example, after a package installation or upgrade.
requires_reboot	`bool`	*RO/runtime*	Indicates whether a VM requires a reboot in order to update its configuration, e.g. its memory allocation.
resident_on	`host ref`	*RO/runtime*	the host the VM is currently resident on
shutdown_delay	`int`	*RO/constructor*	The delay to wait before proceeding to the next order in the shutdown sequence (seconds)
snapshot_info	`(string -> string) map`	*RO/runtime*	Human-readable information concerning this snapshot

Field	Type	Qualifier	Description
snapshot_metadata	`string`	*RO/runtime*	Encoded information about the VM's metadata this is a snapshot of
snapshot_of	`VM ref`	*RO/runtime*	Ref pointing to the VM this snapshot is of.
snapshot_schedule	`VMSS ref`	*RO/constructor*	Ref pointing to a snapshot schedule for this VM
snapshot_time	`datetime`	*RO/runtime*	Date/time when this snapshot was created.
snapshots	`VM ref set`	*RO/runtime*	List pointing to all the VM snapshots.
start_delay	`int`	*RO/constructor*	The delay to wait before proceeding to the next order in the startup sequence (seconds)
suspend_SR	`SR ref`	*RW*	The SR on which a suspend image is stored
suspend_VDI	`VDI ref`	*RO/runtime*	The VDI that a suspend image is stored on. (Only has meaning if VM is currently suspended)
tags	`string set`	*RW*	user-specified tags for categorization purposes
transportable_snapshot_ic	`string`	*RO/runtime*	Transportable ID of the snapshot VM
user_version	`int`	*RW*	Creators of VMs and templates may store version information here.
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VBDs	`VBD ref set`	*RO/runtime*	virtual block devices
VCPUs_at_startup	`int`	*RO/constructor*	Boot number of VCPUs
VCPUs_max	`int`	*RO/constructor*	Max number of VCPUs
VCPUs_params	`(string -> string) map`	*RW*	configuration parameters for the selected VCPU policy
version	`int`	*RO/constructor*	The number of times this VM has been recovered
VGPUs	`VGPU ref set`	*RO/runtime*	Virtual GPUs

Field	Type	Qualifier	Description
VIFs	`VIF ref set`	*RO/runtime*	virtual network interfaces
VTPMs	`VTPM ref set`	*RO/runtime*	virtual TPMs
VUSBs	`VUSB ref set`	*RO/runtime*	vitual usb devices
xenstore_data	`(string -> string) map`	*RW*	data to be inserted into the xenstore tree (/local/domain/<domid>/vm-data) after the VM is created.

4.55.2. RPCs associated with class: VM

4.55.2.1. RPC name: add_tags

Overview:

Add the given value to the tags field of the given VM. If the value is already in that Set, then do nothing.

Signature:

```
void add_tags (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	value	New value to add

Return Type: `void`

4.55.2.2. RPC name: add_to_blocked_operations

Overview:

Add the given key-value pair to the blocked_operations field of the given VM.

Signature:

```
void add_to_blocked_operations (session ref session_id, VM ref self, vm_operations
 key, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

type	name	description
vm_operations	key	Key to add
string	value	Value to add

Return Type: void

4.55.2.3. RPC name: add_to_HVM_boot_params

Overview:

Add the given key-value pair to the HVM/boot_params field of the given VM.

Signature:

```
void add_to_HVM_boot_params (session ref session_id, VM ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.55.2.4. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VM.

Signature:

```
void add_to_other_config (session ref session_id, VM ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.55.2.5. RPC name: add_to_platform

Overview:

Add the given key-value pair to the platform field of the given VM.

Signature:

```
void add_to_platform (session ref session_id, VM ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.55.2.6. RPC name: add_to_VCPUs_params

Overview:

Add the given key-value pair to the VCPUs/params field of the given VM.

Signature:

```
void add_to_VCPUs_params (session ref session_id, VM ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	key	Key to add
string	value	Value to add

Return Type: void

4.55.2.7. RPC name: add_to_VCPUs_params_live

Overview:

Add the given key-value pair to VM.VCPUs_params, and apply that value on the running VM

Signature:

```
void add_to_VCPUs_params_live (session ref session_id, VM ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`string`	key	The key
`string`	value	The value

Return Type: `void`

4.55.2.8. RPC name: add_to_xenstore_data

Overview:

Add the given key-value pair to the xenstore_data field of the given VM.

Signature:

```
void add_to_xenstore_data (session ref session_id, VM ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.55.2.9. RPC name: assert_agile

Overview:

Returns an error if the VM is not considered agile e.g. because it is tied to a resource local to a host

Signature:

```
void assert_agile (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	The VM

Return Type: void

4.55.2.10. RPC name: assert_can_be_recovered

Overview:

Assert whether all SRs required to recover this VM are available.

Signature:

```
void assert_can_be_recovered (session ref session_id, VM ref self, session ref
 session_to)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM to recover
session ref	session_to	The session to which the VM is to be recovered.

Return Type: void

Possible Error Codes: VM_IS_PART_OF_AN_APPLIANCE, VM_REQUIRES_SR

4.55.2.11. RPC name: assert_can_boot_here

Overview:

Returns an error if the VM could not boot on this host for some reason

Signature:

```
void assert_can_boot_here (session ref session_id, VM ref self, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
host ref	host	The host

Return Type: void

Possible Error Codes: HOST_NOT_ENOUGH_FREE_MEMORY, VM_REQUIRES_SR, VM_HOST_INCOMPATIBLE_VERSION, VM_HOST_INCOMPATIBLE_VIRTUAL_HARDWARE_PLATFORM_VERSION

4.55.2.12. RPC name: assert_can_migrate

Overview:

Assert whether a VM can be migrated to the specified destination.

Signature:

```
void assert_can_migrate (session ref session_id, VM ref vm, (string -> string) map
 dest, bool live, (VDI ref -> SR ref) map vdi_map, (VIF ref -> network ref) map
 vif_map, (string -> string) map options, (VGPU ref -> GPU_group ref) map vgpu_map)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM
(string -> string) map	dest	The result of a VM.migrate_receive call.
bool	live	Live migration
(VDI ref -> SR ref) map	vdi_map	Map of source VDI to destination SR
(VIF ref -> network ref) map	vif_map	Map of source VIF to destination network
(string -> string) map	options	Other parameters
(VGPU ref -> GPU_group ref) map	vgpu_map	Map of source vGPU to destination GPU group

Return Type: `void`

Possible Error Codes: `LICENCE_RESTRICTION`

4.55.2.13. RPC name: assert_operation_valid

Overview:

Check to see whether this operation is acceptable in the current state of the system, raising an error if the operation is invalid for some reason

Signature:

```
void assert_operation_valid (session ref session_id, VM ref self, vm_operations op)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

type	name	description
vm_operations	op	proposed operation

Return Type: `void`

4.55.2.14. RPC name: call_plugin

Overview:

Call a XenAPI plugin on this vm

Signature:

```
string call_plugin (session ref session_id, VM ref vm, string plugin, string fn,
 (string -> string) map args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The vm
string	plugin	The name of the plugin
string	fn	The name of the function within the plugin
(string -> string) map	args	Arguments for the function

Return Type: `string`

Result from the plugin

4.55.2.15. RPC name: checkpoint

Overview:

Checkpoints the specified VM, making a new VM. Checkpoint automatically exploits the capabilities of the underlying storage repository in which the VM's disk images are stored (e.g. Copy on Write) and saves the memory image as well.

Signature:

```
VM ref checkpoint (session ref session_id, VM ref vm, string new_name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to be checkpointed
string	new_name	The name of the checkpointed VM

Return Type: `VM ref`

The reference of the newly created VM.

Possible Error Codes: `VM_BAD_POWER_STATE`, `SR_FULL`, `OPERATION_NOT_ALLOWED`, `VM_CHECKPOINT_SUSPEND_FAILED`, `VM_CHECKPOINT_RESUME_FAILED`

4.55.2.16. RPC name: clean_reboot

Overview:

Attempt to cleanly shutdown the specified VM (Note: this may not be supported---e.g. if a guest agent is not installed). This can only be called when the specified VM is in the Running state.

Signature:

```
void clean_reboot (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to shutdown

Return Type: `void`

Possible Error Codes: `VM_BAD_POWER_STATE`, `OTHER_OPERATION_IN_PROGRESS`, `OPERATION_NOT_ALLOWED`, `VM_IS_TEMPLATE`

4.55.2.17. RPC name: clean_shutdown

Overview:

Attempt to cleanly shutdown the specified VM. (Note: this may not be supported---e.g. if a guest agent is not installed). This can only be called when the specified VM is in the Running state.

Signature:

```
void clean_shutdown (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to shutdown

Return Type: `void`

Possible Error Codes: `VM_BAD_POWER_STATE`, `OTHER_OPERATION_IN_PROGRESS`, `OPERATION_NOT_ALLOWED`, `VM_IS_TEMPLATE`

4.55.2.18. RPC name: clone

Overview:

Clones the specified VM, making a new VM. Clone automatically exploits the capabilities of the underlying storage repository in which the VM's disk images are stored (e.g. Copy on Write). This function can only be called when the VM is in the Halted State.

Signature:

```
VM ref clone (session ref session_id, VM ref vm, string new_name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to be cloned
`string`	new_name	The name of the cloned VM

Return Type: `VM ref`

The reference of the newly created VM.

Possible Error Codes: `VM_BAD_POWER_STATE`, `SR_FULL`, `OPERATION_NOT_ALLOWED`, `LICENCE_RESTRICTION`

4.55.2.19. RPC name: compute_memory_overhead

Overview:

Computes the virtualization memory overhead of a VM.

Signature:

```
int compute_memory_overhead (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM for which to compute the memory overhead

Return Type: `int`

the virtualization memory overhead of the VM.

4.55.2.20. RPC name: copy

Overview:

Copied the specified VM, making a new VM. Unlike clone, copy does not exploits the capabilities of the underlying storage repository in which the VM's disk images are stored. Instead, copy guarantees that the disk images of the newly created VM will be 'full disks' - i.e. not part of a CoW chain. This function can only be called when the VM is in the Halted State.

Signature:

```
VM ref copy (session ref session_id, VM ref vm, string new_name, SR ref sr)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to be copied
`string`	new_name	The name of the copied VM
`SR ref`	sr	An SR to copy all the VM's disks into (if an invalid reference then it uses the existing SRs)

Return Type: `VM ref`

The reference of the newly created VM.

Possible Error Codes: `VM_BAD_POWER_STATE`, `SR_FULL`, `OPERATION_NOT_ALLOWED`, `LICENCE_RESTRICTION`

4.55.2.21. RPC name: copy_bios_strings

Overview:

Copy the BIOS strings from the given host to this VM

Signature:

```
void copy_bios_strings (session ref session_id, VM ref vm, host ref host)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to modify
`host ref`	host	The host to copy the BIOS strings from

Return Type: `void`

4.55.2.22. RPC name: create

Overview:

NOT RECOMMENDED! VM.clone or VM.copy (or VM.import) is a better choice in almost all situations. The standard way to obtain a new VM is to call VM.clone on a template VM, then call VM.provision on the new clone. Caution: if VM.create is used and then the new VM is attached to a virtual disc that has an operating system already installed, then there is no guarantee that the operating system will boot and run. Any software that calls VM.create on a future version of this API may fail or give unexpected results. For example this could happen if an additional parameter were added to VM.create. VM.create is intended only for use in the automatic creation of the system VM templates. It creates a new VM instance, and returns its handle.

Signature:

```
VM ref create (session ref session_id, VM record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM record`	args	All constructor arguments

Return Type: `VM ref`

reference to the newly created object

4.55.2.23. RPC name: create_new_blob

Overview:

Create a placeholder for a named binary blob of data that is associated with this VM

Signature:

```
blob ref create_new_blob (session ref session_id, VM ref vm, string name, string
 mime_type, bool public)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM
`string`	name	The name associated with the blob
`string`	mime_type	The mime type for the data. Empty string translates to application/octet-stream
`bool`	public	True if the blob should be publicly available

Return Type: `blob ref`

The reference of the blob, needed for populating its data

4.55.2.24. RPC name: destroy

Overview:

Destroy the specified VM. The VM is completely removed from the system. This function can only be called when the VM is in the Halted State.

Signature:

```
void destroy (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: void

4.55.2.25. RPC name: forget_data_source_archives

Overview:

Forget the recorded statistics related to the specified data source

Signature:

```
void forget_data_source_archives (session ref session_id, VM ref self, string
 data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
string	data_source	The data source whose archives are to be forgotten

Return Type: void

4.55.2.26. RPC name: get_actions_after_crash

Overview:

Get the actions/after_crash field of the given VM.

Signature:

```
on_crash_behaviour get_actions_after_crash (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `on_crash_behaviour`

value of the field

4.55.2.27. RPC name: get_actions_after_reboot

Overview:

Get the actions/after_reboot field of the given VM.

Signature:

```
on_normal_exit get_actions_after_reboot (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `on_normal_exit`

value of the field

4.55.2.28. RPC name: get_actions_after_shutdown

Overview:

Get the actions/after_shutdown field of the given VM.

Signature:

```
on_normal_exit get_actions_after_shutdown (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `on_normal_exit`

value of the field

4.55.2.29. RPC name: get_affinity

Overview:

Get the affinity field of the given VM.

Signature:

```
host ref get_affinity (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `host ref`

value of the field

4.55.2.30. RPC name: get_all

Overview:

Return a list of all the VMs known to the system.

Signature:

```
VM ref set get_all (session ref session_id)
```

4.55.2.31. RPC name: get_all_records

Overview:

Return a map of VM references to VM records for all VMs known to the system.

Signature:

```
(VM ref -> VM record) map get_all_records (session ref session_id)
```

4.55.2.32. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given VM.

Signature:

```
vm_operations set get_allowed_operations (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `vm_operations set`

value of the field

4.55.2.33. RPC name: get_allowed_VBD_devices

Overview:

Returns a list of the allowed values that a VBD device field can take

Signature:

```
string set get_allowed_VBD_devices (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to query

Return Type: `string set`

The allowed values

4.55.2.34. RPC name: get_allowed_VIF_devices

Overview:

Returns a list of the allowed values that a VIF device field can take

Signature:

```
string set get_allowed_VIF_devices (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to query

Return Type: `string set`

The allowed values

4.55.2.35. RPC name: get_appliance

Overview:

Get the appliance field of the given VM.

Signature:

```
VM_appliance ref get_appliance (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `VM_appliance ref`

value of the field

4.55.2.36. RPC name: get_attached_PCIs

Overview:

Get the attached_PCIs field of the given VM.

Signature:

```
PCI ref set get_attached_PCIs (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `PCI ref set`

value of the field

4.55.2.37. RPC name: get_bios_strings

Overview:

Get the bios_strings field of the given VM.

Signature:

```
(string -> string) map get_bios_strings (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.38. RPC name: get_blobs

Overview:

Get the blobs field of the given VM.

Signature:

```
(string -> blob ref) map get_blobs (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `(string -> blob ref) map`

value of the field

4.55.2.39. RPC name: get_blocked_operations

Overview:

Get the blocked_operations field of the given VM.

Signature:

```
(vm_operations -> string) map get_blocked_operations (session ref session_id, VM
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `(vm_operations -> string) map`

value of the field

4.55.2.40. RPC name: get_boot_record

This message is deprecated.

Overview:

Returns a record describing the VM's dynamic state, initialised when the VM boots and updated to reflect runtime configuration changes e.g. CPU hotplug

Signature:

```
VM record get_boot_record (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	The VM whose boot-time state to return

Return Type: `VM record`

A record describing the VM

4.55.2.41. RPC name: get_by_name_label

Overview:

Get all the VM instances with the given label.

Signature:

```
VM ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `VM ref set`

references to objects with matching names

4.55.2.42. RPC name: get_by_uuid

Overview:

Get a reference to the VM instance with the specified UUID.

Signature:

```
VM ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `VM ref`

reference to the object

4.55.2.43. RPC name: get_children

Overview:

Get the children field of the given VM.

Signature:

```
VM ref set get_children (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `VM ref set`

value of the field

4.55.2.44. RPC name: get_consoles

Overview:

Get the consoles field of the given VM.

Signature:

```
console ref set get_consoles (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `console ref set`

value of the field

4.55.2.45. RPC name: get_cooperative

This message is deprecated.

Overview:

Return true if the VM is currently 'co-operative' i.e. is expected to reach a balloon target and actually has done

Signature:

```
bool get_cooperative (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	The VM

Return Type: `bool`

true if the VM is currently 'co-operative'; false otherwise

4.55.2.46. RPC name: get_crash_dumps

Overview:

Get the crash_dumps field of the given VM.

Signature:

```
crashdump ref set get_crash_dumps (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `crashdump ref set`

value of the field

4.55.2.47. RPC name: get_current_operations

Overview:

Get the current_operations field of the given VM.

Signature:

```
(string -> vm_operations) map get_current_operations (session ref session_id, VM
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `(string -> vm_operations) map`

value of the field

4.55.2.48. RPC name: get_data_sources

Overview:

Signature:

```
data_source record set get_data_sources (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM to interrogate

Return Type: `data_source record set`

A set of data sources

4.55.2.49. RPC name: get_domarch

Overview:

Get the domarch field of the given VM.

Signature:

```
string get_domarch (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.50. RPC name: get_domid

Overview:

Get the domid field of the given VM.

Signature:

```
int get_domid (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `int`

value of the field

4.55.2.51. RPC name: get_generation_id

Overview:

Get the generation_id field of the given VM.

Signature:

```
string get_generation_id (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.52. RPC name: get_guest_metrics

Overview:

Get the guest_metrics field of the given VM.

Signature:

```
VM_guest_metrics ref get_guest_metrics (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VM_guest_metrics ref`

value of the field

4.55.2.53. RPC name: get_ha_always_run

This message is deprecated.

Overview:

Get the ha_always_run field of the given VM.

Signature:

```
bool get_ha_always_run (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.54. RPC name: get_ha_restart_priority

Overview:

Get the ha_restart_priority field of the given VM.

Signature:

```
string get_ha_restart_priority (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.55. RPC name: get_hardware_platform_version

Overview:

Get the hardware_platform_version field of the given VM.

Signature:

```
int get_hardware_platform_version (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `int`

value of the field

4.55.2.56. RPC name: get_has_vendor_device

Overview:

Get the has_vendor_device field of the given VM.

Signature:

```
bool get_has_vendor_device (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.57. RPC name: get_HVM_boot_params

Overview:

Get the HVM/boot_params field of the given VM.

Signature:

```
(string -> string) map get_HVM_boot_params (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.58. RPC name: get_HVM_boot_policy

Overview:

Get the HVM/boot_policy field of the given VM.

Signature:

```
string get_HVM_boot_policy (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.59. RPC name: get_HVM_shadow_multiplier

Overview:

Get the HVM/shadow_multiplier field of the given VM.

Signature:

```
float get_HVM_shadow_multiplier (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `float`

value of the field

4.55.2.60. RPC name: get_is_a_snapshot

Overview:

Get the is_a_snapshot field of the given VM.

Signature:

```
bool get_is_a_snapshot (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.61. RPC name: get_is_a_template

Overview:

Get the is_a_template field of the given VM.

Signature:

```
bool get_is_a_template (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.62. RPC name: get_is_control_domain

Overview:

Get the is_control_domain field of the given VM.

Signature:

```
bool get_is_control_domain (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.63. RPC name: get_is_default_template

Overview:

Get the is_default_template field of the given VM.

Signature:

```
bool get_is_default_template (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.64. RPC name: get_is_snapshot_from_vmpp

This message is deprecated.

Overview:

Get the is_snapshot_from_vmpp field of the given VM.

Signature:

```
bool get_is_snapshot_from_vmpp (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.65. RPC name: get_is_vmss_snapshot

Overview:

Get the is_vmss_snapshot field of the given VM.

Signature:

```
bool get_is_vmss_snapshot (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.66. RPC name: get_last_boot_CPU_flags

Overview:

Get the last_boot_CPU_flags field of the given VM.

Signature:

```
(string -> string) map get_last_boot_CPU_flags (session ref session_id, VM ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.67. RPC name: get_last_booted_record

Overview:

Get the last_booted_record field of the given VM.

Signature:

```
string get_last_booted_record (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.68. RPC name: get_memory_dynamic_max

Overview:

Get the memory/dynamic_max field of the given VM.

Signature:

```
int get_memory_dynamic_max (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.69. RPC name: get_memory_dynamic_min

Overview:

Get the memory/dynamic_min field of the given VM.

Signature:

```
int get_memory_dynamic_min (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.70. RPC name: get_memory_overhead

Overview:

Get the memory/overhead field of the given VM.

Signature:

```
int get_memory_overhead (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.71. RPC name: get_memory_static_max

Overview:

Get the memory/static_max field of the given VM.

Signature:

```
int get_memory_static_max (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `int`

value of the field

4.55.2.72. RPC name: get_memory_static_min

Overview:

Get the memory/static_min field of the given VM.

Signature:

```
int get_memory_static_min (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `int`

value of the field

4.55.2.73. RPC name: get_memory_target

This message is deprecated.

Overview:

Get the memory/target field of the given VM.

Signature:

```
int get_memory_target (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.74. RPC name: get_metrics

Overview:

Get the metrics field of the given VM.

Signature:

```
VM_metrics ref get_metrics (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `VM_metrics ref`

value of the field

4.55.2.75. RPC name: get_name_description

Overview:

Get the name/description field of the given VM.

Signature:

```
string get_name_description (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.76. RPC name: get_name_label

Overview:

Get the name/label field of the given VM.

Signature:

```
string get_name_label (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.77. RPC name: get_order

Overview:

Get the order field of the given VM.

Signature:

```
int get_order (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `int`

value of the field

4.55.2.78. RPC name: get_other_config

Overview:

Get the other_config field of the given VM.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.79. RPC name: get_parent

Overview:

Get the parent field of the given VM.

Signature:

```
VM ref get_parent (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `VM ref`

value of the field

4.55.2.80. RPC name: get_PCI_bus

This message is deprecated.

Overview:

Get the PCI_bus field of the given VM.

Signature:

```
string get_PCI_bus (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.81. RPC name: get_platform

Overview:

Get the platform field of the given VM.

Signature:

```
(string -> string) map get_platform (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.82. RPC name: get_possible_hosts

Overview:

Return the list of hosts on which this VM may run.

Signature:

```
host ref set get_possible_hosts (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM

Return Type: `host ref set`

The possible hosts

4.55.2.83. RPC name: get_power_state

Overview:

Get the power_state field of the given VM.

Signature:

```
vm_power_state get_power_state (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VM ref`	self	reference to the object

Return Type: `vm_power_state`

value of the field

4.55.2.84. RPC name: get_protection_policy

This message is deprecated.

Overview:

Get the protection_policy field of the given VM.

Signature:

```
VMPP ref get_protection_policy (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VMPP ref`

value of the field

4.55.2.85. RPC name: get_PV_args

Overview:

Get the PV/args field of the given VM.

Signature:

```
string get_PV_args (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.86. RPC name: get_PV_bootloader

Overview:

Get the PV/bootloader field of the given VM.

Signature:

```
string get_PV_bootloader (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.87. RPC name: get_PV_bootloader_args

Overview:

Get the PV/bootloader_args field of the given VM.

Signature:

```
string get_PV_bootloader_args (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.88. RPC name: get_PV_kernel

Overview:

Get the PV/kernel field of the given VM.

Signature:

```
string get_PV_kernel (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.89. RPC name: get_PV_legacy_args

Overview:

Get the PV/legacy_args field of the given VM.

Signature:

```
string get_PV_legacy_args (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.90. RPC name: get_PV_ramdisk

Overview:

Get the PV/ramdisk field of the given VM.

Signature:

```
string get_PV_ramdisk (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.91. RPC name: get_recommendations

Overview:

Get the recommendations field of the given VM.

Signature:

```
string get_recommendations (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.92. RPC name: get_record

Overview:

Get a record containing the current state of the given VM.

Signature:

```
VM record get_record (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VM record`

all fields from the object

4.55.2.93. RPC name: get_reference_label

Overview:

Get the reference_label field of the given VM.

Signature:

```
string get_reference_label (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.94. RPC name: get_requires_reboot

Overview:

Get the requires_reboot field of the given VM.

Signature:

```
bool get_requires_reboot (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `bool`

value of the field

4.55.2.95. RPC name: get_resident_on

Overview:

Get the resident_on field of the given VM.

Signature:

```
host ref get_resident_on (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `host ref`

value of the field

4.55.2.96. RPC name: get_shutdown_delay

Overview:

Get the shutdown_delay field of the given VM.

Signature:

```
int get_shutdown_delay (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `int`

value of the field

4.55.2.97. RPC name: get_snapshot_info

Overview:

Get the snapshot_info field of the given VM.

Signature:

```
(string -> string) map get_snapshot_info (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.98. RPC name: get_snapshot_metadata

Overview:

Get the snapshot_metadata field of the given VM.

Signature:

```
string get_snapshot_metadata (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VM ref`	self	reference to the object

Return Type: `string`

value of the field

4.55.2.99. RPC name: get_snapshot_of

Overview:

Get the snapshot_of field of the given VM.

Signature:

```
VM ref get_snapshot_of (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VM ref`

value of the field

4.55.2.100. RPC name: get_snapshot_schedule

Overview:

Get the snapshot_schedule field of the given VM.

Signature:

```
VMSS ref get_snapshot_schedule (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VMSS ref`

value of the field

4.55.2.101. RPC name: get_snapshot_time

Overview:

Get the snapshot_time field of the given VM.

Signature:

```
datetime get_snapshot_time (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `datetime`

value of the field

4.55.2.102. RPC name: get_snapshots

Overview:

Get the snapshots field of the given VM.

Signature:

```
VM ref set get_snapshots (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `VM ref set`

value of the field

4.55.2.103. RPC name: get_SRs_required_for_recovery

Overview:

List all the SR's that are required for the VM to be recovered

Signature:

```
SR ref set get_SRs_required_for_recovery (session ref session_id, VM ref self,
 session ref session_to)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM for which the SRs have to be recovered

type	name	description
session ref	session_to	The session to which the SRs of the VM have to be recovered.

Return Type: `SR ref set`

refs for SRs required to recover the VM

4.55.2.104. RPC name: get_start_delay

Overview:

Get the start_delay field of the given VM.

Signature:

```
int get_start_delay (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.105. RPC name: get_suspend_SR

Overview:

Get the suspend_SR field of the given VM.

Signature:

```
SR ref get_suspend_SR (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `SR ref`

value of the field

4.55.2.106. RPC name: get_suspend_VDI

Overview:

Get the suspend_VDI field of the given VM.

Signature:

```
VDI ref get_suspend_VDI (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VDI ref`

value of the field

4.55.2.107. RPC name: get_tags

Overview:

Get the tags field of the given VM.

Signature:

```
string set get_tags (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `string set`

value of the field

4.55.2.108. RPC name: get_transportable_snapshot_id

Overview:

Get the transportable_snapshot_id field of the given VM.

Signature:

```
string get_transportable_snapshot_id (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.109. RPC name: get_user_version

Overview:

Get the user_version field of the given VM.

Signature:

```
int get_user_version (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.110. RPC name: get_uuid

Overview:

Get the uuid field of the given VM.

Signature:

```
string get_uuid (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `string`

value of the field

4.55.2.111. RPC name: get_VBDs

Overview:

Get the VBDs field of the given VM.

Signature:

```
VBD ref set get_VBDs (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VBD ref set`

value of the field

4.55.2.112. RPC name: get_VCPUs_at_startup

Overview:

Get the VCPUs/at_startup field of the given VM.

Signature:

```
int get_VCPUs_at_startup (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `int`

value of the field

4.55.2.113. RPC name: get_VCPUs_max

Overview:

Get the VCPUs/max field of the given VM.

Signature:

```
int get_VCPUs_max (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.114. RPC name: get_VCPUs_params

Overview:

Get the VCPUs/params field of the given VM.

Signature:

```
(string -> string) map get_VCPUs_params (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.115. RPC name: get_version

Overview:

Get the version field of the given VM.

Signature:

```
int get_version (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

Return Type: `int`

value of the field

4.55.2.116. RPC name: get_VGPUs

Overview:

Get the VGPUs field of the given VM.

Signature:

```
VGPU ref set get_VGPUs (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VGPU ref set`

value of the field

4.55.2.117. RPC name: get_VIFs

Overview:

Get the VIFs field of the given VM.

Signature:

```
VIF ref set get_VIFs (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VIF ref set`

value of the field

4.55.2.118. RPC name: get_VTPMs

Overview:

Get the VTPMs field of the given VM.

Signature:

```
VTPM ref set get_VTPMs (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VTPM ref set`

value of the field

4.55.2.119. RPC name: get_VUSBs

Overview:

Get the VUSBs field of the given VM.

Signature:

```
VUSB ref set get_VUSBs (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `VUSB ref set`

value of the field

4.55.2.120. RPC name: get_xenstore_data

Overview:

Get the xenstore_data field of the given VM.

Signature:

```
(string -> string) map get_xenstore_data (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.55.2.121. RPC name: hard_reboot

Overview:

Stop executing the specified VM without attempting a clean shutdown and immediately restart the VM.

Signature:

```
void hard_reboot (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to reboot

Return Type: `void`

Possible Error Codes: VM_BAD_POWER_STATE, OTHER_OPERATION_IN_PROGRESS, OPERATION_NOT_ALLOWED, VM_IS_TEMPLATE

4.55.2.122. RPC name: hard_shutdown

Overview:

Stop executing the specified VM without attempting a clean shutdown.

Signature:

```
void hard_shutdown (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to destroy

Return Type: `void`

Possible Error Codes: VM_BAD_POWER_STATE, OTHER_OPERATION_IN_PROGRESS, OPERATION_NOT_ALLOWED, VM_IS_TEMPLATE

4.55.2.123. RPC name: import

Overview:

Import an XVA from a URI

Signature:

```
VM ref set import (session ref session_id, string url, SR ref sr, bool
 full_restore, bool force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	url	The URL of the XVA file
SR ref	sr	The destination SR for the disks

type	name	description
`bool`	full_restore	Perform a full restore
`bool`	force	Force the import

Return Type: `VM ref set`

Imported VM reference

4.55.2.124. RPC name: import_convert

Overview:

Import using a conversion service.

Signature:

```
void import_convert (session ref session_id, string type, string username, string
 password, SR ref sr, (string -> string) map remote_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	type	Type of the conversion
`string`	username	Admin username on the host
`string`	password	Password on the host
`SR ref`	sr	The destination SR
`(string -> string) map`	remote_config	Remote configuration options

Return Type: `void`

4.55.2.125. RPC name: maximise_memory

Overview:

Returns the maximum amount of guest memory which will fit, together with overheads, in the supplied amount of physical memory. If 'exact' is true then an exact calculation is performed using the VM's current settings. If 'exact' is false then a more conservative approximation is used

Signature:

```
int maximise_memory (session ref session_id, VM ref self, int total, bool
 approximate)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	The VM
int	total	Total amount of physical RAM to fit within
bool	approximate	If false the limit is calculated with the guest's current exact configuration. Otherwise a more approximate calculation is performed

Return Type: `int`

The maximum possible static-max

4.55.2.126. RPC name: migrate_send

Overview:

Migrate the VM to another host. This can only be called when the specified VM is in the Running state.

Signature:

```
VM ref migrate_send (session ref session_id, VM ref vm, (string -> string) map
 dest, bool live, (VDI ref -> SR ref) map vdi_map, (VIF ref -> network ref) map
 vif_map, (string -> string) map options, (VGPU ref -> GPU_group ref) map vgpu_map)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM
(string -> string) map	dest	The result of a Host.migrate_receive call.
bool	live	Live migration
(VDI ref -> SR ref) map	vdi_map	Map of source VDI to destination SR
(VIF ref -> network ref) map	vif_map	Map of source VIF to destination network
(string -> string) map	options	Other parameters
(VGPU ref -> GPU_group ref) map	vgpu_map	Map of source vGPU to destination GPU group

Return Type: `VM ref`

The reference of the newly created VM in the destination pool

Possible Error Codes: `VM_BAD_POWER_STATE`, `LICENCE_RESTRICTION`

4.55.2.127. RPC name: pause

Overview:

Pause the specified VM. This can only be called when the specified VM is in the Running state.

Signature:

```
void pause (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to pause

Return Type: void

Possible Error Codes: VM_BAD_POWER_STATE, OTHER_OPERATION_IN_PROGRESS, OPERATION_NOT_ALLOWED, VM_IS_TEMPLATE

4.55.2.128. RPC name: pool_migrate

Overview:

Migrate a VM to another Host.

Signature:

```
void pool_migrate (session ref session_id, VM ref vm, host ref host, (string ->
 string) map options)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to migrate
host ref	host	The target host
(string -> string) map	options	Extra configuration operations

Return Type: void

Possible Error Codes: VM_BAD_POWER_STATE, OTHER_OPERATION_IN_PROGRESS, VM_IS_TEMPLATE, OPERATION_NOT_ALLOWED, VM_MIGRATE_FAILED

4.55.2.129. RPC name: power_state_reset

Overview:

Reset the power-state of the VM to halted in the database only. (Used to recover from slave failures in pooling scenarios by resetting the power-states of VMs running on dead slaves to halted.) This is a potentially dangerous operation; use with care.

Signature:

```
void power_state_reset (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to reset

Return Type: `void`

4.55.2.130. RPC name: provision

Overview:

Inspects the disk configuration contained within the VM's other_config, creates VDIs and VBDs and then executes any applicable post-install script.

Signature:

```
void provision (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to be provisioned

Return Type: `void`

Possible Error Codes: `VM_BAD_POWER_STATE`, `SR_FULL`, `OPERATION_NOT_ALLOWED`, `LICENCE_RESTRICTION`

4.55.2.131. RPC name: query_data_source

Overview:

Query the latest value of the specified data source

Signature:

```
float query_data_source (session ref session_id, VM ref self, string data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM

type	name	description
string	data_source	The data source to query

Return Type: `float`

The latest value, averaged over the last 5 seconds

4.55.2.132. RPC name: query_services

Overview:

Query the system services advertised by this VM and register them. This can only be applied to a system domain.

Signature:

```
(string -> string) map query_services (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM

Return Type: `(string -> string) map`

map of service type to name

4.55.2.133. RPC name: record_data_source

Overview:

Start recording the specified data source

Signature:

```
void record_data_source (session ref session_id, VM ref self, string data_source)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
string	data_source	The data source to record

Return Type: `void`

4.55.2.134. RPC name: recover

Overview:

Recover the VM

Signature:

```
void recover (session ref session_id, VM ref self, session ref session_to, bool
 force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM to recover
session ref	session_to	The session to which the VM is to be recovered.
bool	force	Whether the VM should replace newer versions of itself.

Return Type: void

4.55.2.135. RPC name: remove_from_blocked_operations

Overview:

Remove the given key and its corresponding value from the blocked_operations field of the given VM. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_blocked_operations (session ref session_id, VM ref self,
 vm_operations key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
vm_operations	key	Key to remove

Return Type: void

4.55.2.136. RPC name: remove_from_HVM_boot_params

Overview:

Remove the given key and its corresponding value from the HVM/boot_params field of the given VM. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_HVM_boot_params (session ref session_id, VM ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.55.2.137. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VM. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VM ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.55.2.138. RPC name: remove_from_platform

Overview:

Remove the given key and its corresponding value from the platform field of the given VM. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_platform (session ref session_id, VM ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.55.2.139. RPC name: remove_from_VCPUs_params

Overview:

Remove the given key and its corresponding value from the VCPUs/params field of the given VM. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_VCPUs_params (session ref session_id, VM ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.55.2.140. RPC name: remove_from_xenstore_data

Overview:

Remove the given key and its corresponding value from the xenstore_data field of the given VM. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_xenstore_data (session ref session_id, VM ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.55.2.141. RPC name: remove_tags

Overview:

Remove the given value from the tags field of the given VM. If the value is not in that Set, then do nothing.

Signature:

```
void remove_tags (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	value	Value to remove

Return Type: `void`

4.55.2.142. RPC name: resume

Overview:

Awaken the specified VM and resume it. This can only be called when the specified VM is in the Suspended state.

Signature:

```
void resume (session ref session_id, VM ref vm, bool start_paused, bool force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to resume
bool	start_paused	Resume VM in paused state if set to true.
bool	force	Attempt to force the VM to resume. If this flag is false then the VM may fail pre-resume safety checks (e.g. if the CPU the VM was running on looks substantially different to the current one)

Return Type: `void`

Possible Error Codes: `VM_BAD_POWER_STATE`, `OPERATION_NOT_ALLOWED`, `VM_IS_TEMPLATE`

4.55.2.143. RPC name: resume_on

Overview:

Awaken the specified VM and resume it on a particular Host. This can only be called when the specified VM is in the Suspended state.

Signature:

```
void resume_on (session ref session_id, VM ref vm, host ref host, bool
 start_paused, bool force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM to resume
host ref	host	The Host on which to resume the VM
bool	start_paused	Resume VM in paused state if set to true.
bool	force	Attempt to force the VM to resume. If this flag is false then the VM may fail pre-resume safety checks (e.g. if the CPU the VM was running on looks substantially different to the current one)

Return Type: `void`

Possible Error Codes: VM_BAD_POWER_STATE, OPERATION_NOT_ALLOWED, VM_IS_TEMPLATE

4.55.2.144. RPC name: retrieve_wlb_recommendations

Overview:

Returns mapping of hosts to ratings, indicating the suitability of starting the VM at that location according to wlb. Rating is replaced with an error if the VM cannot boot there.

Signature:

```
(host ref -> string set) map retrieve_wlb_recommendations (session ref session_id,
 VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM

Return Type: `(host ref -> string set) map`

The potential hosts and their corresponding recommendations or errors

4.55.2.145. RPC name: revert

Overview:

Reverts the specified VM to a previous state.

Signature:

```
void revert (session ref session_id, VM ref snapshot)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	snapshot	The snapshotted state that we revert to

Return Type: void

Possible Error Codes: VM_BAD_POWER_STATE, OPERATION_NOT_ALLOWED, SR_FULL, VM_REVERT_FAILED

4.55.2.146. RPC name: send_sysrq

Overview:

Send the given key as a sysrq to this VM. The key is specified as a single character (a String of length 1). This can only be called when the specified VM is in the Running state.

Signature:

```
void send_sysrq (session ref session_id, VM ref vm, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM
string	key	The key to send

Return Type: void

Possible Error Codes: VM_BAD_POWER_STATE

4.55.2.147. RPC name: send_trigger

Overview:

Send the named trigger to this VM. This can only be called when the specified VM is in the Running state.

Signature:

```
void send_trigger (session ref session_id, VM ref vm, string trigger)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	vm	The VM
string	trigger	The trigger to send

Return Type: void

Possible Error Codes: VM_BAD_POWER_STATE

4.55.2.148. RPC name: set_actions_after_crash

Overview:

Set the actions/after_crash field of the given VM.

Signature:

```
void set_actions_after_crash (session ref session_id, VM ref self,
 on_crash_behaviour value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
on_crash_behaviour	value	New value to set

Return Type: void

4.55.2.149. RPC name: set_actions_after_reboot

Overview:

Set the actions/after_reboot field of the given VM.

Signature:

```
void set_actions_after_reboot (session ref session_id, VM ref self, on_normal_exit
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
on_normal_exit	value	New value to set

Return Type: void

4.55.2.150. RPC name: set_actions_after_shutdown

Overview:

Set the actions/after_shutdown field of the given VM.

Signature:

```
void set_actions_after_shutdown (session ref session_id, VM ref self,
 on_normal_exit value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`on_normal_exit`	value	New value to set

Return Type: `void`

4.55.2.151. RPC name: set_affinity

Overview:

Set the affinity field of the given VM.

Signature:

```
void set_affinity (session ref session_id, VM ref self, host ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`host ref`	value	New value to set

Return Type: `void`

4.55.2.152. RPC name: set_appliance

Overview:

Assign this VM to an appliance.

Signature:

```
void set_appliance (session ref session_id, VM ref self, VM_appliance ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM to assign to an appliance.

type	name	description
`VM_appliance ref`	value	The appliance to which this VM should be assigned.

Return Type: `void`

4.55.2.153. RPC name: set_bios_strings

Overview:

Set custom BIOS strings to this VM. VM will be given a default set of BIOS strings, only some of which can be overridden by the supplied values. Allowed keys are: 'bios-vendor', 'bios-version', 'system-manufacturer', 'system-product-name', 'system-version', 'system-serial-number', 'enclosure-asset-tag'

Signature:

```
void set_bios_strings (session ref session_id, VM ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM to modify
`(string -> string) map`	value	The custom BIOS strings as a list of key-value pairs

Return Type: `void`

Possible Error Codes: `VM_BIOS_STRINGS_ALREADY_SET`, `INVALID_VALUE`

4.55.2.154. RPC name: set_blocked_operations

Overview:

Set the blocked_operations field of the given VM.

Signature:

```
void set_blocked_operations (session ref session_id, VM ref self, (vm_operations ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`(vm_operations -> string) map`	value	New value to set

Return Type: `void`

4.55.2.155. RPC name: set_ha_always_run

This message is deprecated.

Overview:

Set the value of the ha_always_run

Signature:

```
void set_ha_always_run (session ref session_id, VM ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`bool`	value	The value

Return Type: `void`

4.55.2.156. RPC name: set_ha_restart_priority

Overview:

Set the value of the ha_restart_priority field

Signature:

```
void set_ha_restart_priority (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`string`	value	The value

Return Type: `void`

4.55.2.157. RPC name: set_hardware_platform_version

Overview:

Set the hardware_platform_version field of the given VM.

Signature:

```
void set_hardware_platform_version (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`int`	value	New value to set

Return Type: `void`

4.55.2.158. RPC name: set_has_vendor_device

Overview:

Controls whether, when the VM starts in HVM mode, its virtual hardware will include the emulated PCI device for which drivers may be available through Windows Update. Usually this should never be changed on a VM on which Windows has been installed: changing it on such a VM is likely to lead to a crash on next start.

Signature:

```
void set_has_vendor_device (session ref session_id, VM ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM on which to set this flag
`bool`	value	True to provide the vendor PCI device.

Return Type: `void`

4.55.2.159. RPC name: set_HVM_boot_params

Overview:

Set the HVM/boot_params field of the given VM.

Signature:

```
void set_HVM_boot_params (session ref session_id, VM ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

type	name	description
(string -> string) map	value	New value to set

Return Type: void

4.55.2.160. RPC name: set_HVM_boot_policy

Overview:

Set the HVM/boot_policy field of the given VM.

Signature:

```
void set_HVM_boot_policy (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	value	New value to set

Return Type: void

4.55.2.161. RPC name: set_HVM_shadow_multiplier

Overview:

Set the shadow memory multiplier on a halted VM

Signature:

```
void set_HVM_shadow_multiplier (session ref session_id, VM ref self, float value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
float	value	The new shadow memory multiplier to set

Return Type: void

4.55.2.162. RPC name: set_is_a_template

Overview:

Set the is_a_template field of the given VM.

Signature:

```
void set_is_a_template (session ref session_id, VM ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`bool`	value	New value to set

Return Type: `void`

4.55.2.163. RPC name: set_memory

Overview:

Set the memory allocation of this VM. Sets all of memory_static_max, memory_dynamic_min, and memory_dynamic_max to the given value, and leaves memory_static_min untouched.

Signature:

```
void set_memory (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`int`	value	The new memory allocation (bytes).

Return Type: `void`

4.55.2.164. RPC name: set_memory_dynamic_max

Overview:

Set the value of the memory_dynamic_max field

Signature:

```
void set_memory_dynamic_max (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM ref	self	The VM to modify
int	value	The new value of memory_dynamic_max

Return Type: `void`

4.55.2.165. RPC name: set_memory_dynamic_min

Overview:

Set the value of the memory_dynamic_min field

Signature:

```
void set_memory_dynamic_min (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM to modify
int	value	The new value of memory_dynamic_min

Return Type: `void`

4.55.2.166. RPC name: set_memory_dynamic_range

Overview:

Set the minimum and maximum amounts of physical memory the VM is allowed to use.

Signature:

```
void set_memory_dynamic_range (session ref session_id, VM ref self, int min, int
 max)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
int	min	The new minimum value
int	max	The new maximum value

Return Type: `void`

4.55.2.167. RPC name: set_memory_limits

Overview:

Set the memory limits of this VM.

Signature:

```
void set_memory_limits (session ref session_id, VM ref self, int static_min, int
 static_max, int dynamic_min, int dynamic_max)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
int	static_min	The new value of memory_static_min.
int	static_max	The new value of memory_static_max.
int	dynamic_min	The new value of memory_dynamic_min.
int	dynamic_max	The new value of memory_dynamic_max.

Return Type: void

4.55.2.168. RPC name: set_memory_static_max

Overview:

Set the value of the memory_static_max field

Signature:

```
void set_memory_static_max (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM to modify
int	value	The new value of memory_static_max

Return Type: void

Possible Error Codes: HA_OPERATION_WOULD_BREAK_FAILOVER_PLAN

4.55.2.169. RPC name: set_memory_static_min

Overview:

Set the value of the memory_static_min field

Signature:

```
void set_memory_static_min (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM to modify
int	value	The new value of memory_static_min

Return Type: `void`

4.55.2.170. RPC name: set_memory_static_range

Overview:

Set the static (ie boot-time) range of virtual memory that the VM is allowed to use.

Signature:

```
void set_memory_static_range (session ref session_id, VM ref self, int min, int
 max)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
int	min	The new minimum value
int	max	The new maximum value

Return Type: `void`

4.55.2.171. RPC name: set_memory_target_live

This message is deprecated.

Overview:

Set the memory target for a running VM

Signature:

```
void set_memory_target_live (session ref session_id, VM ref self, int target)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`int`	target	The target in bytes

Return Type: `void`

4.55.2.172. RPC name: set_name_description

Overview:

Set the name/description field of the given VM.

Signature:

```
void set_name_description (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.55.2.173. RPC name: set_name_label

Overview:

Set the name/label field of the given VM.

Signature:

```
void set_name_label (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.55.2.174. RPC name: set_order

Overview:

Set this VM's boot order

Signature:

```
void set_order (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`int`	value	This VM's boot order

Return Type: `void`

4.55.2.175. RPC name: set_other_config

Overview:

Set the other_config field of the given VM.

Signature:

```
void set_other_config (session ref session_id, VM ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.55.2.176. RPC name: set_PCI_bus

This message is deprecated.

Overview:

Set the PCI_bus field of the given VM.

Signature:

```
void set_PCI_bus (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.55.2.177. RPC name: set_platform

Overview:

Set the platform field of the given VM.

Signature:

```
void set_platform (session ref session_id, VM ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.55.2.178. RPC name: set_protection_policy

Overview:

Set the value of the protection_policy field

Signature:

```
void set_protection_policy (session ref session_id, VM ref self, VMPP ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM

type	name	description
VMPP ref	value	The value

Return Type: void

4.55.2.179. RPC name: set_PV_args

Overview:

Set the PV/args field of the given VM.

Signature:

```
void set_PV_args (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	value	New value to set

Return Type: void

4.55.2.180. RPC name: set_PV_bootloader

Overview:

Set the PV/bootloader field of the given VM.

Signature:

```
void set_PV_bootloader (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	value	New value to set

Return Type: void

4.55.2.181. RPC name: set_PV_bootloader_args

Overview:

Set the PV/bootloader_args field of the given VM.

Signature:

```
void set_PV_bootloader_args (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.55.2.182. RPC name: set_PV_kernel

Overview:

Set the PV/kernel field of the given VM.

Signature:

```
void set_PV_kernel (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.55.2.183. RPC name: set_PV_legacy_args

Overview:

Set the PV/legacy_args field of the given VM.

Signature:

```
void set_PV_legacy_args (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object

type	name	description
`string`	value	New value to set

Return Type: `void`

4.55.2.184. RPC name: set_PV_ramdisk

Overview:

Set the PV/ramdisk field of the given VM.

Signature:

```
void set_PV_ramdisk (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.55.2.185. RPC name: set_recommendations

Overview:

Set the recommendations field of the given VM.

Signature:

```
void set_recommendations (session ref session_id, VM ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.55.2.186. RPC name: set_shadow_multiplier_live

Overview:

Set the shadow memory multiplier on a running VM

Signature:

```
void set_shadow_multiplier_live (session ref session_id, VM ref self, float
 multiplier)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
float	multiplier	The new shadow memory multiplier to set

Return Type: `void`

4.55.2.187. RPC name: set_shutdown_delay

Overview:

Set this VM's shutdown delay in seconds

Signature:

```
void set_shutdown_delay (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
int	value	This VM's shutdown delay in seconds

Return Type: `void`

4.55.2.188. RPC name: set_snapshot_schedule

Overview:

Set the value of the snapshot schedule field

Signature:

```
void set_snapshot_schedule (session ref session_id, VM ref self, VMSS ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM

type	name	description
VMSS ref	value	The value

Return Type: `void`

4.55.2.189. RPC name: set_start_delay

Overview:

Set this VM's start delay in seconds

Signature:

```
void set_start_delay (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	The VM
int	value	This VM's start delay in seconds

Return Type: `void`

4.55.2.190. RPC name: set_suspend_SR

Overview:

Set the suspend_SR field of the given VM.

Signature:

```
void set_suspend_SR (session ref session_id, VM ref self, SR ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	self	reference to the object
SR ref	value	New value to set

Return Type: `void`

4.55.2.191. RPC name: set_suspend_VDI

Overview:

Set this VM's suspend VDI, which must be indentical to its current one

Signature:

```
void set_suspend_VDI (session ref session_id, VM ref self, VDI ref value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`VDI ref`	value	The suspend VDI uuid

Return Type: `void`

4.55.2.192. RPC name: set_tags

Overview:

Set the tags field of the given VM.

Signature:

```
void set_tags (session ref session_id, VM ref self, string set value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`string set`	value	New value to set

Return Type: `void`

4.55.2.193. RPC name: set_user_version

Overview:

Set the user_version field of the given VM.

Signature:

```
void set_user_version (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`int`	value	New value to set

Return Type: `void`

4.55.2.194. RPC name: set_VCPUs_at_startup

Overview:

Set the number of startup VCPUs for a halted VM

Signature:

```
void set_VCPUs_at_startup (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`int`	value	The new maximum number of VCPUs

Return Type: `void`

4.55.2.195. RPC name: set_VCPUs_max

Overview:

Set the maximum number of VCPUs for a halted VM

Signature:

```
void set_VCPUs_max (session ref session_id, VM ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`int`	value	The new maximum number of VCPUs

Return Type: `void`

4.55.2.196. RPC name: set_VCPUs_number_live

Overview:

Set the number of VCPUs for a running VM

Signature:

```
void set_VCPUs_number_live (session ref session_id, VM ref self, int nvcpu)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM
`int`	nvcpu	The number of VCPUs

Return Type: `void`

Possible Error Codes: `OPERATION_NOT_ALLOWED`, `LICENCE_RESTRICTION`

4.55.2.197. RPC name: set_VCPUs_params

Overview:

Set the VCPUs/params field of the given VM.

Signature:

```
void set_VCPUs_params (session ref session_id, VM ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.55.2.198. RPC name: set_xenstore_data

Overview:

Set the xenstore_data field of the given VM.

Signature:

```
void set_xenstore_data (session ref session_id, VM ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.55.2.199. RPC name: shutdown

Overview:

Attempts to first clean shutdown a VM and if it should fail then perform a hard shutdown on it.

Signature:

```
void shutdown (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to shutdown

Return Type: `void`

Possible Error Codes: `VM_BAD_POWER_STATE`, `OTHER_OPERATION_IN_PROGRESS`, `OPERATION_NOT_ALLOWED`, `VM_IS_TEMPLATE`

4.55.2.200. RPC name: snapshot

Overview:

Snapshots the specified VM, making a new VM. Snapshot automatically exploits the capabilities of the underlying storage repository in which the VM's disk images are stored (e.g. Copy on Write).

Signature:

```
VM ref snapshot (session ref session_id, VM ref vm, string new_name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to be snapshotted
`string`	new_name	The name of the snapshotted VM

Return Type: `VM ref`

The reference of the newly created VM.

Possible Error Codes: `VM_BAD_POWER_STATE`, `SR_FULL`, `OPERATION_NOT_ALLOWED`

4.55.2.201. RPC name: snapshot_with_quiesce

Overview:

Snapshots the specified VM with quiesce, making a new VM. Snapshot automatically exploits the capabilities of the underlying storage repository in which the VM's disk images are stored (e.g. Copy on Write).

Signature:

```
VM ref snapshot_with_quiesce (session ref session_id, VM ref vm, string new_name)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to be snapshotted
`string`	new_name	The name of the snapshotted VM

Return Type: `VM ref`

The reference of the newly created VM.

Possible Error Codes: VM_BAD_POWER_STATE, SR_FULL, OPERATION_NOT_ALLOWED, VM_SNAPSHOT_WITH_QUIESCE_FAILED, VM_SNAPSHOT_WITH_QUIESCE_TIMEOUT, VM_SNAPSHOT_WITH_QUIESCE_PLUGIN_DEOS_NOT_RESPOND, VM_SNAPSHOT_WITH_QUIESCE_NOT_SUPPORTED

4.55.2.202. RPC name: start

Overview:

Start the specified VM. This function can only be called with the VM is in the Halted State.

Signature:

```
void start (session ref session_id, VM ref vm, bool start_paused, bool force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to start
`bool`	start_paused	Instantiate VM in paused state if set to true.
`bool`	force	Attempt to force the VM to start. If this flag is false then the VM may fail pre-boot safety checks (e.g. if the CPU the VM last booted on looks substantially different to the current one)

Return Type: `void`

Possible Error Codes: VM_BAD_POWER_STATE, VM_HVM_REQUIRED, VM_IS_TEMPLATE, OTHER_OPERATION_IN_PROGRESS, OPERATION_NOT_ALLOWED, BOOTLOADER_FAILED, UNKNOWN_BOOTLOADER, NO_HOSTS_AVAILABLE, LICENCE_RESTRICTION

4.55.2.203. RPC name: start_on

Overview:

Start the specified VM on a particular host. This function can only be called with the VM is in the Halted State.

Signature:

```
void start_on (session ref session_id, VM ref vm, host ref host, bool start_paused,
 bool force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to start
`host ref`	host	The Host on which to start the VM
`bool`	start_paused	Instantiate VM in paused state if set to true.
`bool`	force	Attempt to force the VM to start. If this flag is false then the VM may fail pre-boot safety checks (e.g. if the CPU the VM last booted on looks substantially different to the current one)

Return Type: `void`

Possible Error Codes: `VM_BAD_POWER_STATE`, `VM_IS_TEMPLATE`, `OTHER_OPERATION_IN_PROGRESS`, `OPERATION_NOT_ALLOWED`, `BOOTLOADER_FAILED`, `UNKNOWN_BOOTLOADER`

4.55.2.204. RPC name: suspend

Overview:

Suspend the specified VM to disk. This can only be called when the specified VM is in the Running state.

Signature:

```
void suspend (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to suspend

Return Type: `void`

Possible Error Codes: `VM_BAD_POWER_STATE`, `OTHER_OPERATION_IN_PROGRESS`, `OPERATION_NOT_ALLOWED`, `VM_IS_TEMPLATE`

4.55.2.205. RPC name: unpause

Overview:

Resume the specified VM. This can only be called when the specified VM is in the Paused state.

Signature:

```
void unpause (session ref session_id, VM ref vm)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	vm	The VM to unpause

Return Type: `void`

Possible Error Codes: VM_BAD_POWER_STATE, OPERATION_NOT_ALLOWED, VM_IS_TEMPLATE

4.55.2.206. RPC name: update_allowed_operations

Overview:

Recomputes the list of acceptable operations

Signature:

```
void update_allowed_operations (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	reference to the object

Return Type: `void`

4.55.2.207. RPC name: wait_memory_target_live

This message is deprecated.

Overview:

Wait for a running VM to reach its current memory target

Signature:

```
void wait_memory_target_live (session ref session_id, VM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	self	The VM

Return Type: `void`

4.56. Class: VM_appliance

VM appliance

4.56.1. Fields for class: VM_appliance

Field	Type	Qualifier	Description
allowed_operations	`vm_appliance_opera set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
current_operations	`(string -> vm_appliance_opera map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
name_description	`string`	*RW*	a notes field containing human-readable description
name_label	`string`	*RW*	a human-readable name
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VMs	`VM ref set`	*RO/runtime*	all VMs in this appliance

4.56.2. RPCs associated with class: VM_appliance

4.56.2.1. RPC name: assert_can_be_recovered

Overview:

Assert whether all SRs required to recover this VM appliance are available.

Signature:

```
void assert_can_be_recovered (session ref session_id, VM_appliance ref self,
 session ref session_to)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_appliance ref	self	The VM appliance to recover
session ref	session_to	The session to which the VM appliance is to be recovered.

Return Type: void

Possible Error Codes: VM_REQUIRES_SR

4.56.2.2. RPC name: clean_shutdown

Overview:

Perform a clean shutdown of all the VMs in the appliance

Signature:

```
void clean_shutdown (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_appliance ref	self	The VM appliance

Return Type: void

Possible Error Codes: OPERATION_PARTIALLY_FAILED

4.56.2.3. RPC name: create

Overview:

Create a new VM_appliance instance, and return its handle.

Signature:

```
VM_appliance ref create (session ref session_id, VM_appliance record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_appliance record	args	All constructor arguments

Return Type: VM_appliance ref

reference to the newly created object

4.56.2.4. RPC name: destroy

Overview:

Destroy the specified VM_appliance instance.

Signature:

```
void destroy (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object

Return Type: `void`

4.56.2.5. RPC name: get_all

Overview:

Return a list of all the VM_appliances known to the system.

Signature:

```
VM_appliance ref set get_all (session ref session_id)
```

4.56.2.6. RPC name: get_all_records

Overview:

Return a map of VM_appliance references to VM_appliance records for all VM_appliances known to the system.

Signature:

```
(VM_appliance ref -> VM_appliance record) map get_all_records (session ref
 session_id)
```

4.56.2.7. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given VM_appliance.

Signature:

```
vm_appliance_operation set get_allowed_operations (session ref session_id,
 VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM_appliance ref	self	reference to the object

Return Type: `vm_appliance_operation set`

value of the field

4.56.2.8. RPC name: get_by_name_label

Overview:

Get all the VM_appliance instances with the given label.

Signature:

```
VM_appliance ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `VM_appliance ref set`

references to objects with matching names

4.56.2.9. RPC name: get_by_uuid

Overview:

Get a reference to the VM_appliance instance with the specified UUID.

Signature:

```
VM_appliance ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `VM_appliance ref`

reference to the object

4.56.2.10. RPC name: get_current_operations

Overview:

Get the current_operations field of the given VM_appliance.

Signature:

```
(string -> vm_appliance_operation) map get_current_operations (session ref
 session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object

Return Type: `(string -> vm_appliance_operation) map`

value of the field

4.56.2.11. RPC name: get_name_description

Overview:

Get the name/description field of the given VM_appliance.

Signature:

```
string get_name_description (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object

Return Type: `string`

value of the field

4.56.2.12. RPC name: get_name_label

Overview:

Get the name/label field of the given VM_appliance.

Signature:

```
string get_name_label (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object

Return Type: `string`

value of the field

4.56.2.13. RPC name: get_record

Overview:

Get a record containing the current state of the given VM_appliance.

Signature:

```
VM_appliance record get_record (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object

Return Type: `VM_appliance record`

all fields from the object

4.56.2.14. RPC name: get_SRs_required_for_recovery

Overview:

Get the list of SRs required by the VM appliance to recover.

Signature:

```
SR ref set get_SRs_required_for_recovery (session ref session_id, VM_appliance ref
 self, session ref session_to)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	The VM appliance for which the required list of SRs has to be recovered.
`session ref`	session_to	The session to which the list of SRs have to be recovered .

Return Type: `SR ref set`

refs for SRs required to recover the VM

4.56.2.15. RPC name: get_uuid

Overview:

Get the uuid field of the given VM_appliance.

Signature:

```
string get_uuid (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object

Return Type: `string`

value of the field

4.56.2.16. RPC name: get_VMs

Overview:

Get the VMs field of the given VM_appliance.

Signature:

```
VM ref set get_VMs (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object

Return Type: `VM ref set`

value of the field

4.56.2.17. RPC name: hard_shutdown

Overview:

Perform a hard shutdown of all the VMs in the appliance

Signature:

```
void hard_shutdown (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM_appliance ref	self	The VM appliance

Return Type: void

Possible Error Codes: OPERATION_PARTIALLY_FAILED

4.56.2.18. RPC name: recover

Overview:

Recover the VM appliance

Signature:

```
void recover (session ref session_id, VM_appliance ref self, session ref
 session_to, bool force)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_appliance ref	self	The VM appliance to recover
session ref	session_to	The session to which the VM appliance is to be recovered.
bool	force	Whether the VMs should replace newer versions of themselves.

Return Type: void

Possible Error Codes: VM_REQUIRES_SR

4.56.2.19. RPC name: set_name_description

Overview:

Set the name/description field of the given VM_appliance.

Signature:

```
void set_name_description (session ref session_id, VM_appliance ref self, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_appliance ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.56.2.20. RPC name: set_name_label

Overview:

Set the name/label field of the given VM_appliance.

Signature:

```
void set_name_label (session ref session_id, VM_appliance ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.56.2.21. RPC name: shutdown

Overview:

For each VM in the appliance, try to shut it down cleanly. If this fails, perform a hard shutdown of the VM.

Signature:

```
void shutdown (session ref session_id, VM_appliance ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_appliance ref`	self	The VM appliance

Return Type: `void`

Possible Error Codes: `OPERATION_PARTIALLY_FAILED`

4.56.2.22. RPC name: start

Overview:

Start all VMs in the appliance

Signature:

```
void start (session ref session_id, VM_appliance ref self, bool paused)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_appliance ref	self	The VM appliance
bool	paused	Instantiate all VMs belonging to this appliance in paused state if set to true.

Return Type: void

Possible Error Codes: OPERATION_PARTIALLY_FAILED

4.57. Class: VM_guest_metrics

The metrics reported by the guest (as opposed to inferred from outside)

4.57.1. Fields for class: VM_guest_metrics

Field	Type	Qualifier	Description
can_use_hotplug_vbd	tristate_type	*RO/runtime*	The guest's statement of whether it supports VBD hotplug, i.e. whether it is capable of responding immediately to instantiation of a new VBD by bringing online a new PV block device. If the guest states that it is not capable, then the VBD plug and unplug operations will not be allowed while the guest is running.
can_use_hotplug_vif	tristate_type	*RO/runtime*	The guest's statement of whether it supports VIF hotplug, i.e. whether it is capable of responding immediately to instantiation of a new VIF by bringing online a new PV network device. If the guest states that it is not capable, then the VIF plug and unplug operations will not be allowed while the guest is running.
disks	(string -> string) map	*RO/runtime*	**Removed**. This field exists but has no data.

Field	Type	Qualifier	Description
last_updated	`datetime`	*RO/runtime*	Time at which this information was last updated
live	`bool`	*RO/runtime*	True if the guest is sending heartbeat messages via the guest agent
memory	`(string -> string) map`	*RO/runtime*	**Removed**. This field exists but has no data. Use the memory and memory_internal_free RRD data-sources instead.
networks	`(string -> string) map`	*RO/runtime*	network configuration
os_version	`(string -> string) map`	*RO/runtime*	version of the OS
other	`(string -> string) map`	*RO/runtime*	anything else
other_config	`(string -> string) map`	*RW*	additional configuration
PV_drivers_detected	`bool`	*RO/runtime*	At least one of the guest's devices has successfully connected to the backend.
PV_drivers_up_to_date	`bool`	*RO/runtime*	**Deprecated**. Logically equivalent to PV_drivers_detected
PV_drivers_version	`(string -> string) map`	*RO/runtime*	version of the PV drivers
uuid	`string`	*RO/runtime*	Unique identifier/object reference

4.57.2. RPCs associated with class: VM_guest_metrics

4.57.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VM_guest_metrics.

Signature:

```
void add_to_other_config (session ref session_id, VM_guest_metrics ref self, string
 key, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.57.2.2. RPC name: get_all

Overview:

Return a list of all the VM_guest_metrics instances known to the system.

Signature:

```
VM_guest_metrics ref set get_all (session ref session_id)
```

4.57.2.3. RPC name: get_all_records

Overview:

Return a map of VM_guest_metrics references to VM_guest_metrics records for all VM_guest_metrics instances known to the system.

Signature:

```
(VM_guest_metrics ref -> VM_guest_metrics record) map get_all_records (session ref
 session_id)
```

4.57.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the VM_guest_metrics instance with the specified UUID.

Signature:

```
VM_guest_metrics ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VM_guest_metrics ref`

reference to the object

4.57.2.5. RPC name: get_can_use_hotplug_vbd

Overview:

Get the can_use_hotplug_vbd field of the given VM_guest_metrics.

Signature:

```
tristate_type get_can_use_hotplug_vbd (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_guest_metrics ref	self	reference to the object

Return Type: `tristate_type`

value of the field

4.57.2.6. RPC name: get_can_use_hotplug_vif

Overview:

Get the can_use_hotplug_vif field of the given VM_guest_metrics.

Signature:

```
tristate_type get_can_use_hotplug_vif (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_guest_metrics ref	self	reference to the object

Return Type: `tristate_type`

value of the field

4.57.2.7. RPC name: get_disks

This message is removed.

Overview:

Get the disks field of the given VM_guest_metrics.

Signature:

```
(string -> string) map get_disks (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_guest_metrics ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.57.2.8. RPC name: get_last_updated

Overview:

Get the last_updated field of the given VM_guest_metrics.

Signature:

```
datetime get_last_updated (session ref session_id, VM_guest_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_guest_metrics ref	self	reference to the object

Return Type: `datetime`

value of the field

4.57.2.9. RPC name: get_live

Overview:

Get the live field of the given VM_guest_metrics.

Signature:

```
bool get_live (session ref session_id, VM_guest_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_guest_metrics ref	self	reference to the object

Return Type: `bool`

value of the field

4.57.2.10. RPC name: get_memory

This message is removed.

Overview:

Get the memory field of the given VM_guest_metrics.

Signature:

```
(string -> string) map get_memory (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.57.2.11. RPC name: get_networks

Overview:

Get the networks field of the given VM_guest_metrics.

Signature:

```
(string -> string) map get_networks (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.57.2.12. RPC name: get_os_version

Overview:

Get the os_version field of the given VM_guest_metrics.

Signature:

```
(string -> string) map get_os_version (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.57.2.13. RPC name: get_other

Overview:

Get the other field of the given VM_guest_metrics.

Signature:

```
(string -> string) map get_other (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.57.2.14. RPC name: get_other_config

Overview:

Get the other_config field of the given VM_guest_metrics.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VM_guest_metrics
 ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.57.2.15. RPC name: get_PV_drivers_detected

Overview:

Get the PV_drivers_detected field of the given VM_guest_metrics.

Signature:

```
bool get_PV_drivers_detected (session ref session_id, VM_guest_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_guest_metrics ref	self	reference to the object

Return Type: `bool`

value of the field

4.57.2.16. RPC name: get_PV_drivers_up_to_date

This message is deprecated.

Overview:

Get the PV_drivers_up_to_date field of the given VM_guest_metrics.

Signature:

```
bool get_PV_drivers_up_to_date (session ref session_id, VM_guest_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_guest_metrics ref	self	reference to the object

Return Type: `bool`

value of the field

4.57.2.17. RPC name: get_PV_drivers_version

Overview:

Get the PV_drivers_version field of the given VM_guest_metrics.

Signature:

```
(string -> string) map get_PV_drivers_version (session ref session_id,
 VM_guest_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.57.2.18. RPC name: get_record

Overview:

Get a record containing the current state of the given VM_guest_metrics.

Signature:

```
VM_guest_metrics record get_record (session ref session_id, VM_guest_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `VM_guest_metrics record`

all fields from the object

4.57.2.19. RPC name: get_uuid

Overview:

Get the uuid field of the given VM_guest_metrics.

Signature:

```
string get_uuid (session ref session_id, VM_guest_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.57.2.20. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VM_guest_metrics. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VM_guest_metrics ref self,
 string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.57.2.21. RPC name: set_other_config

Overview:

Set the other_config field of the given VM_guest_metrics.

Signature:

```
void set_other_config (session ref session_id, VM_guest_metrics ref self, (string -
> string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_guest_metrics ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.58. Class: VM_metrics

The metrics associated with a VM

4.58.1. Fields for class: VM_metrics

Field	Type	Qualifier	Description
hvm	`bool`	*RO/runtime*	hardware virtual machine

Field	Type	Qualifier	Description
install_time	datetime	*RO/runtime*	Time at which the VM was installed
last_updated	datetime	*RO/runtime*	Time at which this information was last updated
memory_actual	int	*RO/runtime*	Guest's actual memory (bytes)
nested_virt	bool	*RO/runtime*	VM supports nested virtualisation
nomigrate	bool	*RO/runtime*	VM is immobile and can't migrate between hosts
other_config	(string -> string) map	*RW*	additional configuration
start_time	datetime	*RO/runtime*	Time at which this VM was last booted
state	string set	*RO/runtime*	The state of the guest, eg blocked, dying etc
uuid	string	*RO/runtime*	Unique identifier/object reference
VCPUs_CPU	(int -> int) map	*RO/runtime*	VCPU to PCPU map
VCPUs_flags	(int -> string set) map	*RO/runtime*	CPU flags (blocked,online,running)
VCPUs_number	int	*RO/runtime*	Current number of VCPUs
VCPUs_params	(string -> string) map	*RO/runtime*	The live equivalent to VM.VCPUs_params
VCPUs_utilisation	(int -> float) map	*RO/runtime*	**Removed**. Utilisation for all of guest's current VCPUs

4.58.2. RPCs associated with class: VM_metrics

4.58.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VM_metrics.

Signature:

```
void add_to_other_config (session ref session_id, VM_metrics ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: `void`

4.58.2.2. RPC name: get_all

Overview:

Return a list of all the VM_metrics instances known to the system.

Signature:

```
VM_metrics ref set get_all (session ref session_id)
```

4.58.2.3. RPC name: get_all_records

Overview:

Return a map of VM_metrics references to VM_metrics records for all VM_metrics instances known to the system.

Signature:

```
(VM_metrics ref -> VM_metrics record) map get_all_records (session ref session_id)
```

4.58.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the VM_metrics instance with the specified UUID.

Signature:

```
VM_metrics ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VM_metrics ref`

reference to the object

4.58.2.5. RPC name: get_hvm

Overview:

Get the hvm field of the given VM_metrics.

Signature:

```
bool get_hvm (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `bool`

value of the field

4.58.2.6. RPC name: get_install_time

Overview:

Get the install_time field of the given VM_metrics.

Signature:

```
datetime get_install_time (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.58.2.7. RPC name: get_last_updated

Overview:

Get the last_updated field of the given VM_metrics.

Signature:

```
datetime get_last_updated (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VM_metrics ref	self	reference to the object

Return Type: `datetime`

value of the field

4.58.2.8. RPC name: get_memory_actual

Overview:

Get the memory/actual field of the given VM_metrics.

Signature:

```
int get_memory_actual (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_metrics ref	self	reference to the object

Return Type: `int`

value of the field

4.58.2.9. RPC name: get_nested_virt

Overview:

Get the nested_virt field of the given VM_metrics.

Signature:

```
bool get_nested_virt (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM_metrics ref	self	reference to the object

Return Type: `bool`

value of the field

4.58.2.10. RPC name: get_nomigrate

Overview:

Get the nomigrate field of the given VM_metrics.

Signature:

```
bool get_nomigrate (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `bool`

value of the field

4.58.2.11. RPC name: get_other_config

Overview:

Get the other_config field of the given VM_metrics.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VM_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.58.2.12. RPC name: get_record

Overview:

Get a record containing the current state of the given VM_metrics.

Signature:

```
VM_metrics record get_record (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VM_metrics ref`	self	reference to the object

Return Type: `VM_metrics record`

all fields from the object

4.58.2.13. RPC name: get_start_time

Overview:

Get the start_time field of the given VM_metrics.

Signature:

```
datetime get_start_time (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.58.2.14. RPC name: get_state

Overview:

Get the state field of the given VM_metrics.

Signature:

```
string set get_state (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `string set`

value of the field

4.58.2.15. RPC name: get_uuid

Overview:

Get the uuid field of the given VM_metrics.

Signature:

```
string get_uuid (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `string`

value of the field

4.58.2.16. RPC name: get_VCPUs_CPU

Overview:

Get the VCPUs/CPU field of the given VM_metrics.

Signature:

```
(int -> int) map get_VCPUs_CPU (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `(int -> int) map`

value of the field

4.58.2.17. RPC name: get_VCPUs_flags

Overview:

Get the VCPUs/flags field of the given VM_metrics.

Signature:

```
(int -> string set) map get_VCPUs_flags (session ref session_id, VM_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `(int -> string set) map`

value of the field

4.58.2.18. RPC name: get_VCPUs_number

Overview:

Get the VCPUs/number field of the given VM_metrics.

Signature:

```
int get_VCPUs_number (session ref session_id, VM_metrics ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `int`

value of the field

4.58.2.19. RPC name: get_VCPUs_params

Overview:

Get the VCPUs/params field of the given VM_metrics.

Signature:

```
(string -> string) map get_VCPUs_params (session ref session_id, VM_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.58.2.20. RPC name: get_VCPUs_utilisation

This message is removed.

Overview:

Get the VCPUs/utilisation field of the given VM_metrics.

Signature:

```
(int -> float) map get_VCPUs_utilisation (session ref session_id, VM_metrics ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object

Return Type: `(int -> float) map`

value of the field

4.58.2.21. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VM_metrics. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VM_metrics ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM_metrics ref`	self	reference to the object
`string`	key	Key to remove

Return Type: `void`

4.58.2.22. RPC name: set_other_config

Overview:

Set the other_config field of the given VM_metrics.

Signature:

```
void set_other_config (session ref session_id, VM_metrics ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VM_metrics ref`	self	reference to the object
`(string -> string) map`	value	New value to set

Return Type: `void`

4.59. Class: VMPP

This class is removed.

VM Protection Policy

4.59.1. Fields for class: VMPP

Field	Type	Qualifier	Description
alarm_config	`(string -> string) map`	*RO/constructor*	**Removed**. configuration for the alarm
archive_frequency	`vmpp_archive_frequ`	*RO/constructor*	**Removed**. frequency of the archive schedule
archive_last_run_time	`datetime`	*RO/runtime*	**Removed**. time of the last archive
archive_schedule	`(string -> string) map`	*RO/constructor*	**Removed**. schedule of the archive containing 'hour', 'min', 'days'. Date/time-related information is in Local Timezone
archive_target_config	`(string -> string) map`	*RO/constructor*	**Removed**. configuration for the archive, including its 'location', 'username', 'password'
archive_target_type	`vmpp_archive_targe`	*RO/constructor*	**Removed**. type of the archive target config
backup_frequency	`vmpp_backup_freque`	*RO/constructor*	**Removed**. frequency of the backup schedule
backup_last_run_time	`datetime`	*RO/runtime*	**Removed**. time of the last backup
backup_retention_value	`int`	*RO/constructor*	**Removed**. maximum number of backups that should be stored at any time
backup_schedule	`(string -> string) map`	*RO/constructor*	**Removed**. schedule of the backup containing 'hour', 'min', 'days'. Date/time-related information is in Local Timezone

Field	Type	Qualifier	Description
backup_type	vmpp_backup_type	*RW*	**Removed**. type of the backup sub-policy
is_alarm_enabled	bool	*RO/constructor*	**Removed**. true if alarm is enabled for this policy
is_archive_running	bool	*RO/runtime*	**Removed**. true if this protection policy's archive is running
is_backup_running	bool	*RO/runtime*	**Removed**. true if this protection policy's backup is running
is_policy_enabled	bool	*RW*	**Removed**. enable or disable this policy
name_description	string	*RW*	**Removed**. a notes field containing human-readable description
name_label	string	*RW*	**Removed**. a human-readable name
recent_alerts	string set	*RO/runtime*	**Removed**. recent alerts
uuid	string	*RO/runtime*	**Removed**. Unique identifier/object reference
VMs	VM ref set	*RO/runtime*	**Removed**. all VMs attached to this protection policy

4.59.2. RPCs associated with class: VMPP

4.59.2.1. RPC name: add_to_alarm_config

This message is removed.

Overview:

Signature:

```
void add_to_alarm_config (session ref session_id, VMPP ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
string	key	the key to add

type	name	description
string	value	the value to add

Return Type: void

4.59.2.2. RPC name: add_to_archive_schedule

This message is removed.

Overview:

Signature:

```
void add_to_archive_schedule (session ref session_id, VMPP ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
string	key	the key to add
string	value	the value to add

Return Type: void

4.59.2.3. RPC name: add_to_archive_target_config

This message is removed.

Overview:

Signature:

```
void add_to_archive_target_config (session ref session_id, VMPP ref self, string
 key, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
string	key	the key to add
string	value	the value to add

Return Type: void

4.59.2.4. RPC name: add_to_backup_schedule

This message is removed.

Overview:

Signature:

```
void add_to_backup_schedule (session ref session_id, VMPP ref self, string key,
 string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy
`string`	key	the key to add
`string`	value	the value to add

Return Type: `void`

4.59.2.5. RPC name: archive_now

This message is removed.

Overview:

This call archives the snapshot provided as a parameter

Signature:

```
string archive_now (session ref session_id, VM ref snapshot)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VM ref`	snapshot	The snapshot to archive

Return Type: `string`

An XMLRPC result

4.59.2.6. RPC name: create

This message is removed.

Overview:

Create a new VMPP instance, and return its handle.

Signature:

```
VMPP ref create (session ref session_id, VMPP record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP record`	args	All constructor arguments

Return Type: `VMPP ref`

reference to the newly created object

4.59.2.7. RPC name: destroy

This message is removed.

Overview:

Destroy the specified VMPP instance.

Signature:

```
void destroy (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `void`

4.59.2.8. RPC name: get_alarm_config

This message is removed.

Overview:

Get the alarm_config field of the given VMPP.

Signature:

```
(string -> string) map get_alarm_config (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.59.2.9. RPC name: get_alerts

This message is removed.

Overview:

This call fetches a history of alerts for a given protection policy

Signature:

```
string set get_alerts (session ref session_id, VMPP ref vmpp, int hours_from_now)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	vmpp	The protection policy
`int`	hours_from_now	how many hours in the past the oldest record to fetch is

Return Type: `string set`

A list of alerts encoded in xml

4.59.2.10. RPC name: get_all

This message is removed.

Overview:

Return a list of all the VMPPs known to the system.

Signature:

```
VMPP ref set get_all (session ref session_id)
```

4.59.2.11. RPC name: get_all_records

This message is removed.

Overview:

Return a map of VMPP references to VMPP records for all VMPPs known to the system.

Signature:

```
(VMPP ref -> VMPP record) map get_all_records (session ref session_id)
```

4.59.2.12. RPC name: get_archive_frequency

This message is removed.

Overview:

Get the archive_frequency field of the given VMPP.

Signature:

```
vmpp_archive_frequency get_archive_frequency (session ref session_id, VMPP ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `vmpp_archive_frequency`

value of the field

4.59.2.13. RPC name: get_archive_last_run_time

This message is removed.

Overview:

Get the archive_last_run_time field of the given VMPP.

Signature:

```
datetime get_archive_last_run_time (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.59.2.14. RPC name: get_archive_schedule

This message is removed.

Overview:

Get the archive_schedule field of the given VMPP.

Signature:

```
(string -> string) map get_archive_schedule (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.59.2.15. RPC name: get_archive_target_config

This message is removed.

Overview:

Get the archive_target_config field of the given VMPP.

Signature:

```
(string -> string) map get_archive_target_config (session ref session_id, VMPP ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.59.2.16. RPC name: get_archive_target_type

This message is removed.

Overview:

Get the archive_target_type field of the given VMPP.

Signature:

```
vmpp_archive_target_type get_archive_target_type (session ref session_id, VMPP ref
 self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object

Return Type: `vmpp_archive_target_type`

value of the field

4.59.2.17. RPC name: get_backup_frequency

This message is removed.

Overview:

Get the backup_frequency field of the given VMPP.

Signature:

```
vmpp_backup_frequency get_backup_frequency (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `vmpp_backup_frequency`

value of the field

4.59.2.18. RPC name: get_backup_last_run_time

This message is removed.

Overview:

Get the backup_last_run_time field of the given VMPP.

Signature:

```
datetime get_backup_last_run_time (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `datetime`

value of the field

4.59.2.19. RPC name: get_backup_retention_value

This message is removed.

Overview:

Get the backup_retention_value field of the given VMPP.

Signature:

```
int get_backup_retention_value (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `int`

value of the field

4.59.2.20. RPC name: get_backup_schedule

This message is removed.

Overview:

Get the backup_schedule field of the given VMPP.

Signature:

```
(string -> string) map get_backup_schedule (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.59.2.21. RPC name: get_backup_type

This message is removed.

Overview:

Get the backup_type field of the given VMPP.

Signature:

```
vmpp_backup_type get_backup_type (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VMPP ref	self	reference to the object

Return Type: `vmpp_backup_type`

value of the field

4.59.2.22. RPC name: get_by_name_label

This message is removed.

Overview:

Get all the VMPP instances with the given label.

Signature:

```
VMPP ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	label	label of object to return

Return Type: `VMPP ref set`

references to objects with matching names

4.59.2.23. RPC name: get_by_uuid

This message is removed.

Overview:

Get a reference to the VMPP instance with the specified UUID.

Signature:

```
VMPP ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
string	uuid	UUID of object to return

Return Type: `VMPP ref`

reference to the object

4.59.2.24. RPC name: get_is_alarm_enabled

This message is removed.

Overview:

Get the is_alarm_enabled field of the given VMPP.

Signature:

```
bool get_is_alarm_enabled (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object

Return Type: `bool`

value of the field

4.59.2.25. RPC name: get_is_archive_running

This message is removed.

Overview:

Get the is_archive_running field of the given VMPP.

Signature:

```
bool get_is_archive_running (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object

Return Type: `bool`

value of the field

4.59.2.26. RPC name: get_is_backup_running

This message is removed.

Overview:

Get the is_backup_running field of the given VMPP.

Signature:

```
bool get_is_backup_running (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object

Return Type: `bool`

value of the field

4.59.2.27. RPC name: get_is_policy_enabled

This message is removed.

Overview:

Get the is_policy_enabled field of the given VMPP.

Signature:

```
bool get_is_policy_enabled (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object

Return Type: `bool`

value of the field

4.59.2.28. RPC name: get_name_description

This message is removed.

Overview:

Get the name/description field of the given VMPP.

Signature:

```
string get_name_description (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VMPP ref`	self	reference to the object

Return Type: `string`

value of the field

4.59.2.29. RPC name: get_name_label

This message is removed.

Overview:

Get the name/label field of the given VMPP.

Signature:

```
string get_name_label (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `string`

value of the field

4.59.2.30. RPC name: get_recent_alerts

This message is removed.

Overview:

Get the recent_alerts field of the given VMPP.

Signature:

```
string set get_recent_alerts (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `string set`

value of the field

4.59.2.31. RPC name: get_record

This message is removed.

Overview:

Get a record containing the current state of the given VMPP.

Signature:

```
VMPP record get_record (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `VMPP record`

all fields from the object

4.59.2.32. RPC name: get_uuid

This message is removed.

Overview:

Get the uuid field of the given VMPP.

Signature:

```
string get_uuid (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `string`

value of the field

4.59.2.33. RPC name: get_VMs

This message is removed.

Overview:

Get the VMs field of the given VMPP.

Signature:

```
VM ref set get_VMs (session ref session_id, VMPP ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object

Return Type: `VM ref set`

value of the field

4.59.2.34. RPC name: protect_now

This message is removed.

Overview:

This call executes the protection policy immediately

Signature:

```
string protect_now (session ref session_id, VMPP ref vmpp)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	vmpp	The protection policy to execute

Return Type: `string`

An XMLRPC result

4.59.2.35. RPC name: remove_from_alarm_config

This message is removed.

Overview:

Signature:

```
void remove_from_alarm_config (session ref session_id, VMPP ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy

type	name	description
string	key	the key to remove

Return Type: void

4.59.2.36. RPC name: remove_from_archive_schedule

This message is removed.

Overview:

Signature:

```
void remove_from_archive_schedule (session ref session_id, VMPP ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
string	key	the key to remove

Return Type: void

4.59.2.37. RPC name: remove_from_archive_target_config

This message is removed.

Overview:

Signature:

```
void remove_from_archive_target_config (session ref session_id, VMPP ref self,
 string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
string	key	the key to remove

Return Type: void

4.59.2.38. RPC name: remove_from_backup_schedule

This message is removed.

Overview:

Signature:

```
void remove_from_backup_schedule (session ref session_id, VMPP ref self, string
 key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
string	key	the key to remove

Return Type: void

4.59.2.39. RPC name: set_alarm_config

This message is removed.

Overview:

Signature:

```
void set_alarm_config (session ref session_id, VMPP ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
(string -> string) map	value	the value to set

Return Type: void

4.59.2.40. RPC name: set_archive_frequency

This message is removed.

Overview:

Set the value of the archive_frequency field

Signature:

```
void set_archive_frequency (session ref session_id, VMPP ref self,
 vmpp_archive_frequency value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
vmpp_archive_frequency	value	the archive frequency

Return Type: void

4.59.2.41. RPC name: set_archive_last_run_time

This message is removed.

Overview:

Signature:

```
void set_archive_last_run_time (session ref session_id, VMPP ref self, datetime
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
datetime	value	the value to set

Return Type: void

4.59.2.42. RPC name: set_archive_schedule

This message is removed.

Overview:

Signature:

```
void set_archive_schedule (session ref session_id, VMPP ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
(string -> string) map	value	the value to set

Return Type: void

4.59.2.43. RPC name: set_archive_target_config

This message is removed.

Overview:

Signature:

```
void set_archive_target_config (session ref session_id, VMPP ref self, (string ->
 string) map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy
`(string -> string) map`	value	the value to set

Return Type: `void`

4.59.2.44. RPC name: set_archive_target_type

This message is removed.

Overview:

Set the value of the archive_target_config_type field

Signature:

```
void set_archive_target_type (session ref session_id, VMPP ref self,
 vmpp_archive_target_type value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy
`vmpp_archive_target_type`	value	the archive target config type

Return Type: `void`

4.59.2.45. RPC name: set_backup_frequency

This message is removed.

Overview:

Set the value of the backup_frequency field

Signature:

```
void set_backup_frequency (session ref session_id, VMPP ref self,
 vmpp_backup_frequency value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy
`vmpp_backup_frequency`	value	the backup frequency

Return Type: `void`

4.59.2.46. RPC name: set_backup_last_run_time

This message is removed.

Overview:

Signature:

```
void set_backup_last_run_time (session ref session_id, VMPP ref self, datetime
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy
`datetime`	value	the value to set

Return Type: `void`

4.59.2.47. RPC name: set_backup_retention_value

This message is removed.

Overview:

Signature:

```
void set_backup_retention_value (session ref session_id, VMPP ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy

type	name	description
int	value	the value to set

Return Type: `void`

4.59.2.48. RPC name: set_backup_schedule

This message is removed.

Overview:

Signature:

```
void set_backup_schedule (session ref session_id, VMPP ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	The protection policy
(string -> string) map	value	the value to set

Return Type: `void`

4.59.2.49. RPC name: set_backup_type

This message is removed.

Overview:

Set the backup_type field of the given VMPP.

Signature:

```
void set_backup_type (session ref session_id, VMPP ref self, vmpp_backup_type
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object
vmpp_backup_type	value	New value to set

Return Type: `void`

4.59.2.50. RPC name: set_is_alarm_enabled

This message is removed.

Overview:

Set the value of the is_alarm_enabled field

Signature:

```
void set_is_alarm_enabled (session ref session_id, VMPP ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	The protection policy
`bool`	value	true if alarm is enabled for this policy

Return Type: `void`

4.59.2.51. RPC name: set_is_policy_enabled

This message is removed.

Overview:

Set the is_policy_enabled field of the given VMPP.

Signature:

```
void set_is_policy_enabled (session ref session_id, VMPP ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMPP ref`	self	reference to the object
`bool`	value	New value to set

Return Type: `void`

4.59.2.52. RPC name: set_name_description

This message is removed.

Overview:

Set the name/description field of the given VMPP.

Signature:

```
void set_name_description (session ref session_id, VMPP ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.59.2.53. RPC name: set_name_label

This message is removed.

Overview:

Set the name/label field of the given VMPP.

Signature:

```
void set_name_label (session ref session_id, VMPP ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMPP ref	self	reference to the object
string	value	New value to set

Return Type: `void`

4.60. Class: VMSS

VM Snapshot Schedule

4.60.1. Fields for class: VMSS

Field	Type	Qualifier	Description
enabled	bool	*RW*	enable or disable this snapshot schedule
frequency	vmss_frequency	*RO/constructor*	frequency of taking snapshot from snapshot schedule
last_run_time	datetime	*RO/runtime*	time of the last snapshot
name_description	string	*RW*	a notes field containing human-readable description

Field	Type	Qualifier	Description
name_label	`string`	*RW*	a human-readable name
retained_snapshots	`int`	*RO/constructor*	maximum number of snapshots that should be stored at any time
schedule	`(string -> string) map`	*RO/constructor*	schedule of the snapshot containing 'hour', 'min', 'days'. Date/time-related information is in Local Timezone
type	`vmss_type`	*RO/constructor*	type of the snapshot schedule
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VMs	`VM ref set`	*RO/runtime*	all VMs attached to this snapshot schedule

4.60.2. RPCs associated with class: VMSS

4.60.2.1. RPC name: add_to_schedule

Overview:

Signature:

```
void add_to_schedule (session ref session_id, VMSS ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	The snapshot schedule
`string`	key	the key to add
`string`	value	the value to add

Return Type: `void`

4.60.2.2. RPC name: create

Overview:

Create a new VMSS instance, and return its handle.

Signature:

```
VMSS ref create (session ref session_id, VMSS record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS record`	args	All constructor arguments

Return Type: `VMSS ref`

reference to the newly created object

4.60.2.3. RPC name: destroy

Overview:

Destroy the specified VMSS instance.

Signature:

```
void destroy (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object

Return Type: `void`

4.60.2.4. RPC name: get_all

Overview:

Return a list of all the VMSSs known to the system.

Signature:

```
VMSS ref set get_all (session ref session_id)
```

4.60.2.5. RPC name: get_all_records

Overview:

Return a map of VMSS references to VMSS records for all VMSSs known to the system.

Signature:

```
(VMSS ref -> VMSS record) map get_all_records (session ref session_id)
```

4.60.2.6. RPC name: get_by_name_label

Overview:

Get all the VMSS instances with the given label.

Signature:

```
VMSS ref set get_by_name_label (session ref session_id, string label)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	label	label of object to return

Return Type: `VMSS ref set`

references to objects with matching names

4.60.2.7. RPC name: get_by_uuid

Overview:

Get a reference to the VMSS instance with the specified UUID.

Signature:

```
VMSS ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VMSS ref`

reference to the object

4.60.2.8. RPC name: get_enabled

Overview:

Get the enabled field of the given VMSS.

Signature:

```
bool get_enabled (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VMSS ref	self	reference to the object

Return Type: `bool`

value of the field

4.60.2.9. RPC name: get_frequency

Overview:

Get the frequency field of the given VMSS.

Signature:

```
vmss_frequency get_frequency (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMSS ref	self	reference to the object

Return Type: `vmss_frequency`

value of the field

4.60.2.10. RPC name: get_last_run_time

Overview:

Get the last_run_time field of the given VMSS.

Signature:

```
datetime get_last_run_time (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMSS ref	self	reference to the object

Return Type: `datetime`

value of the field

4.60.2.11. RPC name: get_name_description

Overview:

Get the name/description field of the given VMSS.

Signature:

```
string get_name_description (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMSS ref	self	reference to the object

Return Type: `string`

value of the field

4.60.2.12. RPC name: get_name_label

Overview:

Get the name/label field of the given VMSS.

Signature:

```
string get_name_label (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMSS ref	self	reference to the object

Return Type: `string`

value of the field

4.60.2.13. RPC name: get_record

Overview:

Get a record containing the current state of the given VMSS.

Signature:

```
VMSS record get_record (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
`VMSS ref`	self	reference to the object

Return Type: `VMSS record`

all fields from the object

4.60.2.14. RPC name: get_retained_snapshots

Overview:

Get the retained_snapshots field of the given VMSS.

Signature:

```
int get_retained_snapshots (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object

Return Type: `int`

value of the field

4.60.2.15. RPC name: get_schedule

Overview:

Get the schedule field of the given VMSS.

Signature:

```
(string -> string) map get_schedule (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.60.2.16. RPC name: get_type

Overview:

Get the type field of the given VMSS.

Signature:

```
vmss_type get_type (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object

Return Type: `vmss_type`

value of the field

4.60.2.17. RPC name: get_uuid

Overview:

Get the uuid field of the given VMSS.

Signature:

```
string get_uuid (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object

Return Type: `string`

value of the field

4.60.2.18. RPC name: get_VMs

Overview:

Get the VMs field of the given VMSS.

Signature:

```
VM ref set get_VMs (session ref session_id, VMSS ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object

Return Type: `VM ref set`

value of the field

4.60.2.19. RPC name: remove_from_schedule

Overview:

Signature:

```
void remove_from_schedule (session ref session_id, VMSS ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	The snapshot schedule
`string`	key	the key to remove

Return Type: `void`

4.60.2.20. RPC name: set_enabled

Overview:

Set the enabled field of the given VMSS.

Signature:

```
void set_enabled (session ref session_id, VMSS ref self, bool value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object
`bool`	value	New value to set

Return Type: `void`

4.60.2.21. RPC name: set_frequency

Overview:

Set the value of the frequency field

Signature:

```
void set_frequency (session ref session_id, VMSS ref self, vmss_frequency value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMSS ref	self	The snapshot schedule
vmss_frequency	value	the snapshot schedule frequency

Return Type: void

4.60.2.22. RPC name: set_last_run_time

Overview:

Signature:

```
void set_last_run_time (session ref session_id, VMSS ref self, datetime value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMSS ref	self	The snapshot schedule
datetime	value	the value to set

Return Type: void

4.60.2.23. RPC name: set_name_description

Overview:

Set the name/description field of the given VMSS.

Signature:

```
void set_name_description (session ref session_id, VMSS ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VMSS ref	self	reference to the object
string	value	New value to set

Return Type: void

4.60.2.24. RPC name: set_name_label

Overview:

Set the name/label field of the given VMSS.

Signature:

```
void set_name_label (session ref session_id, VMSS ref self, string value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	reference to the object
`string`	value	New value to set

Return Type: `void`

4.60.2.25. RPC name: set_retained_snapshots

Overview:

Signature:

```
void set_retained_snapshots (session ref session_id, VMSS ref self, int value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	The schedule snapshot
`int`	value	the value to set

Return Type: `void`

4.60.2.26. RPC name: set_schedule

Overview:

Signature:

```
void set_schedule (session ref session_id, VMSS ref self, (string -> string) map
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	The snapshot schedule
`(string -> string) map`	value	the value to set

Return Type: `void`

4.60.2.27. RPC name: set_type

Overview:

Signature:

```
void set_type (session ref session_id, VMSS ref self, vmss_type value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	self	The snapshot schedule
`vmss_type`	value	the snapshot schedule type

Return Type: `void`

4.60.2.28. RPC name: snapshot_now

Overview:

This call executes the snapshot schedule immediately

Signature:

```
string snapshot_now (session ref session_id, VMSS ref vmss)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VMSS ref`	vmss	Snapshot Schedule to execute

Return Type: `string`

An XMLRPC result

4.61. Class: VTPM

A virtual TPM device

4.61.1. Fields for class: VTPM

Field	Type	Qualifier	Description
backend	`VM ref`	*RO/constructor*	the domain where the backend is located

Field	Type	Qualifier	Description
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VM	`VM ref`	*RO/constructor*	the virtual machine

4.61.2. RPCs associated with class: VTPM

4.61.2.1. RPC name: create

Overview:

Create a new VTPM instance, and return its handle.

Signature:

```
VTPM ref create (session ref session_id, VTPM record args)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VTPM record`	args	All constructor arguments

Return Type: `VTPM ref`

reference to the newly created object

4.61.2.2. RPC name: destroy

Overview:

Destroy the specified VTPM instance.

Signature:

```
void destroy (session ref session_id, VTPM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VTPM ref`	self	reference to the object

Return Type: `void`

4.61.2.3. RPC name: get_backend

Overview:

Get the backend field of the given VTPM.

Signature:

```
VM ref get_backend (session ref session_id, VTPM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VTPM ref`	self	reference to the object

Return Type: `VM ref`

value of the field

4.61.2.4. RPC name: get_by_uuid

Overview:

Get a reference to the VTPM instance with the specified UUID.

Signature:

```
VTPM ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VTPM ref`

reference to the object

4.61.2.5. RPC name: get_record

Overview:

Get a record containing the current state of the given VTPM.

Signature:

```
VTPM record get_record (session ref session_id, VTPM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VTPM ref	self	reference to the object

Return Type: VTPM record

all fields from the object

4.61.2.6. RPC name: get_uuid

Overview:

Get the uuid field of the given VTPM.

Signature:

```
string get_uuid (session ref session_id, VTPM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VTPM ref	self	reference to the object

Return Type: string

value of the field

4.61.2.7. RPC name: get_VM

Overview:

Get the VM field of the given VTPM.

Signature:

```
VM ref get_VM (session ref session_id, VTPM ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VTPM ref	self	reference to the object

Return Type: VM ref

value of the field

4.62. Class: VUSB

Describes the vusb device

4.62.1. Fields for class: VUSB

Field	Type	Qualifier	Description
allowed_operations	`vusb_operations set`	*RO/runtime*	list of the operations allowed in this state. This list is advisory only and the server state may have changed by the time this field is read by a client.
current_operations	`(string -> vusb_operations) map`	*RO/runtime*	links each of the running tasks using this object (by reference) to a current_operation enum which describes the nature of the task.
currently_attached	`bool`	*RO/runtime*	is the device currently attached
other_config	`(string -> string) map`	*RW*	Additional configuration
USB_group	`USB_group ref`	*RO/runtime*	USB group used by the VUSB
uuid	`string`	*RO/runtime*	Unique identifier/object reference
VM	`VM ref`	*RO/runtime*	VM that owns the VUSB

4.62.2. RPCs associated with class: VUSB

4.62.2.1. RPC name: add_to_other_config

Overview:

Add the given key-value pair to the other_config field of the given VUSB.

Signature:

```
void add_to_other_config (session ref session_id, VUSB ref self, string key, string
 value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VUSB ref`	self	reference to the object
`string`	key	Key to add
`string`	value	Value to add

Return Type: void

4.62.2.2. RPC name: create

Overview:

Create a new VUSB record in the database only

Signature:

```
VUSB ref create (session ref session_id, VM ref VM, USB_group ref USB_group,
 (string -> string) map other_config)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VM ref	VM	The VM
USB_group ref	USB_group	
(string -> string) map	other_config	

Return Type: VUSB ref

The ref of the newly created VUSB record.

4.62.2.3. RPC name: destroy

Overview:

Removes a VUSB record from the database

Signature:

```
void destroy (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VUSB ref	self	The VUSB to destroy about

Return Type: void

4.62.2.4. RPC name: get_all

Overview:

Return a list of all the VUSBs known to the system.

Signature:

```
VUSB ref set get_all (session ref session_id)
```

4.62.2.5. RPC name: get_all_records

Overview:

Return a map of VUSB references to VUSB records for all VUSBs known to the system.

Signature:

```
(VUSB ref -> VUSB record) map get_all_records (session ref session_id)
```

4.62.2.6. RPC name: get_allowed_operations

Overview:

Get the allowed_operations field of the given VUSB.

Signature:

```
vusb_operations set get_allowed_operations (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VUSB ref`	self	reference to the object

Return Type: `vusb_operations set`

value of the field

4.62.2.7. RPC name: get_by_uuid

Overview:

Get a reference to the VUSB instance with the specified UUID.

Signature:

```
VUSB ref get_by_uuid (session ref session_id, string uuid)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`string`	uuid	UUID of object to return

Return Type: `VUSB ref`

reference to the object

4.62.2.8. RPC name: get_current_operations

Overview:

Get the current_operations field of the given VUSB.

Signature:

```
(string -> vusb_operations) map get_current_operations (session ref session_id,
 VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VUSB ref`	self	reference to the object

Return Type: `(string -> vusb_operations) map`

value of the field

4.62.2.9. RPC name: get_currently_attached

Overview:

Get the currently_attached field of the given VUSB.

Signature:

```
bool get_currently_attached (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VUSB ref`	self	reference to the object

Return Type: `bool`

value of the field

4.62.2.10. RPC name: get_other_config

Overview:

Get the other_config field of the given VUSB.

Signature:

```
(string -> string) map get_other_config (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VUSB ref	self	reference to the object

Return Type: `(string -> string) map`

value of the field

4.62.2.11. RPC name: get_record

Overview:

Get a record containing the current state of the given VUSB.

Signature:

```
VUSB record get_record (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VUSB ref	self	reference to the object

Return Type: `VUSB record`

all fields from the object

4.62.2.12. RPC name: get_USB_group

Overview:

Get the USB_group field of the given VUSB.

Signature:

```
USB_group ref get_USB_group (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VUSB ref	self	reference to the object

Return Type: `USB_group ref`

value of the field

4.62.2.13. RPC name: get_uuid

Overview:

Get the uuid field of the given VUSB.

Signature:

```
string get_uuid (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VUSB ref`	self	reference to the object

Return Type: `string`

value of the field

4.62.2.14. RPC name: get_VM

Overview:

Get the VM field of the given VUSB.

Signature:

```
VM ref get_VM (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
`VUSB ref`	self	reference to the object

Return Type: `VM ref`

value of the field

4.62.2.15. RPC name: remove_from_other_config

Overview:

Remove the given key and its corresponding value from the other_config field of the given VUSB. If the key is not in that Map, then do nothing.

Signature:

```
void remove_from_other_config (session ref session_id, VUSB ref self, string key)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session

type	name	description
VUSB ref	self	reference to the object
string	key	Key to remove

Return Type: void

4.62.2.16. RPC name: set_other_config

Overview:

Set the other_config field of the given VUSB.

Signature:

```
void set_other_config (session ref session_id, VUSB ref self, (string -> string)
 map value)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VUSB ref	self	reference to the object
(string -> string) map	value	New value to set

Return Type: void

4.62.2.17. RPC name: unplug

Overview:

Unplug the vusb device from the vm.

Signature:

```
void unplug (session ref session_id, VUSB ref self)
```

Arguments:

type	name	description
session ref	session_id	Reference to a valid session
VUSB ref	self	vusb deivce

Return Type: void

4.63. Error Handling

When a low-level transport error occurs, or a request is malformed at the HTTP or XML-RPC level, the server may send an XML-RPC Fault response, or the client may simulate the same. The client must be prepared to handle these errors, though they may be treated as fatal. On the wire, these are transmitted in a form similar to this:

```
<methodResponse>
  <fault>
    <value>
      <struct>
        <member>
            <name>faultCode</name>
            <value><int>-1</int></value>
          </member>
          <member>
            <name>faultString</name>
            <value><string>Malformed request</string></value>
        </member>
      </struct>
    </value>
  </fault>
</methodResponse>
```

All other failures are reported with a more structured error response, to allow better automatic response to failures, proper internationalisation of any error message, and easier debugging. On the wire, these are transmitted like this:

```
<struct>
  <member>
    <name>Status</name>
    <value>Failure</value>
  </member>
  <member>
    <name>ErrorDescription</name>
    <value>
      <array>
        <data>
          <value>MAP_DUPLICATE_KEY</value>
          <value>Customer</value>
          <value>eSpiel Inc.</value>
          <value>eSpiel Incorporated</value>
        </data>
      </array>
    </value>
  </member>
</struct>
```

Note that `ErrorDescription` value is an array of string values. The first element of the array is an error code; the remainder of the array are strings representing error parameters relating to that code. In this case, the client has attempted to add the mapping *Customer -> eSpiel Incorporated* to a Map, but it already contains the mapping *Customer -> eSpiel Inc.*, and so the request has failed.

Each possible error code is documented in the following section.

4.63.1. Error Codes

4.63.1.1. ACTIVATION_WHILE_NOT_FREE

An activation key can only be applied when the edition is set to 'free'.

No parameters.

4.63.1.2. ADDRESS_VIOLATES_LOCKING_CONSTRAINT

The specified IP address violates the VIF locking configuration.

Signature:

```
ADDRESS_VIOLATES_LOCKING_CONSTRAINT(address)
```

4.63.1.3. AUTH_ALREADY_ENABLED

External authentication for this host is already enabled.

Signature:

```
AUTH_ALREADY_ENABLED(current auth_type, current service_name)
```

4.63.1.4. AUTH_DISABLE_FAILED

The host failed to disable external authentication.

Signature:

```
AUTH_DISABLE_FAILED(message)
```

4.63.1.5. AUTH_DISABLE_FAILED_PERMISSION_DENIED

The host failed to disable external authentication.

Signature:

```
AUTH_DISABLE_FAILED_PERMISSION_DENIED(message)
```

4.63.1.6. AUTH_DISABLE_FAILED_WRONG_CREDENTIALS

The host failed to disable external authentication.

Signature:

```
AUTH_DISABLE_FAILED_WRONG_CREDENTIALS(message)
```

4.63.1.7. AUTH_ENABLE_FAILED

The host failed to enable external authentication.

Signature:

```
AUTH_ENABLE_FAILED(message)
```

4.63.1.8. AUTH_ENABLE_FAILED_DOMAIN_LOOKUP_FAILED

The host failed to enable external authentication.

Signature:

```
AUTH_ENABLE_FAILED_DOMAIN_LOOKUP_FAILED(message)
```

4.63.1.9. AUTH_ENABLE_FAILED_INVALID_ACCOUNT

The host failed to enable external authentication.

Signature:

```
AUTH_ENABLE_FAILED_INVALID_ACCOUNT(message)
```

4.63.1.10. AUTH_ENABLE_FAILED_INVALID_OU

The host failed to enable external authentication.

Signature:

```
AUTH_ENABLE_FAILED_INVALID_OU(message)
```

4.63.1.11. AUTH_ENABLE_FAILED_PERMISSION_DENIED

The host failed to enable external authentication.

Signature:

```
AUTH_ENABLE_FAILED_PERMISSION_DENIED(message)
```

4.63.1.12. AUTH_ENABLE_FAILED_UNAVAILABLE

The host failed to enable external authentication.

Signature:

```
AUTH_ENABLE_FAILED_UNAVAILABLE(message)
```

4.63.1.13. AUTH_ENABLE_FAILED_WRONG_CREDENTIALS

The host failed to enable external authentication.

Signature:

```
AUTH_ENABLE_FAILED_WRONG_CREDENTIALS(message)
```

4.63.1.14. AUTH_IS_DISABLED

External authentication is disabled, unable to resolve subject name.

No parameters.

4.63.1.15. AUTH_SERVICE_ERROR

Error querying the external directory service.

Signature:

```
AUTH_SERVICE_ERROR(message)
```

4.63.1.16. AUTH_UNKNOWN_TYPE

Unknown type of external authentication.

Signature:

```
AUTH_UNKNOWN_TYPE(type)
```

4.63.1.17. BACKUP_SCRIPT_FAILED

The backup could not be performed because the backup script failed.

Signature:

```
BACKUP_SCRIPT_FAILED(log)
```

4.63.1.18. BALLOONING_TIMEOUT_BEFORE_MIGRATION

Timeout trying to balloon down memory before VM migration. If the error occurs repeatedly, consider increasing the memory-dynamic-min value.

Signature:

```
BALLOONING_TIMEOUT_BEFORE_MIGRATION(vm)
```

4.63.1.19. BOOTLOADER_FAILED

The bootloader returned an error

Signature:

```
BOOTLOADER_FAILED(vm, msg)
```

4.63.1.20. BRIDGE_NAME_EXISTS

The specified bridge already exists.

Signature:

```
BRIDGE_NAME_EXISTS(bridge)
```

4.63.1.21. BRIDGE_NOT_AVAILABLE

Could not find bridge required by VM.

Signature:

```
BRIDGE_NOT_AVAILABLE(bridge)
```

4.63.1.22. CANNOT_ADD_TUNNEL_TO_BOND_SLAVE

This PIF is a bond slave and cannot have a tunnel on it.

Signature:

```
CANNOT_ADD_TUNNEL_TO_BOND_SLAVE(PIF)
```

4.63.1.23. CANNOT_ADD_VLAN_TO_BOND_SLAVE

This PIF is a bond slave and cannot have a VLAN on it.

Signature:

```
CANNOT_ADD_VLAN_TO_BOND_SLAVE(PIF)
```

4.63.1.24. CANNOT_CHANGE_PIF_PROPERTIES

This properties of this PIF cannot be changed. Only the properties of non-bonded physical PIFs, or bond masters can be changed.

Signature:

```
CANNOT_CHANGE_PIF_PROPERTIES(PIF)
```

4.63.1.25. CANNOT_CONTACT_HOST

Cannot forward messages because the host cannot be contacted. The host may be switched off or there may be network connectivity problems.

Signature:

```
CANNOT_CONTACT_HOST(host)
```

4.63.1.26. CANNOT_CREATE_STATE_FILE

An HA statefile could not be created, perhaps because no SR with the appropriate capability was found.

No parameters.

4.63.1.27. CANNOT_DESTROY_DISASTER_RECOVERY_TASK

The disaster recovery task could not be cleanly destroyed.

Signature:

```
CANNOT_DESTROY_DISASTER_RECOVERY_TASK(reason)
```

4.63.1.28. CANNOT_DESTROY_SYSTEM_NETWORK

You tried to destroy a system network: these cannot be destroyed.

Signature:

```
CANNOT_DESTROY_SYSTEM_NETWORK(network)
```

4.63.1.29. CANNOT_ENABLE_REDO_LOG

Could not enable redo log.

Signature:

```
CANNOT_ENABLE_REDO_LOG(reason)
```

4.63.1.30. CANNOT_EVACUATE_HOST

This host cannot be evacuated.

Signature:

```
CANNOT_EVACUATE_HOST(errors)
```

4.63.1.31. CANNOT_FETCH_PATCH

The requested update could to be obtained from the master.

Signature:

```
CANNOT_FETCH_PATCH(uuid)
```

4.63.1.32. CANNOT_FIND_OEM_BACKUP_PARTITION

The backup partition to stream the updat to cannot be found

No parameters.

4.63.1.33. CANNOT_FIND_PATCH

The requested update could not be found. This can occur when you designate a new master or xe patch-clean. Please upload the update again

No parameters.

4.63.1.34. CANNOT_FIND_STATE_PARTITION

This operation could not be performed because the state partition could not be found

No parameters.

4.63.1.35. CANNOT_FIND_UPDATE

The requested update could not be found. Please upload the update again. This can occur when you run xe update-pool-clean before xe update-apply.

No parameters.

4.63.1.36. CANNOT_PLUG_BOND_SLAVE

This PIF is a bond slave and cannot be plugged.

Signature:

```
CANNOT_PLUG_BOND_SLAVE(PIF)
```

4.63.1.37. CANNOT_PLUG_VIF

Cannot plug VIF

Signature:

```
CANNOT_PLUG_VIF(VIF)
```

4.63.1.38. CANNOT_RESET_CONTROL_DOMAIN

The power-state of a control domain cannot be reset.

Signature:

```
CANNOT_RESET_CONTROL_DOMAIN(vm)
```

4.63.1.39. CERTIFICATE_ALREADY_EXISTS

A certificate already exists with the specified name.

Signature:

```
CERTIFICATE_ALREADY_EXISTS(name)
```

4.63.1.40. CERTIFICATE_CORRUPT

The specified certificate is corrupt or unreadable.

Signature:

```
CERTIFICATE_CORRUPT(name)
```

4.63.1.41. CERTIFICATE_DOES_NOT_EXIST

The specified certificate does not exist.

Signature:

```
CERTIFICATE_DOES_NOT_EXIST(name)
```

4.63.1.42. CERTIFICATE_LIBRARY_CORRUPT

The certificate library is corrupt or unreadable.

No parameters.

4.63.1.43. CERTIFICATE_NAME_INVALID

The specified certificate name is invalid.

Signature:

```
CERTIFICATE_NAME_INVALID(name)
```

4.63.1.44. CHANGE_PASSWORD_REJECTED

The system rejected the password change request; perhaps the new password was too short?

Signature:

```
CHANGE_PASSWORD_REJECTED(msg)
```

4.63.1.45. CLUSTERED_SR_DEGRADED

An SR is using clustered local storage. It is not safe to reboot a host at the moment.

Signature:

```
CLUSTERED_SR_DEGRADED(sr)
```

4.63.1.46. COULD_NOT_FIND_NETWORK_INTERFACE_WITH_SPECIFIED_DEVICE_NAME_AND_MAC_ADDRESS

Could not find a network interface with the specified device name and MAC address.

Signature:

```
COULD_NOT_FIND_NETWORK_INTERFACE_WITH_SPECIFIED_DEVICE_NAME_AND_MAC_ADDRESS(device,
 mac)
```

4.63.1.47. COULD_NOT_IMPORT_DATABASE

An error occurred while attempting to import a database from a metadata VDI

Signature:

```
COULD_NOT_IMPORT_DATABASE(reason)
```

4.63.1.48. COULD_NOT_UPDATE_IGMP_SNOOPING_EVERYWHERE

The IGMP Snooping setting cannot be applied for some of the host, network(s).

No parameters.

4.63.1.49. CPU_FEATURE_MASKING_NOT_SUPPORTED

The CPU does not support masking of features.

Signature:

```
CPU_FEATURE_MASKING_NOT_SUPPORTED(details)
```

4.63.1.50. CRL_ALREADY_EXISTS

A CRL already exists with the specified name.

Signature:

```
CRL_ALREADY_EXISTS(name)
```

4.63.1.51. CRL_CORRUPT

The specified CRL is corrupt or unreadable.

Signature:

```
CRL_CORRUPT(name)
```

4.63.1.52. CRL_DOES_NOT_EXIST

The specified CRL does not exist.

Signature:

```
CRL_DOES_NOT_EXIST(name)
```

4.63.1.53. CRL_NAME_INVALID

The specified CRL name is invalid.

Signature:

```
CRL_NAME_INVALID(name)
```

4.63.1.54. DB_UNIQUENESS_CONSTRAINT_VIOLATION

You attempted an operation which would have resulted in duplicate keys in the database.

Signature:

```
DB_UNIQUENESS_CONSTRAINT_VIOLATION(table, field, value)
```

4.63.1.55. DEFAULT_SR_NOT_FOUND

The default SR reference does not point to a valid SR

Signature:

```
DEFAULT_SR_NOT_FOUND(sr)
```

4.63.1.56. DEVICE_ALREADY_ATTACHED

The device is already attached to a VM

Signature:

```
DEVICE_ALREADY_ATTACHED(device)
```

4.63.1.57. DEVICE_ALREADY_DETACHED

The device is not currently attached

Signature:

```
DEVICE_ALREADY_DETACHED(device)
```

4.63.1.58. DEVICE_ALREADY_EXISTS

A device with the name given already exists on the selected VM

Signature:

```
DEVICE_ALREADY_EXISTS(device)
```

4.63.1.59. DEVICE_ATTACH_TIMEOUT

A timeout happened while attempting to attach a device to a VM.

Signature:

```
DEVICE_ATTACH_TIMEOUT(type, ref)
```

4.63.1.60. DEVICE_DETACH_REJECTED

The VM rejected the attempt to detach the device.

Signature:

```
DEVICE_DETACH_REJECTED(type, ref, msg)
```

4.63.1.61. DEVICE_DETACH_TIMEOUT

A timeout happened while attempting to detach a device from a VM.

Signature:

```
DEVICE_DETACH_TIMEOUT(type, ref)
```

4.63.1.62. DEVICE_NOT_ATTACHED

The operation could not be performed because the VBD was not connected to the VM.

Signature:

```
DEVICE_NOT_ATTACHED(VBD)
```

4.63.1.63. DISK_VBD_MUST_BE_READWRITE_FOR_HVM

All VBDs of type 'disk' must be read/write for HVM guests

Signature:

```
DISK_VBD_MUST_BE_READWRITE_FOR_HVM(vbd)
```

4.63.1.64. DOMAIN_BUILDER_ERROR

An internal error generated by the domain builder.

Signature:

```
DOMAIN_BUILDER_ERROR(function, code, message)
```

4.63.1.65. DOMAIN_EXISTS

The operation could not be performed because a domain still exists for the specified VM.

Signature:

```
DOMAIN_EXISTS(vm, domid)
```

4.63.1.66. DUPLICATE_MAC_SEED

This MAC seed is already in use by a VM in the pool

Signature:

```
DUPLICATE_MAC_SEED(seed)
```

4.63.1.67. DUPLICATE_PIF_DEVICE_NAME

A PIF with this specified device name already exists.

Signature:

```
DUPLICATE_PIF_DEVICE_NAME(device)
```

4.63.1.68. DUPLICATE_VM

Cannot restore this VM because it would create a duplicate

Signature:

```
DUPLICATE_VM(vm)
```

4.63.1.69. EVENTS_LOST

Some events have been lost from the queue and cannot be retrieved.

No parameters.

4.63.1.70. EVENT_FROM_TOKEN_PARSE_FAILURE

The event.from token could not be parsed. Valid values include: '', and a value returned from a previous event.from call.

Signature:

```
EVENT_FROM_TOKEN_PARSE_FAILURE(token)
```

4.63.1.71. EVENT_SUBSCRIPTION_PARSE_FAILURE

The server failed to parse your event subscription. Valid values include: *, class-name, class-name/object-reference.

Signature:

```
EVENT_SUBSCRIPTION_PARSE_FAILURE(subscription)
```

4.63.1.72. FAILED_TO_START_EMULATOR

An emulator required to run this VM failed to start

Signature:

```
FAILED_TO_START_EMULATOR(vm, name, msg)
```

4.63.1.73. FEATURE_REQUIRES_HVM

The VM is set up to use a feature that requires it to boot as HVM.

Signature:

```
FEATURE_REQUIRES_HVM(details)
```

4.63.1.74. FEATURE_RESTRICTED

The use of this feature is restricted.

No parameters.

4.63.1.75. FIELD_TYPE_ERROR

The value specified is of the wrong type

Signature:

```
FIELD_TYPE_ERROR(field)
```

4.63.1.76. GPU_GROUP_CONTAINS_NO_PGPUS

The GPU group does not contain any PGPUs.

Signature:

```
GPU_GROUP_CONTAINS_NO_PGPUS(gpu_group)
```

4.63.1.77. GPU_GROUP_CONTAINS_PGPU

The GPU group contains active PGPUs and cannot be deleted.

Signature:

```
GPU_GROUP_CONTAINS_PGPU(pgpus)
```

4.63.1.78. GPU_GROUP_CONTAINS_VGPU

The GPU group contains active VGPUs and cannot be deleted.

Signature:

```
GPU_GROUP_CONTAINS_VGPU(vgpus)
```

4.63.1.79. HANDLE_INVALID

You gave an invalid object reference. The object may have recently been deleted. The class parameter gives the type of reference given, and the handle parameter echoes the bad value given.

Signature:

```
HANDLE_INVALID(class, handle)
```

4.63.1.80. HA_ABORT_NEW_MASTER

This host cannot accept the proposed new master setting at this time.

Signature:

```
HA_ABORT_NEW_MASTER(reason)
```

4.63.1.81. HA_CANNOT_CHANGE_BOND_STATUS_OF_MGMT_IFACE

This operation cannot be performed because creating or deleting a bond involving the management interface is not allowed while HA is on. In order to do that, disable HA, create or delete the bond then re-enable HA.

No parameters.

4.63.1.82. HA_CONSTRAINT_VIOLATION_NETWORK_NOT_SHARED

This operation cannot be performed because the referenced network is not properly shared. The network must either be entirely virtual or must be physically present via a currently_attached PIF on every host.

Signature:

```
HA_CONSTRAINT_VIOLATION_NETWORK_NOT_SHARED(network)
```

4.63.1.83. HA_CONSTRAINT_VIOLATION_SR_NOT_SHARED

This operation cannot be performed because the referenced SR is not properly shared. The SR must both be marked as shared and a currently_attached PBD must exist for each host.

Signature:

```
HA_CONSTRAINT_VIOLATION_SR_NOT_SHARED(SR)
```

4.63.1.84. HA_DISABLE_IN_PROGRESS

The operation could not be performed because HA disable is in progress

No parameters.

4.63.1.85. HA_ENABLE_IN_PROGRESS

The operation could not be performed because HA enable is in progress

No parameters.

4.63.1.86. HA_FAILED_TO_FORM_LIVESET

HA could not be enabled on the Pool because a liveset could not be formed: check storage and network heartbeat paths.

No parameters.

4.63.1.87. HA_HEARTBEAT_DAEMON_STARTUP_FAILED

The host could not join the liveset because the HA daemon failed to start.

No parameters.

4.63.1.88. HA_HOST_CANNOT_ACCESS_STATEFILE

The host could not join the liveset because the HA daemon could not access the heartbeat disk.

No parameters.

4.63.1.89. HA_HOST_CANNOT_SEE_PEERS

The operation failed because the HA software on the specified host could not see a subset of other hosts. Check your network connectivity.

Signature:

```
HA_HOST_CANNOT_SEE_PEERS(host, all, subset)
```

4.63.1.90. HA_HOST_IS_ARMED

The operation could not be performed while the host is still armed; it must be disarmed first

Signature:

```
HA_HOST_IS_ARMED(host)
```

4.63.1.91. HA_IS_ENABLED

The operation could not be performed because HA is enabled on the Pool

No parameters.

4.63.1.92. HA_LOST_STATEFILE

This host lost access to the HA statefile.

No parameters.

4.63.1.93. HA_NOT_ENABLED

The operation could not be performed because HA is not enabled on the Pool

No parameters.

4.63.1.94. HA_NOT_INSTALLED

The operation could not be performed because the HA software is not installed on this host.

Signature:

```
HA_NOT_INSTALLED(host)
```

4.63.1.95. HA_NO_PLAN

Cannot find a plan for placement of VMs as there are no other hosts available.

No parameters.

4.63.1.96. HA_OPERATION_WOULD_BREAK_FAILOVER_PLAN

This operation cannot be performed because it would invalidate VM failover planning such that the system would be unable to guarantee to restart protected VMs after a Host failure.

No parameters.

4.63.1.97. HA_POOL_IS_ENABLED_BUT_HOST_IS_DISABLED

This host cannot join the pool because the pool has HA enabled but this host has HA disabled.

No parameters.

4.63.1.98. HA_SHOULD_BE_FENCED

Host cannot rejoin pool because it should have fenced (it is not in the master's partition)

Signature:

```
HA_SHOULD_BE_FENCED(host)
```

4.63.1.99. HA_TOO_FEW_HOSTS

HA can only be enabled for 2 hosts or more. Note that 2 hosts requires a pre-configured quorum tiebreak script.

No parameters.

4.63.1.100. HOSTS_NOT_COMPATIBLE

The hosts in this pool are not compatible.

No parameters.

4.63.1.101. HOSTS_NOT_HOMOGENEOUS

The hosts in this pool are not homogeneous.

Signature:

```
HOSTS_NOT_HOMOGENEOUS(reason)
```

4.63.1.102. HOST_BROKEN

This host failed in the middle of an automatic failover operation and needs to retry the failover action

No parameters.

4.63.1.103. HOST_CANNOT_ATTACH_NETWORK

Host cannot attach network (in the case of NIC bonding, this may be because attaching the network on this host would require other networks [that are currently active] to be taken down).

Signature:

```
HOST_CANNOT_ATTACH_NETWORK(host, network)
```

4.63.1.104. HOST_CANNOT_DESTROY_SELF

The pool master host cannot be removed.

Signature:

```
HOST_CANNOT_DESTROY_SELF(host)
```

4.63.1.105. HOST_CANNOT_READ_METRICS

The metrics of this host could not be read.

No parameters.

4.63.1.106. HOST_CD_DRIVE_EMPTY

The host CDROM drive does not contain a valid CD

No parameters.

4.63.1.107. HOST_DISABLED

The specified host is disabled.

Signature:

```
HOST_DISABLED(host)
```

4.63.1.108. HOST_DISABLED_UNTIL_REBOOT

The specified host is disabled and cannot be re-enabled until after it has rebooted.

Signature:

```
HOST_DISABLED_UNTIL_REBOOT(host)
```

4.63.1.109. HOST_EVACUATE_IN_PROGRESS

This host is being evacuated.

Signature:

```
HOST_EVACUATE_IN_PROGRESS(host)
```

4.63.1.110. HOST_HAS_NO_MANAGEMENT_IP

The host failed to acquire an IP address on its management interface and therefore cannot contact the master.

No parameters.

4.63.1.111. HOST_HAS_RESIDENT_VMS

This host can not be forgotten because there are some user VMs still running

Signature:

```
HOST_HAS_RESIDENT_VMS(host)
```

4.63.1.112. HOST_IN_EMERGENCY_MODE

Cannot perform operation as the host is running in emergency mode.

No parameters.

4.63.1.113. HOST_IN_USE

This operation cannot be completed as the host is in use by (at least) the object of type and ref echoed below.

Signature:

```
HOST_IN_USE(host, type, ref)
```

4.63.1.114. HOST_IS_LIVE

This operation cannot be completed as the host is still live.

Signature:

```
HOST_IS_LIVE(host)
```

4.63.1.115. HOST_IS_SLAVE

You cannot make regular API calls directly on a slave. Please pass API calls via the master host.

Signature:

```
HOST_IS_SLAVE(Master IP address)
```

4.63.1.116. HOST_ITS_OWN_SLAVE

The host is its own slave. Please use pool-emergency-transition-to-master or pool-emergency-reset-master.

No parameters.

4.63.1.117. HOST_MASTER_CANNOT_TALK_BACK

The master reports that it cannot talk back to the slave on the supplied management IP address.

Signature:

```
HOST_MASTER_CANNOT_TALK_BACK(ip)
```

4.63.1.118. HOST_NAME_INVALID

The host name is invalid.

Signature:

```
HOST_NAME_INVALID(reason)
```

4.63.1.119. HOST_NOT_DISABLED

This operation cannot be performed because the host is not disabled. Please disable the host and then try again.

No parameters.

4.63.1.120. HOST_NOT_ENOUGH_FREE_MEMORY

Not enough host memory is available to perform this operation

Signature:

```
HOST_NOT_ENOUGH_FREE_MEMORY(needed, available)
```

4.63.1.121. HOST_NOT_LIVE

This operation cannot be completed as the host is not live.

No parameters.

4.63.1.122. HOST_OFFLINE

You attempted an operation which involves a host which could not be contacted.

Signature:

```
HOST_OFFLINE(host)
```

4.63.1.123. HOST_POWER_ON_MODE_DISABLED

This operation cannot be completed as the host power on mode is disabled.

No parameters.

4.63.1.124. HOST_STILL_BOOTING

The host toolstack is still initialising. Please wait.

No parameters.

4.63.1.125. HOST_UNKNOWN_TO_MASTER

The master says the host is not known to it. Perhaps the Host was deleted from the master's database? Perhaps the slave is pointing to the wrong master?

Signature:

```
HOST_UNKNOWN_TO_MASTER(host)
```

4.63.1.126. ILLEGAL_VBD_DEVICE

The specified VBD device is not recognized: please use a non-negative integer

Signature:

```
ILLEGAL_VBD_DEVICE(vbd, device)
```

4.63.1.127. IMPORT_ERROR

The VM could not be imported.

Signature:

```
IMPORT_ERROR(msg)
```

4.63.1.128. IMPORT_ERROR_ATTACHED_DISKS_NOT_FOUND

The VM could not be imported because attached disks could not be found.

No parameters.

4.63.1.129. IMPORT_ERROR_CANNOT_HANDLE_CHUNKED

Cannot import VM using chunked encoding.

No parameters.

4.63.1.130. IMPORT_ERROR_FAILED_TO_FIND_OBJECT

The VM could not be imported because a required object could not be found.

Signature:

```
IMPORT_ERROR_FAILED_TO_FIND_OBJECT(id)
```

4.63.1.131. IMPORT_ERROR_PREMATURE_EOF

The VM could not be imported; the end of the file was reached prematurely.

No parameters.

4.63.1.132. IMPORT_ERROR_SOME_CHECKSUMS_FAILED

Some data checksums were incorrect; the VM may be corrupt.

No parameters.

4.63.1.133. IMPORT_ERROR_UNEXPECTED_FILE

The VM could not be imported because the XVA file is invalid: an unexpected file was encountered.

Signature:

```
IMPORT_ERROR_UNEXPECTED_FILE(filename_expected, filename_found)
```

4.63.1.134. IMPORT_INCOMPATIBLE_VERSION

The import failed because this export has been created by a different (incompatible) product version

No parameters.

4.63.1.135. INCOMPATIBLE_CLUSTER_STACK_ACTIVE

This operation cannot be performed, because it is incompatible with the currently active HA cluster stack.

Signature:

```
INCOMPATIBLE_CLUSTER_STACK_ACTIVE(cluster_stack)
```

4.63.1.136. INCOMPATIBLE_PIF_PROPERTIES

These PIFs can not be bonded, because their properties are different.

No parameters.

4.63.1.137. INCOMPATIBLE_STATEFILE_SR

The specified SR is incompatible with the selected HA cluster stack.

Signature:

```
INCOMPATIBLE_STATEFILE_SR(SR type)
```

4.63.1.138. INTERFACE_HAS_NO_IP

The specified interface cannot be used because it has no IP address

Signature:

```
INTERFACE_HAS_NO_IP(interface)
```

4.63.1.139. INTERNAL_ERROR

The server failed to handle your request, due to an internal error. The given message may give details useful for debugging the problem.

Signature:

```
INTERNAL_ERROR(message)
```

4.63.1.140. INVALID_CIDR_ADDRESS_SPECIFIED

A required parameter contained an invalid CIDR address (<addr>/<prefix length>)

Signature:

```
INVALID_CIDR_ADDRESS_SPECIFIED(parameter)
```

4.63.1.141. INVALID_DEVICE

The device name is invalid

Signature:

```
INVALID_DEVICE(device)
```

4.63.1.142. INVALID_EDITION

The edition you supplied is invalid.

Signature:

```
INVALID_EDITION(edition)
```

4.63.1.143. INVALID_FEATURE_STRING

The given feature string is not valid.

Signature:

```
INVALID_FEATURE_STRING(details)
```

4.63.1.144. INVALID_IP_ADDRESS_SPECIFIED

A required parameter contained an invalid IP address

Signature:

```
INVALID_IP_ADDRESS_SPECIFIED(parameter)
```

4.63.1.145. INVALID_PATCH

The uploaded patch file is invalid

No parameters.

4.63.1.146. INVALID_PATCH_WITH_LOG

The uploaded patch file is invalid. See attached log for more details.

Signature:

```
INVALID_PATCH_WITH_LOG(log)
```

4.63.1.147. INVALID_UPDATE

The uploaded update package is invalid.

Signature:

```
INVALID_UPDATE(info)
```

4.63.1.148. INVALID_VALUE

The value given is invalid

Signature:

```
INVALID_VALUE(field, value)
```

4.63.1.149. IS_TUNNEL_ACCESS_PIF

You tried to create a VLAN or tunnel on top of a tunnel access PIF - use the underlying transport PIF instead.

Signature:

```
IS_TUNNEL_ACCESS_PIF(PIF)
```

4.63.1.150. JOINING_HOST_CANNOT_BE_MASTER_OF_OTHER_HOSTS

The host joining the pool cannot already be a master of another pool.

No parameters.

4.63.1.151. JOINING_HOST_CANNOT_CONTAIN_SHARED_SRS

The host joining the pool cannot contain any shared storage.

No parameters.

4.63.1.152. JOINING_HOST_CANNOT_HAVE_RUNNING_OR_SUSPENDED_VMS

The host joining the pool cannot have any running or suspended VMs.

No parameters.

4.63.1.153. JOINING_HOST_CANNOT_HAVE_RUNNING_VMS

The host joining the pool cannot have any running VMs.

No parameters.

4.63.1.154. JOINING_HOST_CANNOT_HAVE_VMS_WITH_CURRENT_OPERATIONS

The host joining the pool cannot have any VMs with active tasks.

No parameters.

4.63.1.155. JOINING_HOST_CONNECTION_FAILED

There was an error connecting to the host while joining it in the pool.

No parameters.

4.63.1.156. JOINING_HOST_SERVICE_FAILED

There was an error connecting to the host. the service contacted didn't reply properly.

No parameters.

4.63.1.157. LICENCE_RESTRICTION

This operation is not allowed because your license lacks a needed feature. Please contact your support representative.

Signature:

```
LICENCE_RESTRICTION(feature)
```

4.63.1.158. LICENSE_CANNOT_DOWNGRADE_WHILE_IN_POOL

Cannot downgrade license while in pool. Please disband the pool first, then downgrade licenses on hosts separately.

No parameters.

4.63.1.159. LICENSE_CHECKOUT_ERROR

The license for the edition you requested is not available.

Signature:

```
LICENSE_CHECKOUT_ERROR(reason)
```

4.63.1.160. LICENSE_DOES_NOT_SUPPORT_POOLING

This host cannot join a pool because its license does not support pooling.

No parameters.

4.63.1.161. LICENSE_DOES_NOT_SUPPORT_XHA

XHA cannot be enabled because this host's license does not allow it.

No parameters.

4.63.1.162. LICENSE_EXPIRED

Your license has expired. Please contact your support representative.

No parameters.

4.63.1.163. LICENSE_FILE_DEPRECATED

This license file is no longer accepted. Please upgrade to the new licensing system.

No parameters.

4.63.1.164. LICENSE_HOST_POOL_MISMATCH

Host and pool have incompatible licenses (editions).

No parameters.

4.63.1.165. LICENSE_PROCESSING_ERROR

There was an error processing your license. Please contact your support representative.

No parameters.

4.63.1.166. LOCATION_NOT_UNIQUE

A VDI with the specified location already exists within the SR

Signature:

```
LOCATION_NOT_UNIQUE(SR, location)
```

4.63.1.167. MAC_DOES_NOT_EXIST

The MAC address specified doesn't exist on this host.

Signature:

```
MAC_DOES_NOT_EXIST(MAC)
```

4.63.1.168. MAC_INVALID

The MAC address specified is not valid.

Signature:

```
MAC_INVALID(MAC)
```

4.63.1.169. MAC_STILL_EXISTS

The MAC address specified still exists on this host.

Signature:

```
MAC_STILL_EXISTS(MAC)
```

4.63.1.170. MAP_DUPLICATE_KEY

You tried to add a key-value pair to a map, but that key is already there.

Signature:

```
MAP_DUPLICATE_KEY(type, param_name, uuid, key)
```

4.63.1.171. MEMORY_CONSTRAINT_VIOLATION

The dynamic memory range does not satisfy the following constraint.

Signature:

```
MEMORY_CONSTRAINT_VIOLATION(constraint)
```

4.63.1.172. MESSAGE_DEPRECATED

This message has been deprecated.

No parameters.

4.63.1.173. MESSAGE_METHOD_UNKNOWN

You tried to call a method that does not exist. The method name that you used is echoed.

Signature:

```
MESSAGE_METHOD_UNKNOWN(method)
```

4.63.1.174. MESSAGE_PARAMETER_COUNT_MISMATCH

You tried to call a method with the incorrect number of parameters. The fully-qualified method name that you used, and the number of received and expected parameters are returned.

Signature:

```
MESSAGE_PARAMETER_COUNT_MISMATCH(method, expected, received)
```

4.63.1.175. MESSAGE_REMOVED

This function is no longer available.

No parameters.

4.63.1.176. MIRROR_FAILED

The VDI mirroring cannot be performed

Signature:

```
MIRROR_FAILED(vdi)
```

4.63.1.177. MISSING_CONNECTION_DETAILS

The license-server connection details (address or port) were missing or incomplete.

No parameters.

4.63.1.178. NETWORK_ALREADY_CONNECTED

You tried to create a PIF, but the network you tried to attach it to is already attached to some other PIF, and so the creation failed.

Signature:

```
NETWORK_ALREADY_CONNECTED(network, connected PIF)
```

4.63.1.179. NETWORK_CONTAINS_PIF

The network contains active PIFs and cannot be deleted.

Signature:

```
NETWORK_CONTAINS_PIF(pifs)
```

4.63.1.180. NETWORK_CONTAINS_VIF

The network contains active VIFs and cannot be deleted.

Signature:

```
NETWORK_CONTAINS_VIF(vifs)
```

4.63.1.181. NETWORK_INCOMPATIBLE_PURPOSES

You tried to add a purpose to a network but the new purpose is not compatible with an existing purpose of the network or other networks.

Signature:

```
NETWORK_INCOMPATIBLE_PURPOSES(new_purpose, conflicting_purpose)
```

4.63.1.182. NETWORK_UNMANAGED

The network is not managed by xapi.

Signature:

```
NETWORK_UNMANAGED(network)
```

4.63.1.183. NOT_ALLOWED_ON_OEM_EDITION

This command is not allowed on the OEM edition.

Signature:

```
NOT_ALLOWED_ON_OEM_EDITION(command)
```

4.63.1.184. NOT_IMPLEMENTED

The function is not implemented

Signature:

```
NOT_IMPLEMENTED(function)
```

4.63.1.185. NOT_IN_EMERGENCY_MODE

This pool is not in emergency mode.

No parameters.

4.63.1.186. NOT_SUPPORTED_DURING_UPGRADE

This operation is not supported during an upgrade.

No parameters.

4.63.1.187. NOT_SYSTEM_DOMAIN

The given VM is not registered as a system domain. This operation can only be performed on a registered system domain.

Signature:

```
NOT_SYSTEM_DOMAIN(vm)
```

4.63.1.188. NO_HOSTS_AVAILABLE

There were no hosts available to complete the specified operation.

No parameters.

4.63.1.189. NO_MORE_REDO_LOGS_ALLOWED

The upper limit of active redo log instances was reached.

No parameters.

4.63.1.190. NVIDIA_TOOLS_ERROR

Nvidia tools error. Please ensure that the latest Nvidia tools are installed

Signature:

```
NVIDIA_TOOLS_ERROR(host)
```

4.63.1.191. OBJECT_NOLONGER_EXISTS

The specified object no longer exists.

No parameters.

4.63.1.192. ONLY_ALLOWED_ON_OEM_EDITION

This command is only allowed on the OEM edition.

Signature:

```
ONLY_ALLOWED_ON_OEM_EDITION(command)
```

4.63.1.193. OPENVSWITCH_NOT_ACTIVE

This operation needs the OpenVSwitch networking backend to be enabled on all hosts in the pool.

No parameters.

4.63.1.194. OPERATION_BLOCKED

You attempted an operation that was explicitly blocked (see the blocked_operations field of the given object).

Signature:

```
OPERATION_BLOCKED(ref, code)
```

4.63.1.195. OPERATION_NOT_ALLOWED

You attempted an operation that was not allowed.

Signature:

```
OPERATION_NOT_ALLOWED(reason)
```

4.63.1.196. OPERATION_PARTIALLY_FAILED

Some VMs belonging to the appliance threw an exception while carrying out the specified operation

Signature:

```
OPERATION_PARTIALLY_FAILED(operation)
```

4.63.1.197. OTHER_OPERATION_IN_PROGRESS

Another operation involving the object is currently in progress

Signature:

```
OTHER_OPERATION_IN_PROGRESS(class, object)
```

4.63.1.198. OUT_OF_SPACE

There is not enough space to upload the update

Signature:

```
OUT_OF_SPACE(location)
```

4.63.1.199. PASSTHROUGH_NOT_ENABLED

The passthrough_enabled must be true before passthrough usb to vm.

Signature:

```
PASSTHROUGH_NOT_ENABLED(PUSB)
```

4.63.1.200. PATCH_ALREADY_APPLIED

This patch has already been applied

Signature:

```
PATCH_ALREADY_APPLIED(patch)
```

4.63.1.201. PATCH_ALREADY_EXISTS

The uploaded patch file already exists

Signature:

```
PATCH_ALREADY_EXISTS(uuid)
```

4.63.1.202. PATCH_APPLY_FAILED

The patch apply failed. Please see attached output.

Signature:

```
PATCH_APPLY_FAILED(output)
```

4.63.1.203. PATCH_APPLY_FAILED_BACKUP_FILES_EXIST

The patch apply failed: there are backup files created while applying patch. Please remove these backup files before applying patch again.

Signature:

```
PATCH_APPLY_FAILED_BACKUP_FILES_EXIST(output)
```

4.63.1.204. PATCH_IS_APPLIED

The specified patch is applied and cannot be destroyed.

No parameters.

4.63.1.205. PATCH_PRECHECK_FAILED_ISO_MOUNTED

Tools ISO must be ejected from all running VMs.

Signature:

```
PATCH_PRECHECK_FAILED_ISO_MOUNTED(patch)
```

4.63.1.206. PATCH_PRECHECK_FAILED_OUT_OF_SPACE

The patch precheck stage failed: the server does not have enough space.

Signature:

```
PATCH_PRECHECK_FAILED_OUT_OF_SPACE(patch, found_space, required_required)
```

4.63.1.207. PATCH_PRECHECK_FAILED_PREREQUISITE_MISSING

The patch precheck stage failed: prerequisite patches are missing.

Signature:

```
PATCH_PRECHECK_FAILED_PREREQUISITE_MISSING(patch, prerequisite_patch_uuid_list)
```

4.63.1.208. PATCH_PRECHECK_FAILED_UNKNOWN_ERROR

The patch precheck stage failed with an unknown error. See attached info for more details.

Signature:

```
PATCH_PRECHECK_FAILED_UNKNOWN_ERROR(patch, info)
```

4.63.1.209. PATCH_PRECHECK_FAILED_VM_RUNNING

The patch precheck stage failed: there are one or more VMs still running on the server. All VMs must be suspended before the patch can be applied.

Signature:

```
PATCH_PRECHECK_FAILED_VM_RUNNING(patch)
```

4.63.1.210. PATCH_PRECHECK_FAILED_WRONG_SERVER_BUILD

The patch precheck stage failed: the server is of an incorrect build.

Signature:

```
PATCH_PRECHECK_FAILED_WRONG_SERVER_BUILD(patch, found_build, required_build)
```

4.63.1.211. PATCH_PRECHECK_FAILED_WRONG_SERVER_VERSION

The patch precheck stage failed: the server is of an incorrect version.

Signature:

```
PATCH_PRECHECK_FAILED_WRONG_SERVER_VERSION(patch, found_version, required_version)
```

4.63.1.212. PBD_EXISTS

A PBD already exists connecting the SR to the host

Signature:

```
PBD_EXISTS(sr, host, pbd)
```

4.63.1.213. PERMISSION_DENIED

Caller not allowed to perform this operation.

Signature:

```
PERMISSION_DENIED(message)
```

4.63.1.214. PGPU_INSUFFICIENT_CAPACITY_FOR_VGPU

There is insufficient capacity on this PGPU to run the VGPU.

Signature:

```
PGPU_INSUFFICIENT_CAPACITY_FOR_VGPU(pgpu, vgpu_type)
```

4.63.1.215. PGPU_IN_USE_BY_VM

This PGPU is currently in use by running VMs.

Signature:

```
PGPU_IN_USE_BY_VM(VMs)
```

4.63.1.216. PGPU_NOT_COMPATIBLE_WITH_GPU_GROUP

PGPU type not compatible with destination group.

Signature:

```
PGPU_NOT_COMPATIBLE_WITH_GPU_GROUP(type, group_types)
```

4.63.1.217. PIF_ALREADY_BONDED

This operation cannot be performed because the pif is bonded.

Signature:

```
PIF_ALREADY_BONDED(PIF)
```

4.63.1.218. PIF_BOND_MORE_THAN_ONE_IP

Only one PIF on a bond is allowed to have an IP configuration.

No parameters.

4.63.1.219. PIF_BOND_NEEDS_MORE_MEMBERS

A bond must consist of at least two member interfaces

No parameters.

4.63.1.220. PIF_CANNOT_BOND_CROSS_HOST

You cannot bond interfaces across different hosts.

No parameters.

4.63.1.221. PIF_CONFIGURATION_ERROR

An unknown error occurred while attempting to configure an interface.

Signature:

```
PIF_CONFIGURATION_ERROR(PIF, msg)
```

4.63.1.222. PIF_DEVICE_NOT_FOUND

The specified device was not found.

No parameters.

4.63.1.223. PIF_DOES_NOT_ALLOW_UNPLUG

The operation you requested cannot be performed because the specified PIF does not allow unplug.

Signature:

```
PIF_DOES_NOT_ALLOW_UNPLUG(PIF)
```

4.63.1.224. PIF_HAS_NO_NETWORK_CONFIGURATION

PIF has no IP configuration (mode currently set to 'none')

Signature:

```
PIF_HAS_NO_NETWORK_CONFIGURATION(PIF)
```

4.63.1.225. PIF_HAS_NO_V6_NETWORK_CONFIGURATION

PIF has no IPv6 configuration (mode currently set to 'none')

Signature:

```
PIF_HAS_NO_V6_NETWORK_CONFIGURATION(PIF)
```

4.63.1.226. PIF_INCOMPATIBLE_PRIMARY_ADDRESS_TYPE

The primary address types are not compatible

Signature:

```
PIF_INCOMPATIBLE_PRIMARY_ADDRESS_TYPE(PIF)
```

4.63.1.227. PIF_IS_MANAGEMENT_INTERFACE

The operation you requested cannot be performed because the specified PIF is the management interface.

Signature:

```
PIF_IS_MANAGEMENT_INTERFACE(PIF)
```

4.63.1.228. PIF_IS_PHYSICAL

You tried to destroy a PIF, but it represents an aspect of the physical host configuration, and so cannot be destroyed. The parameter echoes the PIF handle you gave.

Signature:

```
PIF_IS_PHYSICAL(PIF)
```

4.63.1.229. PIF_IS_VLAN

You tried to create a VLAN on top of another VLAN - use the underlying physical PIF/bond instead

Signature:

```
PIF_IS_VLAN(PIF)
```

4.63.1.230. PIF_NOT_PRESENT

This host has no PIF on the given network.

Signature:

```
PIF_NOT_PRESENT(host, network)
```

4.63.1.231. PIF_TUNNEL_STILL_EXISTS

Operation cannot proceed while a tunnel exists on this interface.

Signature:

```
PIF_TUNNEL_STILL_EXISTS(PIF)
```

4.63.1.232. PIF_UNMANAGED

The operation you requested cannot be performed because the specified PIF is not managed by xapi.

Signature:

```
PIF_UNMANAGED(PIF)
```

4.63.1.233. PIF_VLAN_EXISTS

You tried to create a PIF, but it already exists.

Signature:

```
PIF_VLAN_EXISTS(PIF)
```

4.63.1.234. PIF_VLAN_STILL_EXISTS

Operation cannot proceed while a VLAN exists on this interface.

Signature:

```
PIF_VLAN_STILL_EXISTS(PIF)
```

4.63.1.235. POOL_AUTH_ALREADY_ENABLED

External authentication in this pool is already enabled for at least one host.

Signature:

```
POOL_AUTH_ALREADY_ENABLED(host)
```

4.63.1.236. POOL_AUTH_DISABLE_FAILED

The pool failed to disable the external authentication of at least one host.

Signature:

```
POOL_AUTH_DISABLE_FAILED(host, message)
```

4.63.1.237. POOL_AUTH_DISABLE_FAILED_INVALID_ACCOUNT

External authentication has been disabled with errors: Some AD machine accounts were not disabled on the AD server due to invalid account.

Signature:

```
POOL_AUTH_DISABLE_FAILED_INVALID_ACCOUNT(host, message)
```

4.63.1.238. POOL_AUTH_DISABLE_FAILED_PERMISSION_DENIED

External authentication has been disabled with errors: Your AD machine account was not disabled on the AD server as permission was denied.

Signature:

```
POOL_AUTH_DISABLE_FAILED_PERMISSION_DENIED(host, message)
```

4.63.1.239. POOL_AUTH_DISABLE_FAILED_WRONG_CREDENTIALS

External authentication has been disabled with errors: Some AD machine accounts were not disabled on the AD server due to invalid credentials.

Signature:

```
POOL_AUTH_DISABLE_FAILED_WRONG_CREDENTIALS(host, message)
```

4.63.1.240. POOL_AUTH_ENABLE_FAILED

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED(host, message)
```

4.63.1.241. POOL_AUTH_ENABLE_FAILED_DOMAIN_LOOKUP_FAILED

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED_DOMAIN_LOOKUP_FAILED(host, message)
```

4.63.1.242. POOL_AUTH_ENABLE_FAILED_DUPLICATE_HOSTNAME

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED_DUPLICATE_HOSTNAME(host, message)
```

4.63.1.243. POOL_AUTH_ENABLE_FAILED_INVALID_ACCOUNT

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED_INVALID_ACCOUNT(host, message)
```

4.63.1.244. POOL_AUTH_ENABLE_FAILED_INVALID_OU

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED_INVALID_OU(host, message)
```

4.63.1.245. POOL_AUTH_ENABLE_FAILED_PERMISSION_DENIED

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED_PERMISSION_DENIED(host, message)
```

4.63.1.246. POOL_AUTH_ENABLE_FAILED_UNAVAILABLE

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED_UNAVAILABLE(host, message)
```

4.63.1.247. POOL_AUTH_ENABLE_FAILED_WRONG_CREDENTIALS

The pool failed to enable external authentication.

Signature:

```
POOL_AUTH_ENABLE_FAILED_WRONG_CREDENTIALS(host, message)
```

4.63.1.248. POOL_JOINING_EXTERNAL_AUTH_MISMATCH

Cannot join pool whose external authentication configuration is different.

No parameters.

4.63.1.249. POOL_JOINING_HOST_HAS_BONDS

The host joining the pool must not have any bonds.

No parameters.

4.63.1.250. POOL_JOINING_HOST_HAS_NON_MANAGEMENT_VLANS

The host joining the pool must not have any non-management vlans.

No parameters.

4.63.1.251. POOL_JOINING_HOST_HAS_TUNNELS

The host joining the pool must not have any tunnels.

No parameters.

4.63.1.252. POOL_JOINING_HOST_MANAGEMENT_VLAN_DOES_NOT_MATCH

The host joining the pool must have the same management vlan.

Signature:

```
POOL_JOINING_HOST_MANAGEMENT_VLAN_DOES_NOT_MATCH(local, remote)
```

4.63.1.253. POOL_JOINING_HOST_MUST_HAVE_PHYSICAL_MANAGEMENT_NIC

The host joining the pool must have a physical management NIC (i.e. the management NIC must not be on a VLAN or bonded PIF).

No parameters.

4.63.1.254. POOL_JOINING_HOST_MUST_HAVE_SAME_API_VERSION

The host joining the pool must have the same API version as the pool master.

Signature:

```
POOL_JOINING_HOST_MUST_HAVE_SAME_API_VERSION(host_api_version, master_api_version)
```

4.63.1.255. POOL_JOINING_HOST_MUST_HAVE_SAME_DB_SCHEMA

The host joining the pool must have the same database schema as the pool master.

Signature:

```
POOL_JOINING_HOST_MUST_HAVE_SAME_DB_SCHEMA(host_db_schema, master_db_schema)
```

4.63.1.256. POOL_JOINING_HOST_MUST_HAVE_SAME_PRODUCT_VERSION

The host joining the pool must have the same product version as the pool master.

No parameters.

4.63.1.257. POOL_JOINING_HOST_MUST_ONLY_HAVE_PHYSICAL_PIFS

The host joining the pool must not have any bonds, VLANs or tunnels.

No parameters.

4.63.1.258. PROVISION_FAILED_OUT_OF_SPACE

The provision call failed because it ran out of space.

No parameters.

4.63.1.259. PROVISION_ONLY_ALLOWED_ON_TEMPLATE

The provision call can only be invoked on templates, not regular VMs.

No parameters.

4.63.1.260. PUSB_VDI_CONFLICT

The VDI corresponding to this PUSB has existing VBDs.

Signature:

```
PUSB_VDI_CONFLICT(PUSB, VDI)
```

4.63.1.261. PVS_CACHE_STORAGE_ALREADY_PRESENT

The PVS site already has cache storage configured for the host.

Signature:

```
PVS_CACHE_STORAGE_ALREADY_PRESENT(site, host)
```

4.63.1.262. PVS_CACHE_STORAGE_IS_IN_USE

The PVS cache storage is in use by the site and cannot be removed.

Signature:

```
PVS_CACHE_STORAGE_IS_IN_USE(PVS_cache_storage)
```

4.63.1.263. PVS_PROXY_ALREADY_PRESENT

The VIF is already associated with a PVS proxy

Signature:

```
PVS_PROXY_ALREADY_PRESENT(proxies)
```

4.63.1.264. PVS_SERVER_ADDRESS_IN_USE

The address specified is already in use by an existing PVS_server object

Signature:

```
PVS_SERVER_ADDRESS_IN_USE(address)
```

4.63.1.265. PVS_SITE_CONTAINS_RUNNING_PROXIES

The PVS site contains running proxies.

Signature:

```
PVS_SITE_CONTAINS_RUNNING_PROXIES(proxies)
```

4.63.1.266. PVS_SITE_CONTAINS_SERVERS

The PVS site contains servers and cannot be forgotten.

Signature:

```
PVS_SITE_CONTAINS_SERVERS(servers)
```

4.63.1.267. RBAC_PERMISSION_DENIED

RBAC permission denied.

Signature:

```
RBAC_PERMISSION_DENIED(permission, message)
```

4.63.1.268. REDO_LOG_IS_ENABLED

The operation could not be performed because a redo log is enabled on the Pool.

No parameters.

4.63.1.269. RESTORE_INCOMPATIBLE_VERSION

The restore could not be performed because this backup has been created by a different (incompatible) product version

No parameters.

4.63.1.270. RESTORE_SCRIPT_FAILED

The restore could not be performed because the restore script failed. Is the file corrupt?

Signature:

```
RESTORE_SCRIPT_FAILED(log)
```

4.63.1.271. RESTORE_TARGET_MGMT_IF_NOT_IN_BACKUP

The restore could not be performed because the host's current management interface is not in the backup. The interfaces mentioned in the backup are:

No parameters.

4.63.1.272. RESTORE_TARGET_MISSING_DEVICE

The restore could not be performed because a network interface is missing

Signature:

```
RESTORE_TARGET_MISSING_DEVICE(device)
```

4.63.1.273. ROLE_ALREADY_EXISTS

Role already exists.

No parameters.

4.63.1.274. ROLE_NOT_FOUND

Role cannot be found.

No parameters.

4.63.1.275. SESSION_AUTHENTICATION_FAILED

The credentials given by the user are incorrect, so access has been denied, and you have not been issued a session handle.

No parameters.

4.63.1.276. SESSION_INVALID

You gave an invalid session reference. It may have been invalidated by a server restart, or timed out. You should get a new session handle, using one of the session.login_ calls. This error does not invalidate the current connection. The handle parameter echoes the bad value given.

Signature:

```
SESSION_INVALID(handle)
```

4.63.1.277. SESSION_NOT_REGISTERED

This session is not registered to receive events. You must call event.register before event.next. The session handle you are using is echoed.

Signature:

```
SESSION_NOT_REGISTERED(handle)
```

4.63.1.278. SLAVE_REQUIRES_MANAGEMENT_INTERFACE

The management interface on a slave cannot be disabled because the slave would enter emergency mode.

No parameters.

4.63.1.279. SM_PLUGIN_COMMUNICATION_FAILURE

The SM plugin did not respond to a query.

Signature:

```
SM_PLUGIN_COMMUNICATION_FAILURE(sm)
```

4.63.1.280. SR_ATTACH_FAILED

Attaching this SR failed.

Signature:

```
SR_ATTACH_FAILED(sr)
```

4.63.1.281. SR_BACKEND_FAILURE

There was an SR backend failure.

Signature:

```
SR_BACKEND_FAILURE(status, stdout, stderr)
```

4.63.1.282. SR_DEVICE_IN_USE

The SR operation cannot be performed because a device underlying the SR is in use by the host.

No parameters.

4.63.1.283. SR_DOES_NOT_SUPPORT_MIGRATION

You attempted to migrate a VDI to or from an SR which doesn't support migration

Signature:

```
SR_DOES_NOT_SUPPORT_MIGRATION(sr)
```

4.63.1.284. SR_FULL

The SR is full. Requested new size exceeds the maximum size

Signature:

```
SR_FULL(requested, maximum)
```

4.63.1.285. SR_HAS_MULTIPLE_PBDS

The SR.shared flag cannot be set to false while the SR remains connected to multiple hosts

Signature:

```
SR_HAS_MULTIPLE_PBDS(PBD)
```

4.63.1.286. SR_HAS_NO_PBDS

The SR has no attached PBDs

Signature:

```
SR_HAS_NO_PBDS(sr)
```

4.63.1.287. SR_HAS_PBD

The SR is still connected to a host via a PBD. It cannot be destroyed or forgotten.

Signature:

```
SR_HAS_PBD(sr)
```

4.63.1.288. SR_INDESTRUCTIBLE

The SR could not be destroyed, as the 'indestructible' flag was set on it.

Signature:

```
SR_INDESTRUCTIBLE(sr)
```

4.63.1.289. SR_IS_CACHE_SR

The SR is currently being used as a local cache SR.

Signature:

```
SR_IS_CACHE_SR(host)
```

4.63.1.290. SR_NOT_ATTACHED

The SR is not attached.

Signature:

```
SR_NOT_ATTACHED(sr)
```

4.63.1.291. SR_NOT_EMPTY

The SR operation cannot be performed because the SR is not empty.

No parameters.

4.63.1.292. SR_NOT_SHARABLE

The PBD could not be plugged because the SR is in use by another host and is not marked as sharable.

Signature:

```
SR_NOT_SHARABLE(sr, host)
```

4.63.1.293. SR_OPERATION_NOT_SUPPORTED

The SR backend does not support the operation (check the SR's allowed operations)

Signature:

```
SR_OPERATION_NOT_SUPPORTED(sr)
```

4.63.1.294. SR_REQUIRES_UPGRADE

The operation cannot be performed until the SR has been upgraded

Signature:

```
SR_REQUIRES_UPGRADE(SR)
```

4.63.1.295. SR_UNKNOWN_DRIVER

The SR could not be connected because the driver was not recognised.

Signature:

```
SR_UNKNOWN_DRIVER(driver)
```

4.63.1.296. SR_UUID_EXISTS

An SR with that uuid already exists.

Signature:

```
SR_UUID_EXISTS(uuid)
```

4.63.1.297. SR_VDI_LOCKING_FAILED

The operation could not proceed because necessary VDIs were already locked at the storage level.

No parameters.

4.63.1.298. SSL_VERIFY_ERROR

The remote system's SSL certificate failed to verify against our certificate library.

Signature:

```
SSL_VERIFY_ERROR(reason)
```

4.63.1.299. SUBJECT_ALREADY_EXISTS

Subject already exists.

No parameters.

4.63.1.300. SUBJECT_CANNOT_BE_RESOLVED

Subject cannot be resolved by the external directory service.

No parameters.

4.63.1.301. SUSPEND_IMAGE_NOT_ACCESSIBLE

The suspend image of a checkpoint is not accessible from the host on which the VM is running

Signature:

```
SUSPEND_IMAGE_NOT_ACCESSIBLE(vdi)
```

4.63.1.302. SYSTEM_STATUS_MUST_USE_TAR_ON_OEM

You must use tar output to retrieve system status from an OEM host.

No parameters.

4.63.1.303. SYSTEM_STATUS_RETRIEVAL_FAILED

Retrieving system status from the host failed. A diagnostic reason suitable for support organisations is also returned.

Signature:

```
SYSTEM_STATUS_RETRIEVAL_FAILED(reason)
```

4.63.1.304. TASK_CANCELLED

The request was asynchronously cancelled.

Signature:

```
TASK_CANCELLED(task)
```

4.63.1.305. TLS_CONNECTION_FAILED

Cannot contact the other host using TLS on the specified address and port

Signature:

```
TLS_CONNECTION_FAILED(address, port)
```

4.63.1.306. TOO_BUSY

The request was rejected because the server is too busy.

No parameters.

4.63.1.307. TOO_MANY_PENDING_TASKS

The request was rejected because there are too many pending tasks on the server.

No parameters.

4.63.1.308. TOO_MANY_STORAGE_MIGRATES

You reached the maximal number of concurrently migrating VMs.

Signature:

```
TOO_MANY_STORAGE_MIGRATES(number)
```

4.63.1.309. TOO_MANY_VUSBS

The VM has too many VUSBs.

Signature:

```
TOO_MANY_VUSBS(number)
```

4.63.1.310. TRANSPORT_PIF_NOT_CONFIGURED

The tunnel transport PIF has no IP configuration set.

Signature:

```
TRANSPORT_PIF_NOT_CONFIGURED(PIF)
```

4.63.1.311. UNIMPLEMENTED_IN_SM_BACKEND

You have attempted a function which is not implemented

Signature:

```
UNIMPLEMENTED_IN_SM_BACKEND(message)
```

4.63.1.312. UNKNOWN_BOOTLOADER

The requested bootloader is unknown

Signature:

```
UNKNOWN_BOOTLOADER(vm, bootloader)
```

4.63.1.313. UPDATE_ALREADY_APPLIED

This update has already been applied.

Signature:

```
UPDATE_ALREADY_APPLIED(update)
```

4.63.1.314. UPDATE_ALREADY_APPLIED_IN_POOL

This update has already been applied to all hosts in the pool.

Signature:

```
UPDATE_ALREADY_APPLIED_IN_POOL(update)
```

4.63.1.315. UPDATE_ALREADY_EXISTS

The uploaded update already exists

Signature:

```
UPDATE_ALREADY_EXISTS(uuid)
```

4.63.1.316. UPDATE_APPLY_FAILED

The update failed to apply. Please see attached output.

Signature:

```
UPDATE_APPLY_FAILED(output)
```

4.63.1.317. UPDATE_IS_APPLIED

The specified update has been applied and cannot be destroyed.

No parameters.

4.63.1.318. UPDATE_POOL_APPLY_FAILED

The update cannot be applied for the following host(s).

Signature:

```
UPDATE_POOL_APPLY_FAILED(hosts)
```

4.63.1.319. UPDATE_PRECHECK_FAILED_CONFLICT_PRESENT

The update precheck stage failed: conflicting update(s) are present.

Signature:

```
UPDATE_PRECHECK_FAILED_CONFLICT_PRESENT(update, conflict_update)
```

4.63.1.320. UPDATE_PRECHECK_FAILED_GPGKEY_NOT_IMPORTED

The update precheck stage failed: RPM package validation requires a GPG key that is not present on the host.

Signature:

```
UPDATE_PRECHECK_FAILED_GPGKEY_NOT_IMPORTED(update)
```

4.63.1.321. UPDATE_PRECHECK_FAILED_OUT_OF_SPACE

The update precheck stage failed: the server does not have enough space.

Signature:

```
UPDATE_PRECHECK_FAILED_OUT_OF_SPACE(update, available_space, required_space )
```

4.63.1.322. UPDATE_PRECHECK_FAILED_PREREQUISITE_MISSING

The update precheck stage failed: prerequisite update(s) are missing.

Signature:

```
UPDATE_PRECHECK_FAILED_PREREQUISITE_MISSING(update, prerequisite_update)
```

4.63.1.323. UPDATE_PRECHECK_FAILED_UNKNOWN_ERROR

The update precheck stage failed with an unknown error.

Signature:

```
UPDATE_PRECHECK_FAILED_UNKNOWN_ERROR(update, info)
```

4.63.1.324. UPDATE_PRECHECK_FAILED_WRONG_SERVER_VERSION

The update precheck stage failed: the server is of an incorrect version.

Signature:

```
UPDATE_PRECHECK_FAILED_WRONG_SERVER_VERSION(update, installed_version,
 required_version )
```

4.63.1.325. USB_ALREADY_ATTACHED

The USB device is currently attached to a VM.

Signature:

```
USB_ALREADY_ATTACHED(PUSB, VM)
```

4.63.1.326. USB_GROUP_CONFLICT

USB_groups are currently restricted to contain no more than one VUSB.

Signature:

```
USB_GROUP_CONFLICT(USB_group)
```

4.63.1.327. USB_GROUP_CONTAINS_NO_PUSBS

The USB group does not contain any PUSBs.

Signature:

```
USB_GROUP_CONTAINS_NO_PUSBS(usb_group)
```

4.63.1.328. USB_GROUP_CONTAINS_PUSB

The USB group contains active PUSBs and cannot be deleted.

Signature:

```
USB_GROUP_CONTAINS_PUSB(pusbs)
```

4.63.1.329. USB_GROUP_CONTAINS_VUSB

The USB group contains active VUSBs and cannot be deleted.

Signature:

```
USB_GROUP_CONTAINS_VUSB(vusbs)
```

4.63.1.330. USER_IS_NOT_LOCAL_SUPERUSER

Only the local superuser can execute this operation

Signature:

```
USER_IS_NOT_LOCAL_SUPERUSER(msg)
```

4.63.1.331. UUID_INVALID

The uuid you supplied was invalid.

Signature:

```
UUID_INVALID(type, uuid)
```

4.63.1.332. V6D_FAILURE

There was a problem with the license daemon (v6d).

No parameters.

4.63.1.333. VALUE_NOT_SUPPORTED

You attempted to set a value that is not supported by this implementation. The fully-qualified field name and the value that you tried to set are returned. Also returned is a developer-only diagnostic reason.

Signature:

```
VALUE_NOT_SUPPORTED(field, value, reason)
```

4.63.1.334. VBD_CDS_MUST_BE_READONLY

Read/write CDs are not supported

No parameters.

4.63.1.335. VBD_IS_EMPTY

Operation could not be performed because the drive is empty

Signature:

```
VBD_IS_EMPTY(vbd)
```

4.63.1.336. VBD_NOT_EMPTY

Operation could not be performed because the drive is not empty

Signature:

```
VBD_NOT_EMPTY(vbd)
```

4.63.1.337. VBD_NOT_REMOVABLE_MEDIA

Media could not be ejected because it is not removable

Signature:

```
VBD_NOT_REMOVABLE_MEDIA(vbd)
```

4.63.1.338. VBD_NOT_UNPLUGGABLE

Drive could not be hot-unplugged because it is not marked as unpluggable

Signature:

```
VBD_NOT_UNPLUGGABLE(vbd)
```

4.63.1.339. VBD_TRAY_LOCKED

This VM has locked the DVD drive tray, so the disk cannot be ejected

Signature:

```
VBD_TRAY_LOCKED(vbd)
```

4.63.1.340. VDI_CBT_ENABLED

The requested operation is not allowed for VDIs with CBT enabled or VMs having such VDIs, and CBT is enabled for the specified VDI.

Signature:

```
VDI_CBT_ENABLED(vdi)
```

4.63.1.341. VDI_CONTAINS_METADATA_OF_THIS_POOL

The VDI could not be opened for metadata recovery as it contains the current pool's metadata.

Signature:

```
VDI_CONTAINS_METADATA_OF_THIS_POOL(vdi, pool)
```

4.63.1.342. VDI_COPY_FAILED

The VDI copy action has failed

No parameters.

4.63.1.343. VDI_HAS_RRDS

The operation cannot be performed because this VDI has rrd stats

Signature:

```
VDI_HAS_RRDS(vdi)
```

4.63.1.344. VDI_INCOMPATIBLE_TYPE

This operation cannot be performed because the specified VDI is of an incompatible type (eg: an HA statefile cannot be attached to a guest)

Signature:

```
VDI_INCOMPATIBLE_TYPE(vdi, type)
```

4.63.1.345. VDI_IN_USE

This operation cannot be performed because this VDI is in use by some other operation

Signature:

```
VDI_IN_USE(vdi, operation)
```

4.63.1.346. VDI_IS_A_PHYSICAL_DEVICE

The operation cannot be performed on physical device

Signature:

```
VDI_IS_A_PHYSICAL_DEVICE(vdi)
```

4.63.1.347. VDI_IS_NOT_ISO

This operation can only be performed on CD VDIs (iso files or CDROM drives)

Signature:

```
VDI_IS_NOT_ISO(vdi, type)
```

4.63.1.348. VDI_LOCATION_MISSING

This operation cannot be performed because the specified VDI could not be found in the specified SR

Signature:

```
VDI_LOCATION_MISSING(sr, location)
```

4.63.1.349. VDI_MISSING

This operation cannot be performed because the specified VDI could not be found on the storage substrate

Signature:

```
VDI_MISSING(sr, vdi)
```

4.63.1.350. VDI_NEEDS_VM_FOR_MIGRATE

You attempted to migrate a VDI which is not attached to a running VM.

Signature:

```
VDI_NEEDS_VM_FOR_MIGRATE(vdi)
```

4.63.1.351. VDI_NOT_AVAILABLE

This operation cannot be performed because this VDI could not be properly attached to the VM.

Signature:

```
VDI_NOT_AVAILABLE(vdi)
```

4.63.1.352. VDI_NOT_IN_MAP

This VDI was not mapped to a destination SR in VM.migrate_send operation

Signature:

```
VDI_NOT_IN_MAP(vdi)
```

4.63.1.353. VDI_NOT_MANAGED

This operation cannot be performed because the system does not manage this VDI

Signature:

```
VDI_NOT_MANAGED(vdi)
```

4.63.1.354. VDI_NOT_SPARSE

The VDI is not stored using a sparse format. It is not possible to query and manipulate only the changed blocks (or 'block differences' or 'disk deltas') between two VDIs. Please select a VDI which uses a sparse-aware technology such as VHD.

Signature:

```
VDI_NOT_SPARSE(vdi)
```

4.63.1.355. VDI_NO_CBT_METADATA

The requested operation is not allowed because the specified VDI does not have changed block tracking metadata.

Signature:

```
VDI_NO_CBT_METADATA(vdi)
```

4.63.1.356. VDI_ON_BOOT_MODE_INCOMPATIBLE_WITH_OPERATION

This operation is not permitted on VDIs in the 'on-boot=reset' mode, or on VMs having such VDIs.

No parameters.

4.63.1.357. VDI_READONLY

The operation required write access but this VDI is read-only

Signature:

```
VDI_READONLY(vdi)
```

4.63.1.358. VDI_TOO_SMALL

The VDI is too small. Please resize it to at least the minimum size.

Signature:

```
VDI_TOO_SMALL(vdi, minimum size)
```

4.63.1.359. VGPU_DESTINATION_INCOMPATIBLE

The VGPU is not compatible with any PGPU in the destination.

Signature:

```
VGPU_DESTINATION_INCOMPATIBLE(reason, vgpu, host)
```

4.63.1.360. VGPU_TYPE_NOT_COMPATIBLE_WITH_RUNNING_TYPE

VGPU type is not compatible with one or more of the VGPU types currently running on this PGPU

Signature:

```
VGPU_TYPE_NOT_COMPATIBLE_WITH_RUNNING_TYPE(pgpu, type, running_type)
```

4.63.1.361. VGPU_TYPE_NOT_ENABLED

VGPU type is not one of the PGPU's enabled types.

Signature:

```
VGPU_TYPE_NOT_ENABLED(type, enabled_types)
```

4.63.1.362. VGPU_TYPE_NOT_SUPPORTED

VGPU type is not one of the PGPU's supported types.

Signature:

```
VGPU_TYPE_NOT_SUPPORTED(type, supported_types)
```

4.63.1.363. VIF_IN_USE

Network has active VIFs

Signature:

```
VIF_IN_USE(network, VIF)
```

4.63.1.364. VIF_NOT_IN_MAP

This VIF was not mapped to a destination Network in VM.migrate_send operation

Signature:

```
VIF_NOT_IN_MAP(vif)
```

4.63.1.365. VLAN_IN_USE

Operation cannot be performed because this VLAN is already in use. Please check your network configuration.

Signature:

```
VLAN_IN_USE(device, vlan)
```

4.63.1.366. VLAN_TAG_INVALID

You tried to create a VLAN, but the tag you gave was invalid -- it must be between 0 and 4094. The parameter echoes the VLAN tag you gave.

Signature:

```
VLAN_TAG_INVALID(VLAN)
```

4.63.1.367. VMPP_ARCHIVE_MORE_FREQUENT_THAN_BACKUP

Archive more frequent than backup.

No parameters.

4.63.1.368. VMPP_HAS_VM

There is at least one VM assigned to this protection policy.

No parameters.

4.63.1.369. VMSS_HAS_VM

There is at least one VM assigned to snapshot schedule.

No parameters.

4.63.1.370. VMS_FAILED_TO_COOPERATE

The given VMs failed to release memory when instructed to do so

No parameters.

4.63.1.371. VM_ASSIGNED_TO_PROTECTION_POLICY

This VM is assigned to a protection policy.

Signature:

```
VM_ASSIGNED_TO_PROTECTION_POLICY(vm, vmpp)
```

4.63.1.372. VM_ASSIGNED_TO_SNAPSHOT_SCHEDULE

This VM is assigned to a snapshot schedule.

Signature:

```
VM_ASSIGNED_TO_SNAPSHOT_SCHEDULE(vm, vmss)
```

4.63.1.373. VM_ATTACHED_TO_MORE_THAN_ONE_VDI_WITH_TIMEOFFSET_MARKED_AS_RESET_ON_BOOT

You attempted to start a VM that's attached to more than one VDI with a timeoffset marked as reset-on-boot.

Signature:

```
VM_ATTACHED_TO_MORE_THAN_ONE_VDI_WITH_TIMEOFFSET_MARKED_AS_RESET_ON_BOOT(vm)
```

4.63.1.374. VM_BAD_POWER_STATE

You attempted an operation on a VM that was not in an appropriate power state at the time; for example, you attempted to start a VM that was already running. The parameters returned are the VM's handle, and the expected and actual VM state at the time of the call.

Signature:

```
VM_BAD_POWER_STATE(vm, expected, actual)
```

4.63.1.375. VM_BIOS_STRINGS_ALREADY_SET

The BIOS strings for this VM have already been set and cannot be changed.

No parameters.

4.63.1.376. VM_CALL_PLUGIN_RATE_LIMIT

There is a minimal interval required between consecutive plugin calls made on the same VM, please wait before retry.

Signature:

```
VM_CALL_PLUGIN_RATE_LIMIT(VM, interval, wait)
```

4.63.1.377. VM_CANNOT_DELETE_DEFAULT_TEMPLATE

You cannot delete the specified default template.

Signature:

```
VM_CANNOT_DELETE_DEFAULT_TEMPLATE(vm)
```

4.63.1.378. VM_CHECKPOINT_RESUME_FAILED

An error occured while restoring the memory image of the specified virtual machine

Signature:

```
VM_CHECKPOINT_RESUME_FAILED(vm)
```

4.63.1.379. VM_CHECKPOINT_SUSPEND_FAILED

An error occured while saving the memory image of the specified virtual machine

Signature:

```
VM_CHECKPOINT_SUSPEND_FAILED(vm)
```

4.63.1.380. VM_CRASHED

The VM crashed

Signature:

```
VM_CRASHED(vm)
```

4.63.1.381. VM_DUPLICATE_VBD_DEVICE

The specified VM has a duplicate VBD device and cannot be started.

Signature:

```
VM_DUPLICATE_VBD_DEVICE(vm, vbd, device)
```

4.63.1.382. VM_FAILED_SHUTDOWN_ACKNOWLEDGMENT

VM didn't acknowledge the need to shutdown.

No parameters.

4.63.1.383. VM_HALTED

The VM unexpectedly halted

Signature:

```
VM_HALTED(vm)
```

4.63.1.384. VM_HAS_CHECKPOINT

You attempted to migrate a VM which has a checkpoint.

Signature:

```
VM_HAS_CHECKPOINT(vm)
```

4.63.1.385. VM_HAS_NO_SUSPEND_VDI

VM cannot be resumed because it has no suspend VDI

Signature:

```
VM_HAS_NO_SUSPEND_VDI(vm)
```

4.63.1.386. VM_HAS_PCI_ATTACHED

This operation could not be performed, because the VM has one or more PCI devices passed through.

Signature:

```
VM_HAS_PCI_ATTACHED(vm)
```

4.63.1.387. VM_HAS_TOO_MANY_SNAPSHOTS

You attempted to migrate a VM with more than one snapshot.

Signature:

```
VM_HAS_TOO_MANY_SNAPSHOTS(vm)
```

4.63.1.388. VM_HAS_VGPU

This operation could not be performed, because the VM has one or more virtual GPUs.

Signature:

```
VM_HAS_VGPU(vm)
```

4.63.1.389. VM_HAS_VUSBS

The operation is not allowed when the VM has VUSBs.

Signature:

```
VM_HAS_VUSBS(VM)
```

4.63.1.390. VM_HOST_INCOMPATIBLE_VERSION

This VM operation cannot be performed on an older-versioned host during an upgrade.

Signature:

```
VM_HOST_INCOMPATIBLE_VERSION(host, vm)
```

4.63.1.391. VM_HOST_INCOMPATIBLE_VERSION_MIGRATE

You attempted to migrate a VM to a destination host which is older than the source host.

Signature:

```
VM_HOST_INCOMPATIBLE_VERSION_MIGRATE(host, vm)
```

4.63.1.392. VM_HOST_INCOMPATIBLE_VIRTUAL_HARDWARE_PLATFORM_VERSION

You attempted to run a VM on a host that cannot provide the VM's required Virtual Hardware Platform version.

Signature:

```
VM_HOST_INCOMPATIBLE_VIRTUAL_HARDWARE_PLATFORM_VERSION(host, host_versions, vm,
 vm_version)
```

4.63.1.393. VM_HVM_REQUIRED

HVM is required for this operation

Signature:

```
VM_HVM_REQUIRED(vm)
```

4.63.1.394. VM_INCOMPATIBLE_WITH_THIS_HOST

The VM is incompatible with the CPU features of this host.

Signature:

```
VM_INCOMPATIBLE_WITH_THIS_HOST(vm, host, reason)
```

4.63.1.395. VM_IS_IMMOBILE

The VM is configured in a way that prevents it from being mobile.

Signature:

```
VM_IS_IMMOBILE(VM)
```

4.63.1.396. VM_IS_PART_OF_AN_APPLIANCE

This operation is not allowed as the VM is part of an appliance.

Signature:

```
VM_IS_PART_OF_AN_APPLIANCE(vm, appliance)
```

4.63.1.397. VM_IS_PROTECTED

This operation cannot be performed because the specified VM is protected by xHA

Signature:

```
VM_IS_PROTECTED(vm)
```

4.63.1.398. VM_IS_TEMPLATE

The operation attempted is not valid for a template VM

Signature:

```
VM_IS_TEMPLATE(vm)
```

4.63.1.399. VM_IS_USING_NESTED_VIRT

This operation is illegal because the VM is using nested virtualisation.

Signature:

```
VM_IS_USING_NESTED_VIRT(VM)
```

4.63.1.400. VM_LACKS_FEATURE

You attempted an operation on a VM which lacks the feature.

Signature:

```
VM_LACKS_FEATURE(vm)
```

4.63.1.401. VM_LACKS_FEATURE_SHUTDOWN

You attempted an operation which needs the cooperative shutdown feature on a VM which lacks it.

Signature:

```
VM_LACKS_FEATURE_SHUTDOWN(vm)
```

4.63.1.402. VM_LACKS_FEATURE_STATIC_IP_SETTING

You attempted an operation which needs the VM static-ip-setting feature on a VM which lacks it.

Signature:

```
VM_LACKS_FEATURE_STATIC_IP_SETTING(vm)
```

4.63.1.403. VM_LACKS_FEATURE_SUSPEND

You attempted an operation which needs the VM cooperative suspend feature on a VM which lacks it.

Signature:

```
VM_LACKS_FEATURE_SUSPEND(vm)
```

4.63.1.404. VM_LACKS_FEATURE_VCPU_HOTPLUG

You attempted an operation which needs the VM hotplug-vcpu feature on a VM which lacks it.

Signature:

```
VM_LACKS_FEATURE_VCPU_HOTPLUG(vm)
```

4.63.1.405. VM_MEMORY_SIZE_TOO_LOW

The specified VM has too little memory to be started.

Signature:

```
VM_MEMORY_SIZE_TOO_LOW(vm)
```

4.63.1.406. VM_MIGRATE_FAILED

An error occurred during the migration process.

Signature:

```
VM_MIGRATE_FAILED(vm, source, destination, msg)
```

4.63.1.407. VM_MISSING_PV_DRIVERS

You attempted an operation on a VM which requires PV drivers to be installed but the drivers were not detected.

Signature:

```
VM_MISSING_PV_DRIVERS(vm)
```

4.63.1.408. VM_NOT_RESIDENT_HERE

The specified VM is not currently resident on the specified host.

Signature:

```
VM_NOT_RESIDENT_HERE(vm, host)
```

4.63.1.409. VM_NO_CRASHDUMP_SR

This VM does not have a crashdump SR specified.

Signature:

```
VM_NO_CRASHDUMP_SR(vm)
```

4.63.1.410. VM_NO_EMPTY_CD_VBD

The VM has no empty CD drive (VBD).

Signature:

```
VM_NO_EMPTY_CD_VBD(vm)
```

4.63.1.411. VM_NO_SUSPEND_SR

This VM does not have a suspend SR specified.

Signature:

```
VM_NO_SUSPEND_SR(vm)
```

4.63.1.412. VM_NO_VCPUS

You need at least 1 VCPU to start a VM

Signature:

```
VM_NO_VCPUS(vm)
```

4.63.1.413. VM_OLD_PV_DRIVERS

You attempted an operation on a VM which requires a more recent version of the PV drivers. Please upgrade your PV drivers.

Signature:

```
VM_OLD_PV_DRIVERS(vm, major, minor)
```

4.63.1.414. VM_PV_DRIVERS_IN_USE

VM PV drivers still in use

Signature:

```
VM_PV_DRIVERS_IN_USE(vm)
```

4.63.1.415. VM_REBOOTED

The VM unexpectedly rebooted

Signature:

```
VM_REBOOTED(vm)
```

4.63.1.416. VM_REQUIRES_GPU

You attempted to run a VM on a host which doesn't have a pGPU available in the GPU group needed by the VM. The VM has a vGPU attached to this GPU group.

Signature:

```
VM_REQUIRES_GPU(vm, GPU_group)
```

4.63.1.417. VM_REQUIRES_IOMMU

You attempted to run a VM on a host which doesn't have I/O virtualization (IOMMU/VT-d) enabled, which is needed by the VM.

Signature:

```
VM_REQUIRES_IOMMU(host)
```

4.63.1.418. VM_REQUIRES_NETWORK

You attempted to run a VM on a host which doesn't have a PIF on a Network needed by the VM. The VM has at least one VIF attached to the Network.

Signature:

```
VM_REQUIRES_NETWORK(vm, network)
```

4.63.1.419. VM_REQUIRES_SR

You attempted to run a VM on a host which doesn't have access to an SR needed by the VM. The VM has at least one VBD attached to a VDI in the SR.

Signature:

```
VM_REQUIRES_SR(vm, sr)
```

4.63.1.420. VM_REQUIRES_VDI

VM cannot be started because it requires a VDI which cannot be attached

Signature:

```
VM_REQUIRES_VDI(vm, vdi)
```

4.63.1.421. VM_REQUIRES_VGPU

You attempted to run a VM on a host on which the vGPU required by the VM cannot be allocated on any pGPUs in the GPU_group needed by the VM.

Signature:

```
VM_REQUIRES_VGPU(vm, GPU_group, vGPU_type)
```

4.63.1.422. VM_REQUIRES_VUSB

You attempted to run a VM on a host on which the VUSB required by the VM cannot be allocated on any PUSBs in the USB_group needed by the VM.

Signature:

```
VM_REQUIRES_VUSB(vm, USB_group)
```

4.63.1.423. VM_REVERT_FAILED

An error occured while reverting the specified virtual machine to the specified snapshot

Signature:

```
VM_REVERT_FAILED(vm, snapshot)
```

4.63.1.424. VM_SHUTDOWN_TIMEOUT

VM failed to shutdown before the timeout expired

Signature:

```
VM_SHUTDOWN_TIMEOUT(vm, timeout)
```

4.63.1.425. VM_SNAPSHOT_WITH_QUIESCE_FAILED

The quiesced-snapshot operation failed for an unexpected reason

Signature:

```
VM_SNAPSHOT_WITH_QUIESCE_FAILED(vm)
```

4.63.1.426. VM_SNAPSHOT_WITH_QUIESCE_NOT_SUPPORTED

The VSS plug-in is not installed on this virtual machine

Signature:

```
VM_SNAPSHOT_WITH_QUIESCE_NOT_SUPPORTED(vm, error)
```

4.63.1.427. VM_SNAPSHOT_WITH_QUIESCE_PLUGIN_DEOS_NOT_RESPOND

The VSS plug-in cannot be contacted

Signature:

```
VM_SNAPSHOT_WITH_QUIESCE_PLUGIN_DEOS_NOT_RESPOND(vm)
```

4.63.1.428. VM_SNAPSHOT_WITH_QUIESCE_TIMEOUT

The VSS plug-in has timed out

Signature:

```
VM_SNAPSHOT_WITH_QUIESCE_TIMEOUT(vm)
```

4.63.1.429. VM_TOO_MANY_VCPUS

Too many VCPUs to start this VM

Signature:

```
VM_TOO_MANY_VCPUS(vm)
```

4.63.1.430. VM_TO_IMPORT_IS_NOT_NEWER_VERSION

The VM cannot be imported unforced because it is either the same version or an older version of an existing VM.

Signature:

```
VM_TO_IMPORT_IS_NOT_NEWER_VERSION(vm, existing_version, version_to_import)
```

4.63.1.431. VM_UNSAFE_BOOT

You attempted an operation on a VM that was judged to be unsafe by the server. This can happen if the VM would run on a CPU that has a potentially incompatible set of feature flags to those the VM requires. If you want to override this warning then use the 'force' option.

Signature:

```
VM_UNSAFE_BOOT(vm)
```

4.63.1.432. WLB_AUTHENTICATION_FAILED

WLB rejected our configured authentication details.

No parameters.

4.63.1.433. WLB_CONNECTION_REFUSED

WLB refused a connection to the server.

No parameters.

4.63.1.434. WLB_CONNECTION_RESET

The connection to the WLB server was reset.

No parameters.

4.63.1.435. WLB_DISABLED

This pool has wlb-enabled set to false.

No parameters.

4.63.1.436. WLB_INTERNAL_ERROR

WLB reported an internal error.

No parameters.

4.63.1.437. WLB_MALFORMED_REQUEST

WLB rejected the server's request as malformed.

No parameters.

4.63.1.438. WLB_MALFORMED_RESPONSE

WLB said something that the server wasn't expecting or didn't understand. The method called on WLB, a diagnostic reason, and the response from WLB are returned.

Signature:

```
WLB_MALFORMED_RESPONSE(method, reason, response)
```

4.63.1.439. WLB_NOT_INITIALIZED

No WLB connection is configured.

No parameters.

4.63.1.440. WLB_TIMEOUT

The communication with the WLB server timed out.

Signature:

```
WLB_TIMEOUT(configured_timeout)
```

4.63.1.441. WLB_UNKNOWN_HOST

The configured WLB server name failed to resolve in DNS.

No parameters.

4.63.1.442. WLB_URL_INVALID

The WLB URL is invalid. Ensure it is in format: <ipaddress>:<port>. The configured/given URL is returned.

Signature:

```
WLB_URL_INVALID(url)
```

4.63.1.443. WLB_XENSERVER_AUTHENTICATION_FAILED

WLB reported that the server rejected its configured authentication details.

No parameters.

4.63.1.444. WLB_XENSERVER_CONNECTION_REFUSED

WLB reported that the server refused it a connection (even though we're connecting perfectly fine in the other direction).

No parameters.

4.63.1.445. WLB_XENSERVER_MALFORMED_RESPONSE

WLB reported that the server said something to it that WLB wasn't expecting or didn't understand.

No parameters.

4.63.1.446. WLB_XENSERVER_TIMEOUT

WLB reported that communication with the server timed out.

No parameters.

4.63.1.447. WLB_XENSERVER_UNKNOWN_HOST

WLB reported that its configured server name for this server instance failed to resolve in DNS.

No parameters.

4.63.1.448. XAPI_HOOK_FAILED

3rd party xapi hook failed

Signature:

```
XAPI_HOOK_FAILED(hook_name, reason, stdout, exit_code)
```

4.63.1.449. XENAPI_MISSING_PLUGIN

The requested plugin could not be found.

Signature:

```
XENAPI_MISSING_PLUGIN(name)
```

4.63.1.450. XENAPI_PLUGIN_FAILURE

There was a failure communicating with the plugin.

Signature:

```
XENAPI_PLUGIN_FAILURE(status, stdout, stderr)
```

4.63.1.451. XEN_VSS_REQ_ERROR_ADDING_VOLUME_TO_SNAPSET_FAILED

Some volumes to be snapshot could not be added to the VSS snapshot set

Signature:

```
XEN_VSS_REQ_ERROR_ADDING_VOLUME_TO_SNAPSET_FAILED(vm, error_code)
```

4.63.1.452. XEN_VSS_REQ_ERROR_CREATING_SNAPSHOT

An attempt to create the snapshots failed

Signature:

```
XEN_VSS_REQ_ERROR_CREATING_SNAPSHOT(vm, error_code)
```

4.63.1.453. XEN_VSS_REQ_ERROR_CREATING_SNAPSHOT_XML_STRING

Could not create the XML string generated by the transportable snapshot

Signature:

```
XEN_VSS_REQ_ERROR_CREATING_SNAPSHOT_XML_STRING(vm, error_code)
```

4.63.1.454. XEN_VSS_REQ_ERROR_INIT_FAILED

Initialization of the VSS requester failed

Signature:

```
XEN_VSS_REQ_ERROR_INIT_FAILED(vm, error_code)
```

4.63.1.455. XEN_VSS_REQ_ERROR_NO_VOLUMES_SUPPORTED

Could not find any volumes supported by the Vss Provider

Signature:

```
XEN_VSS_REQ_ERROR_NO_VOLUMES_SUPPORTED(vm, error_code)
```

4.63.1.456. XEN_VSS_REQ_ERROR_PREPARING_WRITERS

An attempt to prepare VSS writers for the snapshot failed

Signature:

```
XEN_VSS_REQ_ERROR_PREPARING_WRITERS(vm, error_code)
```

4.63.1.457. XEN_VSS_REQ_ERROR_PROV_NOT_LOADED

The Vss Provider is not loaded

Signature:

```
XEN_VSS_REQ_ERROR_PROV_NOT_LOADED(vm, error_code)
```

4.63.1.458. XEN_VSS_REQ_ERROR_START_SNAPSHOT_SET_FAILED

An attempt to start a new VSS snapshot failed

Signature:

```
XEN_VSS_REQ_ERROR_START_SNAPSHOT_SET_FAILED(vm, error_code)
```

4.63.1.459. XMLRPC_UNMARSHAL_FAILURE

The server failed to unmarshal the XMLRPC message; it was expecting one element and received something else.

Signature:

```
XMLRPC_UNMARSHAL_FAILURE(expected, received)
```