# New Features and Improvements in XenServer 6.2.0 Service Pack 1

XenServer 6.2.0 Service Pack 1 includes the following new features and ongoing improvements:

### 3D Graphics Pack (3DGP)

Support for hardware-accelerated vGPUs based on the NVIDIA GRID technology.
Customers who have NVIDIA GRID K1 or GRID K2 cards installed in their systems can use this technology to share GPUs between multiple Virtual Machines. When combined with XenDesktop HDX 3D Pro, this enables the use of rich 3D applications, such as CAD, to be used by up to 64 concurrent VMs per server[1].

### New Guests: Windows 8.1 and Windows Server 2012R2

The latest versions of Windows 8.1 and Windows Server 2012R2 can be installed using the Windows 8 and Windows Server 2012 templates.

### Site Recovery Improvements to Support Large Environments

The Site Recovery wizard allows multiple fibre-channel LUNs to be connected in a single step, dramatically reducing the time to recover complex environments in the event of a disaster.

### Other Functional improvements

- GPU pass-through improvements including XenCenter configuration.
- New SR wizard allows up to 50 new fibre-channel HBA SRs to be created in a single step.
- Security Hotfix and functional Hotfix roll-up.

## Compatibility

Service Pack 1 (XS62ESP1) can be installed on XenServer 6.2.0 with any publically available hotfix combination (of the form XS62Ennn).

The Service Pack includes all functionality included in hotfixes 1-12 for XenServer 6.2.0 (XS62E001 – XS62E012).

- Before installing Service Pack 1, customers should upgrade XenCenter.

- After installing Service Pack 1 (SP1) customers will be required to **reboot** their hosts and upgrade the XenServer Tools in all Virtual Machines (Windows and Linux VMs).
  For full installation details, refer to [CTX139788](CTX139788).


  **Warning**:  Customers who have installed a hotfix of the form XS62Ennn, where nnn is greater than 13, should install SP1 and then ensure that they also install the corresponding hotfix for SP1 (of the form XS62ESP1nnn), in order to achieve the same patch level.

  **Note:** There is no requirement to install any hotfixes before applying Service Pack 1.

  **Note**: Customers who have previously installed the vGPU Tech Preview (XS62ETP001) on a host, cannot subsequently install Service Pack 1. Customers wishing to install Service Pack 1 will need to do a fresh installation of XenServer 6.2.0, before installing Service Pack 1.

---

[1] This number is dependent on hardware and VM configuration.

## Issues Resolved in This Service Pack

- A Windows guest's PV driver resource rebalance can cause the VM to crash with a Blue Screen.

- In some cases, when performing a VM XenMotion, the in-guest Dynamic Memory Control (DMC) driver can fail to exit, causing a guest to freeze, showing 100% CPU usage.

- The XenServer Tools installer can fail if the Windows Management Instrumentation (WMI) service is unavailable.

- Attempts to import Windows 8 VMs can fail if:

  - the VMs were created in XenServer v6.0.2 or earlier;

  - the VMs were created in XenCenter using a non-Windows8 template;

  - the VMs do not have the XenServer Tools installed.

- Two login attempts with different, incorrect passwords can cause XenCenter to keep trying to connect indefinitely. Depending on your password policy, this can also lead to your Active Directory account being locked.

- Viewing license details at the same time as other servers are being connected or disconnected may cause XenCenter to crash.

- If any hosts are not licensed, the Licence Manager is displayed every time XenCenter is started.

- For Linux guests, XenCenter reports the IP address of the network interface alias rather than the address of the interface.

- XenServer's version of *logrotate* conflicts with the standard Linux distributed version and can prevent metadata backup from working correctly.

## Issues Resolved in Previous Hotfixes also included in Service Pack 1

### Originally fixed in XS62E001
- A Windows VM may display the Found New Hardware dialog box on the Console tab of the VM.

### Originally fixed in XS62E002
- CTX137657 – Citrix XenServer Multiple Security Updates

- CTX138058 – [Security vulnerability in Citrix XenServer PV guest kernel loading could result in privilege escalation](#)

- CTX138134 – [Memory Management Vulnerability in Citrix XenServer Could Result in Host Compromise](#)

### Originally fixed in XS62E003
- When detaching an HBA Storage Repository (SR), and then attempting to reattach it using XenCenter, the reattach operation will fail with the message: `The SCSI id parameter is missing or incorrect.`

- When using XenCenter to move a large disk to a different SR, the operation can time out and fail to complete.

- System Alerts generated for XenServer v6.1.0 hosts display numerical alert severities.

- For XenServer v6.1.0 and earlier versions, the XenCenter License Manager can incorrectly report the license type as "Free Edition" for paid-for editions (that is, Advanced, Enterprise, or Platinum).

XenServer 6.2.0 Service Pack 1: Release Notes
December 2013

- When trying to join an unlicensed host to a licensed pool, XenCenter should offer to apply a license to the new host. This works correctly for XenServer v6.1.0 and earlier hosts, but does not happen in v6.2.0. This means that the new host cannot join a pool until it is licensed separately.

- Joining a licensed host to an unlicensed pool should not be possible; however XenCenter does not apply this rule to v6.2.0 hosts and allows the customer to attempt this operation.

- In rare cases when a pool contains hosts with different license types, the pool's license should be reported as the least privileged license in the pool. However XenCenter's License Manager incorrectly lists the pool master's license as the pool's license type.

- In a pool consisting of XenServer v6.1.0 or earlier hosts, it is impossible to apply a free license to the pool using XenCenter. This is because free licenses have to be applied to each host separately; XenCenter incorrectly lists the whole pool as one item in the License Manager.

- When configuring High Availability (HA), XenCenter may not set the restart priority on all of the VMs, so they will not be protected to the required level. (It will only set the rows that are selected (blue) on the table of VMs and their restart priorities).

## Originally fixed in XS62E004

- Certain network traffic patterns can cause kernel memory leak in the Control Domain (dom0), which can eventually result in a XenServer host crash.

- Path failures in high-speed storage networks, combined with a very fast CPU, may lead to premature I/O errors.

- In some cases, it may not be possible to automatically recover storage paths from outages in multipathed environments.

## Originally fixed in XS62E005

- When setting the ipv6-allowed parameter and then attempting to clear the value, the value does not get cleared as the code does not handle clearing the parameter correctly.

- Customers will not be able to override the emulation of a serial port for HVM guests by using the `other-config:hvm_serial` parameter.

- For VMs configured with GPU Pass-through, attempts to cancel the VM shut down process can leave the VM in an unstable state.

- XenServer incorrectly allows customers to assign a dom0-owned GPU to a VM. This can eventually lead to a host crash.

- When using OpenFlow controllers (for example, the XenServer vSwitch Controller), attempts to create a VIF with the `locking_mode` parameter set to **disabled**, can fail with the following message: `You attempted an operation that is not allowed`.

- When using XenCenter to add a new Virtual Local Area Network (VLAN) on a pool of XenServer hosts, the VLAN will not be configured on hosts in maintenance mode.

- When using Jumbo Frames for storage traffic (with an MTU larger than 1500 on the storage interface), attempts to reboot a host with High Availability (HA) enabled may lead to the XenServer host being unable to fully boot.

- Attempts to join an Active Directory domain can fail when it is on a different domain to the XenServer host's DNS domain.

## Originally fixed in XS62E010

- When using GPU pass-through, if the correct GPU device drivers are not installed in the guest, the console window is displayed in VGA mode (16-bit Colour, 640x480).

- When using GPU pass-through, the standard windows recovery options are not shown after a system crash.

## Originally fixed in XS62E011

- LVM-based storage repositories allow creation of VHD files 2048 GB in size. Writing to the final blocks can lead to a VDI corruption and data loss.

- A mismatch in protocol between Storage plugin and XenCenter could stop users from creating a iSCSI based SR when specifying more than one target IP address.

- If a Storage array reports IPv6 addresses one of the following error may be displayed: "`The SR failed to complete the operation`" or "`ValueError: too many values to unpack or received signal: SIGSEGV`".

- In some cases, Multipathing is shown as 'Not active' in XenCenter even when there are active paths present in the corresponding storage repository (SR).

## Originally fixed in XS62E012

- Certain network traffic patterns can cause kernel memory leak in the Control Domain (dom0), which can eventually result in a XenServer host crash.

- When running XenServer hosts on hardware which enable 64-bit Memory-mapped I/O (MMIO), attempts to use the GPU Pass-through feature can result in a Machine Check Exception (MCE).

- In rare cases, running XenServer hosts with Windows VMs using PV drivers issued before XenServer 6.2.0 or Hotfix XS61E029 for XenServer 6.1.0, can cause CPU Soft Lockup issues or a host crash.

- When OpenvSwitch is configured to be the network stack and a network interface is inactive, rebooting a XenServer host can result in a loss of network connectivity. This is due to a bug that fails to detect the LINK DOWN status of the inactive network interface after a host reboot.

# Known issues and limitations in Service Pack 1

- Customers who select greater than 50 Storage Repositories (SRs) may find that the New SR wizard prematurely exits. Re-running the New SR wizard will create the remaining SRs.

- In some circumstances, the automatic numbering of new SRs may skip one of the sequenced numbers. However, all SRs are created.

- The New SR wizard uses "`Hardware HBA virtual disk`" as the naming prefix, even if customers select a different name.

- When adding HBA SRs to a pool of XenServer hosts, customers should ensure that LUNs are mapped to all hosts in the pool.

- ICA connections can fail when attempting to connect with a client that has two or more monitors with custom resolutions, or when the monitors have different resolutions.

- With high screen resolutions (such as 2560x1600), a lower than expected Frames per Second (FPS) may be apparent, impacting user experience. Users can change the `[HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Graphics]"EncodeSpeed"=dword:00000002` registry key to work around this issue.

- A VM which has had a GPU or vGPU assigned and then removed, may present a blank screen to users when attempting to connect using ICA.

- While connecting to high resolution displays (for example: 2560x1600) artifacts of previously opened windows can remain. To ensure that the screen is refreshed, users can add the following registry key:
  `[HKEY_LOCAL_MACHINE\Software\Citrix\HDX3D\BitmapRemotingConfig]"HKLM_Enab leDirtyRect"=dword:00000000`

- After installing the NVIDIA drivers in the XenServer Control Domain (dom0), the NVIDIA module (nvidia) is not loaded correctly. Refer to [CTX139834](#) for more information on this issue.

- During ICA connections when using a multi-monitor setup with misaligned horizontal or vertical monitors, NVIDIA VGX can fail and sessions can revert to using the standard Windows Graphical Device Interface (GDI). Mouse cursor movements may be inconsistent, Windows Aero may be disabled and there may be high CPU consumption on the host. Disconnect and reconnect to the session to resolve this issue.

- XenCenter shows graphs for GPU Pass-through even though performance data is unavailable.

- If a customer attempts to install new XenServer Tools on a VM which has previously had XenServer Tools installed and then removed, they may find that the Installation Wizard hangs trying to uninstall the tools. Customers can recover from this situation by installing the XenServer Tools from their previous version of XenServer (found on the previous XenServer installation CD in `client_install/windows-pvdrivers-xensetup.exe`), before attempting to upgrade to the new XenServer Tools.

- When trying to start a vGPU-enabled VM on a pool where the required vGPU type cannot be allocated, the following error message is displayed: "`vGPU type is not compatible with one or more of the vGPU types currently running on this pGPU`". The message should be interpreted as: "`There is no available GPU capacity to start this VM`".

- On Windows Vista and Windows Server 2008 guests, network configuration, such as static IP addresses, is occasionally lost during the XenServer Tools installation and upgrade.

- When there is limited GPU capacity in the pool, some VMs may fail to start. A workaround is to start VM one at a time as physical GPUs approach full capacity.

- When an HDX connection to a Windows 7 64-bit VM is closed, VM shutdown can take up to 10 minutes to complete. Customers are advised to first shut down the VM and then close the HDX connection from the client.

- Customers installing Windows 8.1 and Windows Server 2012 R2 guests, may find that the guest freezes with a black screen. This is due to a Microsoft errata. Re-booting the VM will temporarily

clear the issue, however customers should install Microsoft Update KB2887595 to ensure that this problem does not re-occur.

## About Citrix

Citrix (NASDAQ:CTXS) is the cloud company that enables mobile workstyles empowering people to work and collaborate from anywhere, securely accessing apps and data on any of the latest devices, as easily as they would in their own office. Citrix solutions help IT and service providers build clouds, leveraging virtualization and networking technologies to deliver high-performance, elastic and cost-effective cloud services. With market-leading solutions for mobility, desktop virtualization, cloud networking, cloud platforms, collaboration and data sharing, Citrix helps organizations of all sizes achieve the speed and agility necessary to succeed in a mobile and dynamic world. Citrix products are in use at more than 260,000 organizations and by over 100 million users globally. Annual revenue in 2012 was $2.59 billion. Learn more at www.citrix.com.

851 West Cypress Creek Road

Fort Lauderdale, FL 33099

954-267-3000

www.citrix.com