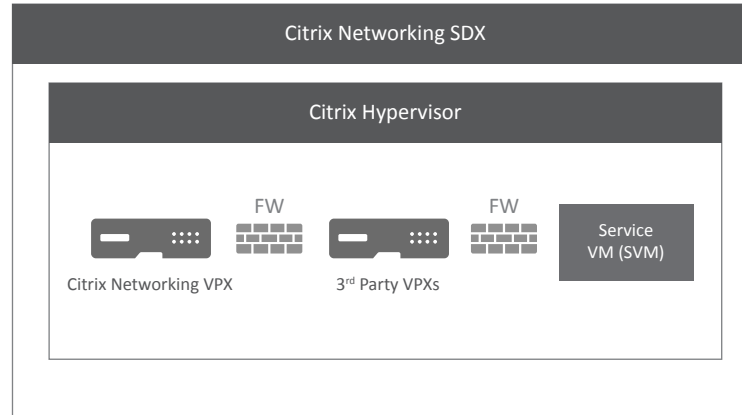## Basic SDX Information

NetScaler SDX is a hardware-based Delivery Appliance for enterprise and cloud datacenters. It supports hosting of multiple NetScaler instances on a single hardware and can thus be used for the purpose of Multi-tenancy.

The SDX appliance provides a Management Service that is pre-provisioned on the appliance. The Management Service provides a user interface (HTTP and HTTPS modes) and an API to configure, manage, and monitor the appliance, the Management Service, and the instances. A Citrix self-signed certificate is prepackaged for HTTPS support.

SDX Components

XenServer	SDX hardware runs on Citrix Hypervisor, XenServer
Service Management (SVM)	Central Management Dashboard providing services such as VPX instance creation, reporting and logging
NetScaler VPX	VPX VMs provisioned on the SDX to provide mutli-tenant solution
3rd Party VPXs	Third-party VPXs such as TrendMicro, PaloAlto, Websense, etc. can also be hosted on SDX.

Common Service Management (SVM) Ports

TYPE	PORT	DETAILS
TCP	80	Used for incoming HTTP (GUI and NITRO) requests. One of the primary interfaces to access the SDX SVM interface.
TCP	443	Used for incoming secured HTTP (GUI and NITRO) requests. One of the primary interfaces to access the SDX SVM interface.
TCP	22	Used for SSH and SCP access to the SDX Management Service interface.
UDP	161	The SDX SVM interface for SNMP traps from the Citrix ADC instances hosted on the SDX appliance. The SDX Management Service interface for walks/get requests.
UDP	162	

SDX Lights Out Management (LOM) Initial Configuration

	Default username and password: **nsroot/nsroot**
LOM module	• Will boot with the default IP address of 192.168.1.3 • Will NOT have a default gateway assigned
Logging onto the LOM module to perform the initial configuration	• Use a crossover cable to connect a laptop to the LOM interface • Connect a laptop in the same broadcast domain, as 192.168.1.0/24

More information can be found in **CTX200084**

Citrix Networking SDX

Citrix Hypervisor

FW   FW   Service VM (SVM)

Citrix Networking VPX   3rd Party VPXs

SVM Common Log Files

/var/mps/log/ **mps_config.log**	All SVM config activity logs
/var/mps/log/ **mps_inventory.log**	SVM's inventory system that polls the state of VM's on SDX
/var/mps/log/ **mps_service.log**	UI to SVM backend activity logs
/var/mps/log/ **mps_event.log**	SVM generated event information
/var/mps/log/ **mps_stat.log**	SVM statistics collection messages
/var/mps/ **system_health/***	SDX Health Information that is reflected in the SVM dashboard
/var/mps/log/ **upgradebundle.log**	Single bundle upgrade process status log

XS Common Log Files

/var/log/**kern.log, dmesg**	XS kernel, disk, NIC messages
/var/log/**xensource.log**	XS command (XAPI) debug logs
/var/log/**daemon.log**	Openvswitch daemon logs
/var/log/**fvt/fvt.log**	Tests to check sanity of hardware across reboots
drive-tests.txt	Smartctl tests of disks
dmidecode.out	Human readable SMBIOS contents describing system hardware
ethtool*.out	Output of ethtool with different flags
ovs-appctl-bond*.out	Openvswitch bond information
lspci-vv.out	PCI listing of devices on XS
/var/log/**installer**	XS upgrade logs during single bundle upgrade/Factory reset/clean install

Accessing SDX Components

XenServer	1. Connect via LOM 2. Connect to the serial console 3. SSH to the XenServer (dom0) IP address 4. SSH to SVM IP; from shell: SSH to 169.254.0.1 (SVM Internal IP)

SVM	1. SSH to SVM IP Address
	2. Login to XS, then:
	  a. SSH to SVM's external IP
	  b. SSH to SVM's SDX internal IP: 169.254.0.10 (XS Internal IP)
	  c. Get dom-id from xl list; then xl console <dom-id>

NetScaler VPX	1. SSH to VPX IP Address
	2. Login to XS, then:
	  a. SSH to VPX's NSIP
	  b. Get dom-id from xl list; then: xl console <dom-id>

Link Aggregation on SDX

TYPE	DESCRIPTION	PORT TYPE
Active-Active	Source level balancing (SLB). Outgoing traffic is balanced based on traffic on participating interfaces. Each packet with new source MAC is sent on an interface with least traffic.	Management Ports
Active-Passive	One of the interfaces is active at any time. When it fails, a new active interface is chosen.	
LACP	Interfaces in a LACP channel are treated as a single interface and provides throughput aggregation, load balancing and failover. Switch to be configured for LACP. LACP PDU exchange happens between XenServer and Switch. VPX maintains a shadow LACP state machine of exchanges between XenServer and Switch.	Management and Data Ports
Static (Manual)	Created as Manual in VPX and as Active-Passive in XenServer. VPX uses both the interfaces as long as they are UP.	Data Ports