



VIRTUALIZATION AND PROVISIONING SERVICE VERSION 1.0.3

1. Release Summary

Release Date: 20-Sep-2013

Purpose: The Virtualization and Provisioning Service (VPS) 1.0.3 Release Notes provide the following information:

- New in this release
- Avaya VPS documentation suite
- Known limitations
- Known issues
- Supported network configurations

New in this release

The following sections detail what's new in the Avaya Virtualization Provisioning Service (VPS) Release 1.0.3.

Features/Enhancements

The following sections describe the new features for VPS release 1.0.3.

Customer Experience Improvement

- Topology View for Provisioning & Monitoring
- Inventory View
- Filtering Support for Audit Log & Events Monitoring

VENA Provisioning Support

- Allows users to configure more servers on the same hypervisor using Switched UNI.
- Support Multi-Tenant Rule based configuration of Service on SPBm.

Device Support

- Support for New Devices in VSP Family including VSP 4k, Modular & Stackable.
- Enhanced support for LLDP to include more devices in Network Discovery.

Vmware vSphere 5.1 Updates

- Vmware Vcenter 5.1 Support
- Vmware ESXi 5.1 support
- Vcenter HA Mode now supported

Support for VMware vSphere 5.1.

Virtualization Provisioning Service (VPS) Release 1.0.3 introduces support for VMware vSphere 5.1.x.

- VPS Release 1.0.3 supports Link Layer Discovery Protocol (LLDP) with a vSphere Distributed Switch (vDS).
- It is similar to Cisco Discovery Protocol (CDP), but is vendor neutral and CDP is Cisco specific.
- LLDP allows vSphere administrators to determine which physical switch port is connected to a given vSphere Distributed Switch.
- When it is enabled for a particular vDS, you can view properties of the physical switch (such as device ID, software version, and timeout) from the vSphere Client.
- To view LLDP based network discovery information on the VPS Inventory View, click the Information Icon on the Hypervisor View Table.

Device Support:

Device Type	Version
ERS 45xx	5.0, 5.2, 5.3, 5.4, 5.5, 5.6
ERS 48xx	5.0, 5.2, 5.3, 5.4, 5.5, 5.6
ERS 55xx	3.0, 3.0.0.1, 4.0, 4.1, 4.2, 4.3, 5.0, 5.1, 6.0, 6.1, 6.2, 6.3
ERS 56xx	5.1, 6.0, 6.1, 6.2, 6.3
ERS 86xx	3.5, 3.7, 4.0, 4.1, 5.0, 5.1, 7.0, 7.1, 7.2, 7.2.10
ERS 88xx*	7.0, 7.1, 7.2, 7.2.10
VSP 4xxx*	3.0, 3.0.1
VSP 7xxx*	10.1, 10.2
VSP 9xxx*	3.0, 3.1, 3.2, 3.3, 3.4

Supported Operating systems and browsers

The following table lists the operating systems supported by VPS 1.0.3

Operating system	Version
Windows	2003, 2008 Server (Both 32-bit and 64-bit OS is supported)
Linux	RHEL 5.6 (Both 32-bit and 64-bit OS is supported)

Note: Starting with release 1.0.3, VPS is no more supported on RHEL 5.2 through 5.5.

Browser	Version
Internet Explorer (IE)	Versions 7, 8, 9
FireFox (FF)	Versions 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21,22

VPS over COM Compatibility Matrix:

VPS Project	COM Project
1.0	2.3.1
1.0.1	2.3.2
1.0.2	3.0.1
1.0.3	3.0.2

Fresh installation of VPS Release r1.0.3

Fresh installation of VPS 1.0.3 requires a license. A trial license (valid usually for one-month) can be obtained either from Avaya Support website (in the Products -> Network Management section) or by sending email to ucmtrial@avaya.com.

The information required for obtaining new license will be displayed when you run the installer. For more details refer to the following section - (Upgrading to VPS release r1.0.3).

Upgrading to VPS release r1.0.3

VPS r1.0.3 would support following paths to upgrade:

- 1.0.1 to 1.0.3
- 1.0.2 to 1.0.3

Following table shows when new license needs to be obtained while upgrading to VPS 1.0.3 from an earlier release.

Old (installed) release	Server Type	New License required?
1.0.1 / 1.0.2	Physical Machine	No
1.0.1	VMWare Virtual Machine	Yes

1.0.1	Non-VMWare Virtual Machine	Yes
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Information Required for New License

Following is the information required for obtaining new license(s).

- Physical or non-VMWare VM based server:
 - o MAC address of the server.
- VMWare VM based server:
 - o IP Address and NOTICE – during upgrade (or fresh installation), the installer will display the IP address and NOTICE required for obtaining the new license.

Known limitations

1. VPS 1.0.3 works only with COM 3.0.2.
2. The virtual topology data in the VPS database is synchronized with the virtual topology managed by the vCenter using the inventory audit of VPS. The Inventory audit uses an algorithm to populate the Virtual MAC address of the ESX/ESXi server physical adaptor, based on the OUI format (00:50:56:5x:xx:xx). If the vCenter is assigned a different OUI format for the VMACs, then currently the algorithm does not recognize this and the operator has to manually run a tool (VMAC Parser tool) to update the Virtual MAC address of the physical adaptors. The procedure for using this tool is available in the *Avaya Virtualization Provisioning Service Interface Guide* (NN46500–300).
3. If there are changes to the virtual network topology regarding the ESX/i server, including vSwitch, dvSwitch, and port group configuration, you need to complete the following tasks:
 - perform an inventory audit from the VPS Dashboard
 - run the vMAC Tool (if applicable)
 - perform a Hypervisor Connectivity from the VPS Dashboard
4. When the inventory audit is in progress, all events received by VPS from VCenter are logged only in the audit log.
5. The changes to the device hardware (adding/removing devices from the network, adding/ removing units from a stackable) need a COM rediscovery. A COM rediscovery is followed by a device reassignment (manage/unmanage) in VPS.
6. VPS Release 1.0.3 does not support virtual machine configurations involving vApp.
7. VPS supports the following options of Port Group VLAN IDs:
 - vSwitch Port group
 - None (0) — You can define a rule using PortGroup VLAN ID of 0 for this port group.
 - 1-4094 — You can define a rule using the specific VLAN ID as the PortGroup VLAN ID for this port group.
 - dvSwitch Port group
 - None — You can define a rule using PortGroup VLAN ID of 0 for this port group.
 - VLAN — You can define a rule using the specific VLAN ID as the PortGroup VLAN ID for this port group
8. VPS, in this release, will not configure the network for EST mode settings. The network administrator must do it manually. If some of the VMs are designated to use EST mode, then the network administrator must manually configure the ports on both source and destination switches.
 9. There is no direct way to export a report to an HTML format using the “export report” feature. However, you can save the report in a HTML format using the “Print Report” feature. For more information, see the *Avaya Virtualization Provisioning Service — Interface* (NN46500–500).
10. The provisioning of a Traffic profile can fail in the following cases:
 - Failure during apply or unapply (device time out, device or configuration failure on VPS).
11. The VPS Topology report does not provide details about the following attributes about the Discovery Protocol for the Virtual Switches:

- Type
- Status
- Operation

12. Refer to *Avaya Virtualization Provisioning Service Fundamentals* (NN46500–100) for information about the vCenter events that VPS manages in release 1.0.3. Unsupported vCenter events that VPS does not manage can appear in the Dashboard Monitor and report an incorrect status. In some scenarios, VPS records these unsupported event types in the audit log to help the operator troubleshoot the network. Refer to the audit log for correct status information.
13. A virtual machine migration event has two subevents: pre-notify and post-notify. VPS first handles the pre-notify event, during which the virtual machine being migrated is created at its destination with a newly matched network profile. Next, VPS handles the post-notify event, during which the virtual machine being migrated is deleted from its original location and its existing network profile (the profile that was originally used to create this virtual machine) is unapplied. You can view this information in the Dashboard Monitor. When both the pre-notify and post-notify events are complete, the whole virtual machine migration is complete, as long as there are no errors. In the event of migration errors during the pre- or post-notify events, you must make manual corrections.
14. If the core device or a BEB is not SPBm supported or is SPBm supported but SPBm is not enabled on the core device, then the link between the edge and the core device is disabled.” to “The Device Management UI shows the link from Edge to Core as disabled when the Core Device in the following cases:
 - Device does not support SPBm or is not SPBm capable
 - Device is SPBm capable but SPBm is not globally enabled
15. VPS block the network traffic for a VM when used in EST mode
16. Topology Report does not have the details about the Discovery Protocol for the Virtual Switches
17. [LLDP] Event shown as Failed even if 1 NIC is disconnected
18. SMLT column in Server Info is blank for LLDP
19. Unused uplink port added to VLAN by VPS
20. If one uplink of the 2 is down, VPS shows Failed in Monitor table
21. RBS for Port group should consider the port group name not just ID
22. VPS Installer shows UCM unstable message during fresh install of VPS r1.0.3
23. VPS Hot Migrate of VM is not being detected by VPS after HA-DRS as a result of Host shutdown / physical failure.

Known Issues

The following known issues are present in the current software release.


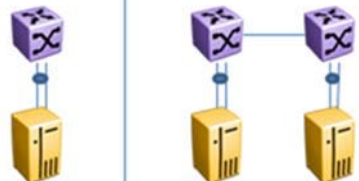
CR Number	Description
wi01047162	VPS currently doesn't distinguish between Used and Unused uplinks in Distributed Switch. If one of the uplinks in a Distributed switch is set as "Unused Uplinks", then VPS would still provision that uplink.
wi01001875	Device Management UI in the dashboard GUI is slow.
wi01112203	VSP 7K does not show neighboring links on Device Management table when using the OOB Port. It fails to fetch the credentials for the out of band IP Address. WorkAround: Make sure to add the credentials for the "Out of Band IP Address" in the UCM Device and Server Credentials page.
wi01068560	SMLT column in Server Info is blank for LLDP enabled Devices
wi01110998	On VSP 9k, when MLT is set on ports connected to ESX, VPS doesn't detect links.
wi01124001	VM information does not appear in the inventory view if the PG and VLAN Ids are deleted.
wi01124027	Device inventory view does not display the VM's connected to the edge devices for dvSwitches due to pagination issue.
wi01124186	With dvSwitch, there is more packet loss than normal when the VM migrates and the configuration on the switch is removed.

Supported Network Configurations

Avaya Virtualization Provisioning Service (VPS) is an application deployed on the Configuration and Orchestration Manager (COM) that you can use to manage data center virtualization. You can use the following deployment recommendations to optimize product operations.

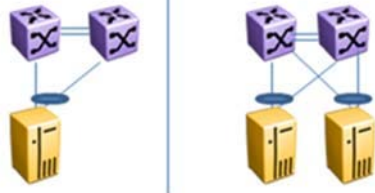
Criteria	Deployment 1	Deployment 2	Deployment 3
Does a COM campus deployment exist?	Yes	Yes	No
How many COM- managed device nodes exist between the campus and the data center?	Fewer than 200 managed devices.	More than 200 managed devices.	N/A
Do you need a separate COM installation for your data center?	No; use the existing COM application to install VPS.	Yes; install a new COM application on a separate server for the VPS application.	Yes

The following table presents the configuration types that VPS 1.0.3 supports.

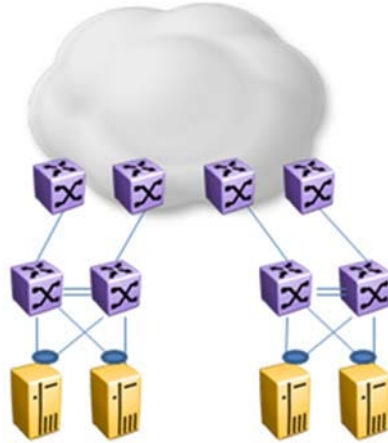
Type	Configuration	Options	Switch types
Non-redundant intra-DC		vSwitch dvSwitch Single link/LAG/ SMLT	TOR: 5xxx EOR: ERS8800, VSP9000
DMLC intra-DC			

Supported network configurations

SMLT intra-DC



SMLT with inter-DC



SPB Dual homing
VLAN spanning
backbone/SMLT

The following figures provide five example of the configurations that VPS supports. These configuration examples are based on the configuration types shown in Table 1.

- Configuration example 1 shows a non-clustered network configuration, in which there is no clustering between network devices. An ESX server is connected to multiple stackable devices.
- Configuration examples 2 and 3 show clustered network configurations, where clustering configured between network devices.
- Configuration example 4 is an example of a network configuration using shortest path bridging MAC (SPBm) devices.
- Configuration example 5 also shows a clustered network.

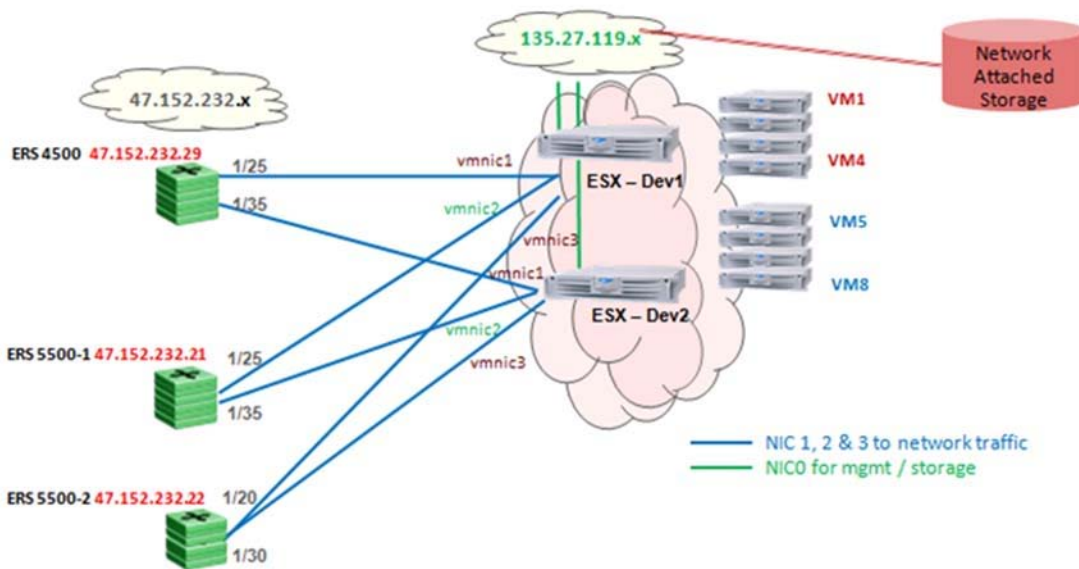


Figure 1: Configuration example 1: non-clustered network configuration

Table 1: Details of configuration example 1

Virtual switch	ESX server	Physical adaptors
vSwitch	esx-dev1 (vSwitch1) esx-dev2 (vSwitch1)	vmnic3 (on both servers)
dvSwitch with multiple PGs	esx-dev1 (dvSwitch1) esx-dev2 (dvSwitch1)	vmnic1 & vmnic2 (on both servers)

Supported network configurations

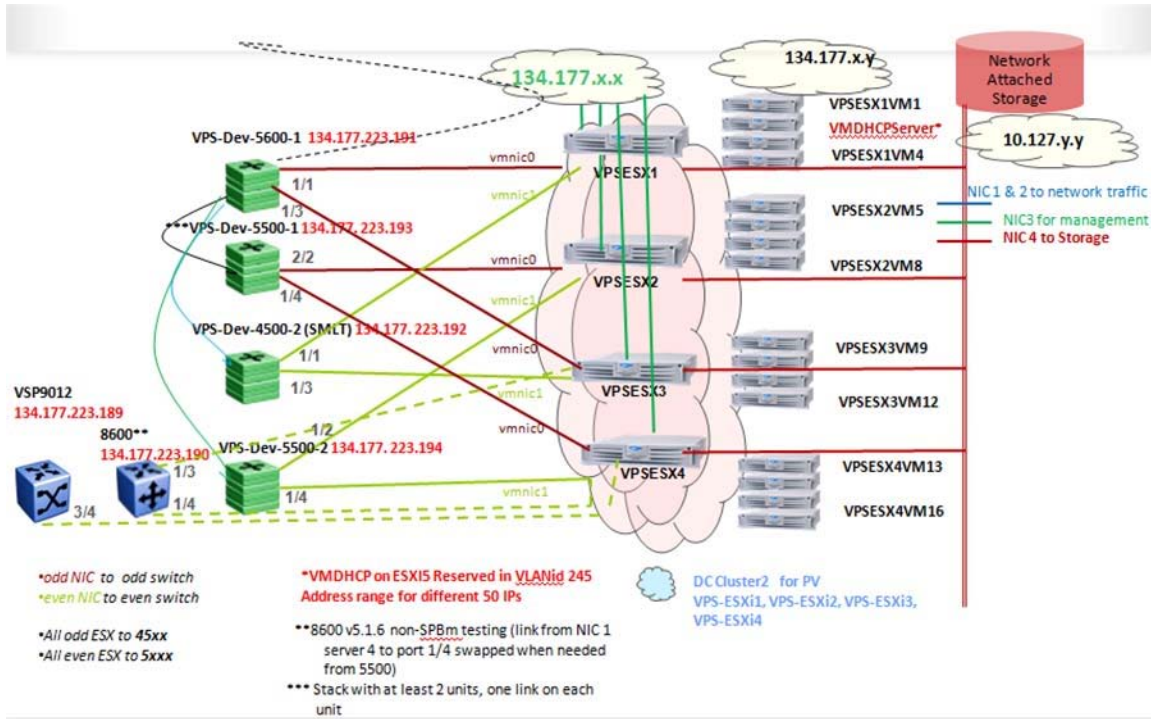


Figure 2: Configuration example 2: clustered network configuration

Table 2: Details of configuration example 2: clustered network configuration

Virtual switch	ESX server	Physical adators	Network topology	Switch IP/port/slot
vSwitch with single/multiple PG	vps-esxi1	vmnic0, vmnic1	Topology1,3 (Topology 2 N/a in vSwitch)	4500-1 134.177.245.15 1/1 4500-2 10.127.245.17 1/1
dvSwitch with multiple PG	vps-esxi2 vps-esxi3	vmnic0, vmnic1 (vps-esxi2), vmnic0 (vps-esxi3)	Topology 1, Topology 3	5500-1 134.177.245.16 1/2 5500-2 134.177.245.18 1/2 4500-1 134.177.245.15 1/3
dvSwitch with multiple PG	vps-esxi3 vps-esxi4	vmnic1 (vps-esxi3) vmnic0 (vps-esxi4)	Topology 2	4500-2 134.177.245.17 1/3 5500-1 134.177.245.16 1/4
vSwitch with single PG	vps-esxi4	vmnic1(vps-esxi4)	Topology1, (2/3 N/a)	5500-2 134.177.245.18 1/4

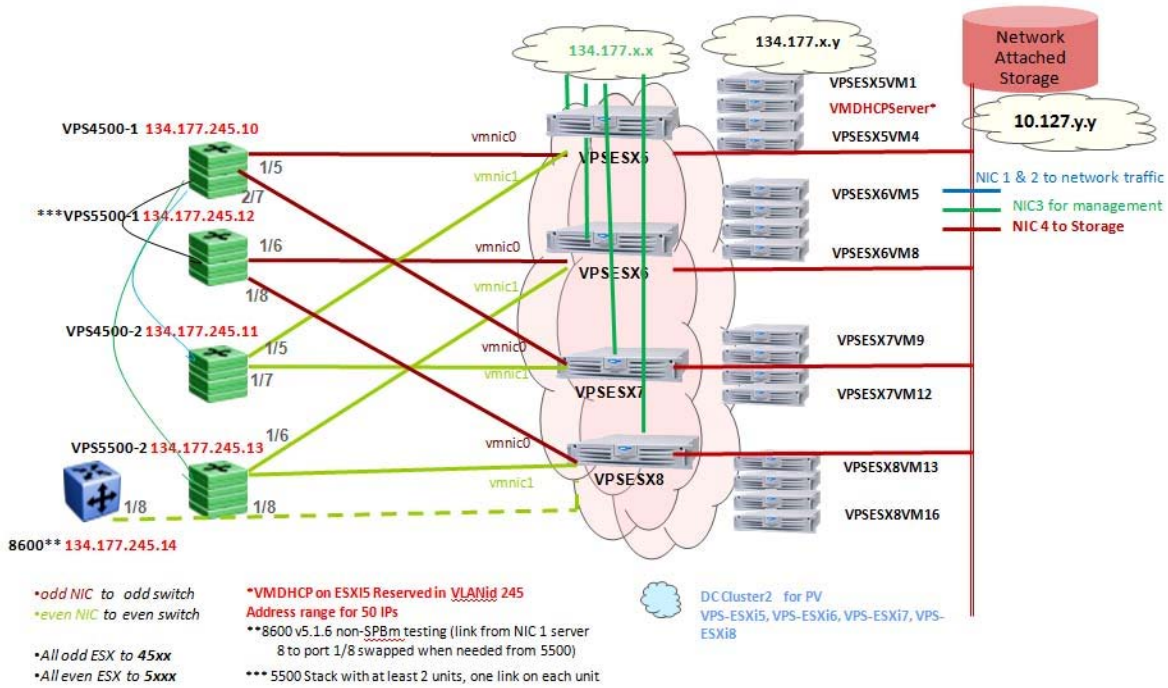


Figure 3: Configuration example 3: clustered network configuration

Table 3: Details of configuration example 3: clustered network configuration

Virtual switch	ESX server	Physical adators	Network topology	Switch IP/port/slot
vSwitch with single/multiple PG	vps-esxi5	vmnic0, vmnic1	Topology1,3 (Topology 2 N/a in vSwitch)	4500-1 134.177.245.10 1/5 4500-2 10.127.245.11 1/5
dvSwitch with multiple PG	vps-esxi6 vps-esxi7	vmnic0, vmnic1 (vps-esxi6), vmnic0 (vps-esxi7)	Topology 1, Topology 3	5500-1 134.177.245.12 1/6 5500-2 134.177.245.13 1/6 4500-1 134.177.245.10 1/7
dvSwitch with multiple PG	vps-esxi7 vps-esxi8	vmnic1 (vps-esxi7) vmnic0 (vps-esxi8)	Topology 2	4500-2 134.177.245.11 1/7 5500-1 134.177.245.12 1/8
vSwitch with single PG	vps-esxi8	vmnic1 (vps-esxi8)	Topology1, (2/3 N/a)	5500-2 134.177.245.13 1/8

Supported network configurations

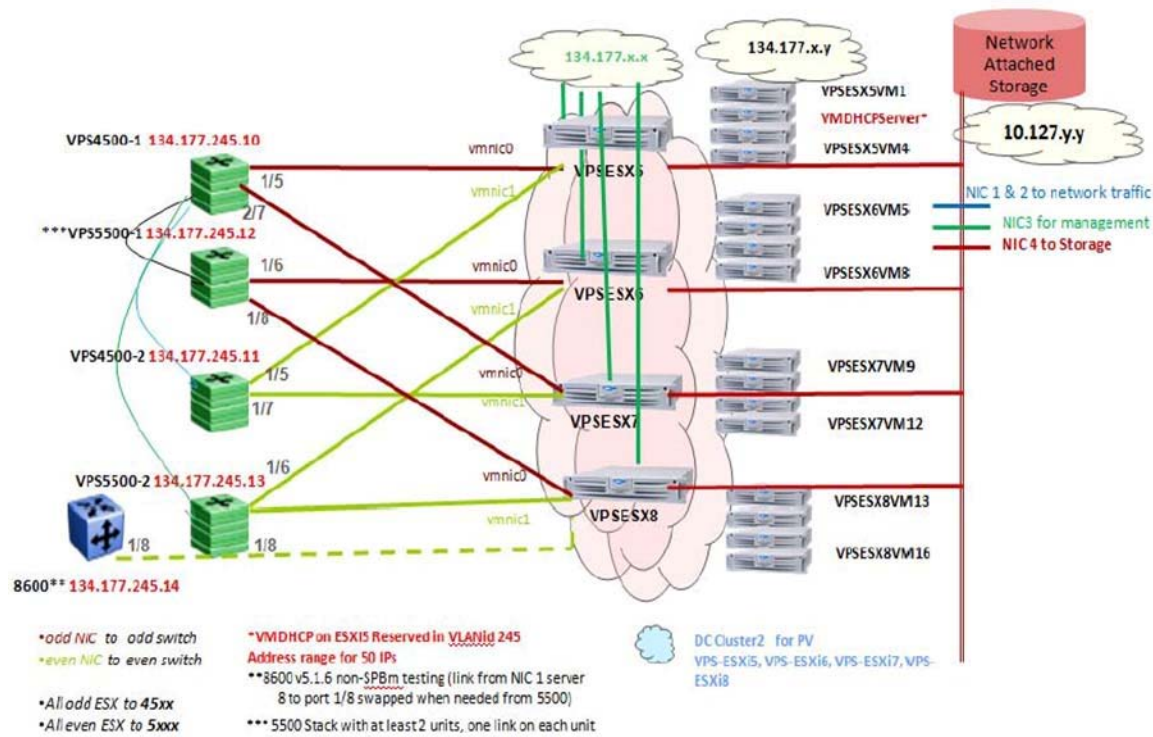


Figure 4: Configuration example 4: configuration with SPBM devices

Table 4: Details of configuration example 4: configuration with SPBM devices

Virtual switch	ESX server	Physical adators	Network topology	Switch IP/port/slot
vSwitch with multiple PG	vps-esxi9 vps-esxi10	vmnic0, vmnic1 (vps-esxi9), vmnic0 (vps-exi10)	Topology 1, Topology 3	BEB#5 10.127.120.50 1/9 BEB#5 10.127.120.50 2/9 BEB#1 10.127.120.10 1/10
dvSwitch with single PG	vps-esxi10	vmnic1(vps-exi10)	Topology1, (2/3 N/a)	5500-2 10.127.120.10 2/10

Supported configurations between Edge and Core (BEB) devices

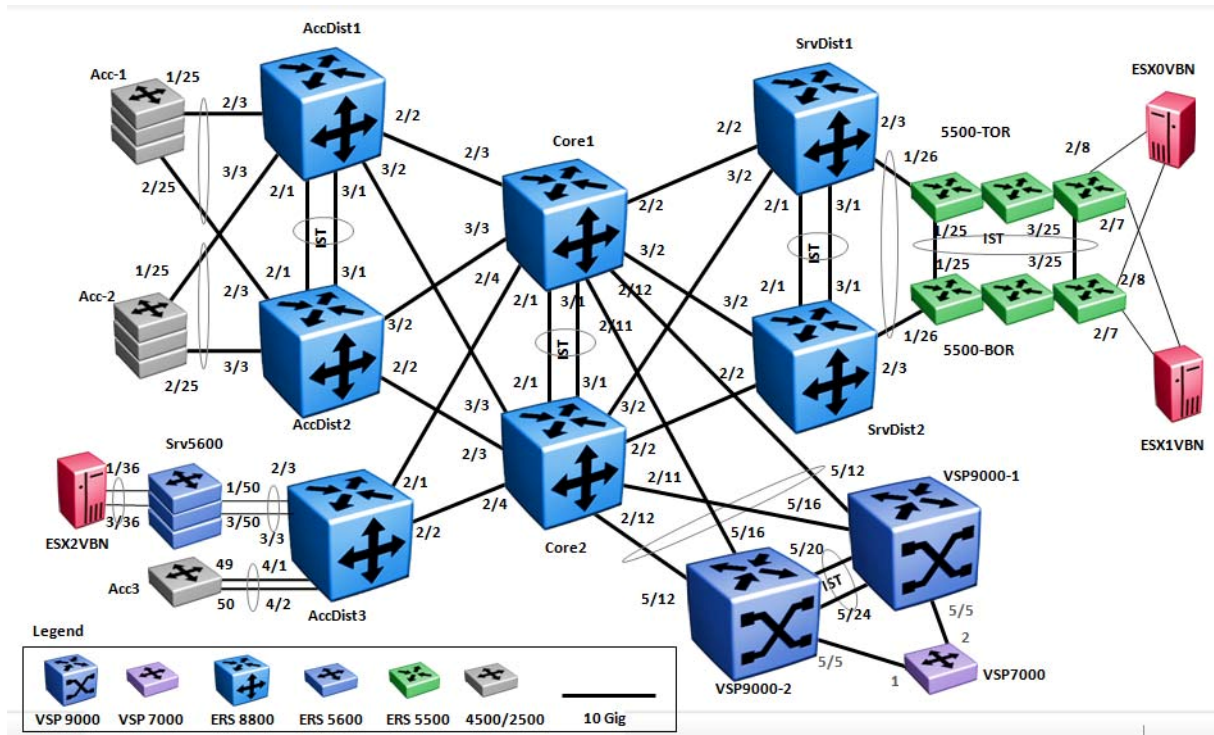


Figure 5: Configuration example 5: clustered network

Supported configurations between Edge and Core (BEB) Devices

The following diagrams show supported configurations between Edge and Core Backbone Edge Bridge (BEB) devices.

Supported network configurations

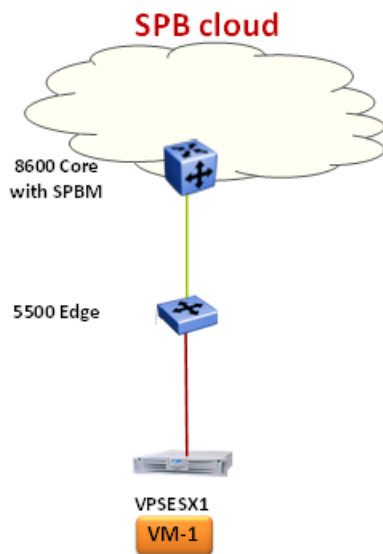


Figure 6: Configuration example 6: Single link between edge and core

Supported configurations between Edge and Core (BEB) devices

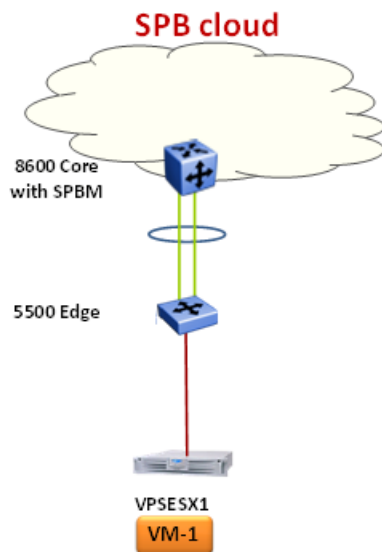
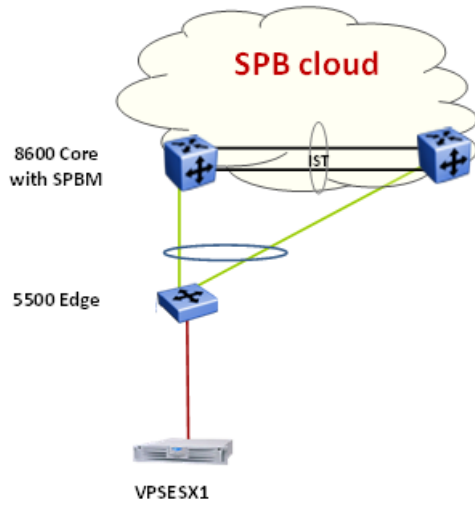


Figure 7: Configuration example 7: Edge and Core MLT

Figure 8: Configuration example 8: Edge-Core Single Link SMLT Dual Home



Supported network configurations

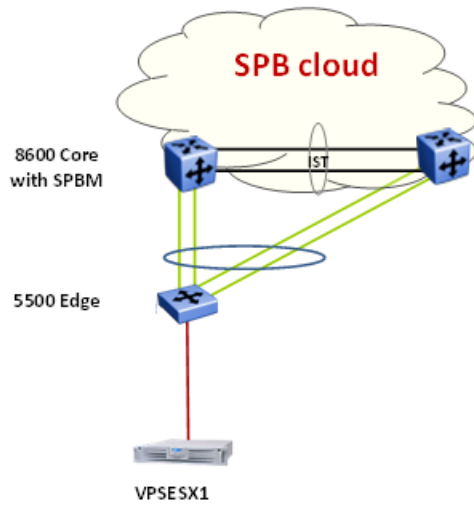
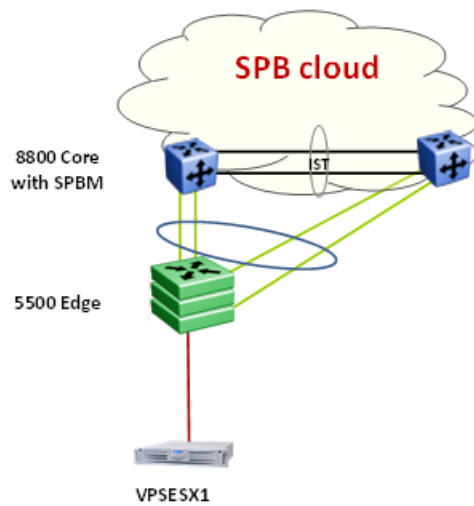


Figure 9: Configuration example 9: Edge-Core SMLT Dual Home

Figure 10: Configuration example 10: TOR Edge-Core SMLT



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