



Avaya Virtualization Provisioning Service (VPS) 1.1.3 Release Notes

February 12th, 2016

Issue 2

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Introduction

Purpose

This document provides procedures for deploying and using the Avaya Virtualization Provisioning Service (VPS). This document includes:

- What's new in VPS r1.1.3
- General Release Notes including changes & Bug Fixes (Including GRIPs)
- Supported operating systems, hardware requirements and browser clients
- Known issues and limitations

Intended Audience

The primary audience for this document is anyone who is involved with deployment & upgrade of Avaya VPS r1.1.3. The audience includes, but is not limited to, implementation engineers, field technicians, business partners, solution providers, and customers. This document does not include optional or customized aspects of a configuration.

Avaya Virtualization Provisioning Service (VPS)

The Avaya Virtualization Provisioning Service is a management tool that automatically synchronizes the network to react to changes in the compute environment - increasing IT efficiency, reducing time to service and ensuring consistent application performance - in a highly dynamic, virtualized data center environment.

Highlights of VPS:

- Automates service provisioning within the data center
- Provides insight into the entire Virtual Machine (VM) lifecycle from activation, to mobility, to deletion
- Gives an end-to-end view of the virtualized data center including applications, servers and network devices across both physical and virtual environments
- Provisions network devices to “follow” VMs as they migrate between servers
- Applies connectivity services and port profiles (QoS, ACLs) to edge devices at an individual VM level
- Provides historical reporting and tracking on VM moves and network provisioning
- Enables network and server teams to work more efficiently and smarter together

Terminology

Term	Description
Appliance	A single hardware server that can contain one or more virtual machines.
Avaya Application	A software solution developed by Avaya that includes a guest operating system. This may be provided on an appliance/blade/server.
COM	Configuration and Orchestration Manager
DRS	Distributed Resource Scheduler. VMware feature to intelligently place workloads based on available resources.
HA	High Availability. VMware High Availability is for failover of ESXi hosts. Since the entire host fails over, it might involve several applications or VMs.
Migration	A migration consists of a specific subset of upgrades you perform when you move a customer from one product to another. Migration may also require the customer to obtain new hardware.
OVA	Single-file version of an OVF
OVF	Open Virtualization Format
SMGR	System Manager
SSH	Secure Shell Protocol
Upgrade	The process of taking a product from one release to a higher release.
vAppliance	A VMware based hypervisor supporting a single software Application, where the hypervisor is VMware ESXi. It supports a single virtual machine running the single virtualized software Application instance, such as CM and the guest OS.
vApplication	A logical entity comprising one or more virtual machines, which uses the industry standard Open Virtualization Format (OVF) to specify and encapsulate all components of a multi-tier Application as well as the operational policies and service levels associated with it. The vApplication is sometimes referred to as a vApp. For example, the first single virtualized software Application instance may include Avaya Communication Manager (CM) and the guest OS, and a second single virtualized software Application instance may include Session Manager (SM) and the guest OS.
vCenter	vCenter is an administrative interface from VMware for the entire virtual infrastructure or datacenter, including VMs, ESXi hosts, deployment profiles, distributed virtual networking, hardware monitoring, etc.
VM	Virtual Machine
vMotion	A VMware feature that allows moving of a workload to another compute resource without losing connectivity.
VMware Fault Tolerance (FT)	A VMware feature that provides for automatic and non-service-affecting failover when the primary compute resource (host) fails.
VMware High Availability (HA)	A high availability feature of VMware's vCenter that restarts an application on another host automatically if the original host system fails.
VPS	Virtualization Provisioning Service

Server and Client Requirements

The following table displays the hardware and software requirements for the Avaya VPS.

Hardware:

Following hardware/VM configuration is recommended for COM-VPS primary server setup.

HW Component	Critical	Minimum	Recommended
CPU	Quad-core 2GHz	Quad-core 2GHz	Quad-core 2GHz
Memory	6 GB	8 GB	10 GB
Free Disk Space	80 GB	80 GB	100 GB

In case of Virtual Machine, COM-VPS requires ESXi 5.0 and later is required. Support for ESXi 4.x is now discontinued.

Operating System:

Operating system	Version
Windows	Windows 2008 R2 Server (available only as 64-bit OS)
Linux	64-bit RHEL v5.6 / v5.7

Client Requirements

Browser	Version
Internet Explorer (IE)	Versions 8, 9 and 10
FireFox (FF)	Versions 19, 20 and 21

Avaya Virtualization Provisioning Service (VPS) Release Notes

Release Content

VPS r1.1.3 is a Service Pack which contains:

❖ **Device support for:**

- ERS 4500/4800
- ERS 5500/5600
- ERS 8600/8800
- ERS 3500
- VSP 7000
- VSP 4000
- VSP 9000
- VSP 7200
- VSP 8000

❖ **Vmware vSphere 5.5 Updates**

VmWare Components	Supported Version
Vmware VCenter Server	5.0x, 5.1, 5.5
Hypervisor – ESXi	5.0x, 5.1, 5.5

Support for ESX 4.x & ESXi 4.x is now discontinued.

Issues Resolved in this release

Customer Issues				
Jira ID	Summary	Priority	Severity	Submitter.login_name
VPS-244	Links between host and switch are not showing in VPS	P3 - Normal Queue	3 - Medium	Simon Michael P
VPS-255	Virtual Machine inventory view is not loading	P3 - Normal Queue	3 - Medium	Nikulski Markus

Software Distribution

The Avaya Virtualization Provisioning Service is delivered in two forms:

1. VPS Installer

- Windows 64-bit installer: For Windows 64-bit operating system.

Name	vps-installer-1.1.3-20160201.212105-7.windows.exe (TBD)
Size	76 MB

- Linux installer: For Linux 64-bit operating system.

Name	vps-installer-1.1.3-20160201.212105-7.linux.bin (TBD)
Size	106 MB

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
1.1	3.1
1.1.3	3.1.3

For more information about the environment in which it can be installed, see [Avaya VPS Server & Client Requirements](#)

Licensing

VPS r1.1.3 would use the same license as in VPS r1.0.x.

Fresh installation of VPS Release r1.1.3

Fresh installation of VPS 1.1.3 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.

Supported Manual Upgrade Scenarios in COM 3.1.3 / VPS 1.1.3

The following table shows how existing COM installations can be moved to COM 3.1.3 / VPS 1.1.3.

Current installation	Upgraded?
COM 3.1 / VPS 1.1 Running on Windows 2008 R2 OS	Yes, this can be upgraded.
COM 3.1 / VPS 1.1 Running on 64-bit RHEL v5.6	Yes, this can be upgraded.
COM 3.1.1 / VPS 1.1 Running on Windows 2008 R2 OS	Yes, this can be upgraded.
COM 3.1.1 / VPS 1.1 Running on 64-bit RHEL v5.6	Yes, this can be upgraded.
COM 3.1.2 / VPS 1.1 Running on Windows 2008 R2 OS	Yes, this can be upgraded.
COM 3.1.2 / VPS 1.1 Running on 64-bit RHEL v5.6	Yes, this can be upgraded.

Limitations and Known Issues

1. 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.
2. VPS Release 1.1.3 does not support virtual machine configurations involving vApp.
3. 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
4. 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.
 5. 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).
 6. 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).
 7. The VPS Topology report does not provide details about the following attributes about the Discovery Protocol for the Virtual Switches:
 - Type
 - Status
 - Operation
 8. Refer to *Avaya Virtualization Provisioning Service Fundamentals* (NN46500–100) for information about the vCenter events that VPS manages in release 1.1. 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.
 9. 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.
 10. 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:
 - a. Device does not support SPBm or is not SPBm capable
 - b. Device is SPBm capable but SPBm is not globally enabled
 11. VPS block the network traffic for a VM when used in EST mode
 12. Topology Report does not have the details about the Discovery Protocol for the Virtual Switches
 13. [LLDP] Event shown as Failed even if 1 NIC is disconnected
 14. Unused uplink port added to VLAN by VPS

- 15. If one uplink of the 2 is down, VPS shows Failed in Monitor table
- 16. RBS for Port group should consider the port group name not just ID
- 17. VPS Hot Migrate of VM is not being detected by VPS after HA-DRS as a result of Host shutdown / physical failure.

Known Issues

Jira ID	Headline	Workaround
VPS-258	Error message observed during day -1 wizard procedure in VPS	Clear the browser History and Relaunch the day-1 wizard.
VPS-259	Unable to schedule the hypervisor connectivity every 24hrs	Schedule the hypervisor connectivity for every 24 hours will work only if the start day is not the current day.

Miscellaneous Information

General Info

- **Default User ID and Password** for accessing newly installed Aura System Manager based COM is **admin / admin123**
- The landing page of new Aura System Manager based COM/VPS is different from older versions of UCM based COM.

Installing COM / VPS License

- From the Aura System Manager home page, navigate to Services->License
- Click on FlexLM link on the left Navigation. You will see the familiar "License Administration" UI.
- Install FlexLM license

User and Role Management

User management can be done using one of the following menus –

- Aura System Manager home page → Administrators
- COM → Admin → User Management

Roles can be managed using the following menus –

- Aura System Manager home page → Groups & Roles

Device Credentials Management

Device Credentials UI can be accessed using one of the following menus -

- Aura System Manager home page → Elements – Inventory → Device and Server Credentials

COM → Admin → Device Credentials

Recommendations for Improved Network Discovery


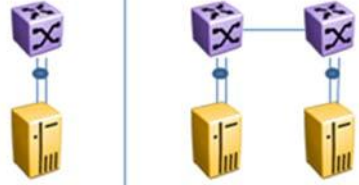
Please refer to the COM Release note as the same is applicable for VPS Network Discovery too.

Supported Deployments

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.

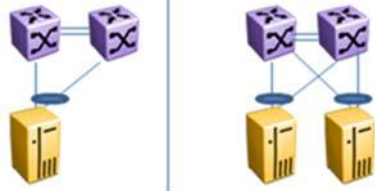
Criteria	Deployment 1	Deployment 2	Deployment 3
Does a COM campus deployment exist?	Yes	Yes	No
How many COM- managed device nodes exist between the campus and the data center?	Fewer than 200 managed devices.	More than 200 managed devices.	N/A
Do you need a separate COM installation for your data center?	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 1.1.3 supports.

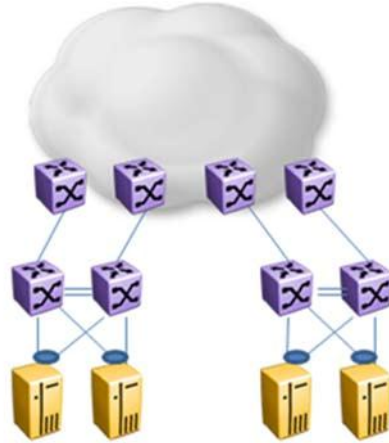
Type	Configuration	Options	Switch types
Non-redundant intra-DC		vSwitch dvSwitch Single link/LAG/ SMLT	TOR: 5xxx EOR: ERS8800, VSP9000
DMLC intra-DC			

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.

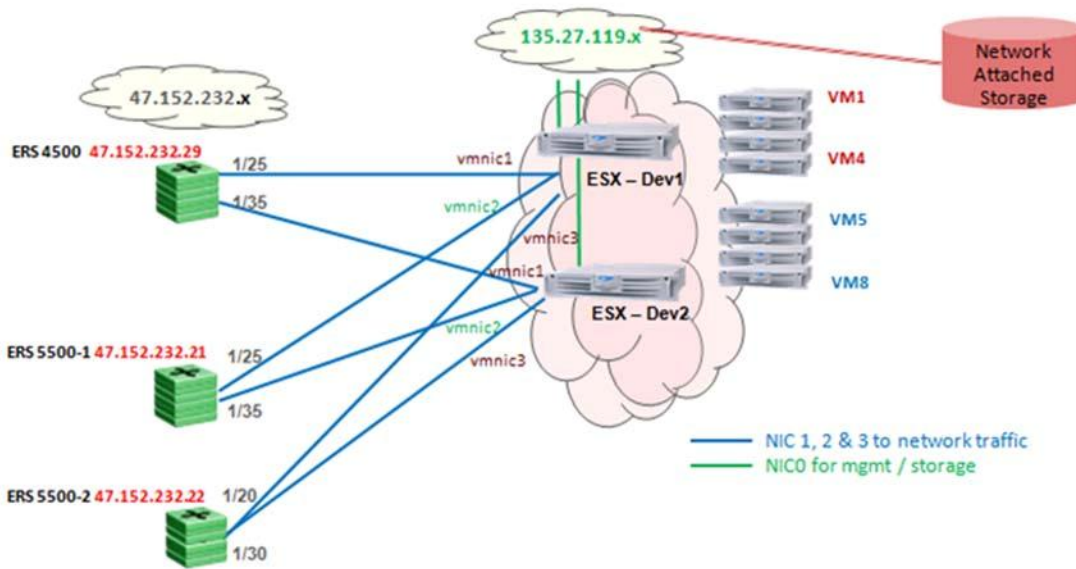


Figure 1: Configuration example 1: non-clustered network configuration

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

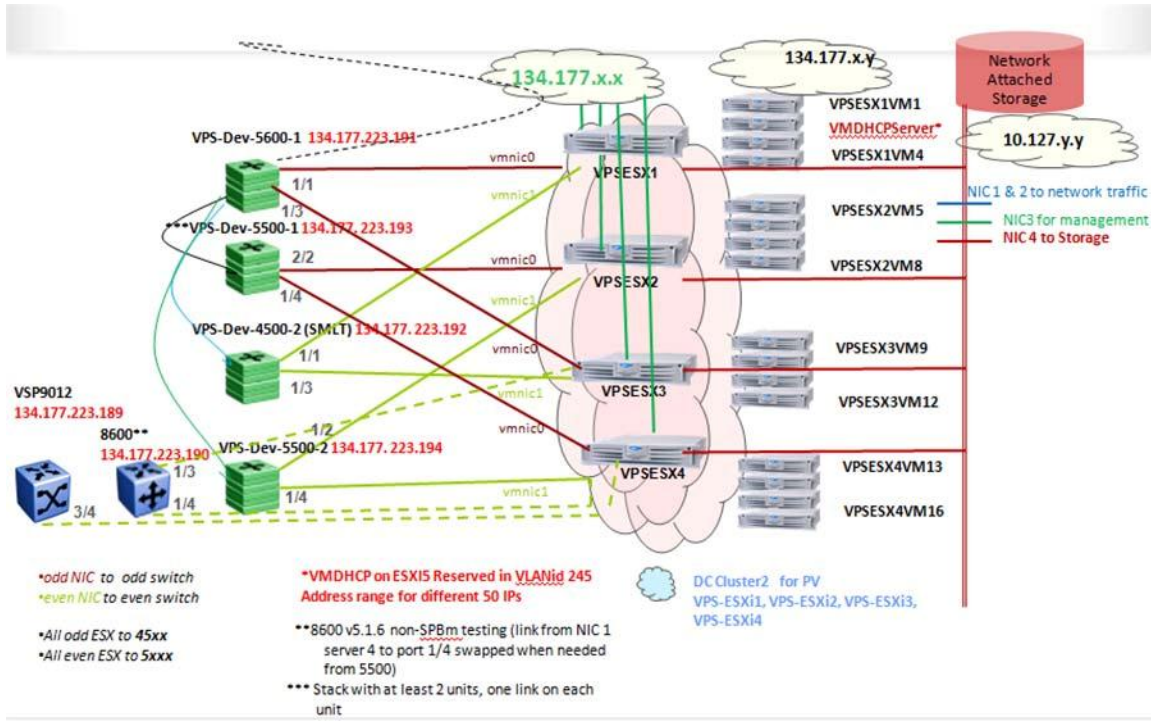


Figure 2: Configuration example 2: clustered network configuration

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

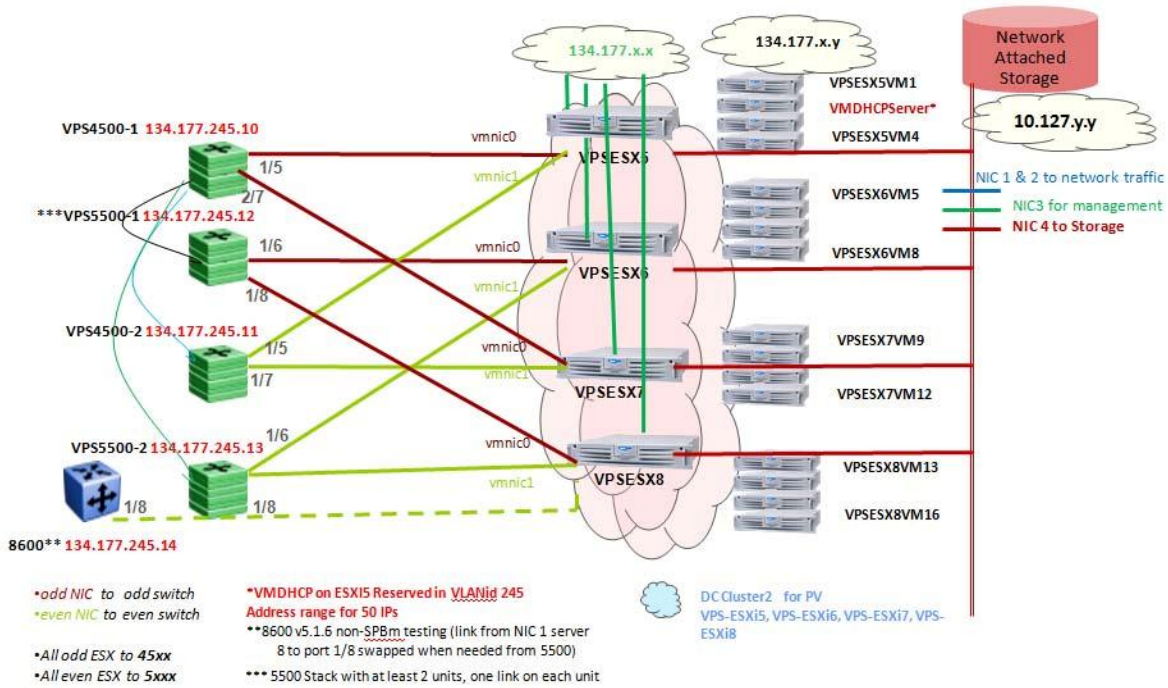


Figure 3: Configuration example 3: clustered network configuration

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

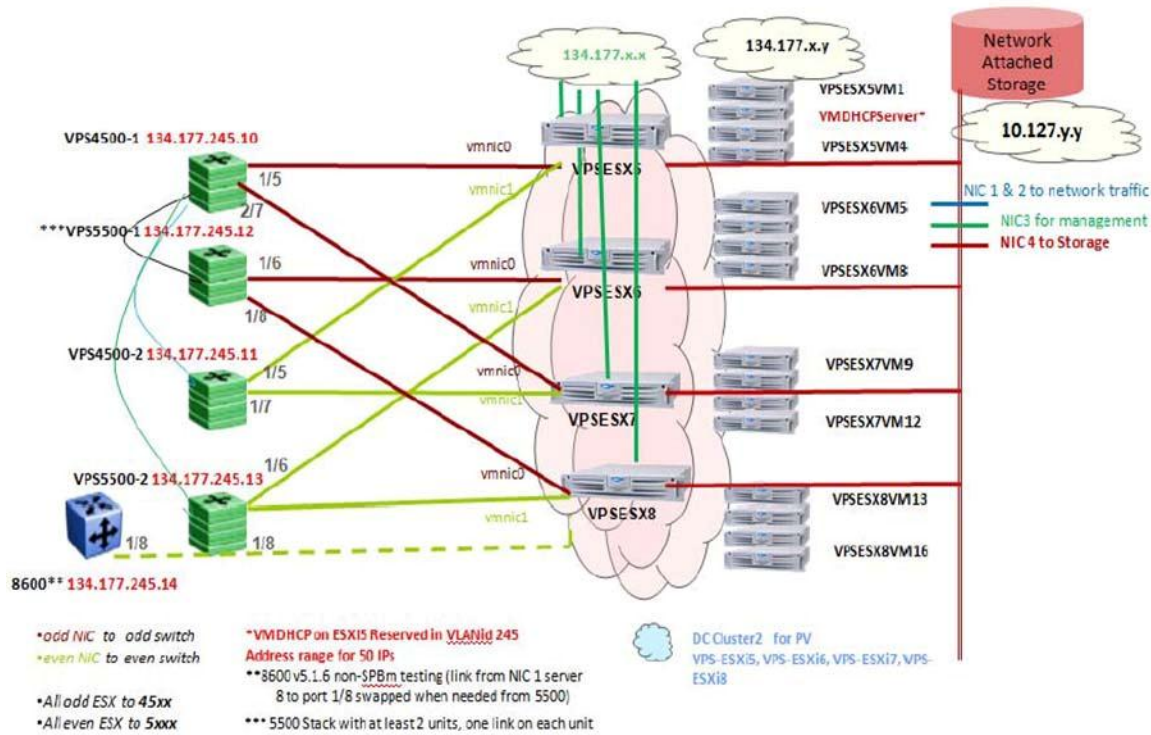


Figure 4: Configuration example 4: configuration with SPBm devices

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-esxi10)	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-esxi10)	Topology1, (2/3 N/a)	5500-2 10.127.120.10 2/10

Supported configurations between Edge and Core (BEB) devices

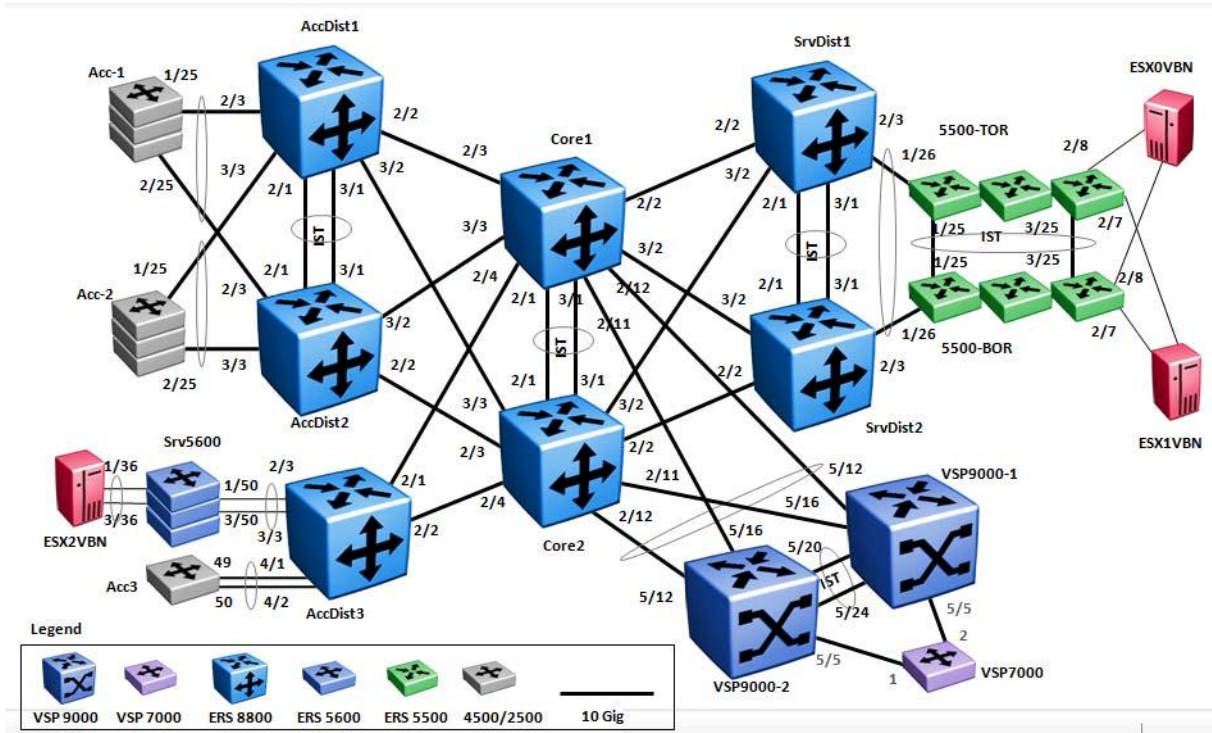


Figure 5: Configuration example 5: clustered network

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

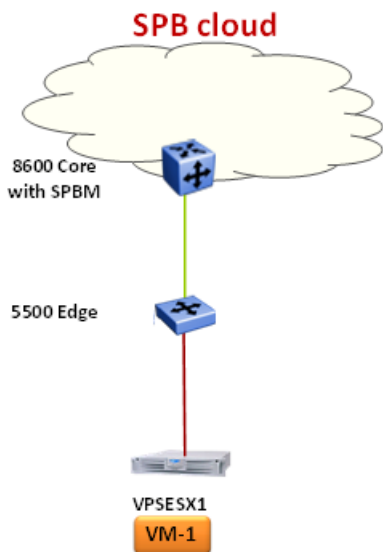


Figure 6: Configuration example 6: Single link between edge and core

Supported configurations between Edge and Core (BEB) devices

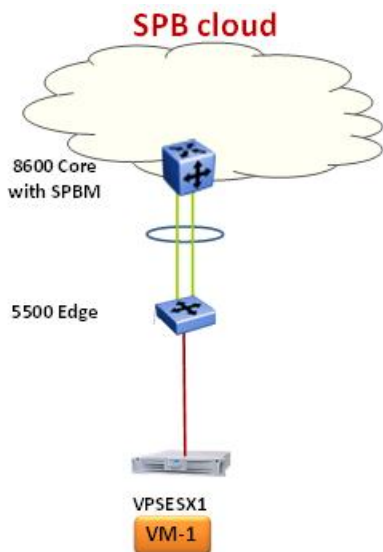
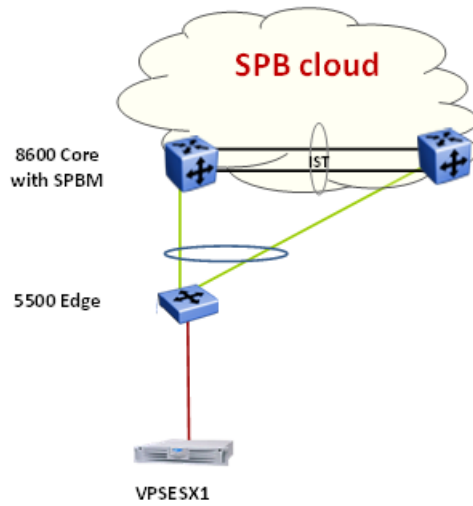


Figure 7: Configuration example 7: Edge and Core MLT

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



Supported network configurations

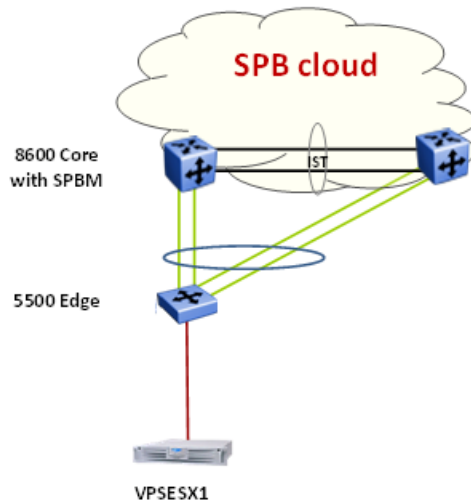


Figure 9: Configuration example 9: Edge-Core SMLT Dual Home

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

