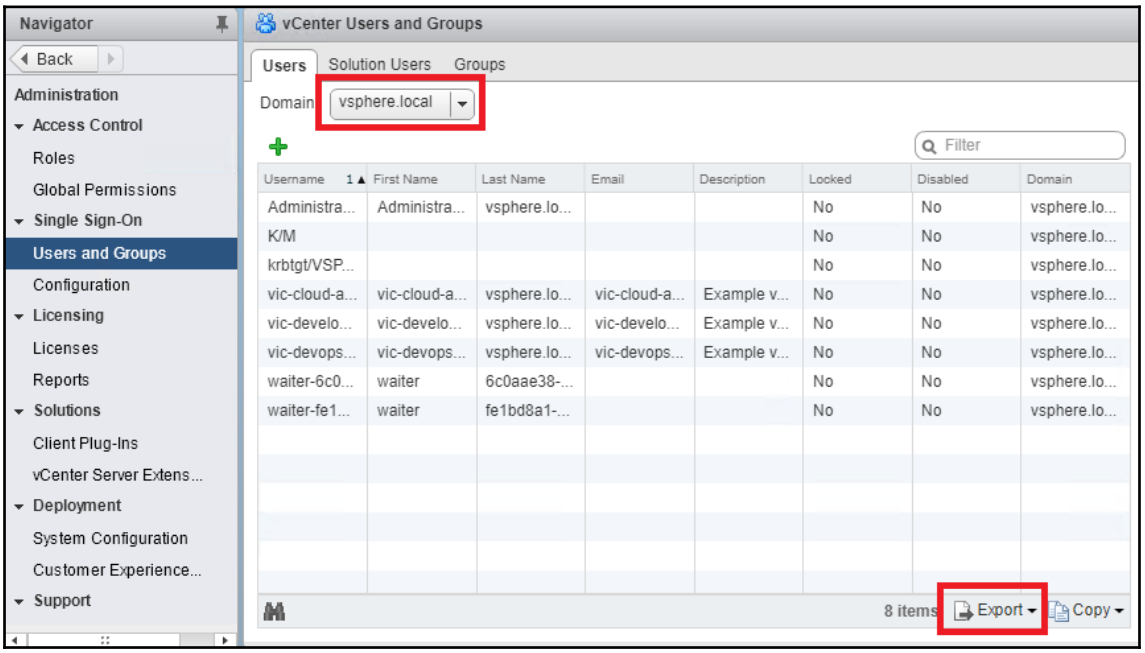
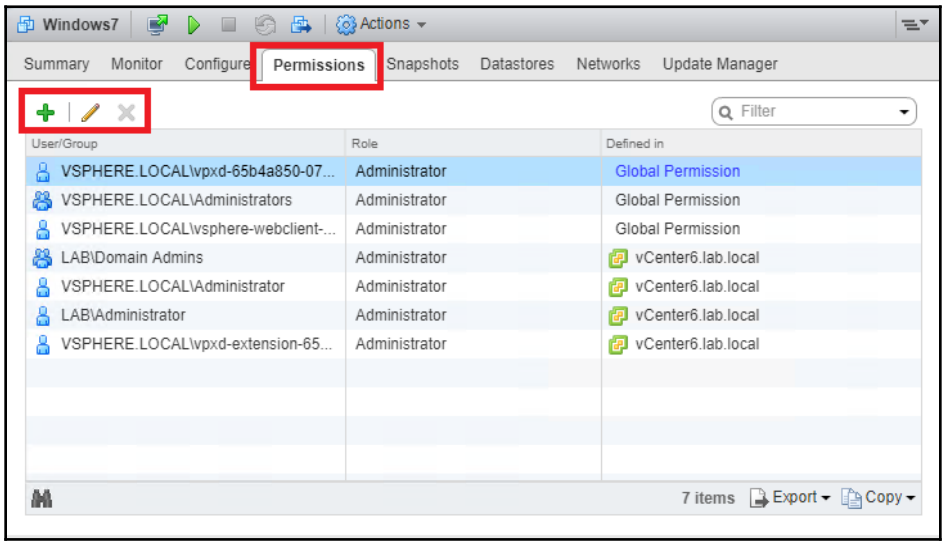
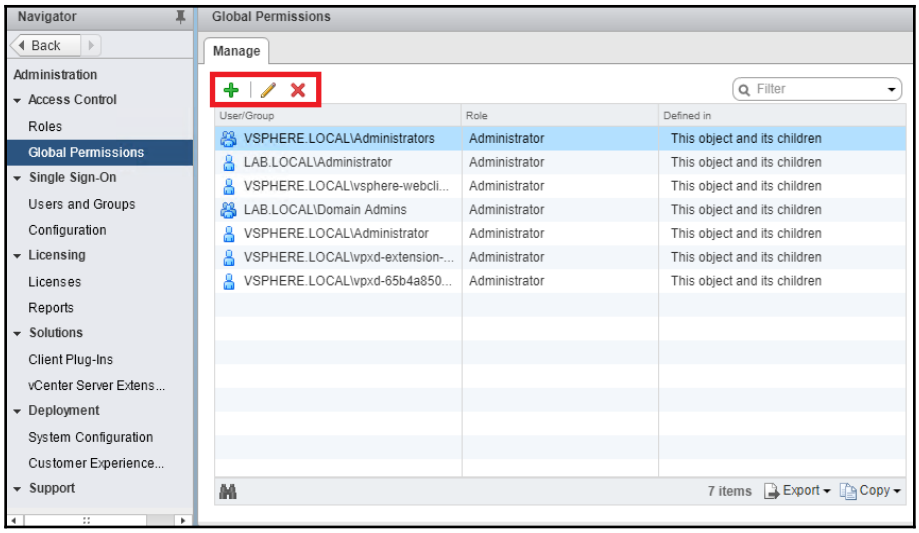
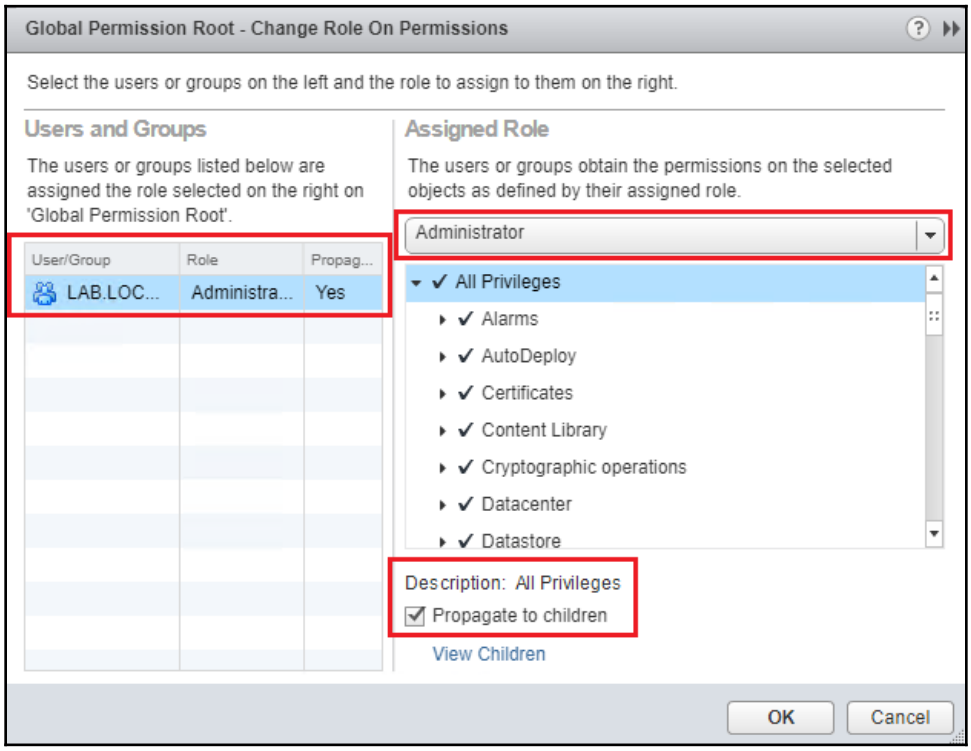
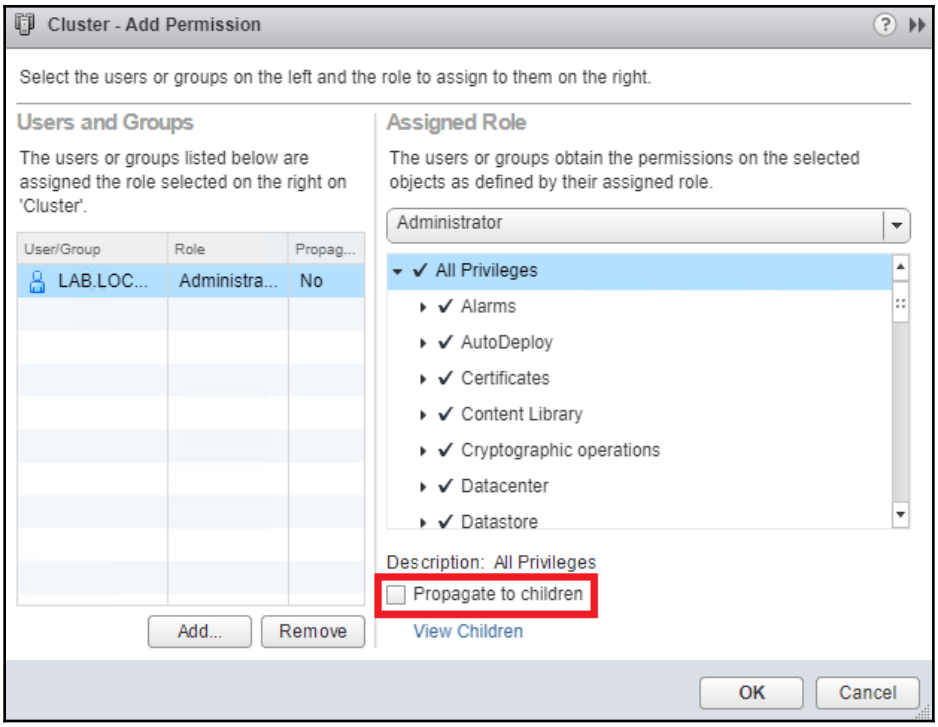
Chapter 01: Configuring and Administering vSphere 6.x Security

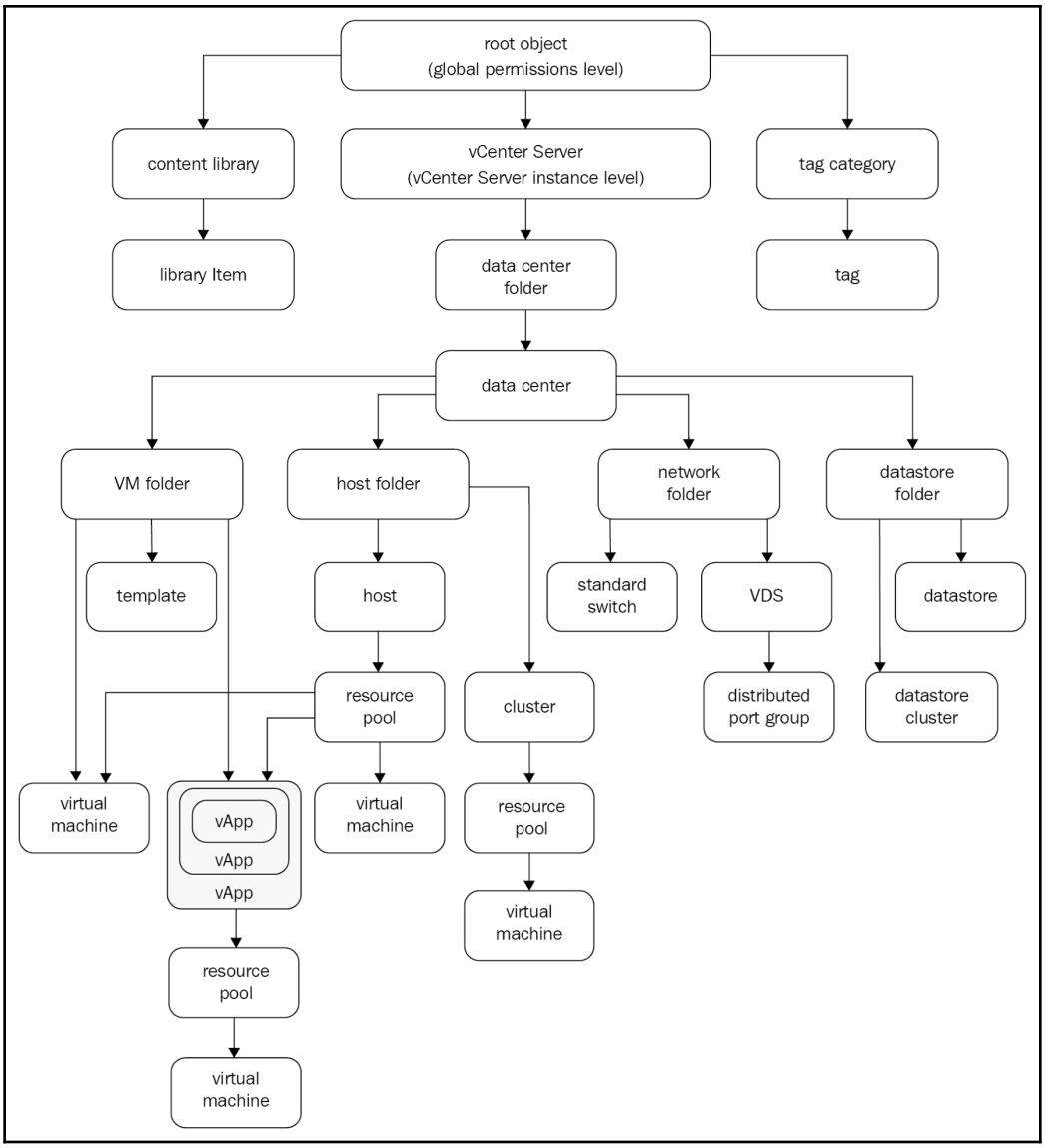


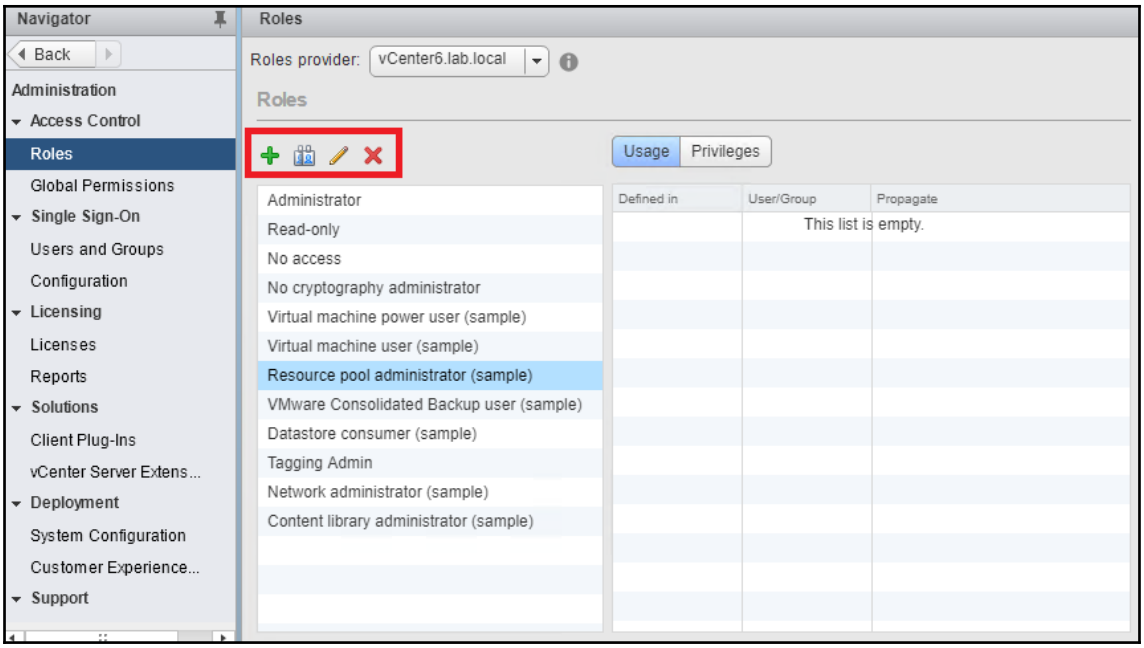


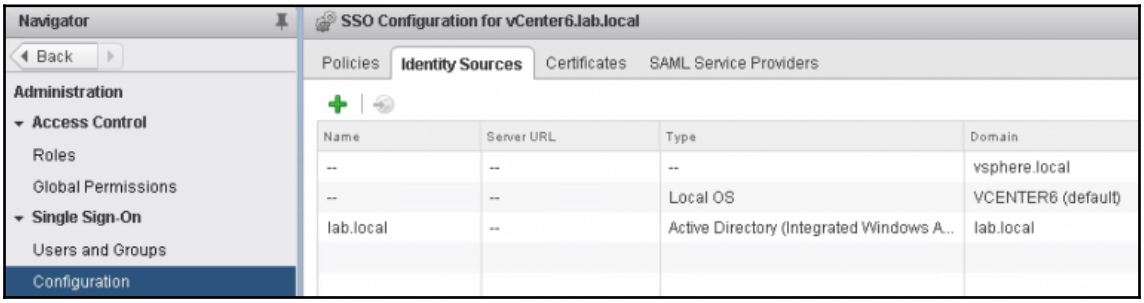

Navigator
Back
Administration
Access Control
Roles
Global Permissions
Single Sign-On
Users and Groups
Configuration
Licensing
Licenses
Reports
Solutions
Client Plug-Ins
vCenter Server Extens...
Deployment
System Configuration
Customer Experience...
Support
Global Permissions
Manage
Filter
User/Group
Role
Defined in
VSPHERE.LOCAL\Administrators
Administrator
This object and its children
LAB.LOCAL\Administrator
VSPHERE.LOCAL\vsphere-webcli...
LAB.LOCAL\Domain Admins
VSPHERE.LOCAL\Administrator
VSPHERE.LOCAL\vpxd-extension-...
VSPHERE.LOCAL\vpxd-65b4a850...
7 items
Export
Copy

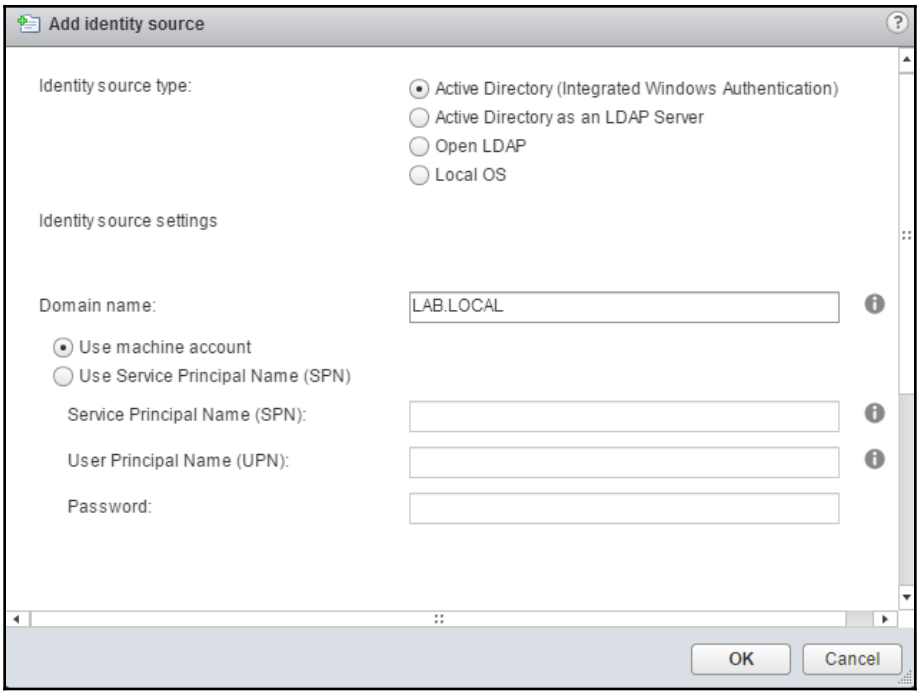

Global Permission Root - Change Role On Permissions
Select the users or groups on the left and the role to assign to them on the right.
Users and Groups
The users or groups listed below are assigned the role selected on the right on 'Global Permission Root'.
User/Group
Role
Propag...
LAB.LOC...
Administra...
Yes
Assigned Role
The users or groups obtain the permissions on the selected objects as defined by their assigned role.
Administrator
All Privileges
Alarms
AutoDeploy
Certificates
Content Library
Cryptographic operations
Datacenter
Datastore
Description: All Privileges
Propagate to children
View Children
OK
Cancel

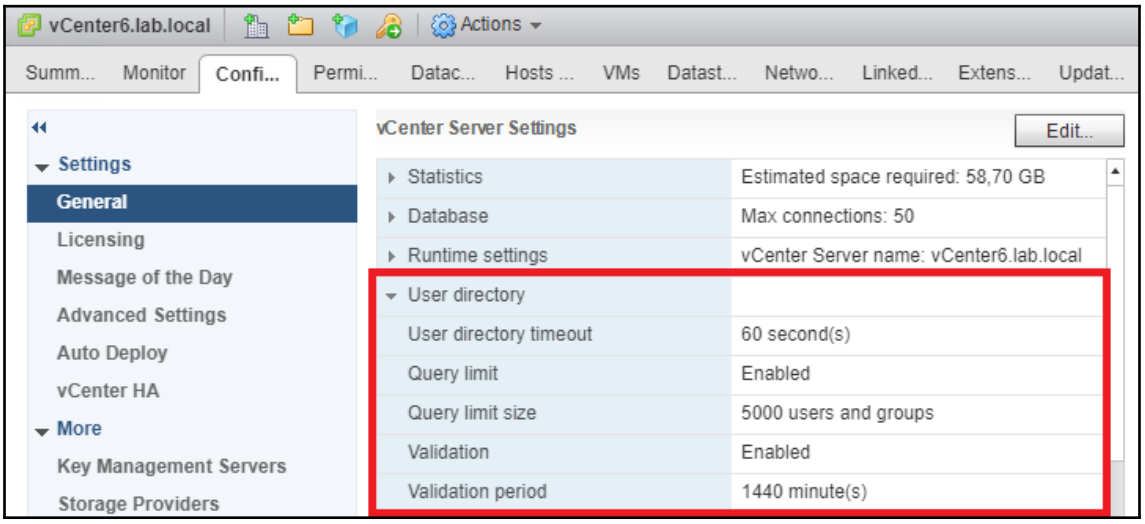

Cluster - Add Permission
Select the users or groups on the left and the role to assign to them on the right.
Users and Groups
The users or groups listed below are assigned the role selected on the right on 'Cluster'.
User/Group
Role
Propag...
LAB.LOC...
Administra...
No
Add...
Remove
Assigned Role
The users or groups obtain the permissions on the selected objects as defined by their assigned role.
Administrator
All Privileges
Alarms
AutoDeploy
Certificates
Content Library
Cryptographic operations
Datacenter
Datastore
Description: All Privileges
Propagate to children
View Children
OK
Cancel

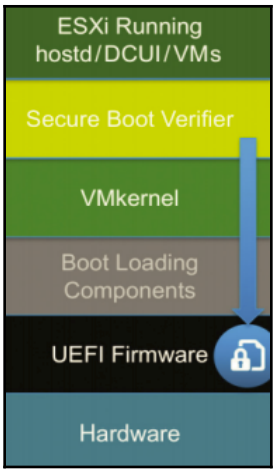

root object
(global permissions level)
content library
vCenter Server
(vCenter Server instance level)
tag category
library Item
data center
folder
tag
data center
VM folder
host folder
network
folder
datastore
folder
template
host
standard
switch
VDS
datastore
resource
pool
cluster
distributed
port group
datastore
cluster
virtual
machine
vApp
vApp
vApp
virtual
machine
resource
pool
resource
pool
virtual
machine
virtual
machine

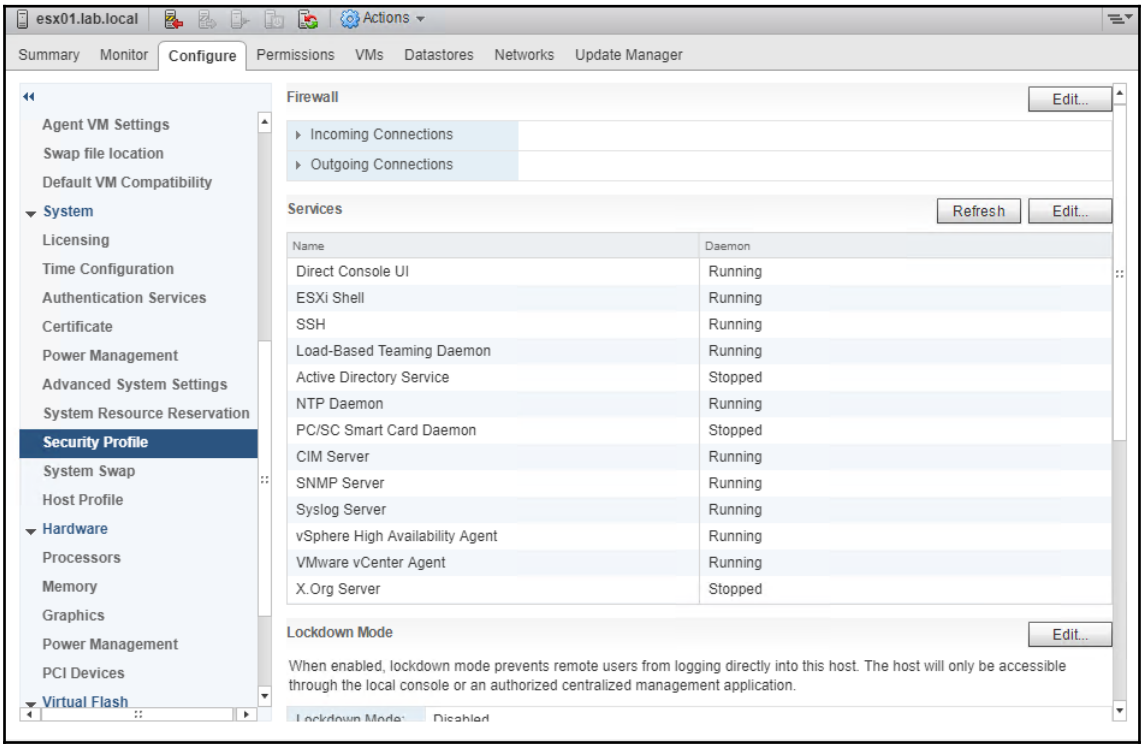

Navigator
Back
Administration
Access Control
Roles
Global Permissions
Single Sign-On
Users and Groups
Configuration
Licensing
Licenses
Reports
Solutions
Client Plug-Ins
vCenter Server Extens...
Deployment
System Configuration
Customer Experience...
Support
Roles
Roles provider:
vCenter6.lab.local
Roles
Usage
Privileges
Administrator
Read-only
No access
No cryptography administrator
Virtual machine power user (sample)
Virtual machine user (sample)
Resource pool administrator (sample)
VMware Consolidated Backup user (sample)
Datastore consumer (sample)
Tagging Admin
Network administrator (sample)
Content library administrator (sample)
Defined in
User/Group
Propagate
This list is empty.

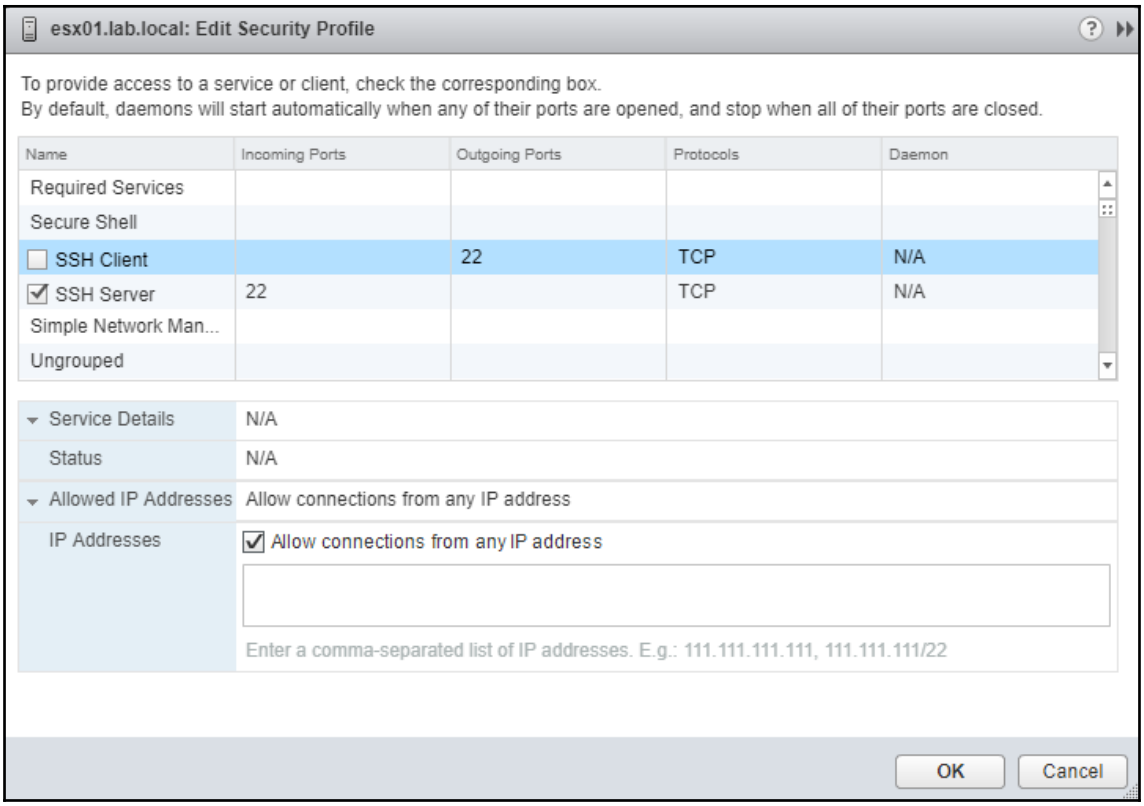

Navigator
Back
Administration
Access Control
Roles
Global Permissions
Single Sign-On
Users and Groups
Configuration
SSO Configuration for vCenter6.lab.local
Policies
Identity Sources
Certificates
SAML Service Providers
Name
Server URL
Type
Domain
--
--
--
vsphere.local
--
--
Local OS
VCENTER6 (default)
lab.local
--
Active Directory (Integrated Windows A...
lab.local

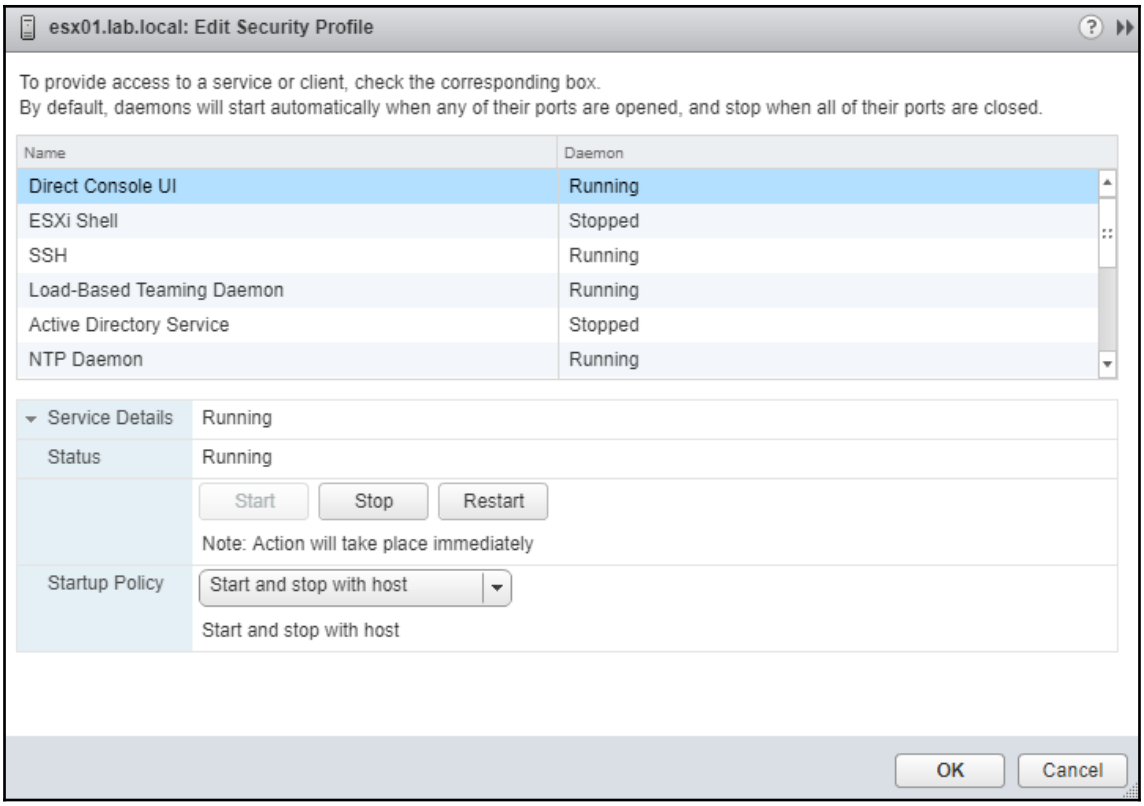

Add identity source
Identity source type:
Active Directory (Integrated Windows Authentication)
Active Directory as an LDAP Server
Open LDAP
Local OS
Identity source settings
Domain name:
LAB.LOCAL
Use machine account
Use Service Principal Name (SPN)
Service Principal Name (SPN):
User Principal Name (UPN):
Password:
OK
Cancel

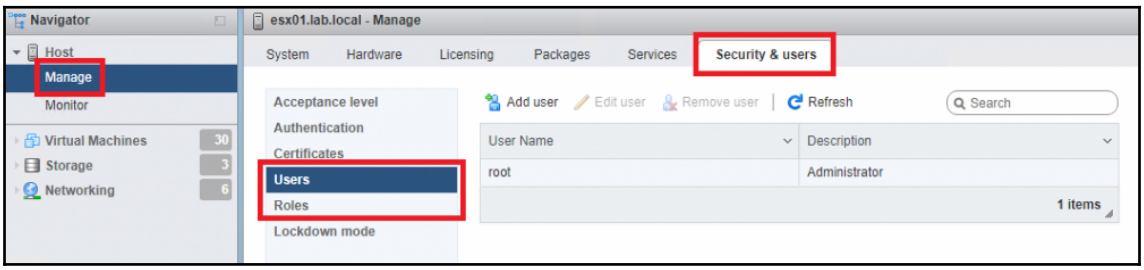

vCenter6.lab.local
Actions
Summ...
Monitor
Confi...
Permi...
Datac...
Hosts ...
VMs
Datast...
Netwo...
Linked...
Extens...
Updat...
Settings
General
Licensing
Message of the Day
Advanced Settings
Auto Deploy
vCenter HA
More
Key Management Servers
Storage Providers
vCenter Server Settings
Edit...
Statistics
Estimated space required: 58,70 GB
Database
Max connections: 50
Runtime settings
vCenter Server name: vCenter6.lab.local
User directory
User directory timeout
60 second(s)
Query limit
Enabled
Query limit size
5000 users and groups
Validation
Enabled
Validation period
1440 minute(s)

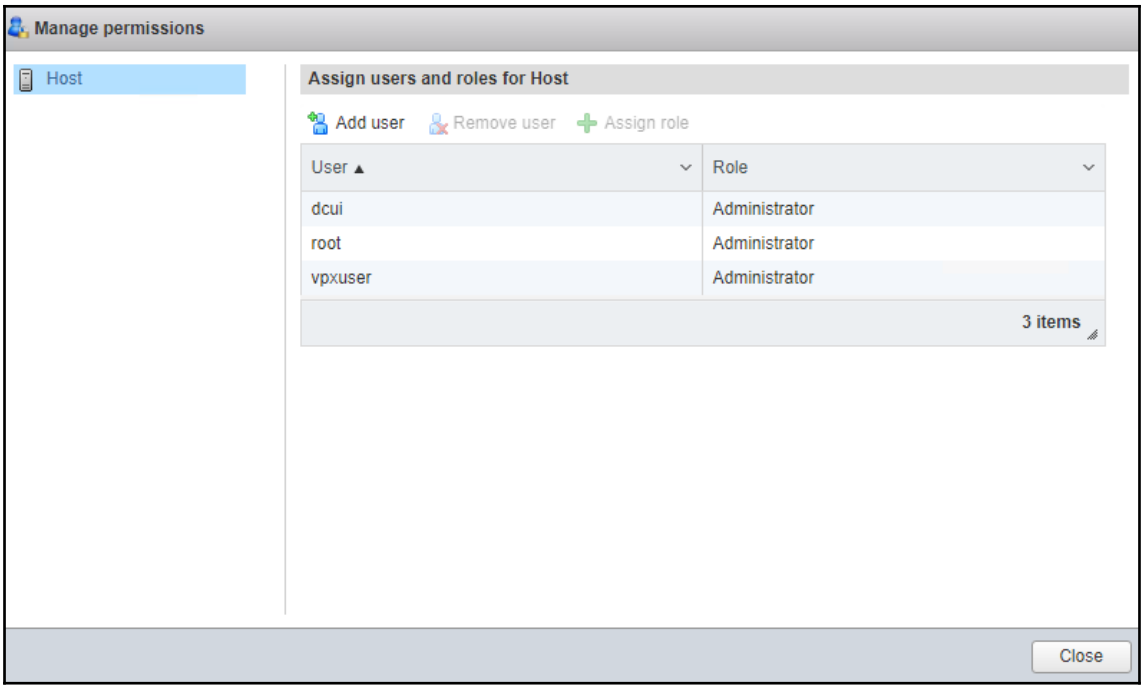

ESXi Running
hostd/DCUI/VMs
Secure Boot Verifier
VMkernel
Boot Loading
Components
UEFI Firmware
Hardware

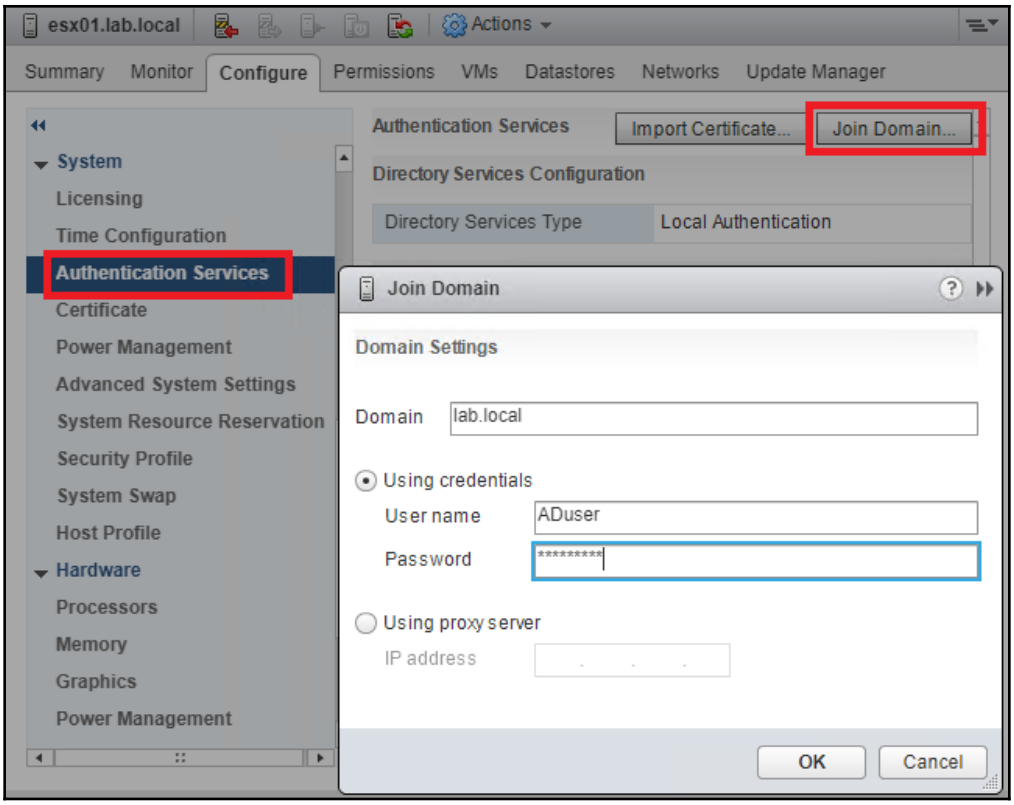

esx01.lab.local
Actions
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
Agent VM Settings
Swap file location
Default VM Compatibility
System
Licensing
Time Configuration
Authentication Services
Certificate
Power Management
Advanced System Settings
System Resource Reservation
Security Profile
System Swap
Host Profile
Hardware
Processors
Memory
Graphics
Power Management
PCI Devices
Virtual Flash
Firewall
Edit...
Incoming Connections
Outgoing Connections
Services
Refresh
Edit...
Name
Daemon
Direct Console UI
Running
ESXi Shell
Running
SSH
Running
Load-Based Teaming Daemon
Running
Active Directory Service
Stopped
NTP Daemon
Running
PC/SC Smart Card Daemon
Stopped
CIM Server
Running
SNMP Server
Running
Syslog Server
Running
vSphere High Availability Agent
Running
VMware vCenter Agent
Running
X.Org Server
Stopped
Lockdown Mode
Edit...
When enabled, lockdown mode prevents remote users from logging directly into this host. The host will only be accessible through the local console or an authorized centralized management application.
Lockdown Mode:
Disabled

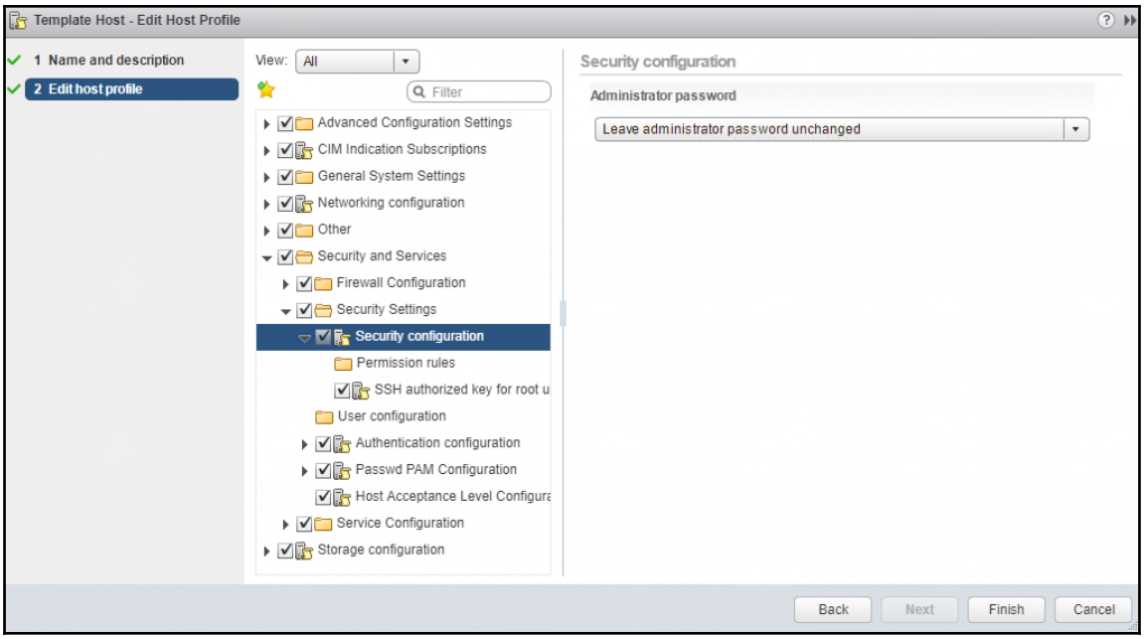

esx01.lab.local: Edit Security Profile
To provide access to a service or client, check the corresponding box.
By default, daemons will start automatically when any of their ports are opened, and stop when all of their ports are closed.
Name
Incoming Ports
Outgoing Ports
Protocols
Daemon
Required Services
Secure Shell
SSH Client
22
TCP
N/A
SSH Server
22
TCP
N/A
Simple Network Man...
Ungrouped
Service Details
N/A
Status
N/A
Allowed IP Addresses
Allow connections from any IP address
IP Addresses
Allow connections from any IP address
Enter a comma-separated list of IP addresses. E.g.: 111.111.111.111, 111.111.111/22
OK
Cancel

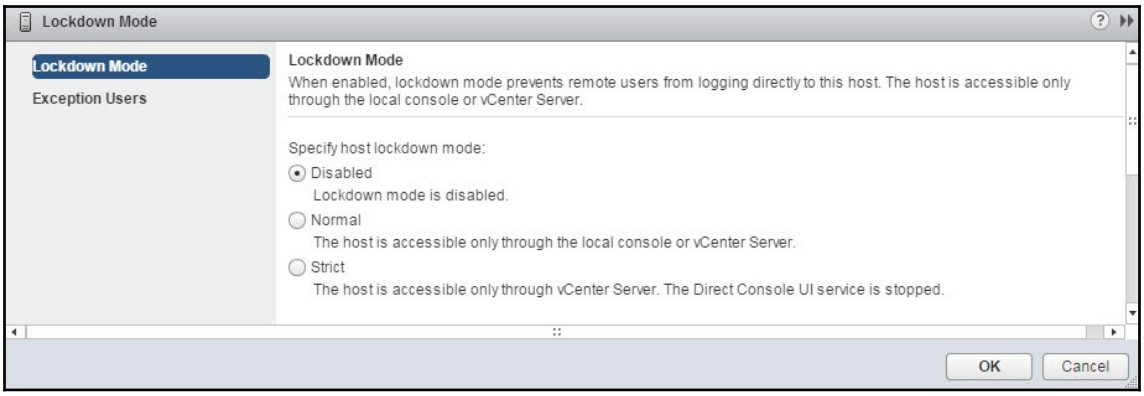

esx01.lab.local: Edit Security Profile
To provide access to a service or client, check the corresponding box.
By default, daemons will start automatically when any of their ports are opened, and stop when all of their ports are closed.
Name
Daemon
Direct Console UI
Running
ESXi Shell
Stopped
SSH
Running
Load-Based Teaming Daemon
Running
Active Directory Service
Stopped
NTP Daemon
Running
Service Details
Running
Status
Running
Start
Stop
Restart
Note: Action will take place immediately
Startup Policy
Start and stop with host
Start and stop with host
OK
Cancel

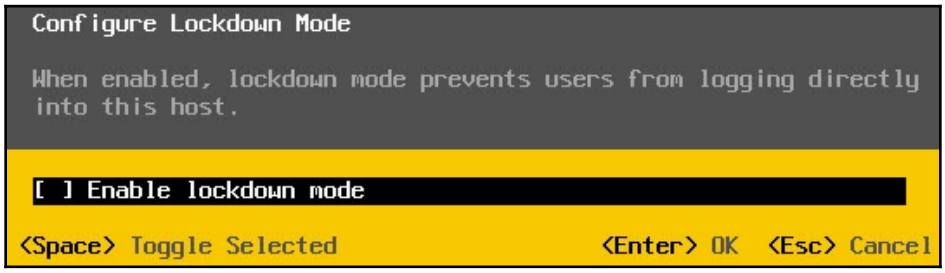

Navigator
Host
Manage
Monitor
Virtual Machines
30
Storage
3
Networking
6
esx01.lab.local - Manage
System
Hardware
Licensing
Packages
Services
Security & users
Acceptance level
Authentication
Certificates
Users
Roles
Lockdown mode
Add user
Edit user
Remove user
Refresh
Search
User Name
Description
root
Administrator
1 items

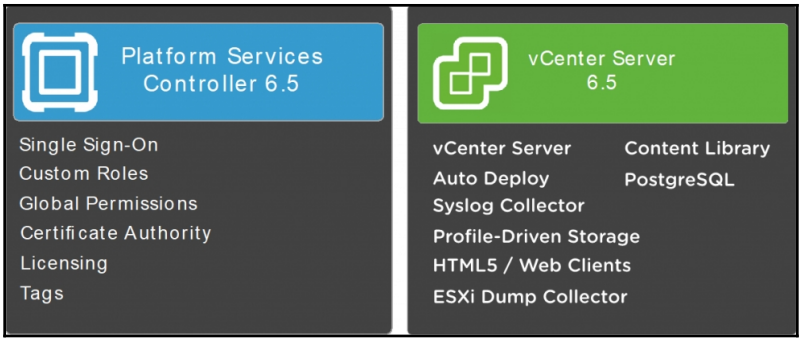

Manage permissions
Host
Assign users and roles for Host
Add user
Remove user
Assign role
User ▲
Role
dcui
Administrator
root
Administrator
vpxuser
Administrator
3 items
Close

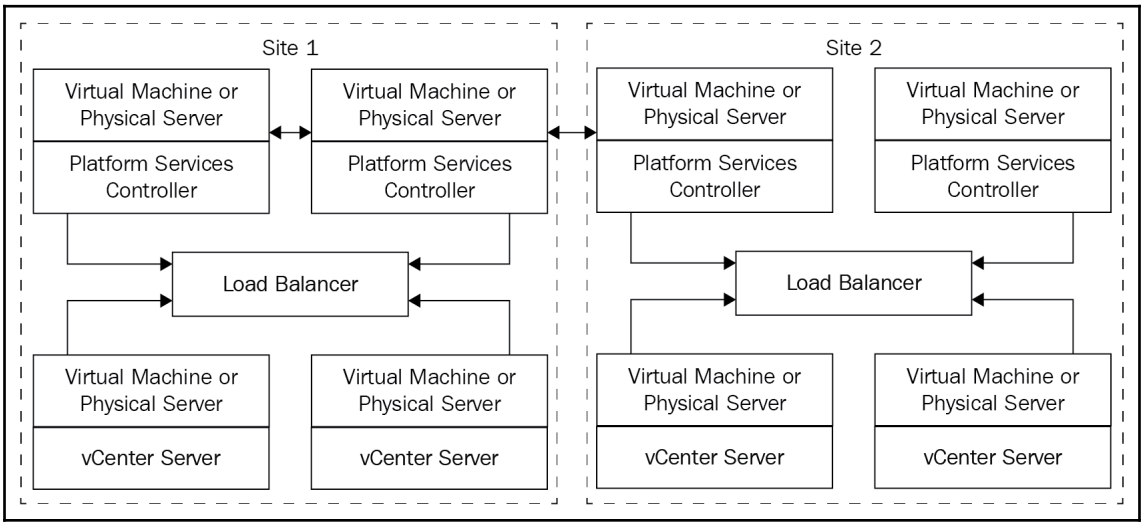

esx01.lab.local
Actions
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
System
Licensing
Time Configuration
Authentication Services
Certificate
Power Management
Advanced System Settings
System Resource Reservation
Security Profile
System Swap
Host Profile
Hardware
Processors
Memory
Graphics
Power Management
Authentication Services
Import Certificate...
Join Domain...
Directory Services Configuration
Directory Services Type
Local Authentication
Join Domain
Domain Settings
Domain
lab.local
Using credentials
User name
ADuser
Password
Using proxy server
IP address
OK
Cancel

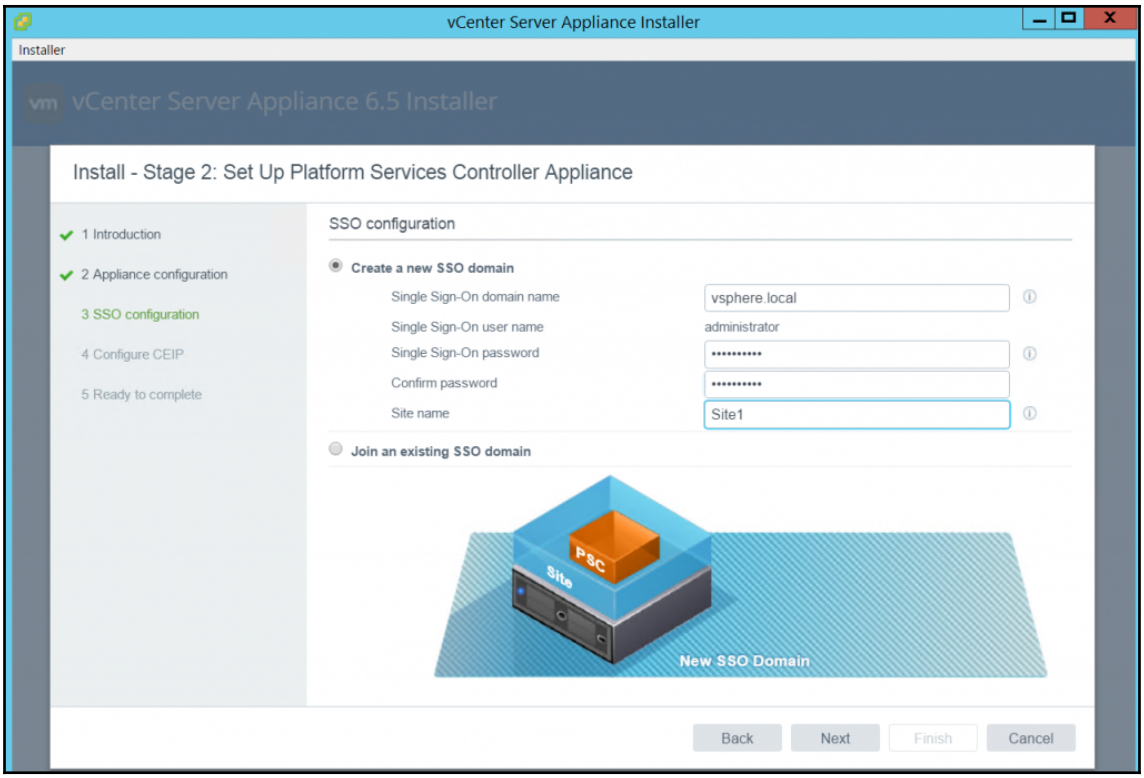

Template Host - Edit Host Profile
1 Name and description
2 Edit host profile
View: All
Filter
Advanced Configuration Settings
CIM Indication Subscriptions
General System Settings
Networking configuration
Other
Security and Services
Firewall Configuration
Security Settings
Security configuration
Permission rules
SSH authorized key for root u
User configuration
Authentication configuration
Passwd PAM Configuration
Host Acceptance Level Configura
Service Configuration
Storage configuration
Security configuration
Administrator password
Leave administrator password unchanged
Back
Next
Finish
Cancel

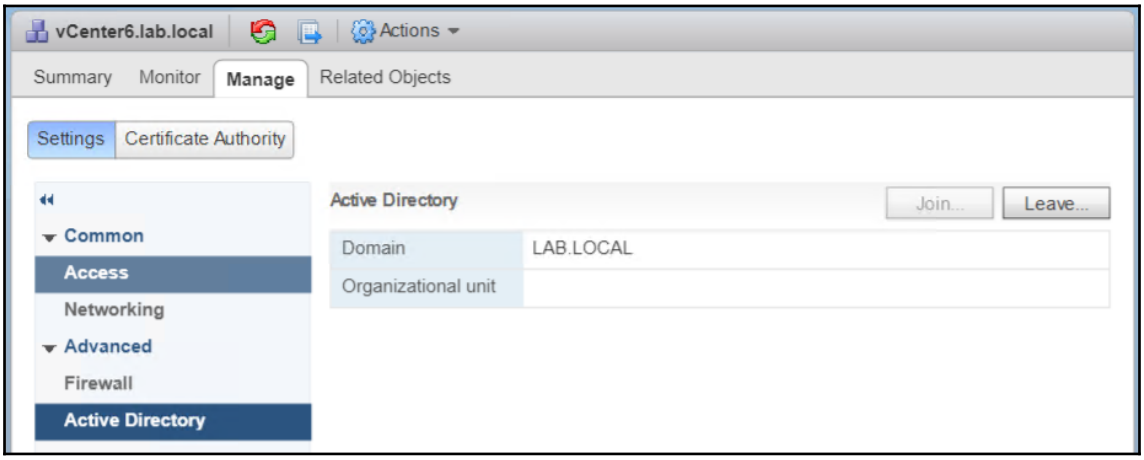

Lockdown Mode
Lockdown Mode
Exception Users
Lockdown Mode
When enabled, lockdown mode prevents remote users from logging directly to this host. The host is accessible only through the local console or vCenter Server.
Specify host lockdown mode:
Disabled
Lockdown mode is disabled.
Normal
The host is accessible only through the local console or vCenter Server.
Strict
The host is accessible only through vCenter Server. The Direct Console UI service is stopped.
OK
Cancel

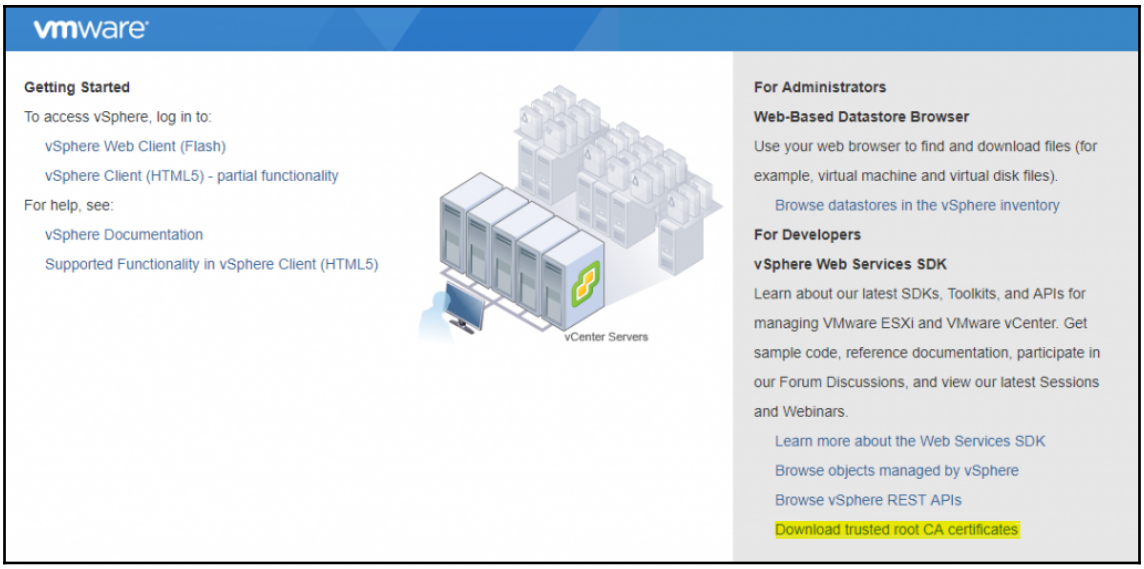

Configure Lockdown Mode
When enabled, lockdown mode prevents users from logging directly into this host.
[ ] Enable lockdown mode
<Space> Toggle Selected
<Enter> OK
<Esc> Cancel

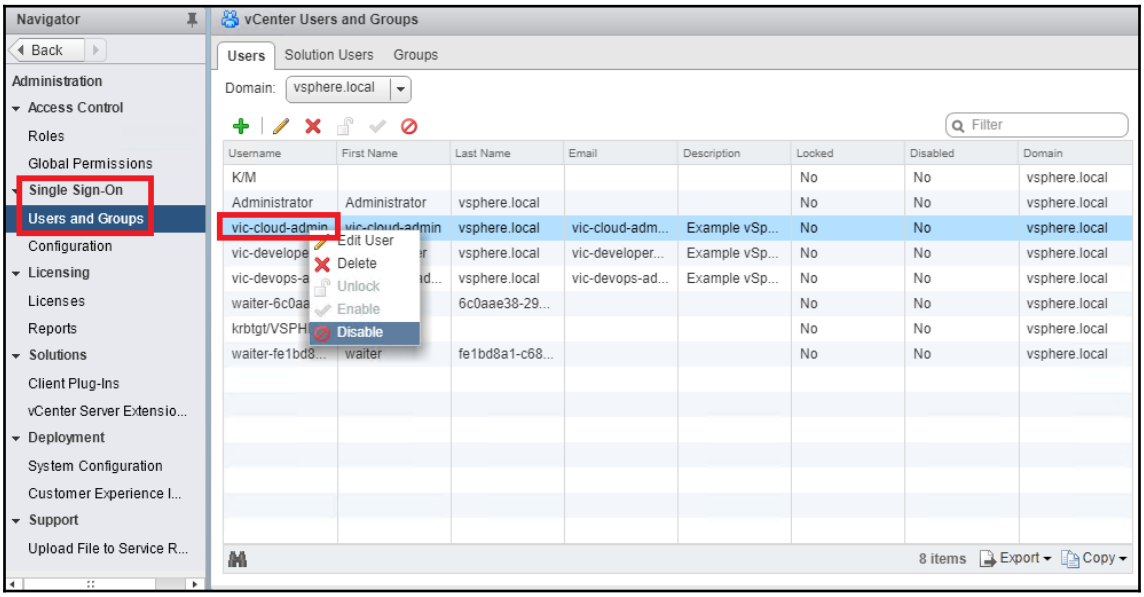

Platform Services Controller 6.5
Single Sign-On
Custom Roles
Global Permissions
Certificate Authority
Licensing
Tags
vCenter Server 6.5
vCenter Server
Content Library
Auto Deploy
PostgreSQL
Syslog Collector
Profile-Driven Storage
HTML5 / Web Clients
ESXi Dump Collector

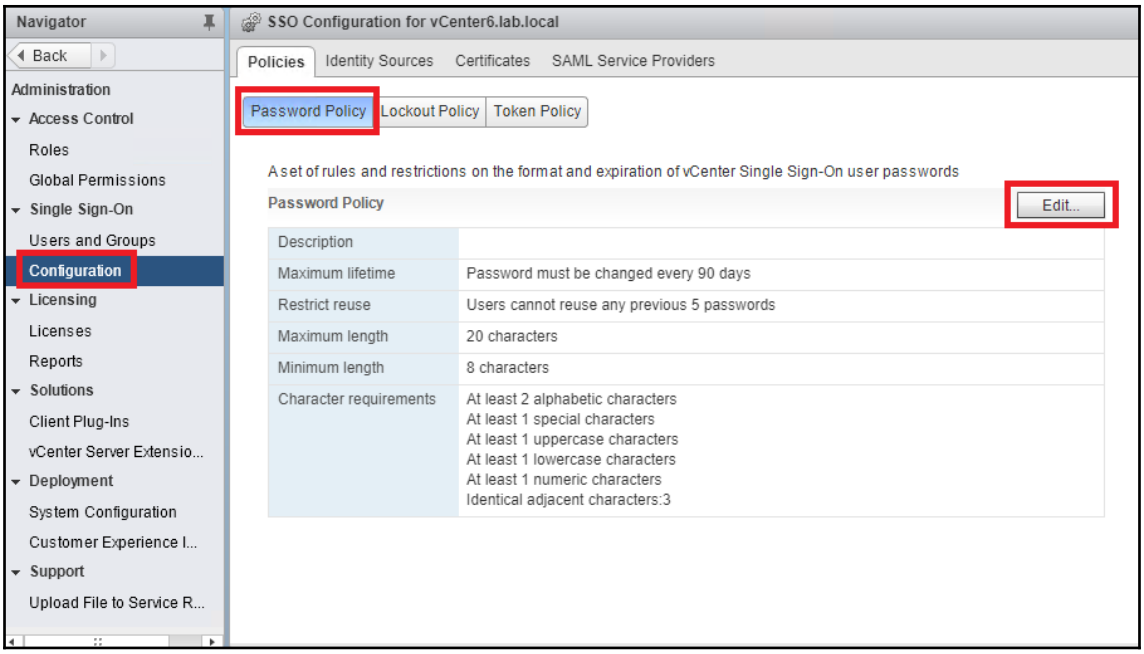

Site 1
Virtual Machine or Physical Server
Platform Services Controller
Virtual Machine or Physical Server
Platform Services Controller
Load Balancer
Virtual Machine or Physical Server
vCenter Server
Virtual Machine or Physical Server
vCenter Server
Site 2
Virtual Machine or Physical Server
Platform Services Controller
Virtual Machine or Physical Server
Platform Services Controller
Load Balancer
Virtual Machine or Physical Server
vCenter Server
Virtual Machine or Physical Server
vCenter Server

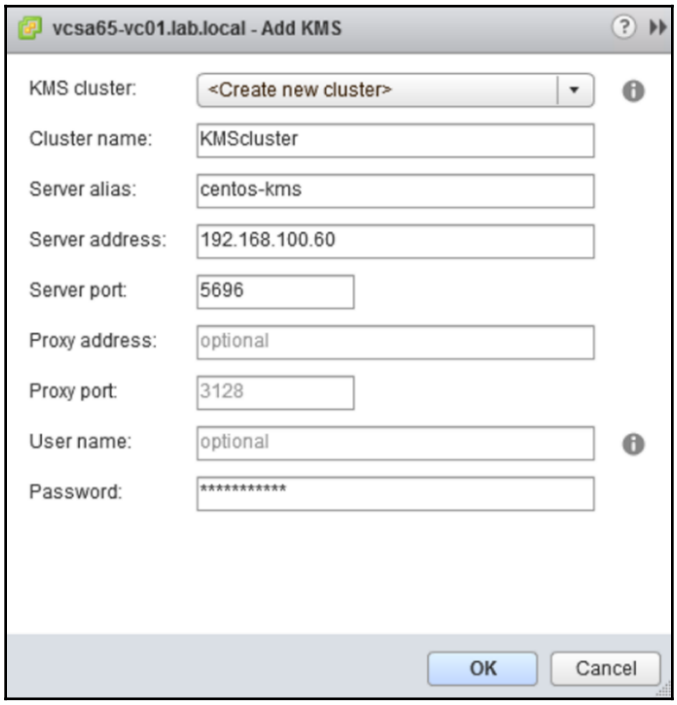

vCenter Server Appliance Installer
Installer
vCenter Server Appliance 6.5 Installer
Install - Stage 2: Set Up Platform Services Controller Appliance
1 Introduction
2 Appliance configuration
3 SSO configuration
4 Configure CEIP
5 Ready to complete
SSO configuration
Create a new SSO domain
Single Sign-On domain name
vsphere.local
Single Sign-On user name
administrator
Single Sign-On password
Confirm password
Site name
Site1
Join an existing SSO domain
PSC
Site
New SSO Domain
Back
Next
Finish
Cancel

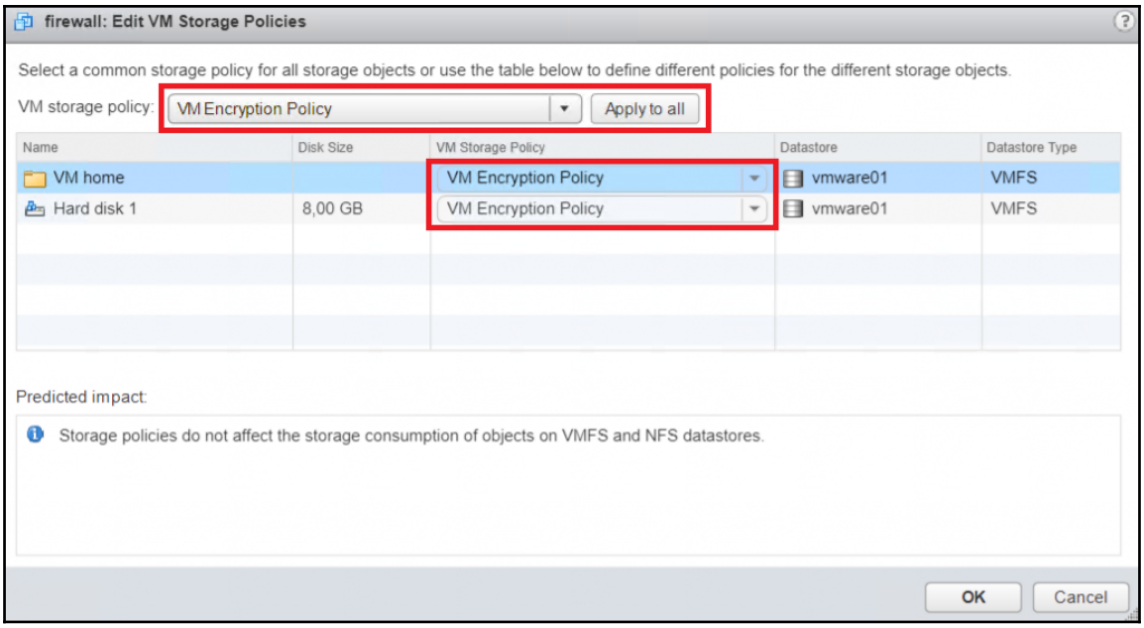

vCenter6.lab.local
Actions
Summary
Monitor
Manage
Related Objects
Settings
Certificate Authority
Common
Access
Networking
Advanced
Firewall
Active Directory
Active Directory
Join...
Leave...
Domain
LAB.LOCAL
Organizational unit

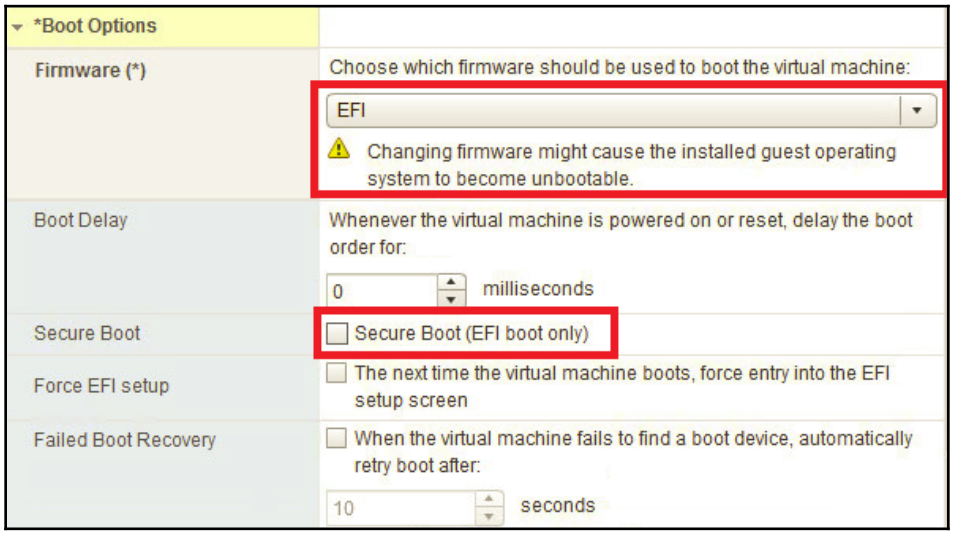

vmware
Getting Started
To access vSphere, log in to:
vSphere Web Client (Flash)
vSphere Client (HTML5) - partial functionality
For help, see:
vSphere Documentation
Supported Functionality in vSphere Client (HTML5)
vCenter Servers
For Administrators
Web-Based Datastore Browser
Use your web browser to find and download files (for example, virtual machine and virtual disk files).
Browse datastores in the vSphere inventory
For Developers
vSphere Web Services SDK
Learn about our latest SDKs, Toolkits, and APIs for managing VMware ESXi and VMware vCenter. Get sample code, reference documentation, participate in our Forum Discussions, and view our latest Sessions and Webinars.
Learn more about the Web Services SDK
Browse objects managed by vSphere
Browse vSphere REST APIs
Download trusted root CA certificates

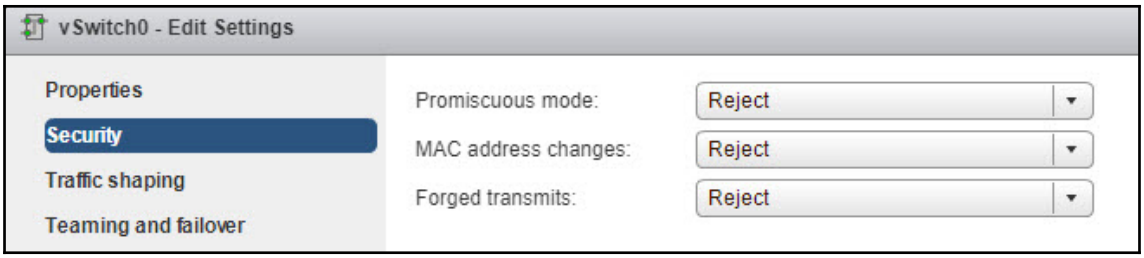

Navigator
Back
Administration
Access Control
Roles
Global Permissions
Single Sign-On
Users and Groups
Configuration
Licensing
Licenses
Reports
Solutions
Client Plug-Ins
vCenter Server Extensio...
Deployment
System Configuration
Customer Experience I...
Support
Upload File to Service R...
vCenter Users and Groups
Users
Solution Users
Groups
Domain: vsphere.local
Filter
Username
First Name
Last Name
Email
Description
Locked
Disabled
Domain
K/M
Administrator
vsphere.local
vic-cloud-admin
Example vSp...
vic-developer...
vic-devops-ad...
waiter-6c0aa
6c0aae38-29...
krbtgt/VSPH
waiter-fe1bd8...
fe1bd8a1-c68...
Edit User
Delete
Unlock
Enable
Disable
8 items
Export
Copy

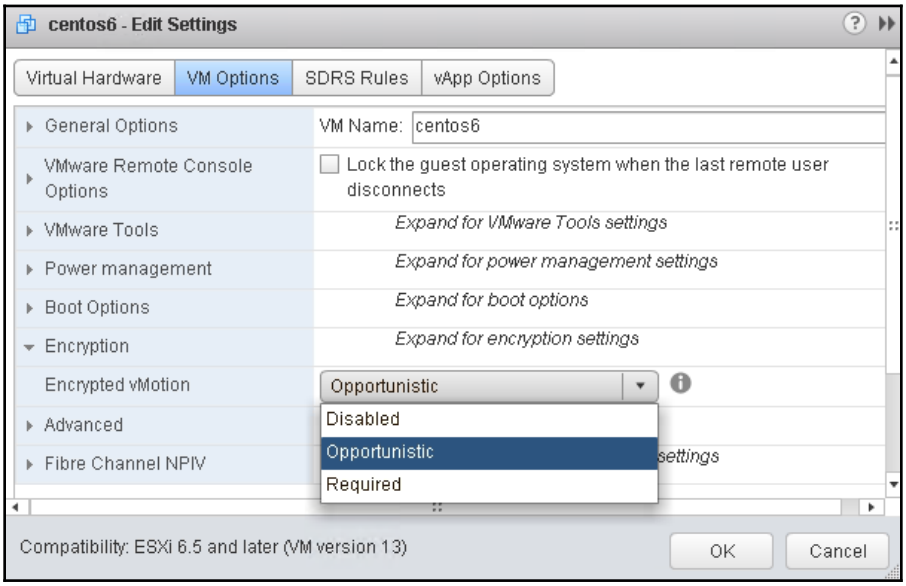

Navigator
Back
Administration
Access Control
Roles
Global Permissions
Single Sign-On
Users and Groups
Configuration
Licensing
Licenses
Reports
Solutions
Client Plug-Ins
vCenter Server Extensio...
Deployment
System Configuration
Customer Experience I...
Support
Upload File to Service R...
SSO Configuration for vCenter6.lab.local
Policies
Identity Sources
Certificates
SAML Service Providers
Password Policy
Lockout Policy
Token Policy
A set of rules and restrictions on the format and expiration of vCenter Single Sign-On user passwords
Password Policy
Edit...
Description
Maximum lifetime
Password must be changed every 90 days
Restrict reuse
Users cannot reuse any previous 5 passwords
Maximum length
20 characters
Minimum length
8 characters
Character requirements
At least 2 alphabetic characters
At least 1 special characters
At least 1 uppercase characters
At least 1 lowercase characters
At least 1 numeric characters
Identical adjacent characters:3


vcsa65-vc01.lab.local - Add KMS
KMS cluster:
<Create new cluster>
Cluster name:
KMScluster
Server alias:
centos-kms
Server address:
192.168.100.60
Server port:
5696
Proxy address:
optional
Proxy port:
3128
User name:
optional
Password:
****
OK
Cancel

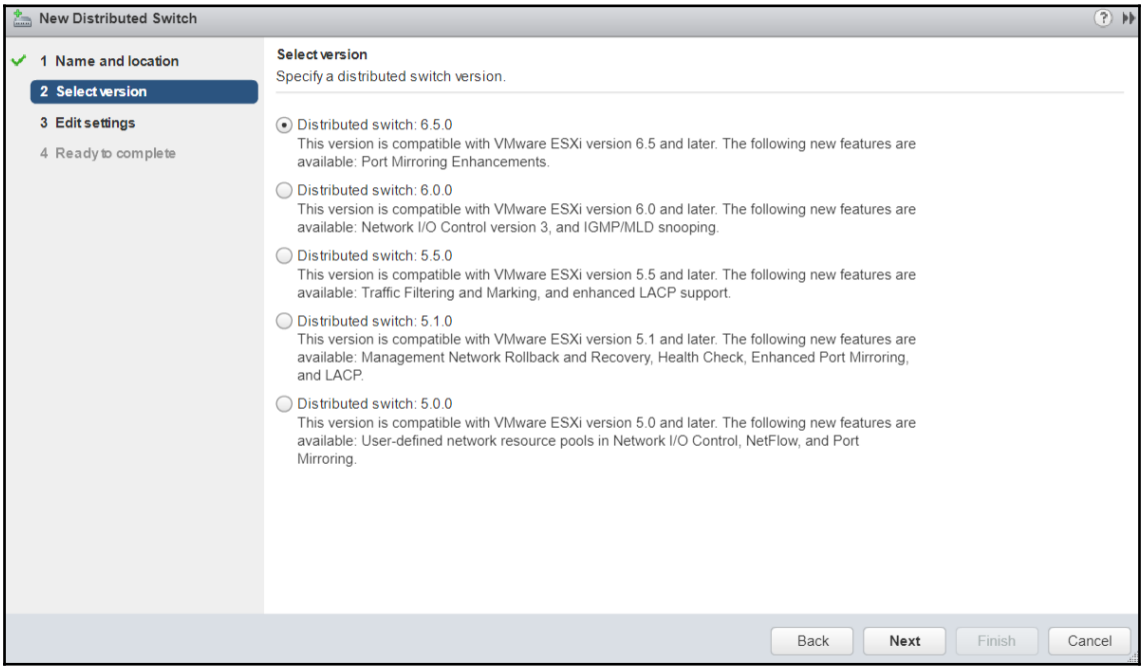

firewall: Edit VM Storage Policies
Select a common storage policy for all storage objects or use the table below to define different policies for the different storage objects.
VM storage policy:
VM Encryption Policy
Apply to all
Name
Disk Size
VM Storage Policy
Datastore
Datastore Type
VM home
VM Encryption Policy
vmware01
VMFS
Hard disk 1
8,00 GB
VM Encryption Policy
vmware01
VMFS
Predicted impact:
Storage policies do not affect the storage consumption of objects on VMFS and NFS datastores.
OK
Cancel

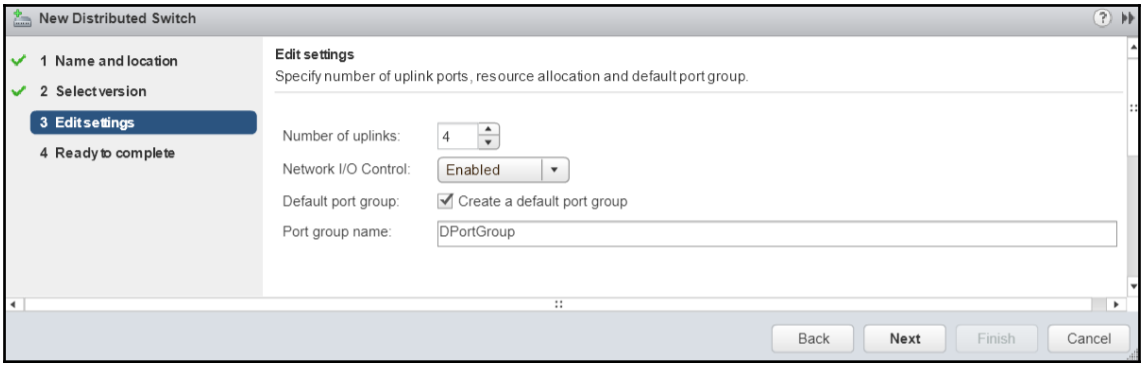

*Boot Options
Firmware (*)
Choose which firmware should be used to boot the virtual machine:
EFI
Changing firmware might cause the installed guest operating system to become unbootable.
Boot Delay
Whenever the virtual machine is powered on or reset, delay the boot order for:
0
milliseconds
Secure Boot
Secure Boot (EFI boot only)
Force EFI setup
The next time the virtual machine boots, force entry into the EFI setup screen
Failed Boot Recovery
When the virtual machine fails to find a boot device, automatically retry boot after:
10
seconds

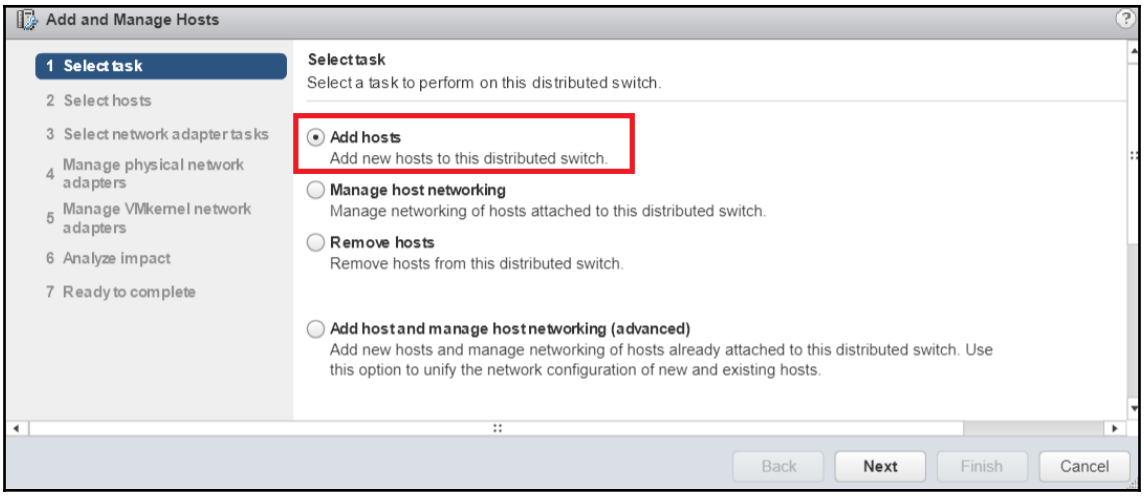

vSwitch0 - Edit Settings
Properties
Security
Traffic shaping
Teaming and failover
Promiscuous mode:
Reject
MAC address changes:
Reject
Forged transmits:
Reject

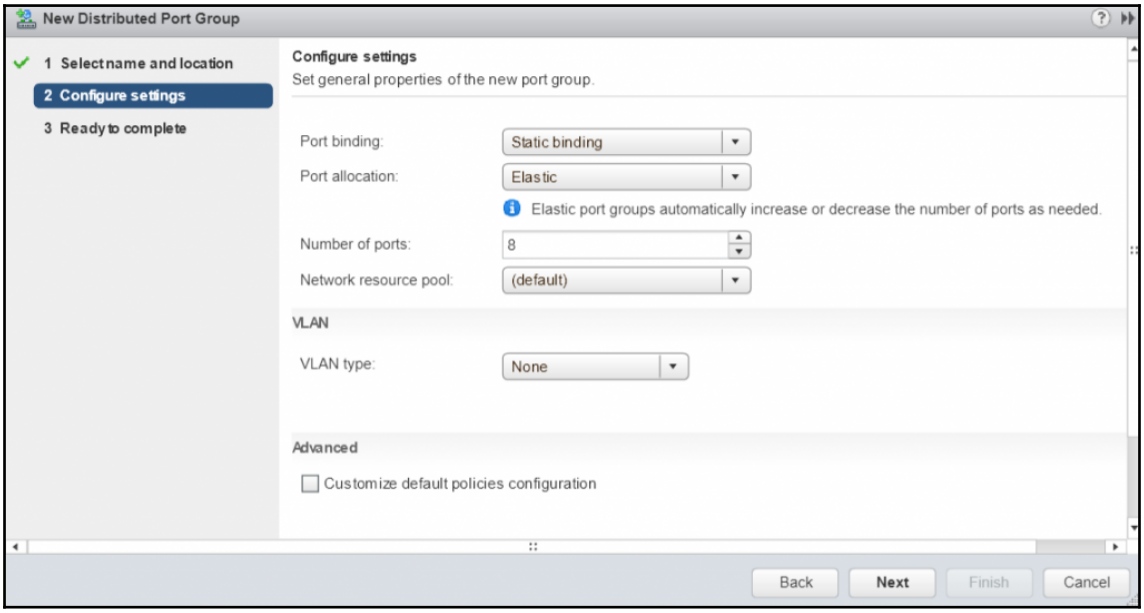

centos6 - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
General Options
VM Name:
centos6
VMware Remote Console Options
Lock the guest operating system when the last remote user disconnects
VMware Tools
Expand for VMware Tools settings
Power management
Expand for power management settings
Boot Options
Expand for boot options
Encryption
Expand for encryption settings
Encrypted vMotion
Opportunistic
Disabled
Opportunistic
Required
Advanced
Fibre Channel NPIV
settings
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel

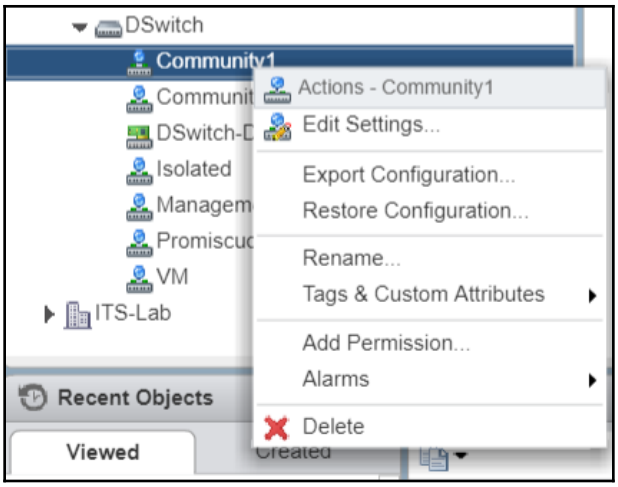
Chapter 02: Configure and Administer vSphere 6.x Networking

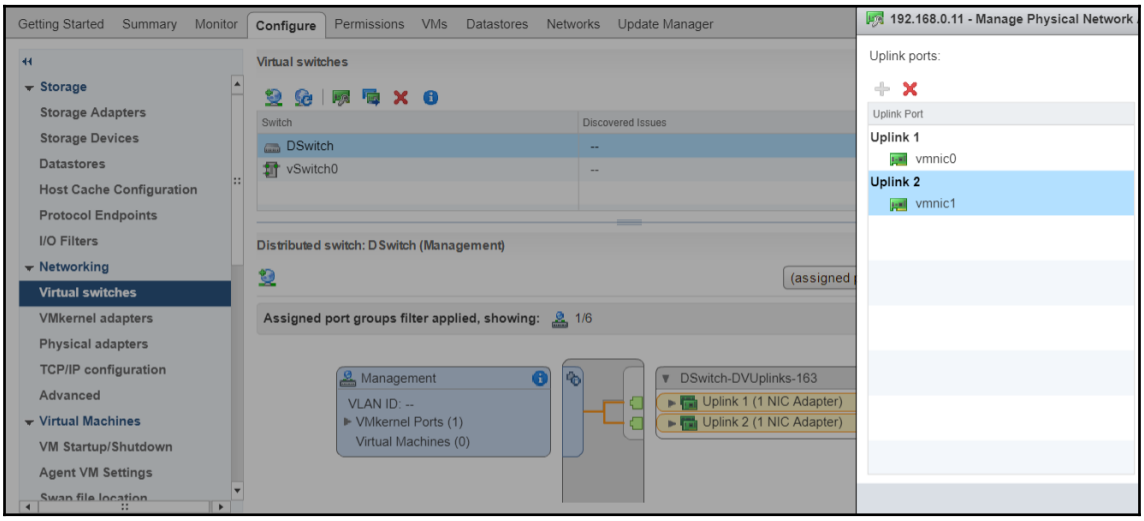


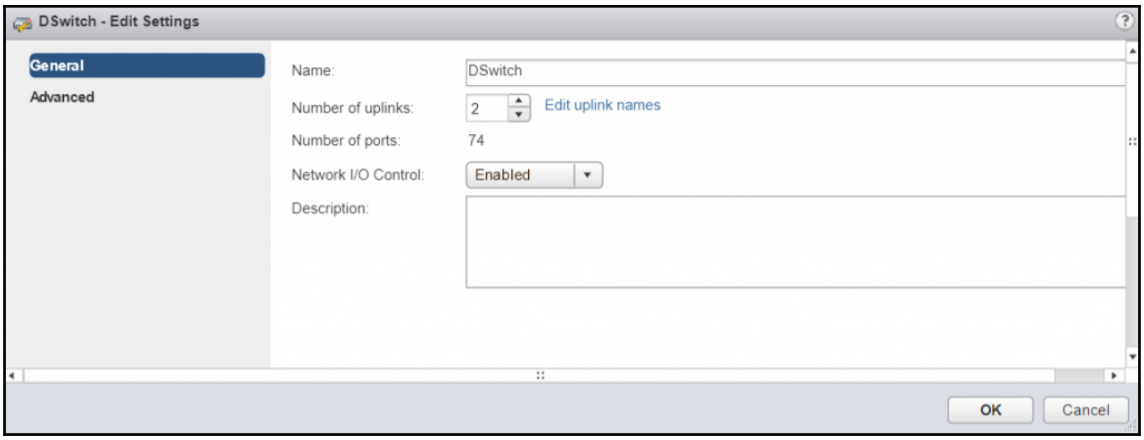


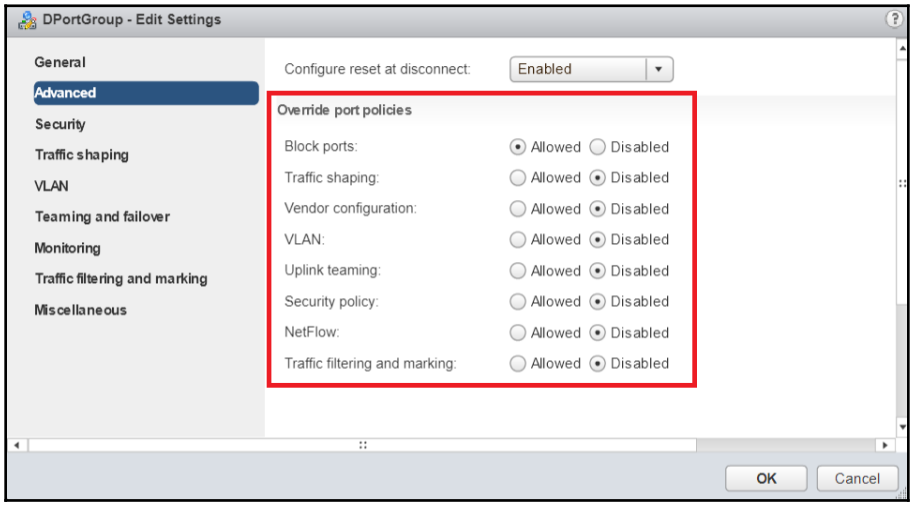

Add and Manage Hosts
1 Select task
2 Select hosts
3 Select network adapter tasks
4 Manage physical network adapters
5 Manage VMkernel network adapters
6 Analyze impact
7 Ready to complete
Select task
Select a task to perform on this distributed switch.
Add hosts
Add new hosts to this distributed switch.
Manage host networking
Manage networking of hosts attached to this distributed switch.
Remove hosts
Remove hosts from this distributed switch.
Add host and manage host networking (advanced)
Add new hosts and manage networking of hosts already attached to this distributed switch. Use this option to unify the network configuration of new and existing hosts.
Back
Next
Finish
Cancel

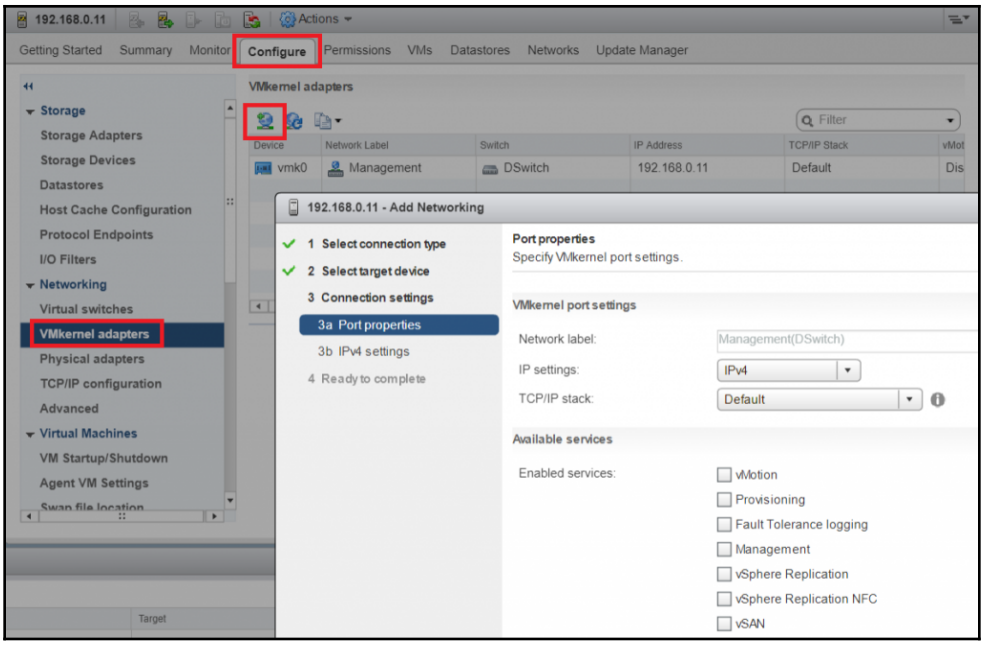

New Distributed Port Group
1 Select name and location
2 Configure settings
3 Ready to complete
Configure settings
Set general properties of the new port group.
Port binding:
Static binding
Port allocation:
Elastic
Elastic port groups automatically increase or decrease the number of ports as needed.
Number of ports:
8
Network resource pool:
(default)
VLAN
VLAN type:
None
Advanced
Customize default policies configuration
Back
Next
Finish
Cancel

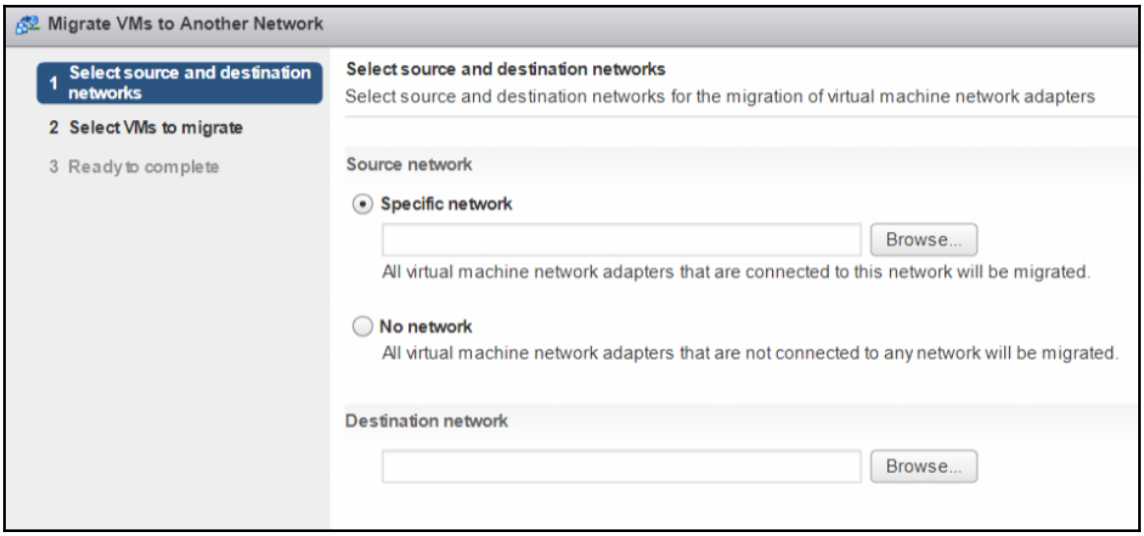

DSwitch
Community1
Actions - Community1
Edit Settings...
Export Configuration...
Restore Configuration...
Rename...
Tags & Custom Attributes
Add Permission...
Alarms
Delete
Isolated
VM
ITS-Lab
Recent Objects
Viewed

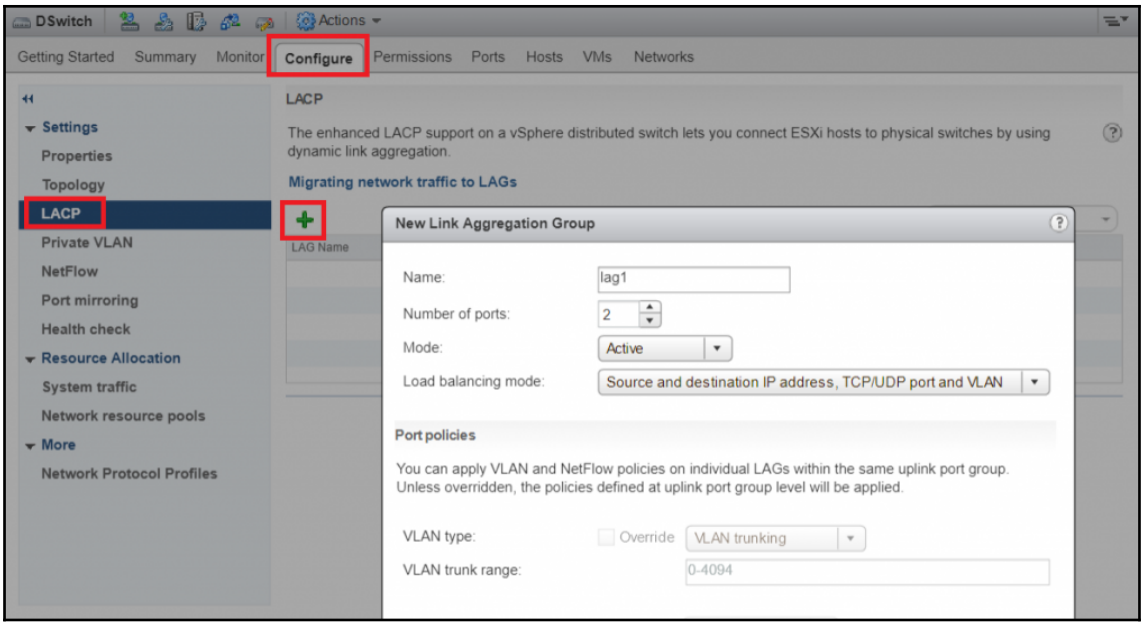

Getting Started
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
Storage
Storage Adapters
Storage Devices
Datastores
Host Cache Configuration
Protocol Endpoints
I/O Filters
Networking
Virtual switches
VMkernel adapters
Physical adapters
TCP/IP configuration
Advanced
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Virtual switches
Switch
Discovered Issues
DSwitch
vSwitch0
Distributed switch: DSwitch (Management)
Assigned port groups filter applied, showing: 1/6
Management
VLAN ID: --
VMkernel Ports (1)
Virtual Machines (0)
DSwitch-DVUplinks-163
Uplink 1 (1 NIC Adapter)
Uplink 2 (1 NIC Adapter)
192.168.0.11 - Manage Physical Network
Uplink ports:
Uplink Port
Uplink 1
vmnic0
Uplink 2
vmnic1


DSwitch - Edit Settings
General
Advanced
Name:
DSwitch
Number of uplinks:
2
Edit uplink names
Number of ports:
74
Network I/O Control:
Enabled
Description:
OK
Cancel


DPortGroup - Edit Settings
General
Advanced
Security
Traffic shaping
VLAN
Teaming and failover
Monitoring
Traffic filtering and marking
Miscellaneous
Configure reset at disconnect:
Enabled
Override port policies
Block ports: Allowed Disabled
Traffic shaping: Allowed Disabled
Vendor configuration: Allowed Disabled
VLAN: Allowed Disabled
Uplink teaming: Allowed Disabled
Security policy: Allowed Disabled
NetFlow: Allowed Disabled
Traffic filtering and marking: Allowed Disabled
OK
Cancel


192.168.0.11
Actions
Getting Started
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
VMkernel adapters
Storage
Storage Adapters
Storage Devices
Datastores
Host Cache Configuration
Protocol Endpoints
I/O Filters
Networking
Virtual switches
VMkernel adapters
Physical adapters
TCP/IP configuration
Advanced
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Swap file location
Filter
Device
Network Label
Switch
IP Address
TCP/IP Stack
vmk0
Management
DSwitch
192.168.0.11
Default
192.168.0.11 - Add Networking
1 Select connection type
2 Select target device
3 Connection settings
3a Port properties
3b IPv4 settings
4 Ready to complete
Port properties
Specify VMkernel port settings.
VMkernel port settings
Network label:
Management(DSwitch)
IP settings:
IPv4
TCP/IP stack:
Default
Available services
Enabled services:
vMotion
Provisioning
Fault Tolerance logging
Management
vSphere Replication
vSphere Replication NFC
vSAN
Target


Migrate VMs to Another Network
1 Select source and destination networks
2 Select VMs to migrate
3 Ready to complete
Select source and destination networks
Select source and destination networks for the migration of virtual machine network adapters
Source network
Specific network
Browse...
All virtual machine network adapters that are connected to this network will be migrated.
No network
All virtual machine network adapters that are not connected to any network will be migrated.
Destination network
Browse...



Migrating Network Traffic to Link Aggregation Groups

Newly-created LAGs are unused by default in the teaming and failover order of distributed port groups, because only one LAG must be the active uplink backing the traffic for a distributed port or port group.

Follow the suggested steps to migrate network traffic to a LAG without losing network connectivity.

1. Set the LAG as a standby uplink on distributed port groups
The combination of active standalone uplinks and a standby LAG should be used only during the migration phase.

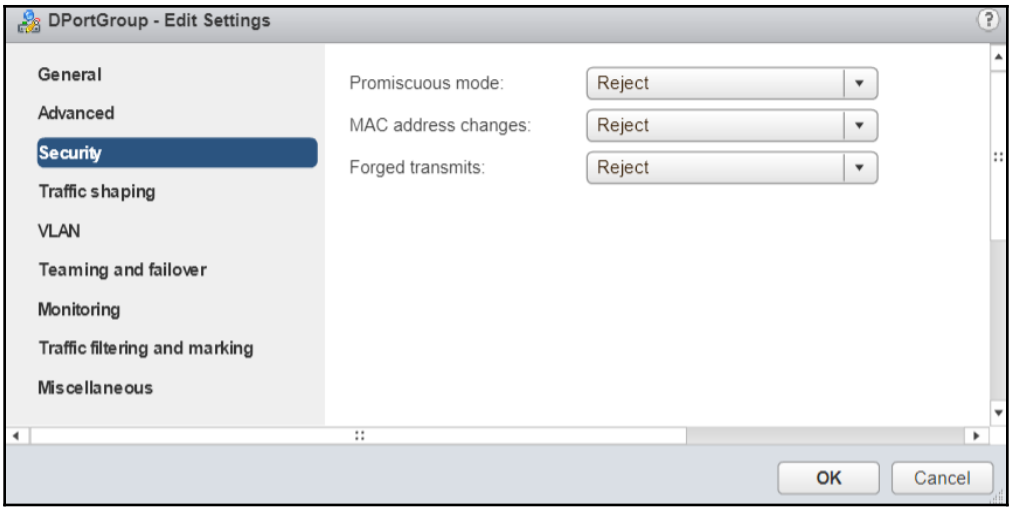
Manage Distributed Port Groups...

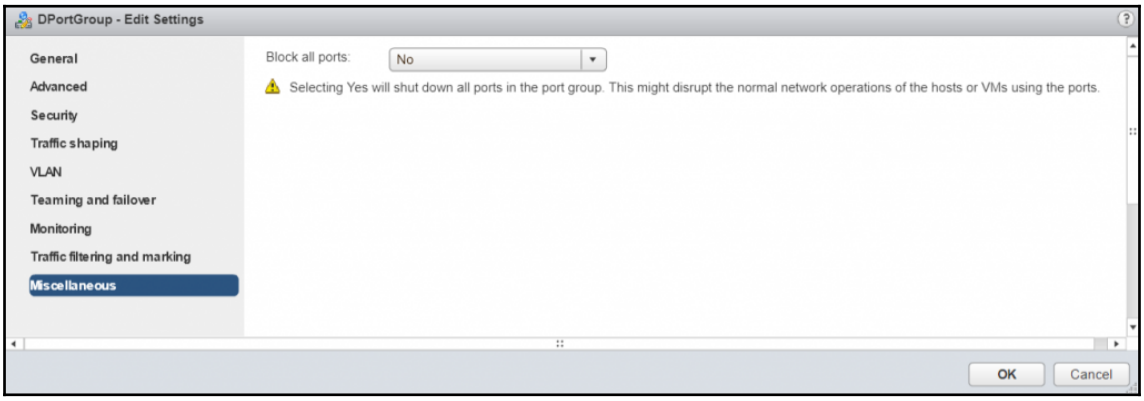
2. Reassign physical network adapters of the hosts to the LAG ports

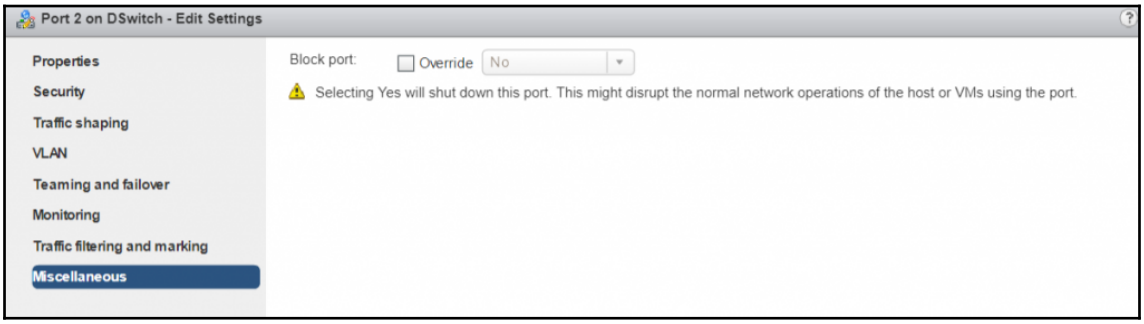
Add and Manage Hosts...

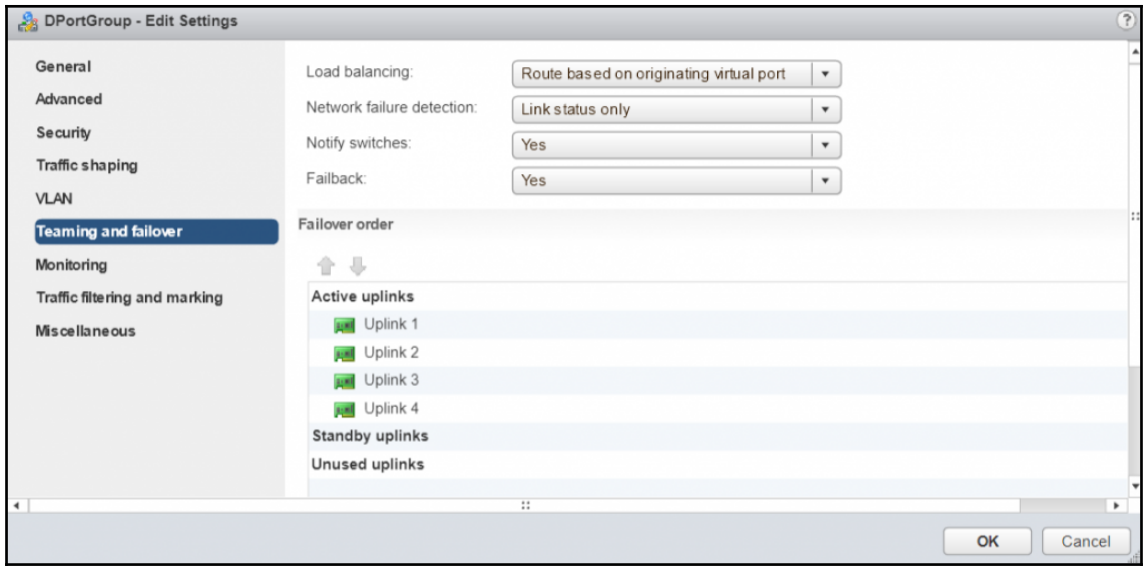
3. Set the LAG to be the only active uplink on the distributed port groups
Set all other uplinks and LAGs as unused.

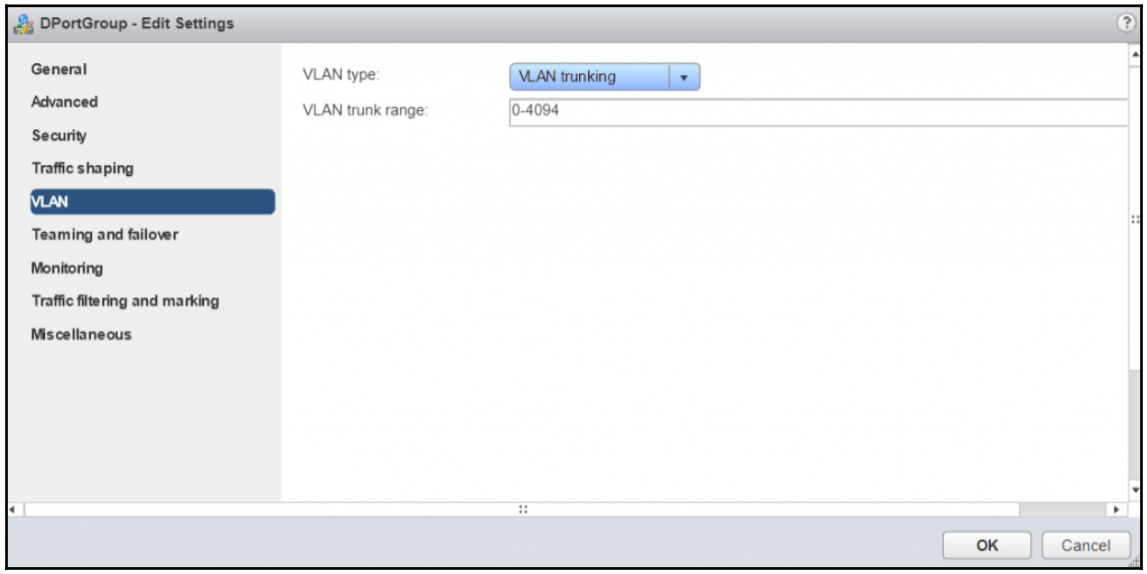
Manage Distributed Port Groups...

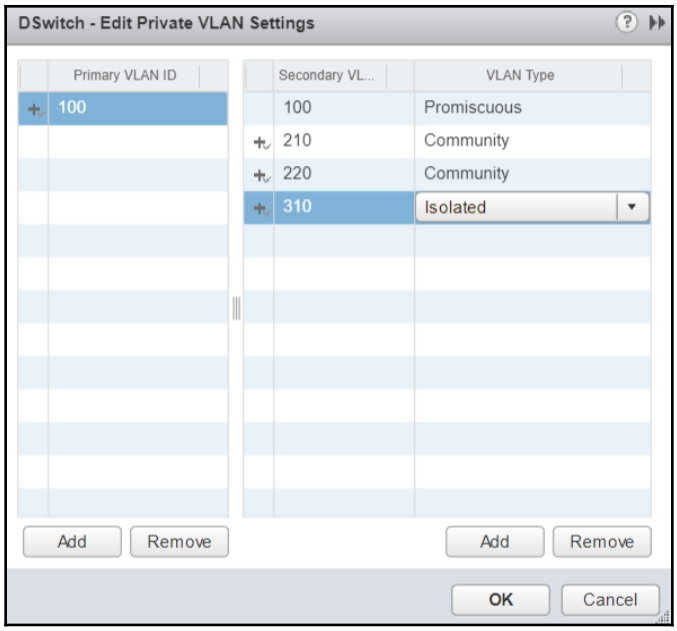

DPortGroup - Edit Settings
General
Advanced
Security
Traffic shaping
VLAN
Teaming and failover
Monitoring
Traffic filtering and marking
Miscellaneous
Promiscuous mode:
Reject
MAC address changes:
Reject
Forged transmits:
Reject
OK
Cancel

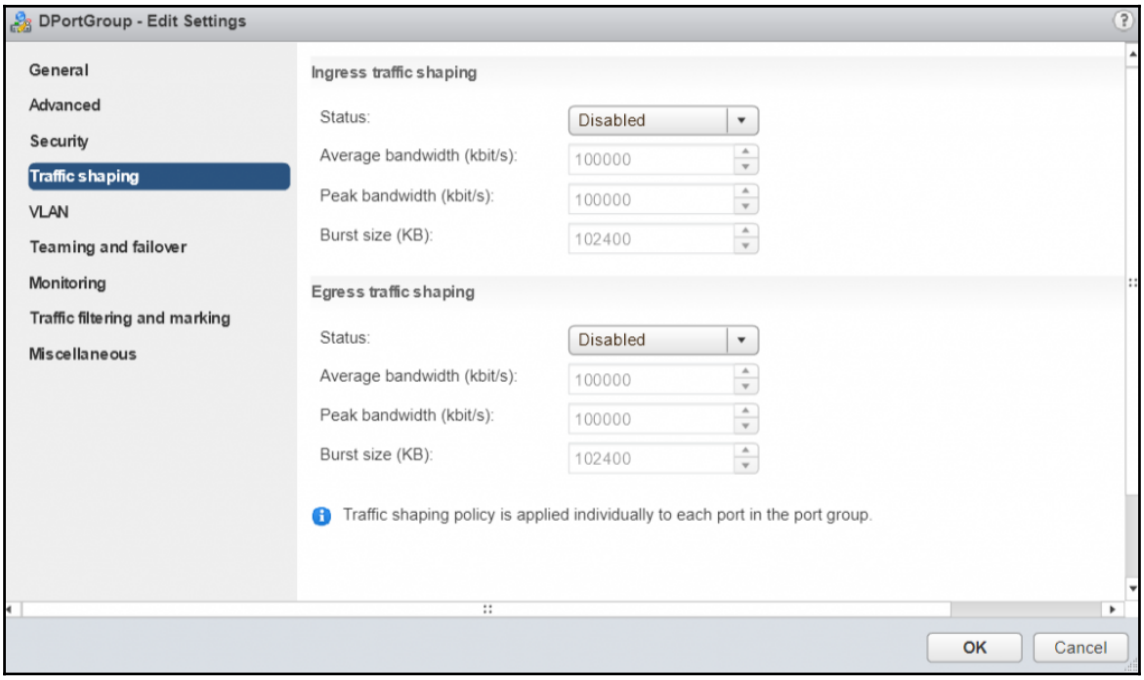

DPortGroup - Edit Settings
General
Advanced
Security
Traffic shaping
VLAN
Teaming and failover
Monitoring
Traffic filtering and marking
Miscellaneous
Block all ports:
No
Selecting Yes will shut down all ports in the port group. This might disrupt the normal network operations of the hosts or VMs using the ports.
OK
Cancel

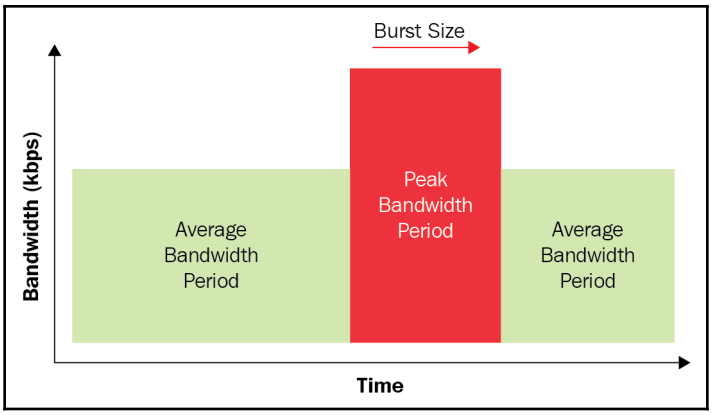

Port 2 on DSwitch - Edit Settings
Properties
Security
Traffic shaping
VLAN
Teaming and failover
Monitoring
Traffic filtering and marking
Miscellaneous
Block port:
Override
No
Selecting Yes will shut down this port. This might disrupt the normal network operations of the host or VMs using the port.

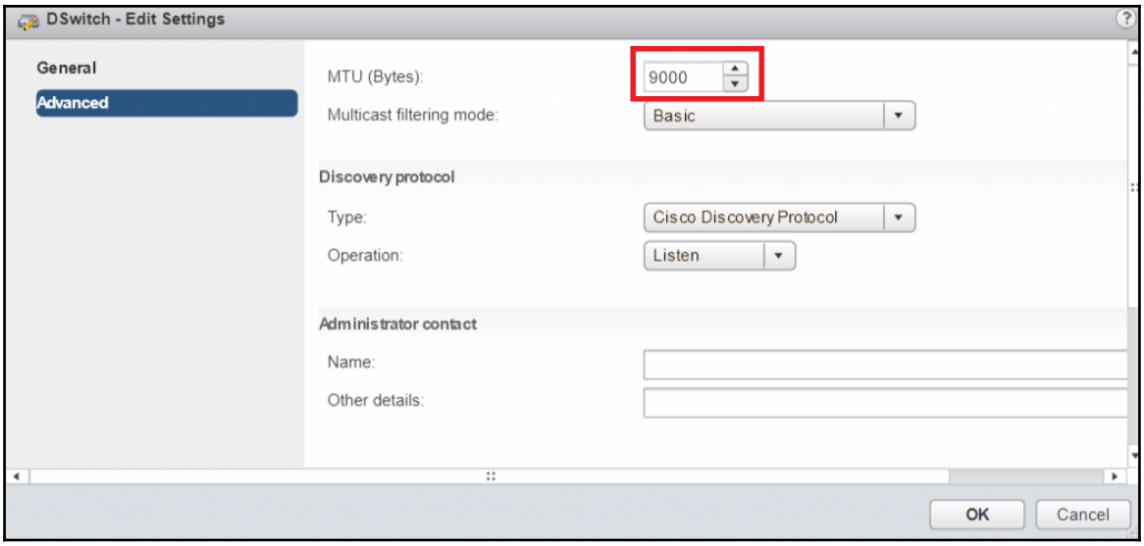

DPortGroup - Edit Settings
General
Advanced
Security
Traffic shaping
VLAN
Teaming and failover
Monitoring
Traffic filtering and marking
Miscellaneous
Load balancing:
Route based on originating virtual port
Network failure detection:
Link status only
Notify switches:
Yes
Failback:
Yes
Failover order
Active uplinks
Uplink 1
Uplink 2
Uplink 3
Uplink 4
Standby uplinks
Unused uplinks
OK
Cancel

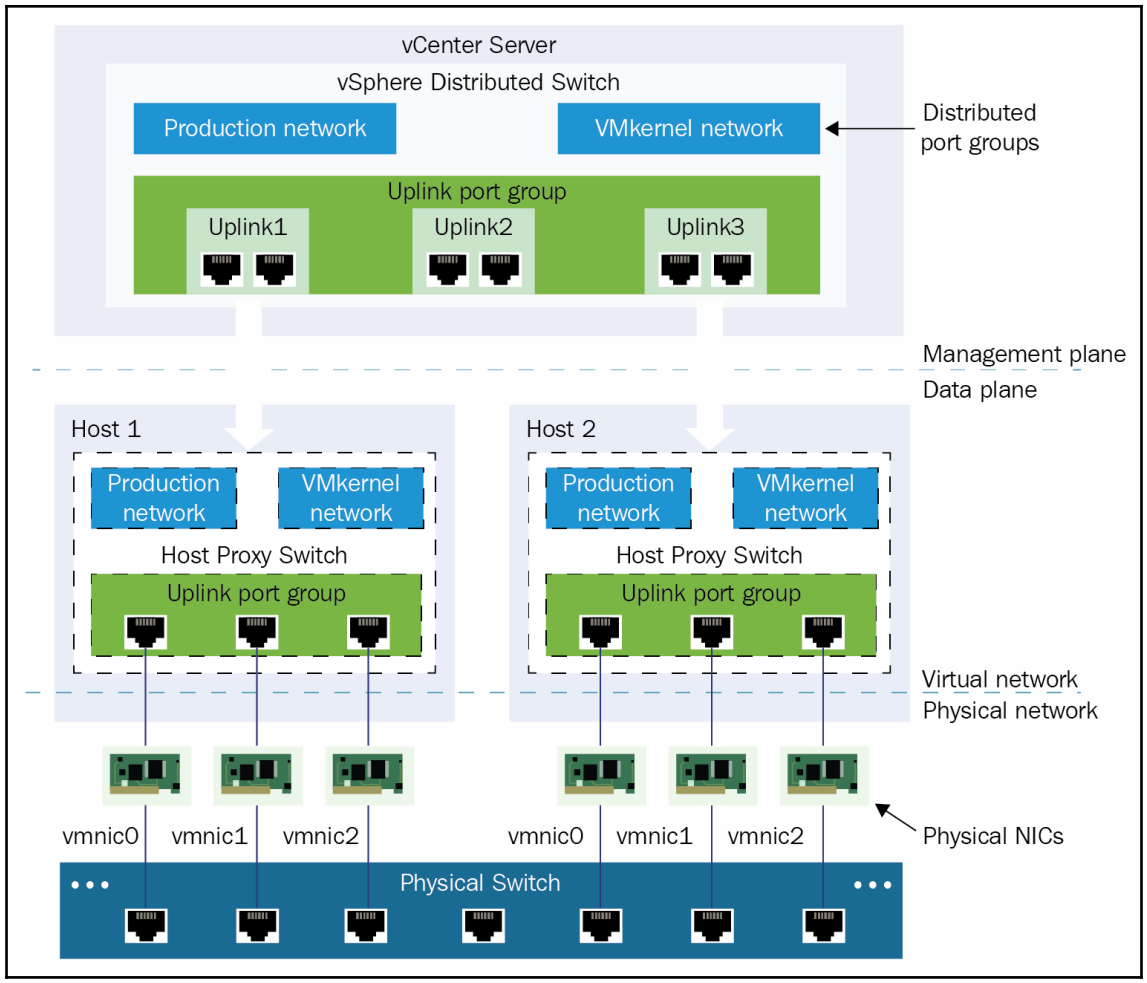

DPortGroup - Edit Settings
General
Advanced
Security
Traffic shaping
VLAN
Teaming and failover
Monitoring
Traffic filtering and marking
Miscellaneous
VLAN type:
VLAN trunking
VLAN trunk range:
0-4094
OK
Cancel

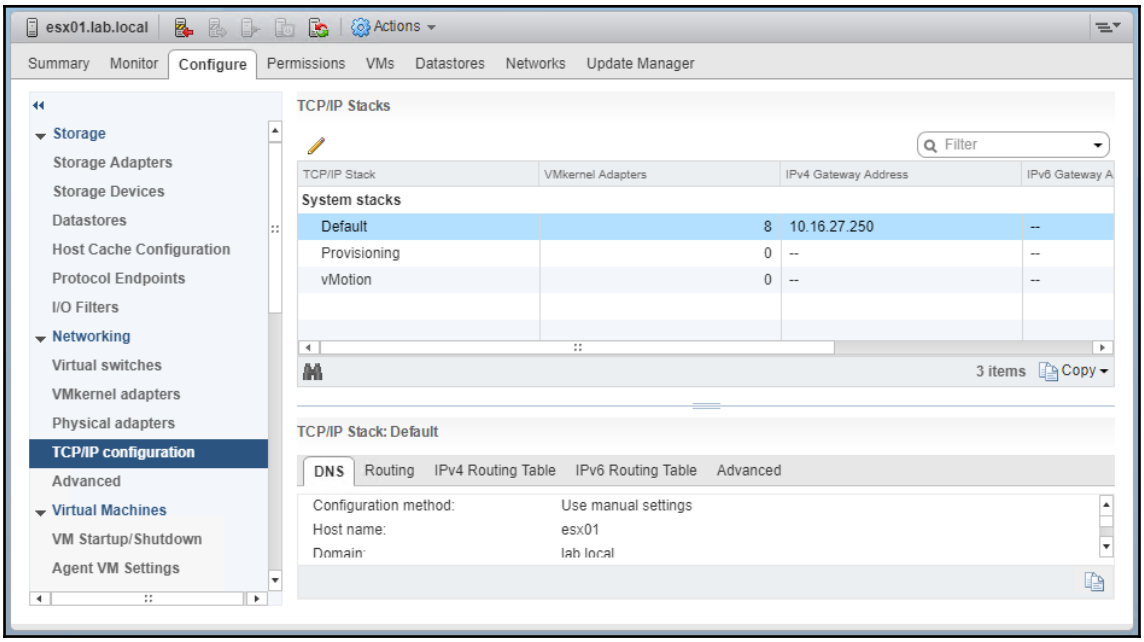

DSwitch - Edit Private VLAN Settings
Primary VLAN ID
100
Secondary VL...
VLAN Type
100
Promiscuous
210
Community
220
Community
310
Isolated
Add
Remove
Add
Remove
OK
Cancel

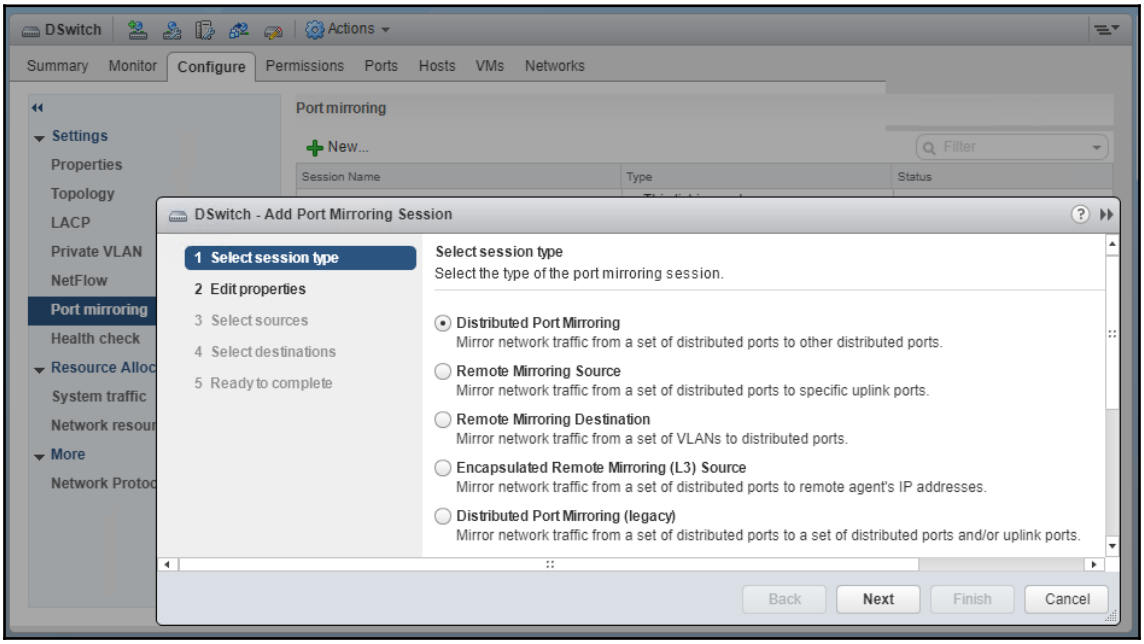

DPortGroup - Edit Settings
General
Advanced
Security
Traffic shaping
VLAN
Teaming and failover
Monitoring
Traffic filtering and marking
Miscellaneous
Ingress traffic shaping
Status:
Disabled
Average bandwidth (kbit/s):
100000
Peak bandwidth (kbit/s):
100000
Burst size (KB):
102400
Egress traffic shaping
Status:
Disabled
Average bandwidth (kbit/s):
100000
Peak bandwidth (kbit/s):
100000
Burst size (KB):
102400
Traffic shaping policy is applied individually to each port in the port group.
OK
Cancel

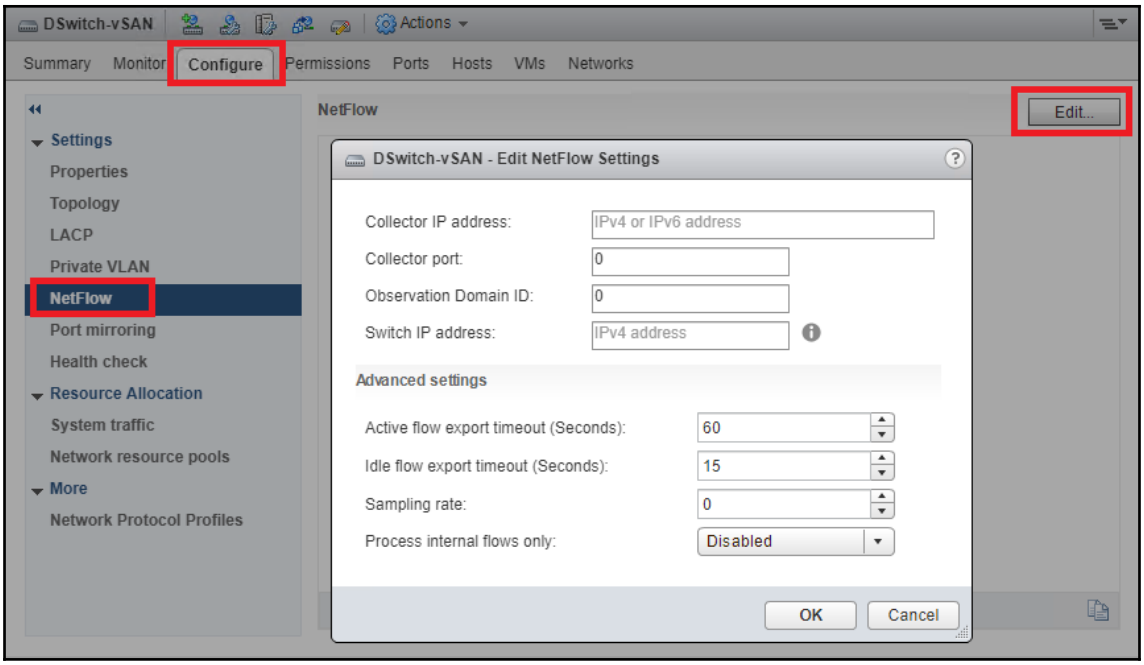

Burst Size
Bandwidth (kbps)
Average Bandwidth Period
Peak Bandwidth Period
Average Bandwidth Period
Time

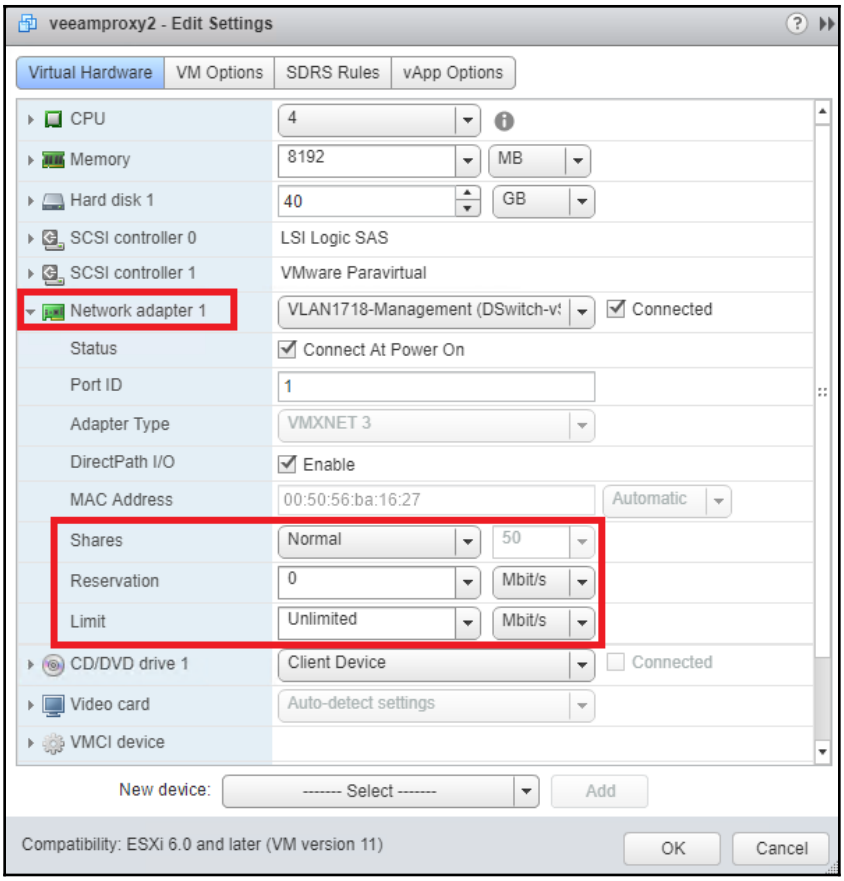

DSwitch - Edit Settings
General
Advanced
MTU (Bytes):
9000
Multicast filtering mode:
Basic
Discovery protocol
Type:
Cisco Discovery Protocol
Operation:
Listen
Administrator contact
Name:
Other details:
OK
Cancel

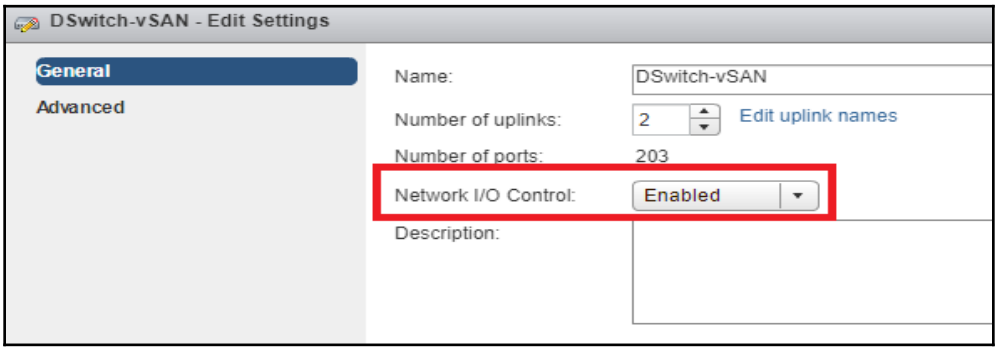

vCenter Server
vSphere Distributed Switch
Production network
VMkernel network
Distributed port groups
Uplink port group
Uplink1
Uplink2
Uplink3
Management plane
Data plane
Host 1
Production network
VMkernel network
Host Proxy Switch
Uplink port group
Host 2
Production network
VMkernel network
Host Proxy Switch
Uplink port group
Virtual network
Physical network
vmnic0
vmnic1
vmnic2
vmnic0
vmnic1
vmnic2
Physical NICs
Physical Switch


esx01.lab.local
Actions
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
Storage
Storage Adapters
Storage Devices
Datastores
Host Cache Configuration
Protocol Endpoints
I/O Filters
Networking
Virtual switches
VMkernel adapters
Physical adapters
TCP/IP configuration
Advanced
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
TCP/IP Stacks
Filter
TCP/IP Stack
VMkernel Adapters
IPv4 Gateway Address
IPv6 Gateway A
System stacks
Default
8
10.16.27.250
Provisioning
0
vMotion
0
3 items
Copy
TCP/IP Stack: Default
DNS
Routing
IPv4 Routing Table
IPv6 Routing Table
Advanced
Configuration method:
Use manual settings
Host name:
esx01
Domain:
lab.local

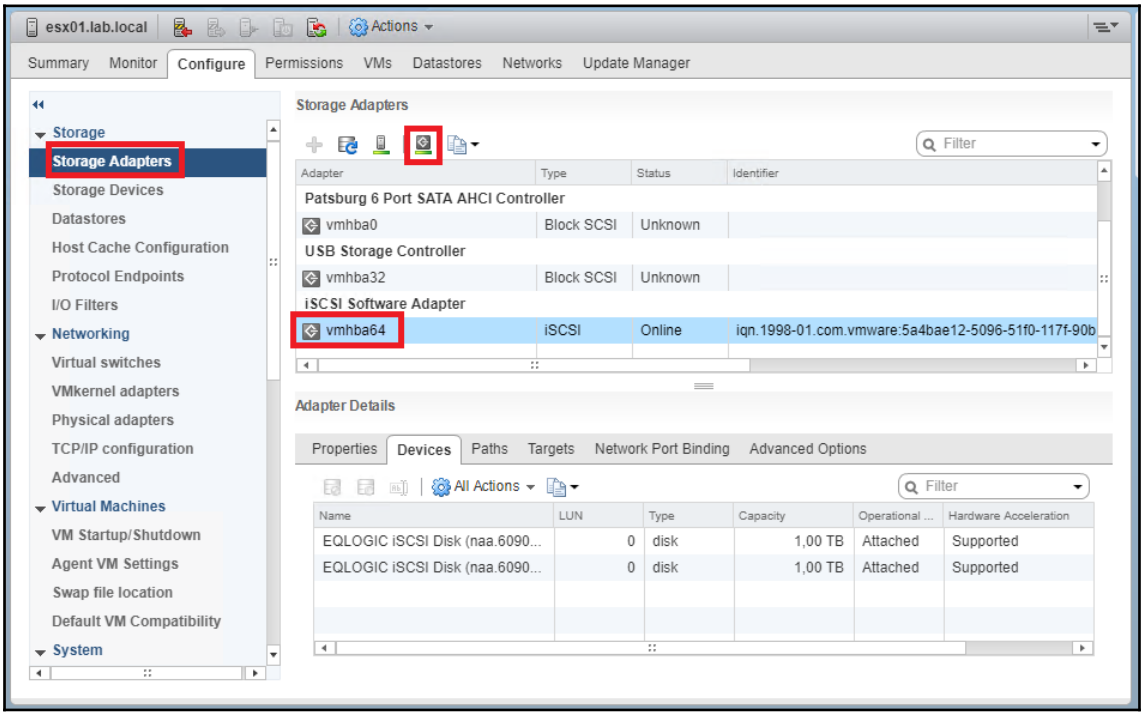

DSwitch
Actions
Summary
Monitor
Configure
Permissions
Ports
Hosts
VMs
Networks
Settings
Properties
Topology
LACP
Private VLAN
NetFlow
Port mirroring
Health check
Resource Alloc
System traffic
Network resour
More
Network Protoc
Port mirroring
New...
Filter
Session Name
Type
Status
DSwitch - Add Port Mirroring Session
1 Select session type
2 Edit properties
3 Select sources
4 Select destinations
5 Ready to complete
Select session type
Select the type of the port mirroring session.
Distributed Port Mirroring
Mirror network traffic from a set of distributed ports to other distributed ports.
Remote Mirroring Source
Mirror network traffic from a set of distributed ports to specific uplink ports.
Remote Mirroring Destination
Mirror network traffic from a set of VLANs to distributed ports.
Encapsulated Remote Mirroring (L3) Source
Mirror network traffic from a set of distributed ports to remote agent's IP addresses.
Distributed Port Mirroring (legacy)
Mirror network traffic from a set of distributed ports to a set of distributed ports and/or uplink ports.
Back
Next
Finish
Cancel

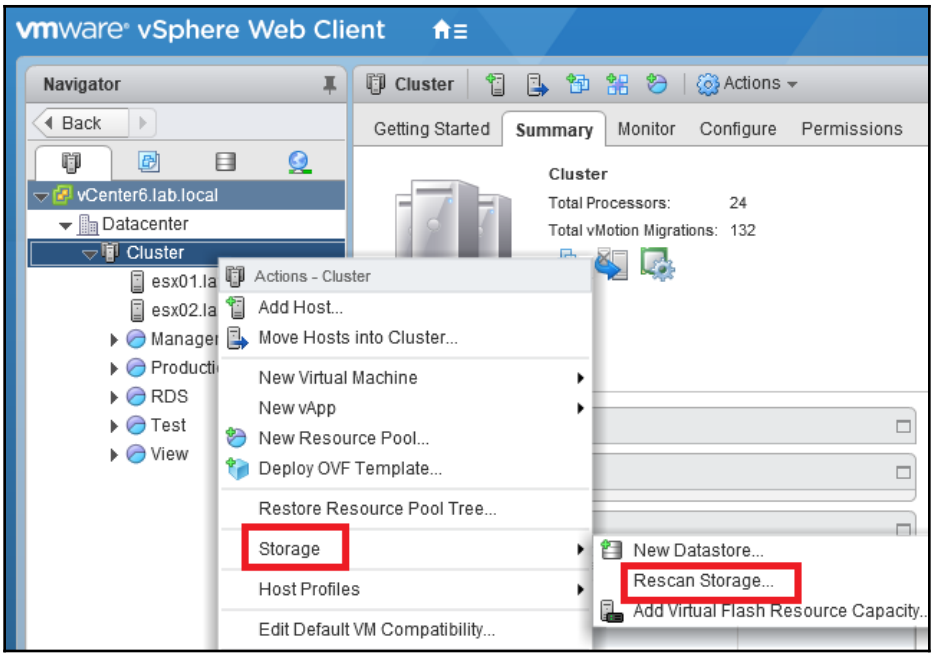

DSwitch-vSAN
Actions
Summary
Monitor
Configure
Permissions
Ports
Hosts
VMs
Networks
Settings
Properties
Topology
LACP
Private VLAN
NetFlow
Port mirroring
Health check
Resource Allocation
System traffic
Network resource pools
More
Network Protocol Profiles
NetFlow
Edit...
DSwitch-vSAN - Edit NetFlow Settings
Collector IP address:
IPv4 or IPv6 address
Collector port:
0
Observation Domain ID:
0
Switch IP address:
IPv4 address
Advanced settings
Active flow export timeout (Seconds):
60
Idle flow export timeout (Seconds):
15
Sampling rate:
0
Process internal flows only:
Disabled
OK
Cancel

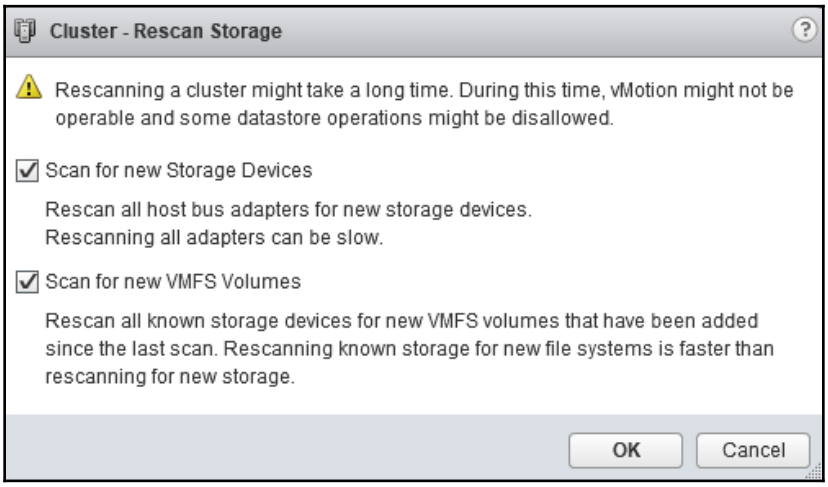

veeamproxy2 - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
CPU
4
Memory
8192
MB
Hard disk 1
40
GB
SCSI controller 0
LSI Logic SAS
SCSI controller 1
VMware Paravirtual
Network adapter 1
VLAN1718-Management (DSwitch-v
Connected
Status
Connect At Power On
Port ID
1
Adapter Type
VMXNET 3
DirectPath I/O
Enable
MAC Address
00:50:56:ba:16:27
Automatic
Shares
Normal
50
Reservation
0
Mbit/s
Limit
Unlimited
Mbit/s
CD/DVD drive 1
Client Device
Connected
Video card
Auto-detect settings
VMCI device
New device:
------- Select -------
Add
Compatibility: ESXi 6.0 and later (VM version 11)
OK
Cancel

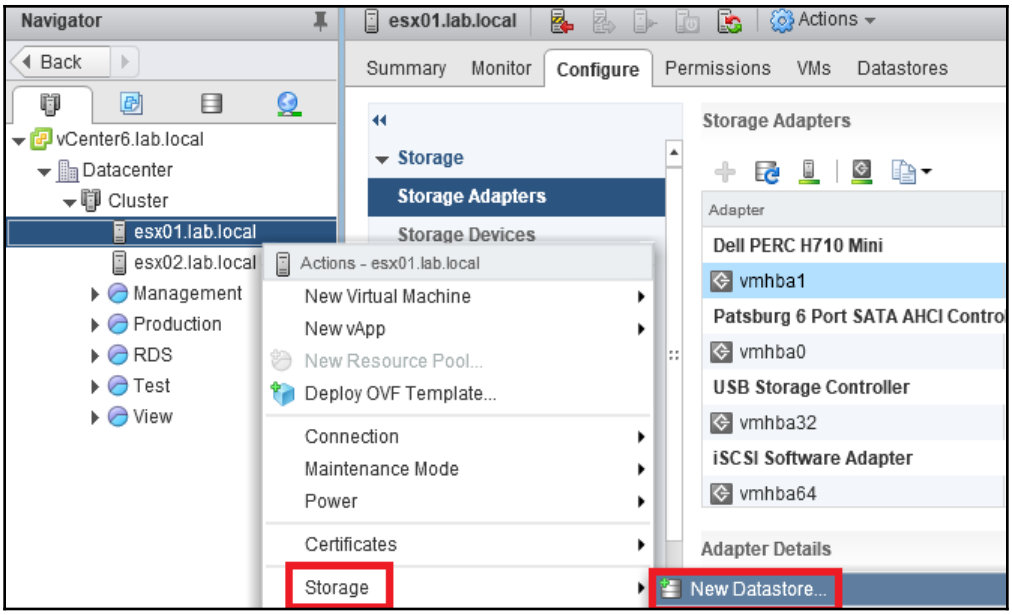

DSwitch-vSAN - Edit Settings
General
Advanced
Name:
DSwitch-vSAN
Number of uplinks:
2
Edit uplink names
Number of ports:
203
Network I/O Control:
Enabled
Description:

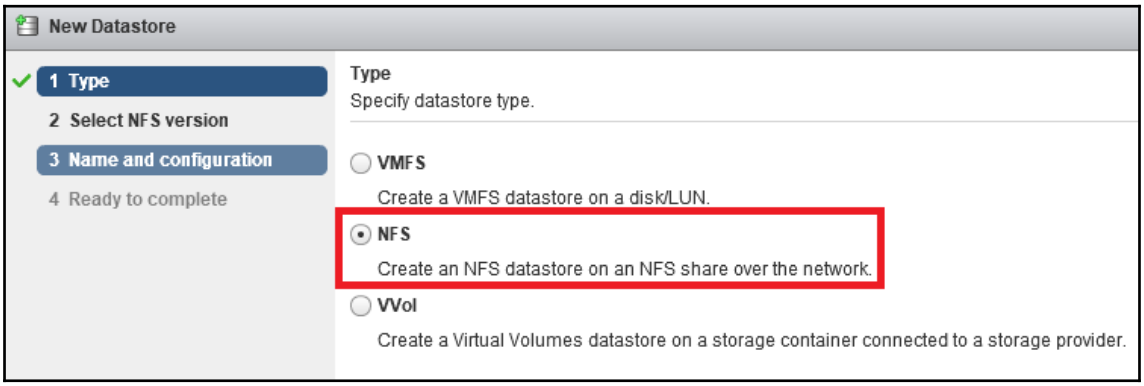
Chapter 03: Configure and Administer vSphere 6.x Storage

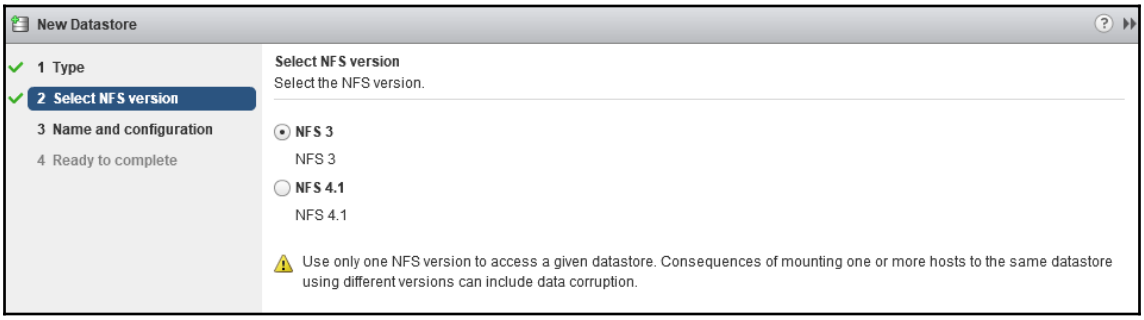


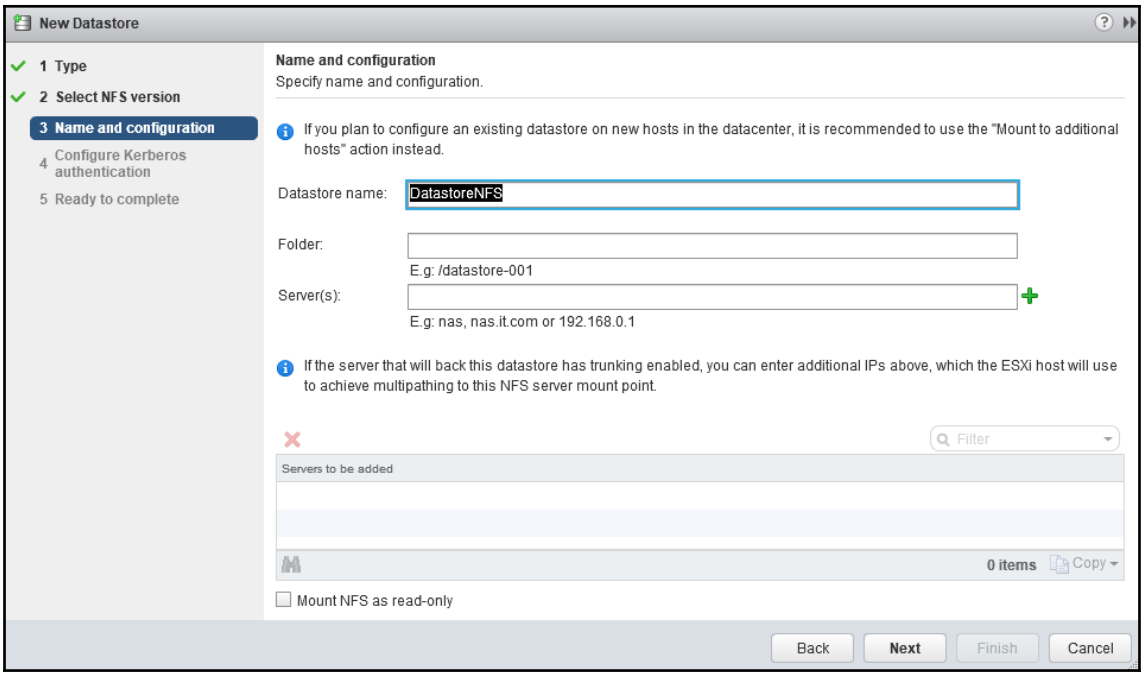

vmware vSphere Web Client
Navigator
Back
vCenter6.lab.local
Datacenter
Cluster
esx01.la
esx02.la
Manager
Producti
RDS
Test
View
Cluster
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Cluster
Total Processors: 24
Total vMotion Migrations: 132
Actions - Cluster
Add Host...
Move Hosts into Cluster...
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Restore Resource Pool Tree...
Storage
Host Profiles
Edit Default VM Compatibility...
New Datastore...
Rescan Storage...
Add Virtual Flash Resource Capacity...

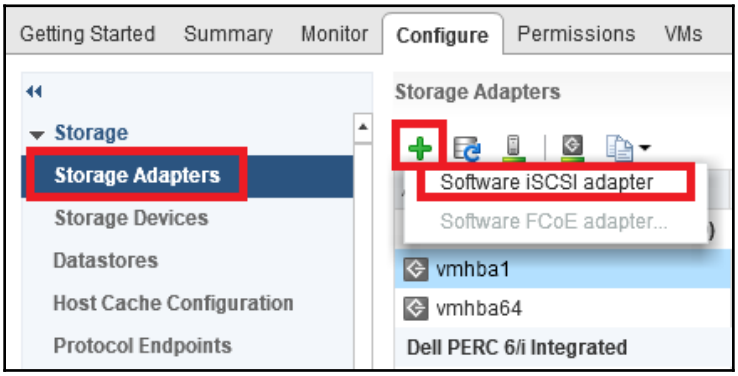

Cluster - Rescan Storage
Rescanning a cluster might take a long time. During this time, vMotion might not be operable and some datastore operations might be disallowed.
Scan for new Storage Devices
Rescan all host bus adapters for new storage devices.
Rescanning all adapters can be slow.
Scan for new VMFS Volumes
Rescan all known storage devices for new VMFS volumes that have been added since the last scan. Rescanning known storage for new file systems is faster than rescanning for new storage.
OK
Cancel

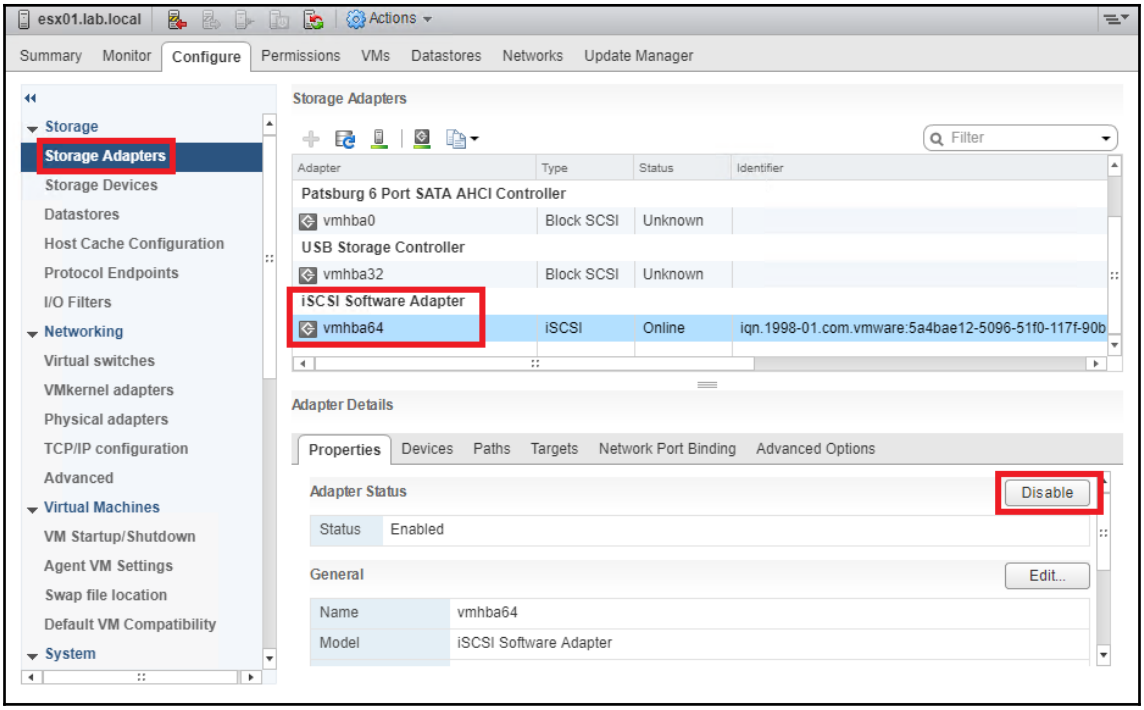

Navigator
Back
vCenter6.lab.local
Datacenter
Cluster
esx01.lab.local
esx02.lab.local
Management
Production
RDS
Test
View
esx01.lab.local
Actions
Summary
Monitor
Configure
Permissions
VMs
Datastores
Storage
Storage Adapters
Storage Devices
Actions - esx01.lab.local
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Connection
Maintenance Mode
Power
Certificates
Storage
Storage Adapters
Adapter
Dell PERC H710 Mini
vmhba1
Patsburg 6 Port SATA AHCI Contro
vmhba0
USB Storage Controller
vmhba32
iSCSI Software Adapter
vmhba64
Adapter Details
New Datastore...

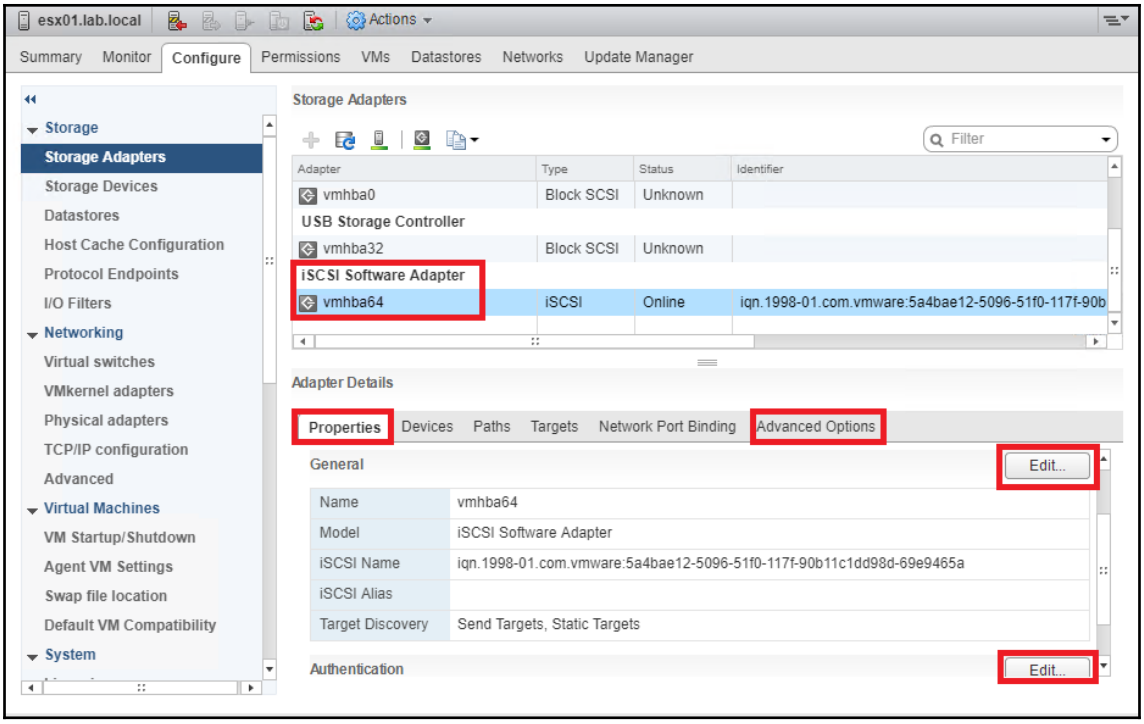

New Datastore
1 Type
2 Select NFS version
3 Name and configuration
4 Ready to complete
Type
Specify datastore type.
VMFS
Create a VMFS datastore on a disk/LUN.
NFS
Create an NFS datastore on an NFS share over the network.
VVol
Create a Virtual Volumes datastore on a storage container connected to a storage provider.

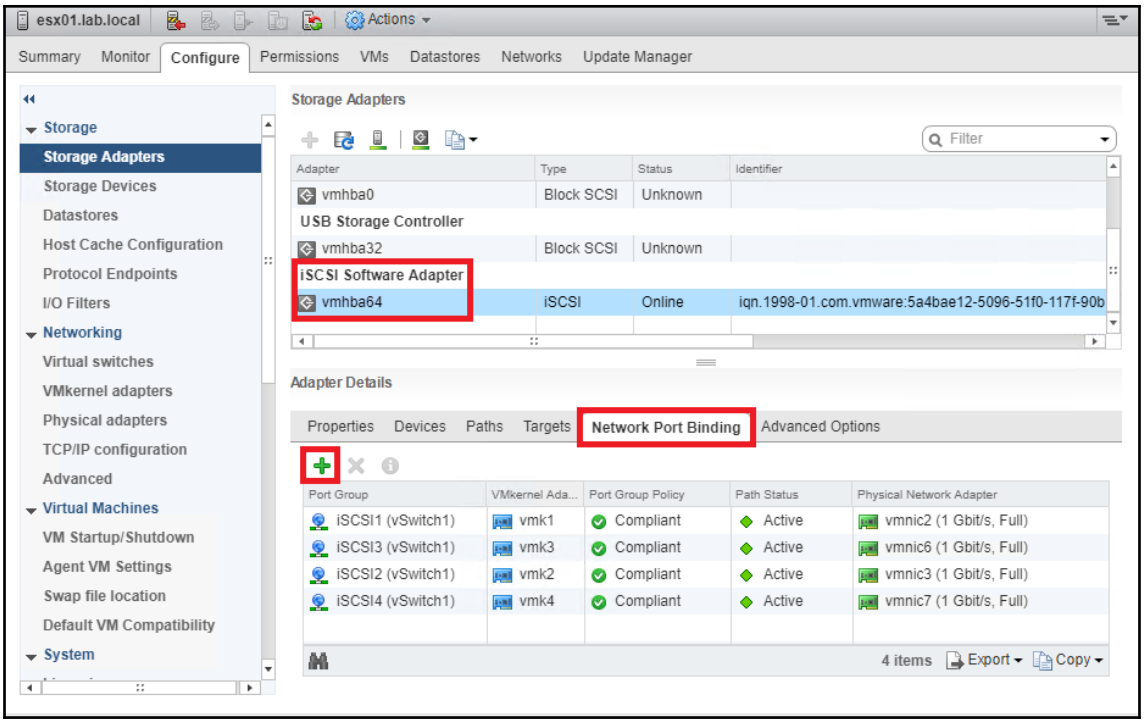

New Datastore
1 Type
2 Select NFS version
3 Name and configuration
4 Ready to complete
Select NFS version
Select the NFS version.
NFS 3
NFS 3
NFS 4.1
NFS 4.1
Use only one NFS version to access a given datastore. Consequences of mounting one or more hosts to the same datastore using different versions can include data corruption.

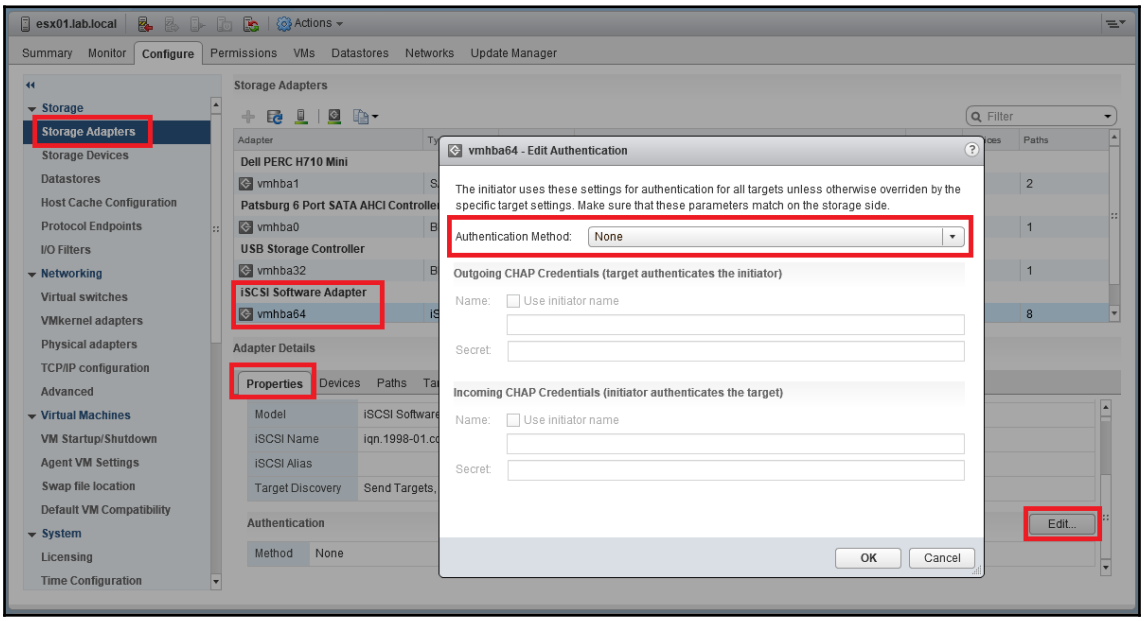

New Datastore
1 Type
2 Select NFS version
3 Name and configuration
4 Configure Kerberos authentication
5 Ready to complete
Name and configuration
Specify name and configuration.
If you plan to configure an existing datastore on new hosts in the datacenter, it is recommended to use the "Mount to additional hosts" action instead.
Datastore name:
DatastoreNFS
Folder:
E.g: /datastore-001
Server(s):
E.g: nas, nas.it.com or 192.168.0.1
If the server that will back this datastore has trunking enabled, you can enter additional IPs above, which the ESXi host will use to achieve multipathing to this NFS server mount point.
Filter
Servers to be added
0 items
Copy
Mount NFS as read-only
Back
Next
Finish
Cancel

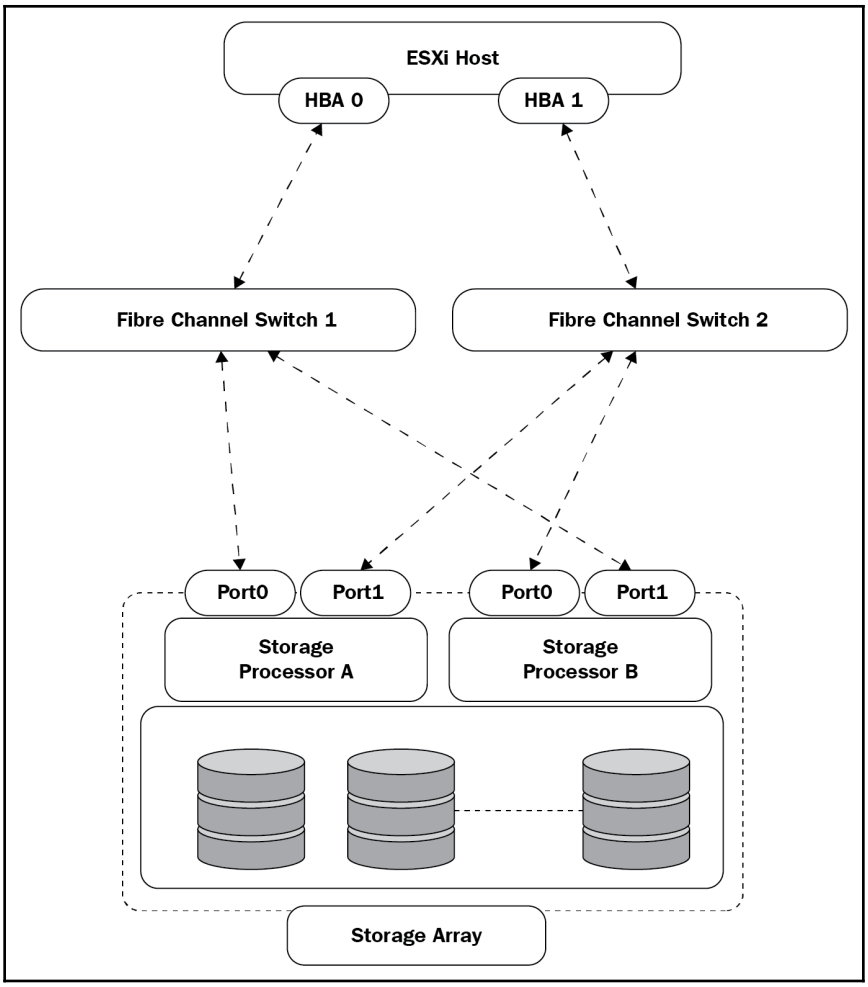

Getting Started
Summary
Monitor
Configure
Permissions
VMs
Storage
Storage Adapters
Storage Devices
Datastores
Host Cache Configuration
Protocol Endpoints
Storage Adapters
Software iSCSI adapter
Software FCoE adapter...
vmhba1
vmhba64
Dell PERC 6/i Integrated

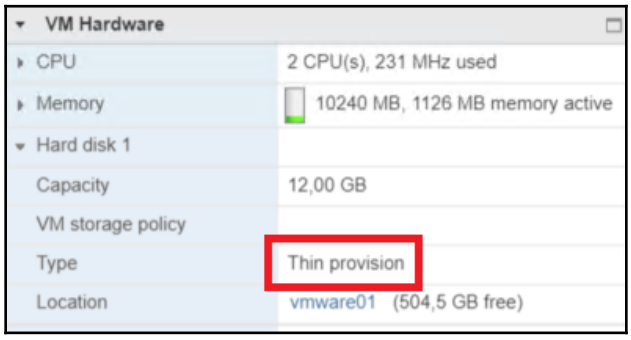

esx01.lab.local
Actions
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
Storage
Storage Adapters
Storage Devices
Datastores
Host Cache Configuration
Protocol Endpoints
I/O Filters
Networking
Virtual switches
VMkernel adapters
Physical adapters
TCP/IP configuration
Advanced
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Swap file location
Default VM Compatibility
System
Storage Adapters
Filter
Adapter
Type
Status
Identifier
Patsburg 6 Port SATA AHCI Controller
vmhba0
Block SCSI
Unknown
USB Storage Controller
vmhba32
Block SCSI
Unknown
iSCSI Software Adapter
vmhba64
iSCSI
Online
iqn.1998-01.com.vmware:5a4bae12-5096-51f0-117f-90b
Adapter Details
Properties
Devices
Paths
Targets
Network Port Binding
Advanced Options
Adapter Status
Disable
Status
Enabled
General
Edit...
Name
vmhba64
Model
iSCSI Software Adapter

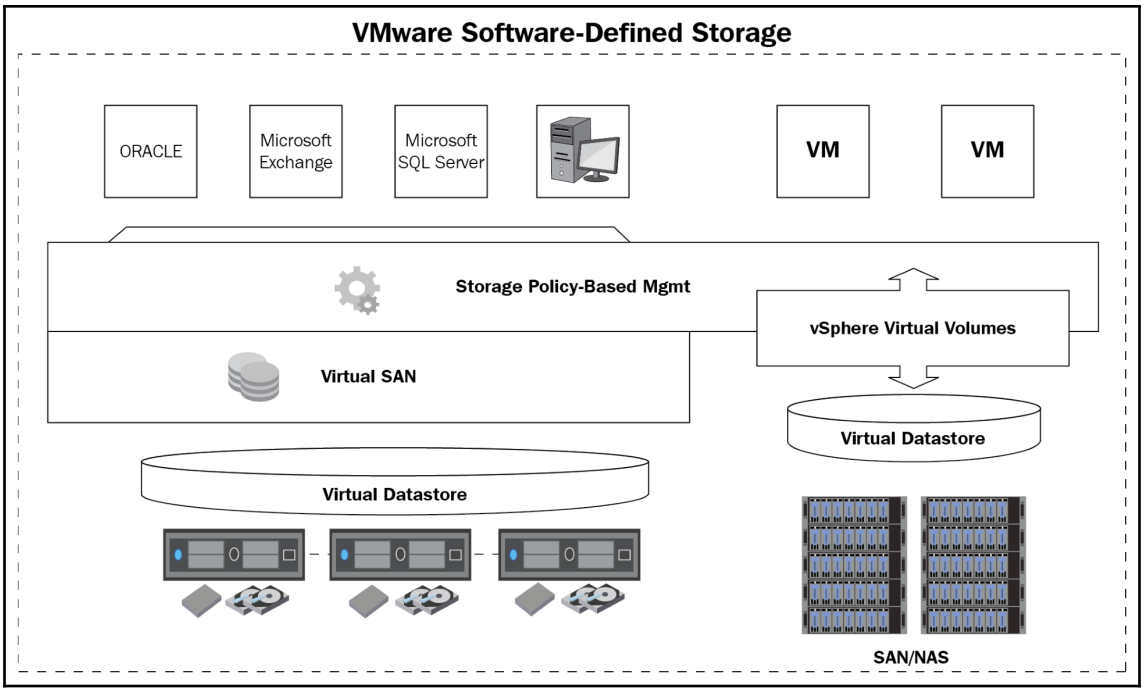

esx01.lab.local
Actions
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
Storage
Storage Adapters
Storage Devices
Datastores
Host Cache Configuration
Protocol Endpoints
I/O Filters
Networking
Virtual switches
VMkernel adapters
Physical adapters
TCP/IP configuration
Advanced
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Swap file location
Default VM Compatibility
System
Storage Adapters
Filter
Adapter
Type
Status
Identifier
vmhba0
Block SCSI
Unknown
USB Storage Controller
vmhba32
Block SCSI
Unknown
iSCSI Software Adapter
vmhba64
iSCSI
Online
iqn.1998-01.com.vmware:5a4bae12-5096-51f0-117f-90b
Adapter Details
Properties
Devices
Paths
Targets
Network Port Binding
Advanced Options
General
Edit...
Name
vmhba64
Model
iSCSI Software Adapter
iSCSI Name
iqn.1998-01.com.vmware:5a4bae12-5096-51f0-117f-90b11c1dd98d-69e9465a
iSCSI Alias
Target Discovery
Send Targets, Static Targets
Authentication
Edit...

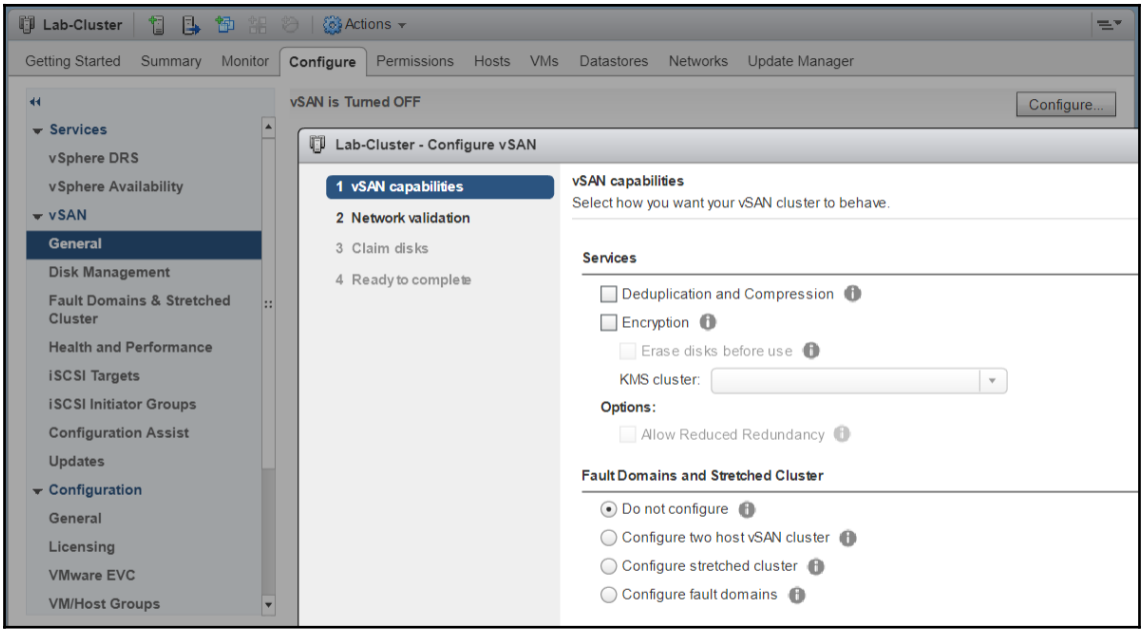

esx01.lab.local
Actions
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
Storage
Storage Adapters
Storage Devices
Datastores
Host Cache Configuration
Protocol Endpoints
I/O Filters
Networking
Virtual switches
VMkernel adapters
Physical adapters
TCP/IP configuration
Advanced
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Swap file location
Default VM Compatibility
System
Storage Adapters
Filter
Adapter
Type
Status
Identifier
vmhba0
Block SCSI
Unknown
USB Storage Controller
vmhba32
Block SCSI
Unknown
iSCSI Software Adapter
vmhba64
iSCSI
Online
iqn.1998-01.com.vmware:5a4bae12-5096-51f0-117f-90b
Adapter Details
Properties
Devices
Paths
Targets
Network Port Binding
Advanced Options
Port Group
VMkernel Ada...
Port Group Policy
Path Status
Physical Network Adapter
iSCSI1 (vSwitch1)
vmk1
Compliant
Active
vmnic2 (1 Gbit/s, Full)
iSCSI3 (vSwitch1)
vmk3
Compliant
Active
vmnic6 (1 Gbit/s, Full)
iSCSI2 (vSwitch1)
vmk2
Compliant
Active
vmnic3 (1 Gbit/s, Full)
iSCSI4 (vSwitch1)
vmk4
Compliant
Active
vmnic7 (1 Gbit/s, Full)
4 items
Export
Copy

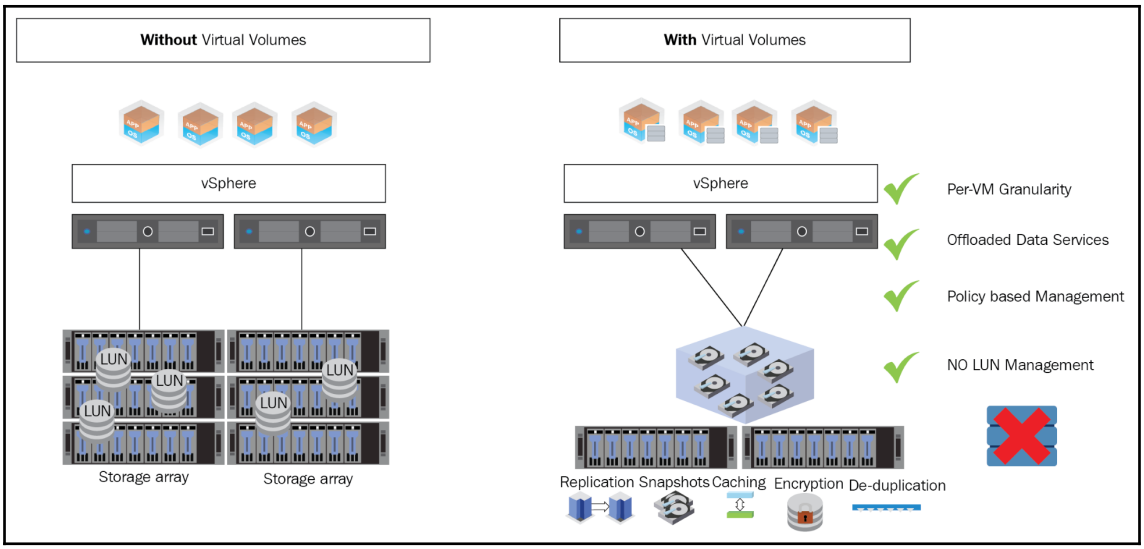

vmhba64 - Edit Authentication
The initiator uses these settings for authentication for all targets unless otherwise overriden by the specific target settings. Make sure that these parameters match on the storage side.
Authentication Method:
None
Outgoing CHAP Credentials (target authenticates the initiator)
Name:
Use initiator name
Secret:
Incoming CHAP Credentials (initiator authenticates the target)
Name:
Use initiator name
Secret:
OK
Cancel
Edit...

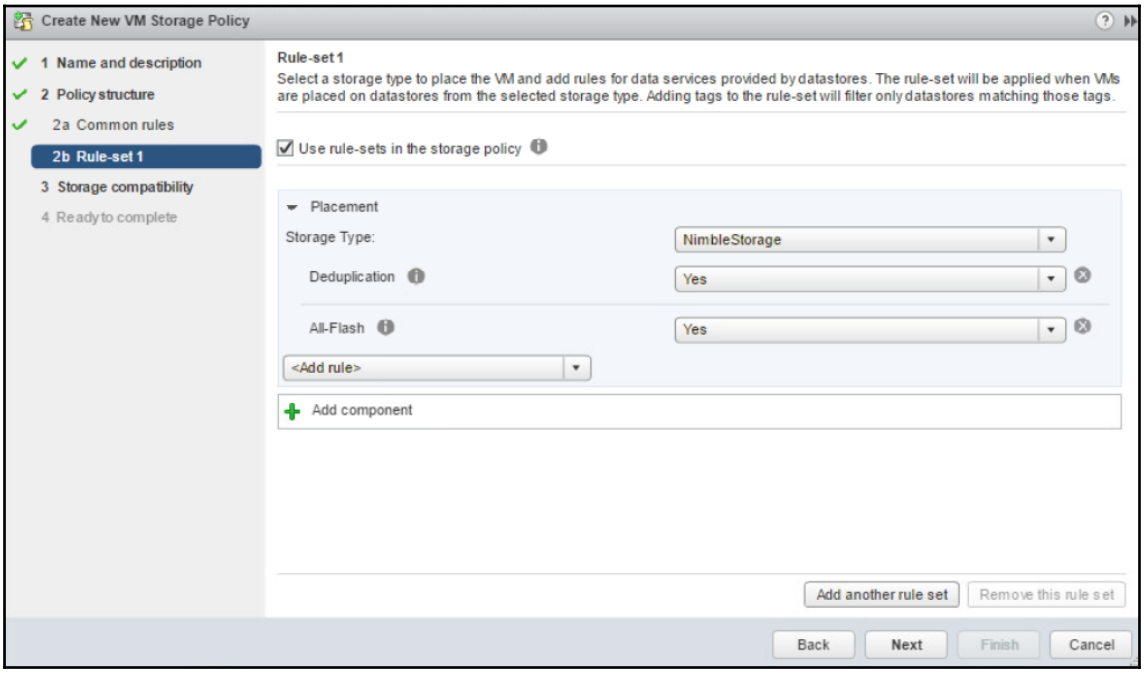

ESXi Host
HBA 0
HBA 1
Fibre Channel Switch 1
Fibre Channel Switch 2
Port0
Port1
Port0
Port1
Storage Processor A
Storage Processor B
Storage Array

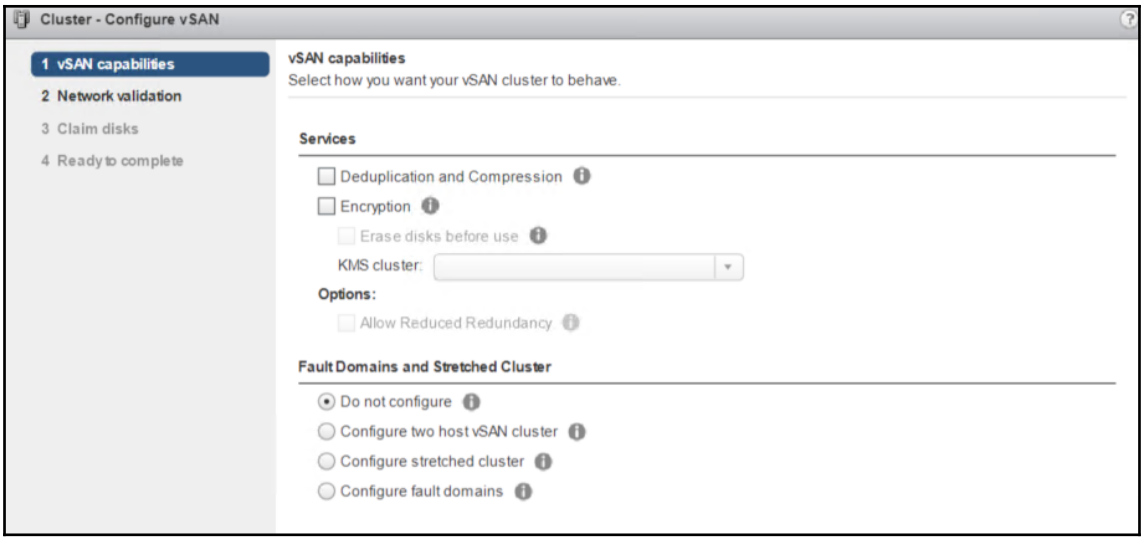

VM Hardware
CPU
2 CPU(s), 231 MHz used
Memory
10240 MB, 1126 MB memory active
Hard disk 1
Capacity
12,00 GB
VM storage policy
Type
Thin provision
Location
vmware01 (504,5 GB free)

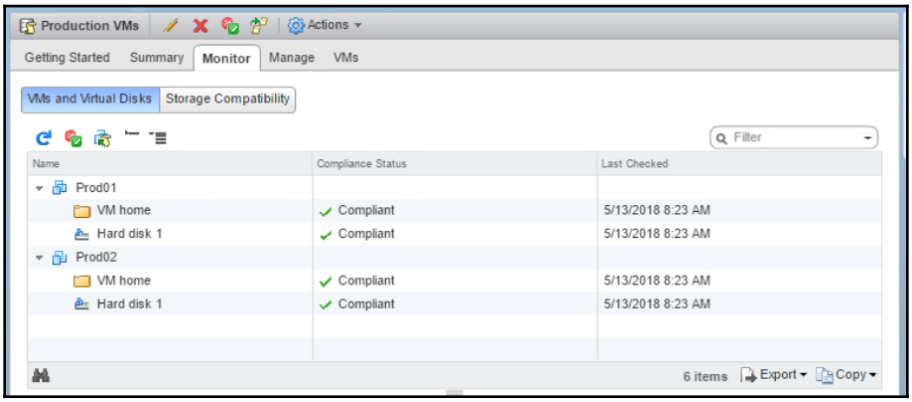

VMware Software-Defined Storage
ORACLE
Microsoft Exchange
Microsoft SQL Server
VM
VM
Storage Policy-Based Mgmt
vSphere Virtual Volumes
Virtual SAN
Virtual Datastore
Virtual Datastore
SAN/NAS

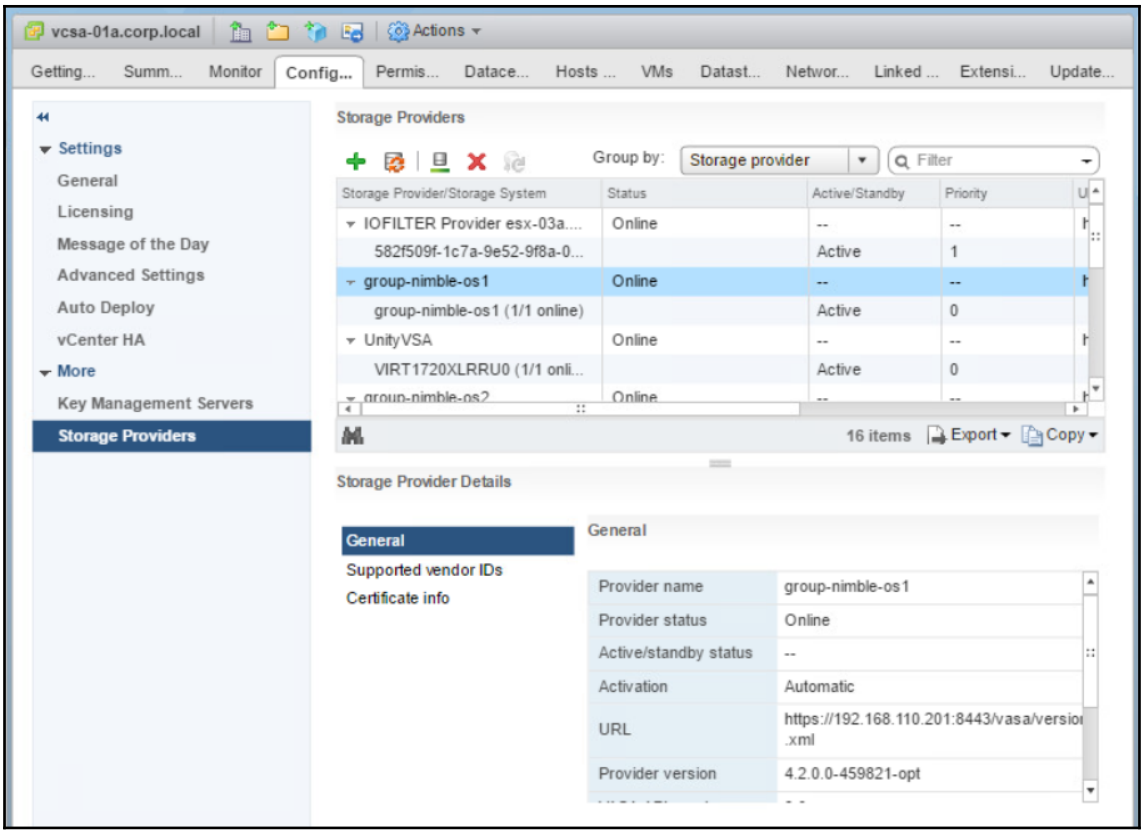

Lab-Cluster
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Hosts
VMs
Datastores
Networks
Update Manager
vSAN is Turned OFF
Configure...
Services
vSphere DRS
vSphere Availability
vSAN
General
Disk Management
Fault Domains & Stretched Cluster
Health and Performance
iSCSI Targets
iSCSI Initiator Groups
Configuration Assist
Updates
Configuration
General
Licensing
VMware EVC
VM/Host Groups
Lab-Cluster - Configure vSAN
1 vSAN capabilities
2 Network validation
3 Claim disks
4 Ready to complete
vSAN capabilities
Select how you want your vSAN cluster to behave.
Services
Deduplication and Compression
Encryption
Erase disks before use
KMS cluster:
Options:
Allow Reduced Redundancy
Fault Domains and Stretched Cluster
Do not configure
Configure two host vSAN cluster
Configure stretched cluster
Configure fault domains

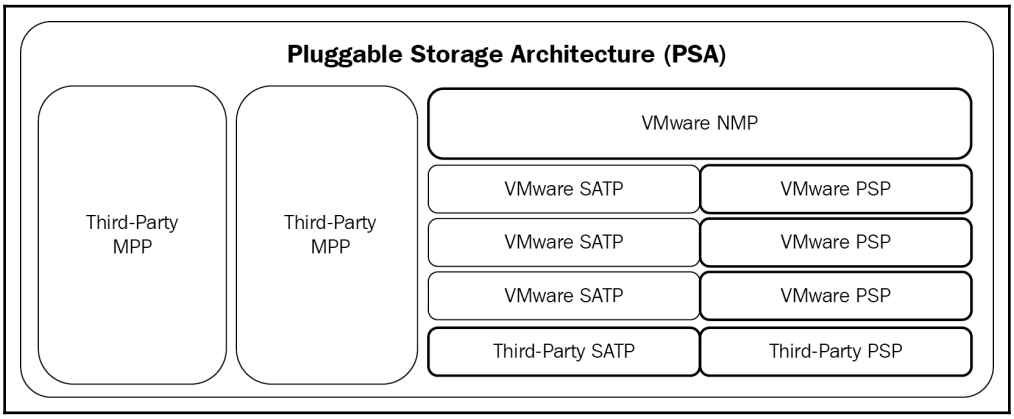

Without Virtual Volumes
With Virtual Volumes
vSphere
vSphere
LUN
LUN
LUN
LUN
LUN
Storage array
Storage array
Per-VM Granularity
Offloaded Data Services
Policy based Management
NO LUN Management
Replication
Snapshots
Caching
Encryption
De-duplication

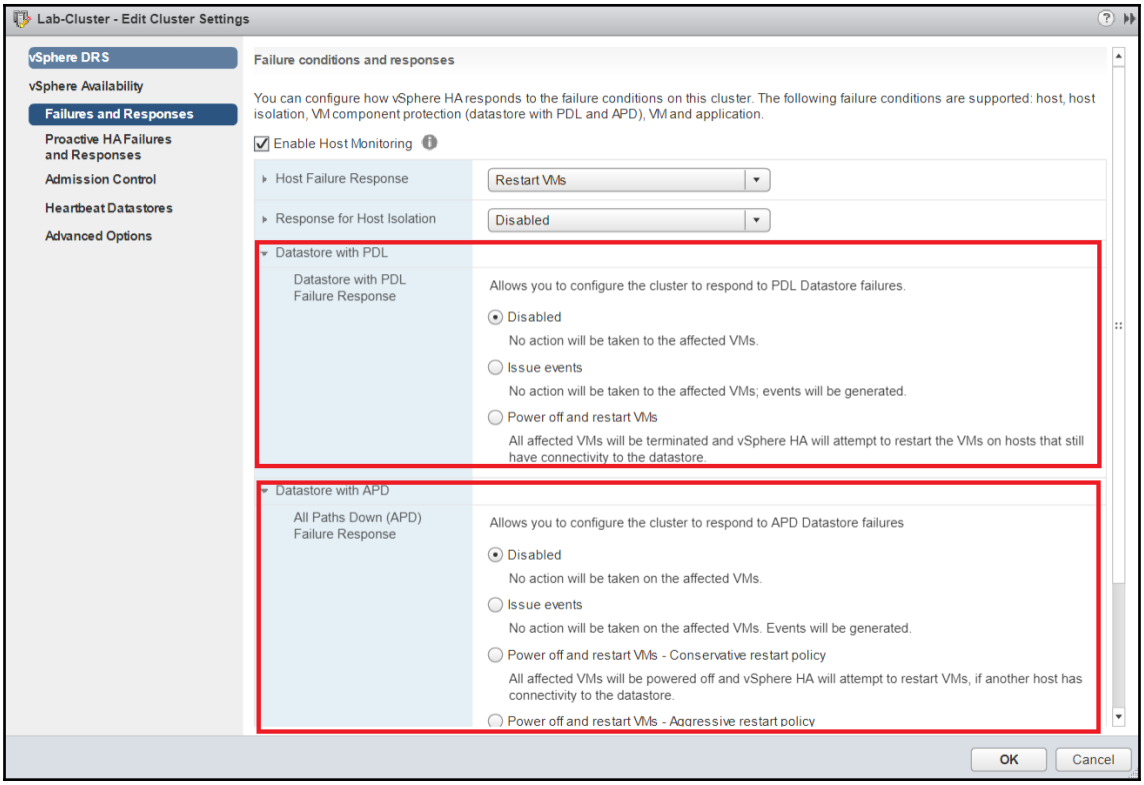

Create New VM Storage Policy
1 Name and description
2 Policy structure
2a Common rules
2b Rule-set 1
3 Storage compatibility
4 Ready to complete
Rule-set 1
Select a storage type to place the VM and add rules for data services provided by datastores. The rule-set will be applied when VMs are placed on datastores from the selected storage type. Adding tags to the rule-set will filter only datastores matching those tags.
Use rule-sets in the storage policy
Placement
Storage Type:
NimbleStorage
Deduplication
Yes
All-Flash
Yes
<Add rule>
Add component
Add another rule set
Remove this rule set
Back
Next
Finish
Cancel

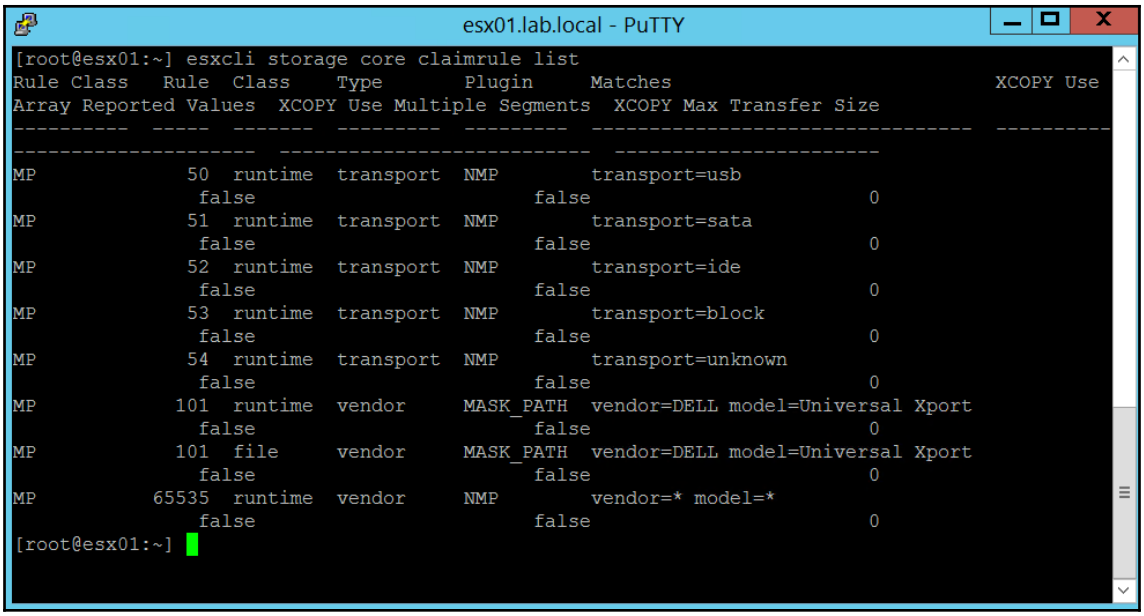

Cluster - Configure vSAN
1 vSAN capabilities
2 Network validation
3 Claim disks
4 Ready to complete
vSAN capabilities
Select how you want your vSAN cluster to behave.
Services
Deduplication and Compression
Encryption
Erase disks before use
KMS cluster:
Options:
Allow Reduced Redundancy
Fault Domains and Stretched Cluster
Do not configure
Configure two host vSAN cluster
Configure stretched cluster
Configure fault domains

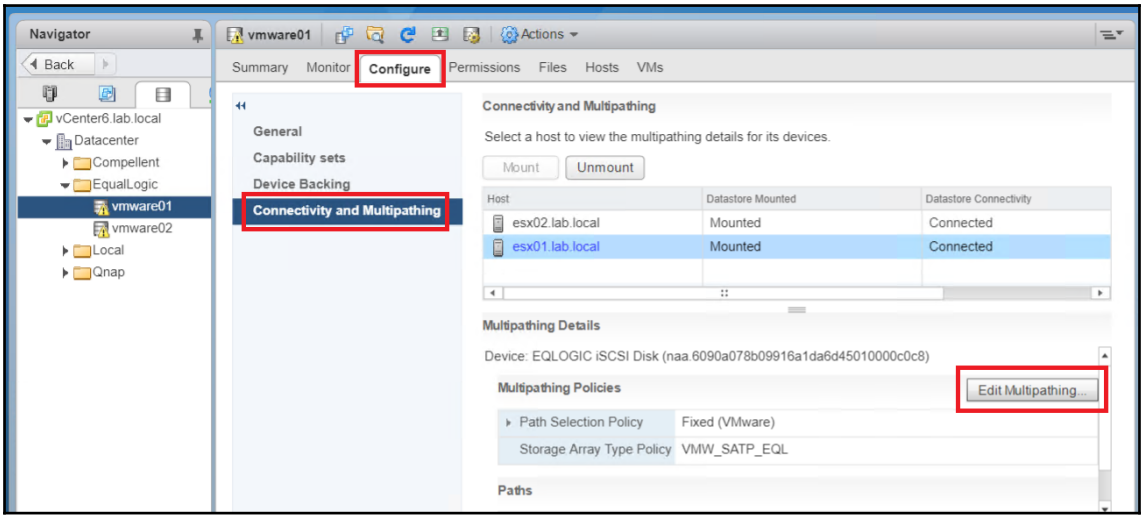

Production VMs
Actions
Getting Started
Summary
Monitor
Manage
VMs
VMs and Virtual Disks
Storage Compatibility
Filter
Name
Compliance Status
Last Checked
Prod01
VM home
Compliant
5/13/2018 8:23 AM
Hard disk 1
Compliant
5/13/2018 8:23 AM
Prod02
VM home
Compliant
5/13/2018 8:23 AM
Hard disk 1
Compliant
5/13/2018 8:23 AM
6 items
Export
Copy

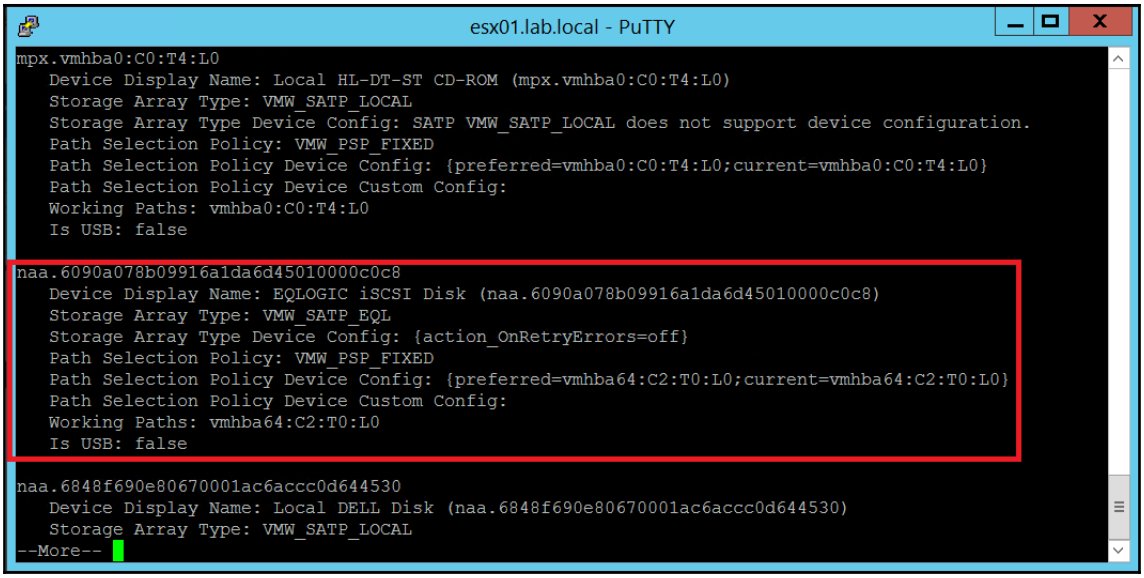

vcsa-01a.corp.local
Actions
Getting...
Summ...
Monitor
Config...
Permis...
Datace...
Hosts ...
VMs
Datast...
Networ...
Linked ...
Extensi...
Update...
Settings
General
Licensing
Message of the Day
Advanced Settings
Auto Deploy
vCenter HA
More
Key Management Servers
Storage Providers
Storage Providers
Group by:
Storage provider
Filter
Storage Provider/Storage System
Status
Active/Standby
Priority
IOFILTER Provider esx-03a....
Online
582f509f-1c7a-9e52-9f8a-0...
Active
1
group-nimble-os1
Online
group-nimble-os1 (1/1 online)
Active
0
UnityVSA
Online
VIRT1720XLRRU0 (1/1 onli...
Active
0
16 items
Export
Copy
Storage Provider Details
General
Supported vendor IDs
Certificate info
General
Provider name
group-nimble-os1
Provider status
Online
Active/standby status
--
Activation
Automatic
URL
Provider version
4.2.0.0-459821-opt

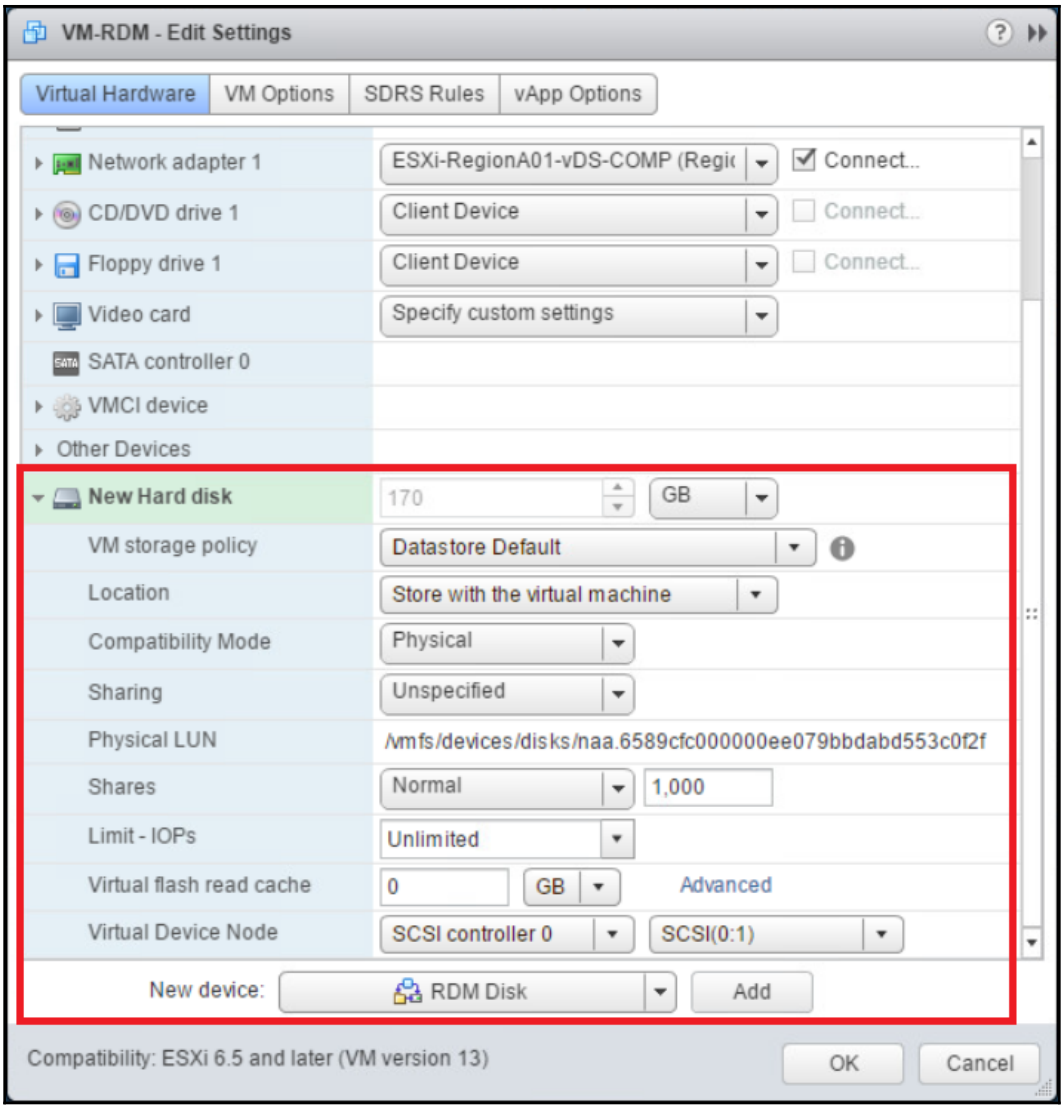

Pluggable Storage Architecture (PSA)
Third-Party MPP
Third-Party MPP
VMware NMP
VMware SATP
VMware PSP
VMware SATP
VMware PSP
VMware SATP
VMware PSP
Third-Party SATP
Third-Party PSP

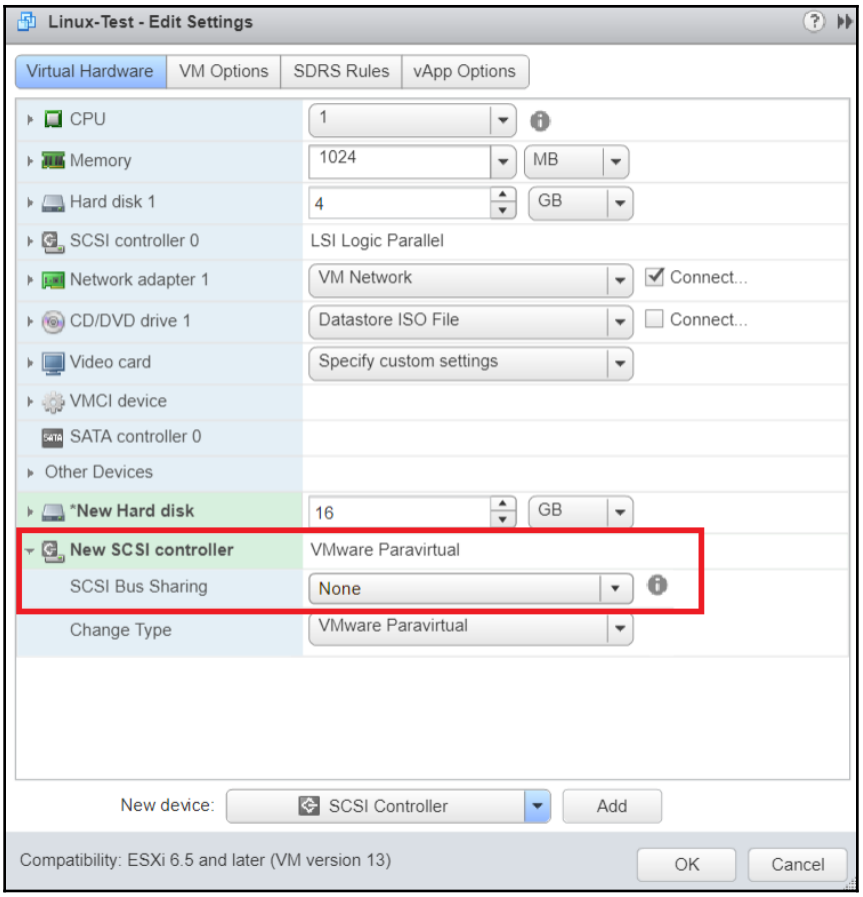

Lab-Cluster - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Failure conditions and responses
You can configure how vSphere HA responds to the failure conditions on this cluster. The following failure conditions are supported: host, host isolation, VM component protection (datastore with PDL and APD), VM and application.
Enable Host Monitoring
Host Failure Response
Restart VMs
Response for Host Isolation
Disabled
Datastore with PDL
Datastore with PDL Failure Response
Allows you to configure the cluster to respond to PDL Datastore failures.
Disabled
No action will be taken to the affected VMs.
Issue events
No action will be taken to the affected VMs; events will be generated.
Power off and restart VMs
All affected VMs will be terminated and vSphere HA will attempt to restart the VMs on hosts that still have connectivity to the datastore.
Datastore with APD
All Paths Down (APD) Failure Response
Allows you to configure the cluster to respond to APD Datastore failures
Disabled
No action will be taken on the affected VMs.
Issue events
No action will be taken on the affected VMs. Events will be generated.
Power off and restart VMs - Conservative restart policy
All affected VMs will be powered off and vSphere HA will attempt to restart VMs, if another host has connectivity to the datastore.
Power off and restart VMs - Aggressive restart policy
OK
Cancel

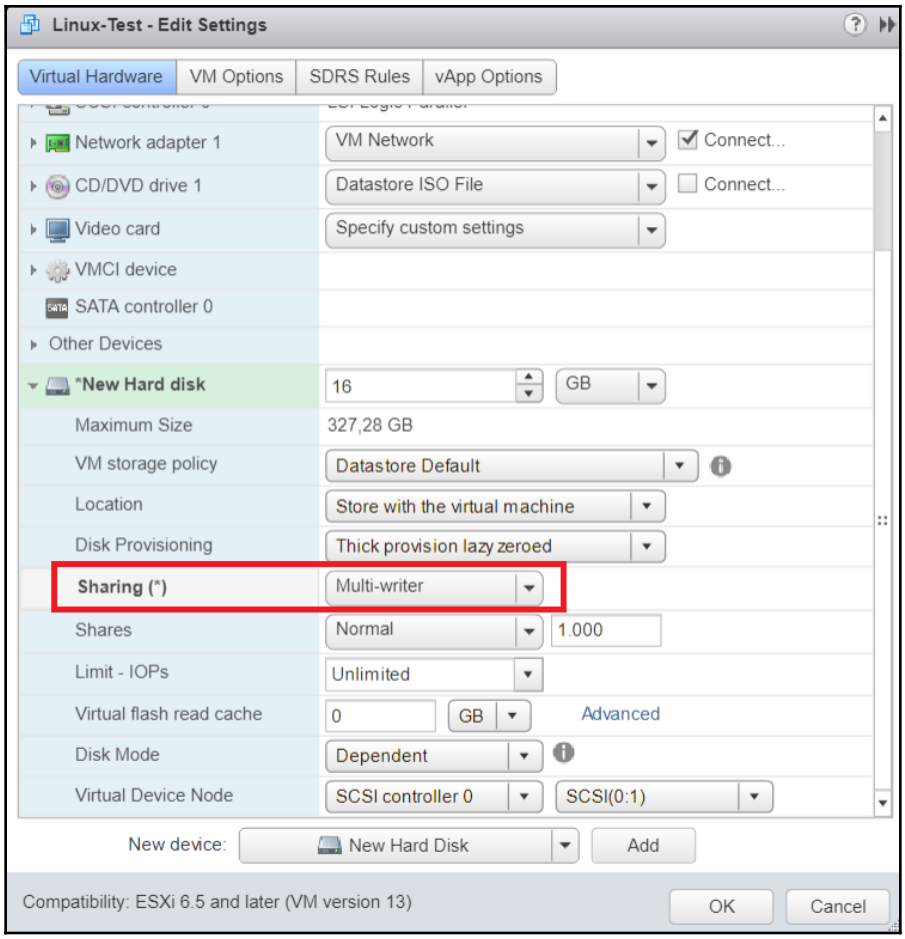

esx01.lab.local - PuTTY
[root@esx01:~] esxcli storage core claimrule list
Rule Class Rule Class Type Plugin Matches XCOPY Use Array Reported Values XCOPY Use Multiple Segments XCOPY Max Transfer Size
MP 50 runtime transport NMP transport=usb
false false 0
MP 51 runtime transport NMP transport=sata
false false 0
MP 52 runtime transport NMP transport=ide
false false 0
MP 53 runtime transport NMP transport=block
false false 0
MP 54 runtime transport NMP transport=unknown
false false 0
MP 101 runtime vendor MASK_PATH vendor=DELL model=Universal Xport
false false 0
MP 101 file vendor MASK_PATH vendor=DELL model=Universal Xport
false false 0
MP 65535 runtime vendor NMP vendor=* model=*
false false 0
[root@esx01:~]

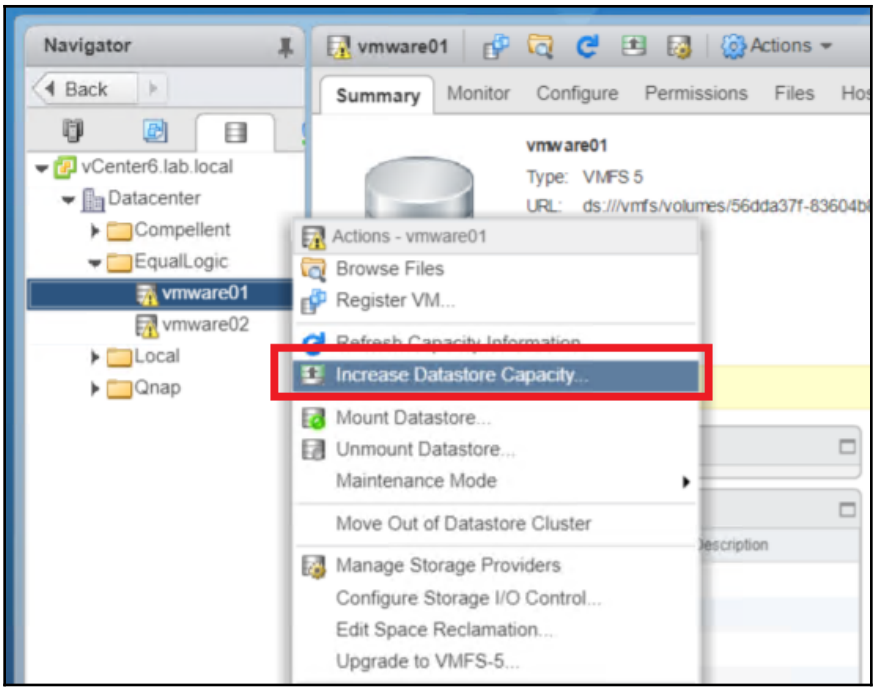

Navigator
Back
vCenter6.lab.local
Datacenter
Compellent
EqualLogic
vmware01
vmware02
Local
Qnap
vmware01
Actions
Summary
Monitor
Configure
Permissions
Files
Hosts
VMs
General
Capability sets
Device Backing
Connectivity and Multipathing
Connectivity and Multipathing
Select a host to view the multipathing details for its devices.
Mount
Unmount
Host
Datastore Mounted
Datastore Connectivity
esx02.lab.local
Mounted
Connected
esx01.lab.local
Mounted
Connected
Multipathing Details
Device: EQLOGIC iSCSI Disk (naa.6090a078b09916a1da6d45010000c0c8)
Multipathing Policies
Edit Multipathing...
Path Selection Policy
Fixed (VMware)
Storage Array Type Policy
VMW_SATP_EQL
Paths

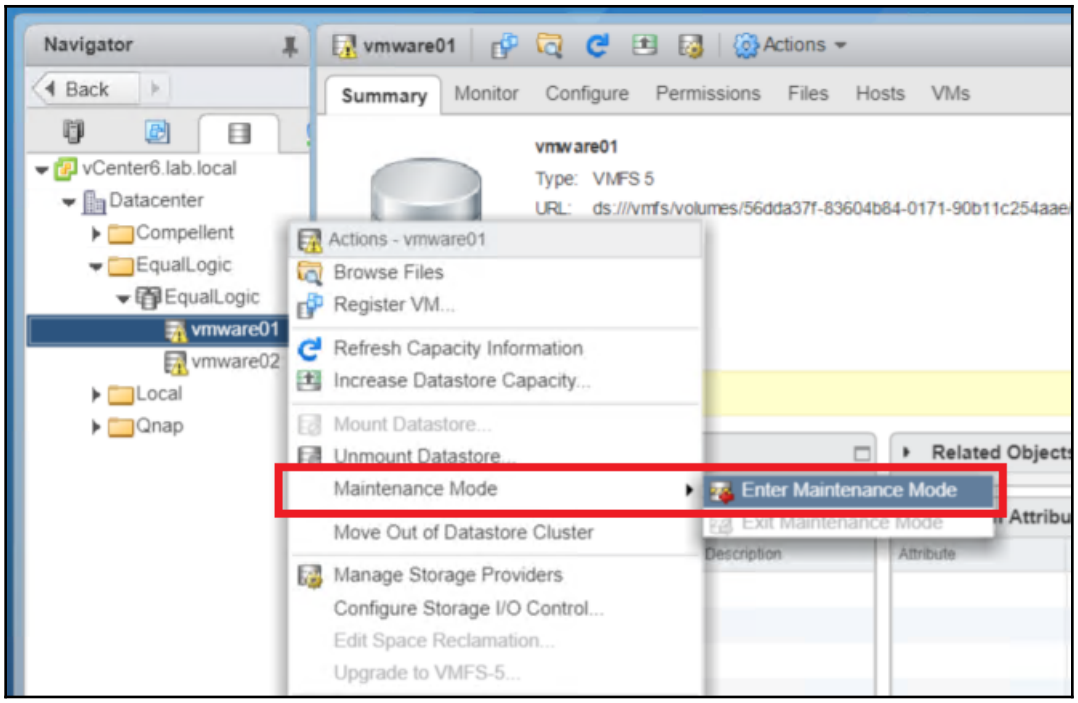

esx01.lab.local - PuTTY
mpx.vmhba0:C0:T4:L0
Device Display Name: Local HL-DT-ST CD-ROM (mpx.vmhba0:C0:T4:L0)
Storage Array Type: VMW_SATP_LOCAL
Storage Array Type Device Config: SATP VMW_SATP_LOCAL does not support device configuration.
Path Selection Policy: VMW_PSP_FIXED
Path Selection Policy Device Config: {preferred=vmhba0:C0:T4:L0;current=vmhba0:C0:T4:L0}
Path Selection Policy Device Custom Config:
Working Paths: vmhba0:C0:T4:L0
Is USB: false
naa.6090a078b09916a1da6d45010000c0c8
Device Display Name: EQLOGIC iSCSI Disk (naa.6090a078b09916a1da6d45010000c0c8)
Storage Array Type: VMW_SATP_EQL
Storage Array Type Device Config: {action_OnRetryErrors=off}
Path Selection Policy: VMW_PSP_FIXED
Path Selection Policy Device Config: {preferred=vmhba64:C2:T0:L0;current=vmhba64:C2:T0:L0}
Path Selection Policy Device Custom Config:
Working Paths: vmhba64:C2:T0:L0
Is USB: false
naa.6848f690e80670001ac6accc0d644530
Device Display Name: Local DELL Disk (naa.6848f690e80670001ac6accc0d644530)
Storage Array Type: VMW_SATP_LOCAL
--More--

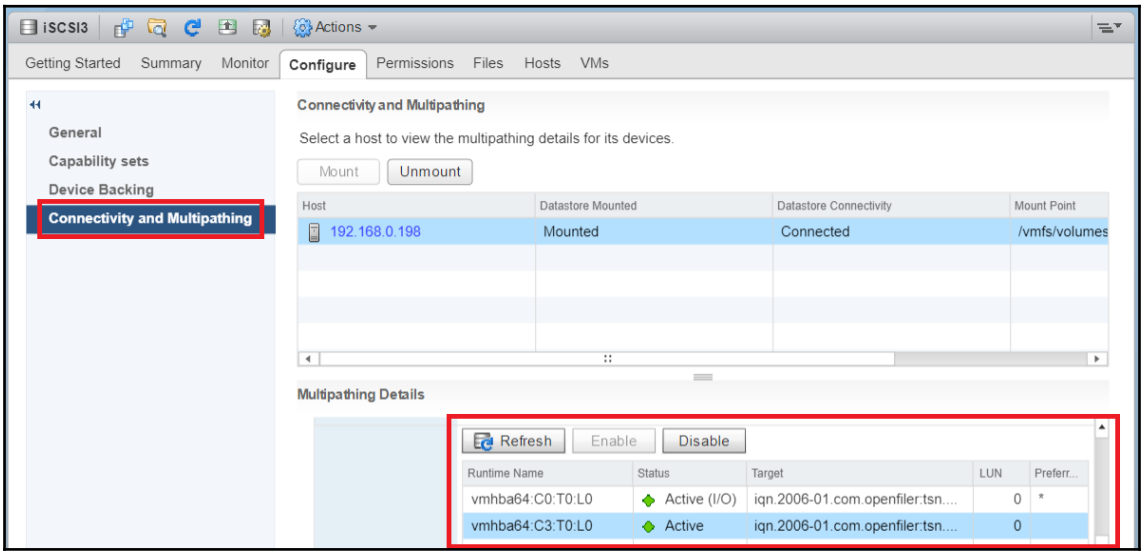

VM-RDM - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
Network adapter 1
ESXi-RegionA01-vDS-COMP (Regi
Connect...
CD/DVD drive 1
Client Device
Connect...
Floppy drive 1
Client Device
Connect...
Video card
Specify custom settings
SATA controller 0
VMCI device
Other Devices
New Hard disk
170
GB
VM storage policy
Datastore Default
Location
Store with the virtual machine
Compatibility Mode
Physical
Sharing
Unspecified
Physical LUN
/vmfs/devices/disks/naa.6589cfc000000ee079bbdabd553c0f2f
Shares
Normal
1,000
Limit - IOPs
Unlimited
Virtual flash read cache
0
GB
Advanced
Virtual Device Node
SCSI controller 0
SCSI(0:1)
New device:
RDM Disk
Add
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel

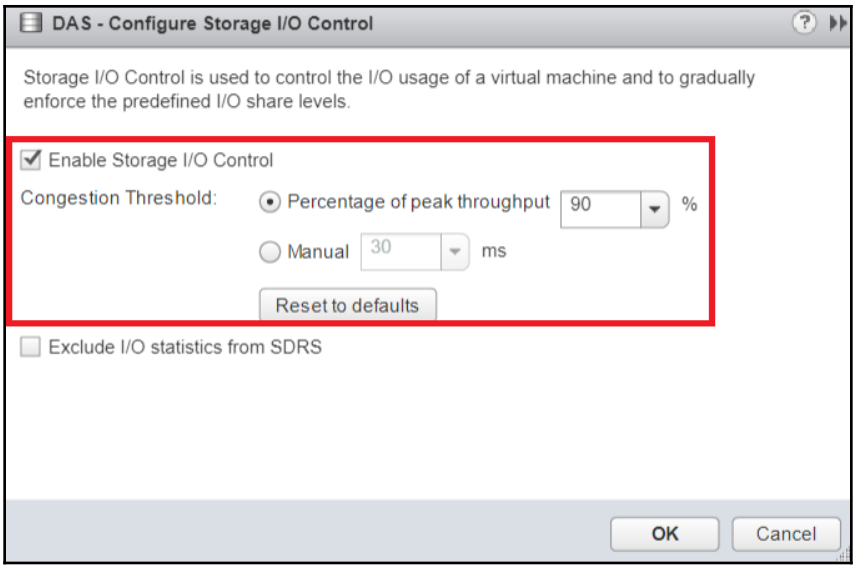

Linux-Test - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
CPU
1
Memory
1024
MB
Hard disk 1
4
GB
SCSI controller 0
LSI Logic Parallel
Network adapter 1
VM Network
Connect...
CD/DVD drive 1
Datastore ISO File
Connect...
Video card
Specify custom settings
VMCI device
SATA controller 0
Other Devices
*New Hard disk
16
GB
New SCSI controller
VMware Paravirtual
SCSI Bus Sharing
None
Change Type
VMware Paravirtual
New device:
SCSI Controller
Add
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel

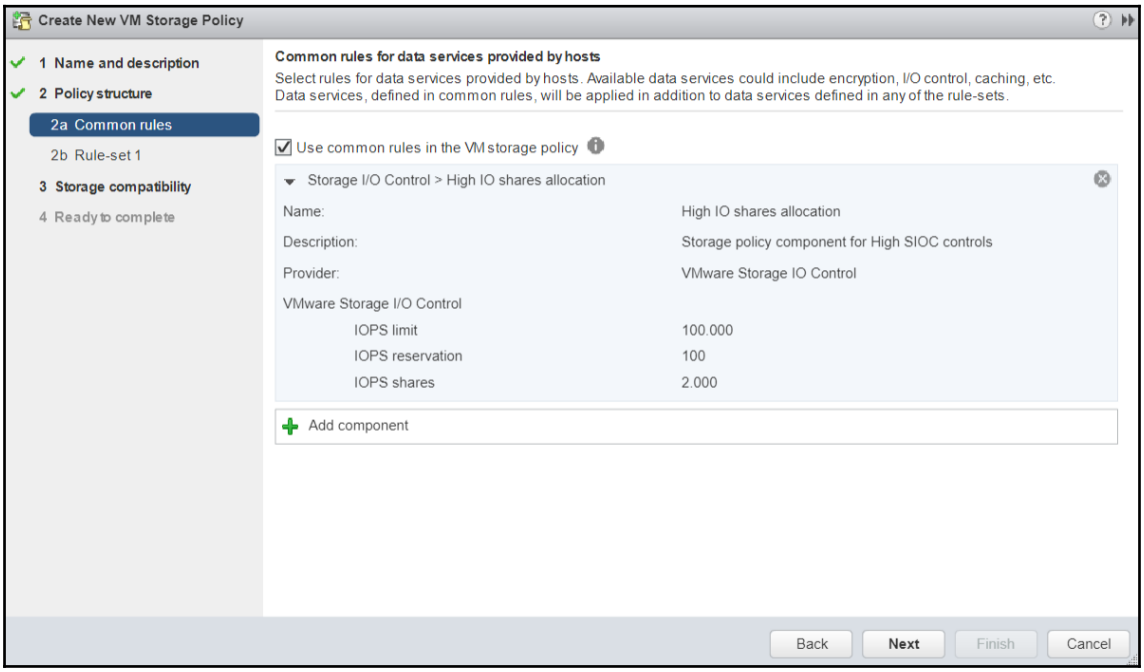

Linux-Test - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
Network adapter 1
VM Network
Connect...
CD/DVD drive 1
Datastore ISO File
Connect...
Video card
Specify custom settings
VMCI device
SATA controller 0
Other Devices
*New Hard disk
16
GB
Maximum Size
327,28 GB
VM storage policy
Datastore Default
Location
Store with the virtual machine
Disk Provisioning
Thick provision lazy zeroed
Sharing (*)
Multi-writer
Shares
Normal
1.000
Limit - IOPs
Unlimited
Virtual flash read cache
0
GB
Advanced
Disk Mode
Dependent
Virtual Device Node
SCSI controller 0
SCSI(0:1)
New device:
New Hard Disk
Add
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel

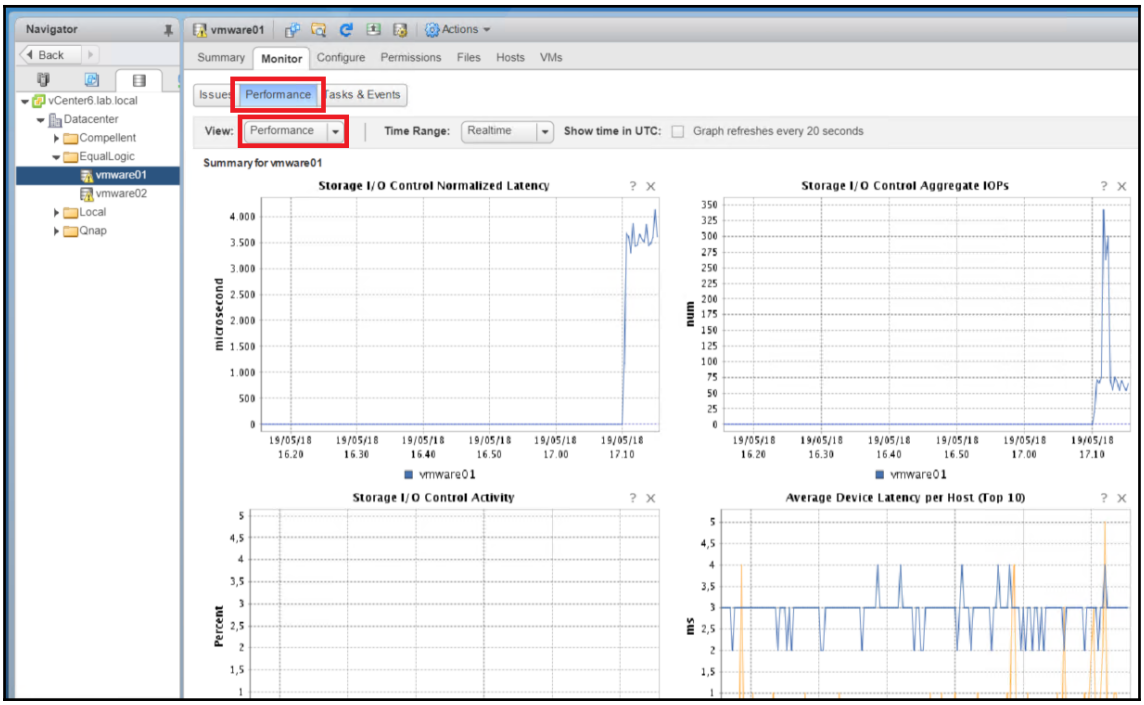

Navigator
Back
vCenter6.lab.local
Datacenter
Compellent
EqualLogic
vmware01
vmware02
Local
Qnap
vmware01
Actions
Summary
Monitor
Configure
Permissions
Files
vmware01
Type: VMFS 5
URL: ds:///vmfs/volumes/56dda37f-83604b
Actions - vmware01
Browse Files
Register VM...
Increase Datastore Capacity...
Mount Datastore...
Unmount Datastore...
Maintenance Mode
Move Out of Datastore Cluster
Manage Storage Providers
Configure Storage I/O Control...
Edit Space Reclamation...
Upgrade to VMFS-5...


Navigator
Back
vCenter6.lab.local
Datacenter
Compellent
EqualLogic
EqualLogic
vmware01
vmware02
Local
Qnap
vmware01
Actions
Summary
Monitor
Configure
Permissions
Files
Hosts
VMs
vmware01
Type: VMFS 5
URL: ds:///vmfs/volumes/56dda37f-83604b84-0171-90b11c254aae
Actions - vmware01
Browse Files
Register VM...
Refresh Capacity Information
Increase Datastore Capacity...
Mount Datastore...
Unmount Datastore...
Maintenance Mode
Move Out of Datastore Cluster
Manage Storage Providers
Configure Storage I/O Control...
Edit Space Reclamation...
Upgrade to VMFS-5...
Enter Maintenance Mode
Exit Maintenance Mode
Related Objects
Description
Attribute

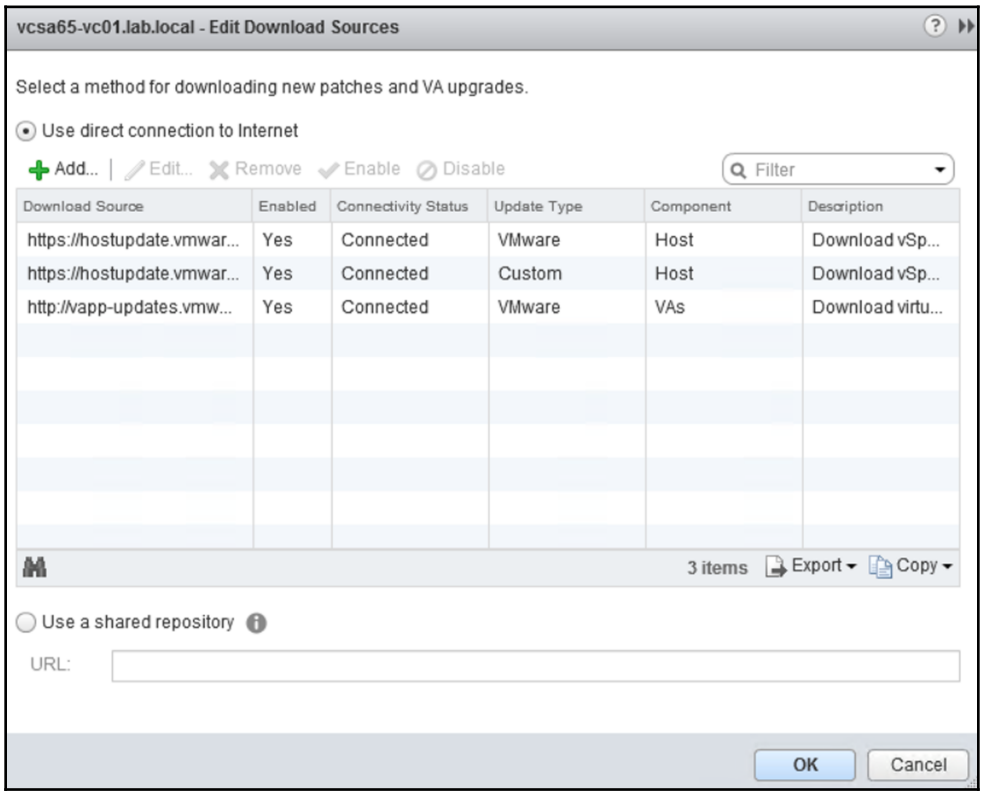

iSCSI3
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Files
Hosts
VMs
General
Capability sets
Device Backing
Connectivity and Multipathing
Connectivity and Multipathing
Select a host to view the multipathing details for its devices.
Mount
Unmount
Host
Datastore Mounted
Datastore Connectivity
Mount Point
192.168.0.198
Mounted
Connected
/vmfs/volumes
Multipathing Details
Refresh
Enable
Disable
Runtime Name
Status
Target
LUN
Preferr...
vmhba64:C0:T0:L0
Active (I/O)
iqn.2006-01.com.openfiler:tsn....
0
*
vmhba64:C3:T0:L0
Active
iqn.2006-01.com.openfiler:tsn....
0

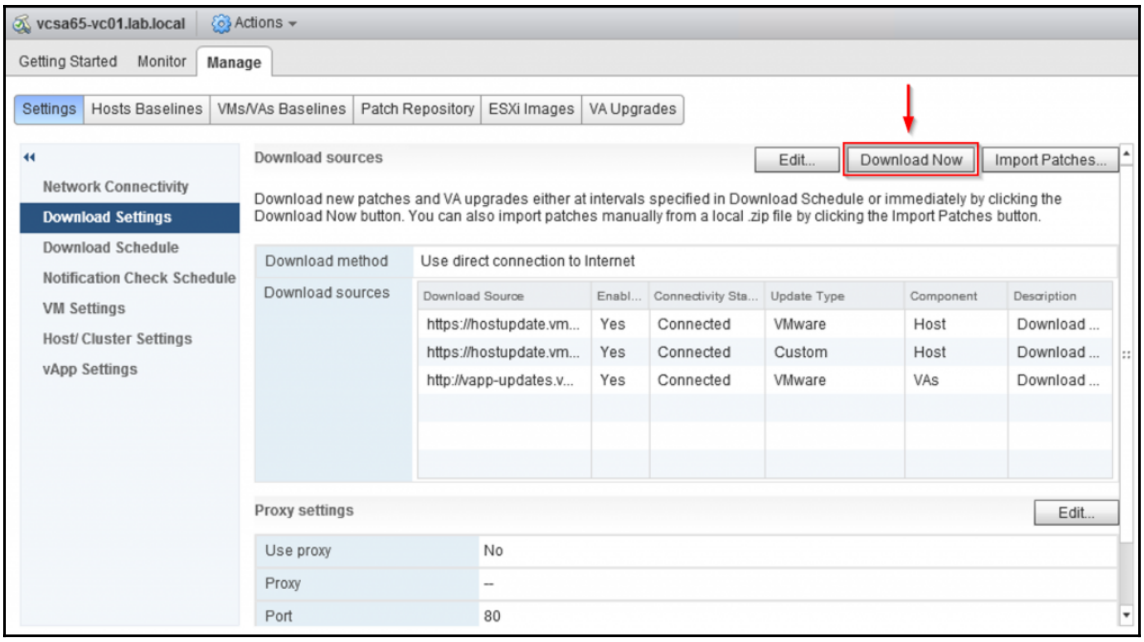

DAS - Configure Storage I/O Control
Storage I/O Control is used to control the I/O usage of a virtual machine and to gradually enforce the predefined I/O share levels.
Enable Storage I/O Control
Congestion Threshold:
Percentage of peak throughput
90
%
Manual
30
ms
Reset to defaults
Exclude I/O statistics from SDRS
OK
Cancel

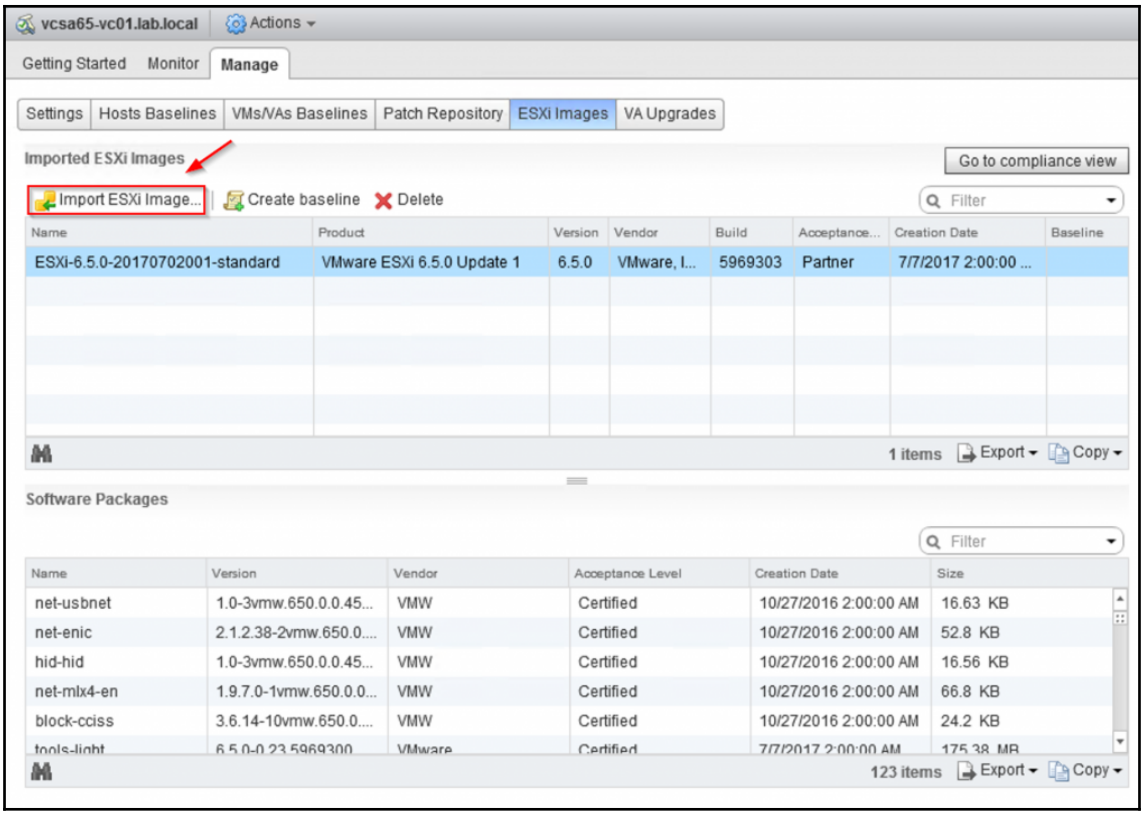

Create New VM Storage Policy
1 Name and description
2 Policy structure
2a Common rules
2b Rule-set 1
3 Storage compatibility
4 Ready to complete
Common rules for data services provided by hosts
Select rules for data services provided by hosts. Available data services could include encryption, I/O control, caching, etc.
Data services, defined in common rules, will be applied in addition to data services defined in any of the rule-sets.
Use common rules in the VM storage policy
Storage I/O Control > High IO shares allocation
Name:
High IO shares allocation
Description:
Storage policy component for High SIOC controls
Provider:
VMware Storage IO Control
VMware Storage I/O Control
IOPS limit
100.000
IOPS reservation
100
IOPS shares
2.000
Add component
Back
Next
Finish
Cancel

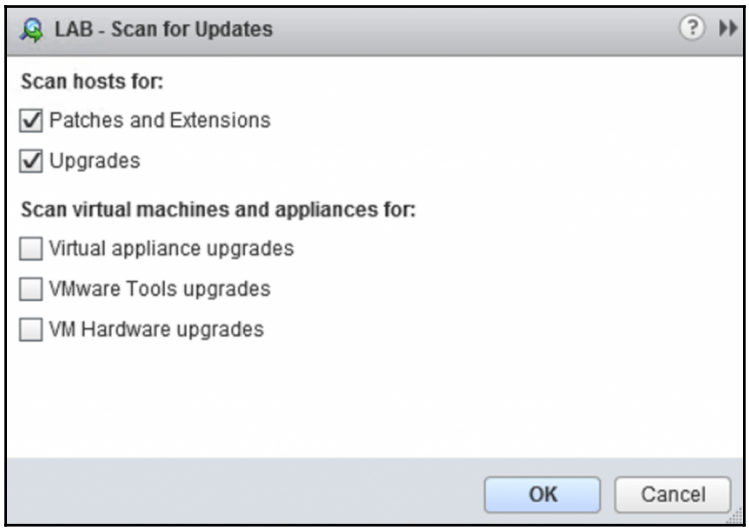

Navigator
Back
vCenter6.lab.local
Datacenter
Compellent
EqualLogic
vmware01
vmware02
Local
Qnap
vmware01
Actions
Summary
Monitor
Configure
Permissions
Files
Hosts
VMs
Issues
Performance
Tasks & Events
View:
Performance
Time Range:
Realtime
Show time in UTC:
Graph refreshes every 20 seconds
Summary for vmware01
Storage I/O Control Normalized Latency
microsecond
4.000
3.500
3.000
2.500
2.000
1.500
1.000
500
0
19/05/18 16.20
19/05/18 16.30
19/05/18 16.40
19/05/18 16.50
19/05/18 17.00
19/05/18 17.10
vmware01
Storage I/O Control Aggregate IOPs
num
350
325
300
275
250
225
200
175
150
125
100
75
50
25
0
19/05/18 16.20
19/05/18 16.30
19/05/18 16.40
19/05/18 16.50
19/05/18 17.00
19/05/18 17.10
vmware01
Storage I/O Control Activity
Percent
5
4,5
4
3,5
3
2,5
2
1,5
1
Average Device Latency per Host (Top 10)
ms
5
4,5
4
3,5
3
2,5
2
1,5
1

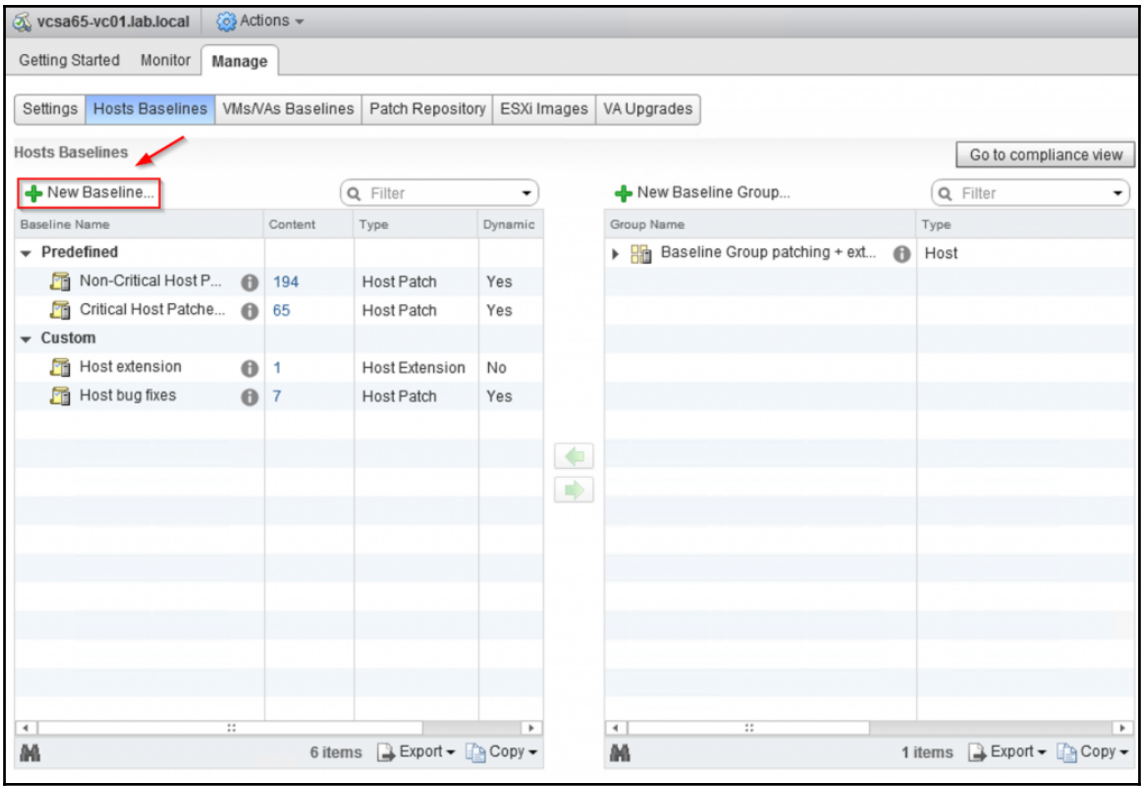
Chapter 04: Upgrade a vSphere Deployment to 6.x

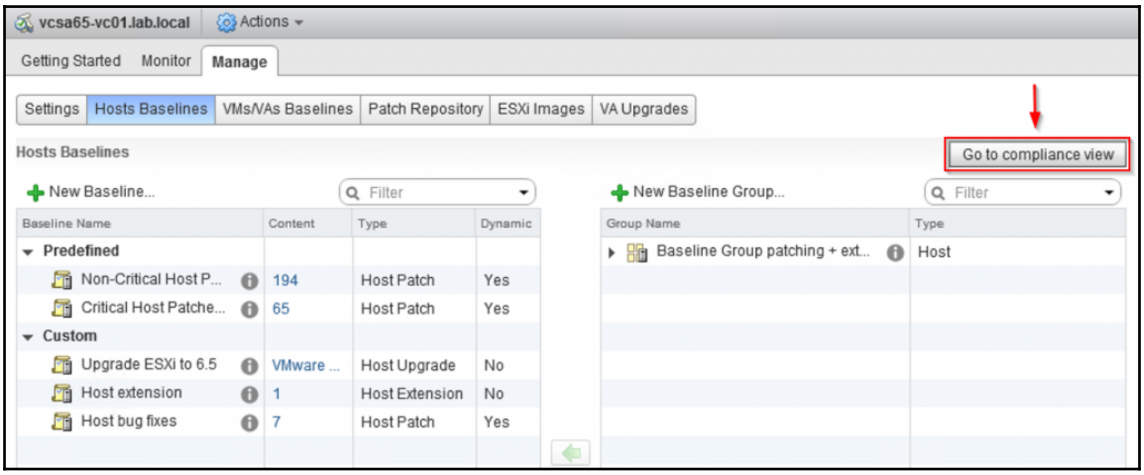


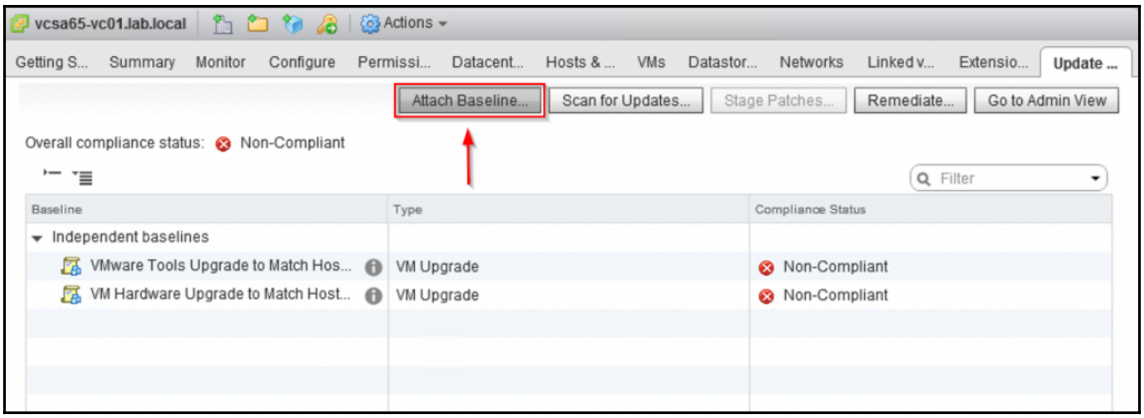

vcsa65-vc01.lab.local
Actions
Getting Started
Monitor
Manage
Settings
Hosts Baselines
VMs/VAs Baselines
Patch Repository
ESXi Images
VA Upgrades
Network Connectivity
Download Settings
Download Schedule
Notification Check Schedule
VM Settings
Host/ Cluster Settings
vApp Settings
Download sources
Edit...
Download Now
Import Patches...
Download new patches and VA upgrades either at intervals specified in Download Schedule or immediately by clicking the Download Now button. You can also import patches manually from a local .zip file by clicking the Import Patches button.
Download method
Use direct connection to Internet
Download sources
Download Source
Enabl...
Connectivity Sta...
Update Type
Component
Description
https://hostupdate.vm...
Yes
Connected
VMware
Host
Download ...
https://hostupdate.vm...
Yes
Connected
Custom
Host
Download ...
http://vapp-updates.v...
Yes
Connected
VMware
VAs
Download ...
Proxy settings
Edit...
Use proxy
No
Proxy
--
Port
80

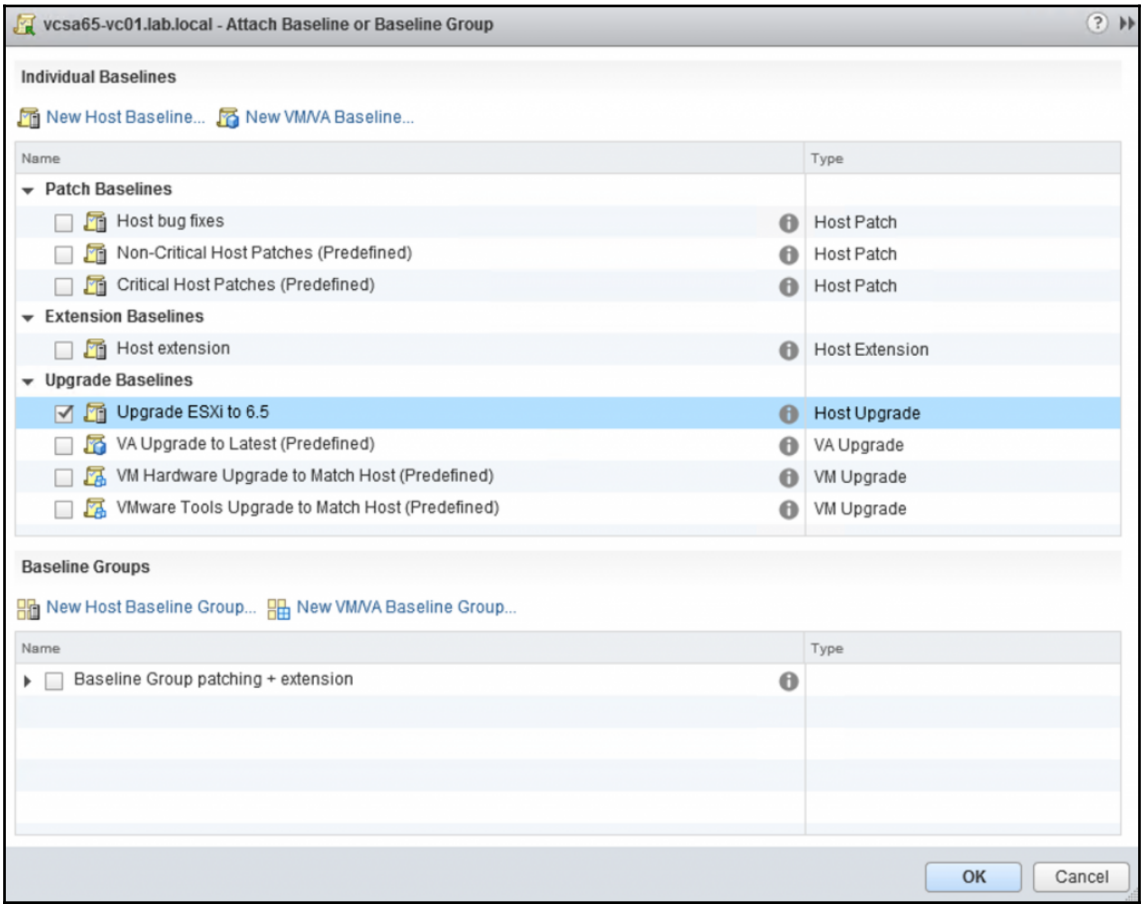

vcsa65-vc01.lab.local
Actions
Getting Started
Monitor
Manage
Settings
Hosts Baselines
VMs/VAs Baselines
Patch Repository
ESXi Images
VA Upgrades
Imported ESXi Images
Go to compliance view
Import ESXi Image...
Create baseline
Delete
Filter
Name
Product
Version
Vendor
Build
Acceptance...
Creation Date
Baseline
ESXi-6.5.0-20170702001-standard
VMware ESXi 6.5.0 Update 1
6.5.0
VMware, I...
5969303
Partner
7/7/2017 2:00:00 ...
1 items
Export
Copy
Software Packages
Filter
Name
Version
Vendor
Acceptance Level
Creation Date
Size
net-usbnet
1.0-3vmw.650.0.0.45...
VMW
Certified
10/27/2016 2:00:00 AM
16.63 KB
net-enic
2.1.2.38-2vmw.650.0....
VMW
Certified
10/27/2016 2:00:00 AM
52.8 KB
hid-hid
1.0-3vmw.650.0.0.45...
VMW
Certified
10/27/2016 2:00:00 AM
16.56 KB
net-mlx4-en
1.9.7.0-1vmw.650.0.0...
VMW
Certified
10/27/2016 2:00:00 AM
66.8 KB
block-cciss
3.6.14-10vmw.650.0....
VMW
Certified
10/27/2016 2:00:00 AM
24.2 KB
123 items
Export
Copy

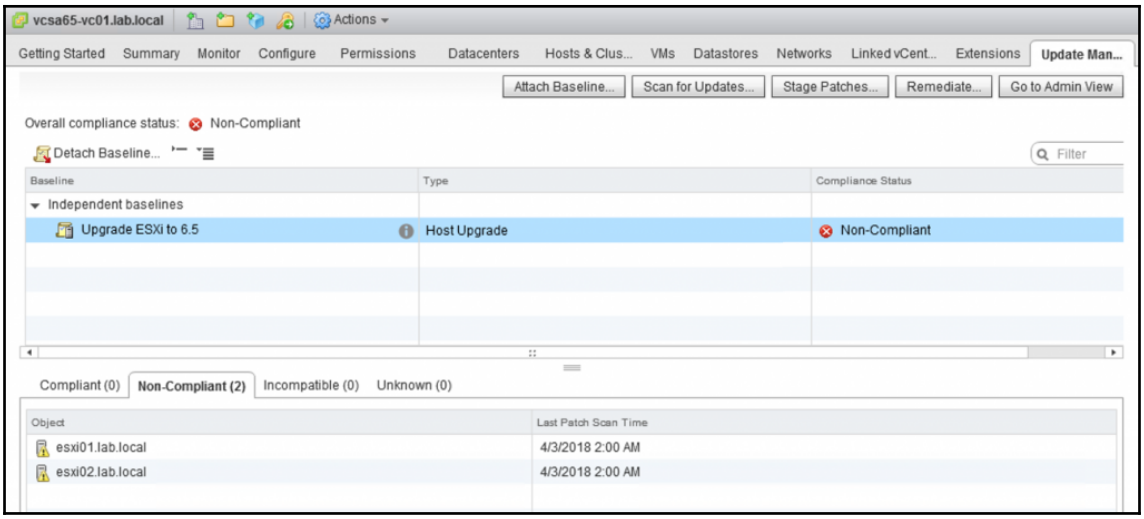

LAB - Scan for Updates
Scan hosts for:
Patches and Extensions
Upgrades
Scan virtual machines and appliances for:
Virtual appliance upgrades
VMware Tools upgrades
VM Hardware upgrades
OK
Cancel

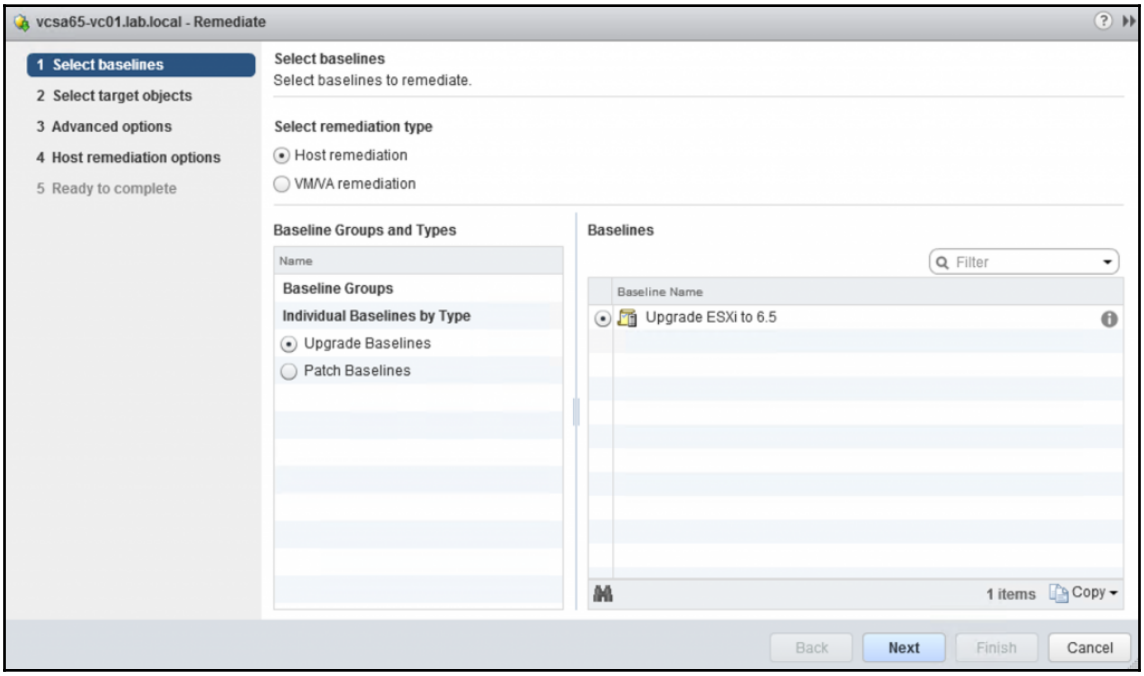

vcsa65-vc01.lab.local
Actions
Getting Started
Monitor
Manage
Settings
Hosts Baselines
VMs/VAs Baselines
Patch Repository
ESXi Images
VA Upgrades
Hosts Baselines
Go to compliance view
New Baseline...
Filter
New Baseline Group...
Filter
Baseline Name
Content
Type
Dynamic
Predefined
Non-Critical Host P...
194
Host Patch
Yes
Critical Host Patche...
65
Host Patch
Yes
Custom
Host extension
1
Host Extension
No
Host bug fixes
7
Host Patch
Yes
Group Name
Type
Baseline Group patching + ext...
Host
6 items
Export
Copy
1 items
Export
Copy

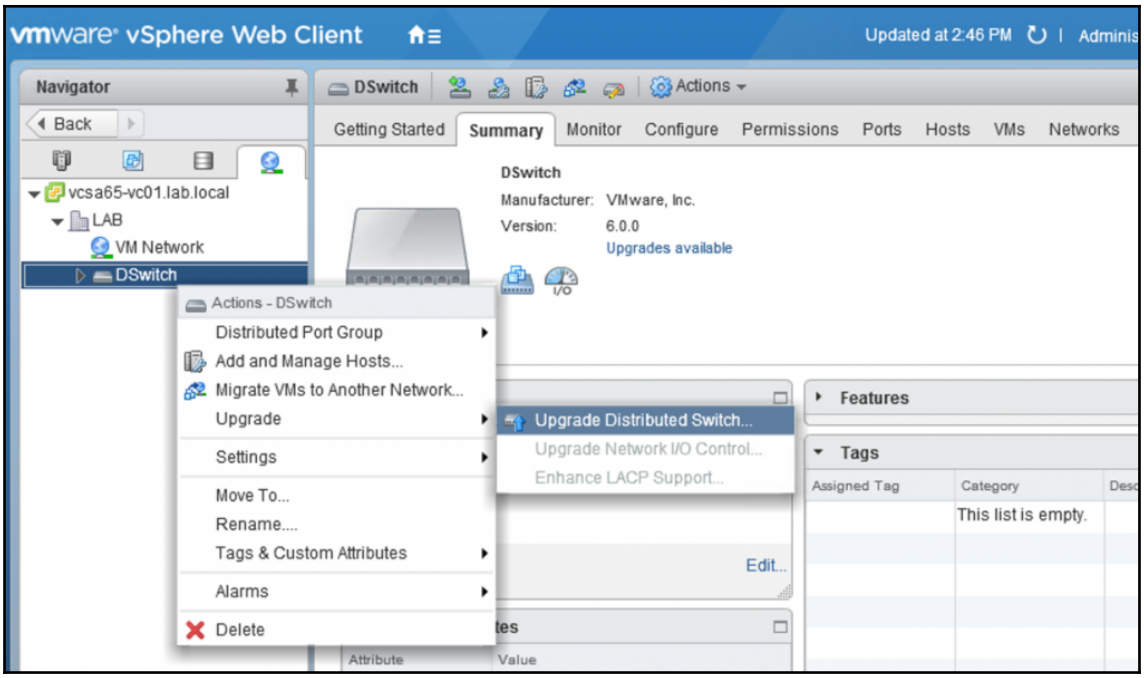

vcsa65-vc01.lab.local
Actions
Getting Started
Monitor
Manage
Settings
Hosts Baselines
VMs/VAs Baselines
Patch Repository
ESXi Images
VA Upgrades
Hosts Baselines
Go to compliance view
New Baseline...
Filter
New Baseline Group...
Filter
Baseline Name
Content
Type
Dynamic
Predefined
Non-Critical Host P...
194
Host Patch
Yes
Critical Host Patche...
65
Host Patch
Yes
Custom
Upgrade ESXi to 6.5
VMware ...
Host Upgrade
No
Host extension
1
Host Extension
No
Host bug fixes
7
Host Patch
Yes
Group Name
Type
Baseline Group patching + ext...
Host

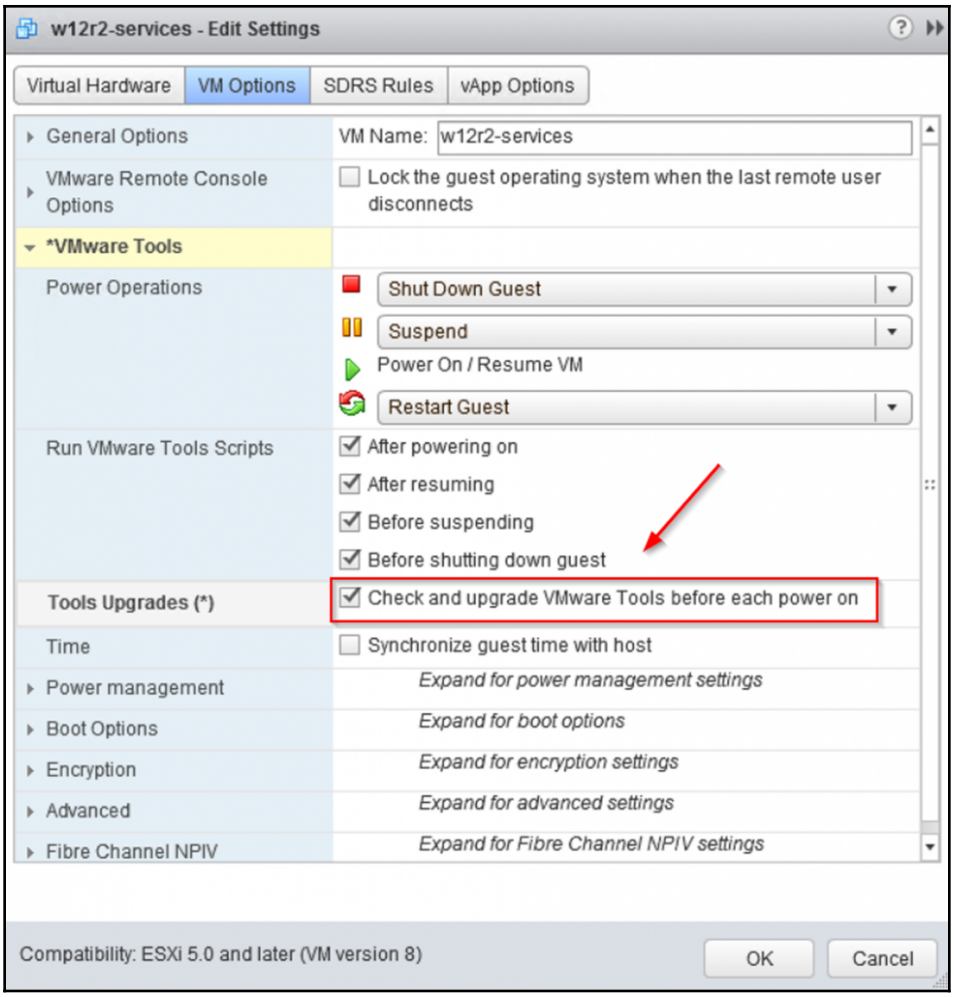

vcsa65-vc01.lab.local
Actions
Getting S...
Summary
Monitor
Configure
Permissi...
Datacent...
Hosts & ...
VMs
Datastor...
Networks
Linked v...
Extensio...
Update ...
Attach Baseline...
Scan for Updates...
Stage Patches...
Remediate...
Go to Admin View
Overall compliance status: Non-Compliant
Filter
Baseline
Type
Compliance Status
Independent baselines
VMware Tools Upgrade to Match Hos...
VM Upgrade
Non-Compliant
VM Hardware Upgrade to Match Host...
VM Upgrade
Non-Compliant

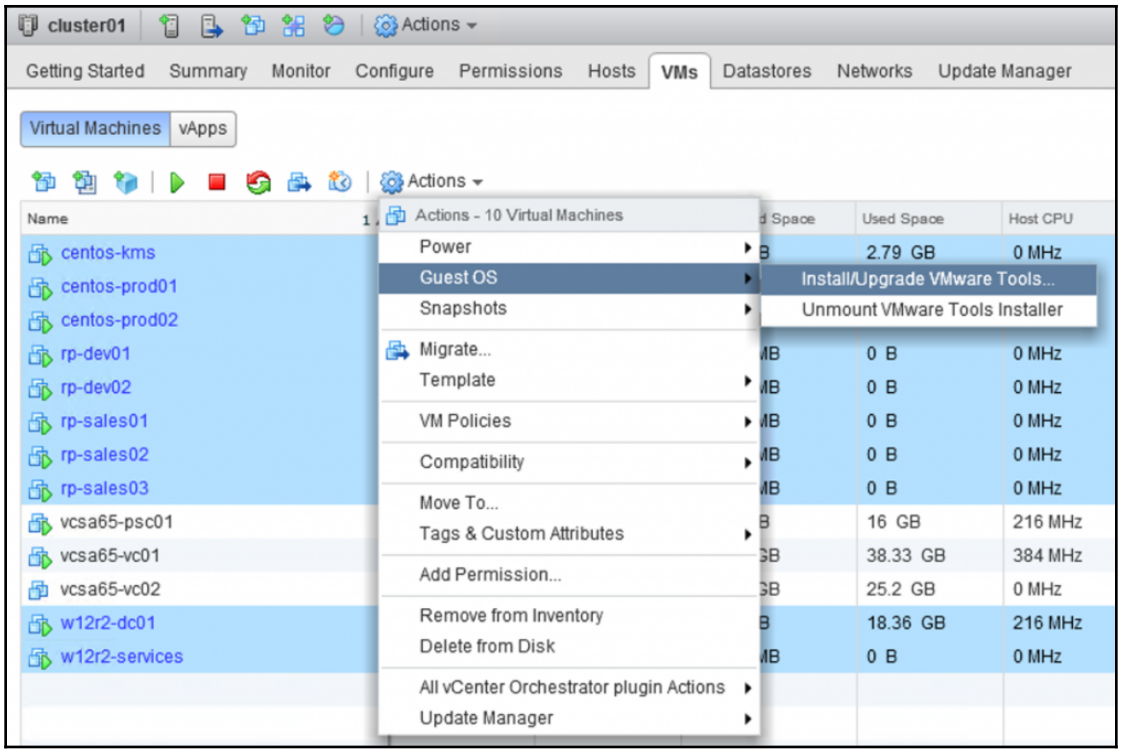

vcsa65-vc01.lab.local - Attach Baseline or Baseline Group
Individual Baselines
New Host Baseline...
New VM/VA Baseline...
Name
Type
Patch Baselines
Host bug fixes
Host Patch
Non-Critical Host Patches (Predefined)
Host Patch
Critical Host Patches (Predefined)
Host Patch
Extension Baselines
Host extension
Host Extension
Upgrade Baselines
Upgrade ESXi to 6.5
Host Upgrade
VA Upgrade to Latest (Predefined)
VA Upgrade
VM Hardware Upgrade to Match Host (Predefined)
VM Upgrade
VMware Tools Upgrade to Match Host (Predefined)
VM Upgrade
Baseline Groups
New Host Baseline Group...
New VM/VA Baseline Group...
Name
Type
Baseline Group patching + extension
OK
Cancel

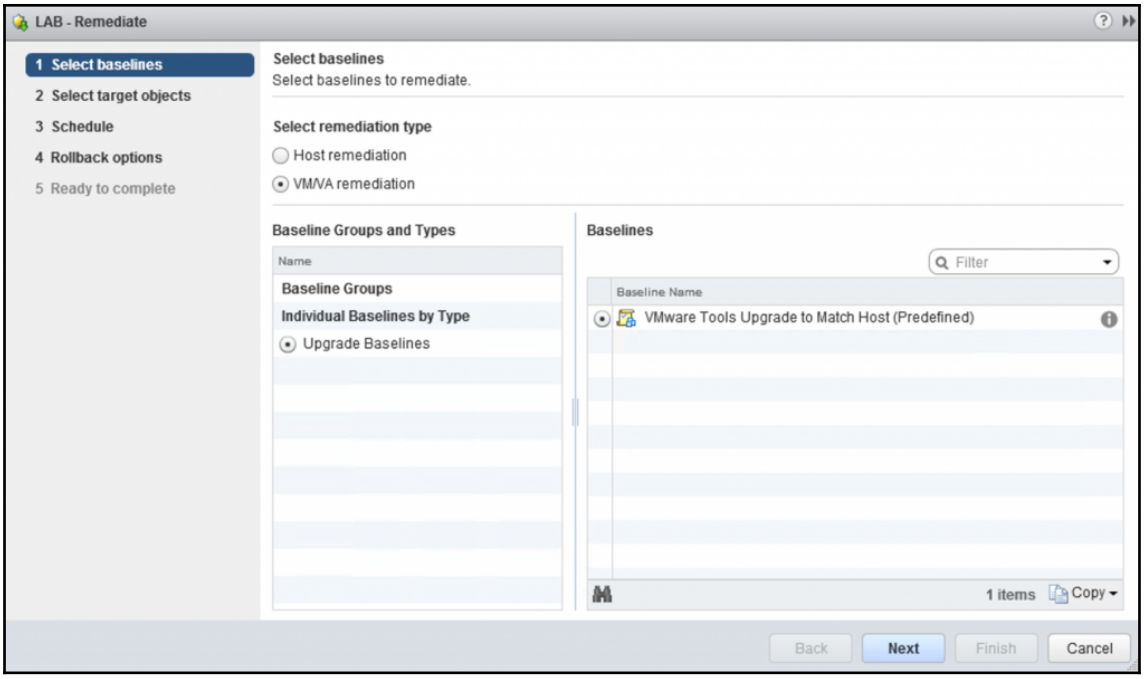

vcsa65-vc01.lab.local
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Datacenters
Hosts & Clus...
VMs
Datastores
Networks
Linked vCent...
Extensions
Update Man...
Attach Baseline...
Scan for Updates...
Stage Patches...
Remediate...
Go to Admin View
Overall compliance status: Non-Compliant
Detach Baseline...
Filter
Baseline
Type
Compliance Status
Independent baselines
Upgrade ESXi to 6.5
Host Upgrade
Non-Compliant
Compliant (0)
Non-Compliant (2)
Incompatible (0)
Unknown (0)
Object
Last Patch Scan Time
esxi01.lab.local
4/3/2018 2:00 AM
esxi02.lab.local
4/3/2018 2:00 AM

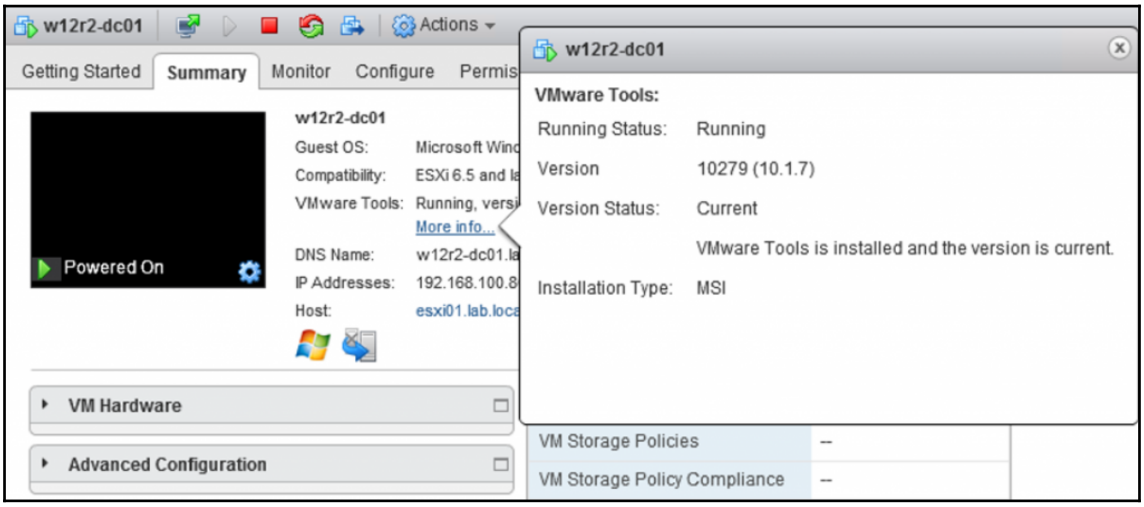

vcsa65-vc01.lab.local - Remediate
1 Select baselines
2 Select target objects
3 Advanced options
4 Host remediation options
5 Ready to complete
Select baselines
Select baselines to remediate.
Select remediation type
Host remediation
VM/VA remediation
Baseline Groups and Types
Name
Baseline Groups
Individual Baselines by Type
Upgrade Baselines
Patch Baselines
Baselines
Filter
Baseline Name
Upgrade ESXi to 6.5
1 items
Copy
Back
Next
Finish
Cancel

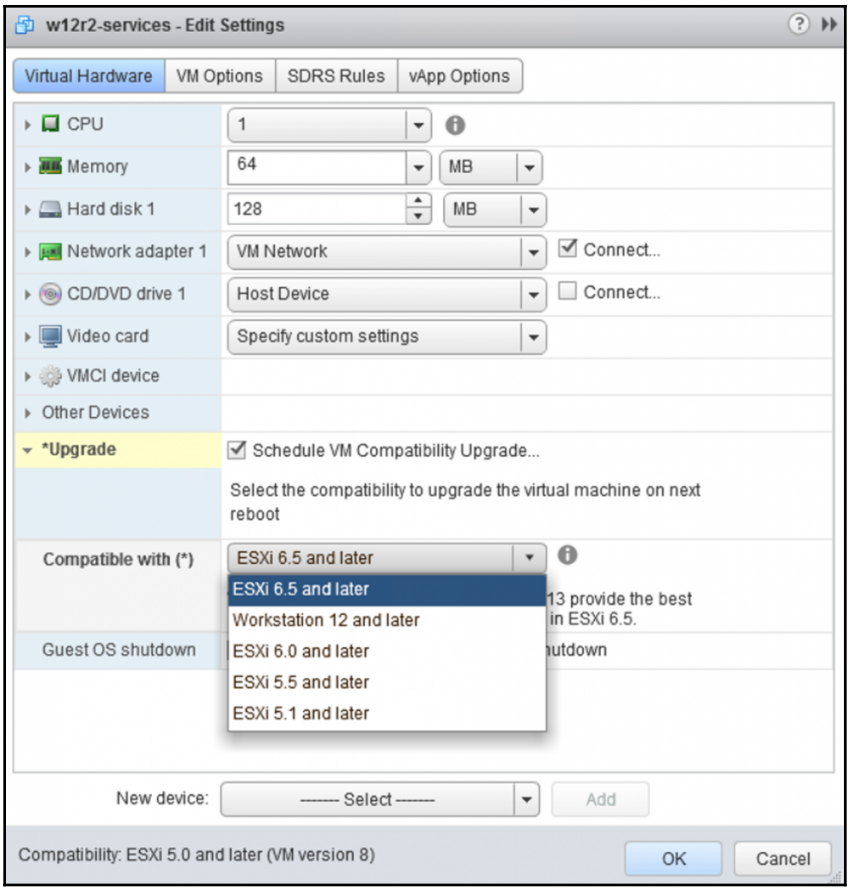

vmware vSphere Web Client
Updated at 2:46 PM
Navigator
Back
vcsa65-vc01.lab.local
LAB
VM Network
DSwitch
DSwitch
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Ports
Hosts
VMs
Networks
DSwitch
Manufacturer: VMware, Inc.
Version: 6.0.0
Upgrades available
I/O
Actions - DSwitch
Distributed Port Group
Add and Manage Hosts...
Migrate VMs to Another Network...
Upgrade
Settings
Move To...
Rename...
Tags & Custom Attributes
Alarms
Delete
Upgrade Distributed Switch...
Upgrade Network I/O Control...
Enhance LACP Support...
Features
Tags
Assigned Tag
Category
This list is empty.
Edit...
Attribute
Value

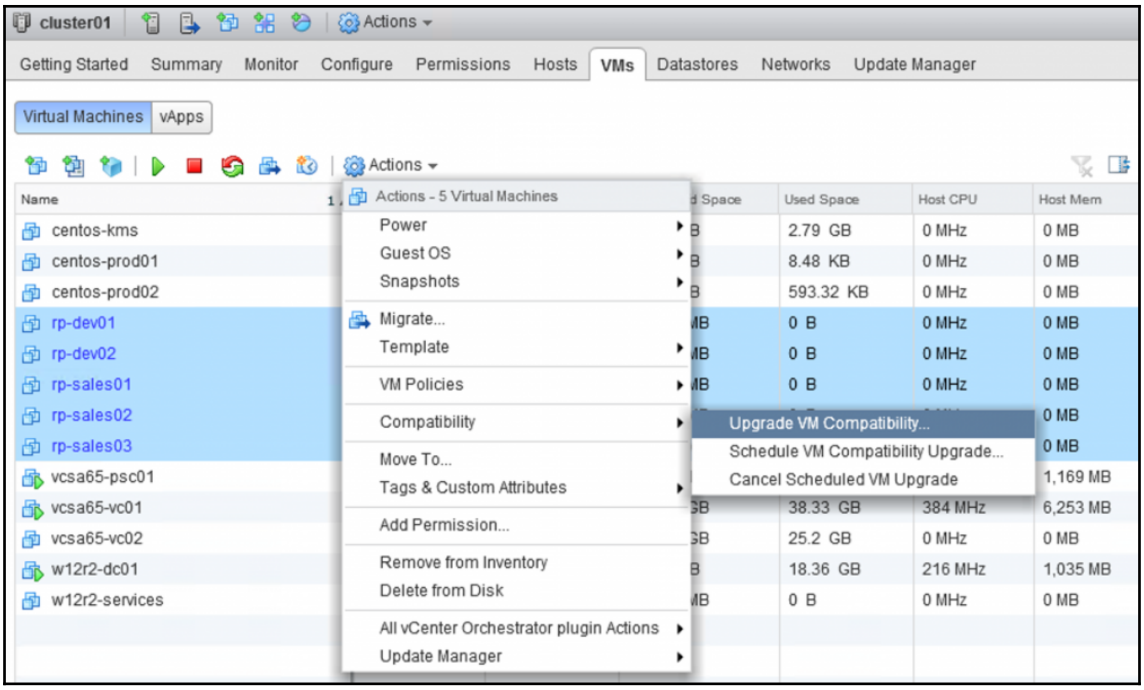

w12r2-services - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
General Options
VM Name: w12r2-services
VMware Remote Console Options
Lock the guest operating system when the last remote user disconnects
*VMware Tools
Power Operations
Shut Down Guest
Suspend
Power On / Resume VM
Restart Guest
Run VMware Tools Scripts
After powering on
After resuming
Before suspending
Before shutting down guest
Tools Upgrades (*)
Check and upgrade VMware Tools before each power on
Time
Synchronize guest time with host
Power management
Expand for power management settings
Boot Options
Expand for boot options
Encryption
Expand for encryption settings
Advanced
Expand for advanced settings
Fibre Channel NPIV
Expand for Fibre Channel NPIV settings
Compatibility: ESXi 5.0 and later (VM version 8)
OK
Cancel

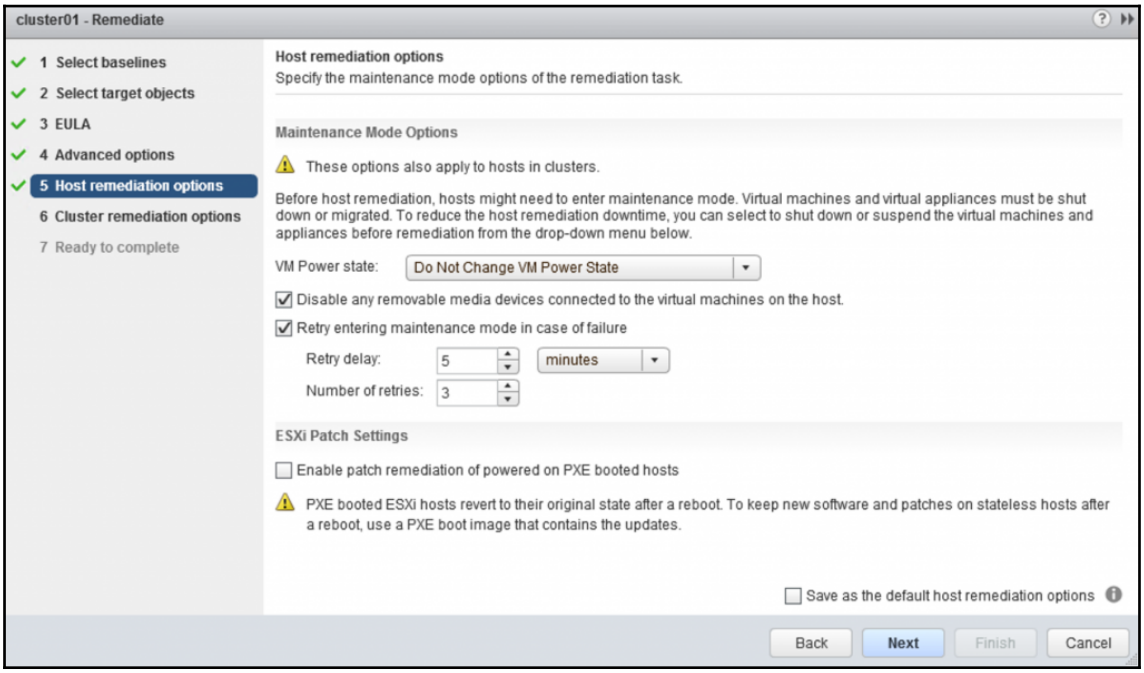

cluster01
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Hosts
VMs
Datastores
Networks
Update Manager
Virtual Machines
vApps
Actions
Name
centos-kms
centos-prod01
centos-prod02
rp-dev01
rp-dev02
rp-sales01
rp-sales02
rp-sales03
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
Actions - 10 Virtual Machines
Power
Guest OS
Snapshots
Migrate...
Template
VM Policies
Compatibility
Move To...
Tags & Custom Attributes
Add Permission...
Remove from Inventory
Delete from Disk
All vCenter Orchestrator plugin Actions
Update Manager
Install/Upgrade VMware Tools...
Unmount VMware Tools Installer
Used Space
Host CPU
2.79 GB
0 MHz
0 B
16 GB
216 MHz
38.33 GB
384 MHz
25.2 GB
18.36 GB

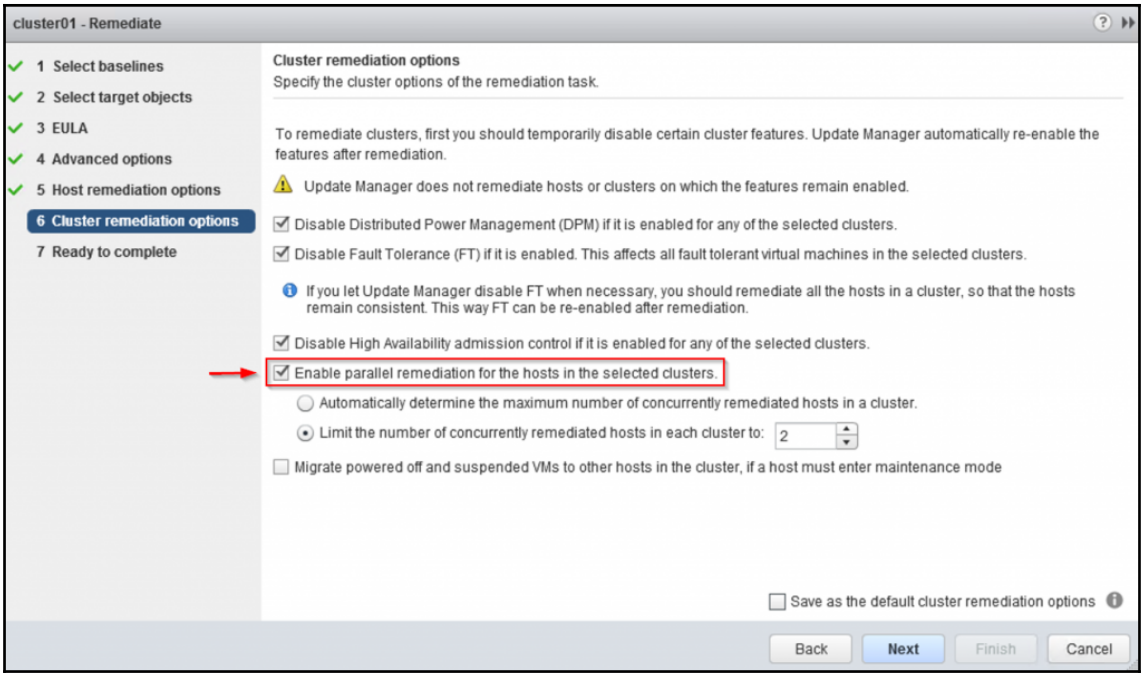

LAB - Remediate
1 Select baselines
2 Select target objects
3 Schedule
4 Rollback options
5 Ready to complete
Select baselines
Select baselines to remediate.
Select remediation type
Host remediation
VM/VA remediation
Baseline Groups and Types
Name
Baseline Groups
Individual Baselines by Type
Upgrade Baselines
Baselines
Filter
Baseline Name
VMware Tools Upgrade to Match Host (Predefined)
1 items
Copy
Back
Next
Finish
Cancel

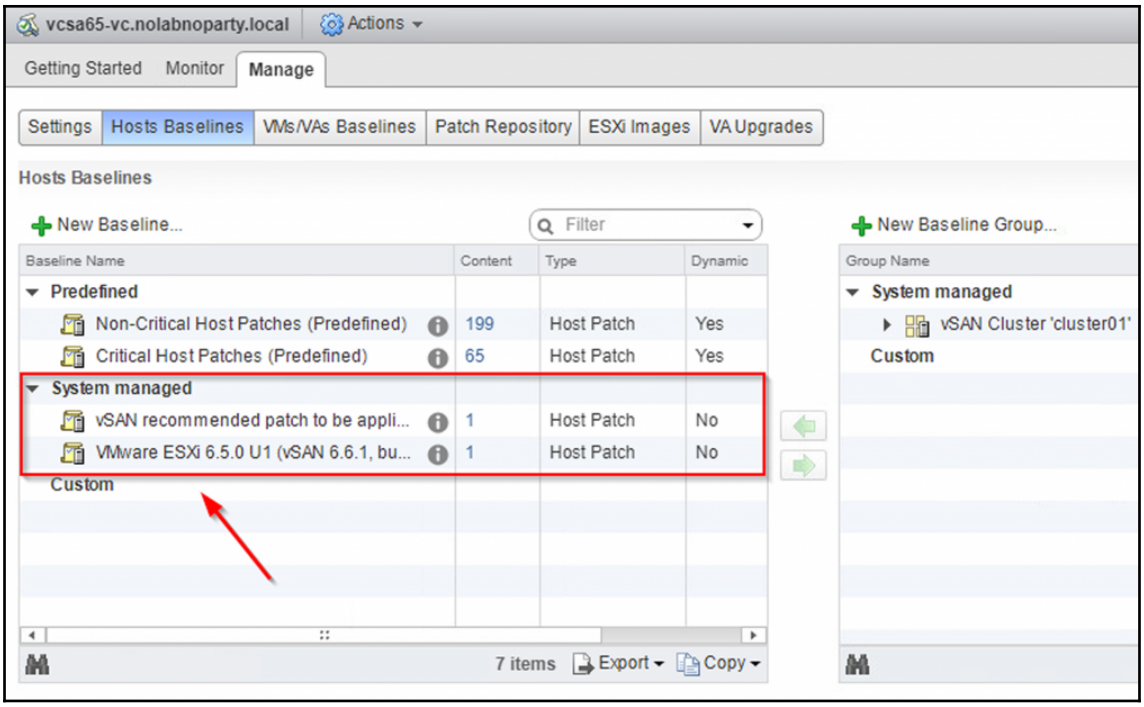

w12r2-dc01
Actions
Getting Started
Summary
Monitor
Configure
Permis
w12r2-dc01
Guest OS:
Compatibility:
VMware Tools:
More info...
DNS Name:
IP Addresses:
Host:
Powered On
VM Hardware
Advanced Configuration
w12r2-dc01
VMware Tools:
Running Status: Running
Version 10279 (10.1.7)
Version Status: Current
VMware Tools is installed and the version is current.
Installation Type: MSI
VM Storage Policies --
VM Storage Policy Compliance --

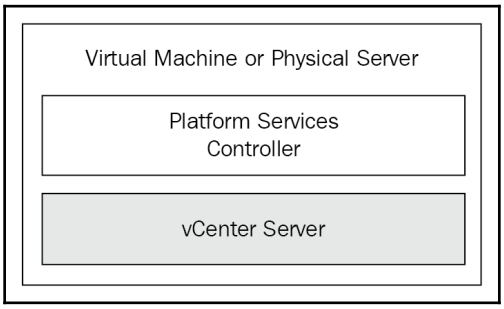

w12r2-services - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
CPU
1
Memory
64
MB
Hard disk 1
128
MB
Network adapter 1
VM Network
Connect...
CD/DVD drive 1
Host Device
Connect...
Video card
Specify custom settings
VMCI device
Other Devices
*Upgrade
Schedule VM Compatibility Upgrade...
Select the compatibility to upgrade the virtual machine on next reboot
Compatible with (*)
ESXi 6.5 and later
ESXi 6.5 and later
Workstation 12 and later
ESXi 6.0 and later
ESXi 5.5 and later
ESXi 5.1 and later
13 provide the best
in ESXi 6.5.
Guest OS shutdown
utdown
New device:
------- Select -------
Add
Compatibility: ESXi 5.0 and later (VM version 8)
OK
Cancel

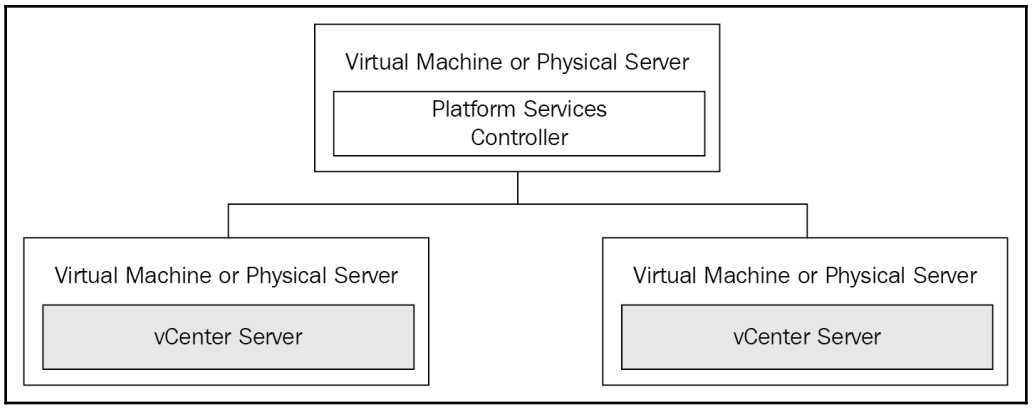

cluster01
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Hosts
VMs
Datastores
Networks
Update Manager
Virtual Machines
vApps
Actions
Name
Used Space
Host CPU
Host Mem
centos-kms
centos-prod01
centos-prod02
rp-dev01
rp-dev02
rp-sales01
rp-sales02
rp-sales03
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
Actions - 5 Virtual Machines
Power
Guest OS
Snapshots
Migrate...
Template
VM Policies
Compatibility
Move To...
Tags & Custom Attributes
Add Permission...
Remove from Inventory
Delete from Disk
All vCenter Orchestrator plugin Actions
Update Manager
Upgrade VM Compatibility...
Schedule VM Compatibility Upgrade...
Cancel Scheduled VM Upgrade

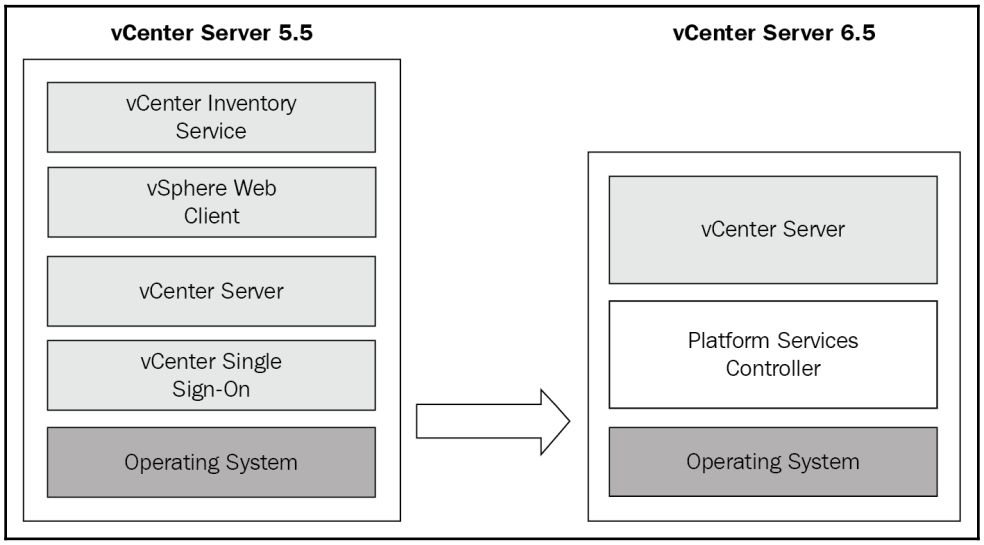

cluster01 - Remediate
1 Select baselines
2 Select target objects
3 EULA
4 Advanced options
5 Host remediation options
6 Cluster remediation options
7 Ready to complete
Host remediation options
Specify the maintenance mode options of the remediation task.
Maintenance Mode Options
These options also apply to hosts in clusters.
Before host remediation, hosts might need to enter maintenance mode. Virtual machines and virtual appliances must be shut down or migrated. To reduce the host remediation downtime, you can select to shut down or suspend the virtual machines and appliances before remediation from the drop-down menu below.
VM Power state:
Do Not Change VM Power State
Disable any removable media devices connected to the virtual machines on the host.
Retry entering maintenance mode in case of failure
Retry delay:
5
minutes
Number of retries:
3
ESXi Patch Settings
Enable patch remediation of powered on PXE booted hosts
PXE booted ESXi hosts revert to their original state after a reboot. To keep new software and patches on stateless hosts after a reboot, use a PXE boot image that contains the updates.
Save as the default host remediation options
Back
Next
Finish
Cancel

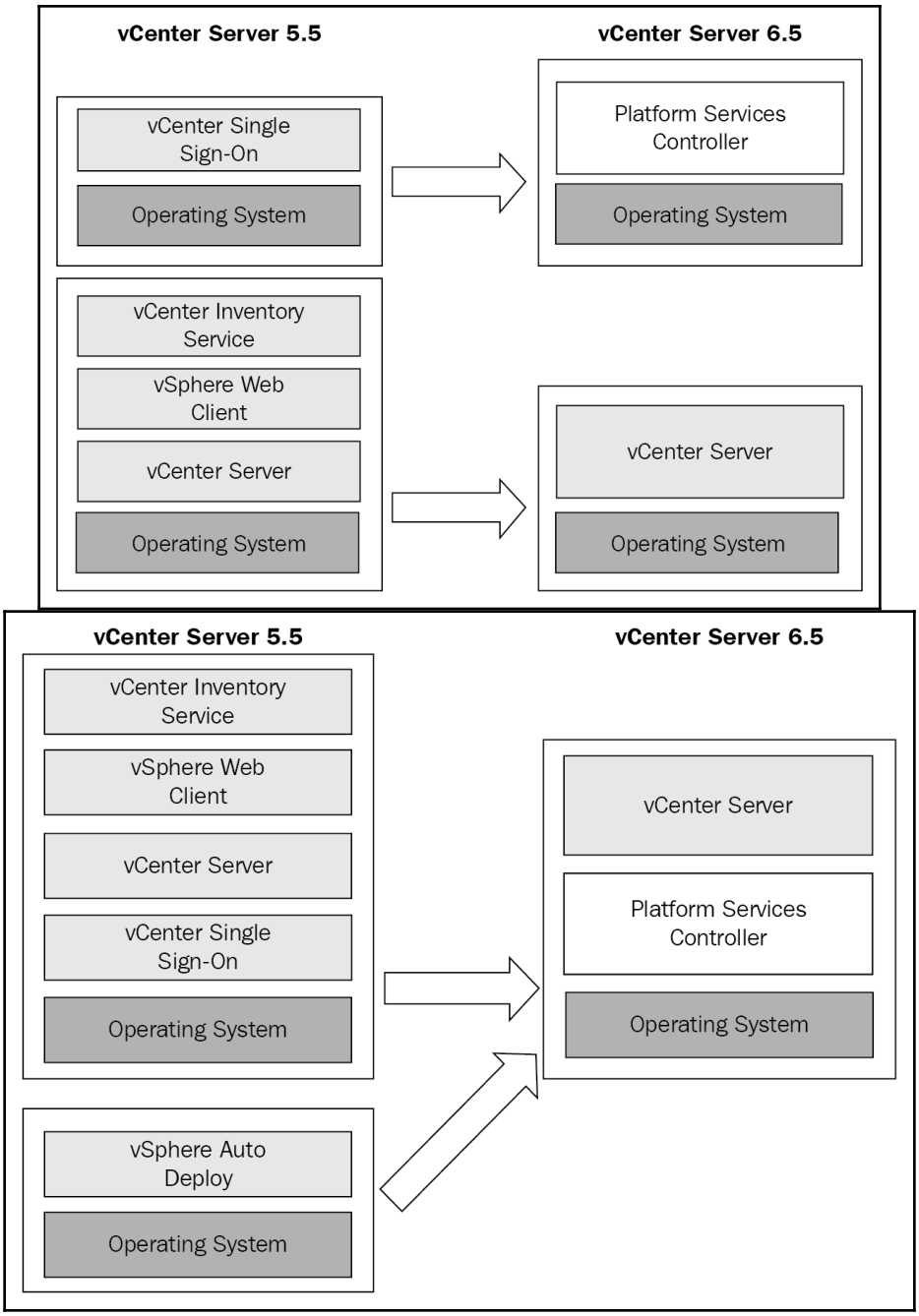

cluster01 - Remediate
1 Select baselines
2 Select target objects
3 EULA
4 Advanced options
5 Host remediation options
6 Cluster remediation options
7 Ready to complete
Cluster remediation options
Specify the cluster options of the remediation task.
To remediate clusters, first you should temporarily disable certain cluster features. Update Manager automatically re-enable the features after remediation.
Update Manager does not remediate hosts or clusters on which the features remain enabled.
Disable Distributed Power Management (DPM) if it is enabled for any of the selected clusters.
Disable Fault Tolerance (FT) if it is enabled. This affects all fault tolerant virtual machines in the selected clusters.
If you let Update Manager disable FT when necessary, you should remediate all the hosts in a cluster, so that the hosts remain consistent. This way FT can be re-enabled after remediation.
Disable High Availability admission control if it is enabled for any of the selected clusters.
Enable parallel remediation for the hosts in the selected clusters.
Automatically determine the maximum number of concurrently remediated hosts in a cluster.
Limit the number of concurrently remediated hosts in each cluster to: 2
Migrate powered off and suspended VMs to other hosts in the cluster, if a host must enter maintenance mode
Save as the default cluster remediation options
Back
Next
Finish
Cancel

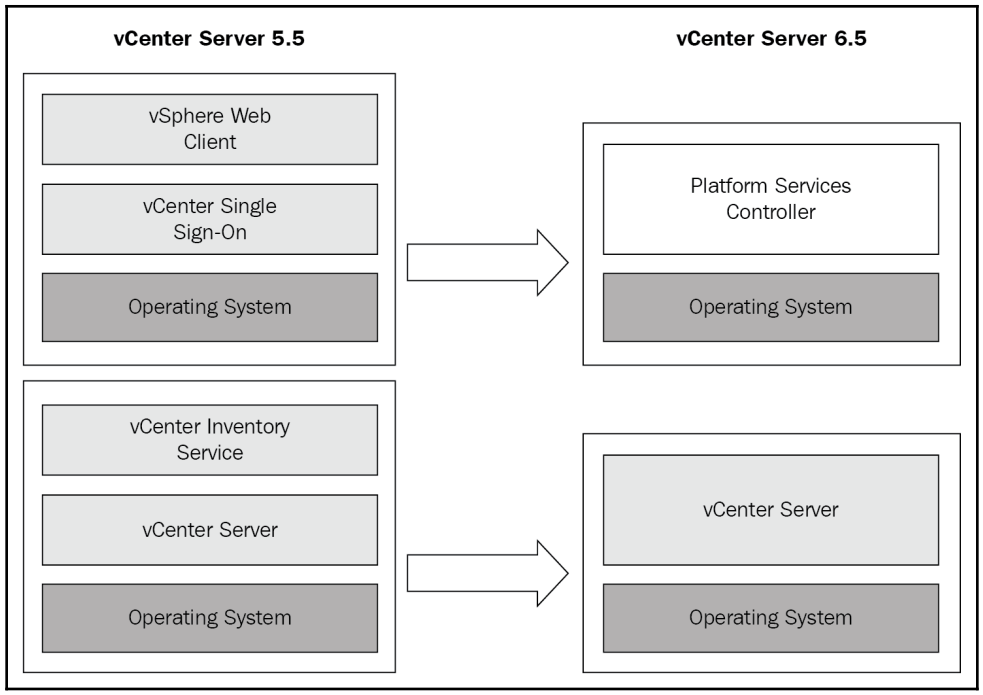

vcsa65-vc.nolabnoparty.local
Actions
Getting Started
Monitor
Manage
Settings
Hosts Baselines
VMs/VAs Baselines
Patch Repository
ESXi Images
VA Upgrades
Hosts Baselines
New Baseline...
Filter
New Baseline Group...
Baseline Name
Content
Type
Dynamic
Group Name
Predefined
Non-Critical Host Patches (Predefined)
199
Host Patch
Yes
Critical Host Patches (Predefined)
65
Host Patch
Yes
System managed
vSAN recommended patch to be appli...
1
Host Patch
No
VMware ESXi 6.5.0 U1 (vSAN 6.6.1, bu...
1
Host Patch
No
Custom
System managed
vSAN Cluster 'cluster01'
Custom
7 items
Export
Copy

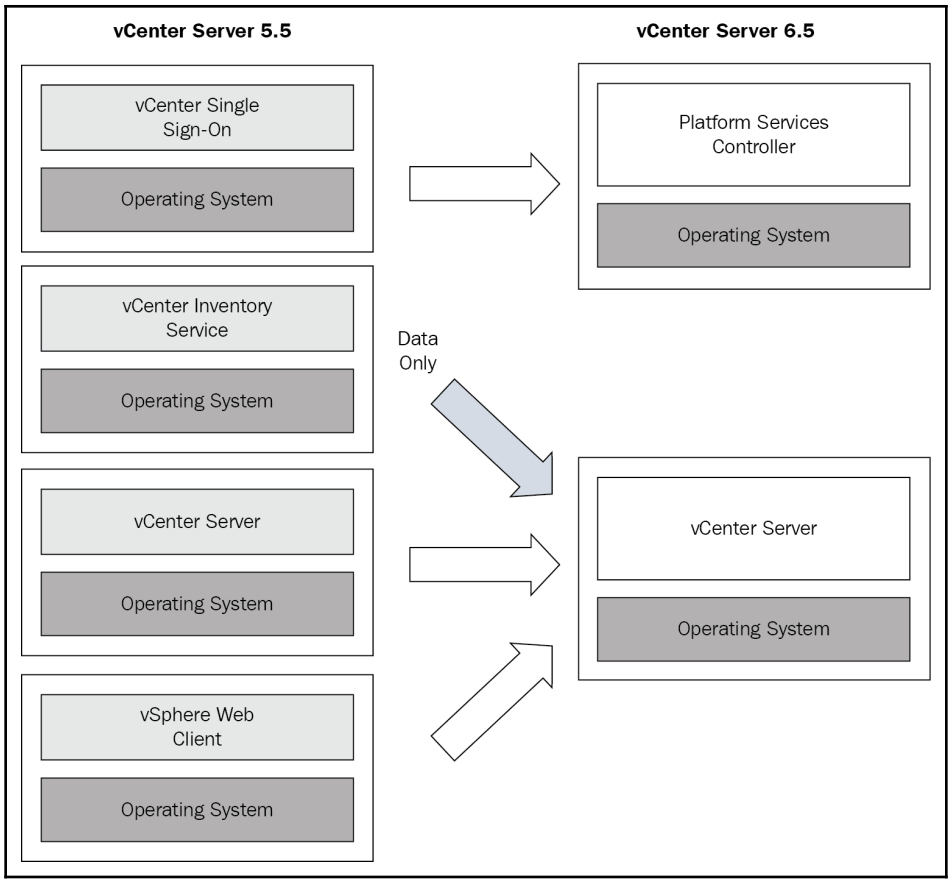

Virtual Machine or Physical Server
Platform Services Controller
vCenter Server

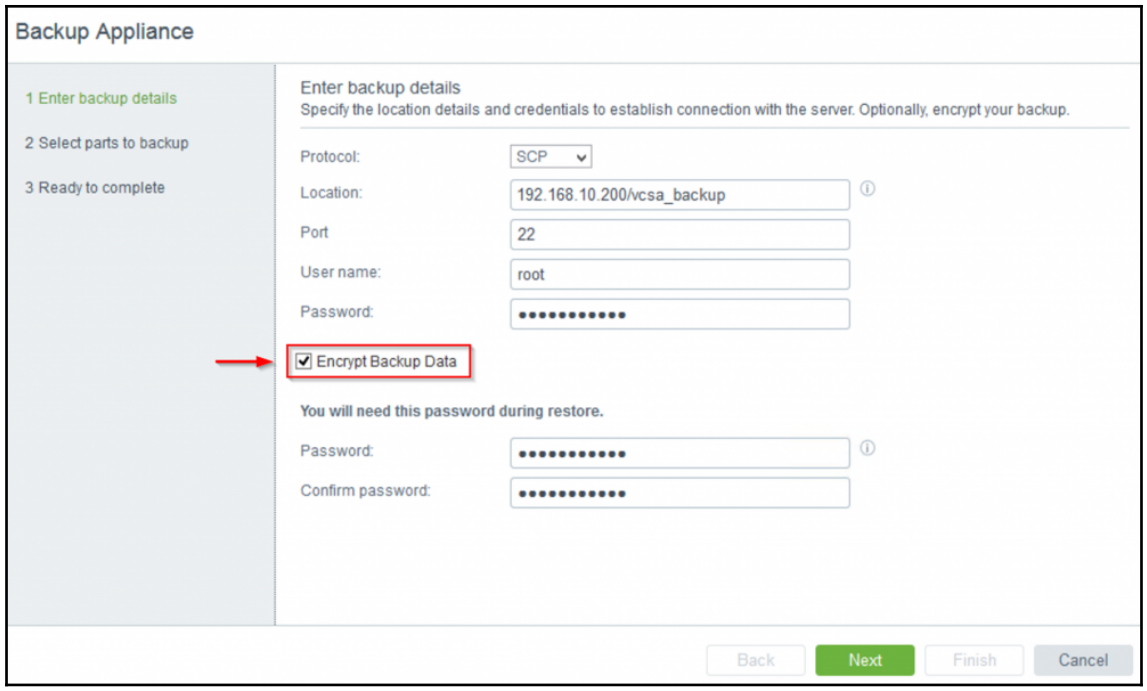

Virtual Machine or Physical Server
Platform Services Controller
Virtual Machine or Physical Server
vCenter Server
Virtual Machine or Physical Server
vCenter Server

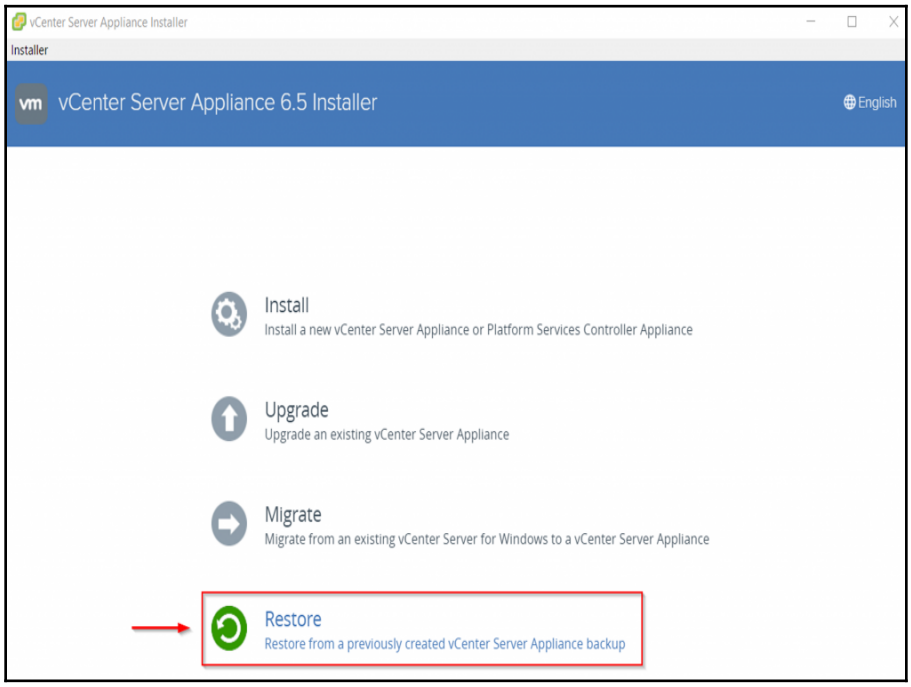

vCenter Server 5.5
vCenter Inventory Service
vSphere Web Client
vCenter Server
vCenter Single Sign-On
Operating System
vCenter Server 6.5
vCenter Server
Platform Services Controller
Operating System

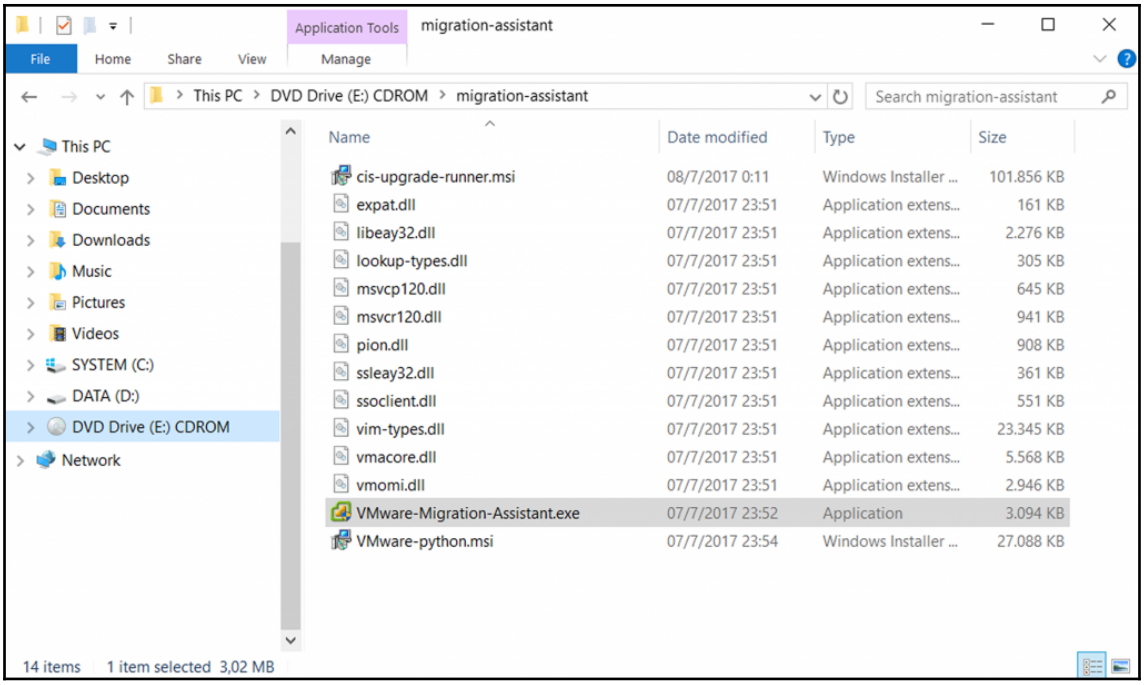

vCenter Server 5.5
vCenter Server 6.5
vCenter Single Sign-On
Operating System
Platform Services Controller
Operating System
vCenter Inventory Service
vSphere Web Client
vCenter Server
Operating System
vCenter Server
Operating System
vCenter Server 5.5
vCenter Server 6.5
vCenter Inventory Service
vSphere Web Client
vCenter Server
vCenter Single Sign-On
Operating System
vCenter Server
Platform Services Controller
Operating System
vSphere Auto Deploy
Operating System

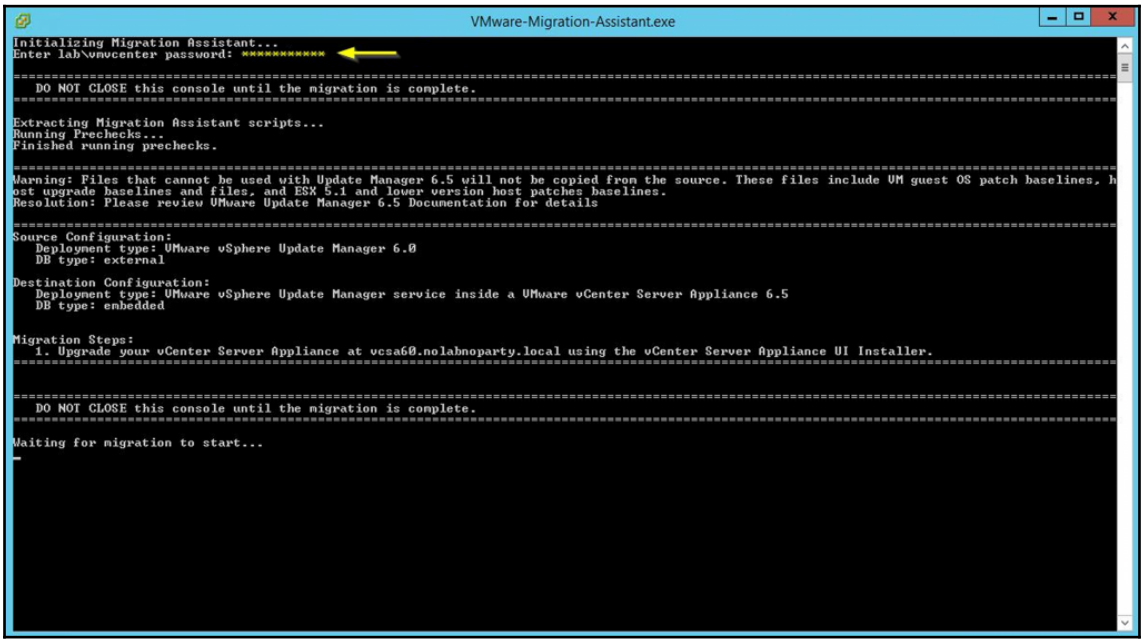

vCenter Server 5.5
vCenter Server 6.5
vSphere Web Client
vCenter Single Sign-On
Operating System
Platform Services Controller
Operating System
vCenter Inventory Service
vCenter Server
Operating System
vCenter Server
Operating System

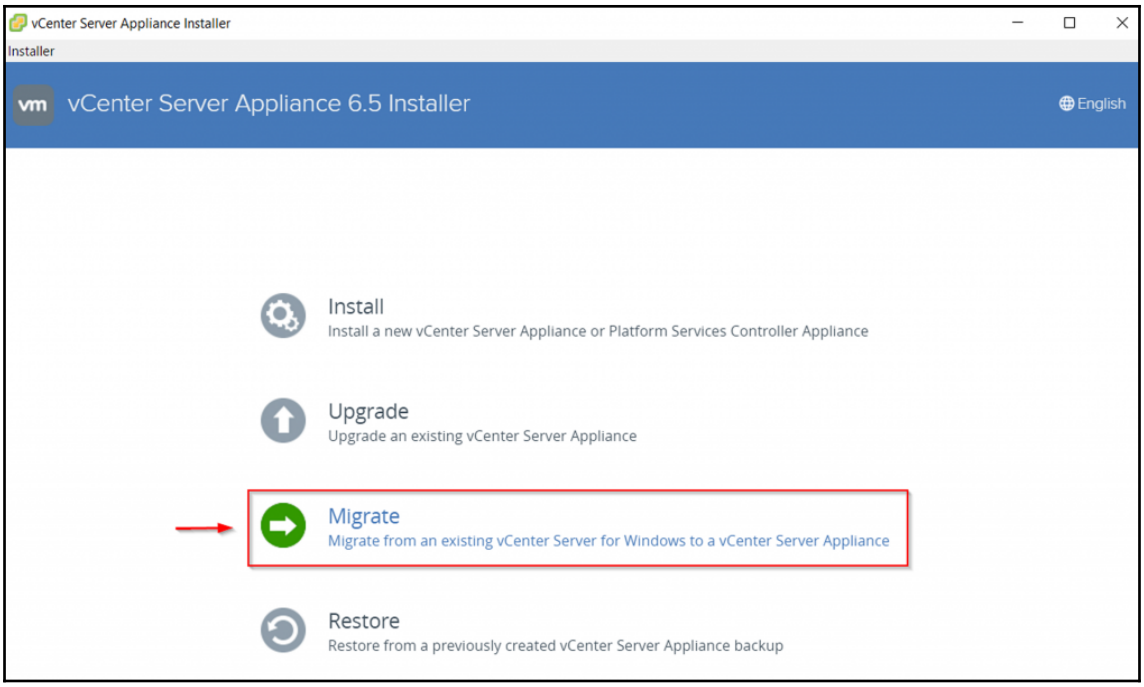

vCenter Server 5.5
vCenter Server 6.5
vCenter Single Sign-On
Operating System
vCenter Inventory Service
Operating System
vCenter Server
Operating System
vSphere Web Client
Operating System
Platform Services Controller
Operating System
Data Only
vCenter Server
Operating System

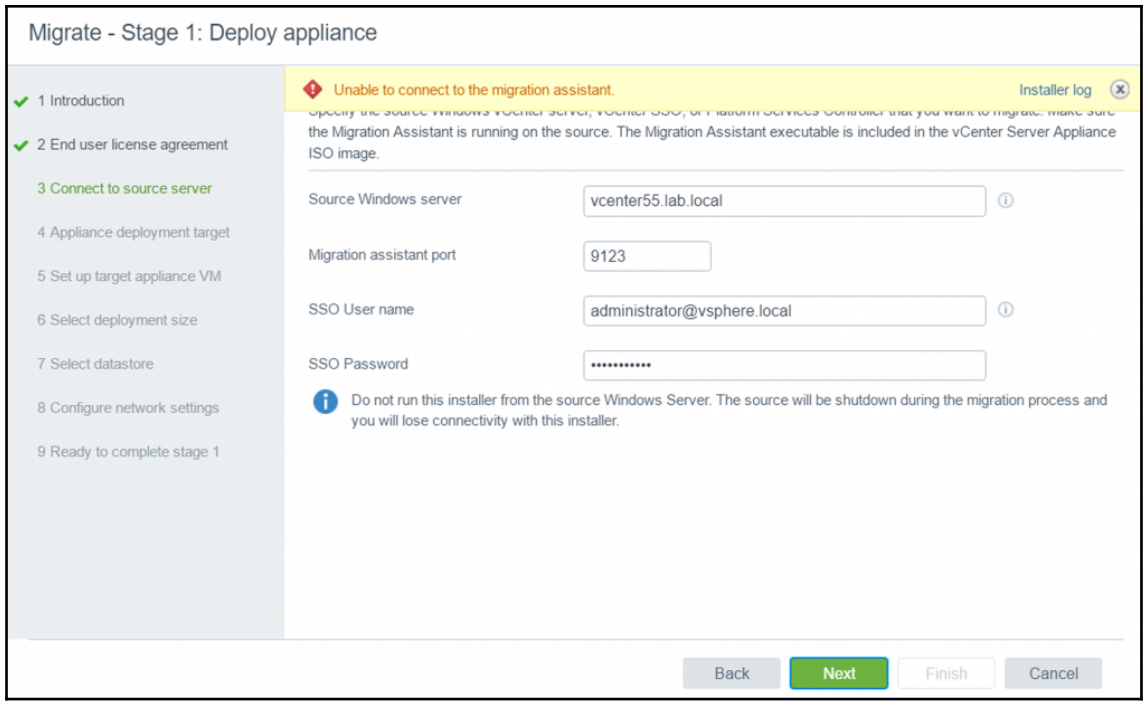

Backup Appliance
1 Enter backup details
2 Select parts to backup
3 Ready to complete
Enter backup details
Specify the location details and credentials to establish connection with the server. Optionally, encrypt your backup.
Protocol:
SCP
Location:
192.168.10.200/vcsa_backup
Port
22
User name:
root
Password:
Encrypt Backup Data
You will need this password during restore.
Password:
Confirm password:
Back
Next
Finish
Cancel

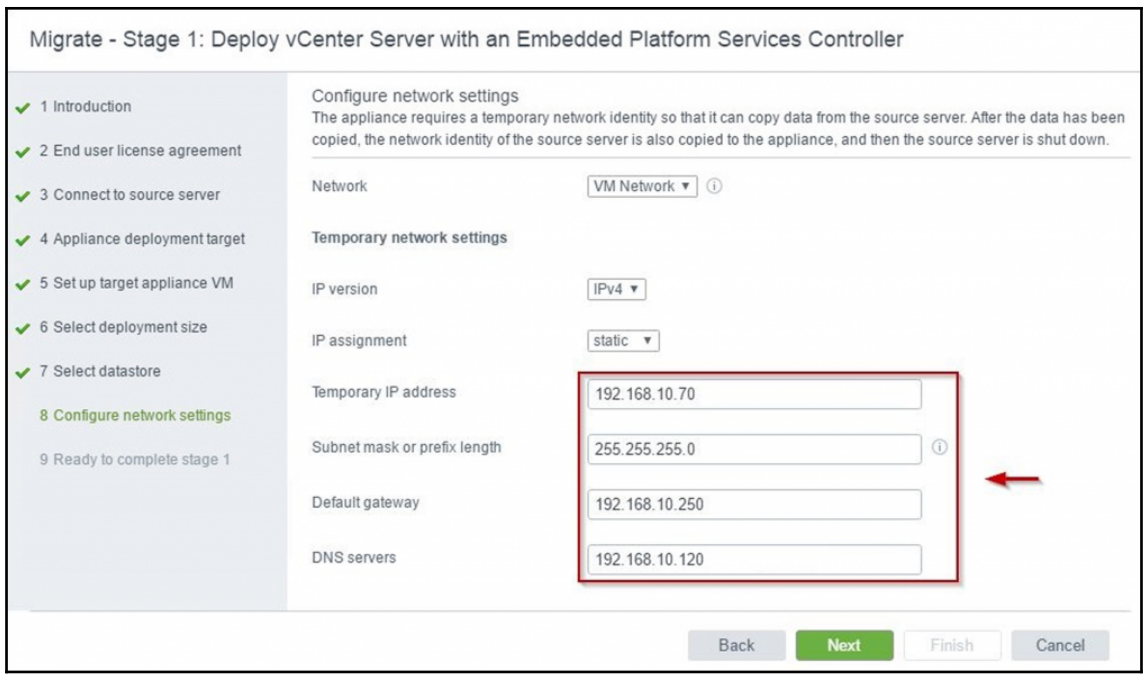

vCenter Server Appliance Installer
Installer
vCenter Server Appliance 6.5 Installer
English
Install
Install a new vCenter Server Appliance or Platform Services Controller Appliance
Upgrade
Upgrade an existing vCenter Server Appliance
Migrate
Migrate from an existing vCenter Server for Windows to a vCenter Server Appliance
Restore
Restore from a previously created vCenter Server Appliance backup

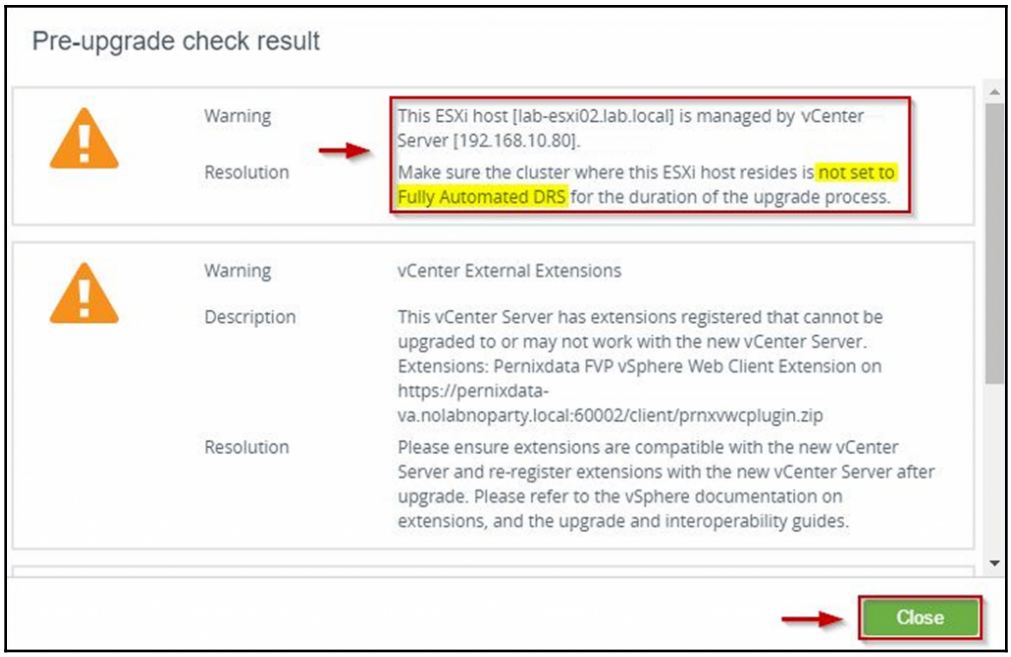

Application Tools
migration-assistant
File
Home
Share
View
Manage
This PC
DVD Drive (E:) CDROM
migration-assistant
Search migration-assistant
This PC
Desktop
Documents
Downloads
Music
Pictures
Videos
SYSTEM (C:)
DATA (D:)
DVD Drive (E:) CDROM
Network
Name
Date modified
Type
Size
cis-upgrade-runner.msi 08/7/2017 0:11 Windows Installer ... 101.856 KB
expat.dll 07/7/2017 23:51 Application extens... 161 KB
libeay32.dll 07/7/2017 23:51 Application extens... 2.276 KB
lookup-types.dll 07/7/2017 23:51 Application extens... 305 KB
msvcp120.dll 07/7/2017 23:51 Application extens... 645 KB
msvcr120.dll 07/7/2017 23:51 Application extens... 941 KB
pion.dll 07/7/2017 23:51 Application extens... 908 KB
ssleay32.dll 07/7/2017 23:51 Application extens... 361 KB
ssoclient.dll 07/7/2017 23:51 Application extens... 551 KB
vim-types.dll 07/7/2017 23:51 Application extens... 23.345 KB
vmacore.dll 07/7/2017 23:51 Application extens... 5.568 KB
vmomi.dll 07/7/2017 23:51 Application extens... 2.946 KB
VMware-Migration-Assistant.exe 07/7/2017 23:52 Application 3.094 KB
VMware-python.msi 07/7/2017 23:54 Windows Installer ... 27.088 KB
14 items
1 item selected 3,02 MB

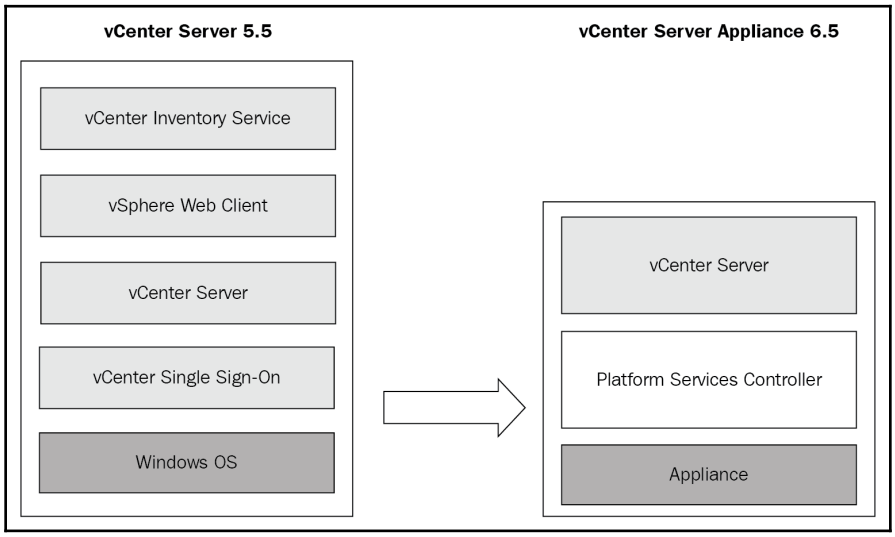

VMware-Migration-Assistant.exe
Initializing Migration Assistant...
Enter lab\vmvcenter password: **********
DO NOT CLOSE this console until the migration is complete.
Extracting Migration Assistant scripts...
Running Prechecks...
Finished running prechecks.
Warning: Files that cannot be used with Update Manager 6.5 will not be copied from the source. These files include VM guest OS patch baselines, h
ost upgrade baselines and files, and ESX 5.1 and lower version host patches baselines.
Resolution: Please review VMware Update Manager 6.5 Documentation for details
Source Configuration:
Deployment type: VMware vSphere Update Manager 6.0
DB type: external
Destination Configuration:
Deployment type: VMware vSphere Update Manager service inside a VMware vCenter Server Appliance 6.5
DB type: embedded
Migration Steps:
1. Upgrade your vCenter Server Appliance at vcsa60.nolabnoparty.local using the vCenter Server Appliance UI Installer.
DO NOT CLOSE this console until the migration is complete.
Waiting for migration to start...

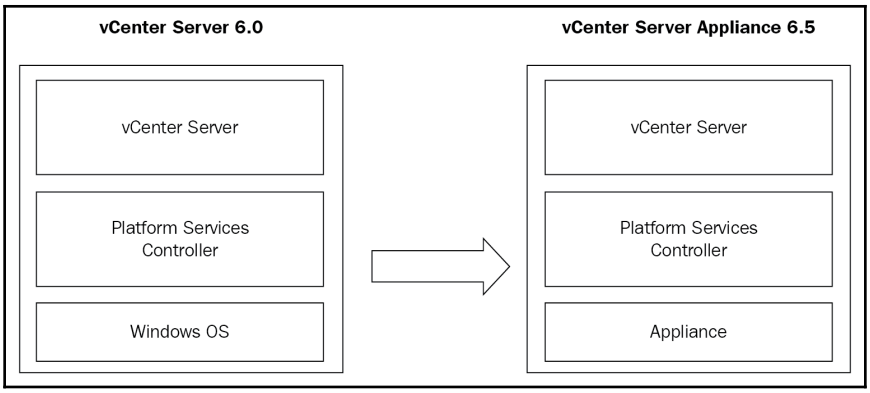

vCenter Server Appliance Installer
Installer
vCenter Server Appliance 6.5 Installer
English
Install
Install a new vCenter Server Appliance or Platform Services Controller Appliance
Upgrade
Upgrade an existing vCenter Server Appliance
Migrate
Migrate from an existing vCenter Server for Windows to a vCenter Server Appliance
Restore
Restore from a previously created vCenter Server Appliance backup

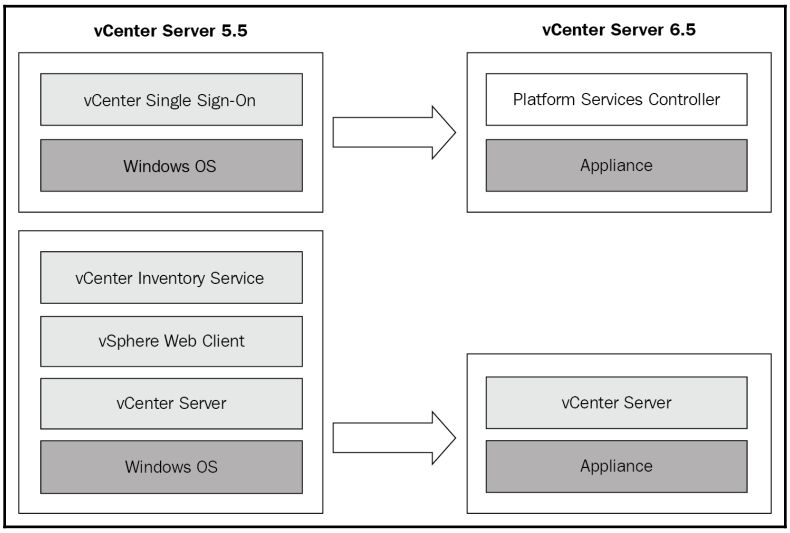

Migrate - Stage 1: Deploy appliance
1 Introduction
2 End user license agreement
3 Connect to source server
4 Appliance deployment target
5 Set up target appliance VM
6 Select deployment size
7 Select datastore
8 Configure network settings
9 Ready to complete stage 1
Unable to connect to the migration assistant.
Installer log
the Migration Assistant is running on the source. The Migration Assistant executable is included in the vCenter Server Appliance ISO image.
Source Windows server
vcenter55.lab.local
Migration assistant port
9123
SSO User name
administrator@vsphere.local
SSO Password
Do not run this installer from the source Windows Server. The source will be shutdown during the migration process and you will lose connectivity with this installer.
Back
Next
Finish
Cancel

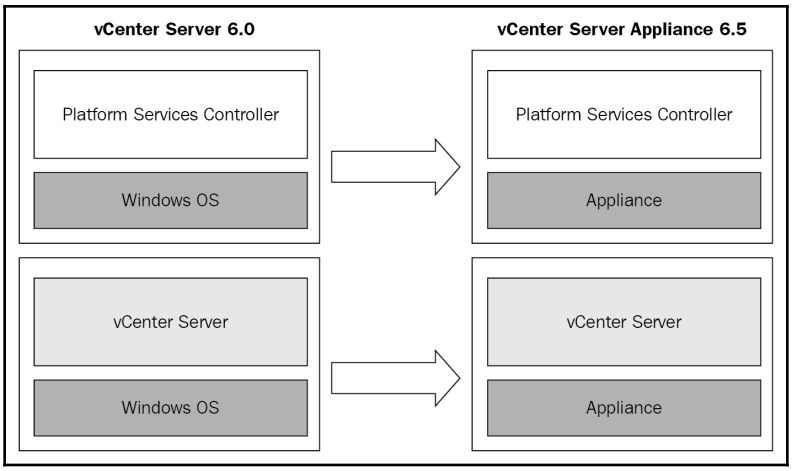

Migrate - Stage 1: Deploy vCenter Server with an Embedded Platform Services Controller
1 Introduction
2 End user license agreement
3 Connect to source server
4 Appliance deployment target
5 Set up target appliance VM
6 Select deployment size
7 Select datastore
8 Configure network settings
9 Ready to complete stage 1
Configure network settings
The appliance requires a temporary network identity so that it can copy data from the source server. After the data has been copied, the network identity of the source server is also copied to the appliance, and then the source server is shut down.
Network
VM Network
Temporary network settings
IP version
IPv4
IP assignment
static
Temporary IP address
192.168.10.70
Subnet mask or prefix length
255.255.255.0
Default gateway
192.168.10.250
DNS servers
192.168.10.120
Back
Next
Finish
Cancel


Pre-upgrade check result
Warning
This ESXi host [lab-esxi02.lab.local] is managed by vCenter Server [192.168.10.80].
Resolution
Make sure the cluster where this ESXi host resides is not set to Fully Automated DRS for the duration of the upgrade process.
Warning
vCenter External Extensions
Description
This vCenter Server has extensions registered that cannot be upgraded to or may not work with the new vCenter Server. Extensions: Pernixdata FVP vSphere Web Client Extension on https://pernixdata-va.nolabnoparty.local:60002/client/prnxvwcplugin.zip
Resolution
Please ensure extensions are compatible with the new vCenter Server and re-register extensions with the new vCenter Server after upgrade. Please refer to the vSphere documentation on extensions, and the upgrade and interoperability guides.
Close

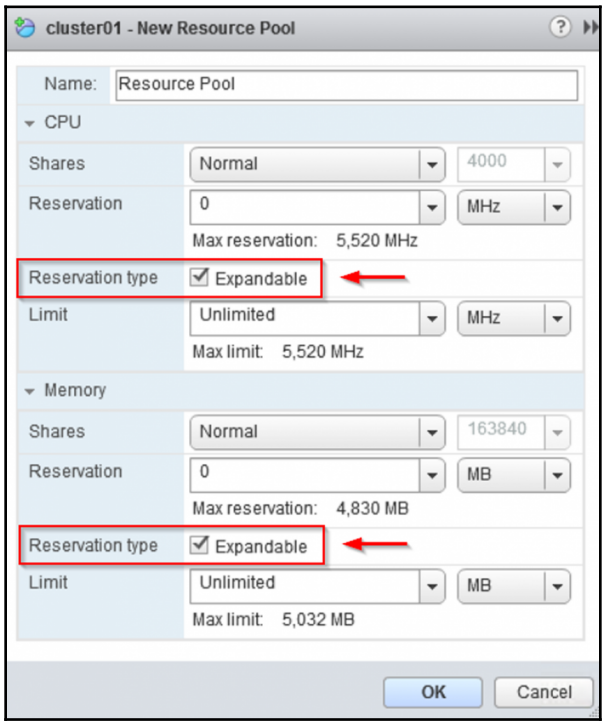

vCenter Server 5.5
vCenter Server Appliance 6.5
vCenter Inventory Service
vSphere Web Client
vCenter Server
vCenter Single Sign-On
Windows OS
vCenter Server
Platform Services Controller
Appliance

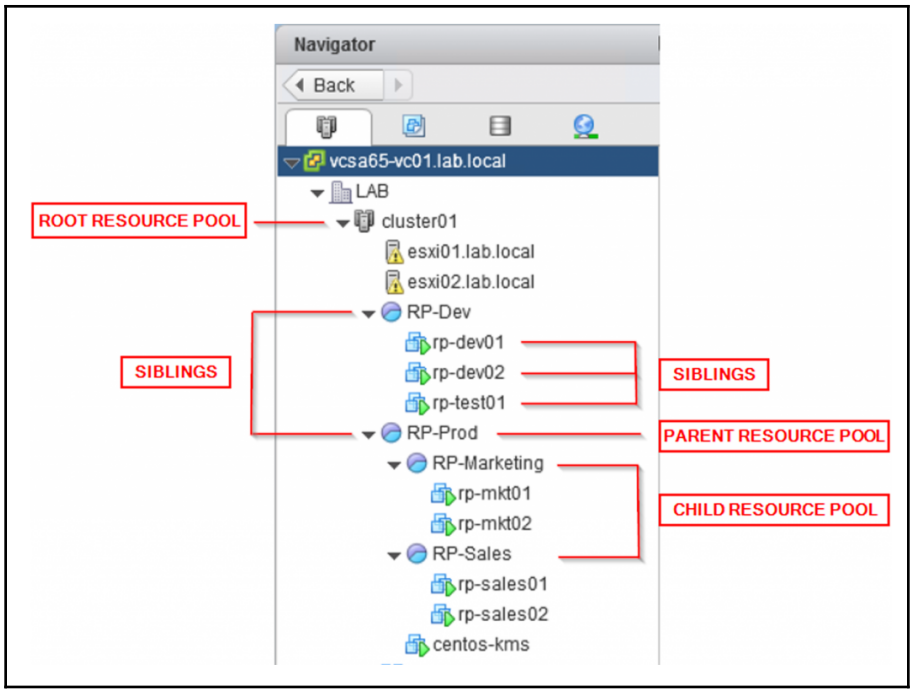

vCenter Server 6.0
vCenter Server
Platform Services Controller
Windows OS
vCenter Server Appliance 6.5
vCenter Server
Platform Services Controller
Appliance

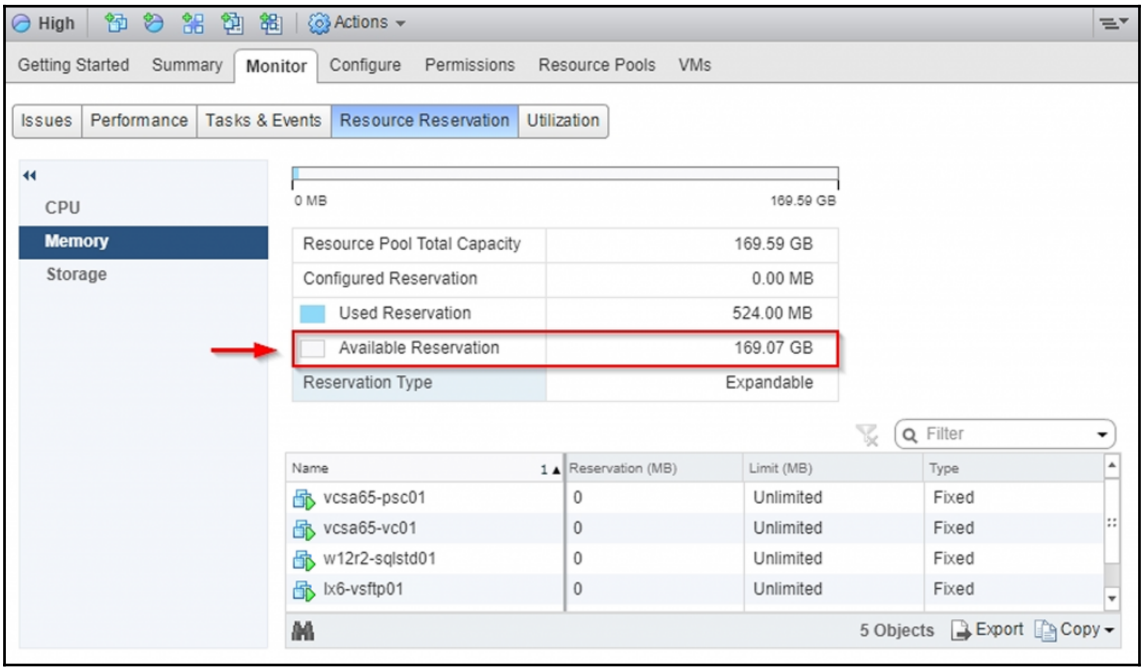

vCenter Server 5.5
vCenter Single Sign-On
Windows OS
vCenter Inventory Service
vSphere Web Client
vCenter Server
Windows OS
vCenter Server 6.5
Platform Services Controller
Appliance
vCenter Server
Appliance

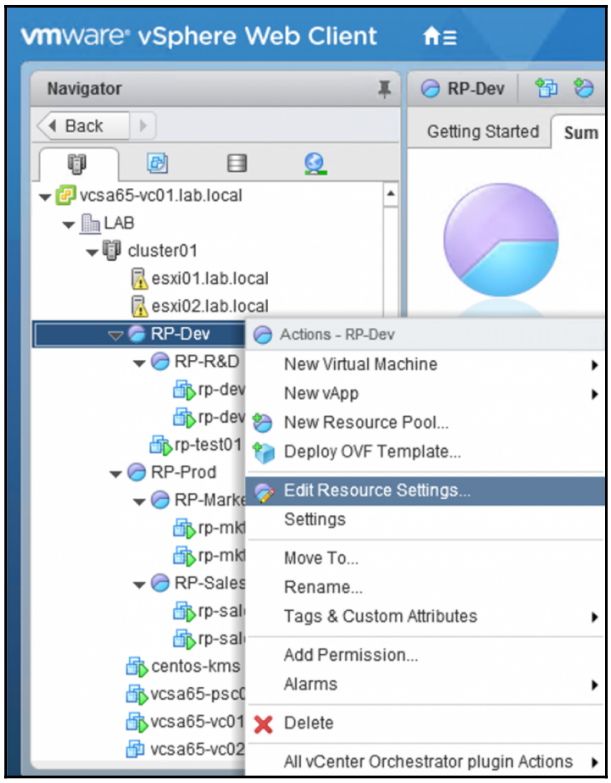

vCenter Server 6.0
vCenter Server Appliance 6.5
Platform Services Controller
Windows OS
Platform Services Controller
Appliance
vCenter Server
Windows OS
vCenter Server
Appliance

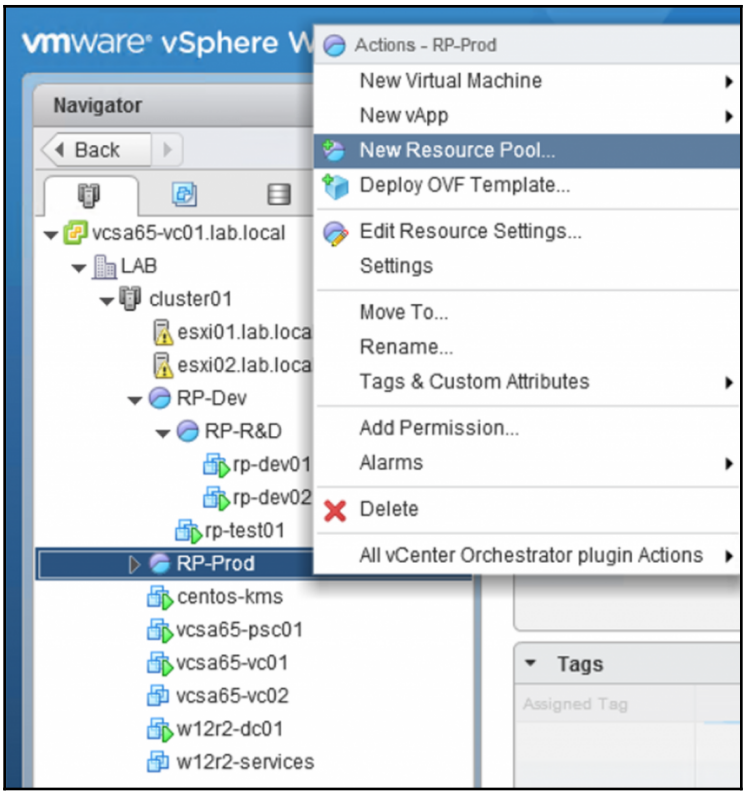
Chapter 05: Administer and Manage vSphere 6.x Resources

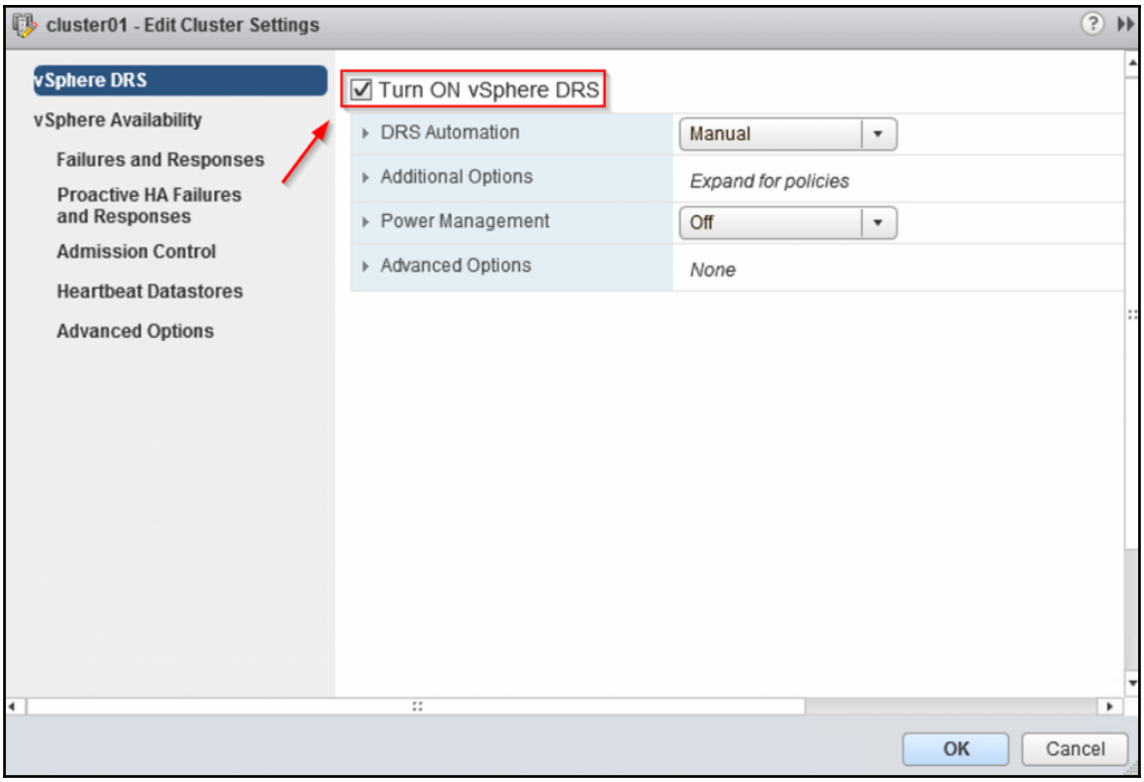


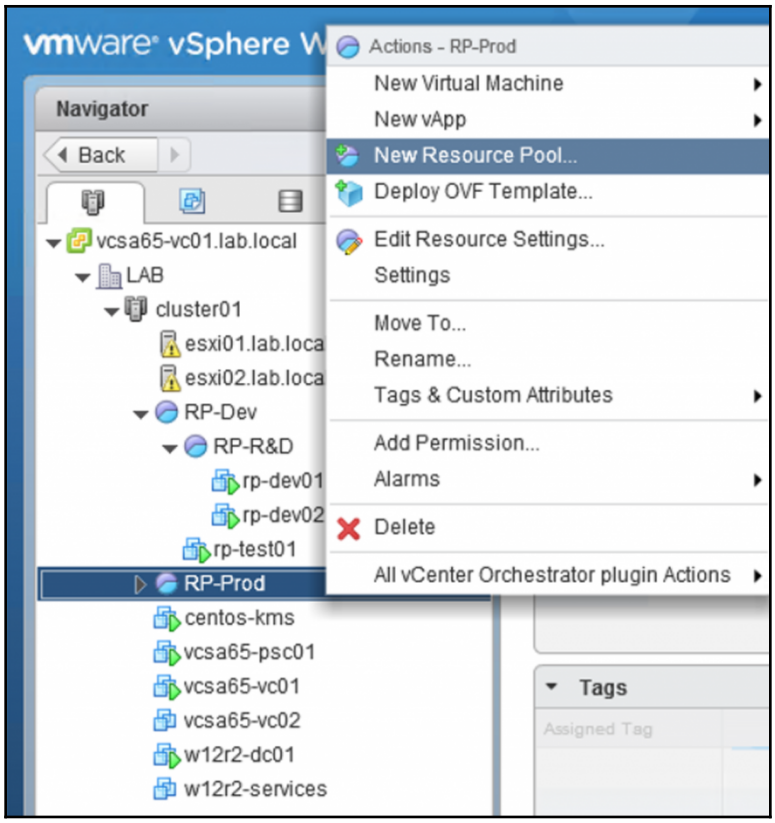

Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
rp-dev01
rp-dev02
rp-test01
RP-Prod
RP-Marketing
rp-mkt01
rp-mkt02
RP-Sales
rp-sales01
rp-sales02
centos-kms
ROOT RESOURCE POOL
SIBLINGS
SIBLINGS
PARENT RESOURCE POOL
CHILD RESOURCE POOL

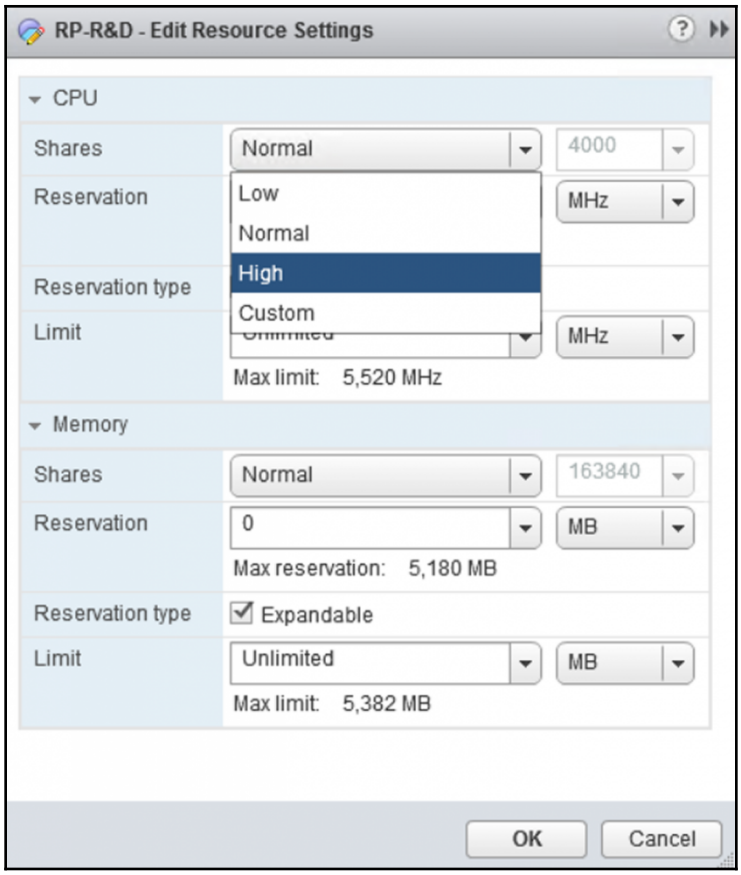

High
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Resource Pools
VMs
Issues
Performance
Tasks & Events
Resource Reservation
Utilization
CPU
Memory
Storage
0 MB
169.59 GB
Resource Pool Total Capacity 169.59 GB
Configured Reservation 0.00 MB
Used Reservation 524.00 MB
Available Reservation 169.07 GB
Reservation Type Expandable
Filter
Name
Reservation (MB)
Limit (MB)
Type
vcsa65-psc01 0 Unlimited Fixed
vcsa65-vc01 0 Unlimited Fixed
w12r2-sqlstd01 0 Unlimited Fixed
lx6-vsftp01 0 Unlimited Fixed
5 Objects
Export
Copy

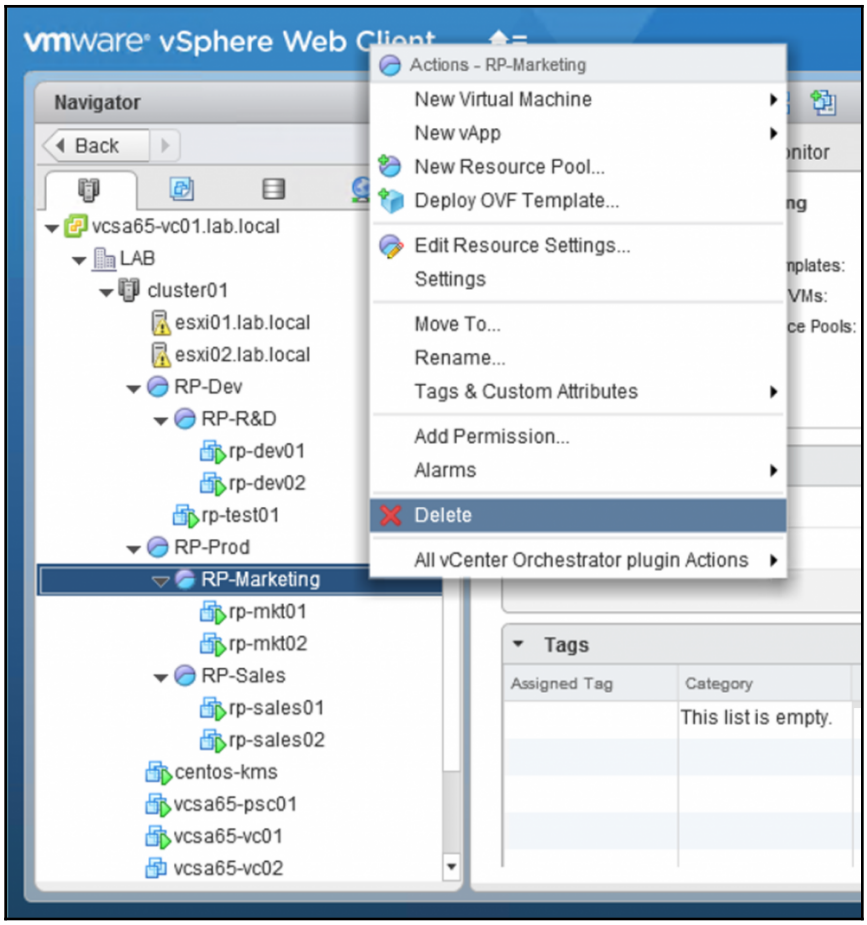

vmware vSphere Web Client
Navigator
Back
RP-Dev
Getting Started
Sum
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-R&D
rp-dev
rp-dev
rp-test01
RP-Prod
RP-Marke
rp-mk
rp-mk
RP-Sales
rp-sal
rp-sal
centos-kms
vcsa65-psc0
vcsa65-vc01
vcsa65-vc02
Actions - RP-Dev
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Edit Resource Settings...
Settings
Move To...
Rename...
Tags & Custom Attributes
Add Permission...
Alarms
Delete
All vCenter Orchestrator plugin Actions

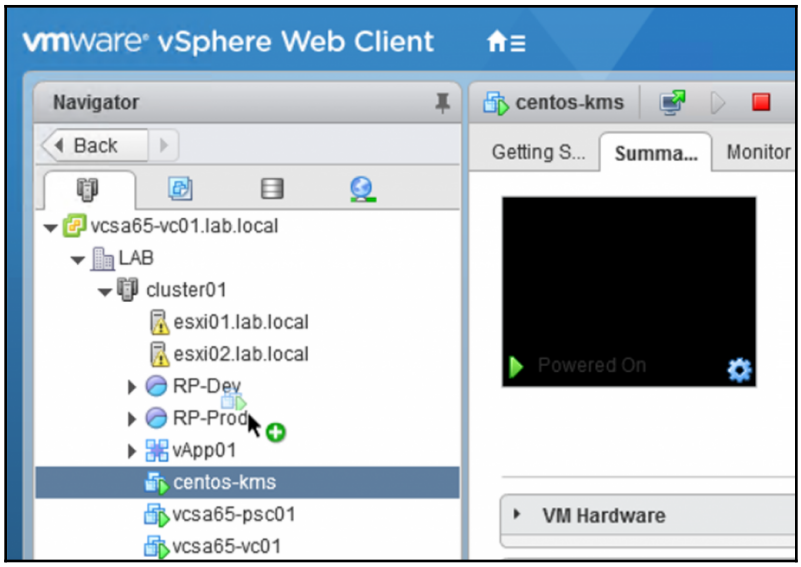

vmware vSphere W
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.loca
esxi02.lab.loca
RP-Dev
RP-R&D
rp-dev01
rp-dev02
rp-test01
RP-Prod
centos-kms
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
Actions - RP-Prod
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Edit Resource Settings...
Settings
Move To...
Rename...
Tags & Custom Attributes
Add Permission...
Alarms
Delete
All vCenter Orchestrator plugin Actions
Tags
Assigned Tag

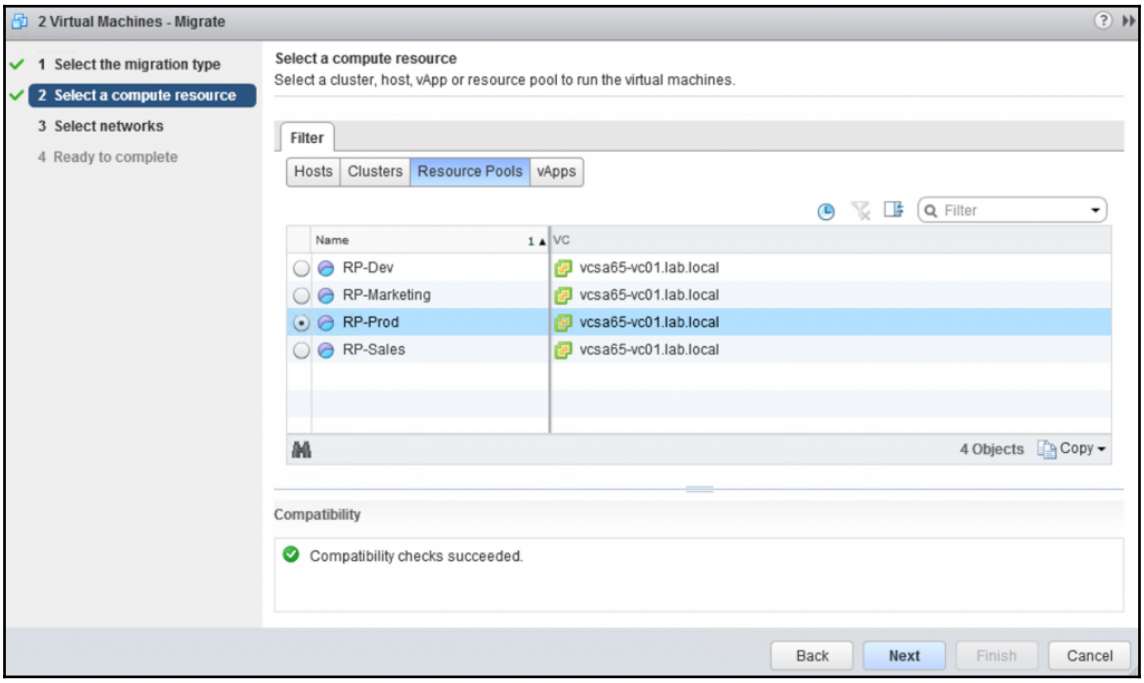

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Turn ON vSphere DRS
DRS Automation
Manual
Additional Options
Expand for policies
Power Management
Off
Advanced Options
None
OK
Cancel

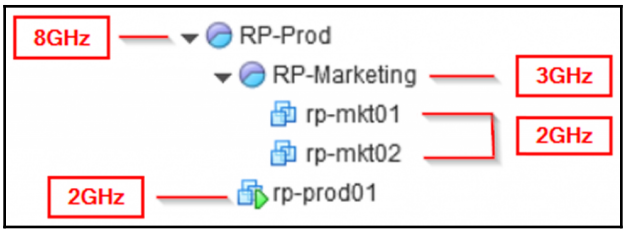

vmware vSphere W
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.loca
esxi02.lab.loca
RP-Dev
RP-R&D
rp-dev01
rp-dev02
rp-test01
RP-Prod
centos-kms
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
Actions - RP-Prod
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Edit Resource Settings...
Settings
Move To...
Rename...
Tags & Custom Attributes
Add Permission...
Alarms
Delete
All vCenter Orchestrator plugin Actions
Tags
Assigned Tag

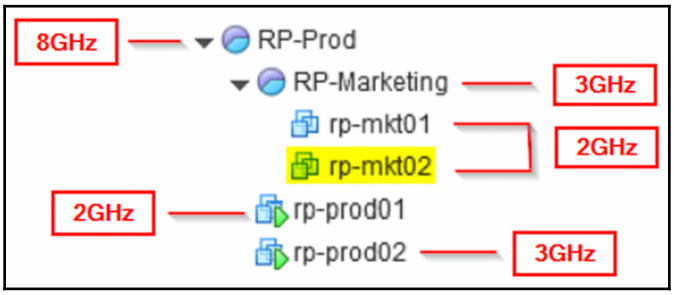

RP-R&D - Edit Resource Settings
CPU
Shares
Normal
4000
Reservation
Low
Normal
High
Custom
MHz
Reservation type
Limit
MHz
Max limit: 5,520 MHz
Memory
Shares
Normal
163840
Reservation
0
MB
Max reservation: 5,180 MB
Reservation type
Expandable
Limit
Unlimited
MB
Max limit: 5,382 MB
OK
Cancel

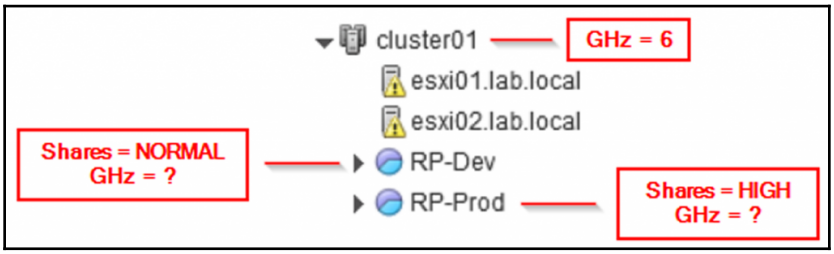

vmware vSphere Web Client
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-R&D
rp-dev01
rp-dev02
rp-test01
RP-Prod
RP-Marketing
rp-mkt01
rp-mkt02
RP-Sales
rp-sales01
rp-sales02
centos-kms
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
Actions - RP-Marketing
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Edit Resource Settings...
Settings
Move To...
Rename...
Tags & Custom Attributes
Add Permission...
Alarms
Delete
All vCenter Orchestrator plugin Actions
Tags
Assigned Tag
Category
This list is empty.

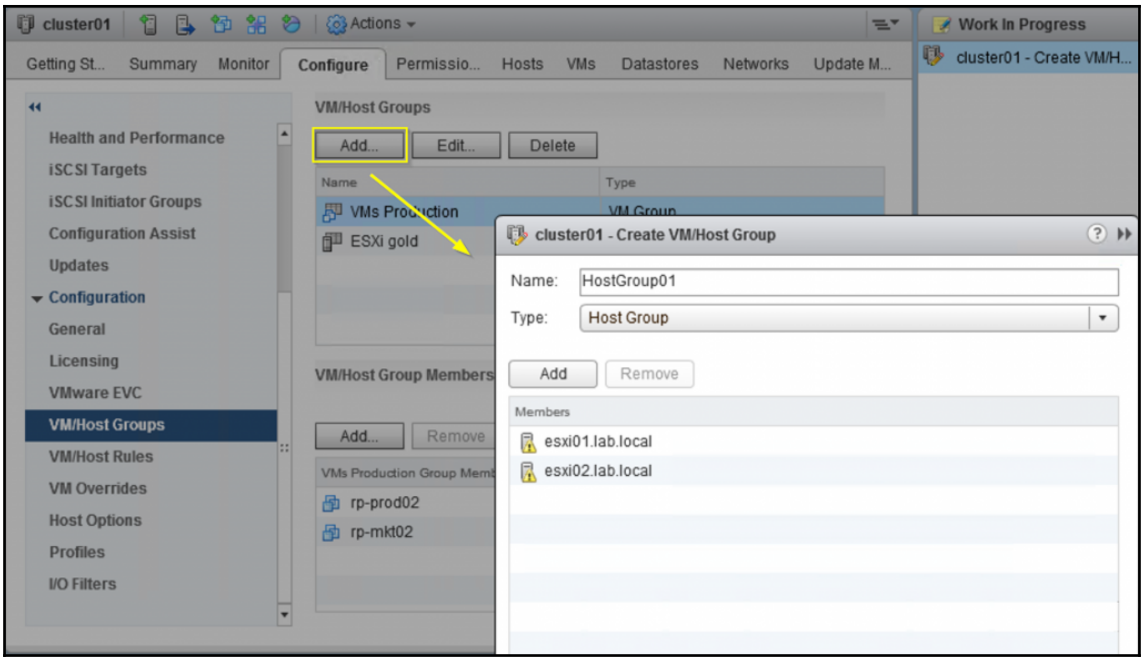

vmware vSphere Web Client
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
vApp01
centos-kms
vcsa65-psc01
vcsa65-vc01
centos-kms
Getting S...
Summa...
Monitor
Powered On
VM Hardware

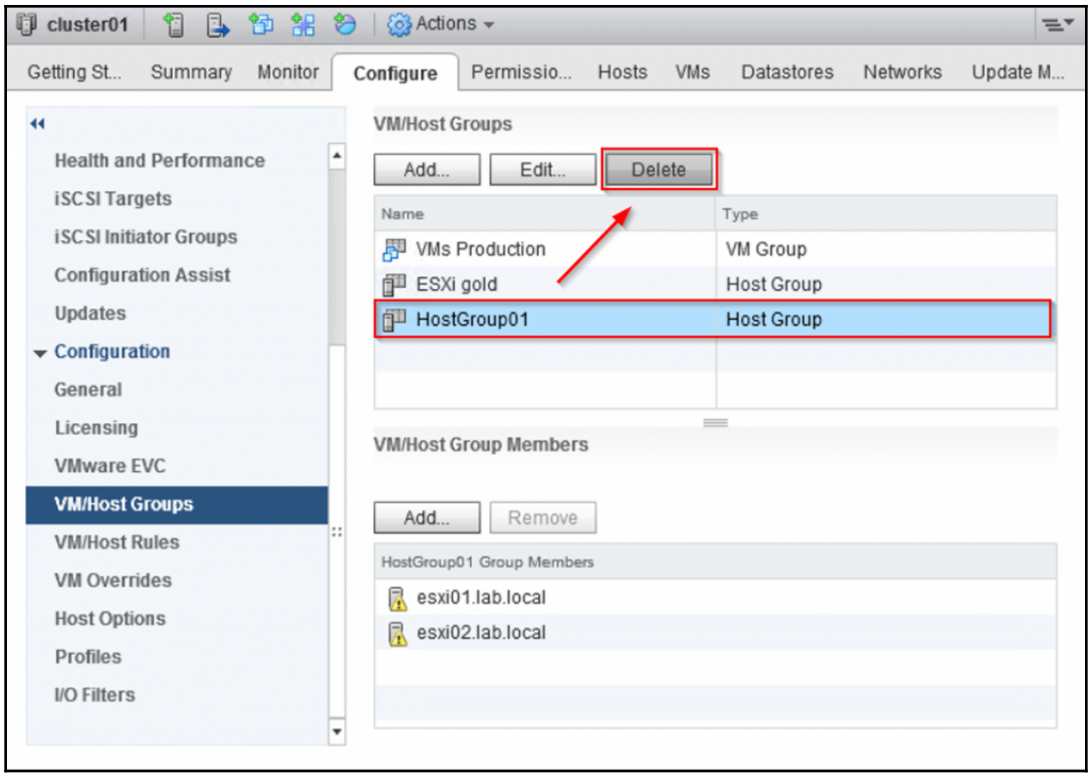

2 Virtual Machines - Migrate
1 Select the migration type
2 Select a compute resource
3 Select networks
4 Ready to complete
Select a compute resource
Select a cluster, host, vApp or resource pool to run the virtual machines.
Filter
Hosts
Clusters
Resource Pools
vApps
Filter
Name
VC
RP-Dev
vcsa65-vc01.lab.local
RP-Marketing
vcsa65-vc01.lab.local
RP-Prod
vcsa65-vc01.lab.local
RP-Sales
vcsa65-vc01.lab.local
4 Objects
Copy
Compatibility
Compatibility checks succeeded.
Back
Next
Finish
Cancel

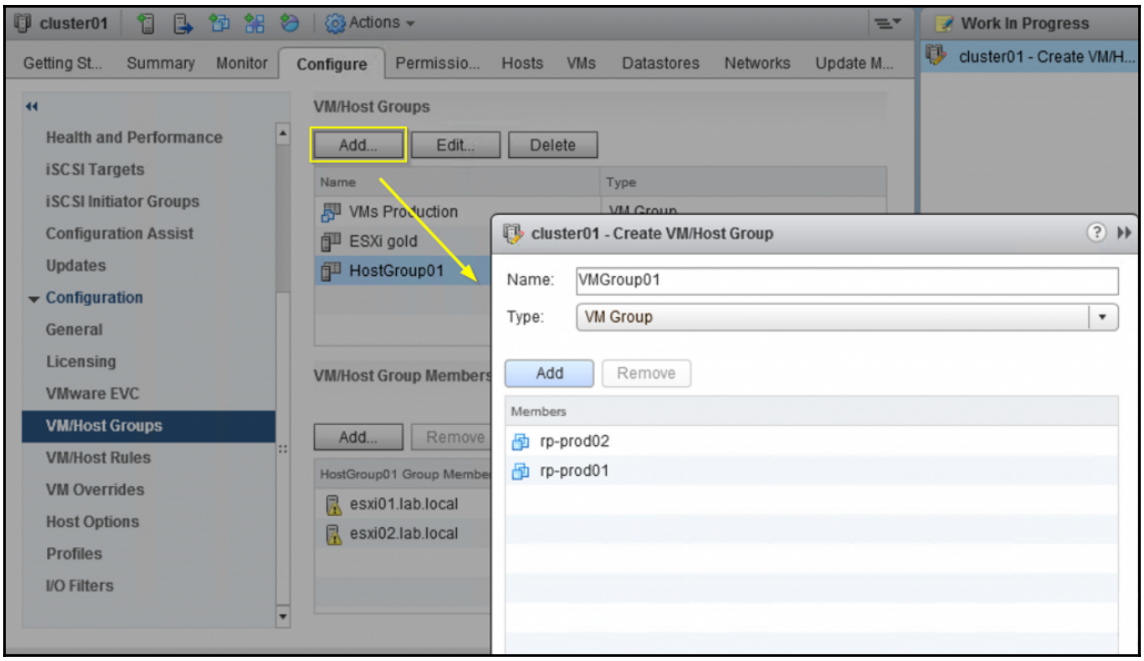

8GHz
RP-Prod
RP-Marketing
3GHz
rp-mkt01
2GHz
rp-mkt02
2GHz
rp-prod01

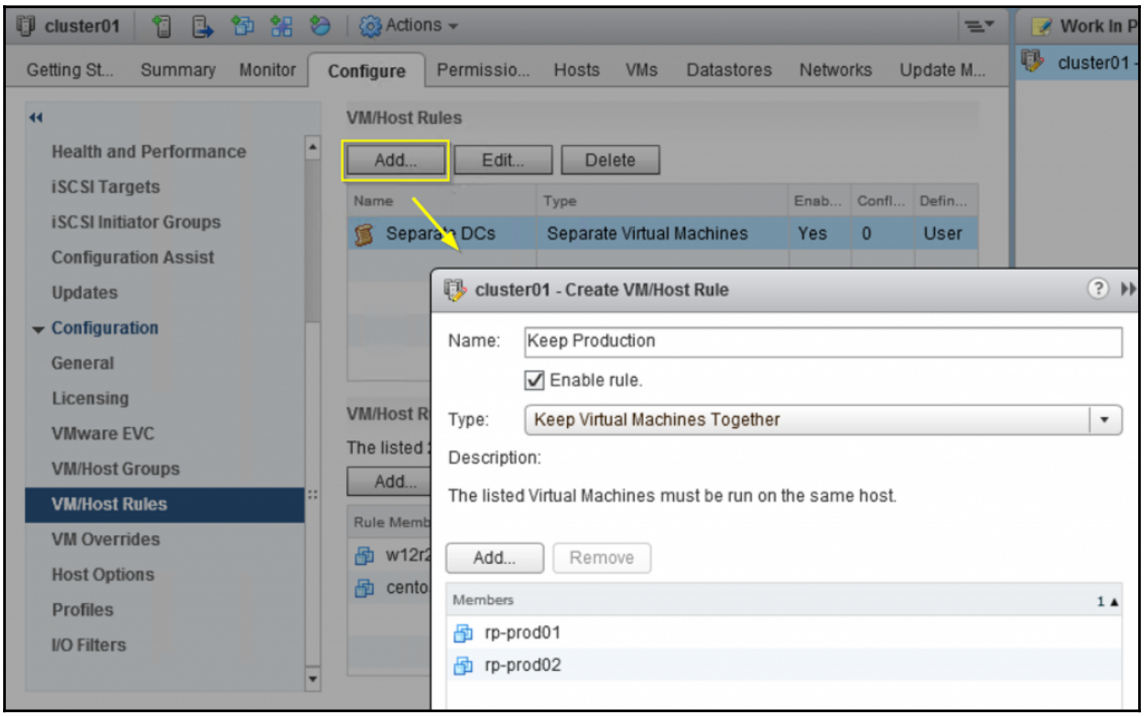

8GHz
RP-Prod
RP-Marketing
3GHz
rp-mkt01
2GHz
rp-mkt02
2GHz
rp-prod01
rp-prod02
3GHz

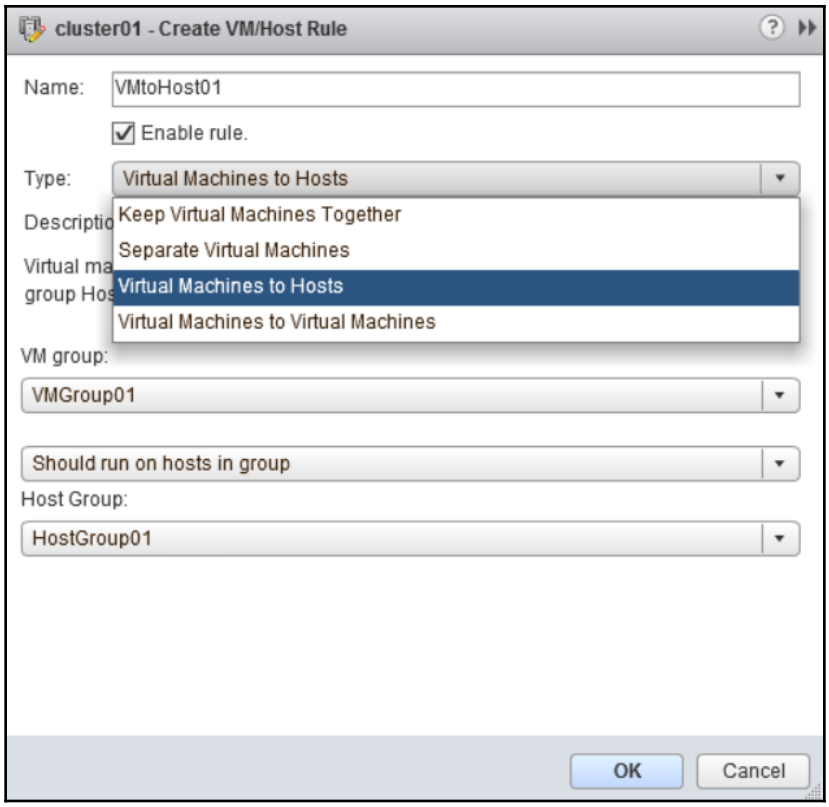

cluster01
GHz = 6
esxi01.lab.local
esxi02.lab.local
Shares = NORMAL
GHz = ?
RP-Dev
RP-Prod
Shares = HIGH
GHz = ?

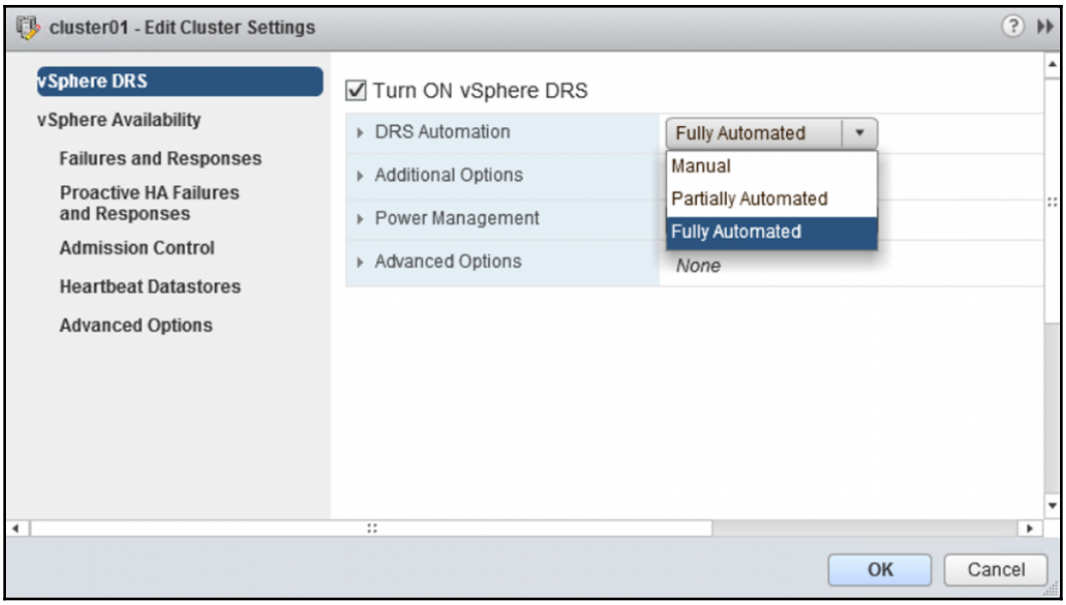

cluster01
Actions
Work In Progress
cluster01 - Create VM/H...
Getting St...
Summary
Monitor
Configure
Permissio...
Hosts
VMs
Datastores
Networks
Update M...
Health and Performance
iSCSI Targets
iSCSI Initiator Groups
Configuration Assist
Updates
Configuration
General
Licensing
VMware EVC
VM/Host Groups
VM/Host Rules
VM Overrides
Host Options
Profiles
I/O Filters
VM/Host Groups
Add...
Edit...
Delete
Name
Type
VMs Production
VM Group
ESXi gold
VM/Host Group Members
Add...
Remove
rp-prod02
rp-mkt02
cluster01 - Create VM/Host Group
Name:
HostGroup01
Type:
Host Group
Add
Remove
Members
esxi01.lab.local
esxi02.lab.local

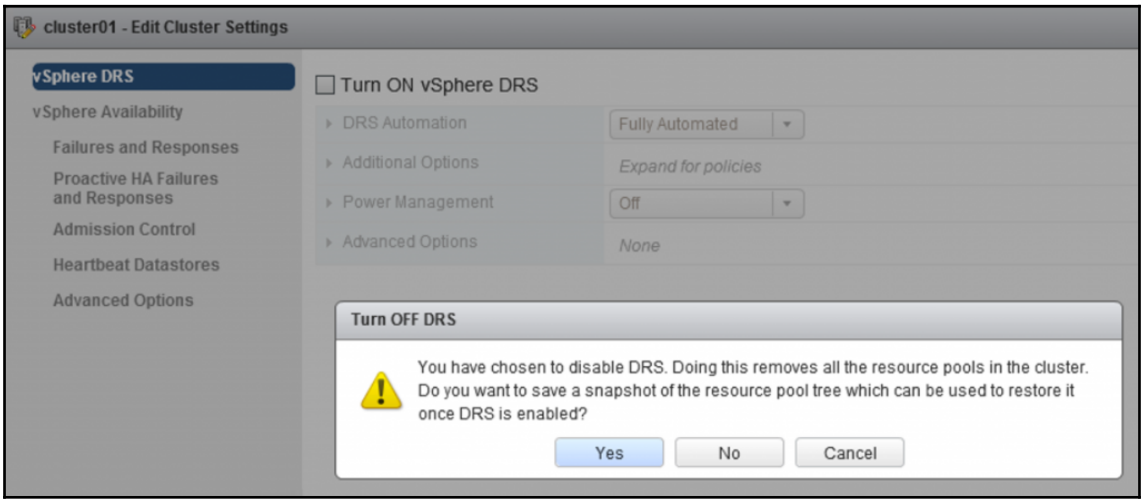

cluster01
Actions
Getting St...
Summary
Monitor
Configure
Permissio...
Hosts
VMs
Datastores
Networks
Update M...
Health and Performance
iSCSI Targets
iSCSI Initiator Groups
Configuration Assist
Updates
Configuration
General
Licensing
VMware EVC
VM/Host Groups
VM/Host Rules
VM Overrides
Host Options
Profiles
I/O Filters
VM/Host Groups
Add...
Edit...
Delete
Name
Type
VMs Production
VM Group
ESXi gold
Host Group
HostGroup01
Host Group
VM/Host Group Members
Add...
Remove
HostGroup01 Group Members
esxi01.lab.local
esxi02.lab.local

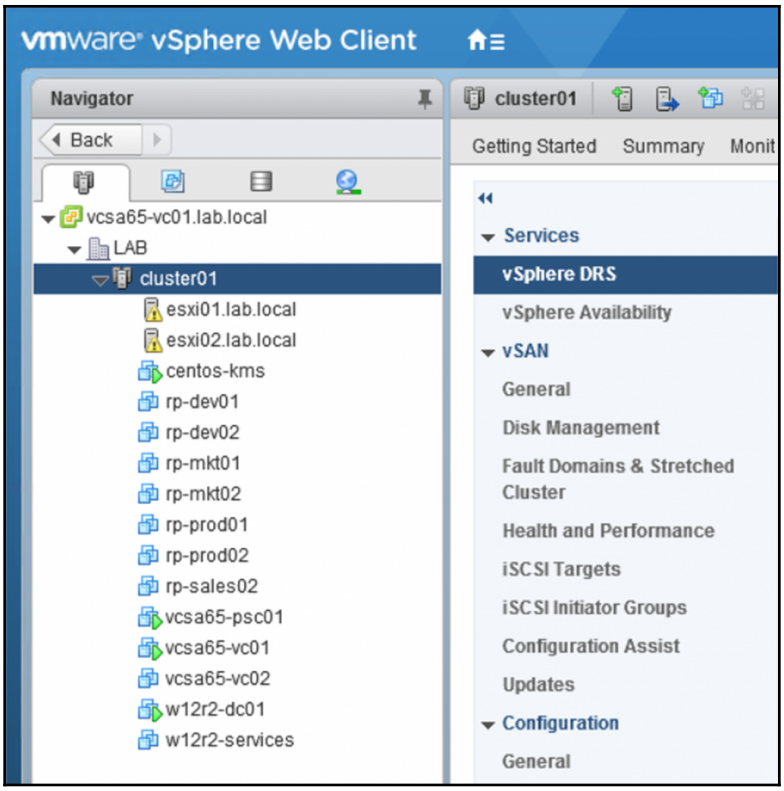

cluster01
Actions
Work In Progress
cluster01 - Create VM/H...
Getting St...
Summary
Monitor
Configure
Permissio...
Hosts
VMs
Datastores
Networks
Update M...
Health and Performance
iSCSI Targets
iSCSI Initiator Groups
Configuration Assist
Updates
Configuration
General
Licensing
VMware EVC
VM/Host Groups
VM/Host Rules
VM Overrides
Host Options
Profiles
I/O Filters
VM/Host Groups
Add...
Edit...
Delete
Name
Type
VMs Production
ESXi gold
HostGroup01
VM/Host Group Members
Add...
Remove
esxi01.lab.local
esxi02.lab.local
cluster01 - Create VM/Host Group
Name:
VMGroup01
Type:
VM Group
Add
Remove
Members
rp-prod02
rp-prod01

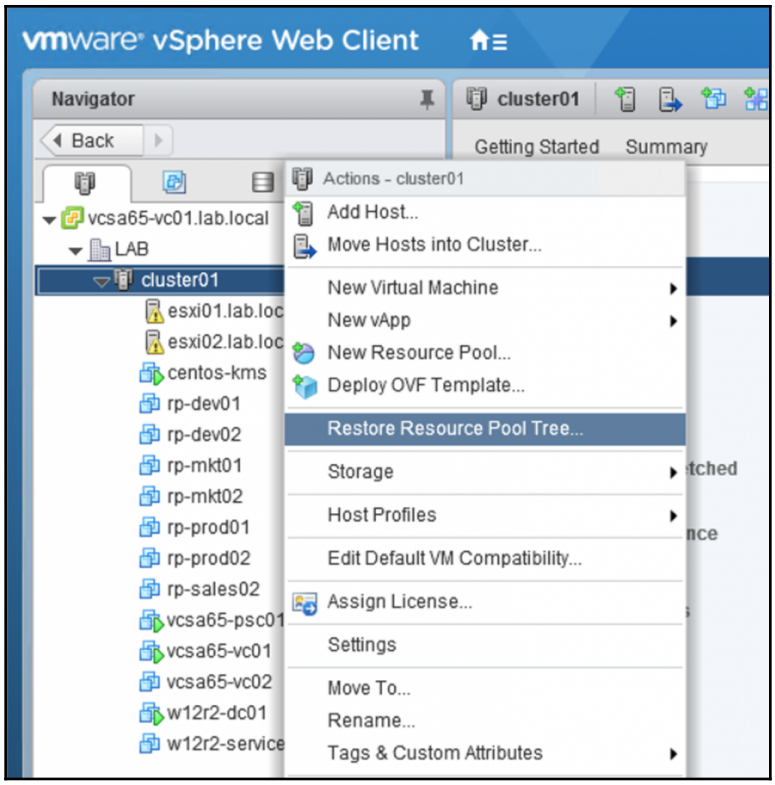

cluster01
Actions
Work In P
cluster01 -
Getting St...
Summary
Monitor
Configure
Permissio...
Hosts
VMs
Datastores
Networks
Update M...
Health and Performance
iSCSI Targets
iSCSI Initiator Groups
Configuration Assist
Updates
Configuration
General
Licensing
VMware EVC
VM/Host Groups
VM/Host Rules
VM Overrides
Host Options
Profiles
I/O Filters
VM/Host Rules
Add...
Edit...
Delete
Name
Type
Enab...
Confl...
Defin...
Separate Virtual Machines
Yes
0
User
cluster01 - Create VM/Host Rule
Name:
Keep Production
Enable rule.
Type:
Keep Virtual Machines Together
Description:
The listed Virtual Machines must be run on the same host.
Add...
Remove
Members
rp-prod01
rp-prod02

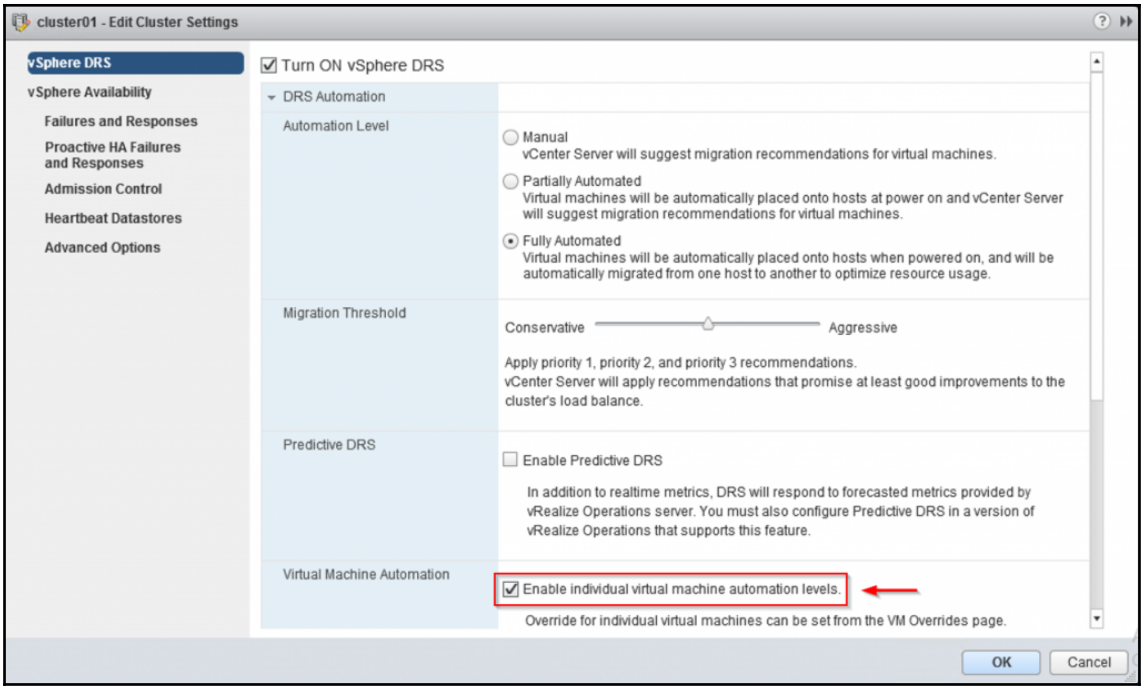

cluster01 - Create VM/Host Rule
Name:
VMtoHost01
Enable rule.
Type:
Virtual Machines to Hosts
Keep Virtual Machines Together
Separate Virtual Machines
Virtual Machines to Hosts
Virtual Machines to Virtual Machines
VM group:
VMGroup01
Should run on hosts in group
Host Group:
HostGroup01
OK
Cancel

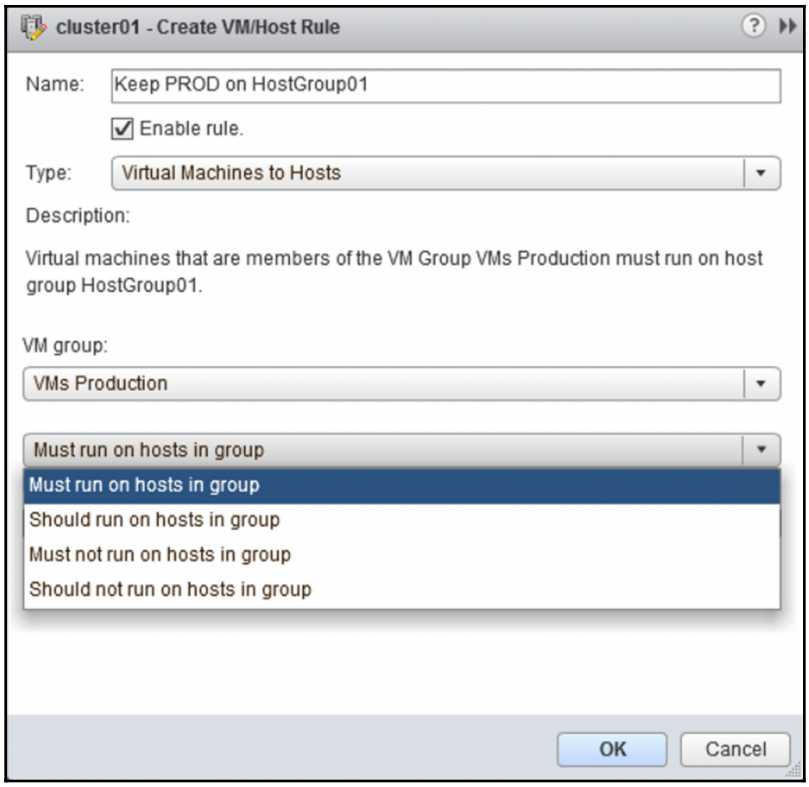

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Turn ON vSphere DRS
DRS Automation
Fully Automated
Manual
Partially Automated
Fully Automated
Additional Options
Power Management
Advanced Options
None
OK
Cancel

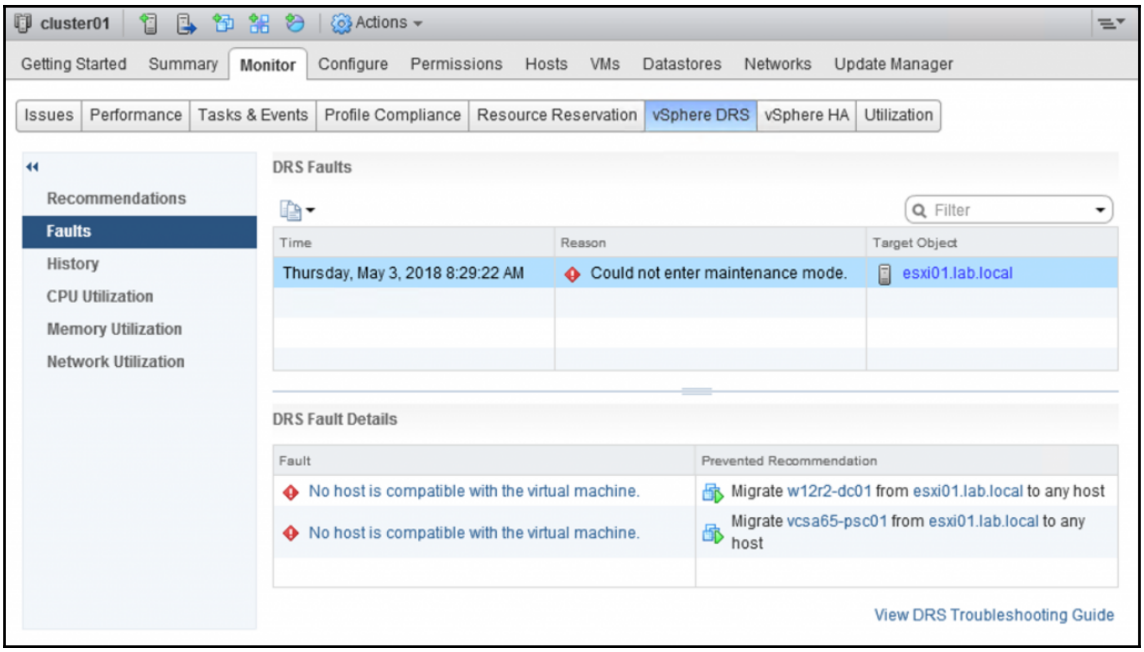

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Turn ON vSphere DRS
DRS Automation
Fully Automated
Additional Options
Expand for policies
Power Management
Off
Advanced Options
None
Turn OFF DRS
You have chosen to disable DRS. Doing this removes all the resource pools in the cluster. Do you want to save a snapshot of the resource pool tree which can be used to restore it once DRS is enabled?
Yes
No
Cancel

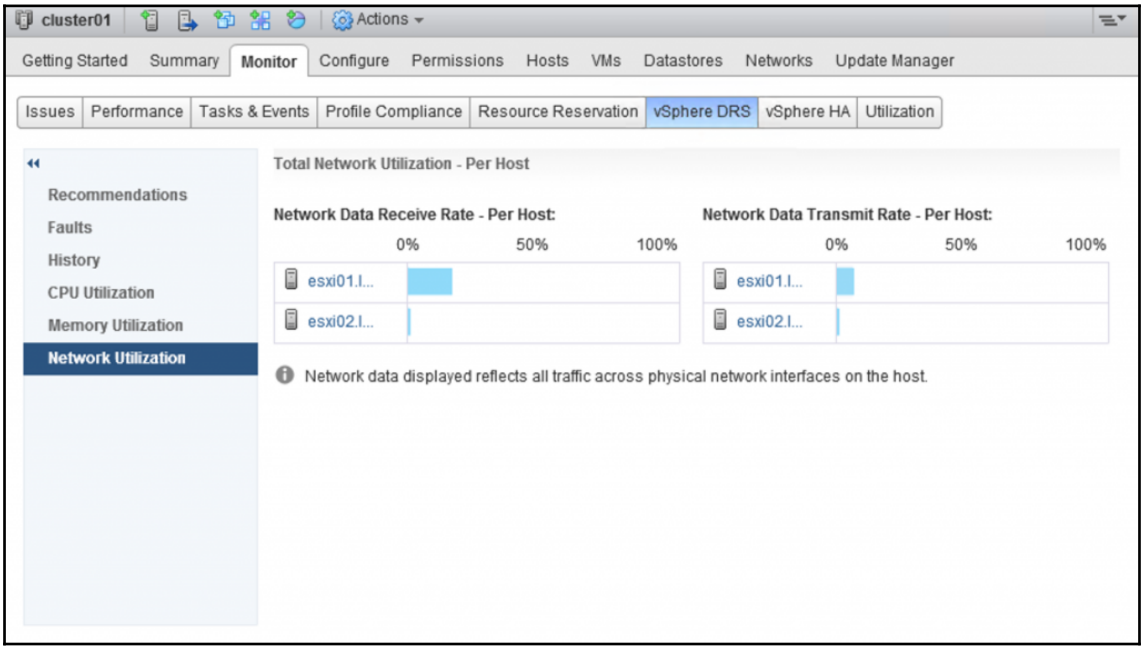

vmware vSphere Web Client
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
centos-kms
rp-dev01
rp-dev02
rp-mkt01
rp-mkt02
rp-prod01
rp-prod02
rp-sales02
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
cluster01
Getting Started
Summary
Monit
Services
vSphere DRS
vSphere Availability
vSAN
General
Disk Management
Fault Domains & Stretched Cluster
Health and Performance
iSCSI Targets
iSCSI Initiator Groups
Configuration Assist
Updates
Configuration
General

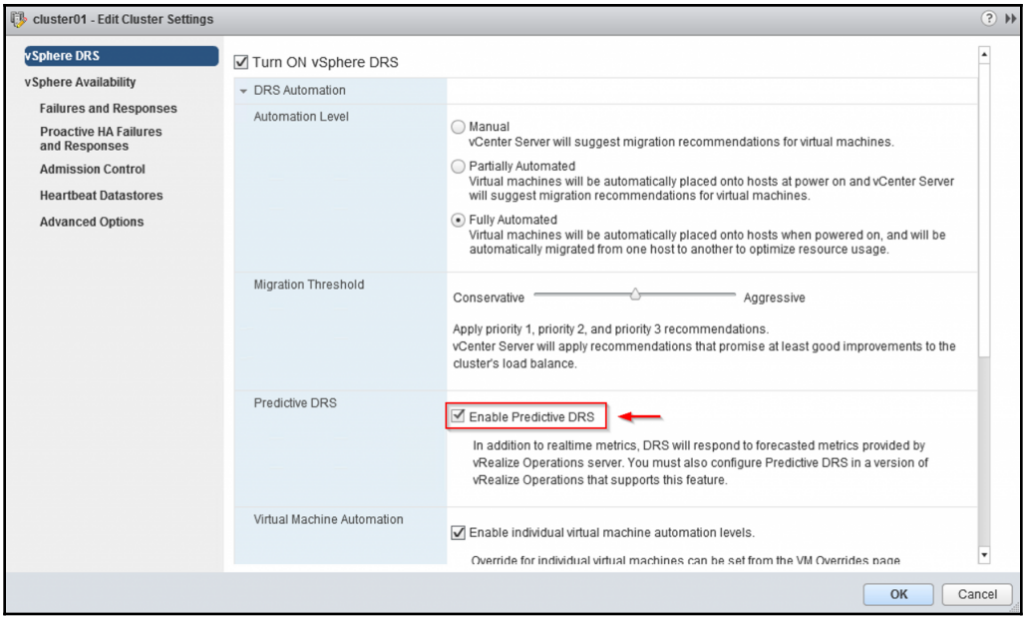

vmware vSphere Web Client
Navigator
Back
cluster01
Getting Started
Summary
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.loc
esxi02.lab.loc
centos-kms
rp-dev01
rp-dev02
rp-mkt01
rp-mkt02
rp-prod01
rp-prod02
rp-sales02
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-service
Actions - cluster01
Add Host...
Move Hosts into Cluster...
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Restore Resource Pool Tree...
Storage
Host Profiles
Edit Default VM Compatibility...
Assign License...
Settings
Move To...
Rename...
Tags & Custom Attributes

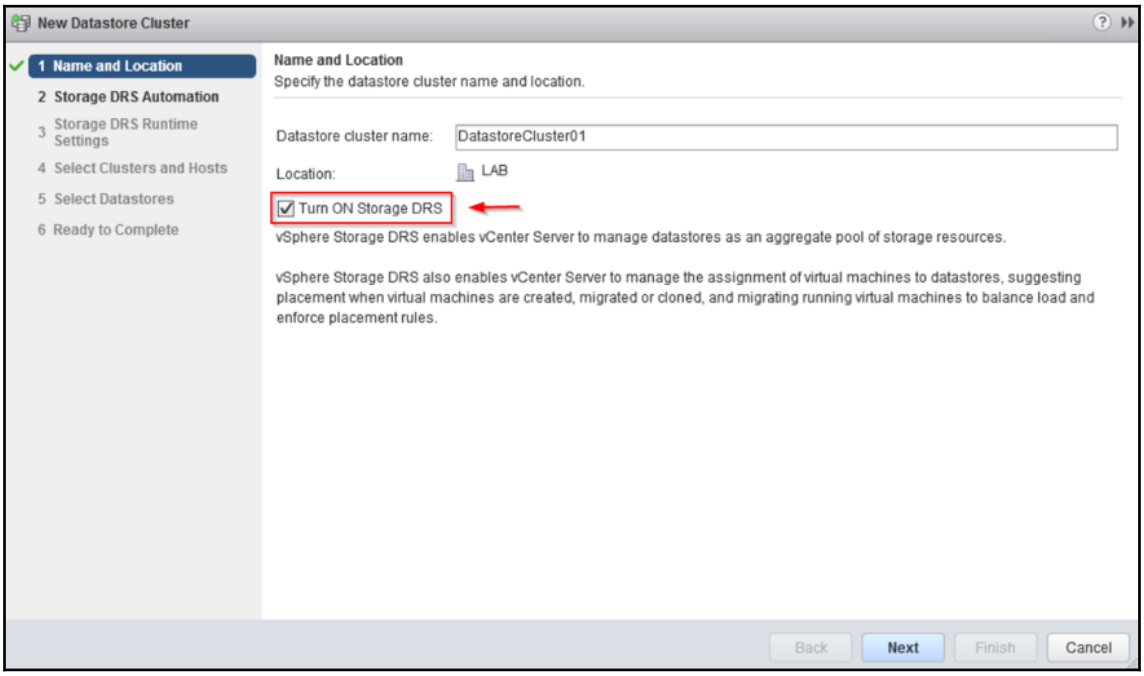

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Turn ON vSphere DRS
DRS Automation
Automation Level
Manual
vCenter Server will suggest migration recommendations for virtual machines.
Partially Automated
Virtual machines will be automatically placed onto hosts at power on and vCenter Server will suggest migration recommendations for virtual machines.
Fully Automated
Virtual machines will be automatically placed onto hosts when powered on, and will be automatically migrated from one host to another to optimize resource usage.
Migration Threshold
Conservative
Aggressive
Apply priority 1, priority 2, and priority 3 recommendations.
vCenter Server will apply recommendations that promise at least good improvements to the cluster's load balance.
Predictive DRS
Enable Predictive DRS
In addition to realtime metrics, DRS will respond to forecasted metrics provided by vRealize Operations server. You must also configure Predictive DRS in a version of vRealize Operations that supports this feature.
Virtual Machine Automation
Enable individual virtual machine automation levels.
Override for individual virtual machines can be set from the VM Overrides page.
OK
Cancel

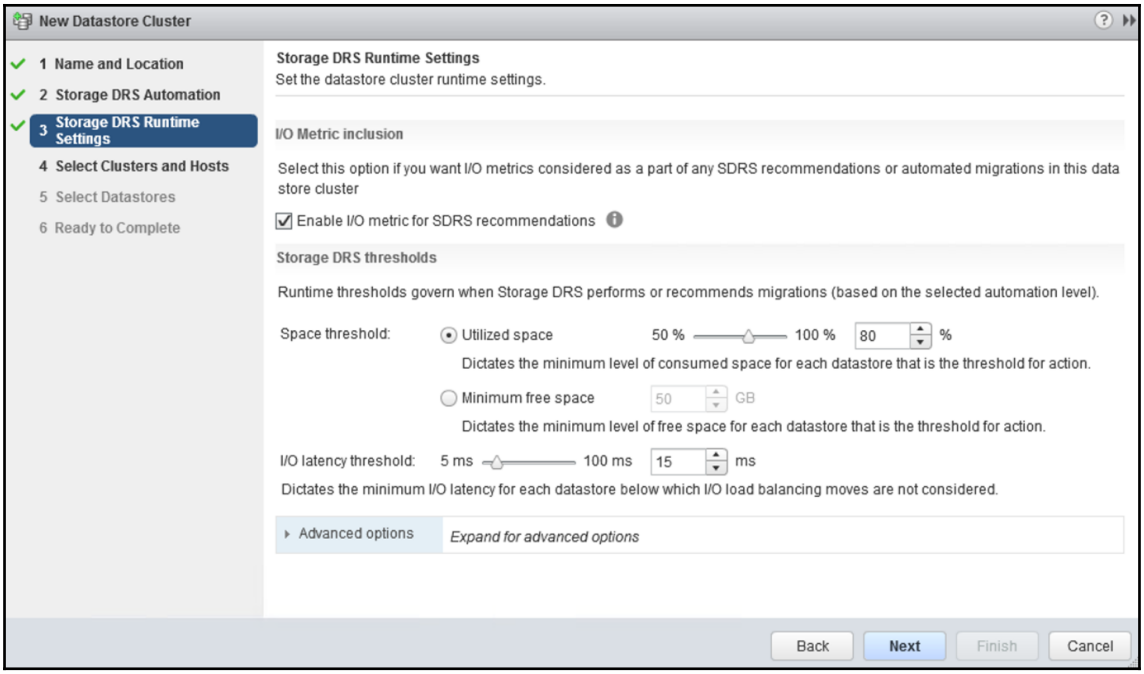

cluster01 - Create VM/Host Rule
Name:
Keep PROD on HostGroup01
Enable rule.
Type:
Virtual Machines to Hosts
Description:
Virtual machines that are members of the VM Group VMs Production must run on host group HostGroup01.
VM group:
VMs Production
Must run on hosts in group
Must run on hosts in group
Should run on hosts in group
Must not run on hosts in group
Should not run on hosts in group
OK
Cancel


cluster01
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Hosts
VMs
Datastores
Networks
Update Manager
Issues
Performance
Tasks & Events
Profile Compliance
Resource Reservation
vSphere DRS
vSphere HA
Utilization
Recommendations
Faults
History
CPU Utilization
Memory Utilization
Network Utilization
DRS Faults
Filter
Time
Reason
Target Object
Thursday, May 3, 2018 8:29:22 AM
Could not enter maintenance mode.
esxi01.lab.local
DRS Fault Details
Fault
Prevented Recommendation
No host is compatible with the virtual machine.
Migrate w12r2-dc01 from esxi01.lab.local to any host
No host is compatible with the virtual machine.
Migrate vcsa65-psc01 from esxi01.lab.local to any host
View DRS Troubleshooting Guide

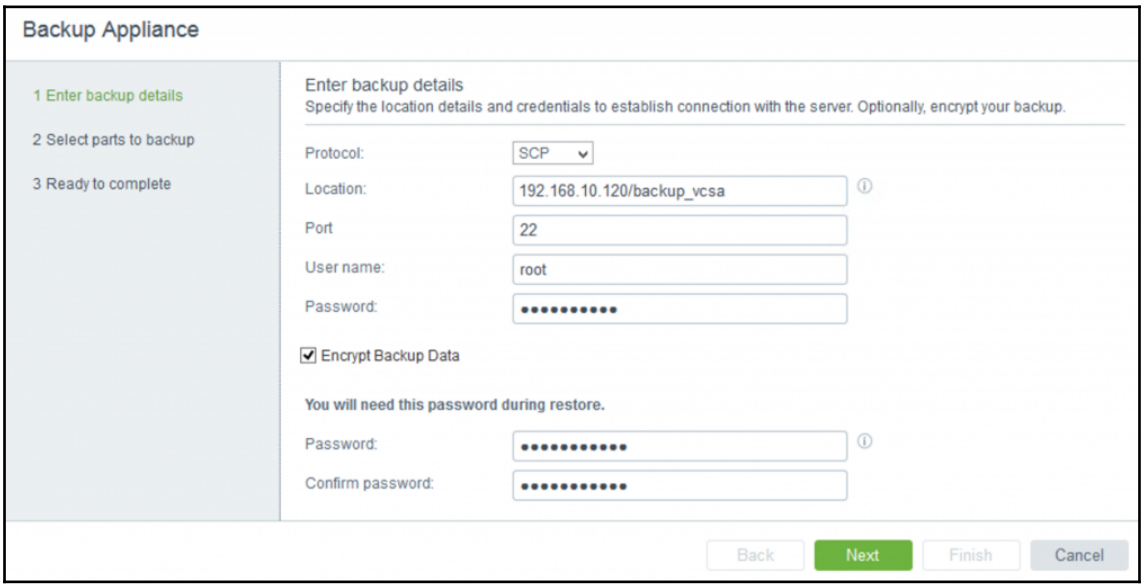

cluster01
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Hosts
VMs
Datastores
Networks
Update Manager
Issues
Performance
Tasks & Events
Profile Compliance
Resource Reservation
vSphere DRS
vSphere HA
Utilization
Recommendations
Faults
History
CPU Utilization
Memory Utilization
Network Utilization
Total Network Utilization - Per Host
Network Data Receive Rate - Per Host:
0%
50%
100%
esxi01.l...
esxi02.l...
Network Data Transmit Rate - Per Host:
0%
50%
100%
esxi01.l...
esxi02.l...
Network data displayed reflects all traffic across physical network interfaces on the host.

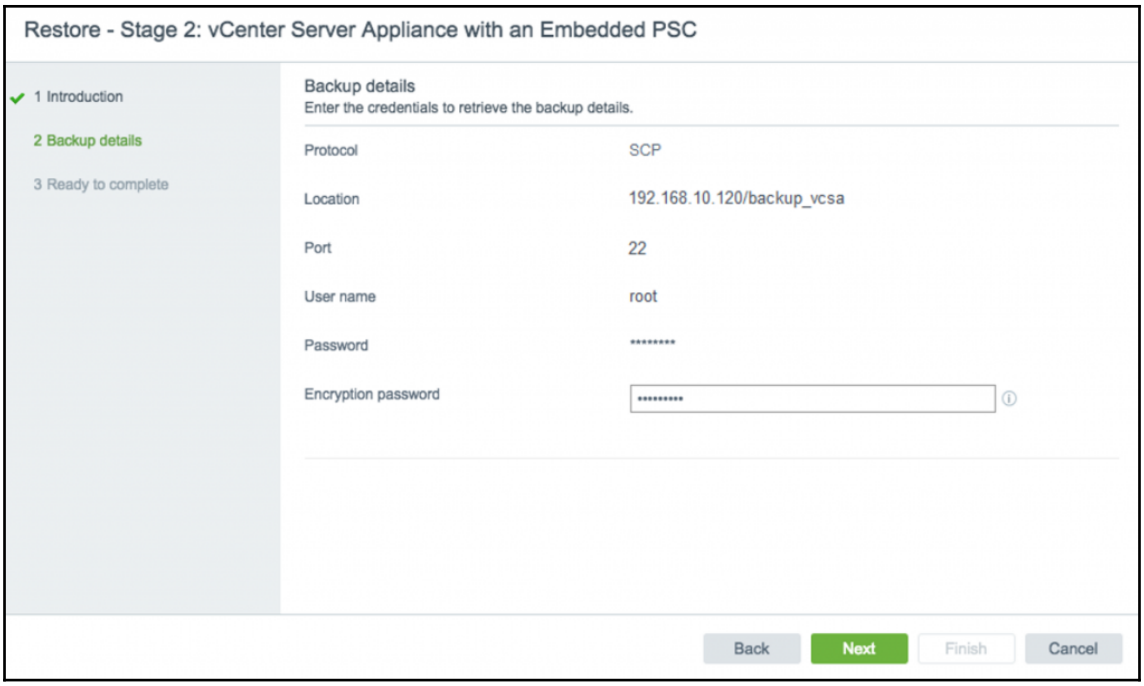

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Turn ON vSphere DRS
DRS Automation
Automation Level
Manual
vCenter Server will suggest migration recommendations for virtual machines.
Partially Automated
Virtual machines will be automatically placed onto hosts at power on and vCenter Server will suggest migration recommendations for virtual machines.
Fully Automated
Virtual machines will be automatically placed onto hosts when powered on, and will be automatically migrated from one host to another to optimize resource usage.
Migration Threshold
Conservative
Aggressive
Apply priority 1, priority 2, and priority 3 recommendations.
vCenter Server will apply recommendations that promise at least good improvements to the cluster's load balance.
Predictive DRS
Enable Predictive DRS
In addition to realtime metrics, DRS will respond to forecasted metrics provided by vRealize Operations server. You must also configure Predictive DRS in a version of vRealize Operations that supports this feature.
Virtual Machine Automation
Enable individual virtual machine automation levels.
OK
Cancel

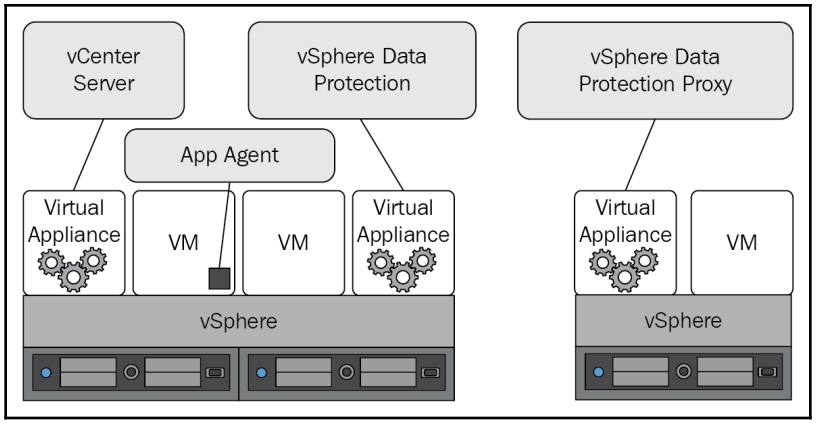

New Datastore Cluster
1 Name and Location
2 Storage DRS Automation
3 Storage DRS Runtime Settings
4 Select Clusters and Hosts
5 Select Datastores
6 Ready to Complete
Name and Location
Specify the datastore cluster name and location.
Datastore cluster name:
DatastoreCluster01
Location:
LAB
Turn ON Storage DRS
vSphere Storage DRS enables vCenter Server to manage datastores as an aggregate pool of storage resources.
vSphere Storage DRS also enables vCenter Server to manage the assignment of virtual machines to datastores, suggesting placement when virtual machines are created, migrated or cloned, and migrating running virtual machines to balance load and enforce placement rules.
Back
Next
Finish
Cancel

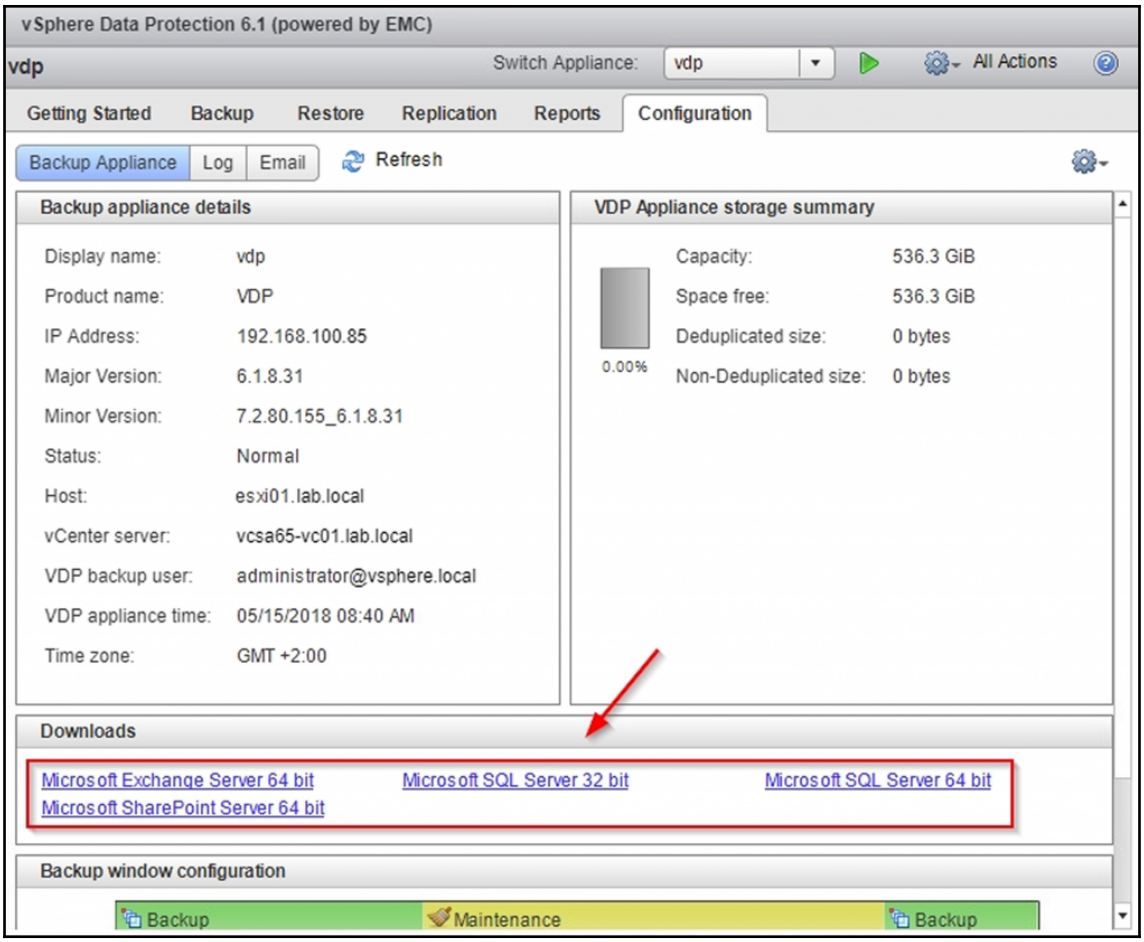

New Datastore Cluster
1 Name and Location
2 Storage DRS Automation
3 Storage DRS Runtime Settings
4 Select Clusters and Hosts
5 Select Datastores
6 Ready to Complete
Storage DRS Runtime Settings
Set the datastore cluster runtime settings.
I/O Metric inclusion
Select this option if you want I/O metrics considered as a part of any SDRS recommendations or automated migrations in this data store cluster
Enable I/O metric for SDRS recommendations
Storage DRS thresholds
Runtime thresholds govern when Storage DRS performs or recommends migrations (based on the selected automation level).
Space threshold:
Utilized space
50 %
100 %
80
%
Dictates the minimum level of consumed space for each datastore that is the threshold for action.
Minimum free space
50
GB
Dictates the minimum level of free space for each datastore that is the threshold for action.
I/O latency threshold:
5 ms
100 ms
15
ms
Dictates the minimum I/O latency for each datastore below which I/O load balancing moves are not considered.
Advanced options
Expand for advanced options
Back
Next
Finish
Cancel

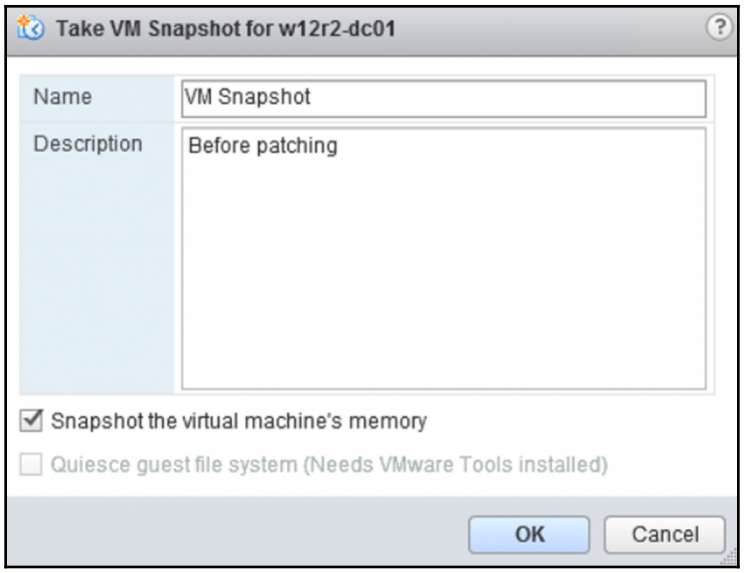
Chapter 06: Backup and Recover a vSphere Deployment

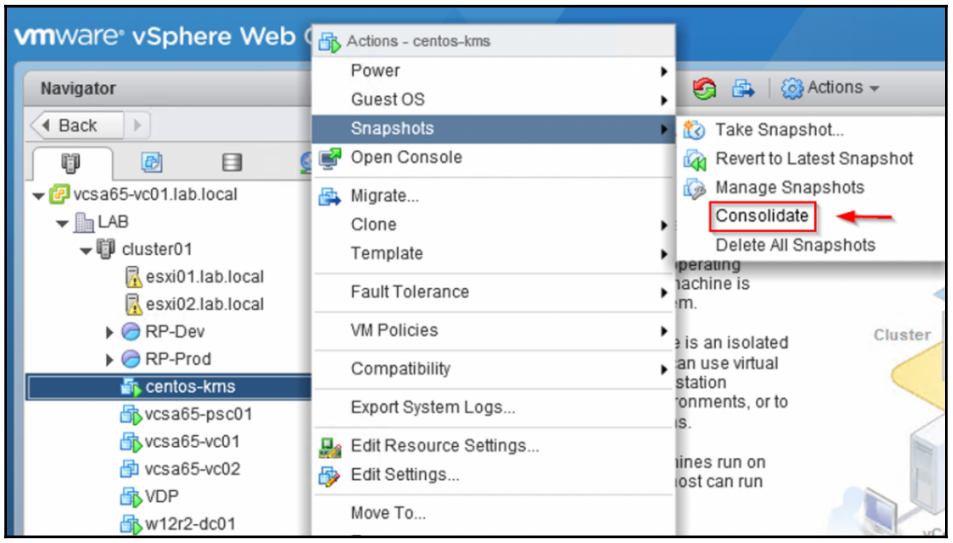


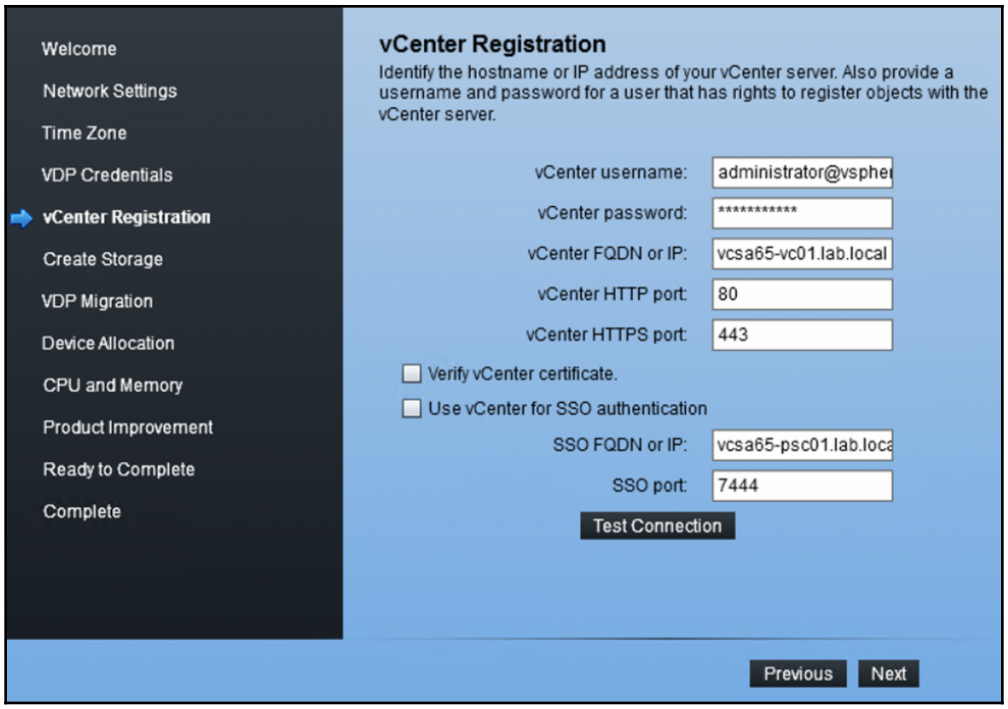

Restore - Stage 2: vCenter Server Appliance with an Embedded PSC
1 Introduction
2 Backup details
3 Ready to complete
Backup details
Enter the credentials to retrieve the backup details.
Protocol
SCP
Location
192.168.10.120/backup_vcsa
Port
22
User name
root
Password
Encryption password
Back
Next
Finish
Cancel

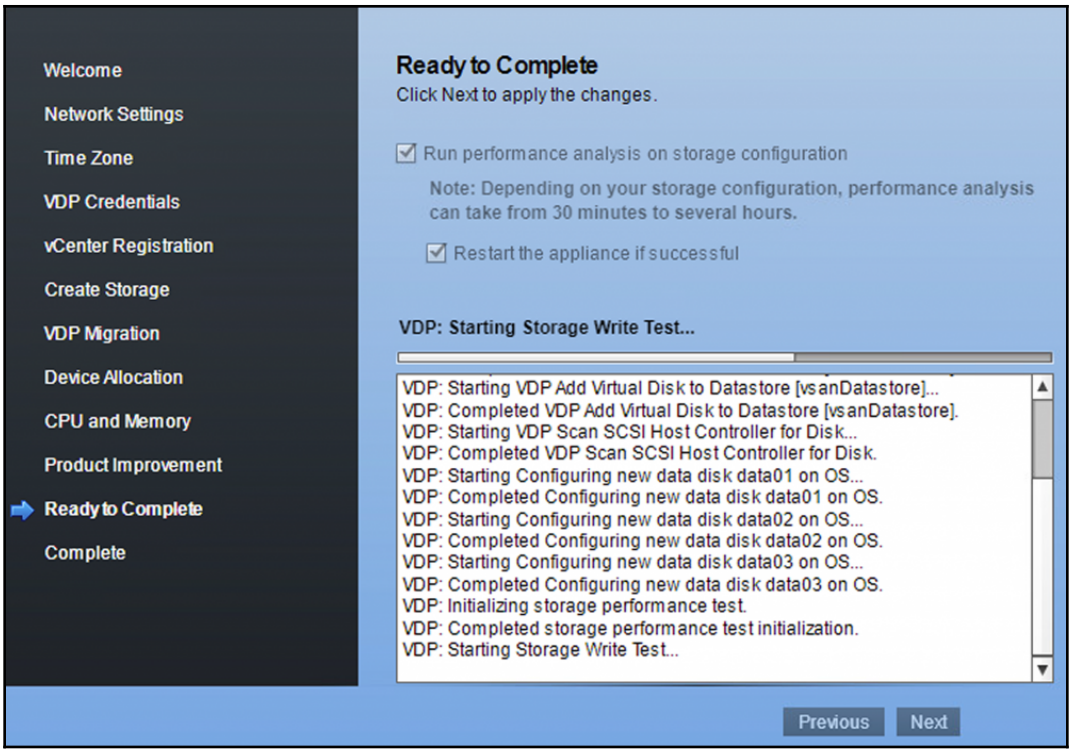

vCenter Server
vSphere Data Protection
vSphere Data Protection Proxy
App Agent
Virtual Appliance
VM
VM
Virtual Appliance
Virtual Appliance
VM
vSphere
vSphere

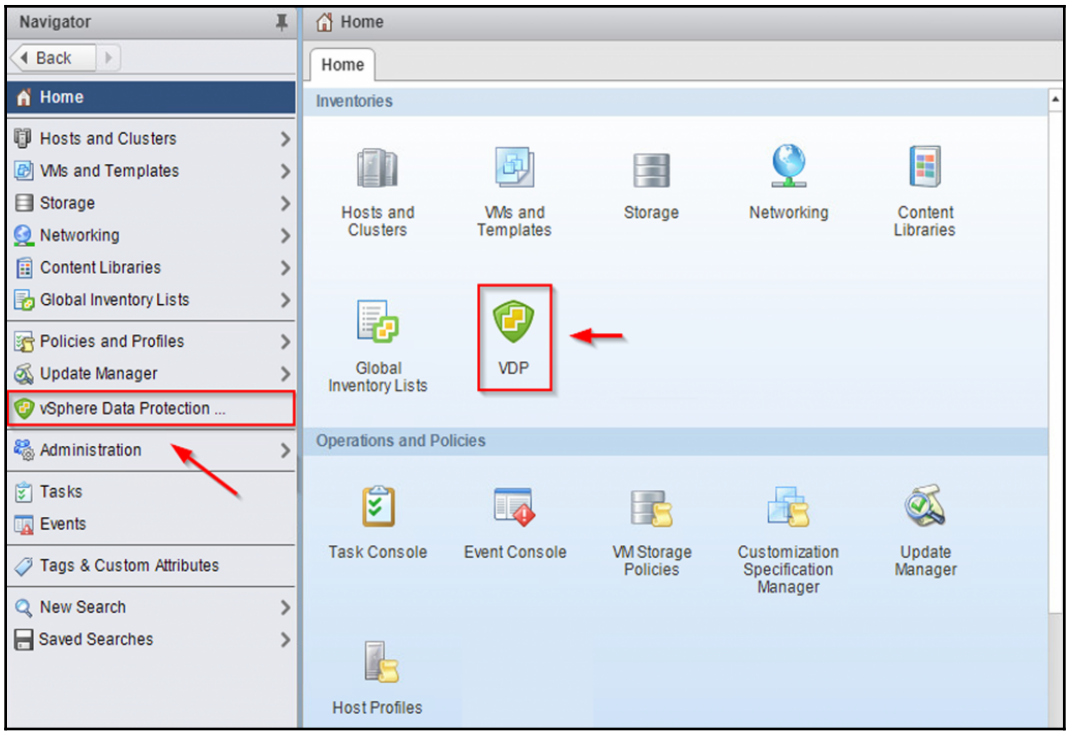

vSphere Data Protection 6.1 (powered by EMC)
vdp
Switch Appliance:
vdp
All Actions
Getting Started
Backup
Restore
Replication
Reports
Configuration
Backup Appliance
Log
Email
Refresh
Backup appliance details
Display name: vdp
Product name: VDP
IP Address: 192.168.100.85
Major Version: 6.1.8.31
Minor Version: 7.2.80.155_6.1.8.31
Status: Normal
Host: esxi01.lab.local
vCenter server: vcsa65-vc01.lab.local
VDP backup user: administrator@vsphere.local
VDP appliance time: 05/15/2018 08:40 AM
Time zone: GMT +2:00
VDP Appliance storage summary
0.00%
Capacity: 536.3 GiB
Space free: 536.3 GiB
Deduplicated size: 0 bytes
Non-Deduplicated size: 0 bytes
Downloads
Microsoft Exchange Server 64 bit
Microsoft SQL Server 32 bit
Microsoft SQL Server 64 bit
Microsoft SharePoint Server 64 bit
Backup window configuration
Backup
Maintenance
Backup

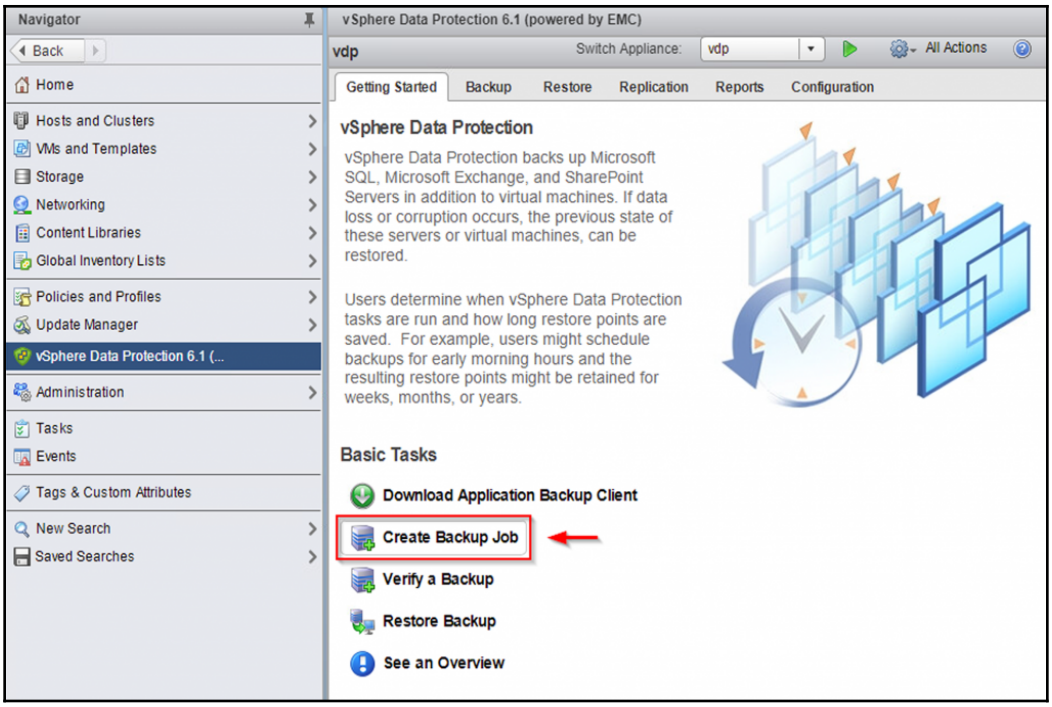

Take VM Snapshot for w12r2-dc01
Name
VM Snapshot
Description
Before patching
Snapshot the virtual machine's memory
Quiesce guest file system (Needs VMware Tools installed)
OK
Cancel

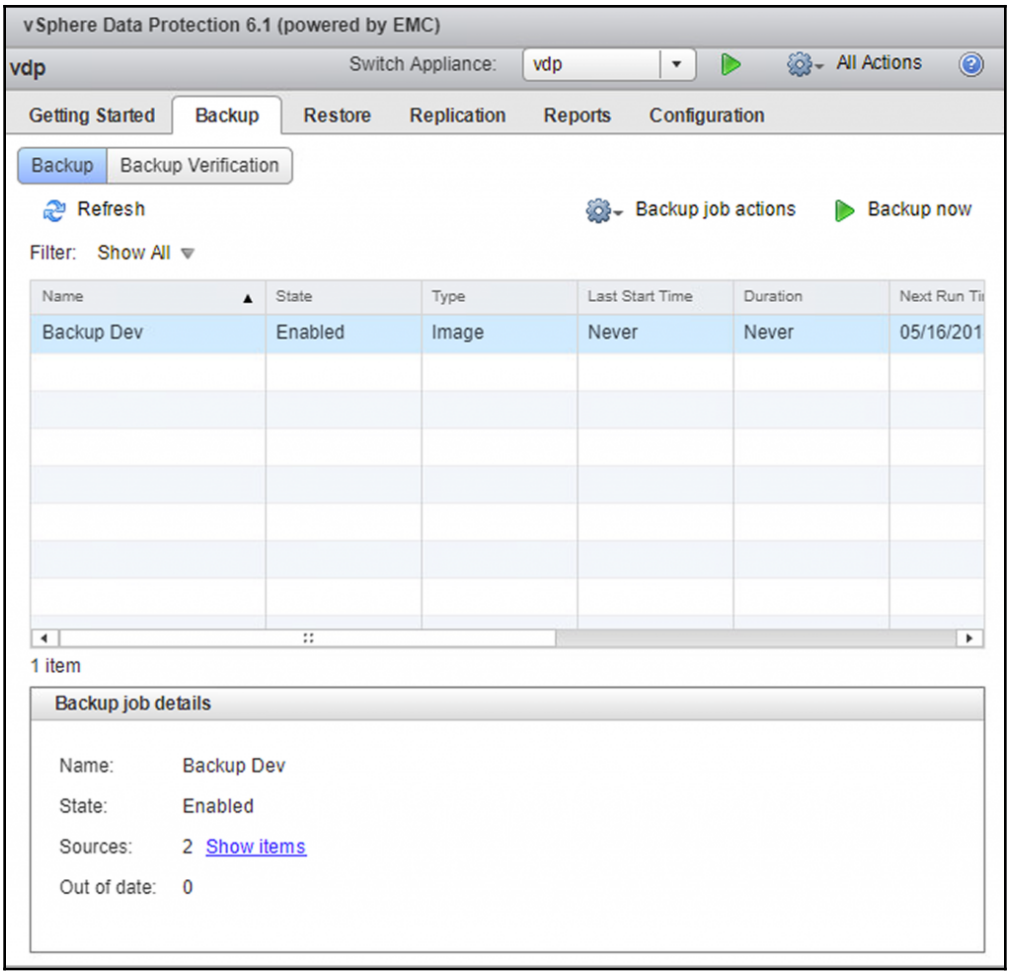

vmware vSphere Web
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
centos-kms
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
VDP
w12r2-dc01
Actions - centos-kms
Power
Guest OS
Snapshots
Open Console
Migrate...
Clone
Template
Fault Tolerance
VM Policies
Compatibility
Export System Logs...
Edit Resource Settings...
Edit Settings...
Move To...
Actions
Take Snapshot...
Revert to Latest Snapshot
Manage Snapshots
Consolidate
Delete All Snapshots
Cluster

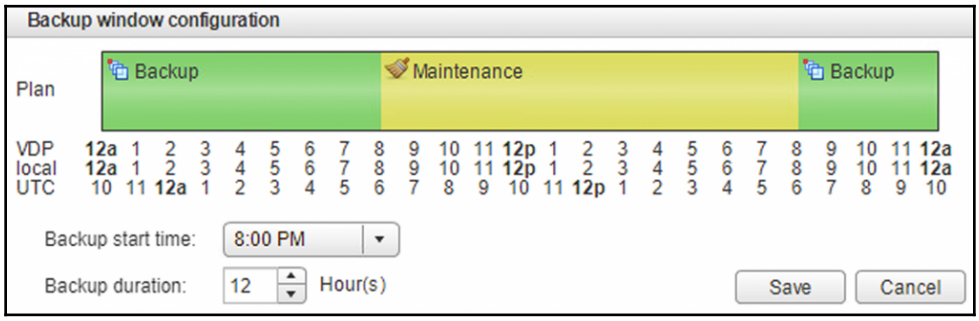

Welcome
Network Settings
Time Zone
VDP Credentials
vCenter Registration
Create Storage
VDP Migration
Device Allocation
CPU and Memory
Product Improvement
Ready to Complete
Complete
vCenter Registration
Identify the hostname or IP address of your vCenter server. Also provide a username and password for a user that has rights to register objects with the vCenter server.
vCenter username:
administrator@vsphe
vCenter password:
****
vCenter FQDN or IP:
vcsa65-vc01.lab.local
vCenter HTTP port:
80
vCenter HTTPS port:
443
Verify vCenter certificate.
Use vCenter for SSO authentication
SSO FQDN or IP:
vcsa65-psc01.lab.loca
SSO port:
7444
Test Connection
Previous
Next

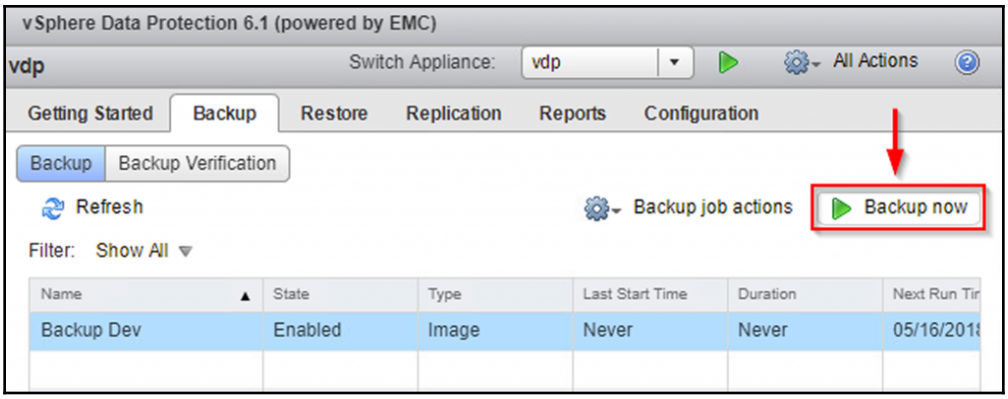

Welcome
Network Settings
Time Zone
VDP Credentials
vCenter Registration
Create Storage
VDP Migration
Device Allocation
CPU and Memory
Product Improvement
Ready to Complete
Complete
Ready to Complete
Click Next to apply the changes.
Run performance analysis on storage configuration
Note: Depending on your storage configuration, performance analysis can take from 30 minutes to several hours.
Restart the appliance if successful
VDP: Starting Storage Write Test...
VDP: Starting VDP Add Virtual Disk to Datastore [vsanDatastore]...
VDP: Completed VDP Add Virtual Disk to Datastore [vsanDatastore].
VDP: Starting VDP Scan SCSI Host Controller for Disk...
VDP: Completed VDP Scan SCSI Host Controller for Disk.
VDP: Starting Configuring new data disk data01 on OS...
VDP: Completed Configuring new data disk data01 on OS.
VDP: Starting Configuring new data disk data02 on OS...
VDP: Completed Configuring new data disk data02 on OS.
VDP: Starting Configuring new data disk data03 on OS...
VDP: Completed Configuring new data disk data03 on OS.
VDP: Initializing storage performance test.
VDP: Completed storage performance test initialization.
VDP: Starting Storage Write Test...
Previous
Next

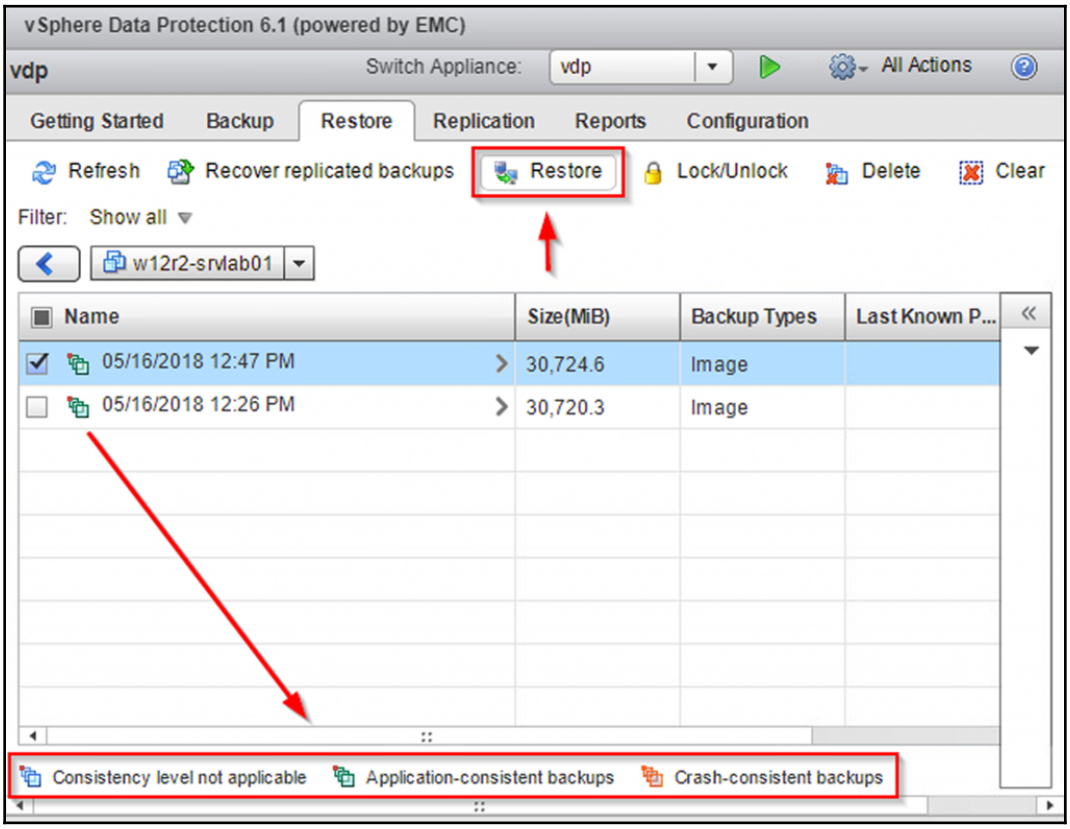

Navigator
Back
Home
Hosts and Clusters
VMs and Templates
Storage
Networking
Content Libraries
Global Inventory Lists
Policies and Profiles
Update Manager
vSphere Data Protection ...
Administration
Tasks
Events
Tags & Custom Attributes
New Search
Saved Searches
Home
Home
Inventories
Hosts and Clusters
VMs and Templates
Storage
Networking
Content Libraries
Global Inventory Lists
VDP
Operations and Policies
Task Console
Event Console
VM Storage Policies
Customization Specification Manager
Update Manager
Host Profiles

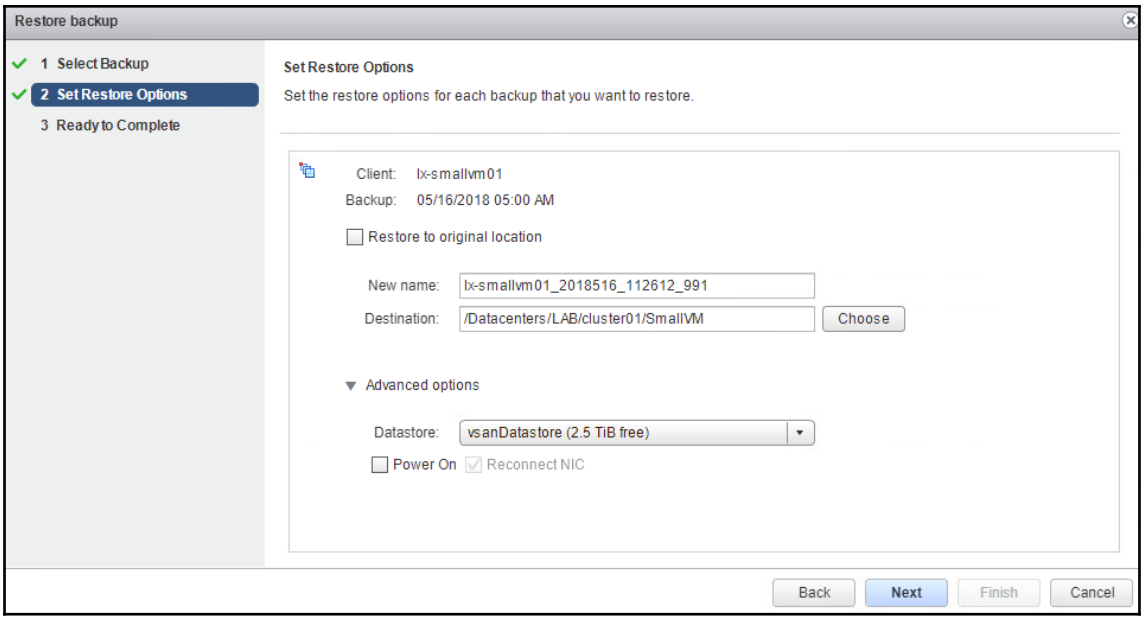

Navigator
Back
Home
Hosts and Clusters
VMs and Templates
Storage
Networking
Content Libraries
Global Inventory Lists
Policies and Profiles
Update Manager
vSphere Data Protection 6.1 (...
Administration
Tasks
Events
Tags & Custom Attributes
New Search
Saved Searches
vSphere Data Protection 6.1 (powered by EMC)
vdp
Switch Appliance:
vdp
All Actions
Getting Started
Backup
Restore
Replication
Reports
Configuration
vSphere Data Protection
vSphere Data Protection backs up Microsoft SQL, Microsoft Exchange, and SharePoint Servers in addition to virtual machines. If data loss or corruption occurs, the previous state of these servers or virtual machines, can be restored.
Users determine when vSphere Data Protection tasks are run and how long restore points are saved. For example, users might schedule backups for early morning hours and the resulting restore points might be retained for weeks, months, or years.
Basic Tasks
Download Application Backup Client
Create Backup Job
Verify a Backup
Restore Backup
See an Overview

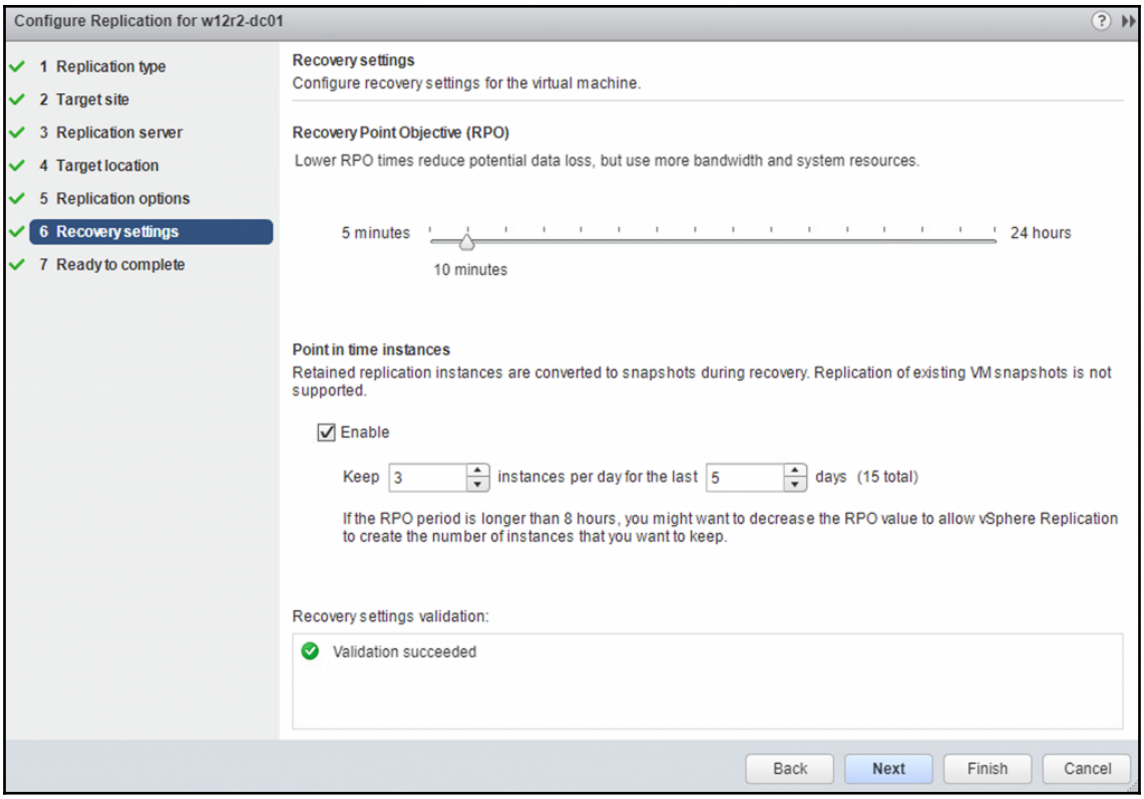

vSphere Data Protection 6.1 (powered by EMC)
vdp
Switch Appliance:
vdp
All Actions
Getting Started
Backup
Restore
Replication
Reports
Configuration
Backup
Backup Verification
Refresh
Backup job actions
Backup now
Filter:
Show All
Name
State
Type
Last Start Time
Duration
Next Run Ti
Backup Dev
Enabled
Image
Never
Never
05/16/201
1 item
Backup job details
Name:
Backup Dev
State:
Enabled
Sources:
2
Show items
Out of date:
0

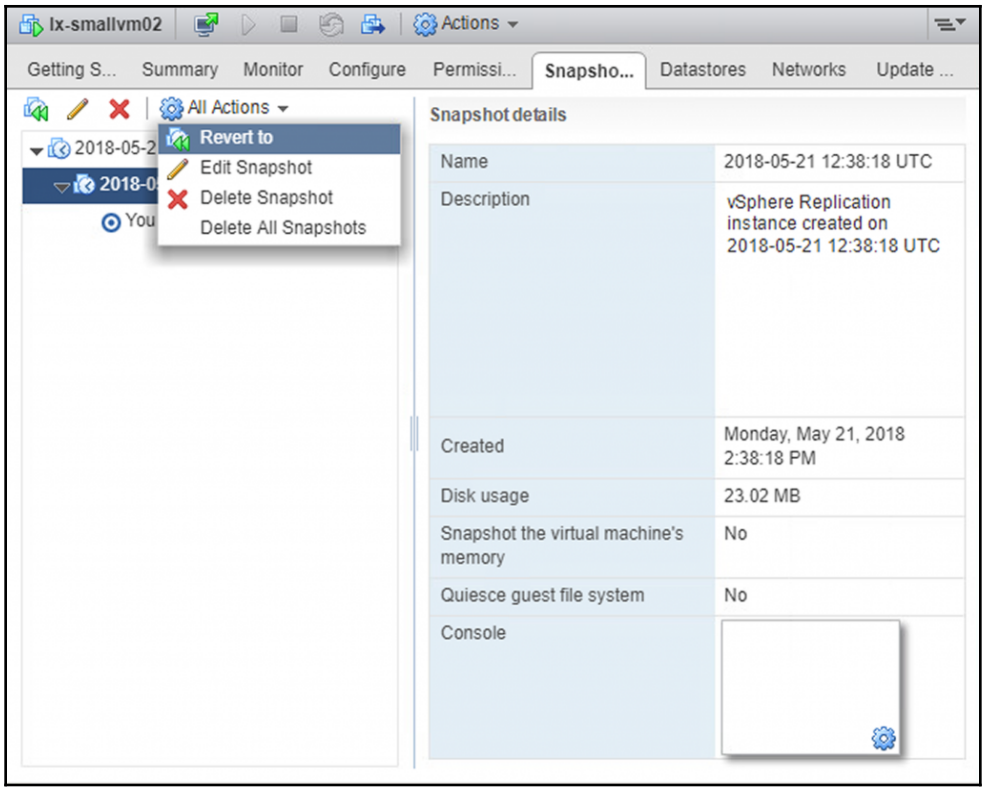

Backup window configuration
Plan
Backup
Maintenance
Backup
VDP 12a 1 2 3 4 5 6 7 8 9 10 11 12p 1 2 3 4 5 6 7 8 9 10 11 12a
local 12a 1 2 3 4 5 6 7 8 9 10 11 12p 1 2 3 4 5 6 7 8 9 10 11 12a
UTC 10 11 12a 1 2 3 4 5 6 7 8 9 10 11 12p 1 2 3 4 5 6 7 8 9 10
Backup start time:
8:00 PM
Backup duration:
12
Hour(s)
Save
Cancel

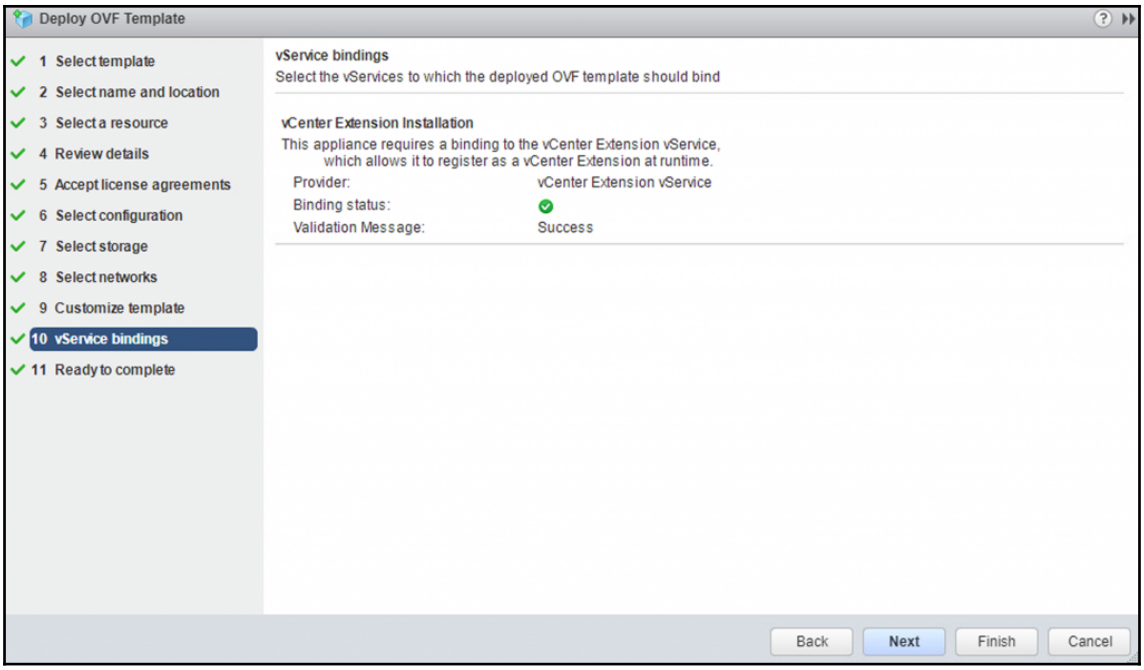

vSphere Data Protection 6.1 (powered by EMC)
vdp
Switch Appliance:
vdp
All Actions
Getting Started
Backup
Restore
Replication
Reports
Configuration
Backup
Backup Verification
Refresh
Backup job actions
Backup now
Filter:
Show All
Name
State
Type
Last Start Time
Duration
Next Run Tir
Backup Dev
Enabled
Image
Never
Never
05/16/201

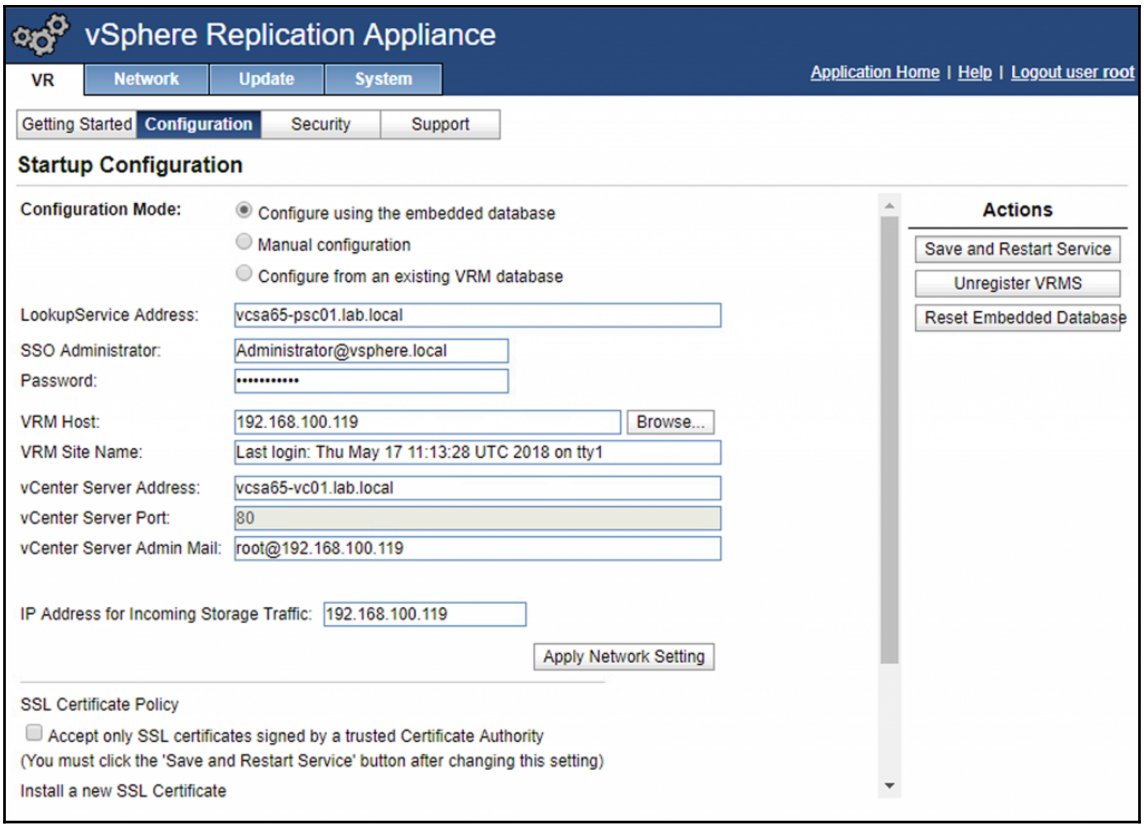

vSphere Data Protection 6.1 (powered by EMC)
vdp
Switch Appliance:
vdp
All Actions
Getting Started
Backup
Restore
Replication
Reports
Configuration
Refresh
Recover replicated backups
Restore
Lock/Unlock
Delete
Clear
Filter:
Show all
w12r2-srvlab01
Name
Size(MiB)
Backup Types
Last Known P...
05/16/2018 12:47 PM
30,724.6
Image
05/16/2018 12:26 PM
30,720.3
Image
Consistency level not applicable
Application-consistent backups
Crash-consistent backups

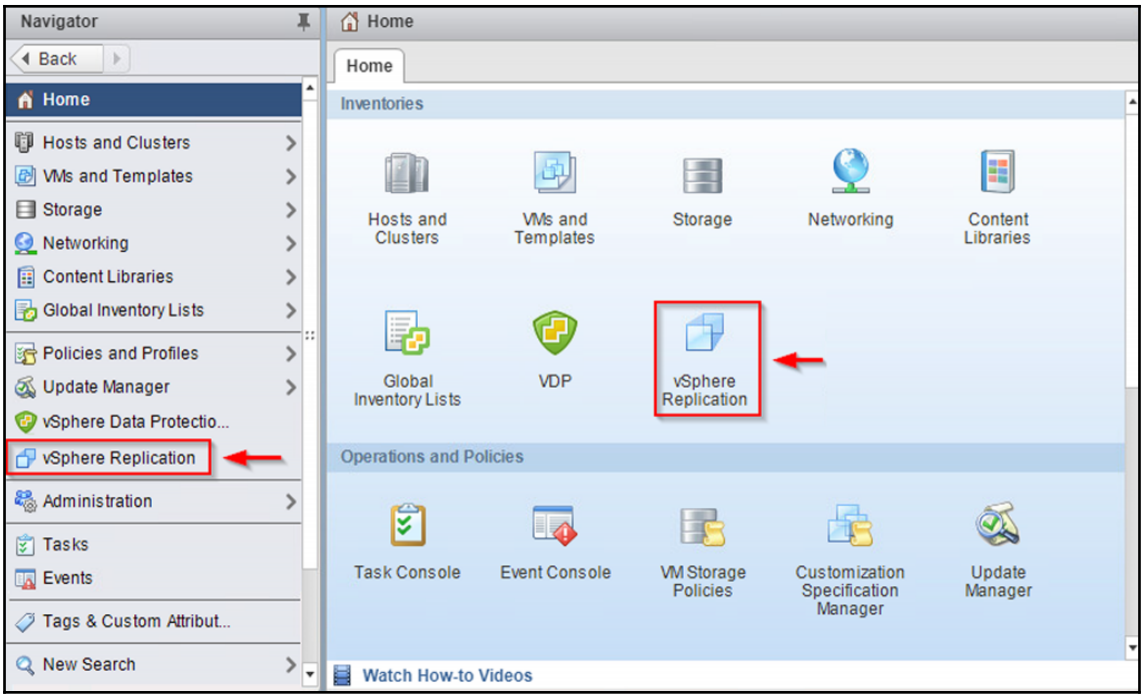

Restore backup
1 Select Backup
2 Set Restore Options
3 Ready to Complete
Set Restore Options
Set the restore options for each backup that you want to restore.
Client: lx-smallvm01
Backup: 05/16/2018 05:00 AM
Restore to original location
New name: lx-smallvm01_2018516_112612_991
Destination: /Datacenters/LAB/cluster01/SmallVM
Choose
Advanced options
Datastore: vsanDatastore (2.5 TiB free)
Power On
Reconnect NIC
Back
Next
Finish
Cancel

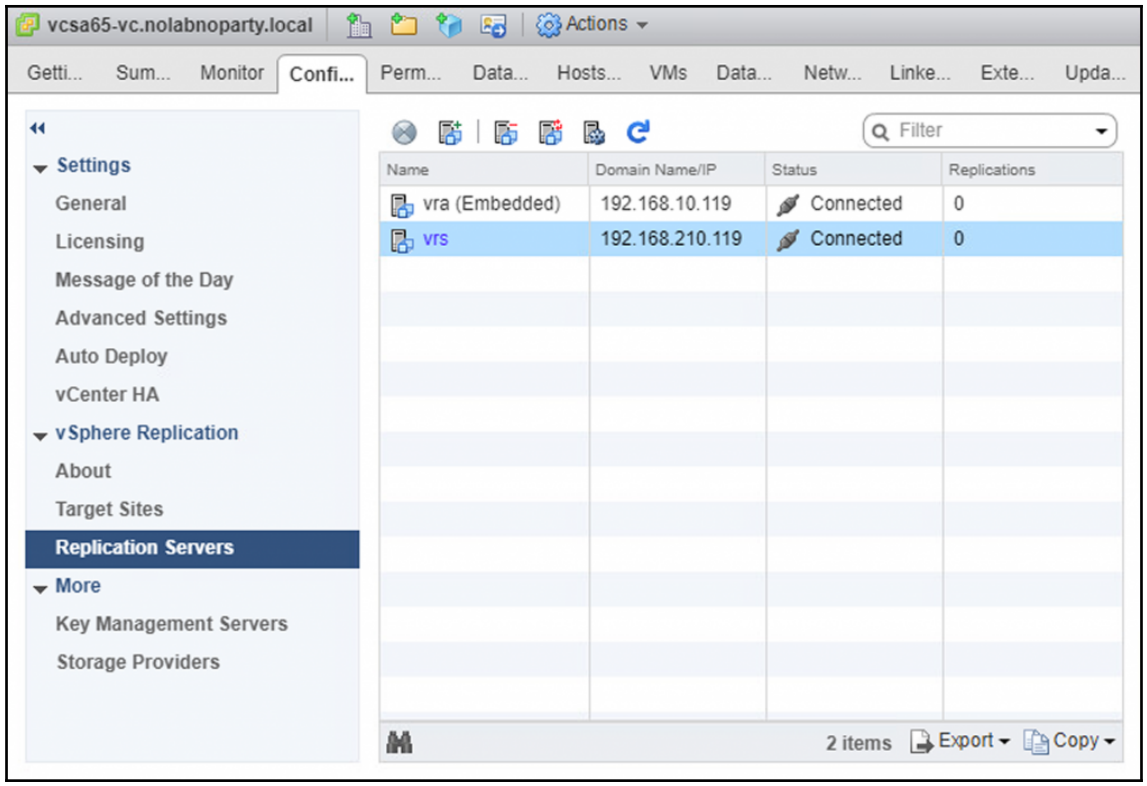

Configure Replication for w12r2-dc01
1 Replication type
2 Target site
3 Replication server
4 Target location
5 Replication options
6 Recovery settings
7 Ready to complete
Recovery settings
Configure recovery settings for the virtual machine.
Recovery Point Objective (RPO)
Lower RPO times reduce potential data loss, but use more bandwidth and system resources.
5 minutes
24 hours
10 minutes
Point in time instances
Retained replication instances are converted to snapshots during recovery. Replication of existing VM snapshots is not supported.
Enable
Keep 3 instances per day for the last 5 days (15 total)
If the RPO period is longer than 8 hours, you might want to decrease the RPO value to allow vSphere Replication to create the number of instances that you want to keep.
Recovery settings validation:
Validation succeeded
Back
Next
Finish
Cancel

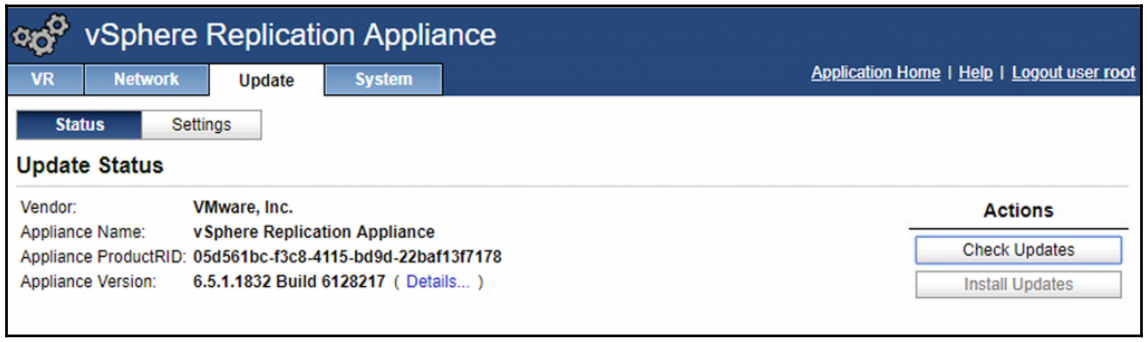

lx-smallvm02
Actions
Getting S...
Summary
Monitor
Configure
Permissi...
Snapsho...
Datastores
Networks
Update ...
All Actions
Revert to
Edit Snapshot
Delete Snapshot
Delete All Snapshots
Snapshot details
Name
2018-05-21 12:38:18 UTC
Description
vSphere Replication instance created on 2018-05-21 12:38:18 UTC
Created
Monday, May 21, 2018 2:38:18 PM
Disk usage
23.02 MB
Snapshot the virtual machine's memory
No
Quiesce guest file system
No
Console

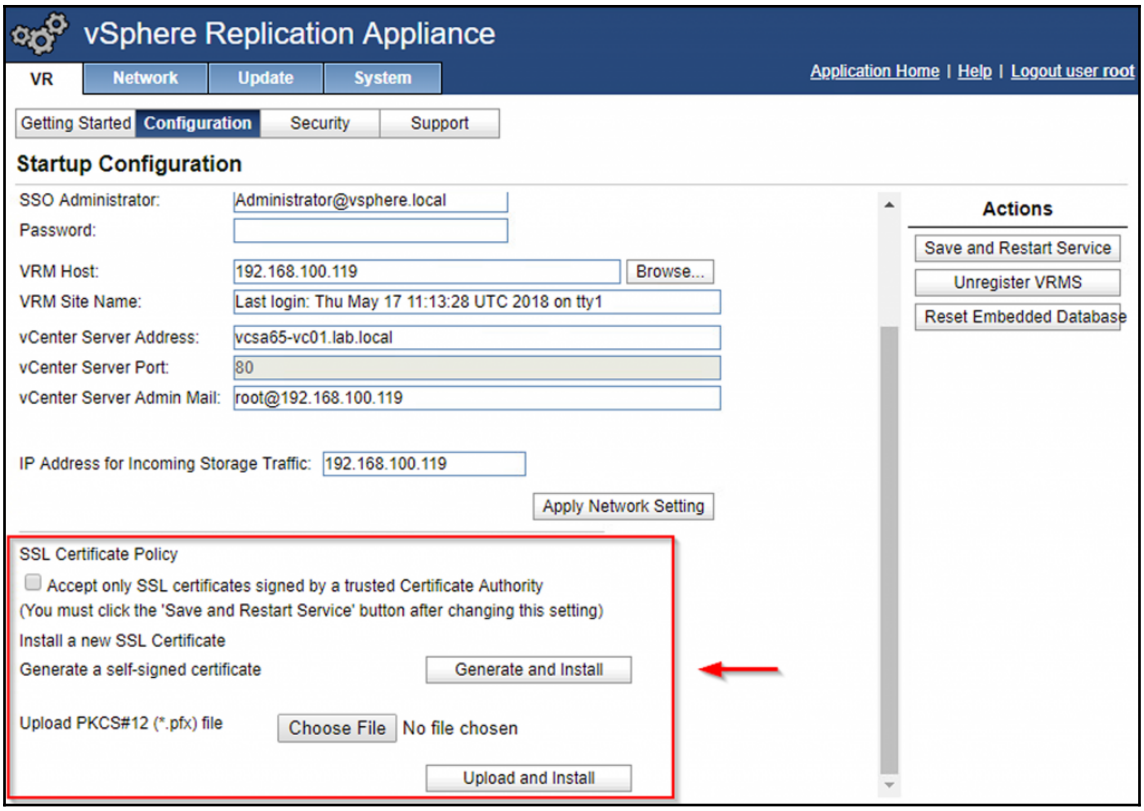

Deploy OVF Template
1 Select template
2 Select name and location
3 Select a resource
4 Review details
5 Accept license agreements
6 Select configuration
7 Select storage
8 Select networks
9 Customize template
10 vService bindings
11 Ready to complete
vService bindings
Select the vServices to which the deployed OVF template should bind
vCenter Extension Installation
This appliance requires a binding to the vCenter Extension vService, which allows it to register as a vCenter Extension at runtime.
Provider: vCenter Extension vService
Binding status:
Validation Message: Success
Back
Next
Finish
Cancel

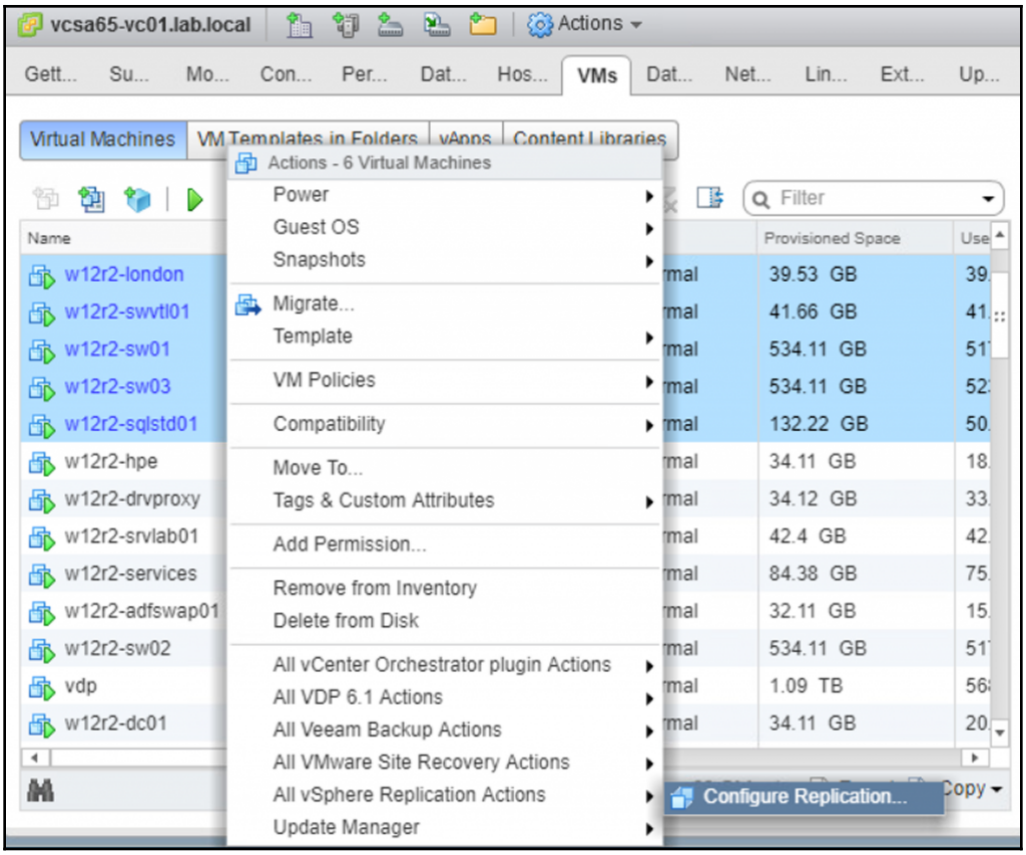

vSphere Replication Appliance
VR
Network
Update
System
Application Home | Help | Logout user root
Getting Started
Configuration
Security
Support
Startup Configuration
Configuration Mode:
Configure using the embedded database
Manual configuration
Configure from an existing VRM database
LookupService Address:
vcsa65-psc01.lab.local
SSO Administrator:
Administrator@vsphere.local
Password:
VRM Host:
192.168.100.119
Browse...
VRM Site Name:
Last login: Thu May 17 11:13:28 UTC 2018 on tty1
vCenter Server Address:
vcsa65-vc01.lab.local
vCenter Server Port:
80
vCenter Server Admin Mail:
root@192.168.100.119
IP Address for Incoming Storage Traffic:
192.168.100.119
Apply Network Setting
SSL Certificate Policy
Accept only SSL certificates signed by a trusted Certificate Authority
(You must click the 'Save and Restart Service' button after changing this setting)
Install a new SSL Certificate
Actions
Save and Restart Service
Unregister VRMS
Reset Embedded Database

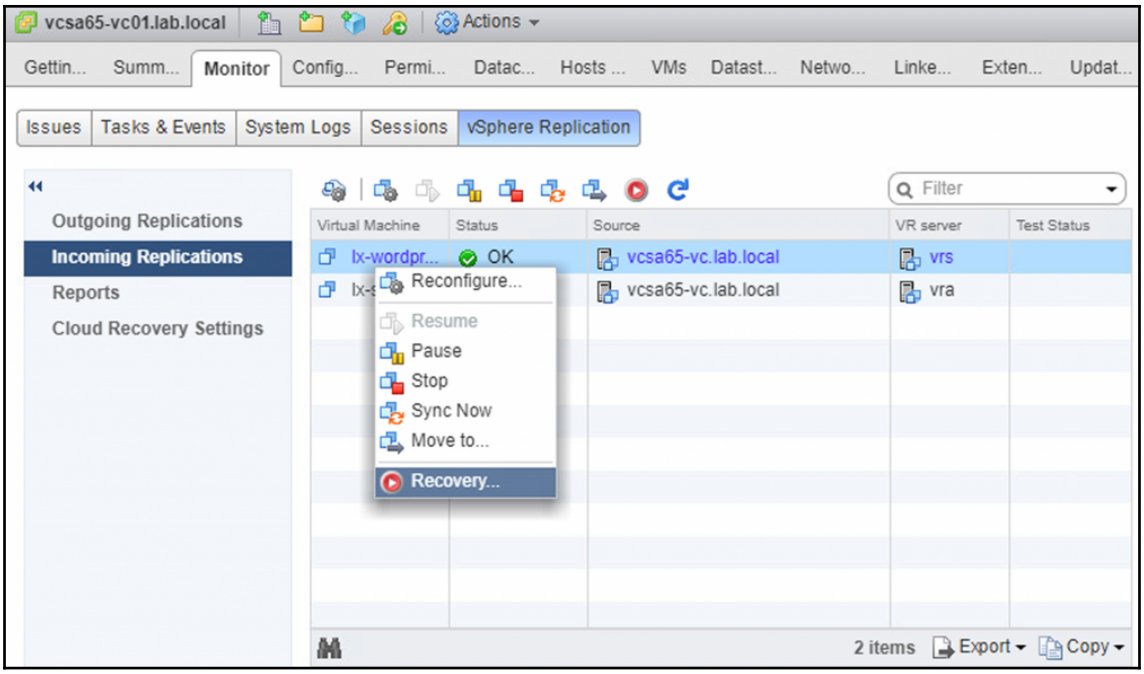

Navigator
Back
Home
Hosts and Clusters
VMs and Templates
Storage
Networking
Content Libraries
Global Inventory Lists
Policies and Profiles
Update Manager
vSphere Data Protectio...
vSphere Replication
Administration
Tasks
Events
Tags & Custom Attribut...
New Search
Home
Home
Inventories
Hosts and Clusters
VMs and Templates
Storage
Networking
Content Libraries
Global Inventory Lists
VDP
vSphere Replication
Operations and Policies
Task Console
Event Console
VM Storage Policies
Customization Specification Manager
Update Manager
Watch How-to Videos

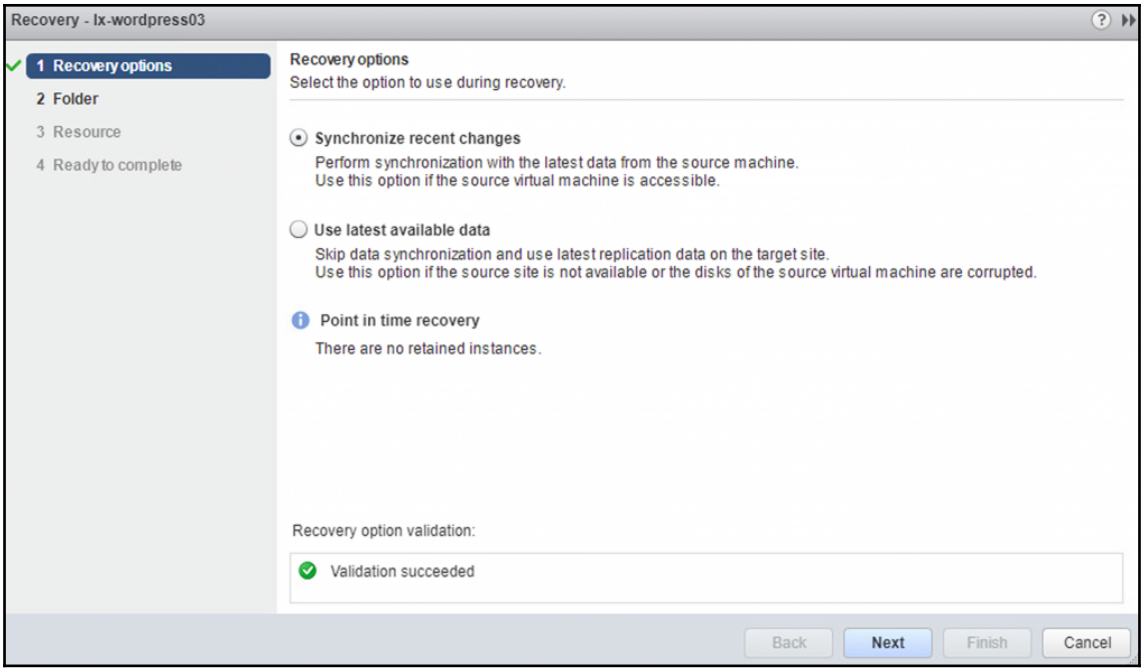

vcsa65-vc.nolabnoparty.local
Actions
Getti...
Sum...
Monitor
Confi...
Perm...
Data...
Hosts...
VMs
Data...
Netw...
Linke...
Exte...
Upda...
Settings
General
Licensing
Message of the Day
Advanced Settings
Auto Deploy
vCenter HA
vSphere Replication
About
Target Sites
Replication Servers
More
Key Management Servers
Storage Providers
Filter
Name
Domain Name/IP
Status
Replications
vra (Embedded)
192.168.10.119
Connected
0
vrs
192.168.210.119
Connected
0
2 items
Export
Copy

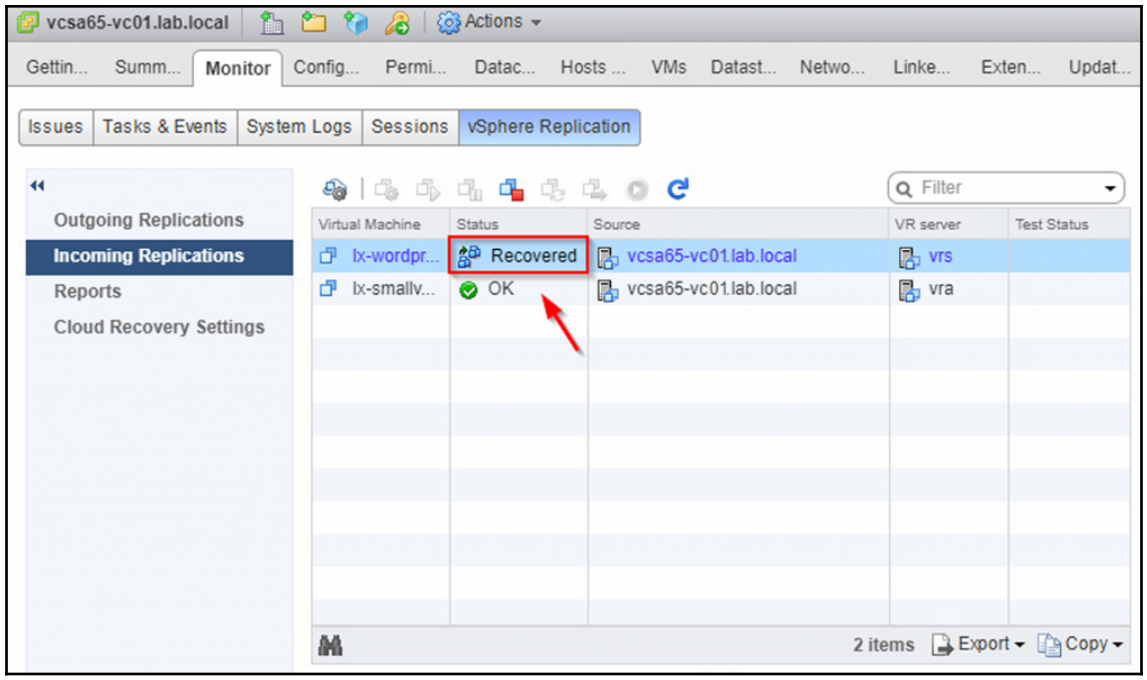

vSphere Replication Appliance
VR
Network
Update
System
Application Home | Help | Logout user root
Status
Settings
Update Status
Vendor: VMware, Inc.
Appliance Name: vSphere Replication Appliance
Appliance ProductRID: 05d561bc-f3c8-4115-bd9d-22baf13f7178
Appliance Version: 6.5.1.1832 Build 6128217 (Details...)
Actions
Check Updates
Install Updates

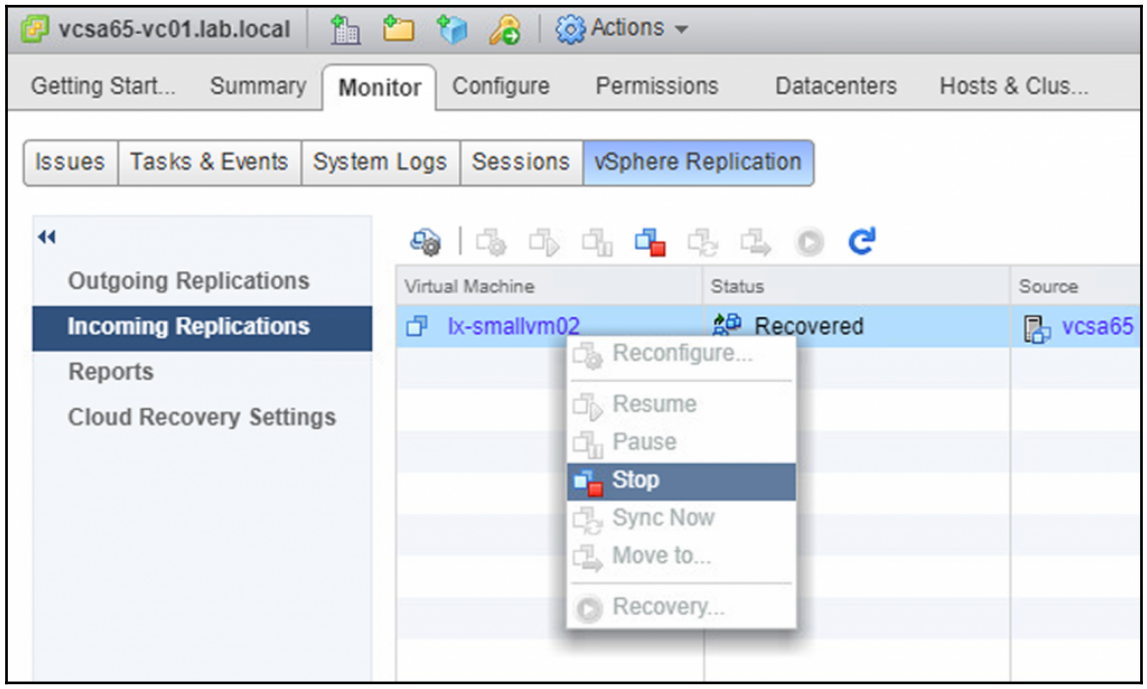

vSphere Replication Appliance
VR
Network
Update
System
Application Home | Help | Logout user root
Getting Started
Configuration
Security
Support
Startup Configuration
SSO Administrator:
Administrator@vsphere.local
Password:
VRM Host:
192.168.100.119
Browse...
VRM Site Name:
Last login: Thu May 17 11:13:28 UTC 2018 on tty1
vCenter Server Address:
vcsa65-vc01.lab.local
vCenter Server Port:
80
vCenter Server Admin Mail:
root@192.168.100.119
IP Address for Incoming Storage Traffic:
192.168.100.119
Apply Network Setting
SSL Certificate Policy
Accept only SSL certificates signed by a trusted Certificate Authority
(You must click the 'Save and Restart Service' button after changing this setting)
Install a new SSL Certificate
Generate a self-signed certificate
Generate and Install
Upload PKCS#12 (*.pfx) file
Choose File
No file chosen
Upload and Install
Actions
Save and Restart Service
Unregister VRMS
Reset Embedded Database


vcsa65-vc01.lab.local
Actions
Gett...
Su...
Mo...
Con...
Per...
Dat...
Hos...
VMs
Dat...
Net...
Lin...
Ext...
Up...
Virtual Machines
VM Templates in Folders
vApps
Content Libraries
Actions - 6 Virtual Machines
Power
Guest OS
Snapshots
Migrate...
Template
VM Policies
Compatibility
Move To...
Tags & Custom Attributes
Add Permission...
Remove from Inventory
Delete from Disk
All vCenter Orchestrator plugin Actions
All VDP 6.1 Actions
All Veeam Backup Actions
All VMware Site Recovery Actions
All vSphere Replication Actions
Update Manager
Filter
Name
Provisioned Space
w12r2-london
39.53 GB
w12r2-swvtl01
41.66 GB
w12r2-sw01
534.11 GB
w12r2-sw03
534.11 GB
w12r2-sqlstd01
132.22 GB
w12r2-hpe
34.11 GB
w12r2-drvproxy
34.12 GB
w12r2-srvlab01
42.4 GB
w12r2-services
84.38 GB
w12r2-adfswap01
32.11 GB
w12r2-sw02
534.11 GB
vdp
1.09 TB
w12r2-dc01
34.11 GB
Configure Replication...

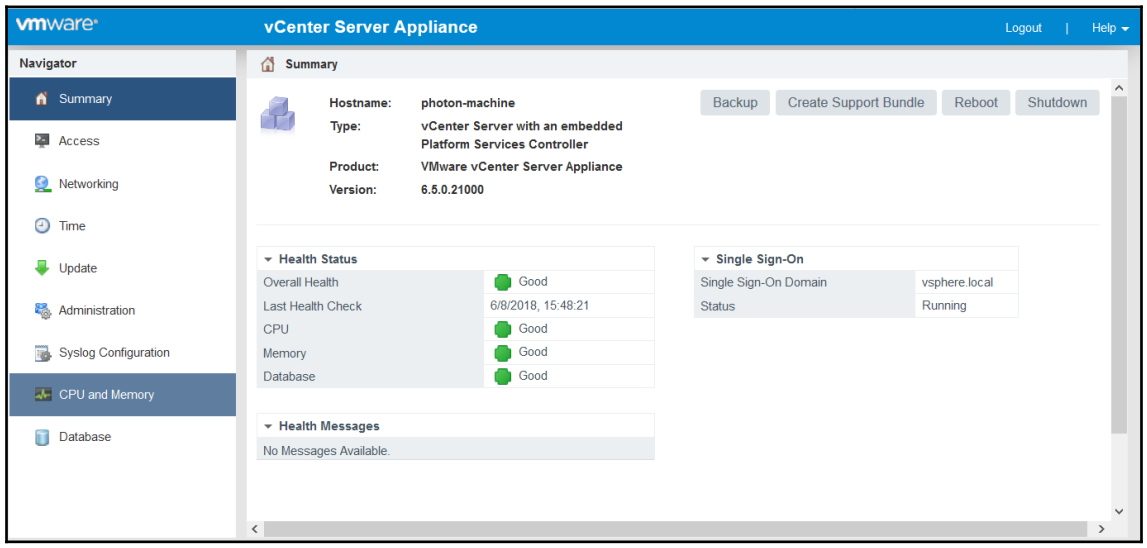

vcsa65-vc01.lab.local
Actions
Gettin...
Summ...
Monitor
Config...
Permi...
Datac...
Hosts ...
VMs
Datast...
Netwo...
Linke...
Exten...
Updat...
Issues
Tasks & Events
System Logs
Sessions
vSphere Replication
Outgoing Replications
Incoming Replications
Reports
Cloud Recovery Settings
Filter
Virtual Machine
Status
Source
VR server
Test Status
lx-wordpr...
OK
vcsa65-vc.lab.local
vrs
vcsa65-vc.lab.local
vra
Reconfigure...
Resume
Pause
Stop
Sync Now
Move to...
Recovery...
2 items
Export
Copy

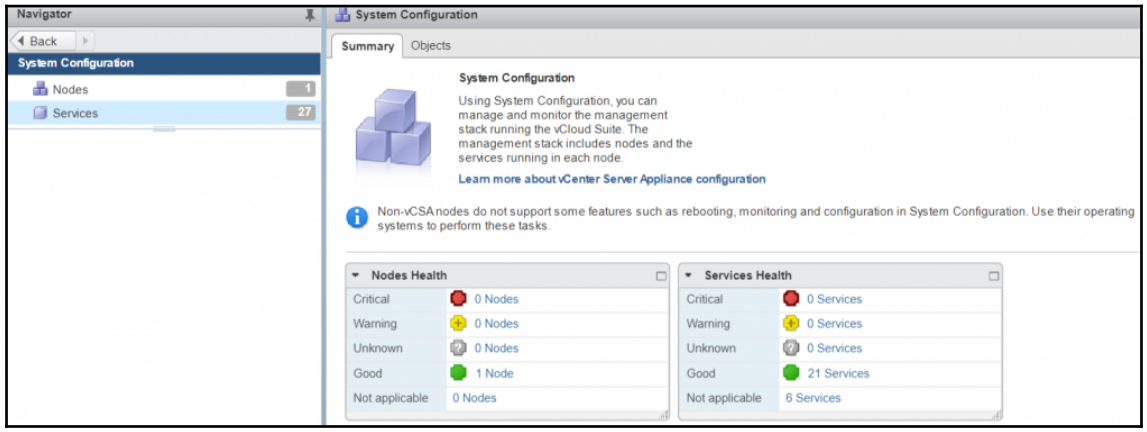

Recovery - lx-wordpress03
1 Recovery options
2 Folder
3 Resource
4 Ready to complete
Recovery options
Select the option to use during recovery.
Synchronize recent changes
Perform synchronization with the latest data from the source machine.
Use this option if the source virtual machine is accessible.
Use latest available data
Skip data synchronization and use latest replication data on the target site.
Use this option if the source site is not available or the disks of the source virtual machine are corrupted.
Point in time recovery
There are no retained instances.
Recovery option validation:
Validation succeeded
Back
Next
Finish
Cancel

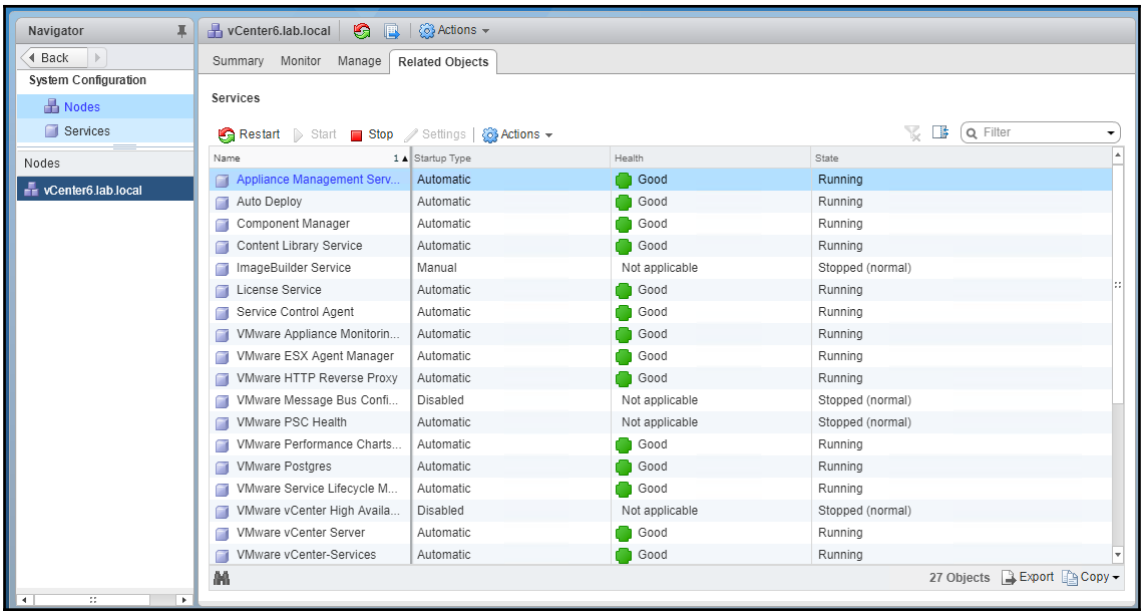

vcsa65-vc01.lab.local
Actions
Gettin...
Summ...
Monitor
Config...
Permi...
Datac...
Hosts ...
VMs
Datast...
Netwo...
Linke...
Exten...
Updat...
Issues
Tasks & Events
System Logs
Sessions
vSphere Replication
Outgoing Replications
Incoming Replications
Reports
Cloud Recovery Settings
Filter
Virtual Machine
Status
Source
VR server
Test Status
lx-wordpr...
Recovered
vcsa65-vc01.lab.local
vrs
lx-smallv...
OK
vcsa65-vc01.lab.local
vra
2 items
Export
Copy


vcsa65-vc01.lab.local
Actions
Getting Start...
Summary
Monitor
Configure
Permissions
Datacenters
Hosts & Clus...
Issues
Tasks & Events
System Logs
Sessions
vSphere Replication
Outgoing Replications
Incoming Replications
Reports
Cloud Recovery Settings
Virtual Machine
Status
Source
lx-smallvm02
Recovered
vcsa65
Reconfigure...
Resume
Pause
Stop
Sync Now
Move to...
Recovery...

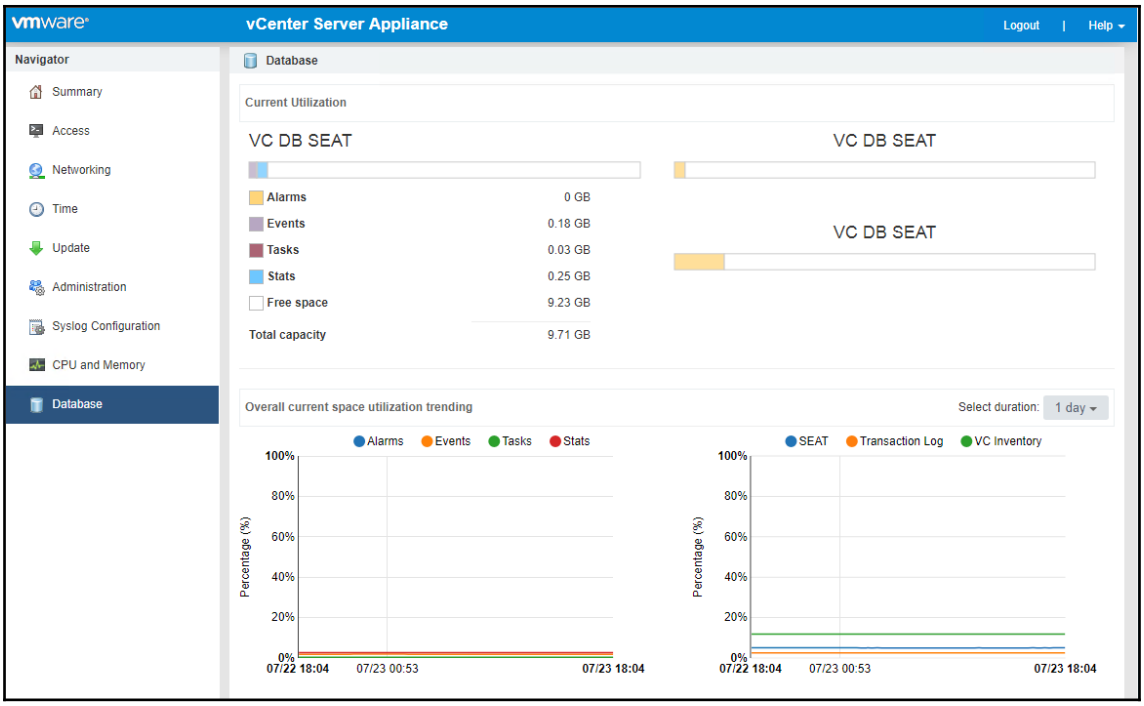
Chapter 07: Troubleshoot a vSphere Deployment

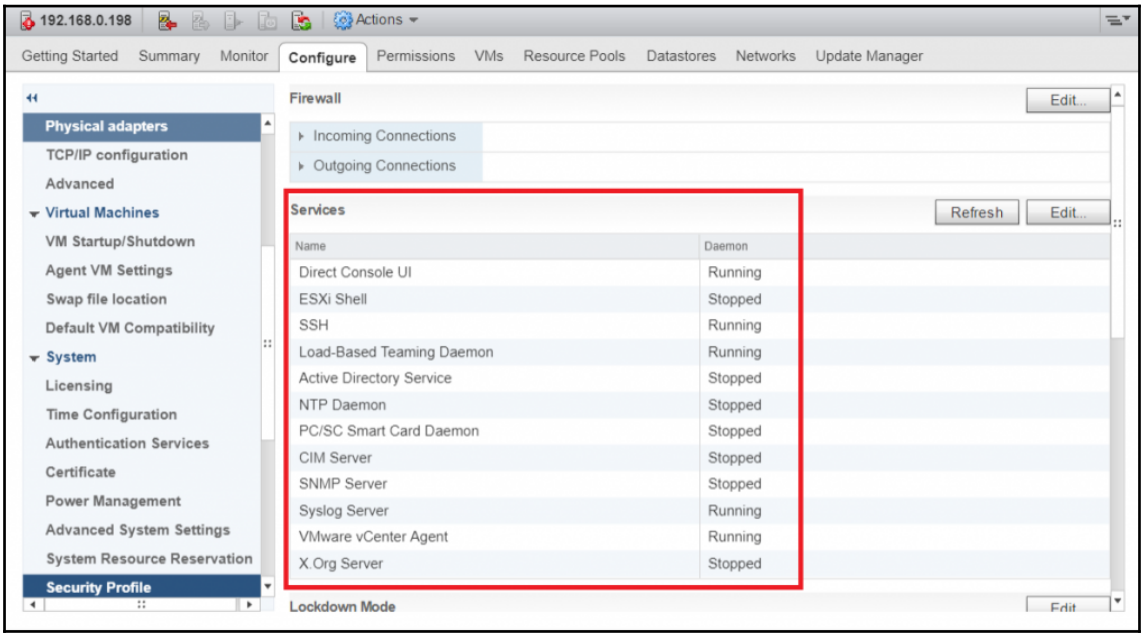


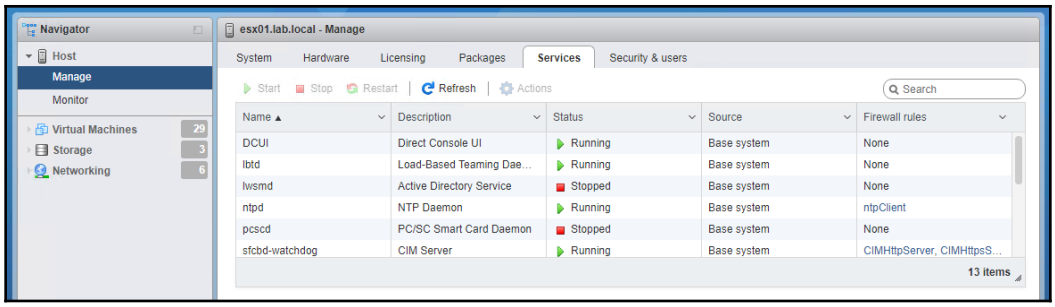


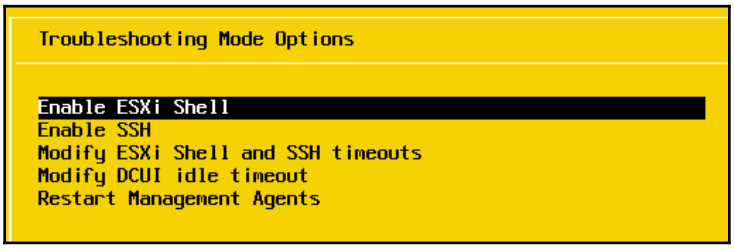


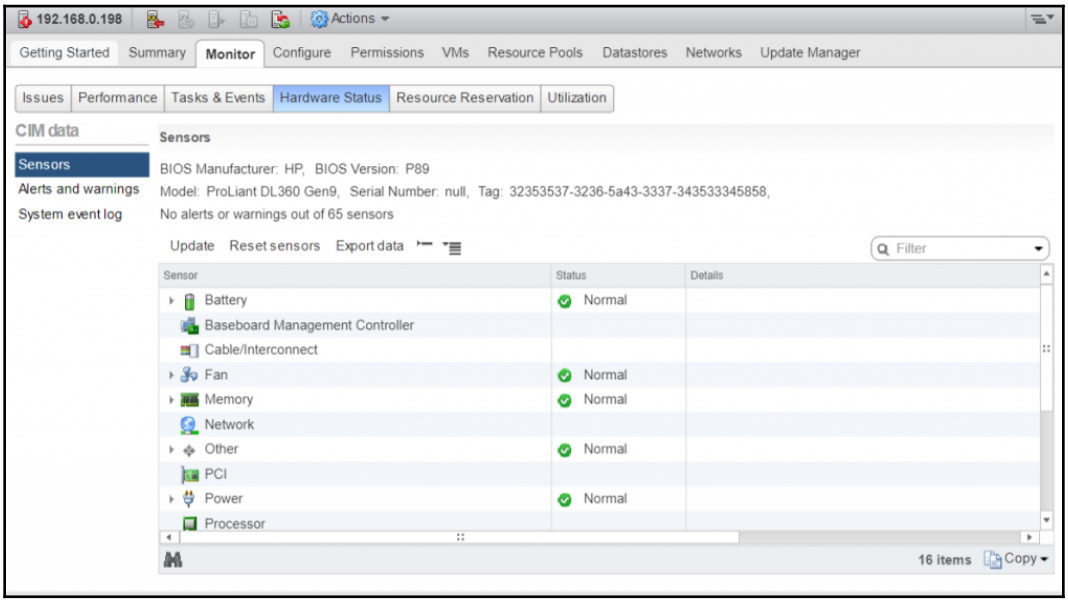
Badge icon	Description
	Good: The health of the object is normal
	Warning: The object is experiencing some problem
	Critical: The object is not functioning properly or will stop functioning soon
	Unknown: No data is available for this object

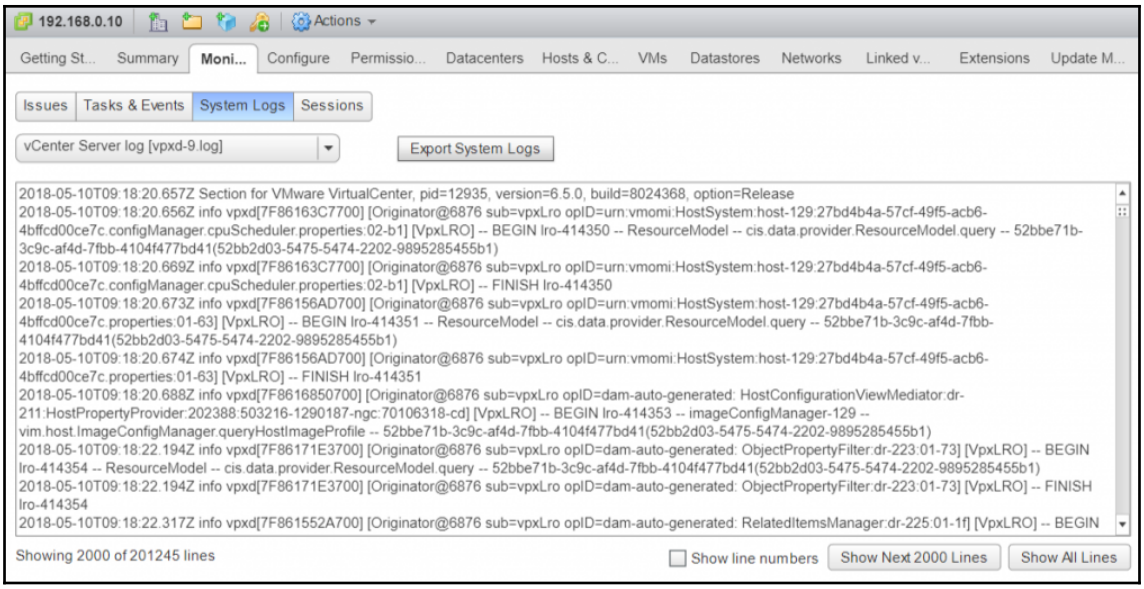

vmware
vCenter Server Appliance
Logout | Help
Navigator
Summary
Access
Networking
Time
Update
Administration
Syslog Configuration
CPU and Memory
Database
Database
Current Utilization
VC DB SEAT
Alarms 0 GB
Events 0.18 GB
Tasks 0.03 GB
Stats 0.25 GB
Free space 9.23 GB
Total capacity 9.71 GB
VC DB SEAT
VC DB SEAT
Overall current space utilization trending
Select duration: 1 day
Alarms Events Tasks Stats
Percentage (%)
100%
80%
60%
40%
20%
0%
07/22 18:04
07/23 00:53
07/23 18:04
SEAT Transaction Log VC Inventory
Percentage (%)
100%
80%
60%
40%
20%
0%
07/22 18:04
07/23 00:53
07/23 18:04

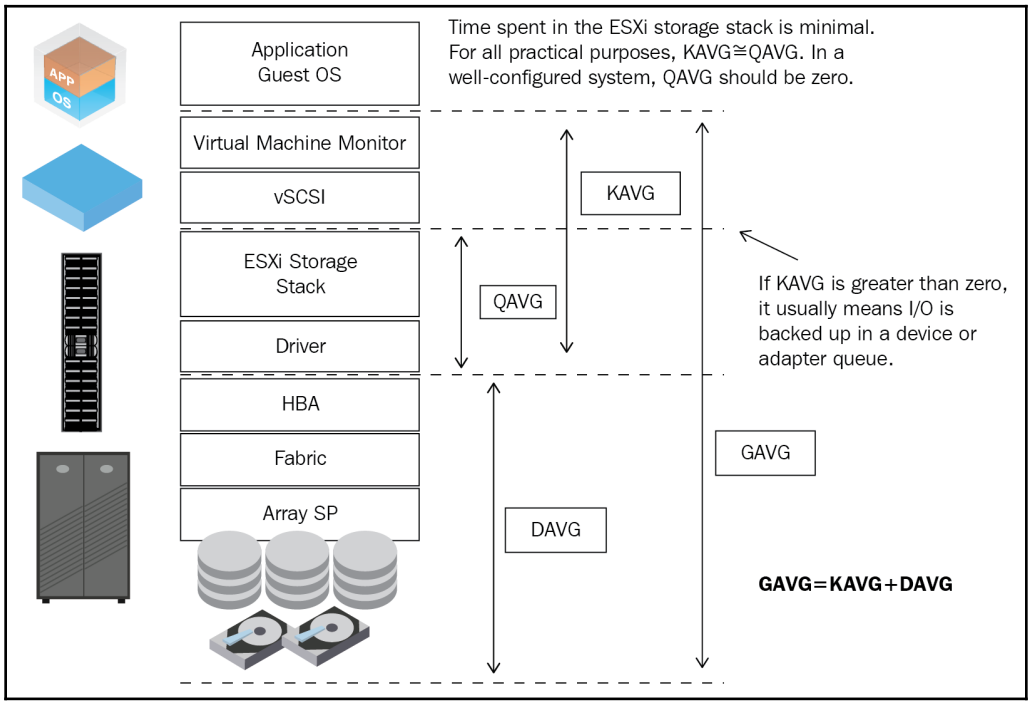

192.168.0.198
Actions
Getting Started
Summary
Monitor
Configure
Permissions
VMs
Resource Pools
Datastores
Networks
Update Manager
Physical adapters
TCP/IP configuration
Advanced
Virtual Machines
VM Startup/Shutdown
Agent VM Settings
Swap file location
Default VM Compatibility
System
Licensing
Time Configuration
Authentication Services
Certificate
Power Management
Advanced System Settings
System Resource Reservation
Security Profile
Firewall
Edit...
Incoming Connections
Outgoing Connections
Services
Refresh
Edit...
Name
Daemon
Direct Console UI Running
ESXi Shell Stopped
SSH Running
Load-Based Teaming Daemon Running
Active Directory Service Stopped
NTP Daemon Stopped
PC/SC Smart Card Daemon Stopped
CIM Server Stopped
SNMP Server Stopped
Syslog Server Running
VMware vCenter Agent Running
X.Org Server Stopped
Lockdown Mode
Edit...

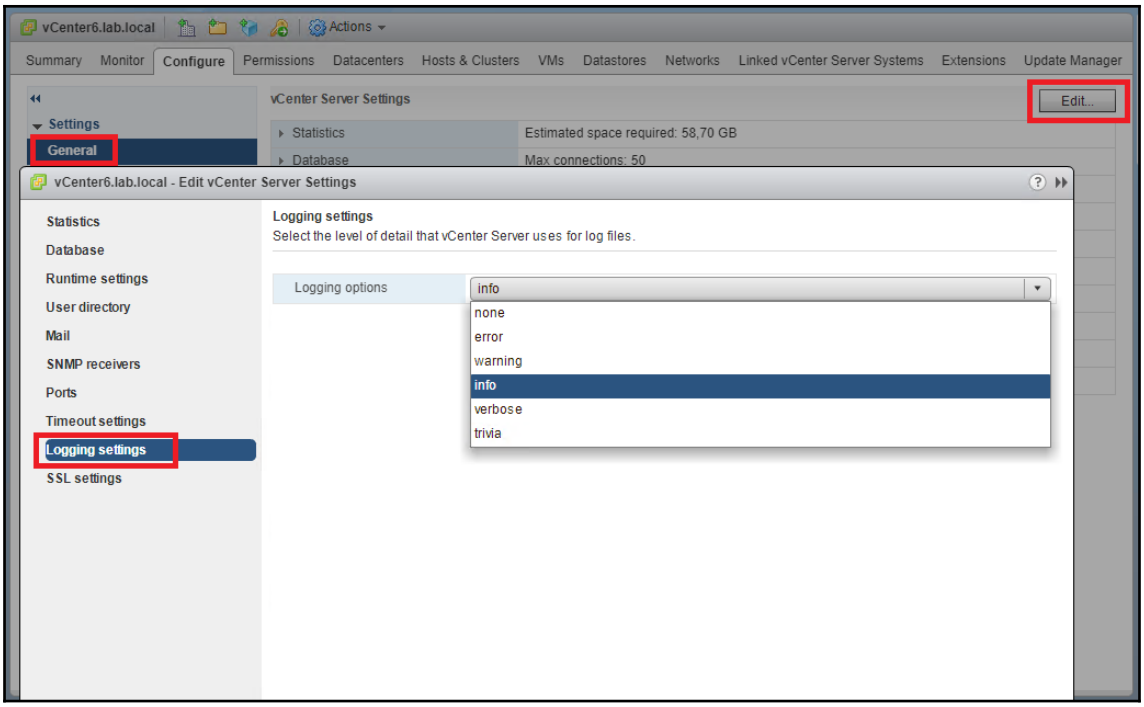

Navigator
Host
Manage
Monitor
Virtual Machines 29
Storage 3
Networking 6
esx01.lab.local - Manage
System Hardware Licensing Packages Services Security & users
Start Stop Restart Refresh Actions
Search
Name Description Status Source Firewall rules
DCUI Direct Console UI Running Base system None
lbtd Load-Based Teaming Dae... Running Base system None
lwsmd Active Directory Service Stopped Base system None
ntpd NTP Daemon Running Base system ntpClient
pcscd PC/SC Smart Card Daemon Stopped Base system None
sfcbd-watchdog CIM Server Running Base system CIMHttpServer, CIMHttpsS...
13 items

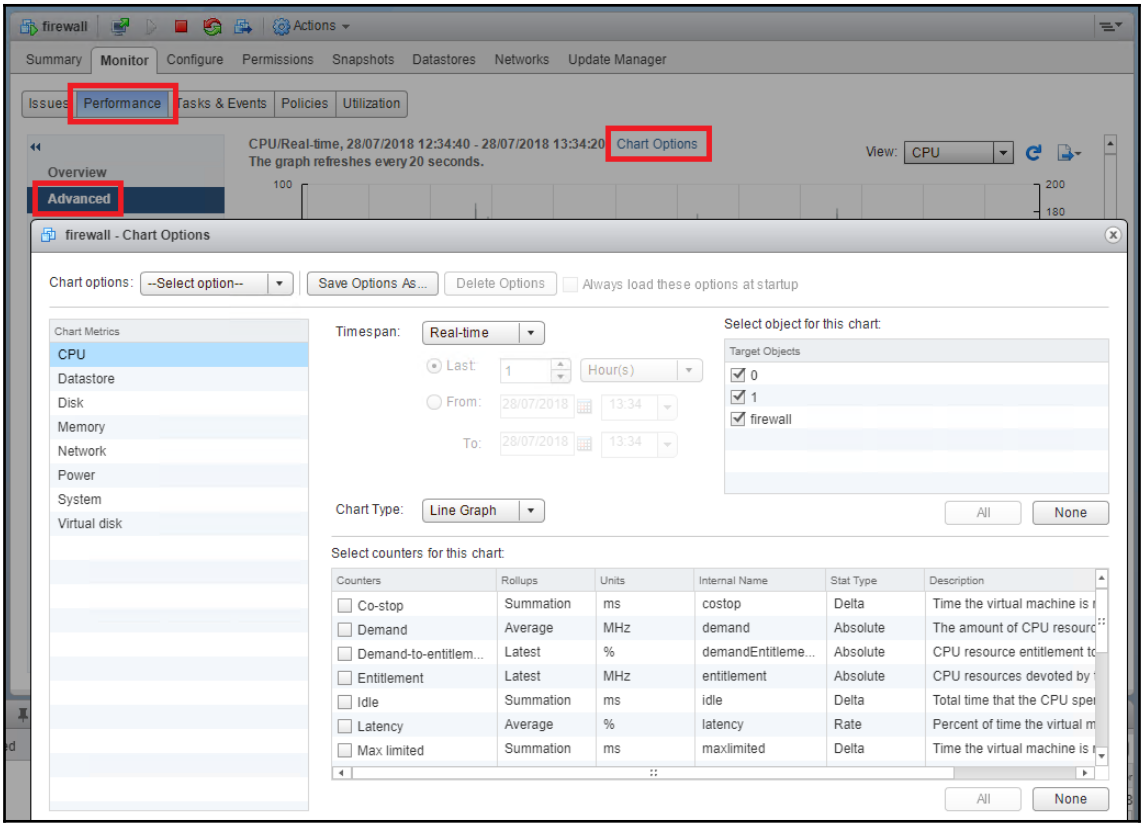

Troubleshooting Mode Options
Enable ESXi Shell
Enable SSH
Modify ESXi Shell and SSH timeouts
Modify DCUI idle timeout
Restart Management Agents

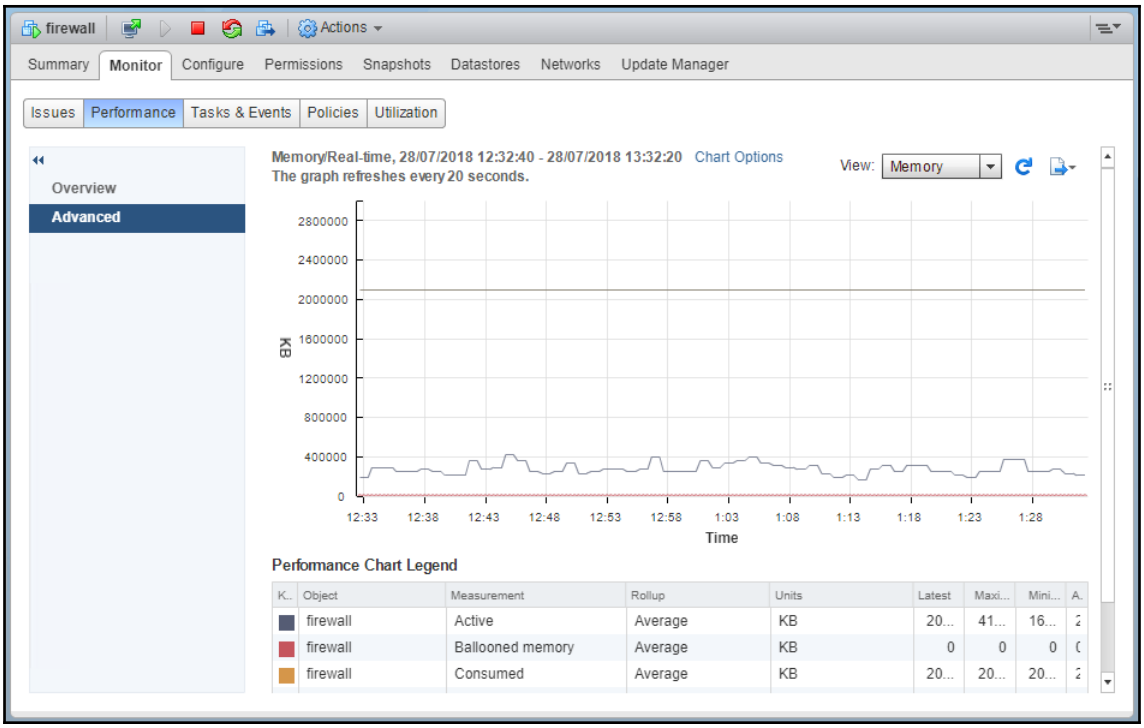

192.168.0.198
Actions
Getting Started Summary Monitor Configure Permissions VMs Resource Pools Datastores Networks Update Manager
Issues Performance Tasks & Events Hardware Status Resource Reservation Utilization
CIM data
Sensors
Alerts and warnings
System event log
Sensors
BIOS Manufacturer: HP, BIOS Version: P89
Model: ProLiant DL360 Gen9, Serial Number: null, Tag: 32353537-3236-5a43-3337-343533345858,
No alerts or warnings out of 65 sensors
Update Reset sensors Export data
Filter
Sensor Status Details
Battery Normal
Baseboard Management Controller
Cable/Interconnect
Fan Normal
Memory Normal
Network
Other Normal
PCI
Power Normal
Processor
16 items
Copy

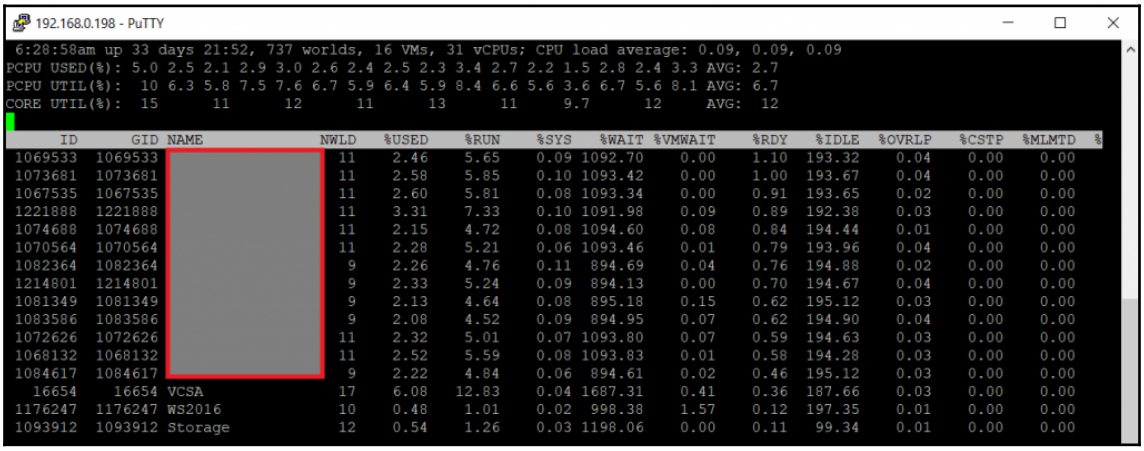

192.168.0.10
Actions
Getting St...
Summary
Moni...
Configure
Permissio...
Datacenters
Hosts & C...
VMs
Datastores
Networks
Linked v...
Extensions
Update M...
Issues
Tasks & Events
System Logs
Sessions
vCenter Server log [vpxd-9.log]
Export System Logs
2018-05-10T09:18:20.657Z Section for VMware VirtualCenter, pid=12935, version=6.5.0, build=8024368, option=Release
2018-05-10T09:18:20.656Z info vpxd[7F86163C7700] [Originator@6876 sub=vpxLro opID=urn:vmomi:HostSystem:host-129:27bd4b4a-57cf-49f5-acb6-4bffcd00ce7c.configManager.cpuScheduler.properties:02-b1] [VpxLRO] -- BEGIN lro-414350 -- ResourceModel -- cis.data.provider.ResourceModel.query -- 52bbe71b-3c9c-af4d-7fbb-4104f477bd41(52bb2d03-5475-5474-2202-9895285455b1)
2018-05-10T09:18:20.669Z info vpxd[7F86163C7700] [Originator@6876 sub=vpxLro opID=urn:vmomi:HostSystem:host-129:27bd4b4a-57cf-49f5-acb6-4bffcd00ce7c.configManager.cpuScheduler.properties:02-b1] [VpxLRO] -- FINISH lro-414350
2018-05-10T09:18:20.673Z info vpxd[7F86156AD700] [Originator@6876 sub=vpxLro opID=urn:vmomi:HostSystem:host-129:27bd4b4a-57cf-49f5-acb6-4bffcd00ce7c.properties:01-63] [VpxLRO] -- BEGIN lro-414351 -- ResourceModel -- cis.data.provider.ResourceModel.query -- 52bbe71b-3c9c-af4d-7fbb-4104f477bd41(52bb2d03-5475-5474-2202-9895285455b1)
2018-05-10T09:18:20.674Z info vpxd[7F86156AD700] [Originator@6876 sub=vpxLro opID=urn:vmomi:HostSystem:host-129:27bd4b4a-57cf-49f5-acb6-4bffcd00ce7c.properties:01-63] [VpxLRO] -- FINISH lro-414351
2018-05-10T09:18:20.688Z info vpxd[7F8616850700] [Originator@6876 sub=vpxLro opID=dam-auto-generated: HostConfigurationViewMediator:dr-211:HostPropertyProvider:202388:503216-1290187-ngc:70106318-cd] [VpxLRO] -- BEGIN lro-414353 -- imageConfigManager-129 -- vim.host.ImageConfigManager.queryHostImageProfile -- 52bbe71b-3c9c-af4d-7fbb-4104f477bd41(52bb2d03-5475-5474-2202-9895285455b1)
2018-05-10T09:18:22.194Z info vpxd[7F86171E3700] [Originator@6876 sub=vpxLro opID=dam-auto-generated: ObjectPropertyFilter:dr-223:01-73] [VpxLRO] -- BEGIN lro-414354 -- ResourceModel -- cis.data.provider.ResourceModel.query -- 52bbe71b-3c9c-af4d-7fbb-4104f477bd41(52bb2d03-5475-5474-2202-9895285455b1)
2018-05-10T09:18:22.194Z info vpxd[7F86171E3700] [Originator@6876 sub=vpxLro opID=dam-auto-generated: ObjectPropertyFilter:dr-223:01-73] [VpxLRO] -- FINISH lro-414354
2018-05-10T09:18:22.317Z info vpxd[7F861552A700] [Originator@6876 sub=vpxLro opID=dam-auto-generated: RelatedItemsManager:dr-225:01-1f] [VpxLRO] -- BEGIN
Showing 2000 of 201245 lines
Show line numbers
Show Next 2000 Lines
Show All Lines

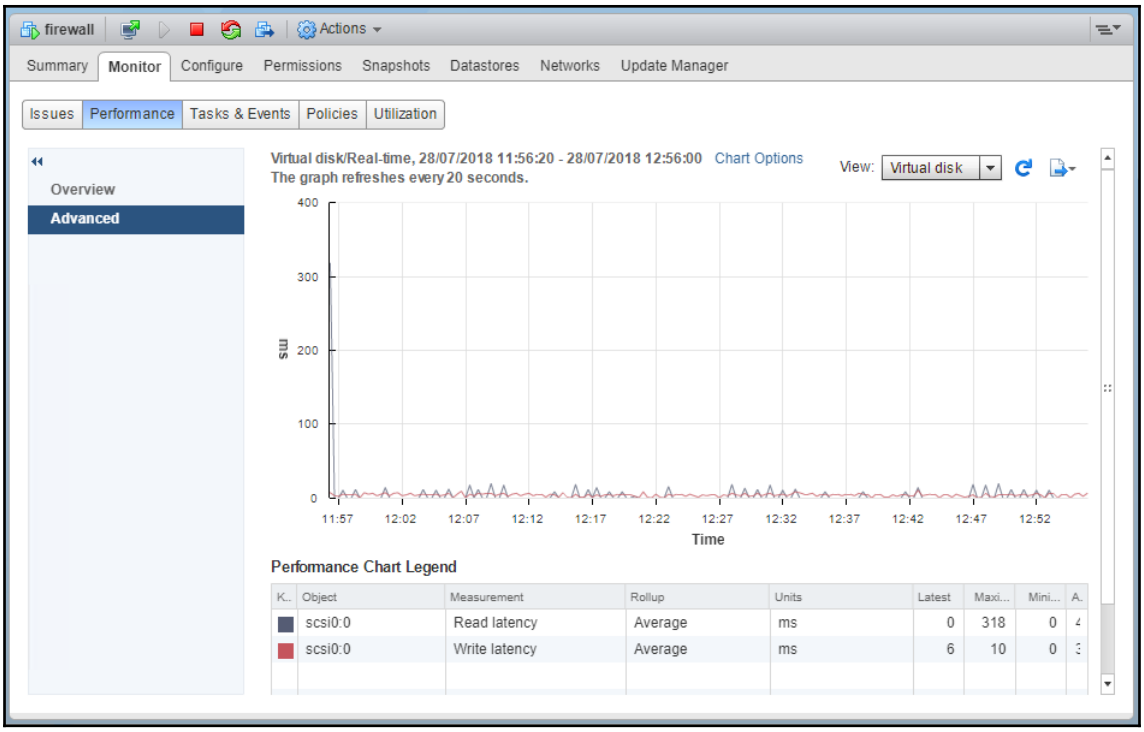

Application
Guest OS
Time spent in the ESXi storage stack is minimal. For all practical purposes, KAVG≅QAVG. In a well-configured system, QAVG should be zero.
Virtual Machine Monitor
vSCSI
ESXi Storage Stack
Driver
HBA
Fabric
Array SP
KAVG
QAVG
DAVG
GAVG
If KAVG is greater than zero, it usually means I/O is backed up in a device or adapter queue.
GAVG=KAVG+DAVG

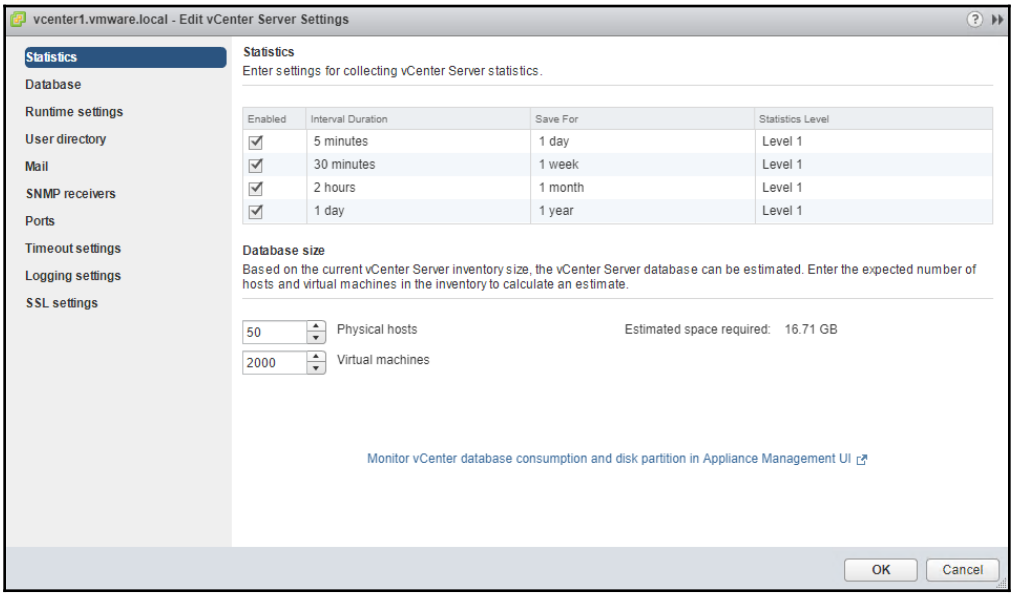

vCenter6.lab.local
Actions
Summary
Monitor
Configure
Permissions
Datacenters
Hosts & Clusters
VMs
Datastores
Networks
Linked vCenter Server Systems
Extensions
Update Manager
Settings
General
vCenter Server Settings
Edit...
Statistics
Estimated space required: 58,70 GB
Database
Max connections: 50
vCenter6.lab.local - Edit vCenter Server Settings
Statistics
Database
Runtime settings
User directory
Mail
SNMP receivers
Ports
Timeout settings
Logging settings
SSL settings
Logging settings
Select the level of detail that vCenter Server uses for log files.
Logging options
info
none
error
warning
info
verbose
trivia

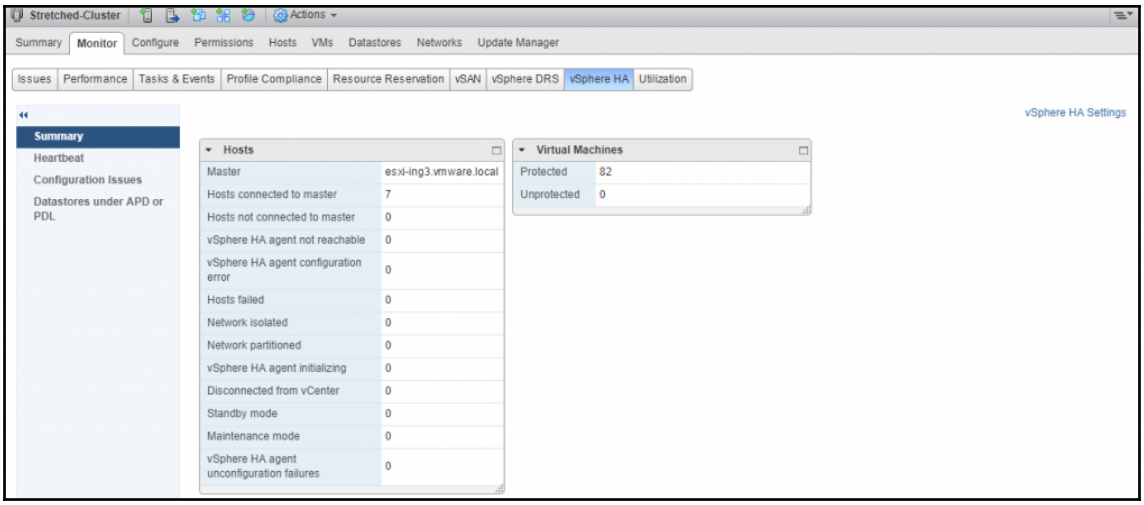

firewall
Actions
Summary
Monitor
Configure
Permissions
Snapshots
Datastores
Networks
Update Manager
Issues
Performance
Tasks & Events
Policies
Utilization
Overview
Advanced
CPU/Real-time, 28/07/2018 12:34:40 - 28/07/2018 13:34:20
The graph refreshes every 20 seconds.
Chart Options
View:
CPU
100
200
180
firewall - Chart Options
Chart options:
--Select option--
Save Options As...
Delete Options
Always load these options at startup
Chart Metrics
CPU
Datastore
Disk
Memory
Network
Power
System
Virtual disk
Timespan:
Real-time
Last:
1
Hour(s)
From:
28/07/2018
13:34
To:
28/07/2018
13:34
Select object for this chart:
Target Objects
0
1
firewall
Chart Type:
Line Graph
All
None
Select counters for this chart:
Counters
Rollups
Units
Internal Name
Stat Type
Description
Co-stop
Summation
ms
costop
Delta
Demand
Average
MHz
demand
Absolute
Demand-to-entitlem...
Latest
%
demandEntitleme...
Absolute
Entitlement
Latest
MHz
entitlement
Absolute
Idle
Summation
ms
idle
Delta
Latency
Average
%
latency
Rate
Max limited
Summation
ms
maxlimited
Delta
All
None

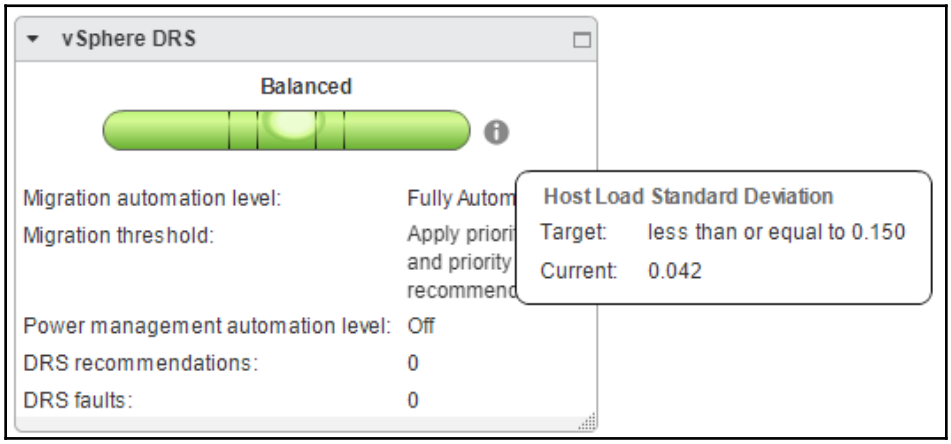

firewall
Actions
Summary
Monitor
Configure
Permissions
Snapshots
Datastores
Networks
Update Manager
Issues
Performance
Tasks & Events
Policies
Utilization
Overview
Advanced
Memory/Real-time, 28/07/2018 12:32:40 - 28/07/2018 13:32:20
Chart Options
The graph refreshes every 20 seconds.
View:
Memory
KB
2800000
2400000
2000000
1600000
1200000
800000
400000
0
12:33
12:38
12:43
12:48
12:53
12:58
1:03
1:08
1:13
1:18
1:23
1:28
Time
Performance Chart Legend
K..
Object
Measurement
Rollup
Units
Latest
Maxi...
Mini...
A.
firewall
Active
Average
KB
20...
41...
16...
firewall
Ballooned memory
Average
KB
0
0
0
firewall
Consumed
Average
KB
20...
20...
20...


192.168.0.198 - PuTTY
6:28:58am up 33 days 21:52, 737 worlds, 16 VMs, 31 vCPUs; CPU load average: 0.09, 0.09, 0.09
PCPU USED(%): 5.0 2.5 2.1 2.9 3.0 2.6 2.4 2.5 2.3 3.4 2.7 2.2 1.5 2.8 2.4 3.3 AVG: 2.7
PCPU UTIL(%): 10 6.3 5.8 7.5 7.6 6.7 5.9 6.4 5.9 8.4 6.6 5.6 3.6 6.7 5.6 8.1 AVG: 6.7
CORE UTIL(%): 15 11 12 11 13 11 9.7 12 AVG: 12
ID GID NAME NWLD %USED %RUN %SYS %WAIT %VMWAIT %RDY %IDLE %OVRLP %CSTP %MLMTD %
1069533 1069533 11 2.46 5.65 0.09 1092.70 0.00 1.10 193.32 0.04 0.00 0.00
1073681 1073681 11 2.58 5.85 0.10 1093.42 0.00 1.00 193.67 0.04 0.00 0.00
1067535 1067535 11 2.60 5.81 0.08 1093.34 0.00 0.91 193.65 0.02 0.00 0.00
1221888 1221888 11 3.31 7.33 0.10 1091.98 0.09 0.89 192.38 0.03 0.00 0.00
1074688 1074688 11 2.15 4.72 0.08 1094.60 0.08 0.84 194.44 0.01 0.00 0.00
1070564 1070564 11 2.28 5.21 0.06 1093.46 0.01 0.79 193.96 0.04 0.00 0.00
1082364 1082364 9 2.26 4.76 0.11 894.69 0.04 0.76 194.88 0.02 0.00 0.00
1214801 1214801 9 2.33 5.24 0.09 894.13 0.00 0.70 194.67 0.04 0.00 0.00
1081349 1081349 9 2.13 4.64 0.08 895.18 0.15 0.62 195.12 0.03 0.00 0.00
1083586 1083586 9 2.08 4.52 0.09 894.95 0.07 0.62 194.90 0.04 0.00 0.00
1072626 1072626 11 2.32 5.01 0.07 1093.80 0.07 0.59 194.63 0.03 0.00 0.00
1068132 1068132 11 2.52 5.59 0.08 1093.83 0.01 0.58 194.28 0.03 0.00 0.00
1084617 1084617 9 2.22 4.84 0.06 894.61 0.02 0.46 195.12 0.03 0.00 0.00
16654 16654 VCSA 17 6.08 12.83 0.04 1687.31 0.41 0.36 187.66 0.03 0.00 0.00
1176247 1176247 WS2016 10 0.48 1.01 0.02 998.38 1.57 0.12 197.35 0.01 0.00 0.00
1093912 1093912 Storage 12 0.54 1.26 0.03 1198.06 0.00 0.11 99.34 0.01 0.00 0.00

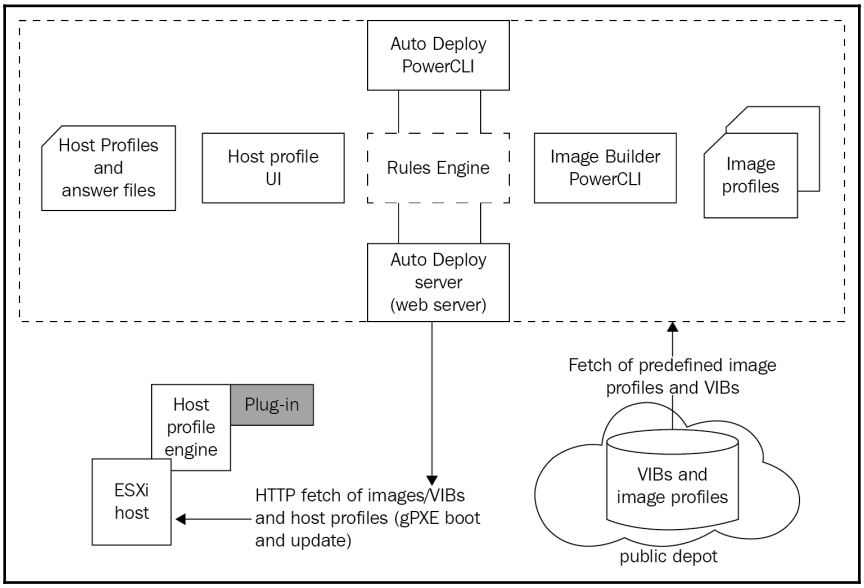

firewall
Actions
Summary
Monitor
Configure
Permissions
Snapshots
Datastores
Networks
Update Manager
Issues
Performance
Tasks & Events
Policies
Utilization
Overview
Advanced
Virtual disk/Real-time, 28/07/2018 11:56:20 - 28/07/2018 12:56:00
Chart Options
The graph refreshes every 20 seconds.
View:
Virtual disk
400
300
200
100
0
ms
11:57
12:02
12:07
12:12
12:17
12:22
12:27
12:32
12:37
12:42
12:47
12:52
Time
Performance Chart Legend
K..
Object
Measurement
Rollup
Units
Latest
Maxi...
Mini...
A..
scsi0:0
Read latency
Average
ms
0
318
0
scsi0:0
Write latency
Average
ms
6
10
0

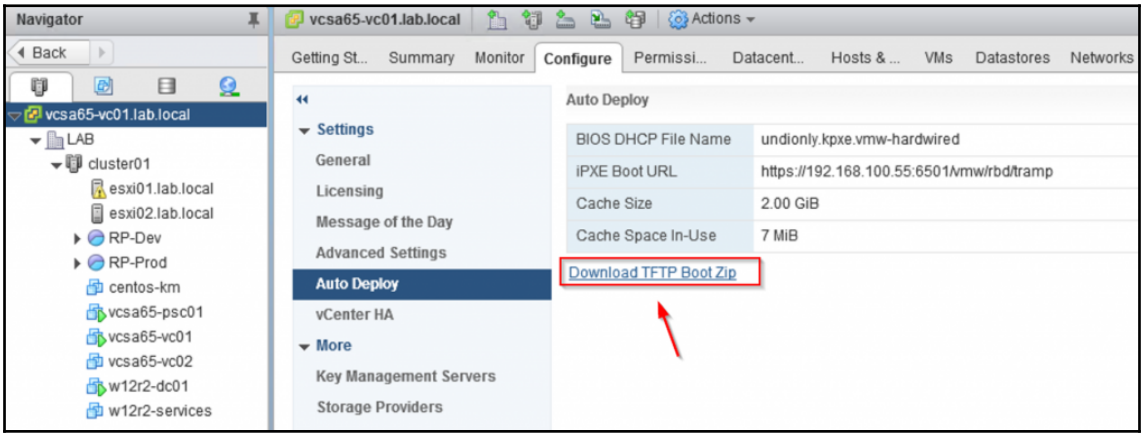

vcenter1.vmware.local - Edit vCenter Server Settings
Statistics
Database
Runtime settings
User directory
Mail
SNMP receivers
Ports
Timeout settings
Logging settings
SSL settings
Statistics
Enter settings for collecting vCenter Server statistics.
Enabled
Interval Duration
Save For
Statistics Level
5 minutes
1 day
Level 1
30 minutes
1 week
Level 1
2 hours
1 month
Level 1
1 day
1 year
Level 1
Database size
Based on the current vCenter Server inventory size, the vCenter Server database can be estimated. Enter the expected number of hosts and virtual machines in the inventory to calculate an estimate.
50
Physical hosts
2000
Virtual machines
Estimated space required: 16.71 GB
Monitor vCenter database consumption and disk partition in Appliance Management UI
OK
Cancel

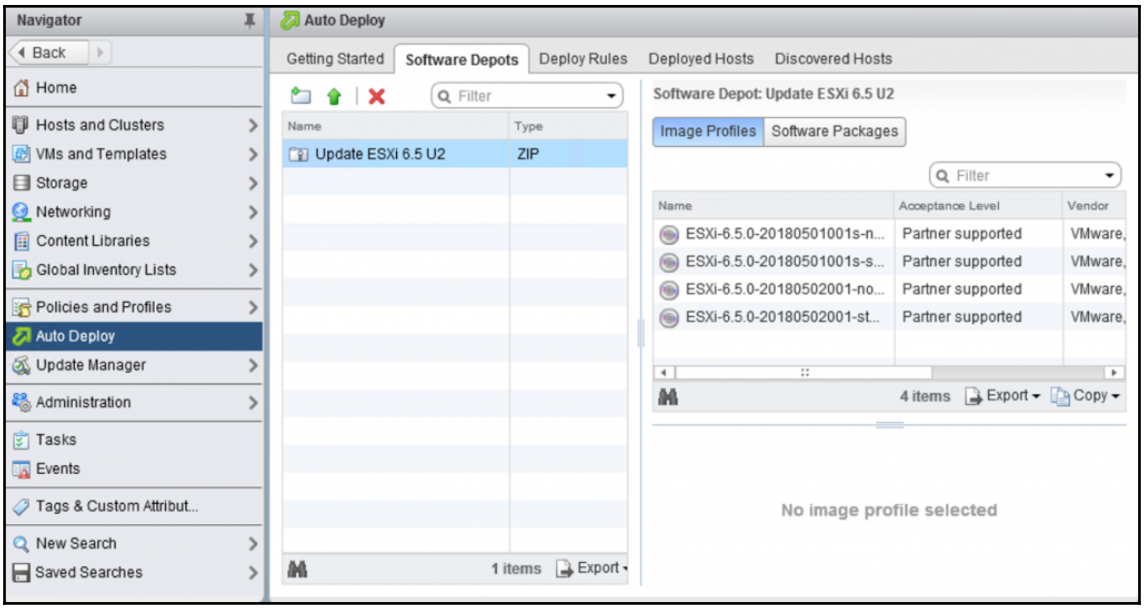

Stretched-Cluster
Actions
Summary
Monitor
Configure
Permissions
Hosts
VMs
Datastores
Networks
Update Manager
Issues
Performance
Tasks & Events
Profile Compliance
Resource Reservation
vSAN
vSphere DRS
vSphere HA
Utilization
vSphere HA Settings
Summary
Heartbeat
Configuration Issues
Datastores under APD or PDL
Hosts
Master
esxi-ing3.vmware.local
Hosts connected to master
7
Hosts not connected to master
0
vSphere HA agent not reachable
0
vSphere HA agent configuration error
0
Hosts failed
0
Network isolated
0
Network partitioned
0
vSphere HA agent initializing
0
Disconnected from vCenter
0
Standby mode
0
Maintenance mode
0
vSphere HA agent unconfiguration failures
0
Virtual Machines
Protected
82
Unprotected
0

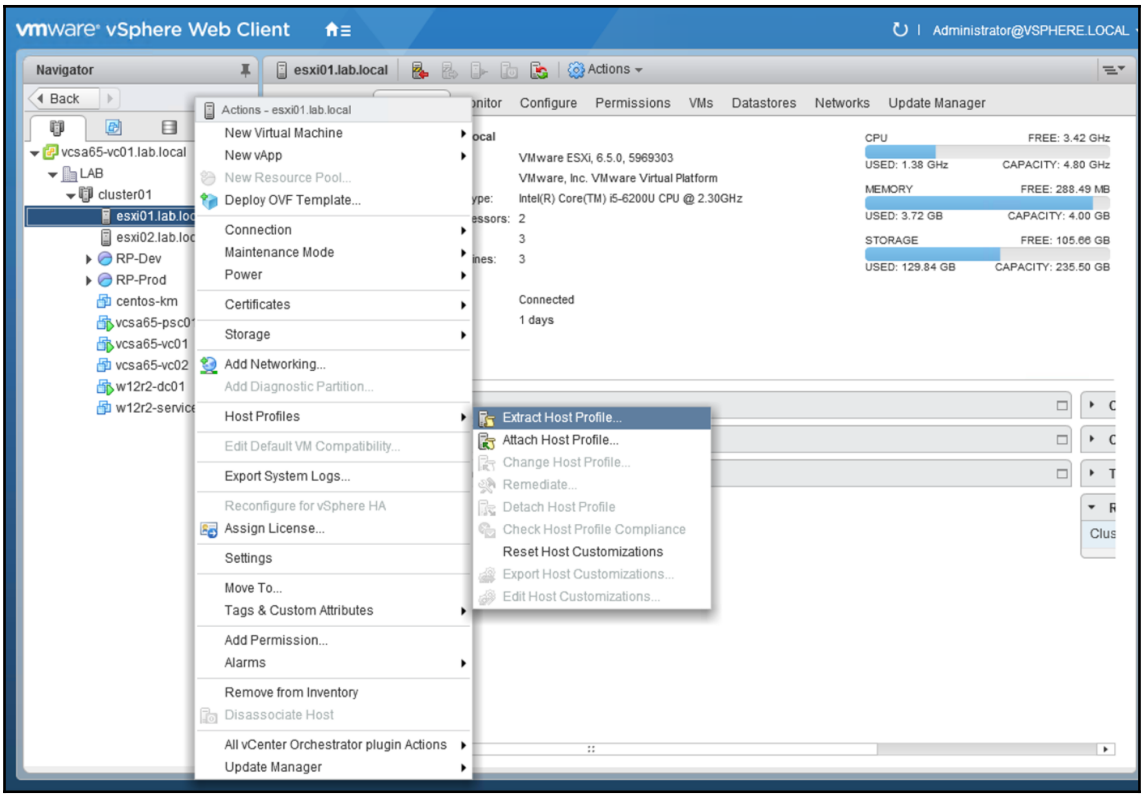

vSphere DRS
Balanced
Migration automation level:
Fully Autom
Migration threshold:
Apply priori
and priority
recommend
Power management automation level:
Off
DRS recommendations:
0
DRS faults:
0
Host Load Standard Deviation
Target:
less than or equal to 0.150
Current:
0.042

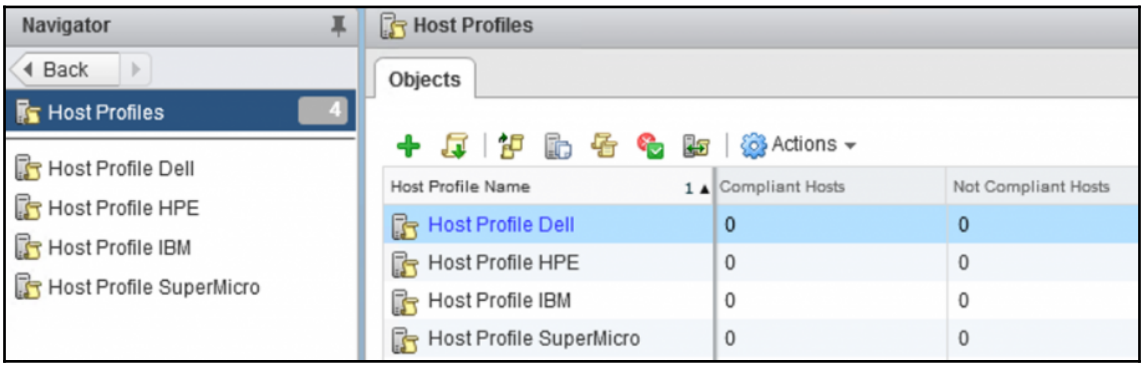
Chapter 08: Deploy and Customize ESXi Hosts

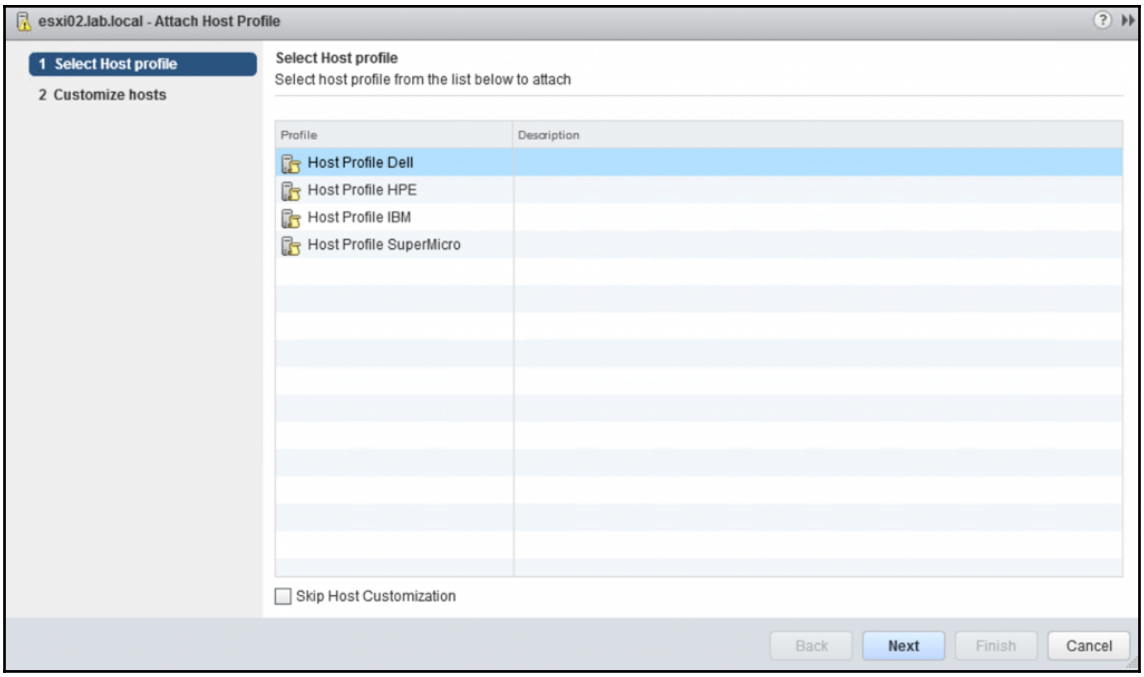


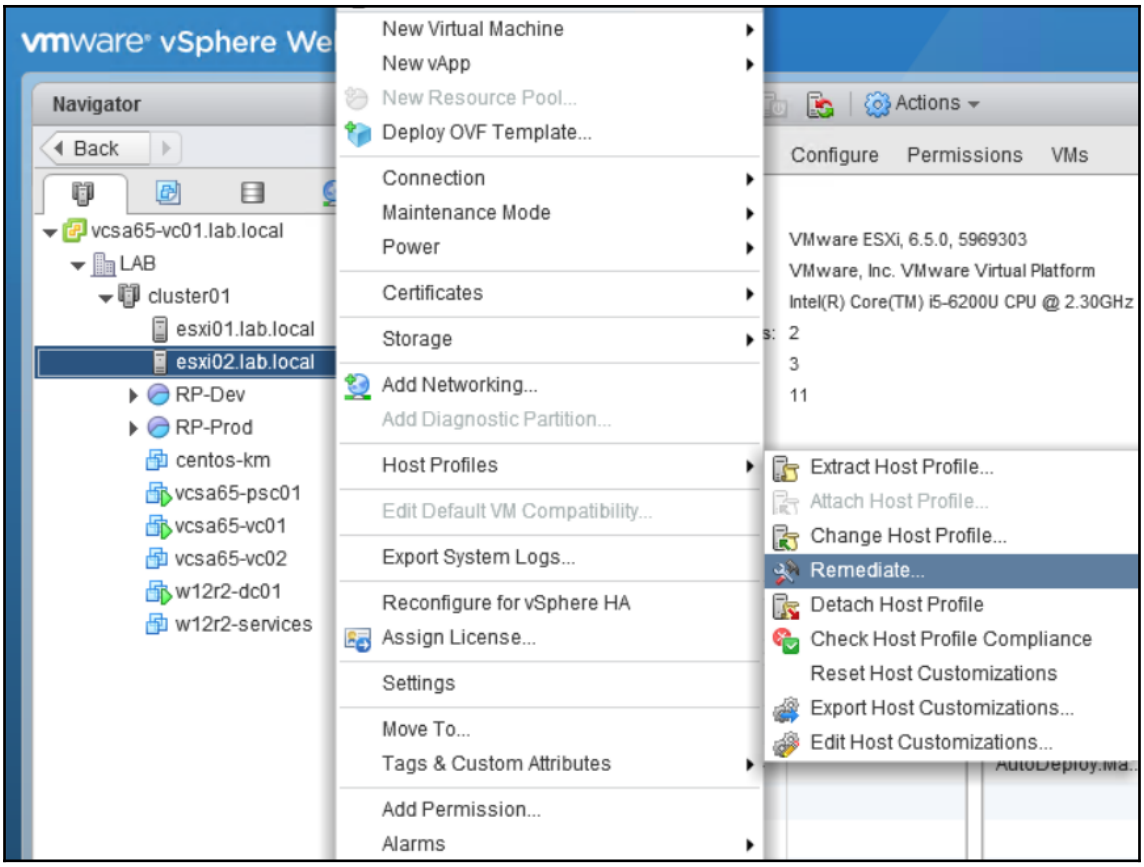


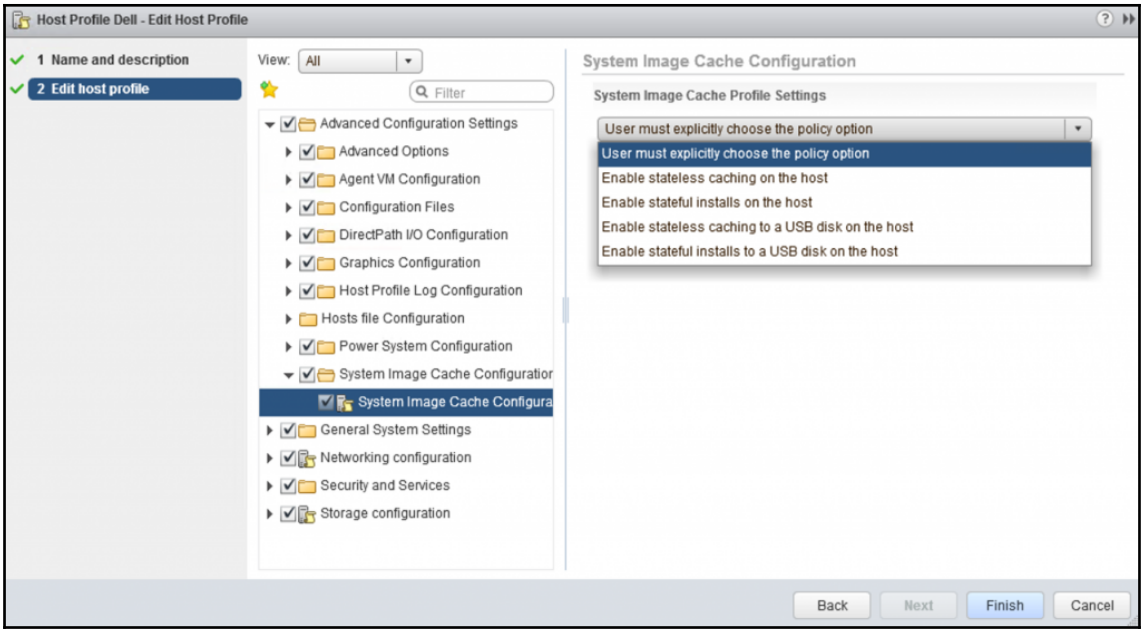

Navigator
Back
Home
Hosts and Clusters
VMs and Templates
Storage
Networking
Content Libraries
Global Inventory Lists
Policies and Profiles
Auto Deploy
Update Manager
Administration
Tasks
Events
Tags & Custom Attribut...
New Search
Saved Searches
Auto Deploy
Getting Started
Software Depots
Deploy Rules
Deployed Hosts
Discovered Hosts
Filter
Name
Type
Update ESXi 6.5 U2
ZIP
1 items
Export
Software Depot: Update ESXi 6.5 U2
Image Profiles
Software Packages
Filter
Name
Acceptance Level
Vendor
ESXi-6.5.0-20180501001s-n...
Partner supported
VMware,
ESXi-6.5.0-20180501001s-s...
Partner supported
VMware,
ESXi-6.5.0-20180502001-no...
Partner supported
VMware,
ESXi-6.5.0-20180502001-st...
Partner supported
VMware,
4 items
Export
Copy
No image profile selected

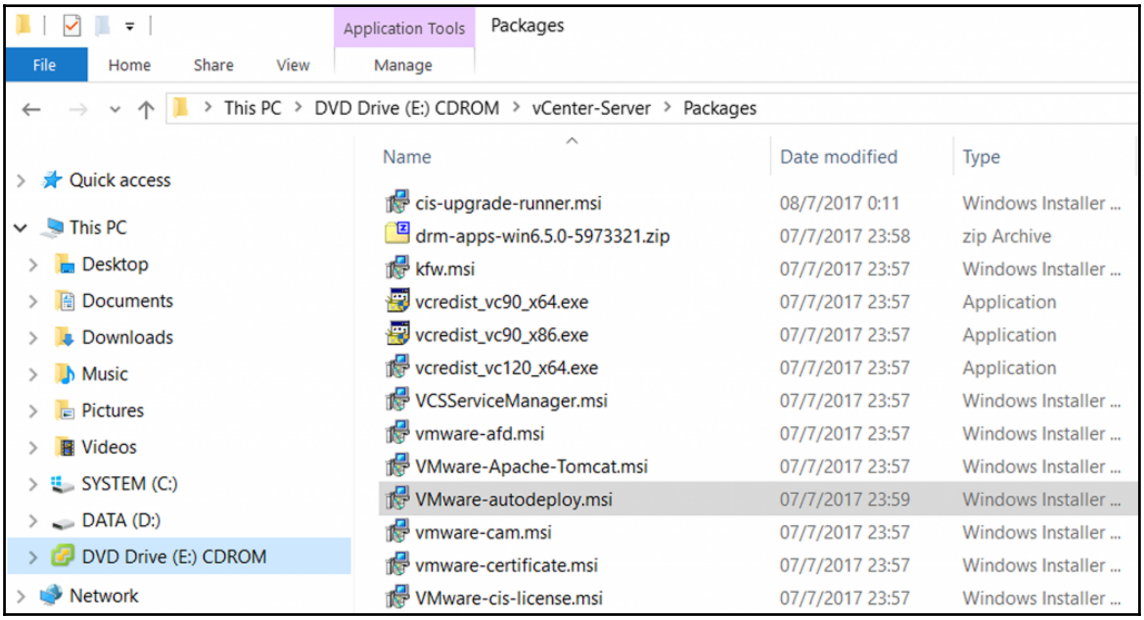

vmware vSphere Web Client
Administrator@VSPHERE.LOCAL
Navigator
Back
esxi01.lab.local
Actions
Configure
Permissions
VMs
Datastores
Networks
Update Manager
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.loc
esxi02.lab.loc
RP-Dev
RP-Prod
centos-km
vcsa65-psc0
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-servic
Actions - esxi01.lab.local
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Connection
Maintenance Mode
Power
Certificates
Storage
Add Networking...
Add Diagnostic Partition...
Host Profiles
Edit Default VM Compatibility...
Export System Logs...
Reconfigure for vSphere HA
Assign License...
Settings
Move To...
Tags & Custom Attributes
Add Permission...
Alarms
Remove from Inventory
Disassociate Host
All vCenter Orchestrator plugin Actions
Update Manager
Extract Host Profile...
Attach Host Profile...
Change Host Profile...
Remediate...
Detach Host Profile
Check Host Profile Compliance
Reset Host Customizations
Export Host Customizations...
Edit Host Customizations...
VMware ESXi, 6.5.0, 5969303
VMware, Inc. VMware Virtual Platform
Intel(R) Core(TM) i5-6200U CPU @ 2.30GHz
2
3
3
Connected
1 days
CPU
FREE: 3.42 GHz
USED: 1.38 GHz
CAPACITY: 4.80 GHz
MEMORY
FREE: 288.49 MB
USED: 3.72 GB
CAPACITY: 4.00 GB
STORAGE
FREE: 105.66 GB
USED: 129.84 GB
CAPACITY: 235.50 GB

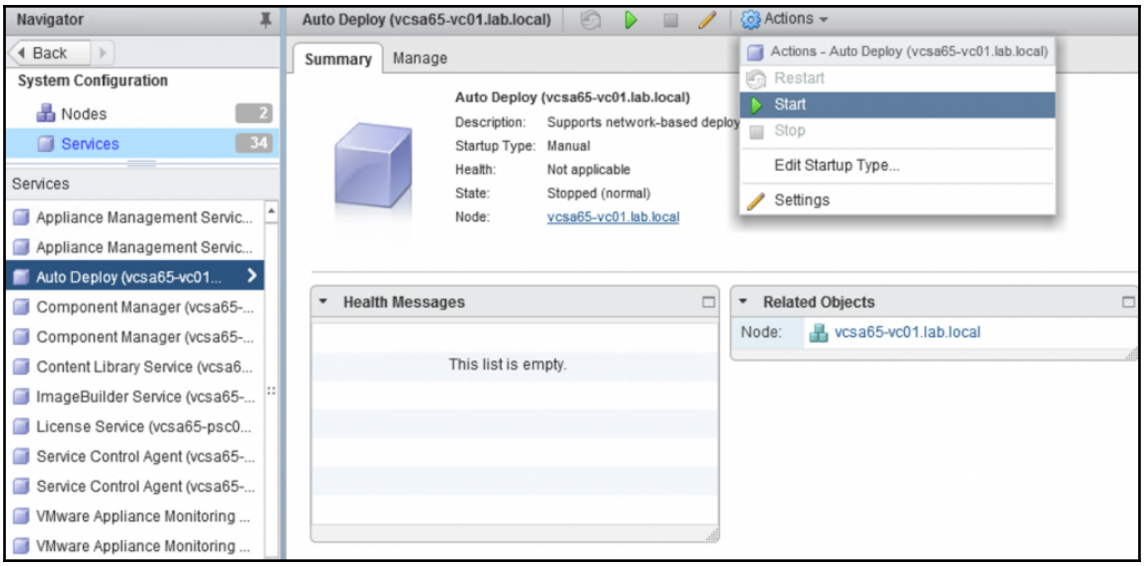

Navigator
Back
Host Profiles
4
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
Host Profiles
Objects
Actions
Host Profile Name
1
Compliant Hosts
Not Compliant Hosts
Host Profile Dell
0
0
Host Profile HPE
0
0
Host Profile IBM
0
0
Host Profile SuperMicro
0
0

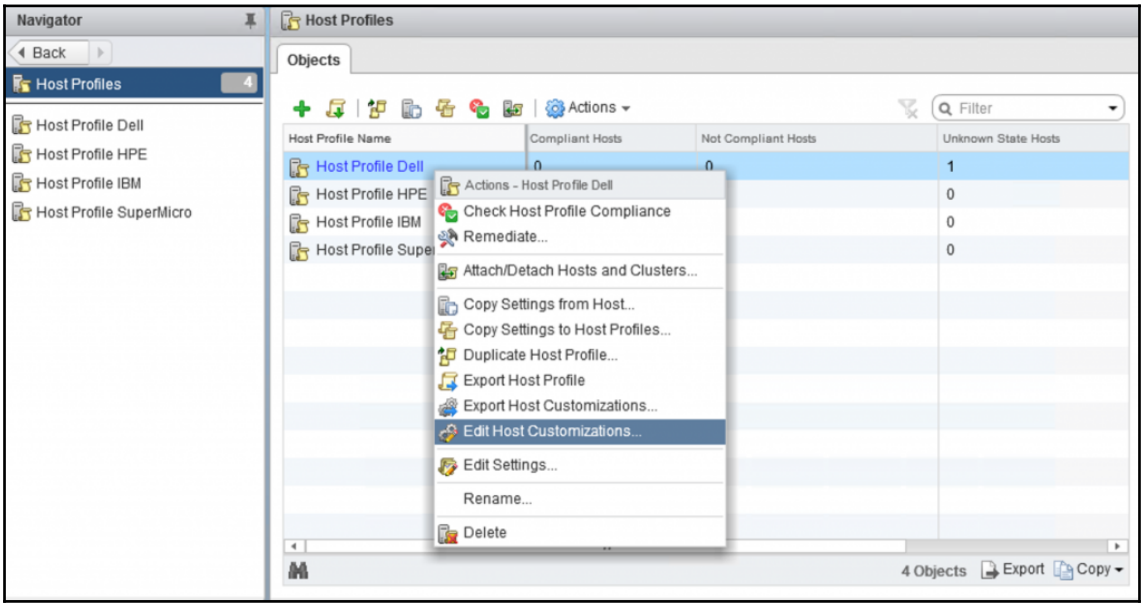

esxi02.lab.local - Attach Host Profile
1 Select Host profile
2 Customize hosts
Select Host profile
Select host profile from the list below to attach
Profile
Description
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
Skip Host Customization
Back
Next
Finish
Cancel

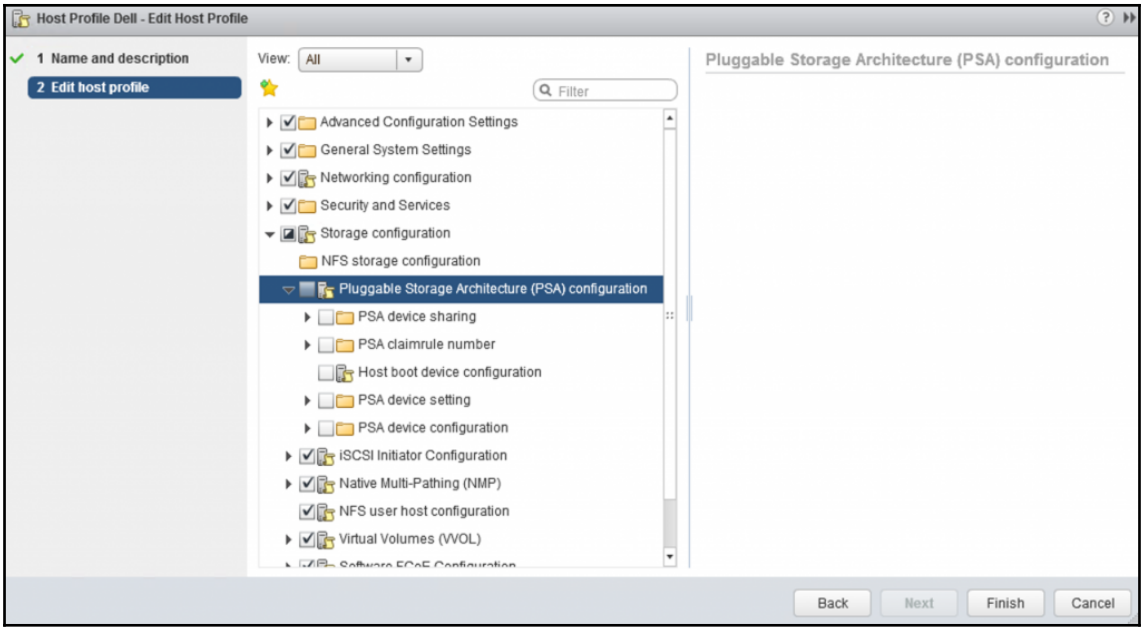

vmware vSphere We
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
centos-km
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Connection
Maintenance Mode
Power
Certificates
Storage
Add Networking...
Add Diagnostic Partition...
Host Profiles
Edit Default VM Compatibility...
Export System Logs...
Reconfigure for vSphere HA
Assign License...
Settings
Move To...
Tags & Custom Attributes
Add Permission...
Alarms
Actions
Configure
Permissions
VMs
VMware ESXi, 6.5.0, 5969303
VMware, Inc. VMware Virtual Platform
Intel(R) Core(TM) i5-6200U CPU @ 2.30GHz
2
3
11
Extract Host Profile...
Attach Host Profile...
Change Host Profile...
Remediate...
Detach Host Profile
Check Host Profile Compliance
Reset Host Customizations
Export Host Customizations...
Edit Host Customizations...

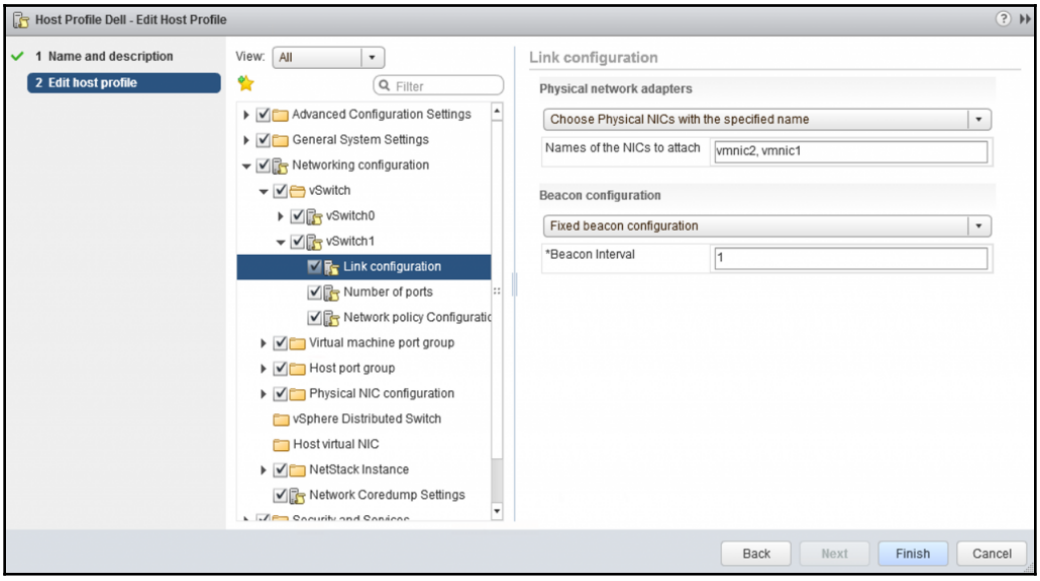

Host Profile Dell - Edit Host Profile
1 Name and description
2 Edit host profile
View: All
Filter
Advanced Configuration Settings
Advanced Options
Agent VM Configuration
Configuration Files
DirectPath I/O Configuration
Graphics Configuration
Host Profile Log Configuration
Hosts file Configuration
Power System Configuration
System Image Cache Configuratior
System Image Cache Configura
General System Settings
Networking configuration
Security and Services
Storage configuration
System Image Cache Configuration
System Image Cache Profile Settings
User must explicitly choose the policy option
User must explicitly choose the policy option
Enable stateless caching on the host
Enable stateful installs on the host
Enable stateless caching to a USB disk on the host
Enable stateful installs to a USB disk on the host
Back
Next
Finish
Cancel

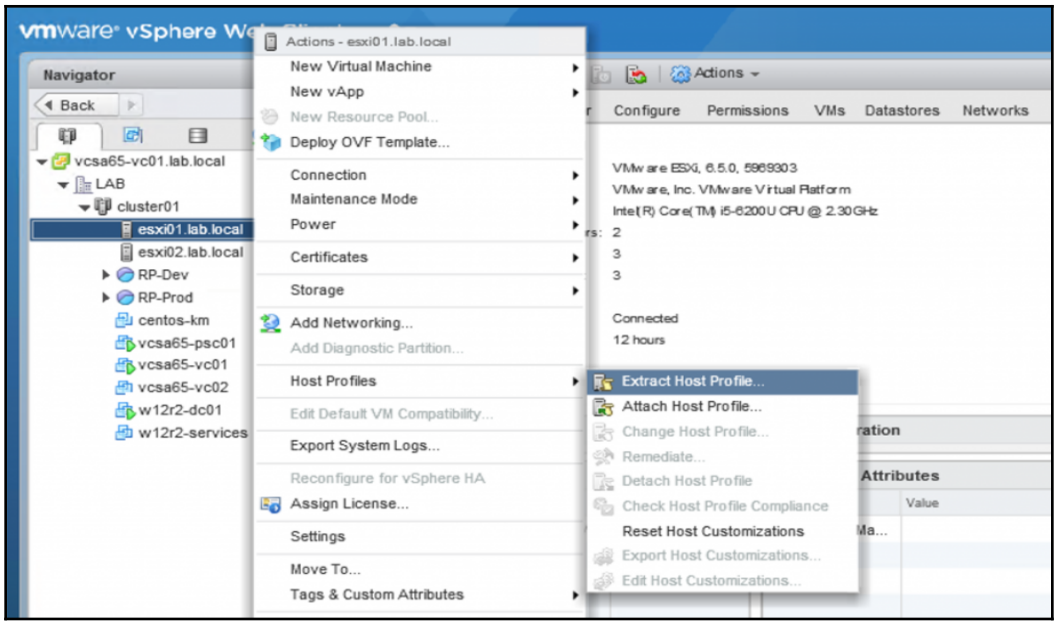

Application Tools
Packages
File
Home
Share
View
Manage
This PC
DVD Drive (E:) CDROM
vCenter-Server
Packages
Quick access
This PC
Desktop
Documents
Downloads
Music
Pictures
Videos
SYSTEM (C:)
DATA (D:)
DVD Drive (E:) CDROM
Network
Name
Date modified
Type
cis-upgrade-runner.msi 08/7/2017 0:11 Windows Installer ...
drm-apps-win6.5.0-5973321.zip 07/7/2017 23:58 zip Archive
kfw.msi 07/7/2017 23:57 Windows Installer ...
vcredist_vc90_x64.exe 07/7/2017 23:57 Application
vcredist_vc90_x86.exe 07/7/2017 23:57 Application
vcredist_vc120_x64.exe 07/7/2017 23:57 Application
VCSServiceManager.msi 07/7/2017 23:57 Windows Installer ...
vmware-afd.msi 07/7/2017 23:57 Windows Installer ...
VMware-Apache-Tomcat.msi 07/7/2017 23:57 Windows Installer ...
VMware-autodeploy.msi 07/7/2017 23:59 Windows Installer ...
vmware-cam.msi 07/7/2017 23:57 Windows Installer ...
vmware-certificate.msi 07/7/2017 23:57 Windows Installer ...
VMware-cis-license.msi 07/7/2017 23:57 Windows Installer ...

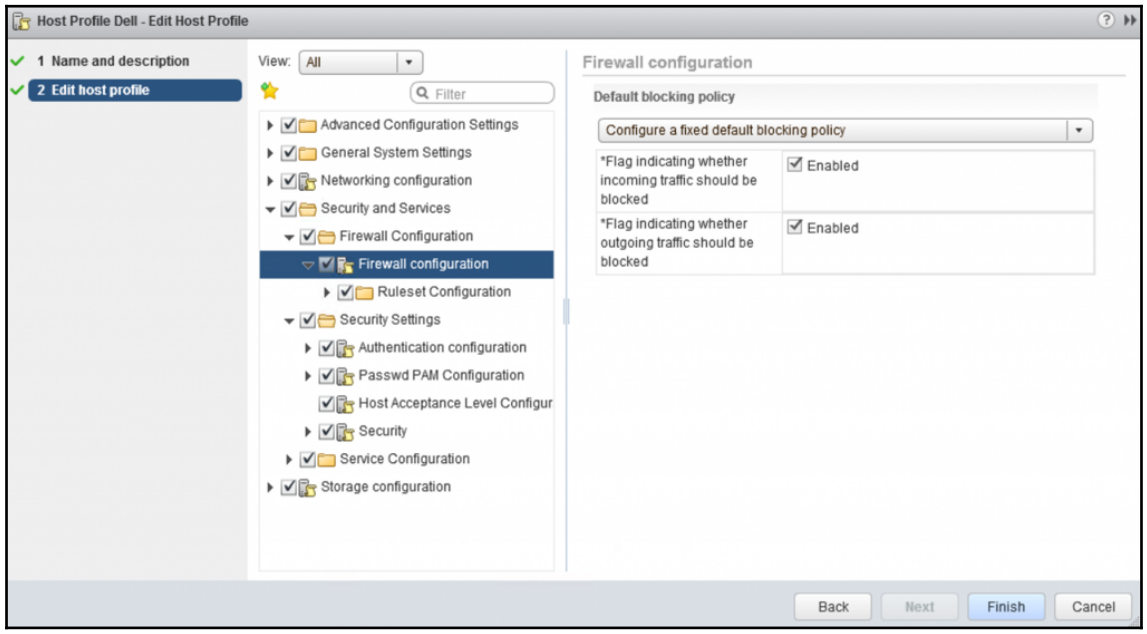

Navigator
Back
System Configuration
Nodes 2
Services 34
Services
Appliance Management Servic...
Appliance Management Servic...
Auto Deploy (vcsa65-vc01...
Component Manager (vcsa65-...
Component Manager (vcsa65-...
Content Library Service (vcsa6...
ImageBuilder Service (vcsa65-...
License Service (vcsa65-psc0...
Service Control Agent (vcsa65-...
Service Control Agent (vcsa65-...
VMware Appliance Monitoring ...
VMware Appliance Monitoring ...
Auto Deploy (vcsa65-vc01.lab.local)
Actions
Summary
Manage
Auto Deploy (vcsa65-vc01.lab.local)
Description: Supports network-based deploy
Startup Type: Manual
Health: Not applicable
State: Stopped (normal)
Node: vcsa65-vc01.lab.local
Actions - Auto Deploy (vcsa65-vc01.lab.local)
Restart
Start
Stop
Edit Startup Type...
Settings
Health Messages
This list is empty.
Related Objects
Node: vcsa65-vc01.lab.local

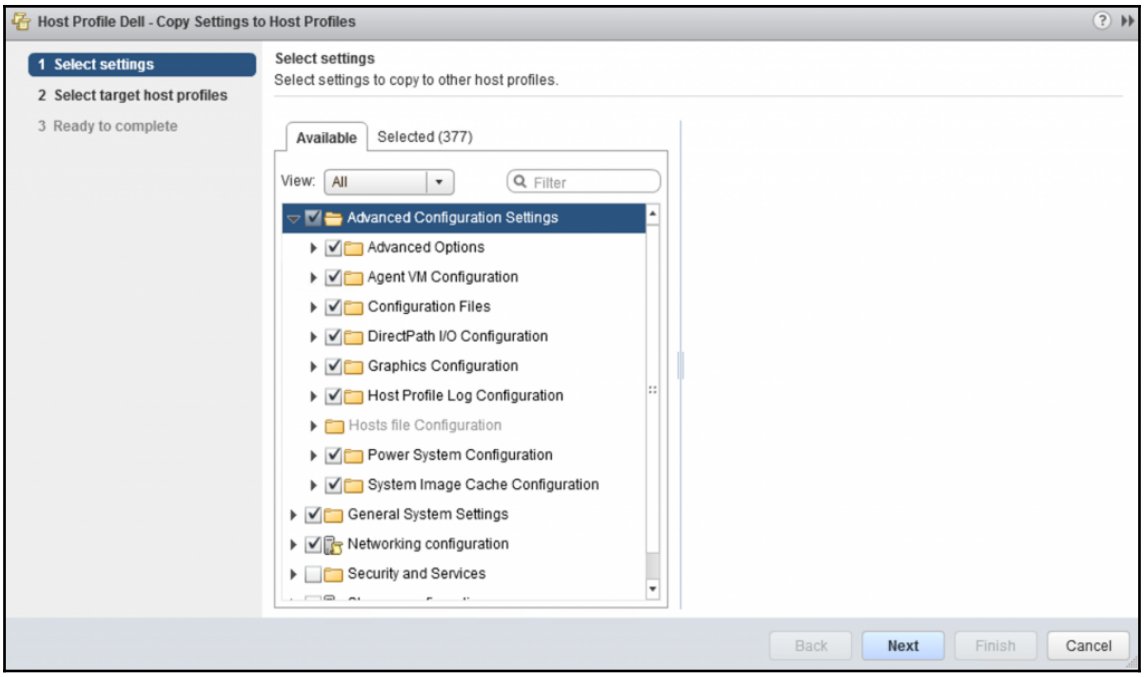

Navigator
Back
Host Profiles 4
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
Host Profiles
Objects
Actions
Filter
Host Profile Name
Compliant Hosts
Not Compliant Hosts
Unknown State Hosts
Host Profile Dell 0 0 1
Host Profile HPE 0
Host Profile IBM 0
Host Profile Super 0
Actions - Host Profile Dell
Check Host Profile Compliance
Remediate...
Attach/Detach Hosts and Clusters...
Copy Settings from Host...
Copy Settings to Host Profiles...
Duplicate Host Profile...
Export Host Profile
Export Host Customizations...
Edit Host Customizations...
Edit Settings...
Rename...
Delete
4 Objects
Export
Copy

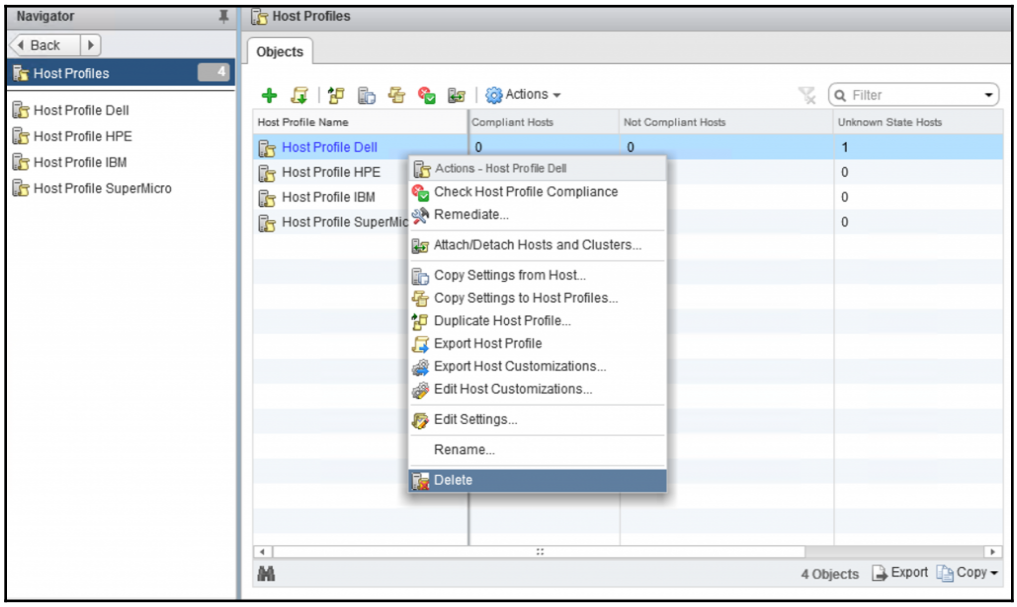

Host Profile Dell - Edit Host Profile
1 Name and description
2 Edit host profile
View: All
Filter
Advanced Configuration Settings
General System Settings
Networking configuration
Security and Services
Storage configuration
NFS storage configuration
Pluggable Storage Architecture (PSA) configuration
PSA device sharing
PSA claimrule number
Host boot device configuration
PSA device setting
PSA device configuration
iSCSI Initiator Configuration
Native Multi-Pathing (NMP)
NFS user host configuration
Virtual Volumes (VVOL)
Pluggable Storage Architecture (PSA) configuration
Back
Next
Finish
Cancel

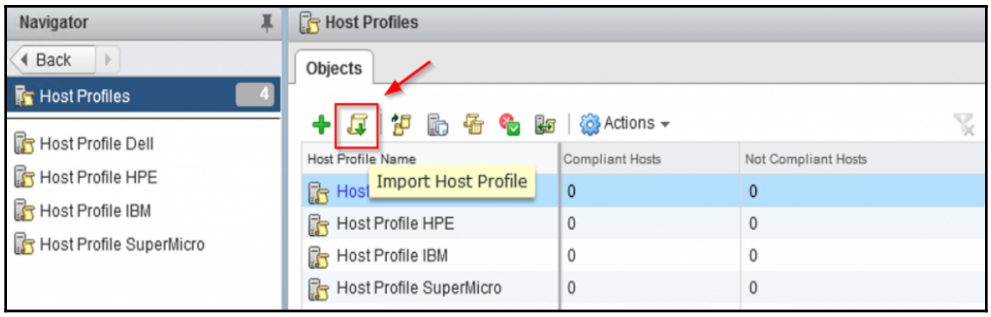

Host Profile Dell - Edit Host Profile
1 Name and description
2 Edit host profile
View: All
Filter
Advanced Configuration Settings
General System Settings
Networking configuration
vSwitch
vSwitch0
vSwitch1
Link configuration
Number of ports
Network policy Configuratic
Virtual machine port group
Host port group
Physical NIC configuration
vSphere Distributed Switch
Host virtual NIC
NetStack Instance
Network Coredump Settings
Link configuration
Physical network adapters
Choose Physical NICs with the specified name
Names of the NICs to attach
vmnic2, vmnic1
Beacon configuration
Fixed beacon configuration
*Beacon Interval
1
Back
Next
Finish
Cancel

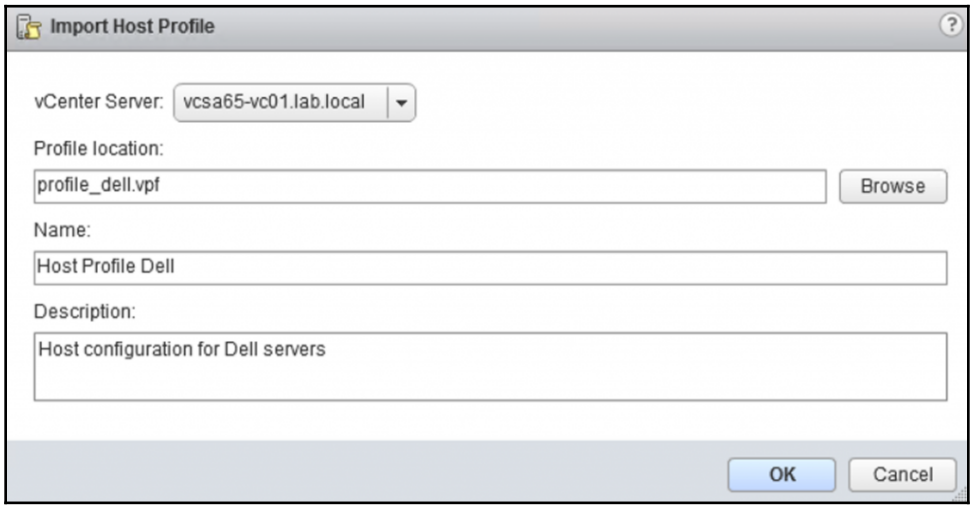

Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
centos-km
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
Actions - esxi01.lab.local
New Virtual Machine
New vApp
New Resource Pool...
Deploy OVF Template...
Connection
Maintenance Mode
Power
Certificates
Storage
Add Networking...
Add Diagnostic Partition...
Host Profiles
Edit Default VM Compatibility...
Export System Logs...
Reconfigure for vSphere HA
Assign License...
Settings
Move To...
Tags & Custom Attributes
Actions
Configure
Permissions
VMs
Datastores
Networks
VMware ESXi, 6.5.0, 5969303
VMware, Inc. VMware Virtual Platform
Intel(R) Core(TM) i5-6200U CPU @ 2.30GHz
2
3
3
Connected
12 hours
Extract Host Profile...
Attach Host Profile...
Change Host Profile...
Remediate...
Detach Host Profile
Check Host Profile Compliance
Reset Host Customizations
Export Host Customizations...
Edit Host Customizations...
Attributes
Value

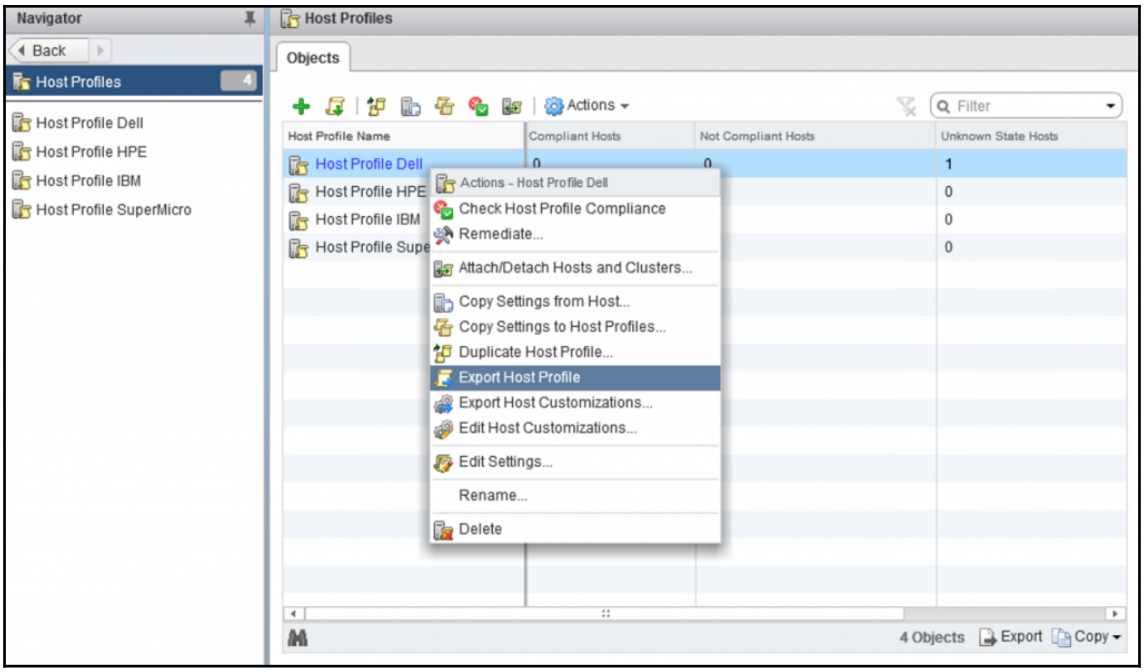

Host Profile Dell - Edit Host Profile
1 Name and description
2 Edit host profile
View: All
Filter
Advanced Configuration Settings
General System Settings
Networking configuration
Security and Services
Firewall Configuration
Firewall configuration
Ruleset Configuration
Security Settings
Authentication configuration
Passwd PAM Configuration
Host Acceptance Level Configur
Security
Service Configuration
Storage configuration
Firewall configuration
Default blocking policy
Configure a fixed default blocking policy
*Flag indicating whether incoming traffic should be blocked
Enabled
*Flag indicating whether outgoing traffic should be blocked
Enabled
Back
Next
Finish
Cancel

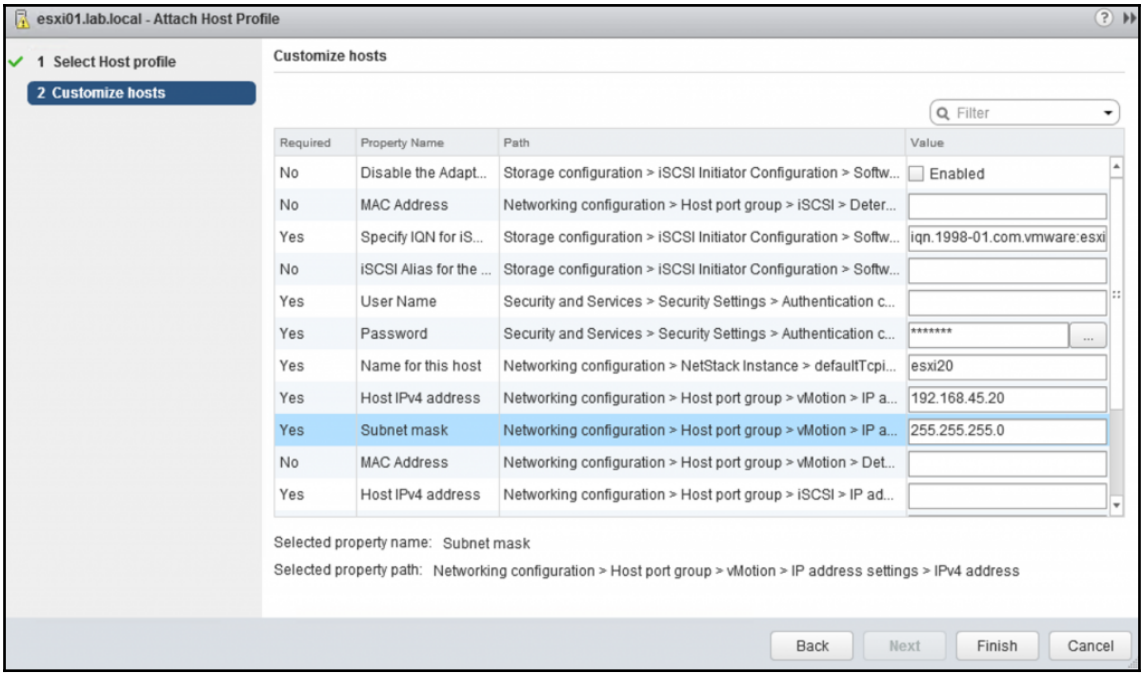

Host Profile Dell - Copy Settings to Host Profiles
1 Select settings
2 Select target host profiles
3 Ready to complete
Select settings
Select settings to copy to other host profiles.
Available
Selected (377)
View:
All
Filter
Advanced Configuration Settings
Advanced Options
Agent VM Configuration
Configuration Files
DirectPath I/O Configuration
Graphics Configuration
Host Profile Log Configuration
Hosts file Configuration
Power System Configuration
System Image Cache Configuration
General System Settings
Networking configuration
Security and Services
Back
Next
Finish
Cancel

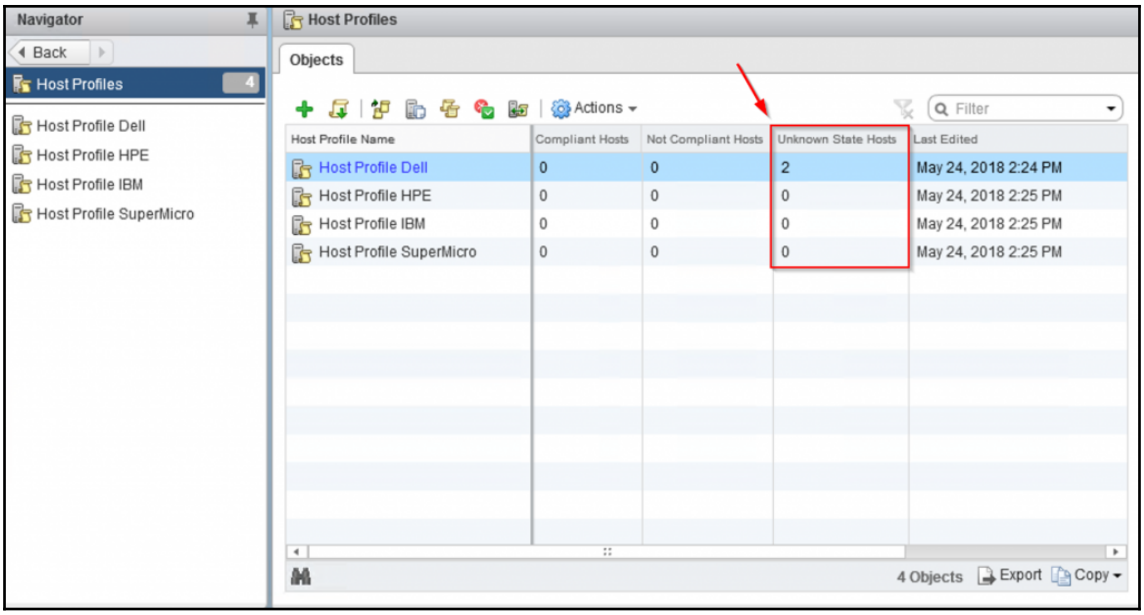

Navigator
Back
Host Profiles
4
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
Host Profiles
Objects
Actions
Filter
Host Profile Name
Compliant Hosts
Not Compliant Hosts
Unknown State Hosts
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMic
Actions - Host Profile Dell
Check Host Profile Compliance
Remediate...
Attach/Detach Hosts and Clusters...
Copy Settings from Host...
Copy Settings to Host Profiles...
Duplicate Host Profile...
Export Host Profile
Export Host Customizations...
Edit Host Customizations...
Edit Settings...
Rename...
Delete
4 Objects
Export
Copy

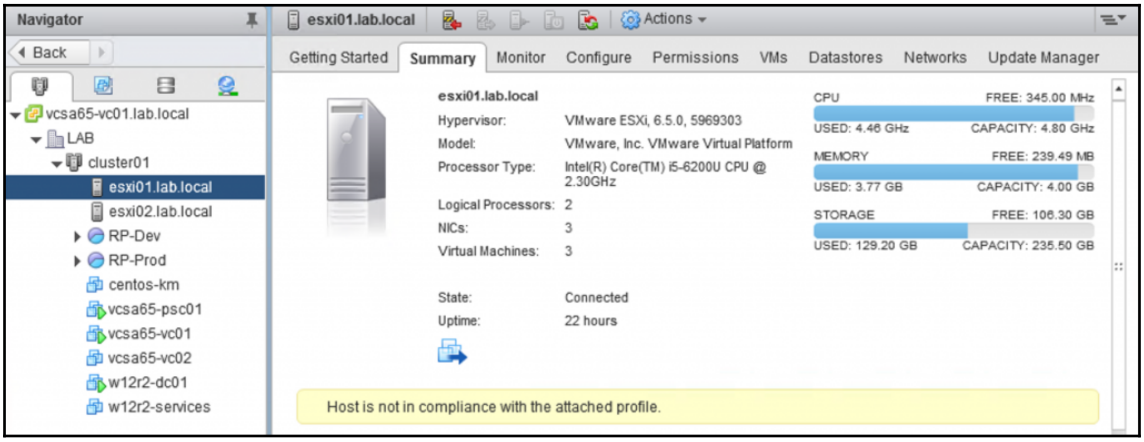

Navigator
Back
Host Profiles
4
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
Host Profiles
Objects
Actions
Import Host Profile
Host Profile Name
Compliant Hosts
Not Compliant Hosts
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
0

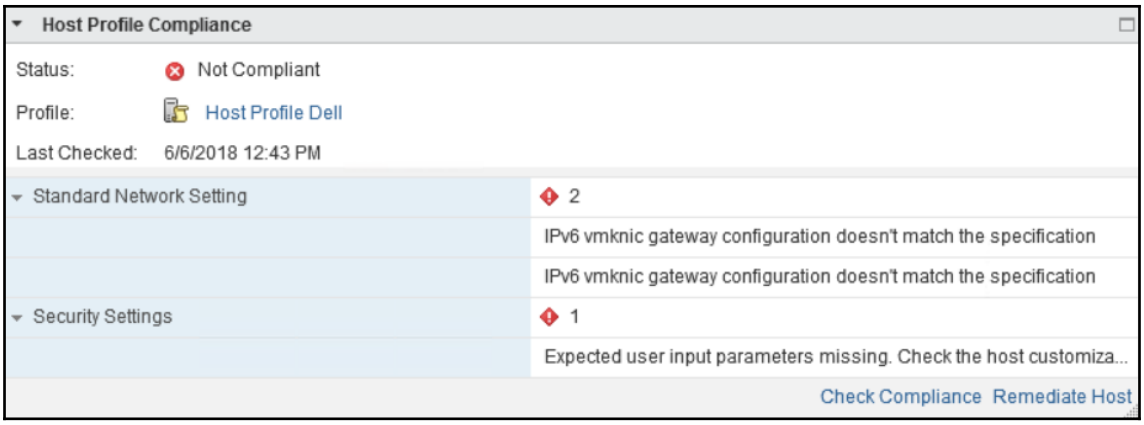

Import Host Profile
vCenter Server:
vcsa65-vc01.lab.local
Profile location:
profile_dell.vpf
Browse
Name:
Host Profile Dell
Description:
Host configuration for Dell servers
OK
Cancel

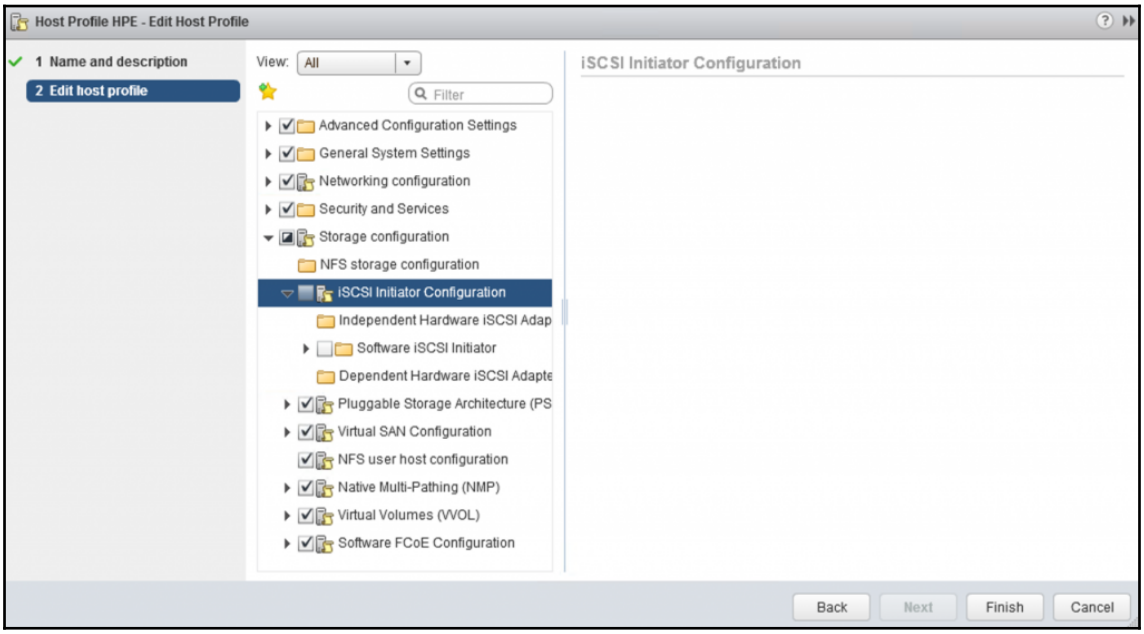

Navigator
Back
Host Profiles 4
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
Host Profiles
Objects
Actions
Filter
Host Profile Name
Compliant Hosts
Not Compliant Hosts
Unknown State Hosts
Host Profile Dell 0 0 1
Host Profile HPE 0
Host Profile IBM 0
Host Profile Supe 0
Actions - Host Profile Dell
Check Host Profile Compliance
Remediate...
Attach/Detach Hosts and Clusters...
Copy Settings from Host...
Copy Settings to Host Profiles...
Duplicate Host Profile...
Export Host Profile
Export Host Customizations...
Edit Host Customizations...
Edit Settings...
Rename...
Delete
4 Objects
Export
Copy


esxi01.lab.local - Attach Host Profile
1 Select Host profile
2 Customize hosts
Customize hosts
Filter
Required
Property Name
Path
Value
No Disable the Adapt... Storage configuration > iSCSI Initiator Configuration > Softw... Enabled
No MAC Address Networking configuration > Host port group > iSCSI > Deter...
Yes Specify IQN for iS... Storage configuration > iSCSI Initiator Configuration > Softw... iqn.1998-01.com.vmware:esxi
No iSCSI Alias for the ... Storage configuration > iSCSI Initiator Configuration > Softw...
Yes User Name Security and Services > Security Settings > Authentication c...
Yes Password Security and Services > Security Settings > Authentication c... *******
Yes Name for this host Networking configuration > NetStack Instance > defaultTcpi... esxi20
Yes Host IPv4 address Networking configuration > Host port group > vMotion > IP a... 192.168.45.20
Yes Subnet mask Networking configuration > Host port group > vMotion > IP a... 255.255.255.0
No MAC Address Networking configuration > Host port group > vMotion > Det...
Yes Host IPv4 address Networking configuration > Host port group > iSCSI > IP ad...
Selected property name: Subnet mask
Selected property path: Networking configuration > Host port group > vMotion > IP address settings > IPv4 address
Back
Next
Finish
Cancel

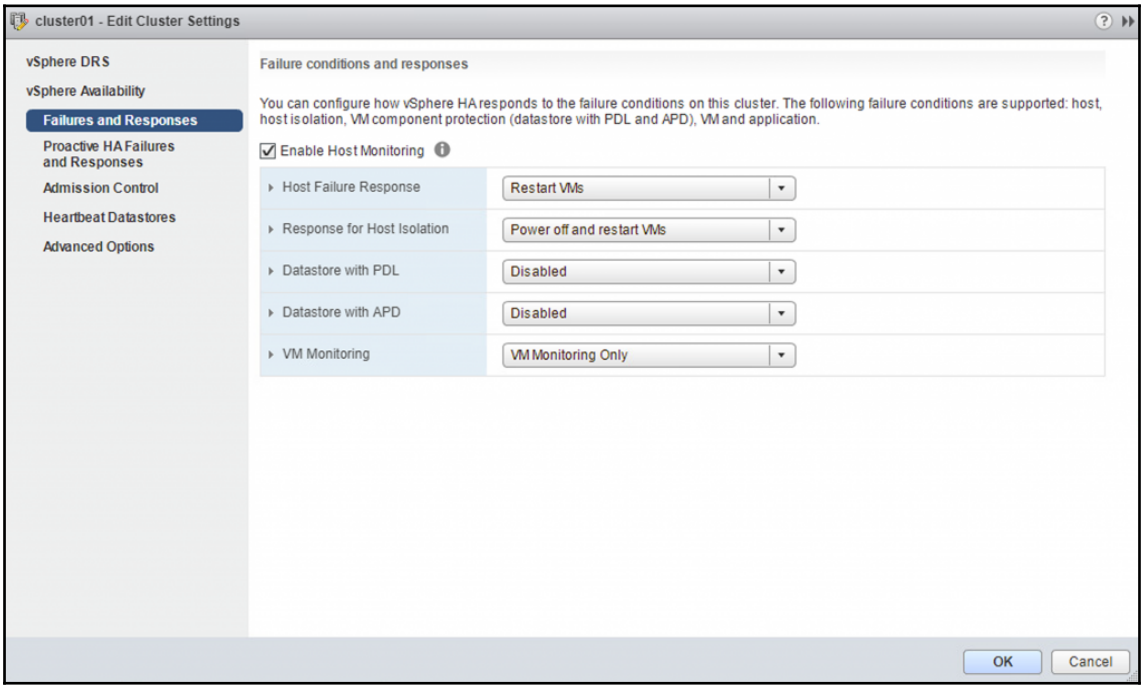

Navigator
Back
Host Profiles
4
Host Profile Dell
Host Profile HPE
Host Profile IBM
Host Profile SuperMicro
Host Profiles
Objects
Actions
Filter
Host Profile Name
Compliant Hosts
Not Compliant Hosts
Unknown State Hosts
Last Edited
Host Profile Dell 0 0 2 May 24, 2018 2:24 PM
Host Profile HPE 0 0 0 May 24, 2018 2:25 PM
Host Profile IBM 0 0 0 May 24, 2018 2:25 PM
Host Profile SuperMicro 0 0 0 May 24, 2018 2:25 PM
4 Objects
Export
Copy

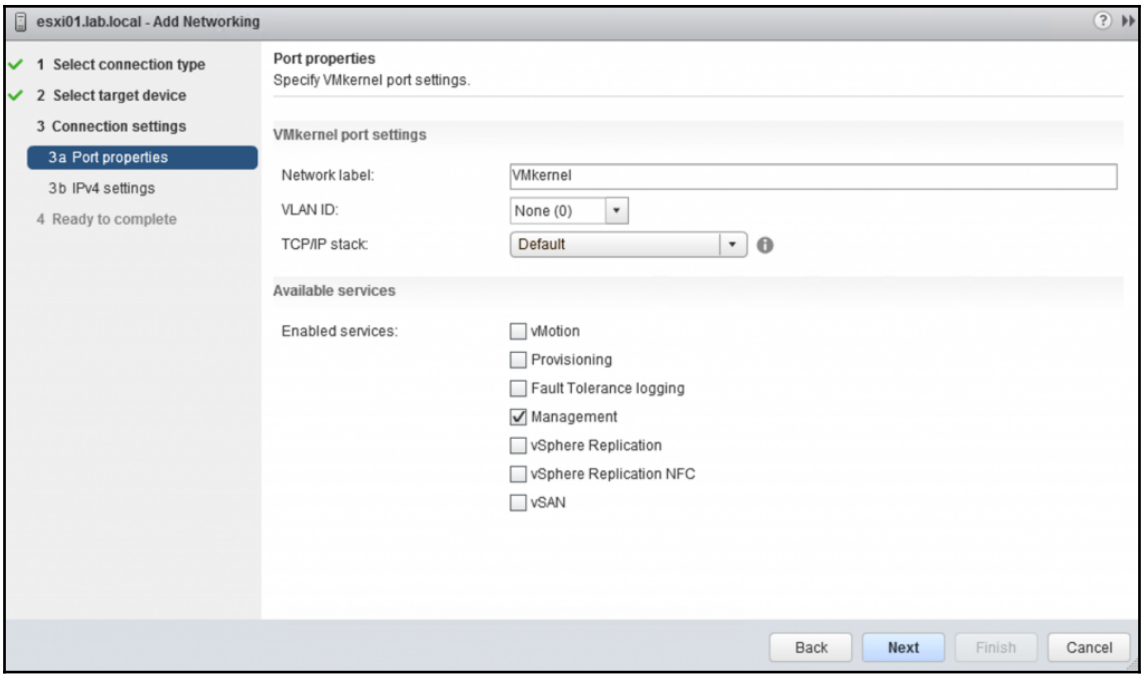

Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
centos-km
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
esxi01.lab.local
Actions
Getting Started
Summary
Monitor
Configure
Permissions
VMs
Datastores
Networks
Update Manager
esxi01.lab.local
Hypervisor: VMware ESXi, 6.5.0, 5969303
Model: VMware, Inc. VMware Virtual Platform
Processor Type: Intel(R) Core(TM) i5-6200U CPU @ 2.30GHz
Logical Processors: 2
NICs: 3
Virtual Machines: 3
State: Connected
Uptime: 22 hours
CPU FREE: 345.00 MHz
USED: 4.46 GHz CAPACITY: 4.80 GHz
MEMORY FREE: 239.49 MB
USED: 3.77 GB CAPACITY: 4.00 GB
STORAGE FREE: 106.30 GB
USED: 129.20 GB CAPACITY: 235.50 GB
Host is not in compliance with the attached profile.

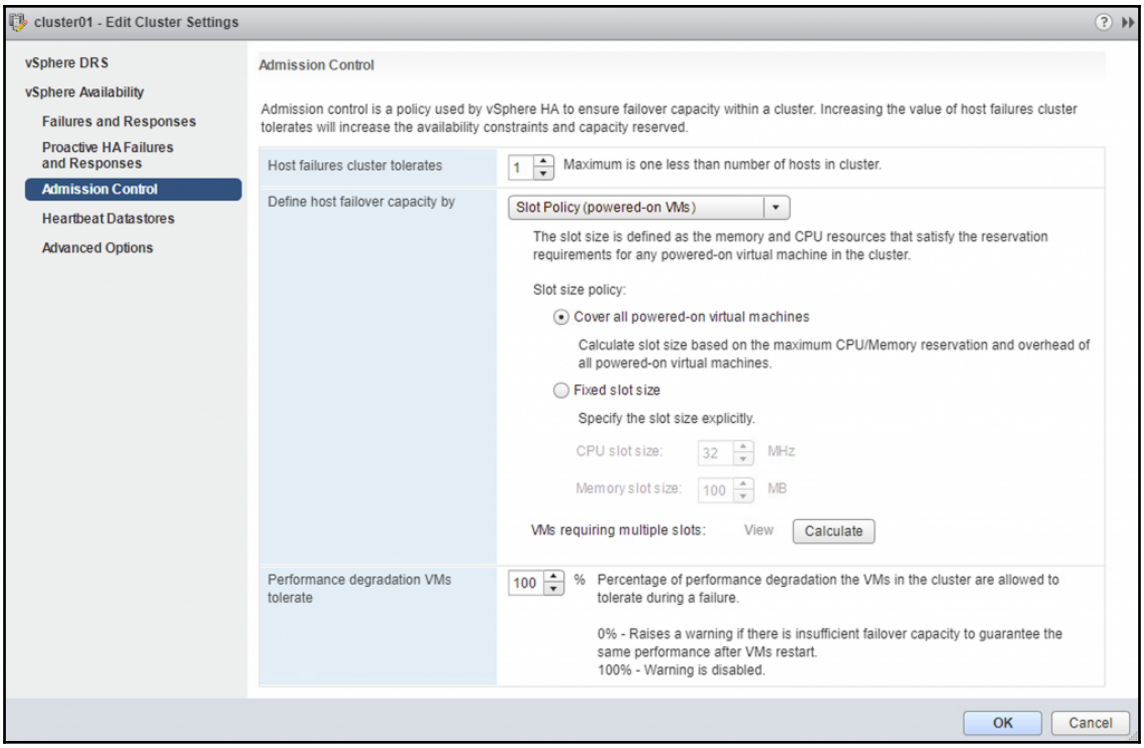

Host Profile Compliance
Status:
Not Compliant
Profile:
Host Profile Dell
Last Checked:
6/6/2018 12:43 PM
Standard Network Setting
2
IPv6 vmknic gateway configuration doesn't match the specification
IPv6 vmknic gateway configuration doesn't match the specification
Security Settings
1
Expected user input parameters missing. Check the host customiza...
Check Compliance
Remediate Host

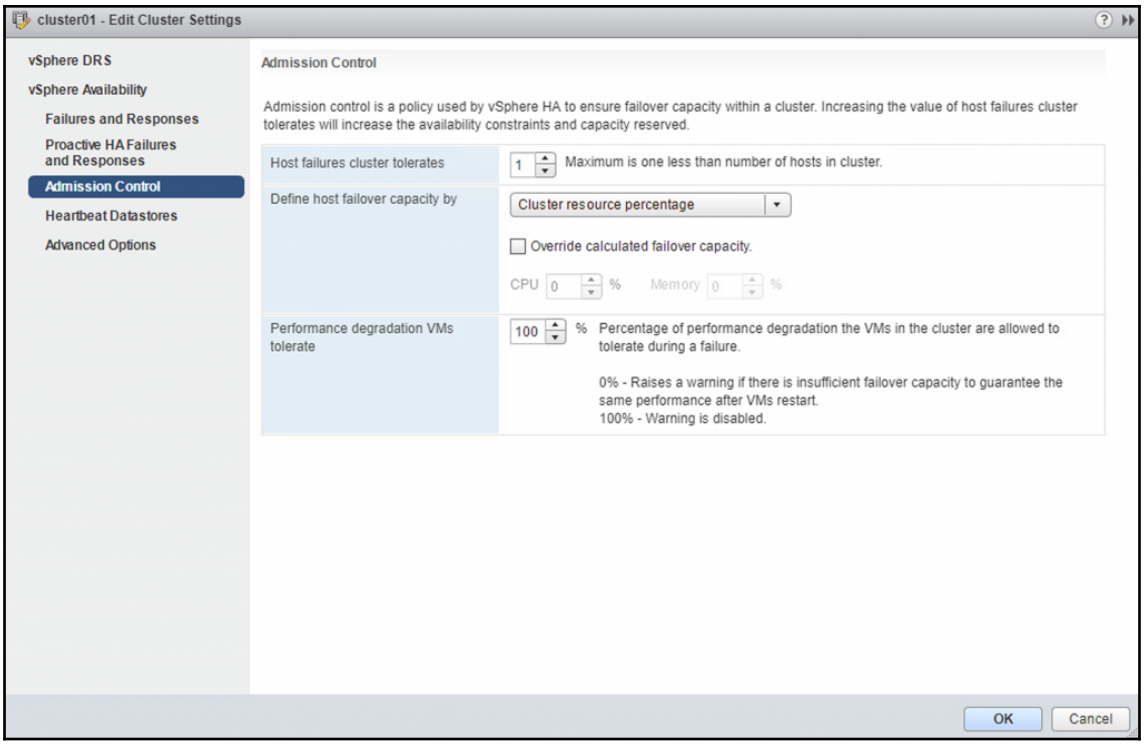

Host Profile HPE - Edit Host Profile
1 Name and description
2 Edit host profile
View:
All
Filter
Advanced Configuration Settings
General System Settings
Networking configuration
Security and Services
Storage configuration
NFS storage configuration
iSCSI Initiator Configuration
Independent Hardware iSCSI Adap
Software iSCSI Initiator
Dependent Hardware iSCSI Adapte
Pluggable Storage Architecture (PS
Virtual SAN Configuration
NFS user host configuration
Native Multi-Pathing (NMP)
Virtual Volumes (VVOL)
Software FCoE Configuration
iSCSI Initiator Configuration
Back
Next
Finish
Cancel

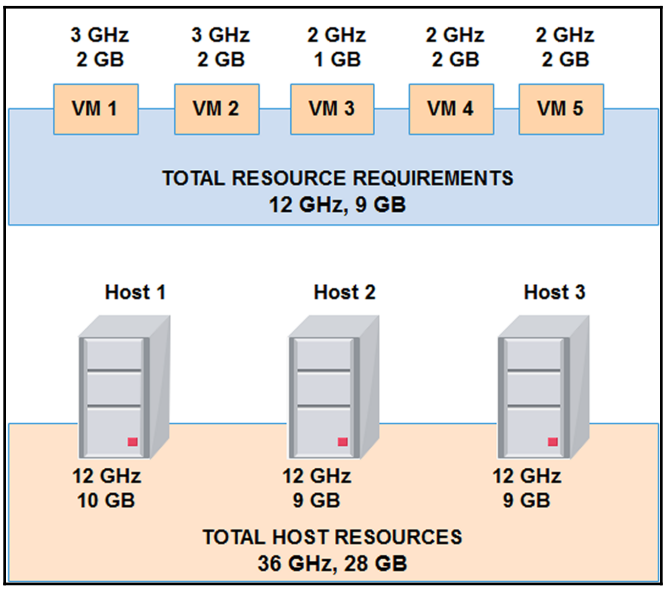
Chapter 09: Configure and Administer vSphere and vCenter Availability Solutions

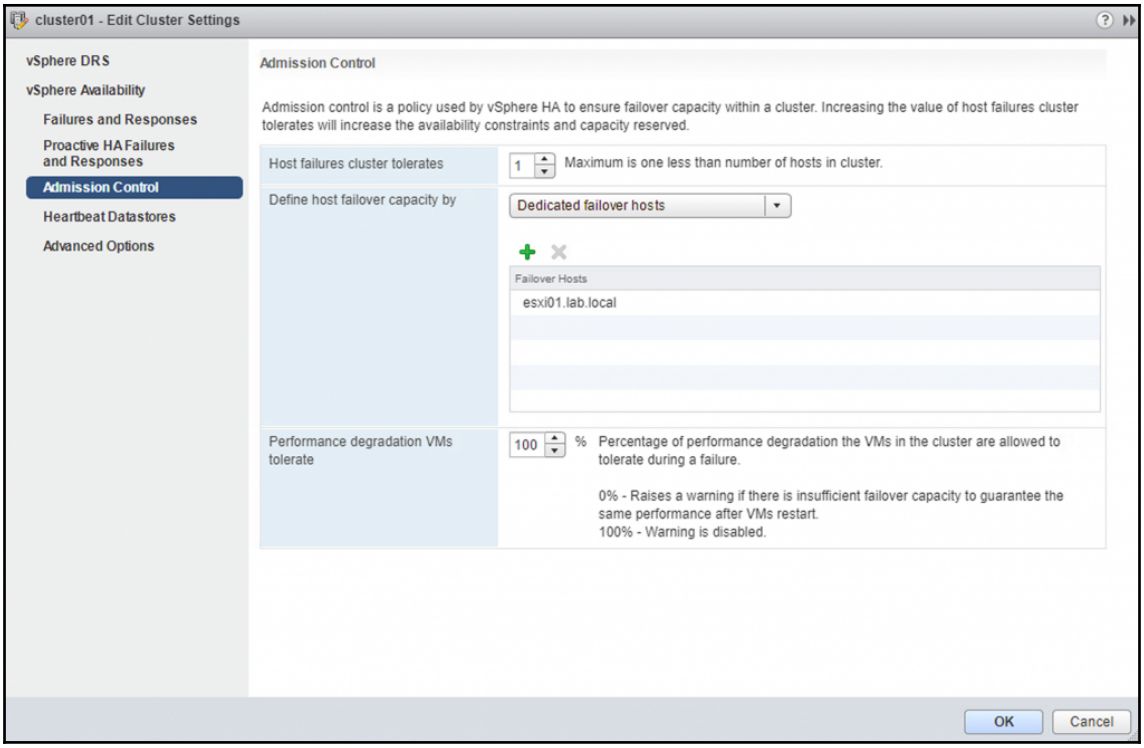


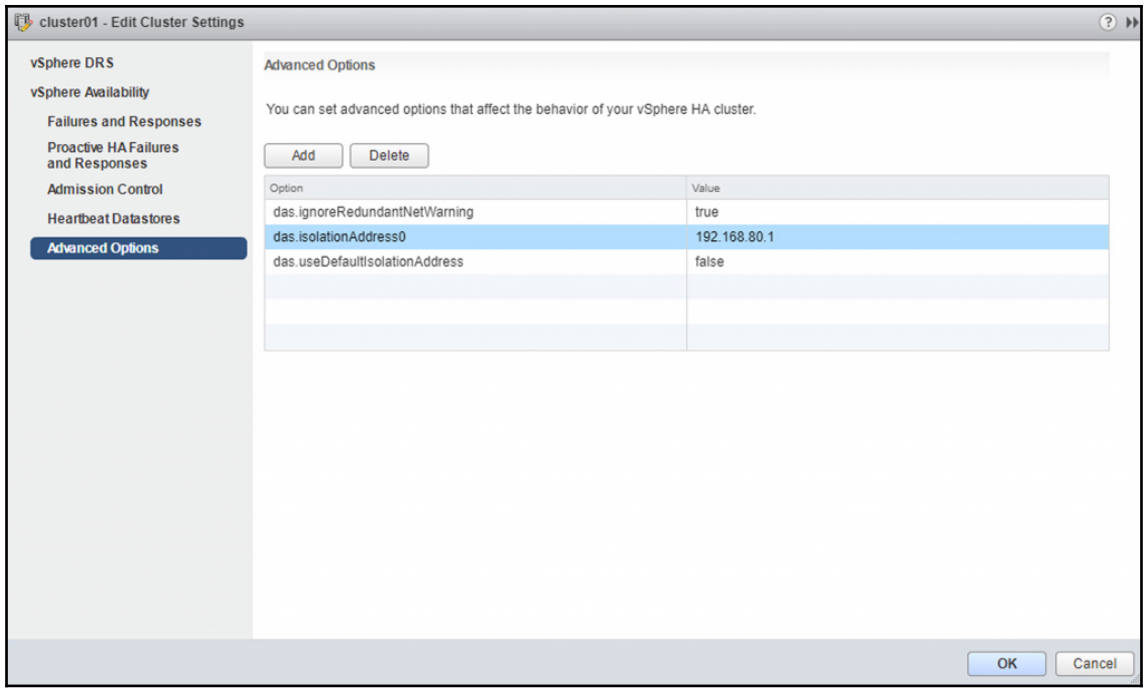

esxi01.lab.local - Add Networking
1 Select connection type
2 Select target device
3 Connection settings
3a Port properties
3b IPv4 settings
4 Ready to complete
Port properties
Specify VMkernel port settings.
VMkernel port settings
Network label:
VMkernel
VLAN ID:
None (0)
TCP/IP stack:
Default
Available services
Enabled services:
vMotion
Provisioning
Fault Tolerance logging
Management
vSphere Replication
vSphere Replication NFC
vSAN
Back
Next
Finish
Cancel

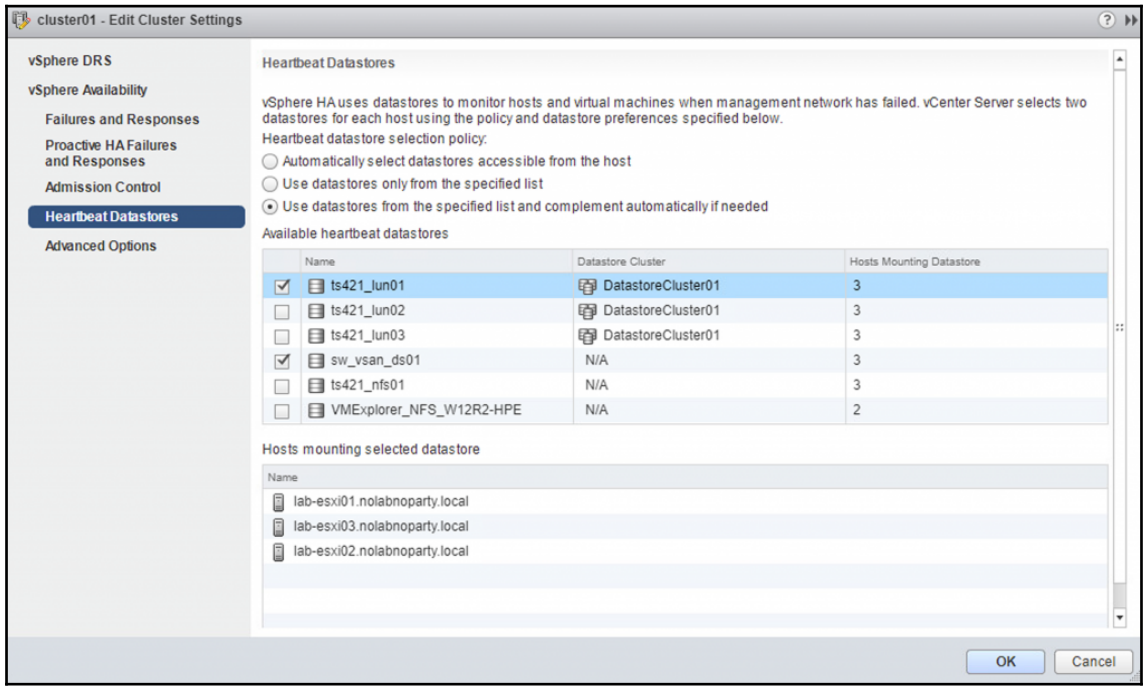

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Admission Control
Admission control is a policy used by vSphere HA to ensure failover capacity within a cluster. Increasing the value of host failures cluster tolerates will increase the availability constraints and capacity reserved.
Host failures cluster tolerates
1
Maximum is one less than number of hosts in cluster.
Define host failover capacity by
Slot Policy (powered-on VMs)
The slot size is defined as the memory and CPU resources that satisfy the reservation requirements for any powered-on virtual machine in the cluster.
Slot size policy:
Cover all powered-on virtual machines
Calculate slot size based on the maximum CPU/Memory reservation and overhead of all powered-on virtual machines.
Fixed slot size
Specify the slot size explicitly.
CPU slot size:
32
MHz
Memory slot size:
100
MB
VMs requiring multiple slots:
View
Calculate
Performance degradation VMs tolerate
100
%
Percentage of performance degradation the VMs in the cluster are allowed to tolerate during a failure.
0% - Raises a warning if there is insufficient failover capacity to guarantee the same performance after VMs restart.
100% - Warning is disabled.
OK
Cancel

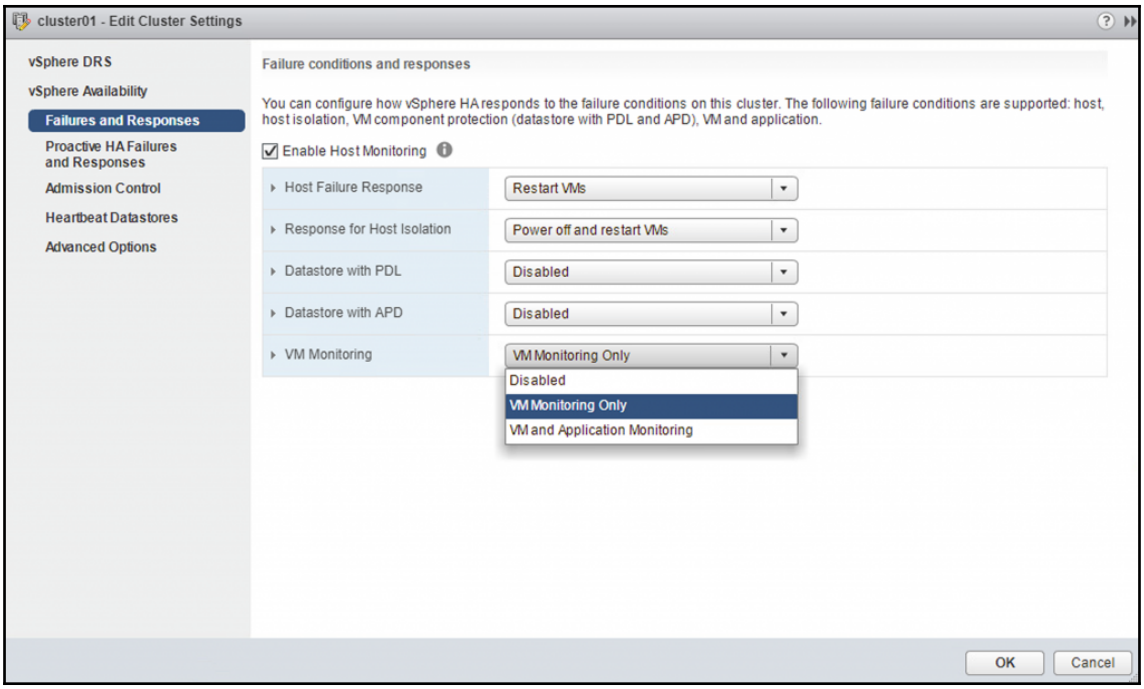

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Admission Control
Admission control is a policy used by vSphere HA to ensure failover capacity within a cluster. Increasing the value of host failures cluster tolerates will increase the availability constraints and capacity reserved.
Host failures cluster tolerates
1
Maximum is one less than number of hosts in cluster.
Define host failover capacity by
Cluster resource percentage
Override calculated failover capacity.
CPU 0 %
Memory 0 %
Performance degradation VMs tolerate
100 %
Percentage of performance degradation the VMs in the cluster are allowed to tolerate during a failure.
0% - Raises a warning if there is insufficient failover capacity to guarantee the same performance after VMs restart.
100% - Warning is disabled.
OK
Cancel

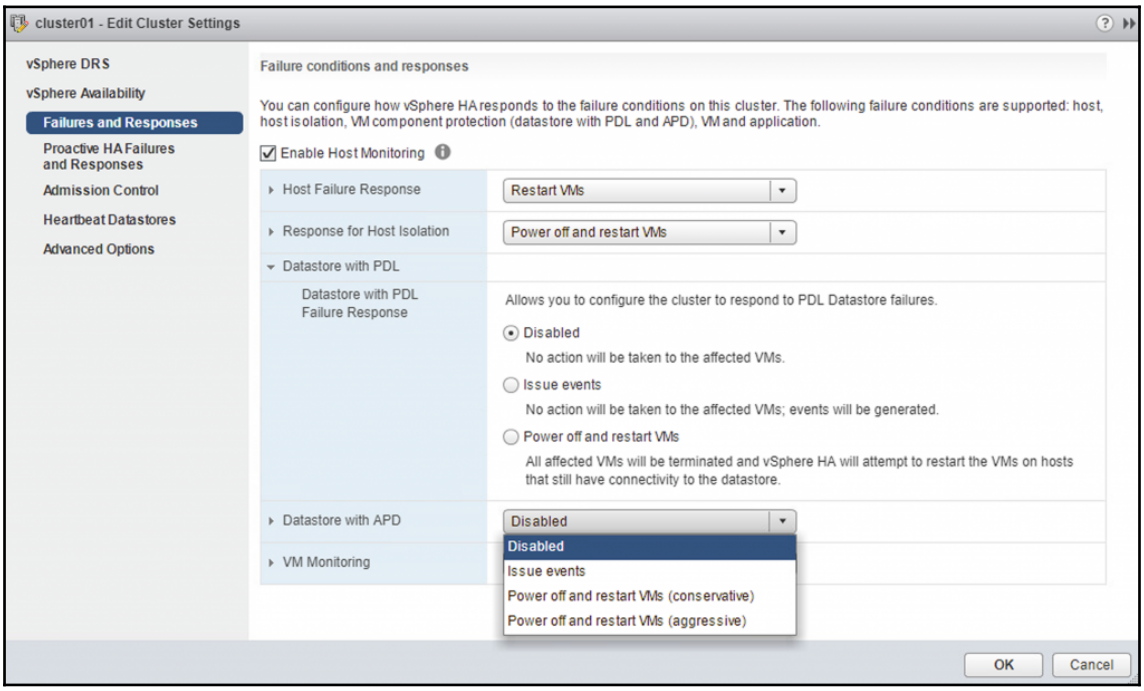

3 GHz
2 GB
3 GHz
2 GB
2 GHz
1 GB
2 GHz
2 GB
2 GHz
2 GB
VM 1
VM 2
VM 3
VM 4
VM 5
TOTAL RESOURCE REQUIREMENTS
12 GHz, 9 GB
Host 1
Host 2
Host 3
12 GHz
10 GB
12 GHz
9 GB
12 GHz
9 GB
TOTAL HOST RESOURCES
36 GHz, 28 GB

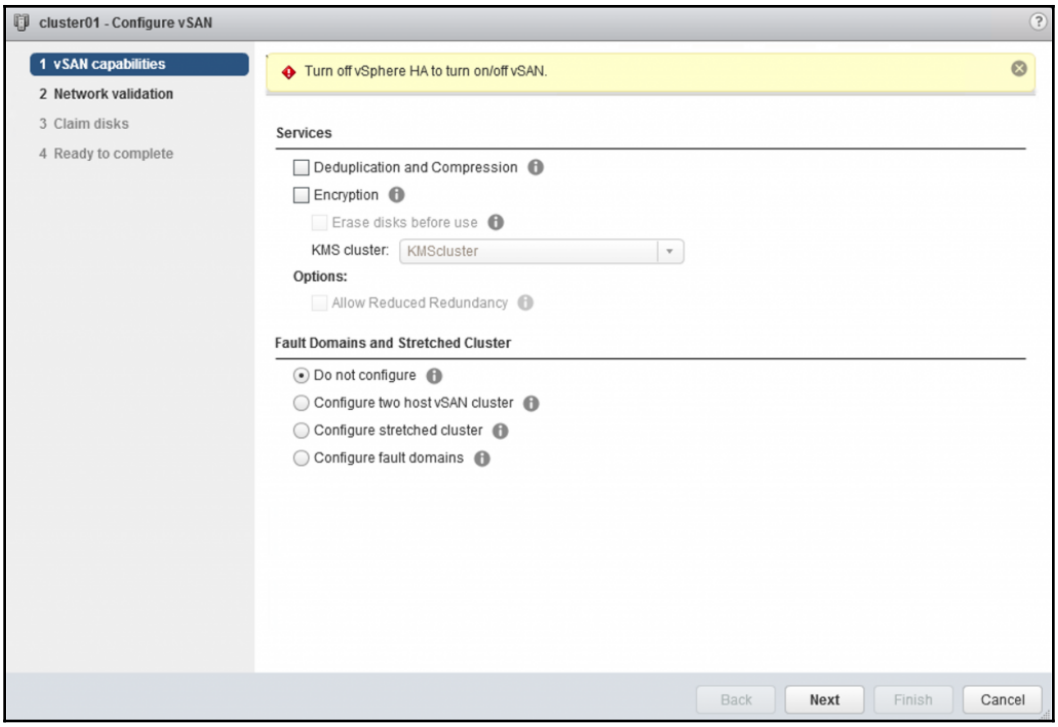

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Admission Control
Admission control is a policy used by vSphere HA to ensure failover capacity within a cluster. Increasing the value of host failures cluster tolerates will increase the availability constraints and capacity reserved.
Host failures cluster tolerates
1
Maximum is one less than number of hosts in cluster.
Define host failover capacity by
Dedicated failover hosts
Failover Hosts
esxi01.lab.local
Performance degradation VMs tolerate
100
%
Percentage of performance degradation the VMs in the cluster are allowed to tolerate during a failure.
0% - Raises a warning if there is insufficient failover capacity to guarantee the same performance after VMs restart.
100% - Warning is disabled.
OK
Cancel

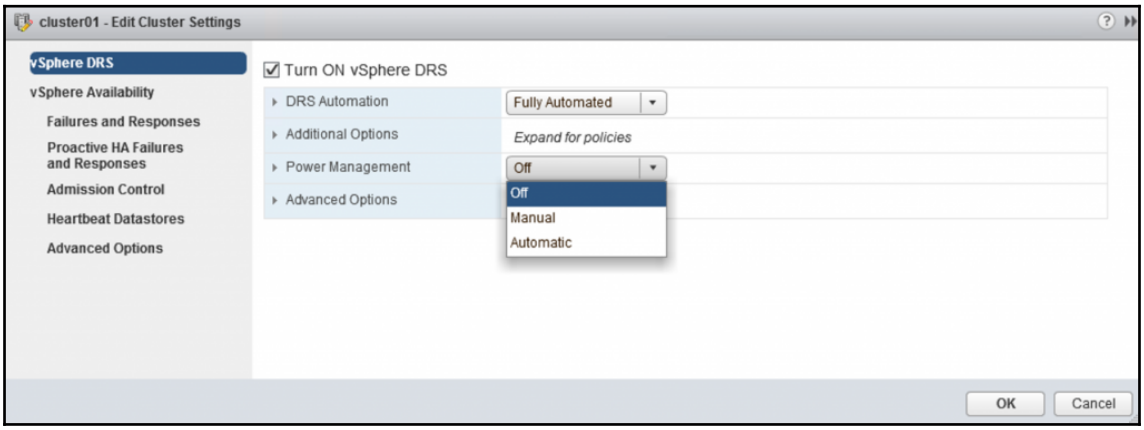

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Advanced Options
You can set advanced options that affect the behavior of your vSphere HA cluster.
Add
Delete
Option
Value
das.ignoreRedundantNetWarning
true
das.isolationAddress0
192.168.80.1
das.useDefaultIsolationAddress
false
OK
Cancel

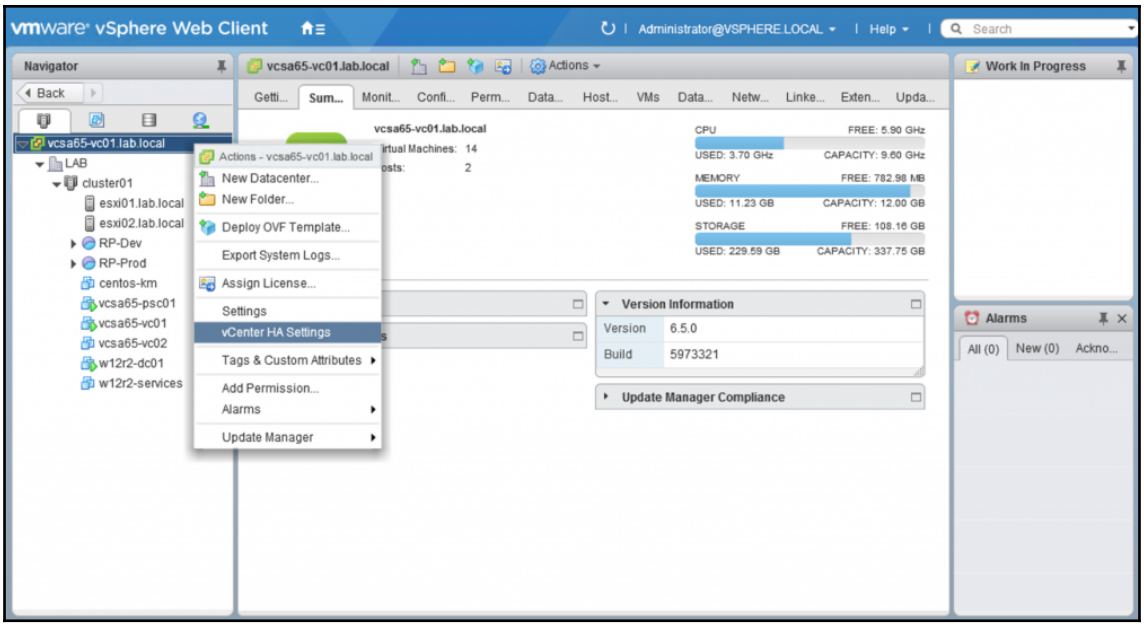

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Heartbeat Datastores
vSphere HA uses datastores to monitor hosts and virtual machines when management network has failed. vCenter Server selects two datastores for each host using the policy and datastore preferences specified below.
Heartbeat datastore selection policy:
Automatically select datastores accessible from the host
Use datastores only from the specified list
Use datastores from the specified list and complement automatically if needed
Available heartbeat datastores
Name
Datastore Cluster
Hosts Mounting Datastore
ts421_lun01
DatastoreCluster01
3
ts421_lun02
DatastoreCluster01
3
ts421_lun03
DatastoreCluster01
3
sw_vsan_ds01
N/A
3
ts421_nfs01
N/A
3
VMExplorer_NFS_W12R2-HPE
N/A
2
Hosts mounting selected datastore
Name
lab-esxi01.nolabnoparty.local
lab-esxi03.nolabnoparty.local
lab-esxi02.nolabnoparty.local
OK
Cancel

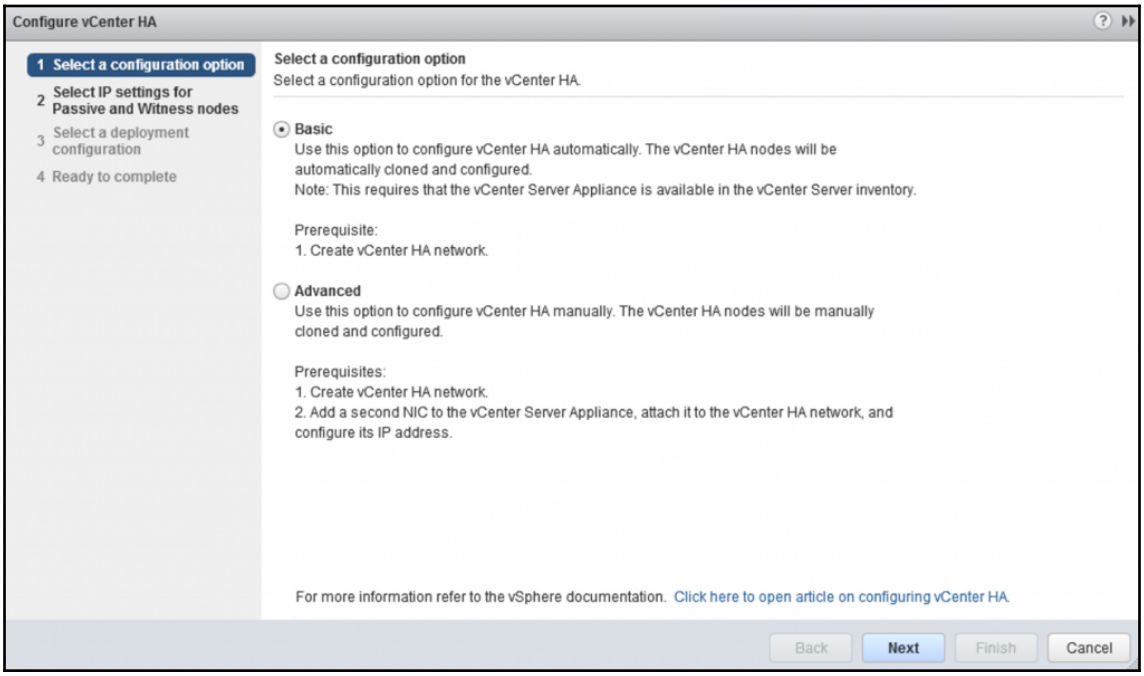

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Failure conditions and responses
You can configure how vSphere HA responds to the failure conditions on this cluster. The following failure conditions are supported: host, host isolation, VM component protection (datastore with PDL and APD), VM and application.
Enable Host Monitoring
Host Failure Response
Restart VMs
Response for Host Isolation
Power off and restart VMs
Datastore with PDL
Disabled
Datastore with APD
Disabled
VM Monitoring
VM Monitoring Only
Disabled
VM Monitoring Only
VM and Application Monitoring
OK
Cancel

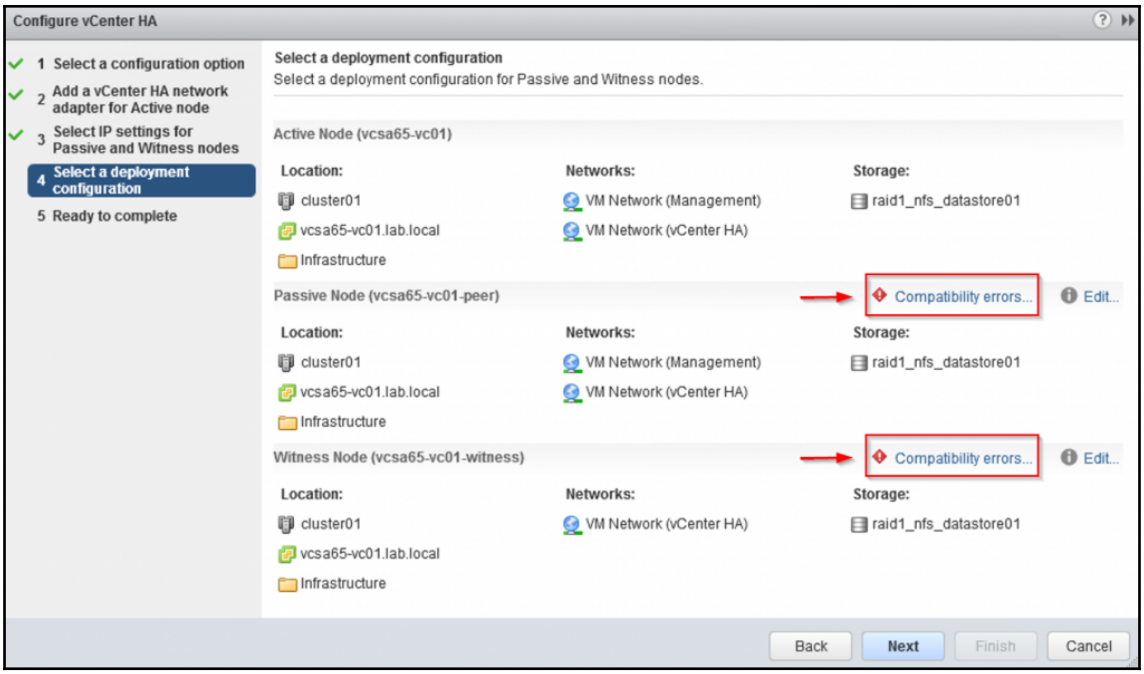

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Failure conditions and responses
You can configure how vSphere HA responds to the failure conditions on this cluster. The following failure conditions are supported: host, host isolation, VM component protection (datastore with PDL and APD), VM and application.
Enable Host Monitoring
Host Failure Response
Restart VMs
Response for Host Isolation
Power off and restart VMs
Datastore with PDL
Datastore with PDL Failure Response
Allows you to configure the cluster to respond to PDL Datastore failures.
Disabled
No action will be taken to the affected VMs.
Issue events
No action will be taken to the affected VMs; events will be generated.
Power off and restart VMs
All affected VMs will be terminated and vSphere HA will attempt to restart the VMs on hosts that still have connectivity to the datastore.
Datastore with APD
Disabled
VM Monitoring
Disabled
Issue events
Power off and restart VMs (conservative)
Power off and restart VMs (aggressive)
OK
Cancel

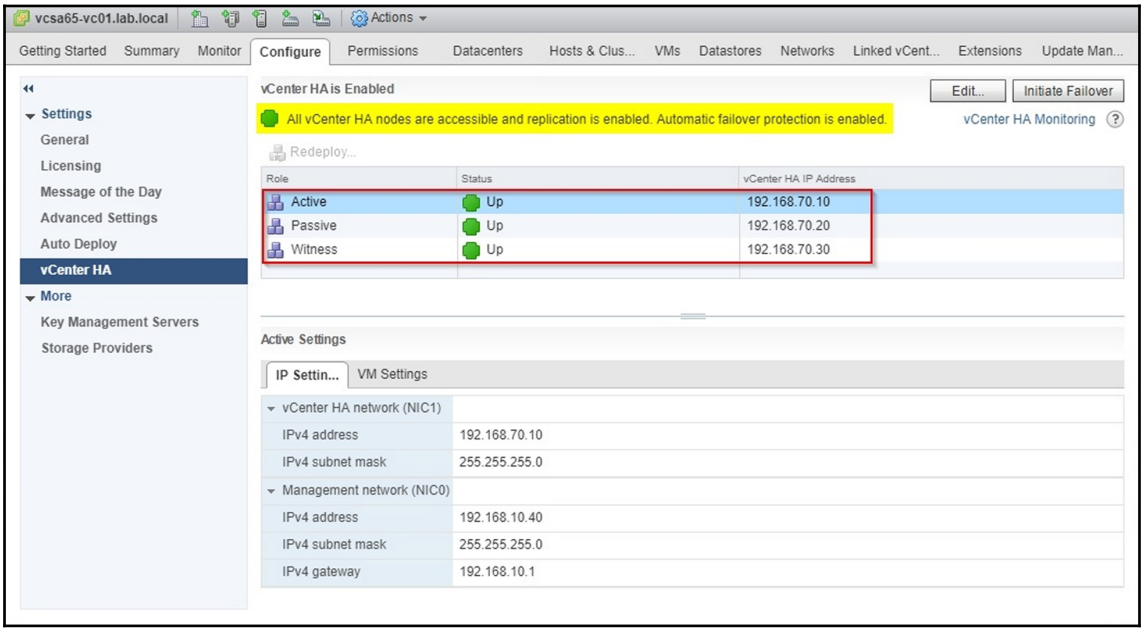

cluster01 - Configure vSAN
1 vSAN capabilities
2 Network validation
3 Claim disks
4 Ready to complete
Turn off vSphere HA to turn on/off vSAN.
Services
Deduplication and Compression
Encryption
Erase disks before use
KMS cluster:
KMScluster
Options:
Allow Reduced Redundancy
Fault Domains and Stretched Cluster
Do not configure
Configure two host vSAN cluster
Configure stretched cluster
Configure fault domains
Back
Next
Finish
Cancel

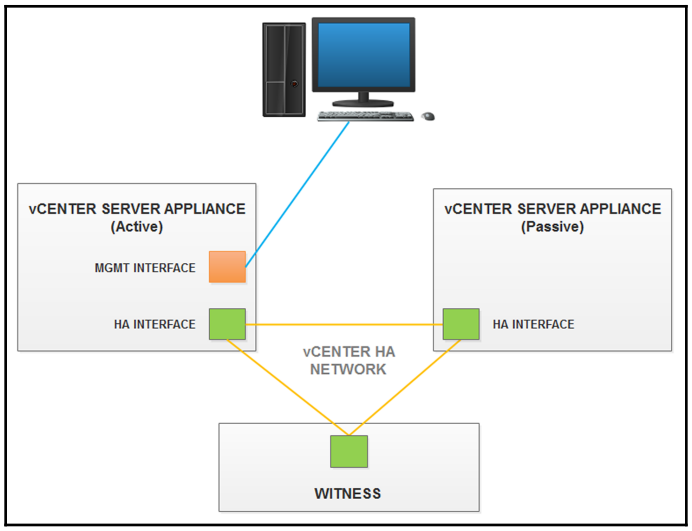

cluster01 - Edit Cluster Settings
vSphere DRS
vSphere Availability
Failures and Responses
Proactive HA Failures and Responses
Admission Control
Heartbeat Datastores
Advanced Options
Turn ON vSphere DRS
DRS Automation
Fully Automated
Additional Options
Expand for policies
Power Management
Off
Advanced Options
Off
Manual
Automatic
OK
Cancel

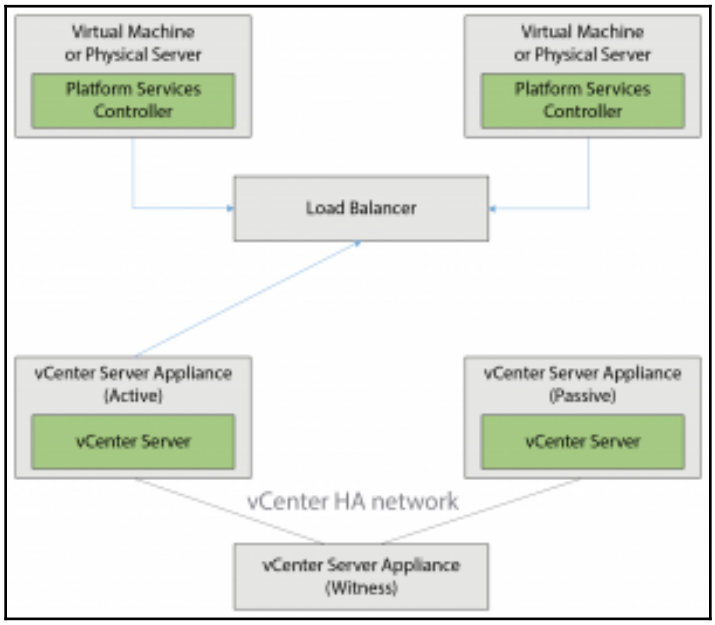

vmware vSphere Web Client
Administrator@VSPHERE.LOCAL
Help
Search
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
centos-km
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
Actions - vcsa65-vc01.lab.local
New Datacenter...
New Folder...
Deploy OVF Template...
Export System Logs...
Assign License...
Settings
vCenter HA Settings
Tags & Custom Attributes
Add Permission...
Alarms
Update Manager
Actions
Getti...
Sum...
Monit...
Confi...
Perm...
Data...
Host...
VMs
Data...
Netw...
Linke...
Exten...
Upda...
vcsa65-vc01.lab.local
CPU
FREE: 5.90 GHz
USED: 3.70 GHz
CAPACITY: 9.60 GHz
MEMORY
FREE: 782.98 MB
USED: 11.23 GB
CAPACITY: 12.00 GB
STORAGE
FREE: 108.16 GB
USED: 229.59 GB
CAPACITY: 337.75 GB
Version Information
Version
6.5.0
Build
5973321
Update Manager Compliance
Work In Progress
Alarms
All (0)
New (0)
Ackno...

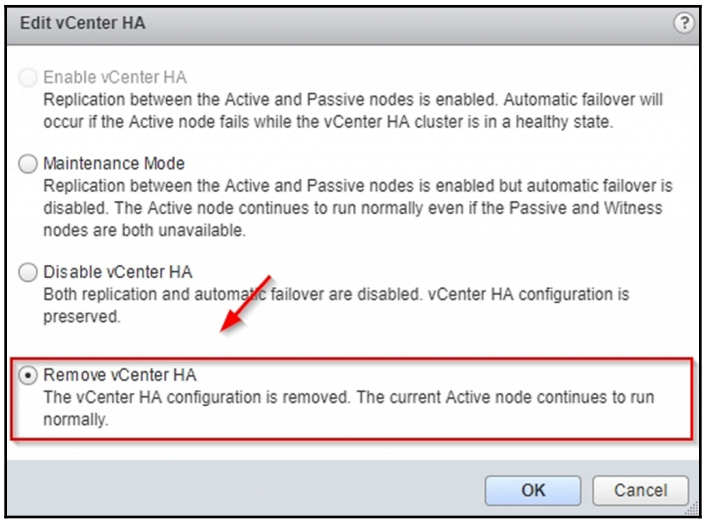

Configure vCenter HA
1 Select a configuration option
2 Select IP settings for Passive and Witness nodes
3 Select a deployment configuration
4 Ready to complete
Select a configuration option
Select a configuration option for the vCenter HA.
Basic
Use this option to configure vCenter HA automatically. The vCenter HA nodes will be automatically cloned and configured.
Note: This requires that the vCenter Server Appliance is available in the vCenter Server inventory.
Prerequisite:
1. Create vCenter HA network.
Advanced
Use this option to configure vCenter HA manually. The vCenter HA nodes will be manually cloned and configured.
Prerequisites:
1. Create vCenter HA network.
2. Add a second NIC to the vCenter Server Appliance, attach it to the vCenter HA network, and configure its IP address.
For more information refer to the vSphere documentation. Click here to open article on configuring vCenter HA.
Back
Next
Finish
Cancel


Configure vCenter HA
1 Select a configuration option
2 Add a vCenter HA network adapter for Active node
3 Select IP settings for Passive and Witness nodes
4 Select a deployment configuration
5 Ready to complete
Select a deployment configuration
Select a deployment configuration for Passive and Witness nodes.
Active Node (vcsa65-vc01)
Location:
cluster01
vcsa65-vc01.lab.local
Infrastructure
Networks:
VM Network (Management)
VM Network (vCenter HA)
Storage:
raid1_nfs_datastore01
Passive Node (vcsa65-vc01-peer)
Compatibility errors...
Edit...
Location:
cluster01
vcsa65-vc01.lab.local
Infrastructure
Networks:
VM Network (Management)
VM Network (vCenter HA)
Storage:
raid1_nfs_datastore01
Witness Node (vcsa65-vc01-witness)
Compatibility errors...
Edit...
Location:
cluster01
vcsa65-vc01.lab.local
Infrastructure
Networks:
VM Network (vCenter HA)
Storage:
raid1_nfs_datastore01
Back
Next
Finish
Cancel

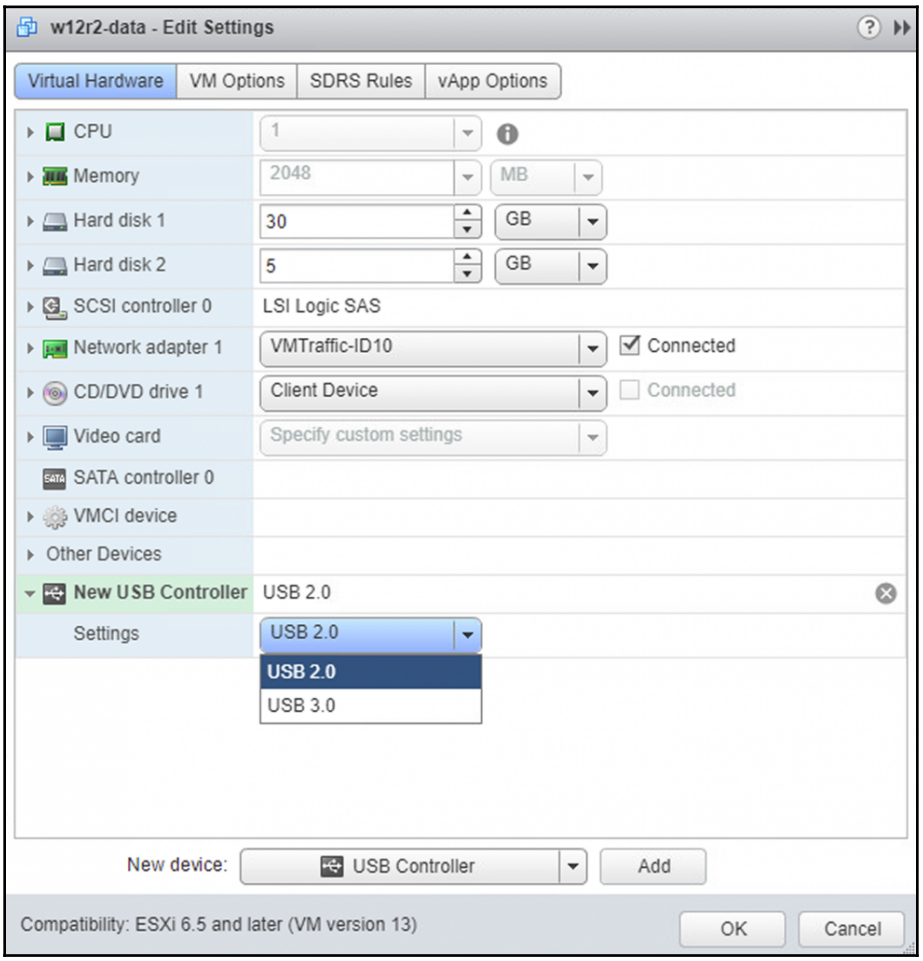

vcsa65-vc01.lab.local
Actions
Getting Started
Summary
Monitor
Configure
Permissions
Datacenters
Hosts & Clus...
VMs
Datastores
Networks
Linked vCent...
Extensions
Update Man...
Settings
General
Licensing
Message of the Day
Advanced Settings
Auto Deploy
vCenter HA
More
Key Management Servers
Storage Providers
vCenter HA is Enabled
Edit...
Initiate Failover
All vCenter HA nodes are accessible and replication is enabled. Automatic failover protection is enabled.
vCenter HA Monitoring
Redeploy...
Role
Status
vCenter HA IP Address
Active
Up
192.168.70.10
Passive
Up
192.168.70.20
Witness
Up
192.168.70.30
Active Settings
IP Settin...
VM Settings
vCenter HA network (NIC1)
IPv4 address
192.168.70.10
IPv4 subnet mask
255.255.255.0
Management network (NIC0)
IPv4 address
192.168.10.40
IPv4 subnet mask
255.255.255.0
IPv4 gateway
192.168.10.1

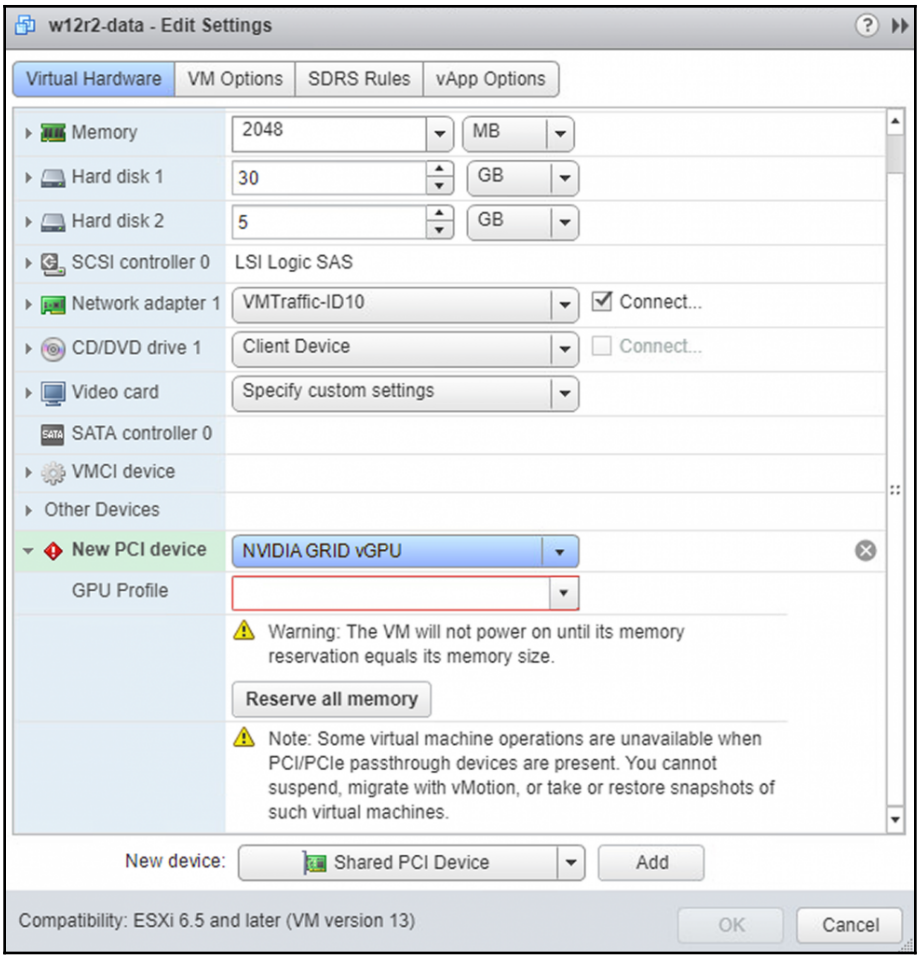

vCENTER SERVER APPLIANCE
(Active)
MGMT INTERFACE
HA INTERFACE
vCENTER SERVER APPLIANCE
(Passive)
HA INTERFACE
vCENTER HA
NETWORK
WITNESS

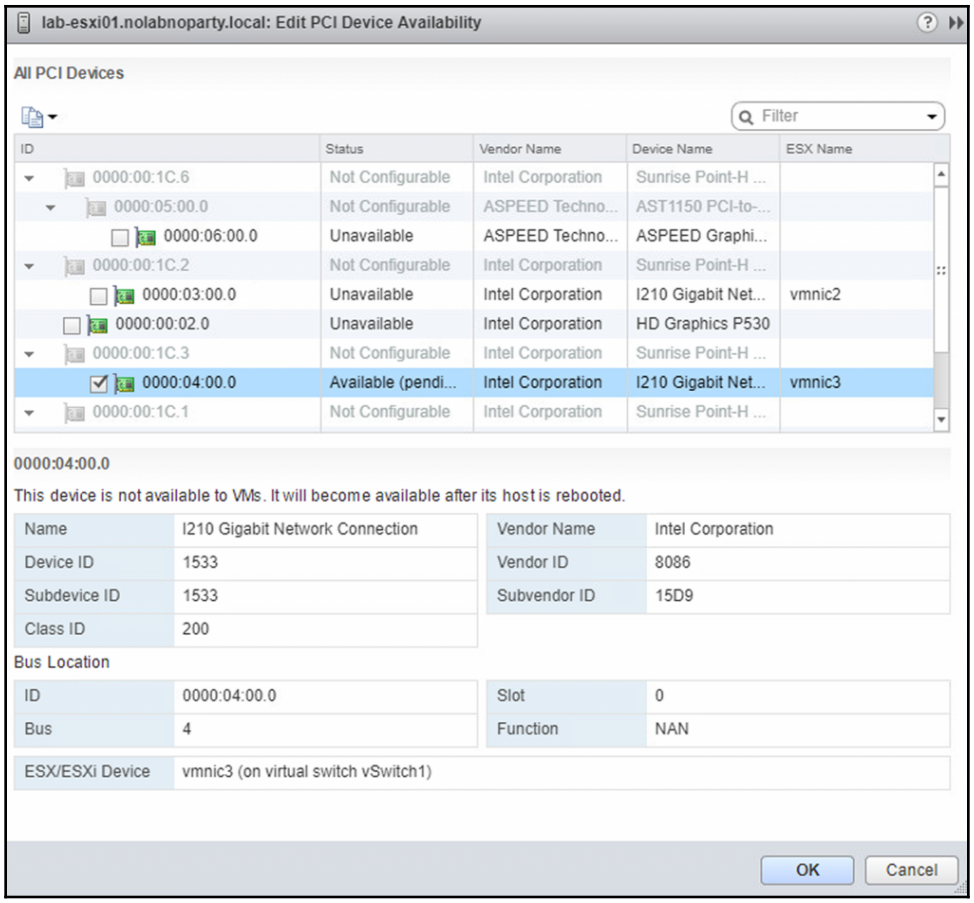

Virtual Machine
or Physical Server
Platform Services
Controller
Virtual Machine
or Physical Server
Platform Services
Controller
Load Balancer
vCenter Server Appliance
(Active)
vCenter Server
vCenter Server Appliance
(Passive)
vCenter Server
vCenter HA network
vCenter Server Appliance
(Witness)

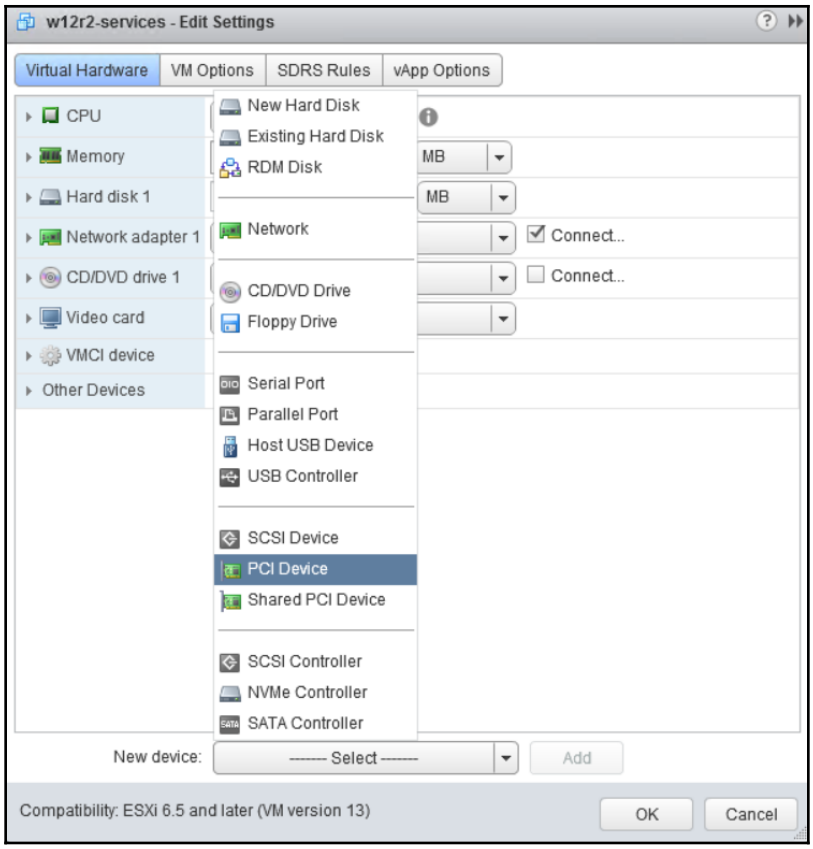

Edit vCenter HA
Enable vCenter HA
Replication between the Active and Passive nodes is enabled. Automatic failover will occur if the Active node fails while the vCenter HA cluster is in a healthy state.
Maintenance Mode
Replication between the Active and Passive nodes is enabled but automatic failover is disabled. The Active node continues to run normally even if the Passive and Witness nodes are both unavailable.
Disable vCenter HA
Both replication and automatic failover are disabled. vCenter HA configuration is preserved.
Remove vCenter HA
The vCenter HA configuration is removed. The current Active node continues to run normally.
OK
Cancel

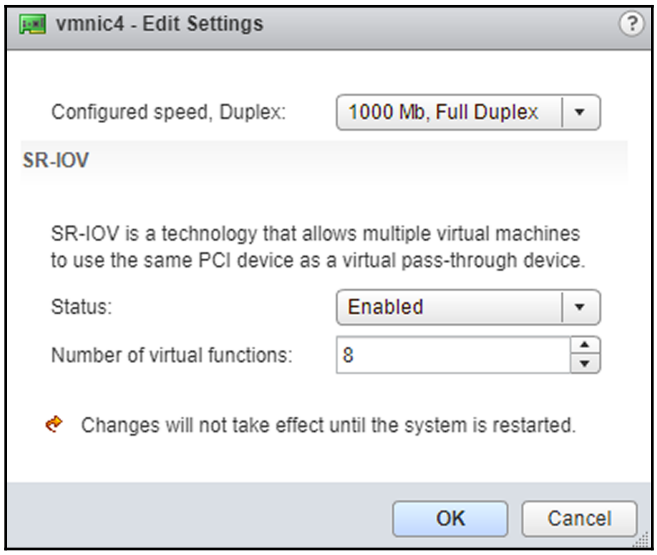
Chapter 10: Administer and Manage vSphere Virtual Machines

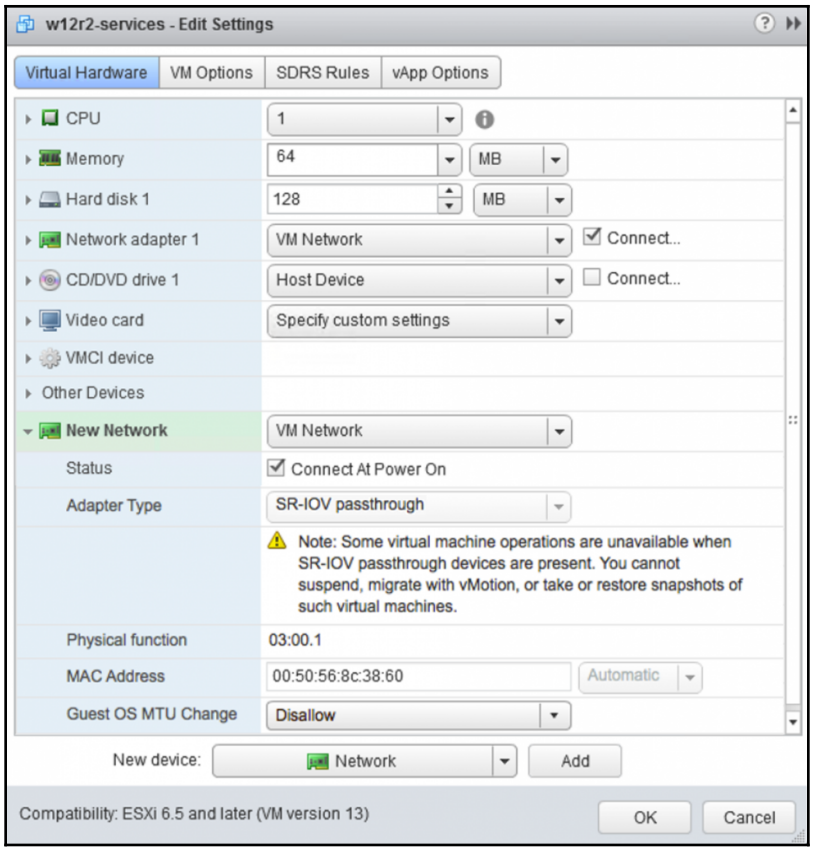


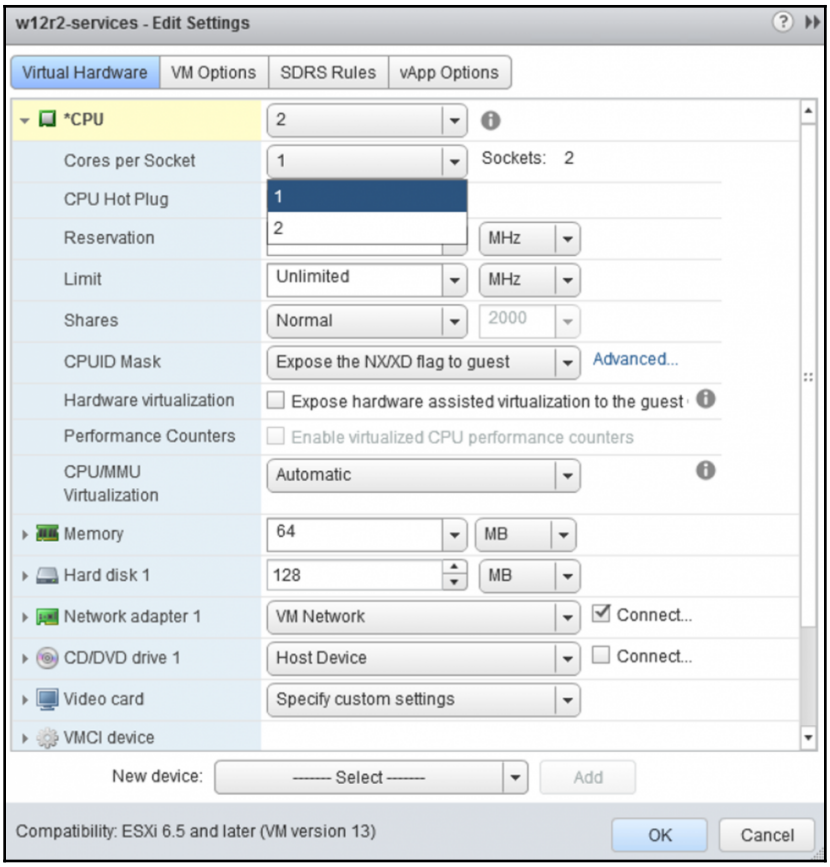

w12r2-data - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
Memory
2048
MB
Hard disk 1
30
GB
Hard disk 2
5
GB
SCSI controller 0
LSI Logic SAS
Network adapter 1
VMTraffic-ID10
Connect...
CD/DVD drive 1
Client Device
Connect...
Video card
Specify custom settings
SATA controller 0
VMCI device
Other Devices
New PCI device
NVIDIA GRID vGPU
GPU Profile
Warning: The VM will not power on until its memory reservation equals its memory size.
Reserve all memory
Note: Some virtual machine operations are unavailable when PCI/PCIe passthrough devices are present. You cannot suspend, migrate with vMotion, or take or restore snapshots of such virtual machines.
New device:
Shared PCI Device
Add
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel

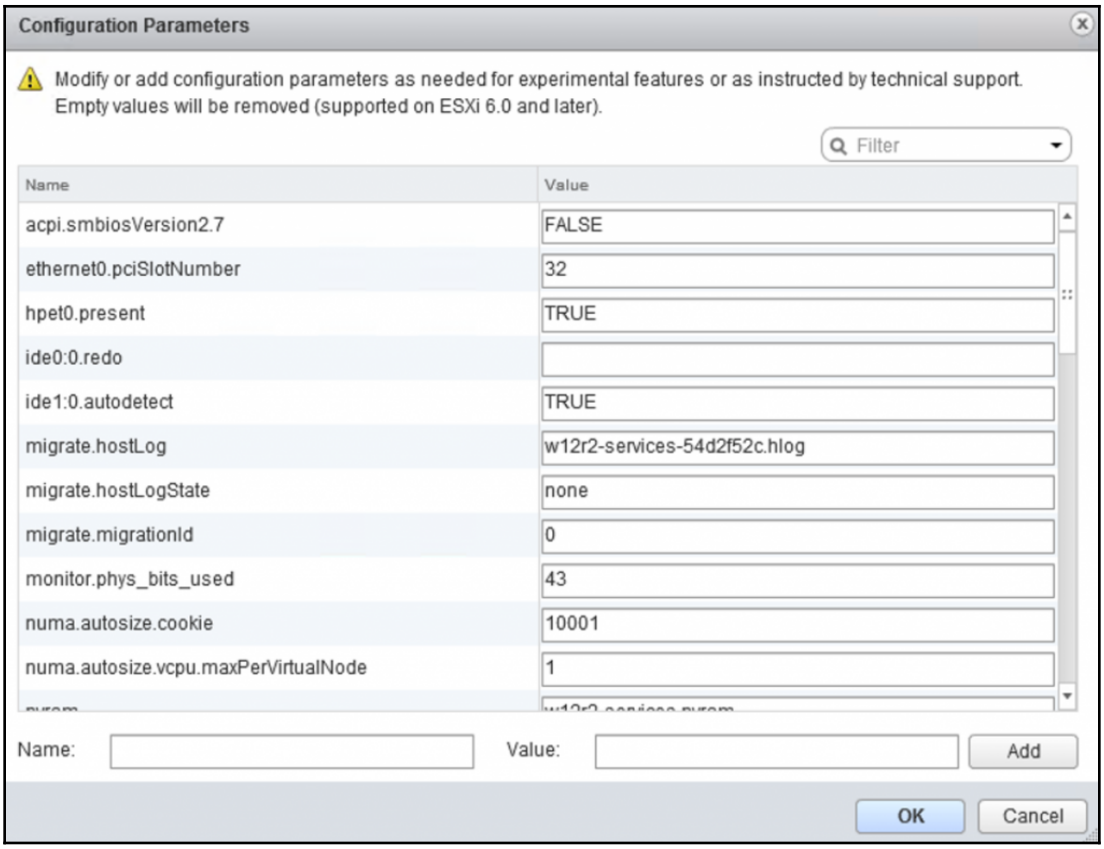

lab-esxi01.nolabnoparty.local: Edit PCI Device Availability
All PCI Devices
Filter
ID
Status
Vendor Name
Device Name
ESX Name
0000:00:1C.6
Not Configurable
Intel Corporation
Sunrise Point-H ...
0000:05:00.0
Not Configurable
ASPEED Techno...
AST1150 PCI-to-...
0000:06:00.0
Unavailable
ASPEED Techno...
ASPEED Graphi...
0000:00:1C.2
Not Configurable
Intel Corporation
Sunrise Point-H ...
0000:03:00.0
Unavailable
Intel Corporation
I210 Gigabit Net...
vmnic2
0000:00:02.0
Unavailable
Intel Corporation
HD Graphics P530
0000:00:1C.3
Not Configurable
Intel Corporation
Sunrise Point-H ...
0000:04:00.0
Available (pendi...
Intel Corporation
I210 Gigabit Net...
vmnic3
0000:00:1C.1
Not Configurable
Intel Corporation
Sunrise Point-H ...
0000:04:00.0
This device is not available to VMs. It will become available after its host is rebooted.
Name
I210 Gigabit Network Connection
Vendor Name
Intel Corporation
Device ID
1533
Vendor ID
8086
Subdevice ID
1533
Subvendor ID
15D9
Class ID
200
Bus Location
ID
0000:04:00.0
Slot
0
Bus
4
Function
NAN
ESX/ESXi Device
vmnic3 (on virtual switch vSwitch1)
OK
Cancel


w12r2-services - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
CPU
Memory
Hard disk 1
Network adapter 1
CD/DVD drive 1
Video card
VMCI device
Other Devices
New Hard Disk
Existing Hard Disk
RDM Disk
Network
CD/DVD Drive
Floppy Drive
Serial Port
Parallel Port
Host USB Device
USB Controller
SCSI Device
PCI Device
Shared PCI Device
SCSI Controller
NVMe Controller
SATA Controller
MB
MB
Connect...
Connect...
New device:
------ Select ------
Add
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel


vmnic4 - Edit Settings
Configured speed, Duplex:
1000 Mb, Full Duplex
SR-IOV
SR-IOV is a technology that allows multiple virtual machines to use the same PCI device as a virtual pass-through device.
Status:
Enabled
Number of virtual functions:
8
Changes will not take effect until the system is restarted.
OK
Cancel

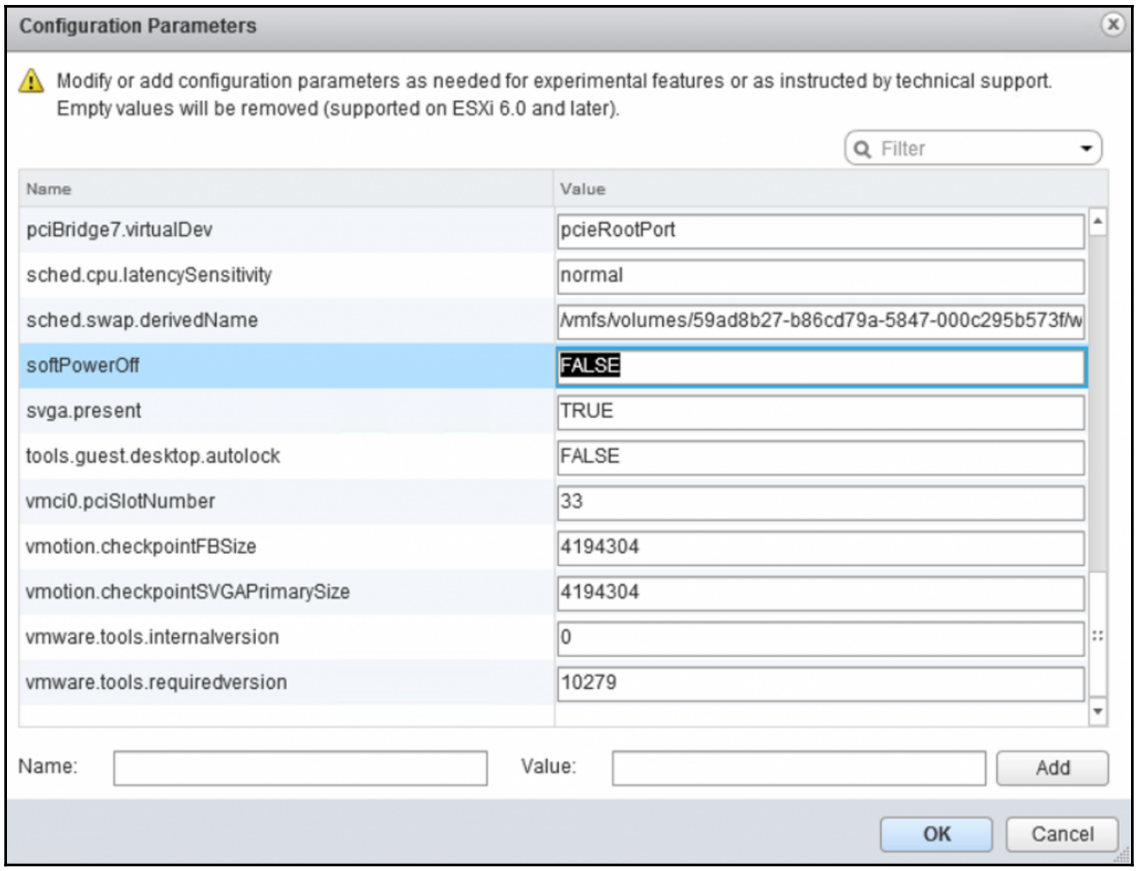

w12r2-services - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
CPU
1
Memory
64
MB
Hard disk 1
128
MB
Network adapter 1
VM Network
Connect...
CD/DVD drive 1
Host Device
Connect...
Video card
Specify custom settings
VMCI device
Other Devices
New Network
VM Network
Status
Connect At Power On
Adapter Type
SR-IOV passthrough
Note: Some virtual machine operations are unavailable when SR-IOV passthrough devices are present. You cannot suspend, migrate with vMotion, or take or restore snapshots of such virtual machines.
Physical function
03:00.1
MAC Address
00:50:56:8c:38:60
Automatic
Guest OS MTU Change
Disallow
New device:
Network
Add
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel

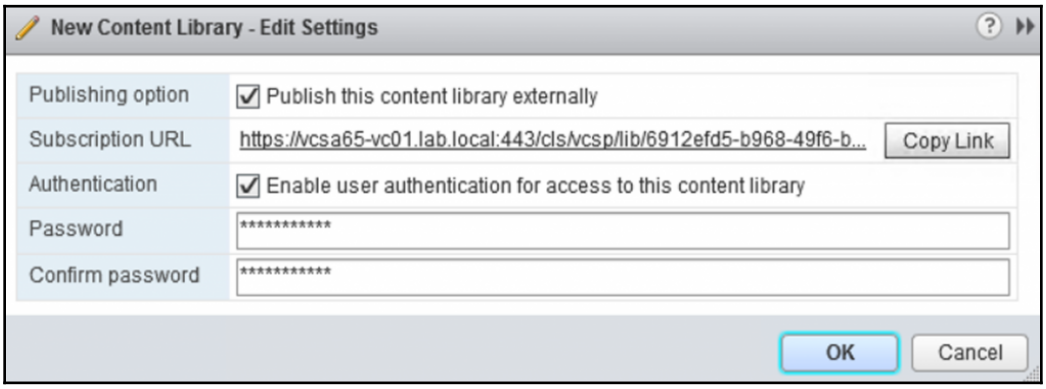

w12r2-services - Edit Settings
Virtual Hardware
VM Options
SDRS Rules
vApp Options
*CPU
2
Cores per Socket
1
Sockets: 2
CPU Hot Plug
1
2
Reservation
MHz
Limit
Unlimited
MHz
Shares
Normal
2000
CPUID Mask
Expose the NX/XD flag to guest
Advanced...
Hardware virtualization
Expose hardware assisted virtualization to the guest
Performance Counters
Enable virtualized CPU performance counters
CPU/MMU Virtualization
Automatic
Memory
64
MB
Hard disk 1
128
MB
Network adapter 1
VM Network
Connect...
CD/DVD drive 1
Host Device
Connect...
Video card
Specify custom settings
VMCI device
New device:
------- Select -------
Add
Compatibility: ESXi 6.5 and later (VM version 13)
OK
Cancel

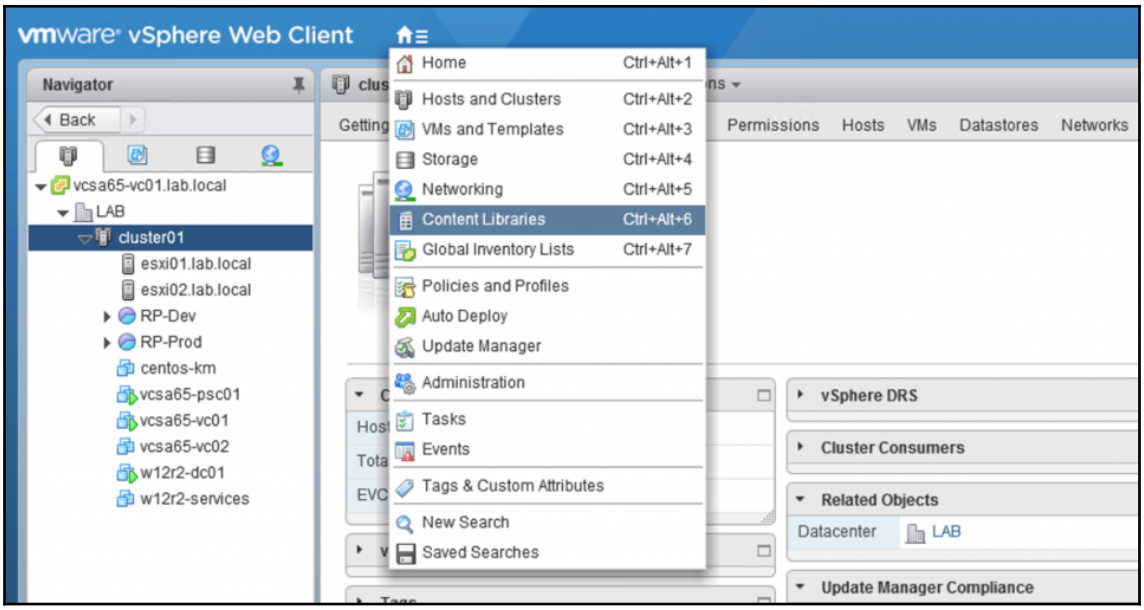

Configuration Parameters
Modify or add configuration parameters as needed for experimental features or as instructed by technical support.
Empty values will be removed (supported on ESXi 6.0 and later).
Filter
Name
Value
acpi.smbiosVersion2.7
FALSE
ethernet0.pciSlotNumber
32
hpet0.present
TRUE
ide0:0.redo
ide1:0.autodetect
TRUE
migrate.hostLog
w12r2-services-54d2f52c.hlog
migrate.hostLogState
none
migrate.migrationId
0
monitor.phys_bits_used
43
numa.autosize.cookie
10001
numa.autosize.vcpu.maxPerVirtualNode
1
Name:
Value:
Add
OK
Cancel

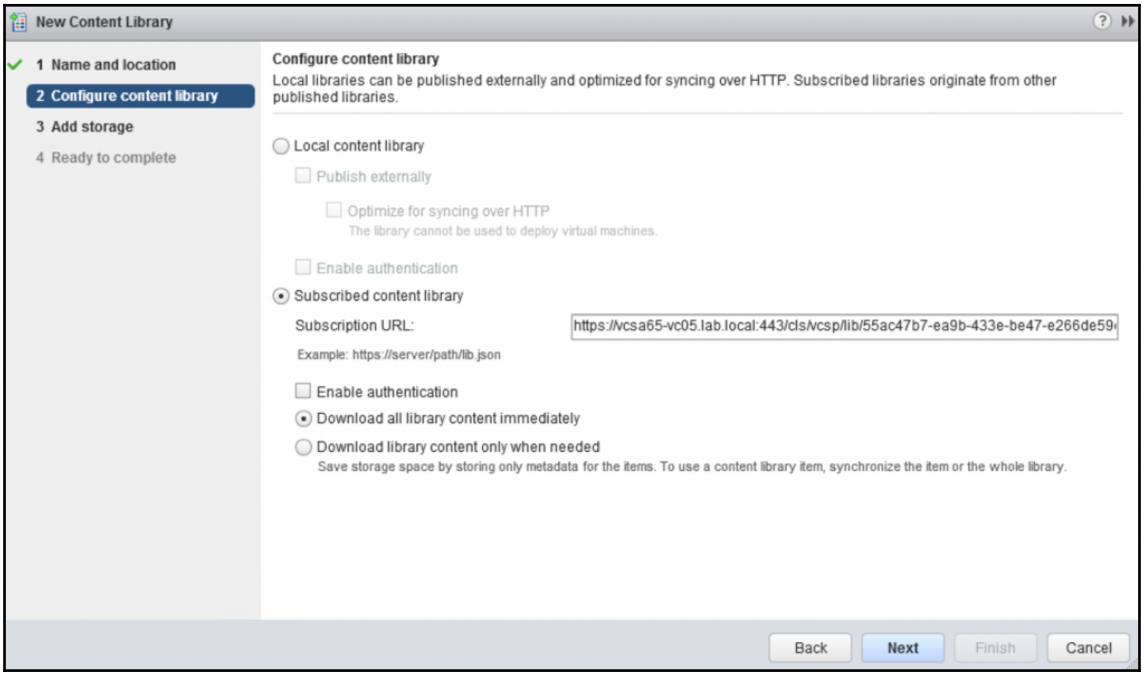
w12r2-dc01.vmx

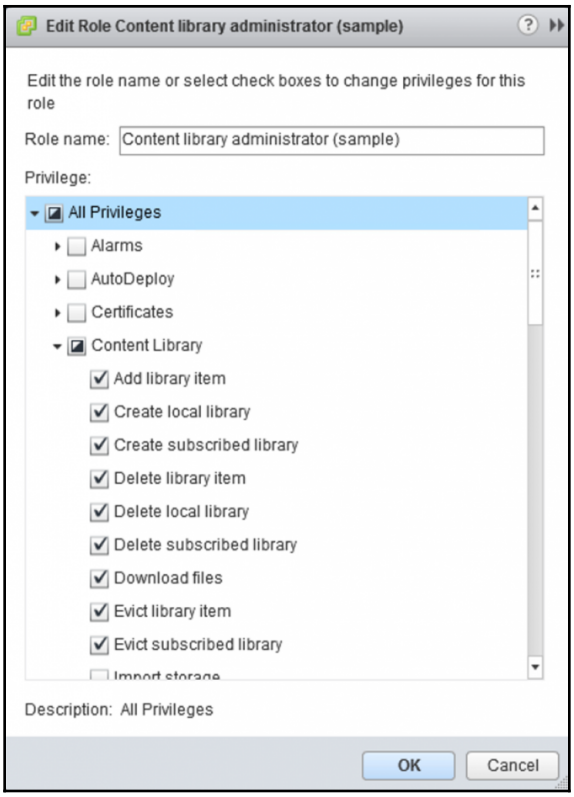
```
.encoding = "UTF-8"
config.version = "8"
virtualHW.version = "13"
nvram = "w12r2-dc01.nvram"
pciBridge0.present = "TRUE"
svga.present = "TRUE"
pciBridge4.present = "TRUE"
pciBridge4.virtualDev = "pcieRootPort"
vmci0.present = "TRUE"
hpet0.present = "TRUE"
floppy0.present = "FALSE"
svga.vramSize = "8388608"
memSize = "4096"
tools.upgrade.policy = "manual"
scsi0.virtualDev = "lsisas1068"
scsi0.pciSlotNumber = "160"
scsi0.present = "TRUE"
scsi0:0.deviceType = "scsi-hardDisk"
scsi0:0.fileName = "w12r2-dc01.vmdk"
scsi0:0.present = "TRUE"
vmci0.pciSlotNumber = "32"
ethernet0.virtualDev = "vmxnet3"
ethernet0.networkName = "VM Network"
ethernet0.addressType = "generated"
ethernet0.pciSlotNumber = "192"
ethernet0.uptCompatibility = "TRUE"
ethernet0.present = "TRUE"
displayName = "w12r2-dc01"
guestOS = "windows8srv-64"
disk.EnableUUID = "TRUE"
```

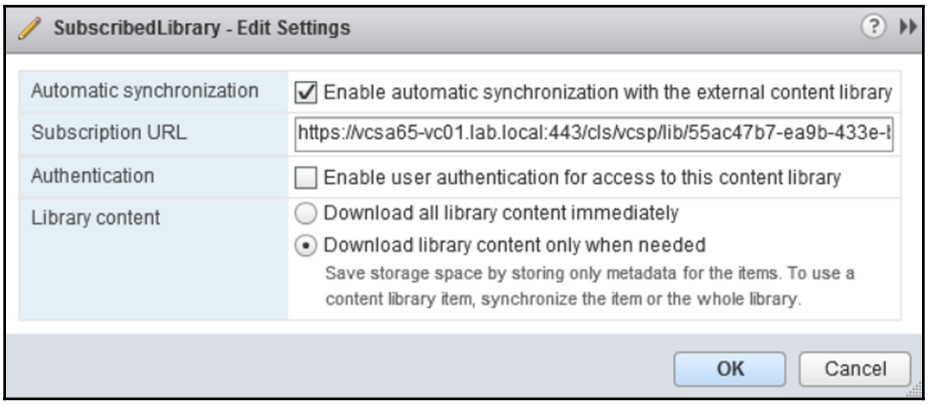

Configuration Parameters
Modify or add configuration parameters as needed for experimental features or as instructed by technical support.
Empty values will be removed (supported on ESXi 6.0 and later).
Filter
Name
Value
pciBridge7.virtualDev
pcieRootPort
sched.cpu.latencySensitivity
normal
sched.swap.derivedName
/vmfs/volumes/59ad8b27-b86cd79a-5847-000c295b573f/w
softPowerOff
FALSE
svga.present
TRUE
tools.guest.desktop.autolock
FALSE
vmci0.pciSlotNumber
33
vmotion.checkpointFBSize
4194304
vmotion.checkpointSVGAPrimarySize
4194304
vmware.tools.internalversion
0
vmware.tools.requiredversion
10279
Name:
Value:
Add
OK
Cancel

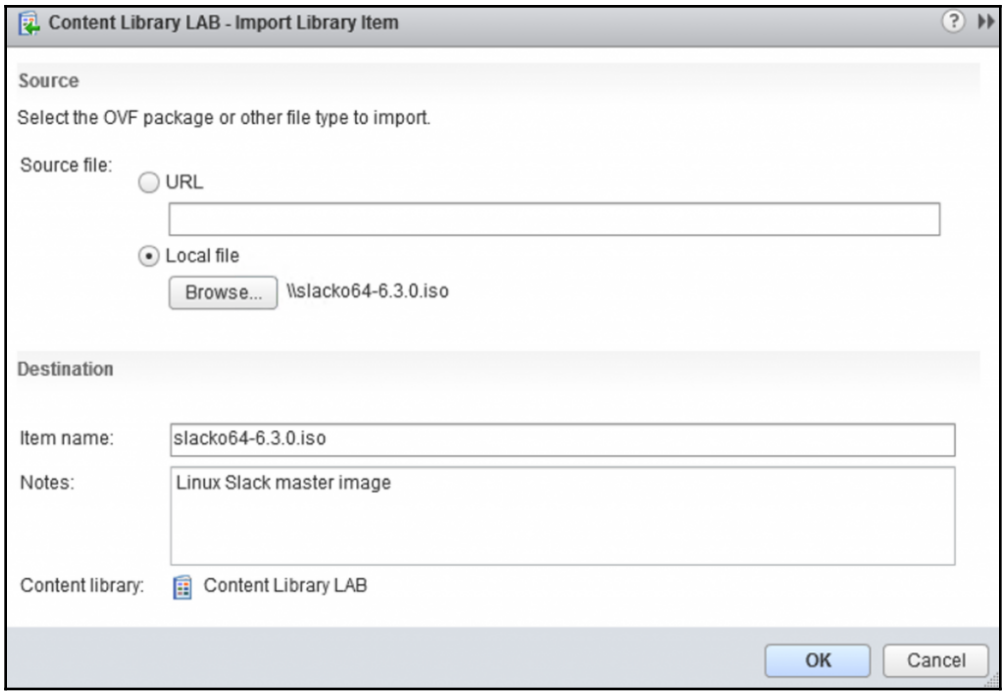

New Content Library - Edit Settings
Publishing option
Publish this content library externally
Subscription URL
https://vcsa65-vc01.lab.local:443/cls/vcsp/lib/6912efd5-b968-49f6-b...
Copy Link
Authentication
Enable user authentication for access to this content library
Password
****
Confirm password
****
OK
Cancel

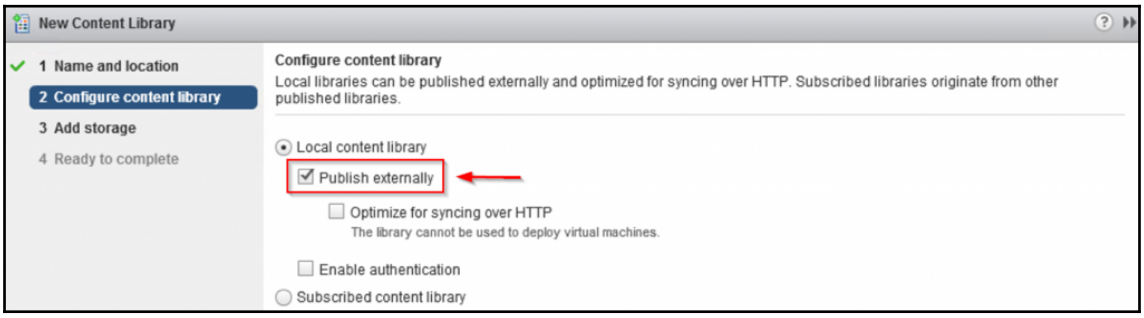

vmware vSphere Web Client
Navigator
Back
vcsa65-vc01.lab.local
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
centos-km
vcsa65-psc01
vcsa65-vc01
vcsa65-vc02
w12r2-dc01
w12r2-services
Home Ctrl+Alt+1
Hosts and Clusters Ctrl+Alt+2
VMs and Templates Ctrl+Alt+3
Storage Ctrl+Alt+4
Networking Ctrl+Alt+5
Content Libraries Ctrl+Alt+6
Global Inventory Lists Ctrl+Alt+7
Policies and Profiles
Auto Deploy
Update Manager
Administration
Tasks
Events
Tags & Custom Attributes
New Search
Saved Searches
Permissions
Hosts
VMs
Datastores
Networks
vSphere DRS
Cluster Consumers
Related Objects
Datacenter
LAB
Update Manager Compliance

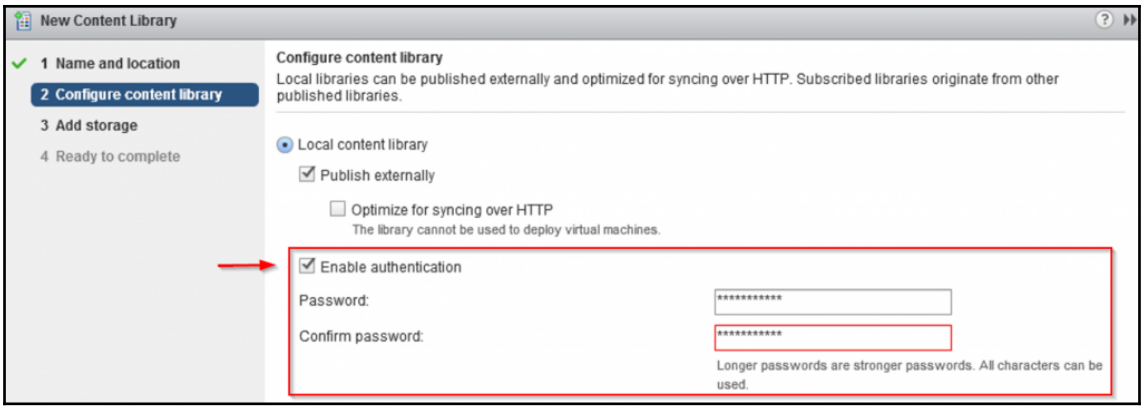

New Content Library
1 Name and location
2 Configure content library
3 Add storage
4 Ready to complete
Configure content library
Local libraries can be published externally and optimized for syncing over HTTP. Subscribed libraries originate from other published libraries.
Local content library
Publish externally
Optimize for syncing over HTTP
The library cannot be used to deploy virtual machines.
Enable authentication
Subscribed content library
Subscription URL:
https://vcsa65-vc05.lab.local:443/cls/vcsp/lib/55ac47b7-ea9b-433e-be47-e266de59
Example: https://server/path/lib.json
Enable authentication
Download all library content immediately
Download library content only when needed
Save storage space by storing only metadata for the items. To use a content library item, synchronize the item or the whole library.
Back
Next
Finish
Cancel

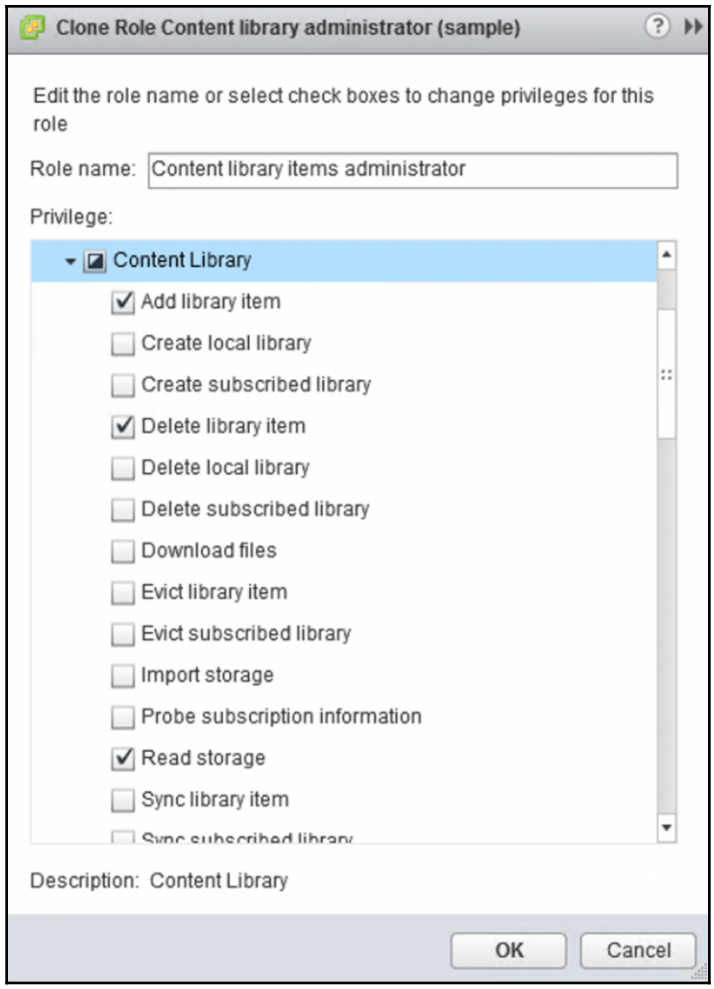

Edit Role Content library administrator (sample)
Edit the role name or select check boxes to change privileges for this role
Role name: Content library administrator (sample)
Privilege:
All Privileges
Alarms
AutoDeploy
Certificates
Content Library
Add library item
Create local library
Create subscribed library
Delete library item
Delete local library
Delete subscribed library
Download files
Evict library item
Evict subscribed library
Description: All Privileges
OK
Cancel

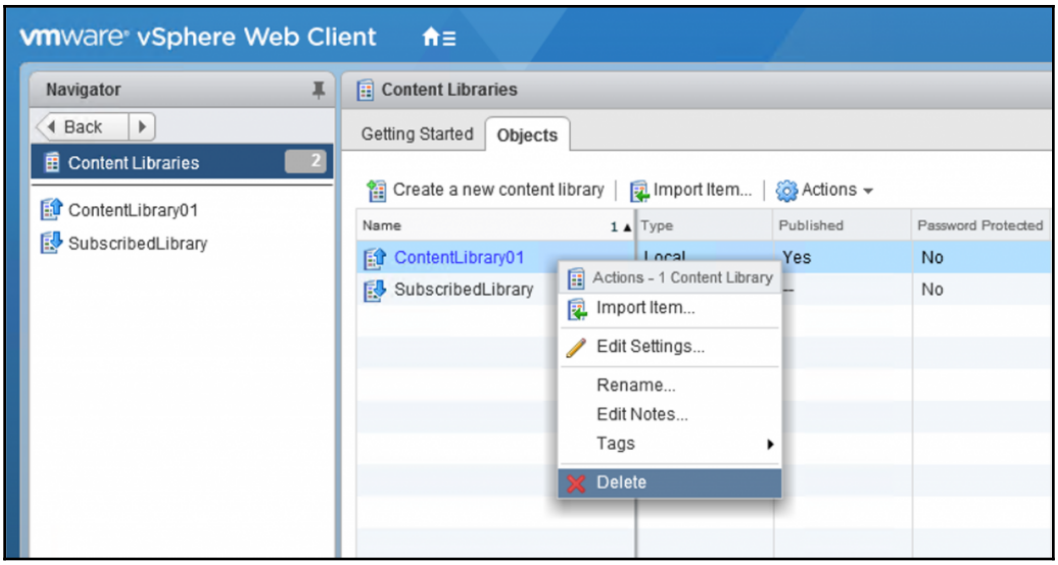

SubscribedLibrary - Edit Settings
Automatic synchronization
Enable automatic synchronization with the external content library
Subscription URL
https://vcsa65-vc01.lab.local:443/cls/vcsp/lib/55ac47b7-ea9b-433e-
Authentication
Enable user authentication for access to this content library
Library content
Download all library content immediately
Download library content only when needed
Save storage space by storing only metadata for the items. To use a content library item, synchronize the item or the whole library.
OK
Cancel

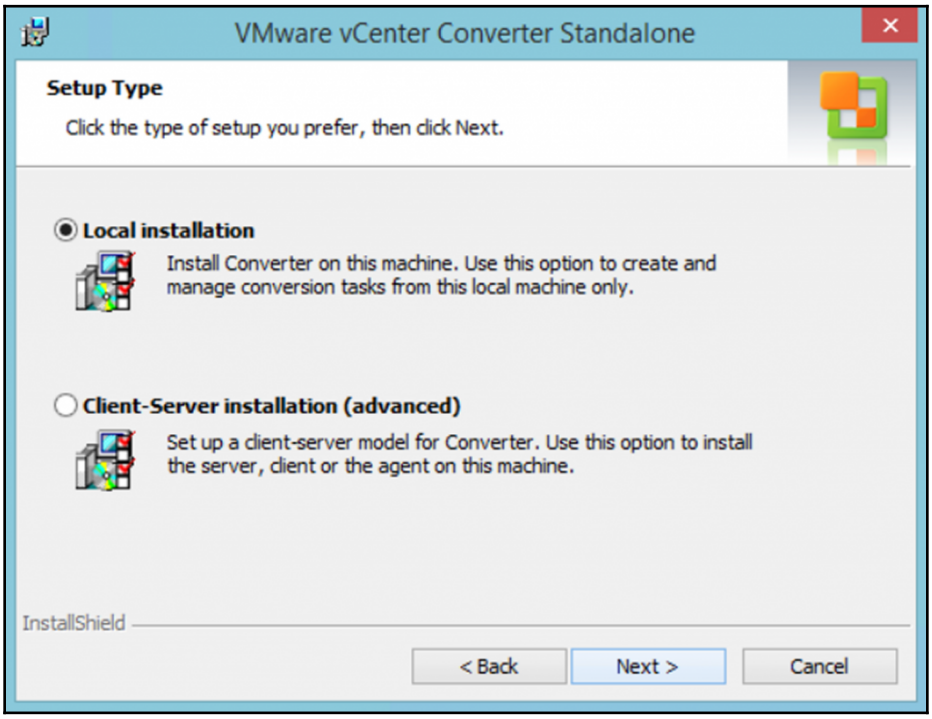

Content Library LAB - Import Library Item
Source
Select the OVF package or other file type to import.
Source file:
URL
Local file
Browse...
\\slacko64-6.3.0.iso
Destination
Item name:
slacko64-6.3.0.iso
Notes:
Linux Slack master image
Content library:
Content Library LAB
OK
Cancel

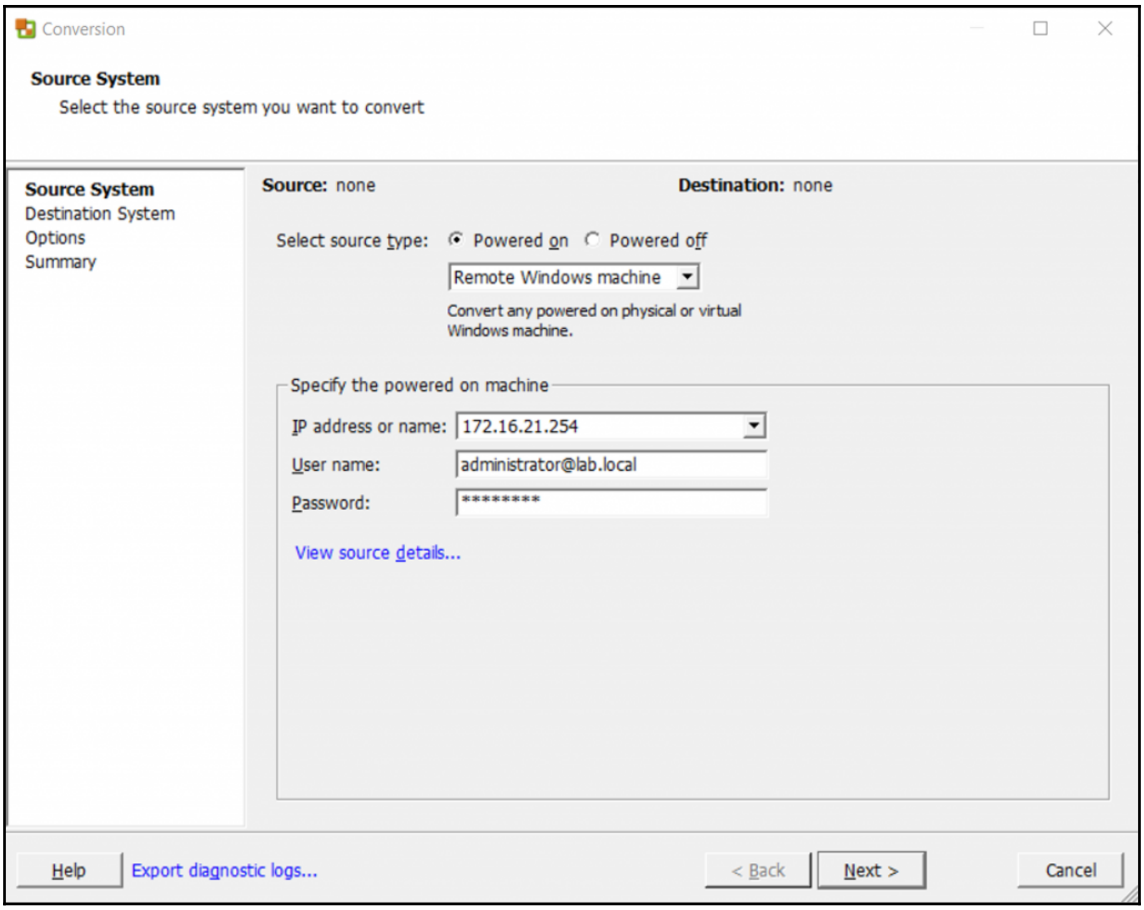

New Content Library
1 Name and location
2 Configure content library
3 Add storage
4 Ready to complete
Configure content library
Local libraries can be published externally and optimized for syncing over HTTP. Subscribed libraries originate from other published libraries.
Local content library
Publish externally
Optimize for syncing over HTTP
The library cannot be used to deploy virtual machines.
Enable authentication
Subscribed content library

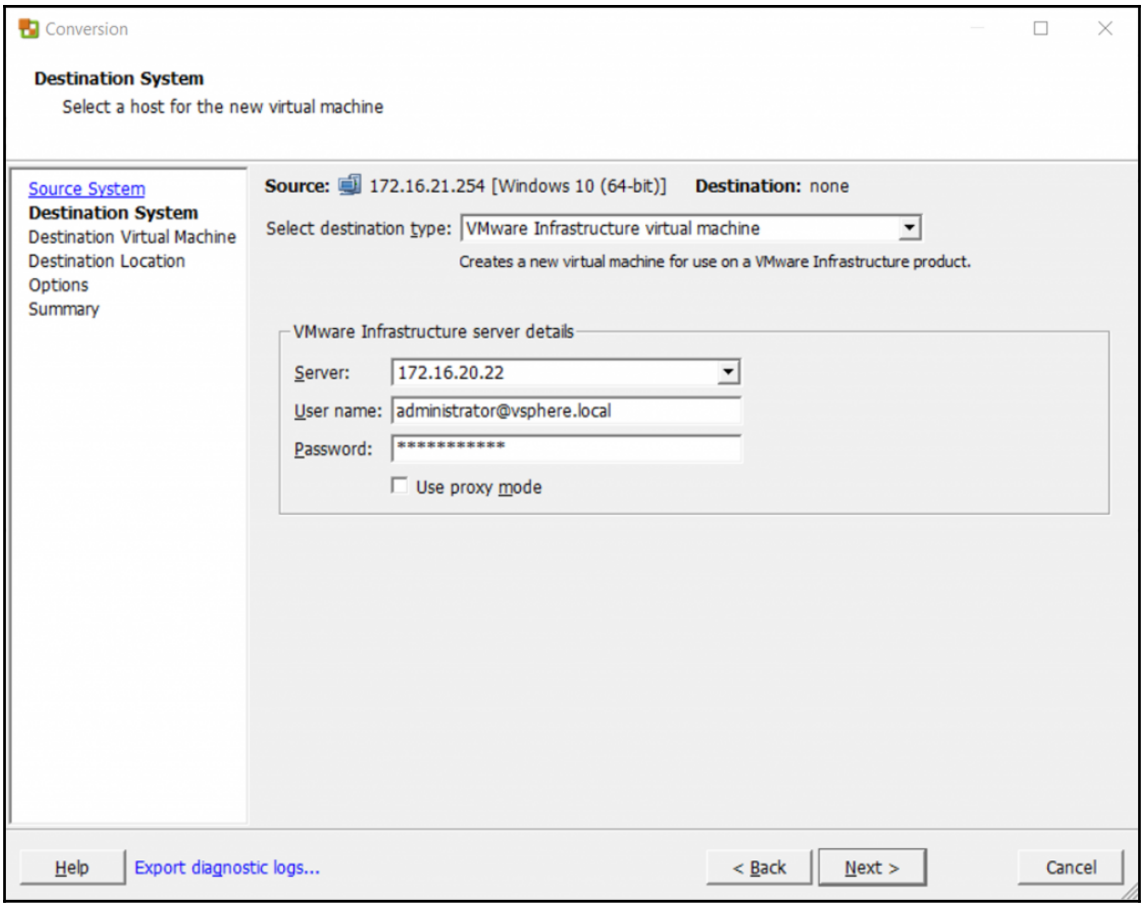

New Content Library
1 Name and location
2 Configure content library
3 Add storage
4 Ready to complete
Configure content library
Local libraries can be published externally and optimized for syncing over HTTP. Subscribed libraries originate from other published libraries.
Local content library
Publish externally
Optimize for syncing over HTTP
The library cannot be used to deploy virtual machines.
Enable authentication
Password:
****
Confirm password:
****
Longer passwords are stronger passwords. All characters can be used.

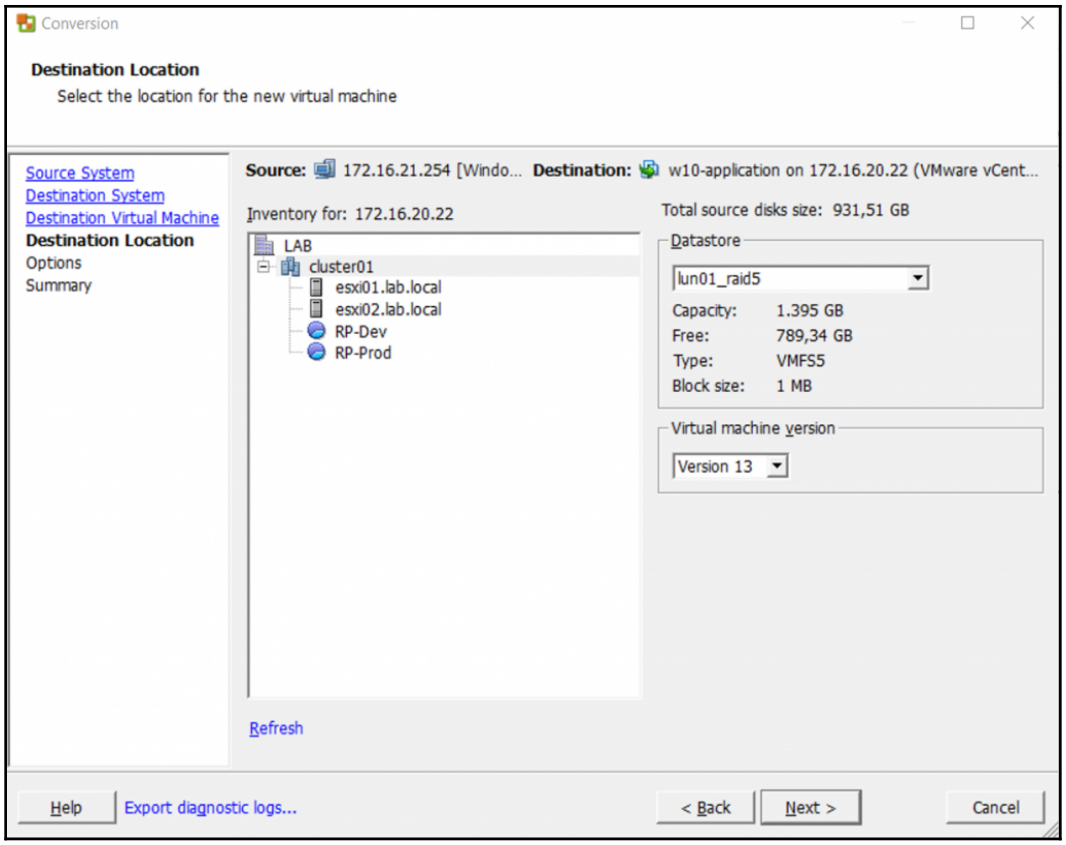

Clone Role Content library administrator (sample)
Edit the role name or select check boxes to change privileges for this role
Role name:
Content library items administrator
Privilege:
Content Library
Add library item
Create local library
Create subscribed library
Delete library item
Delete local library
Delete subscribed library
Download files
Evict library item
Evict subscribed library
Import storage
Probe subscription information
Read storage
Sync library item
Description: Content Library
OK
Cancel

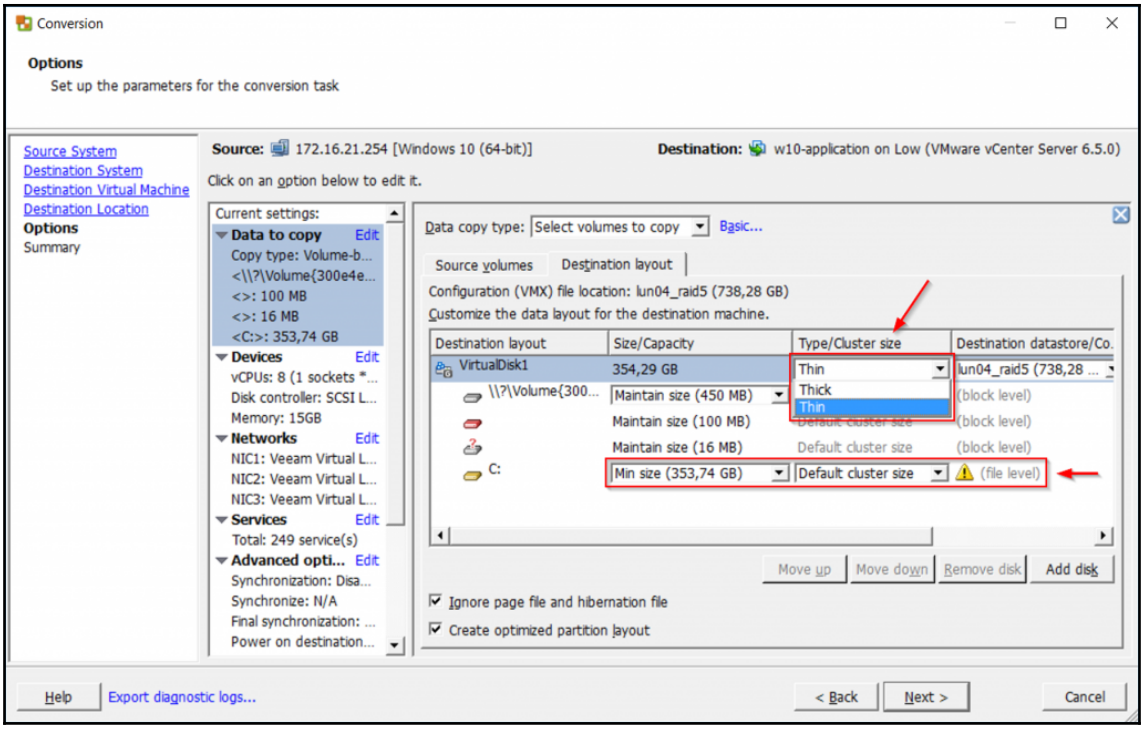

vmware vSphere Web Client
Navigator
Back
Content Libraries
2
ContentLibrary01
SubscribedLibrary
Content Libraries
Getting Started
Objects
Create a new content library
Import Item...
Actions
Name
Type
Published
Password Protected
ContentLibrary01
Local
Yes
No
SubscribedLibrary
No
Actions - 1 Content Library
Import Item...
Edit Settings...
Rename...
Edit Notes...
Tags
Delete

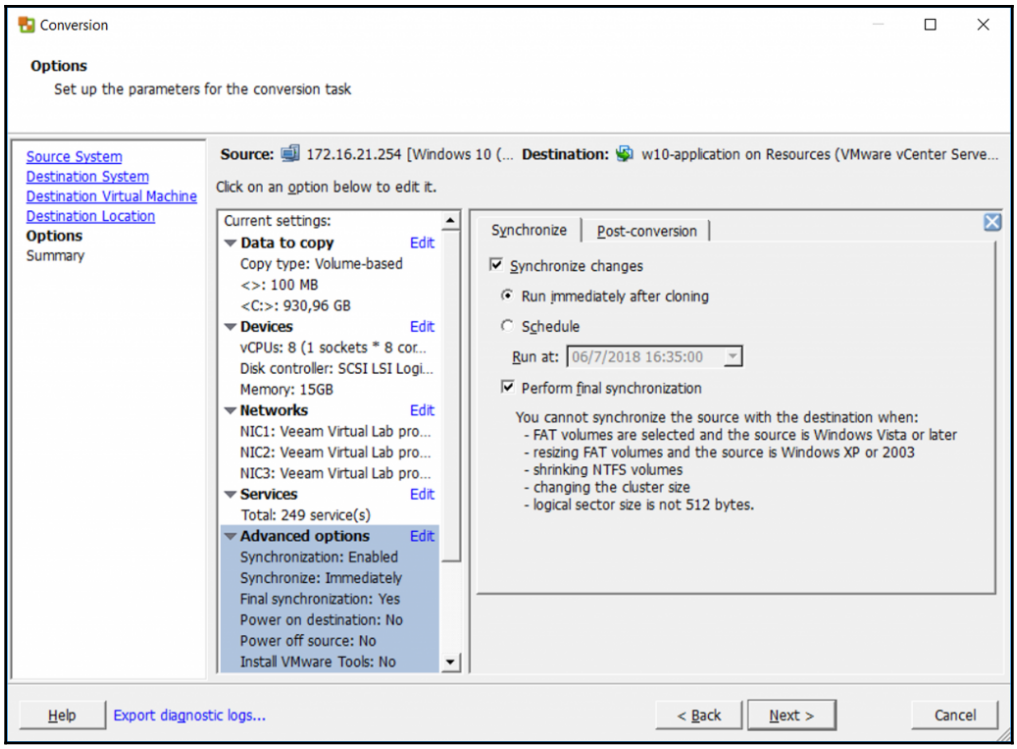

VMware vCenter Converter Standalone
Setup Type
Click the type of setup you prefer, then click Next.
Local installation
Install Converter on this machine. Use this option to create and manage conversion tasks from this local machine only.
Client-Server installation (advanced)
Set up a client-server model for Converter. Use this option to install the server, client or the agent on this machine.
InstallShield
< Back
Next >
Cancel

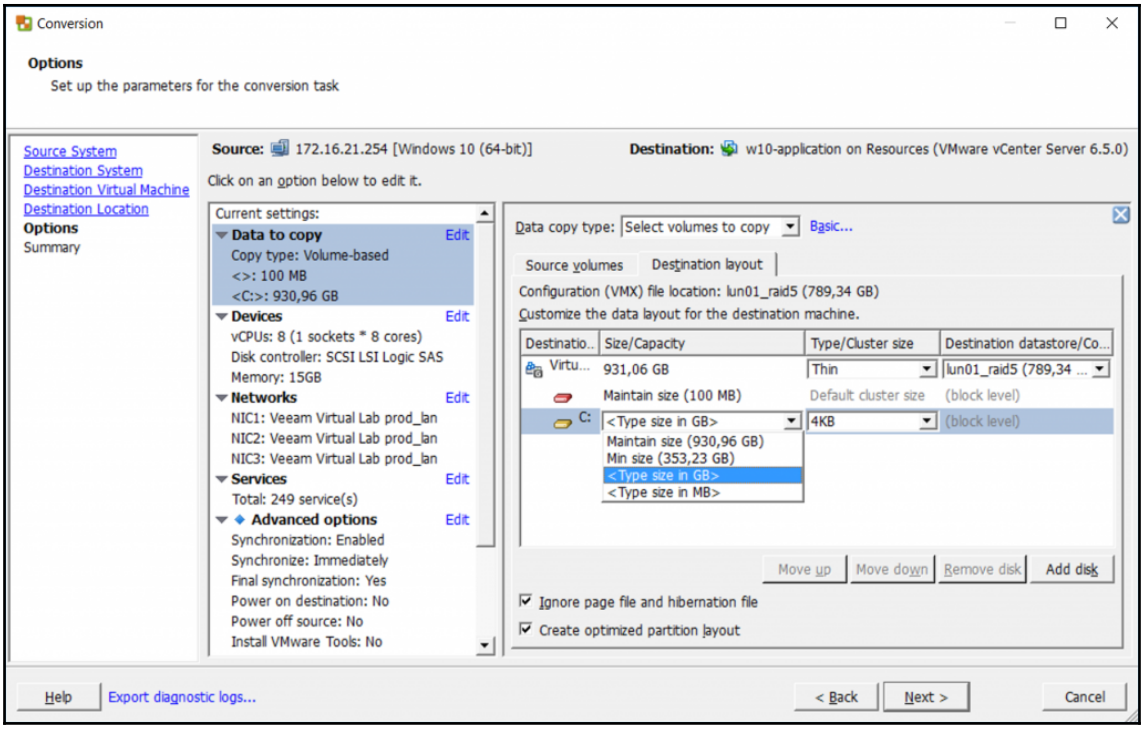

Conversion
Source System
Select the source system you want to convert
Source System
Destination System
Options
Summary
Source: none
Destination: none
Select source type:
Powered on
Powered off
Remote Windows machine
Convert any powered on physical or virtual Windows machine.
Specify the powered on machine
IP address or name:
172.16.21.254
User name:
administrator@lab.local
Password:
****
View source details...
Help
Export diagnostic logs...
< Back
Next >
Cancel

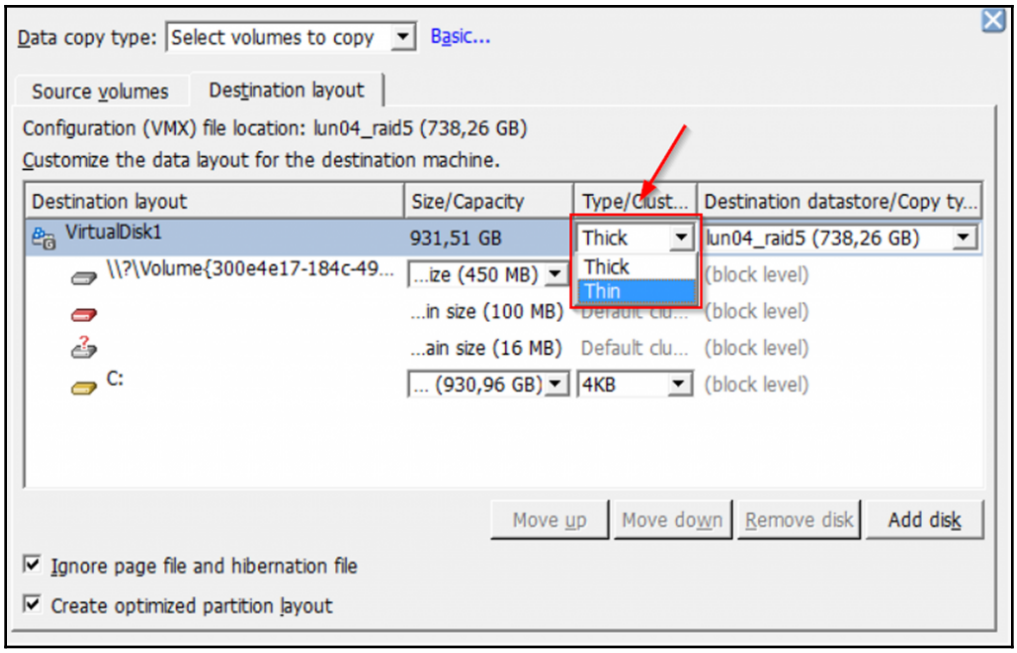

Conversion
Destination System
Select a host for the new virtual machine
Source System
Destination System
Destination Virtual Machine
Destination Location
Options
Summary
Source: 172.16.21.254 [Windows 10 (64-bit)] Destination: none
Select destination type: VMware Infrastructure virtual machine
Creates a new virtual machine for use on a VMware Infrastructure product.
VMware Infrastructure server details
Server: 172.16.20.22
User name: administrator@vsphere.local
Password: **********
Use proxy mode
Help
Export diagnostic logs...
< Back
Next >
Cancel


Conversion
Destination Location
Select the location for the new virtual machine
Source System
Destination System
Destination Virtual Machine
Destination Location
Options
Summary
Source: 172.16.21.254 [Windo...
Destination: w10-application on 172.16.20.22 (VMware vCent...
Inventory for: 172.16.20.22
LAB
cluster01
esxi01.lab.local
esxi02.lab.local
RP-Dev
RP-Prod
Refresh
Total source disks size: 931,51 GB
Datastore
lun01_raid5
Capacity: 1.395 GB
Free: 789,34 GB
Type: VMFS5
Block size: 1 MB
Virtual machine version
Version 13
Help
Export diagnostic logs...
< Back
Next >
Cancel

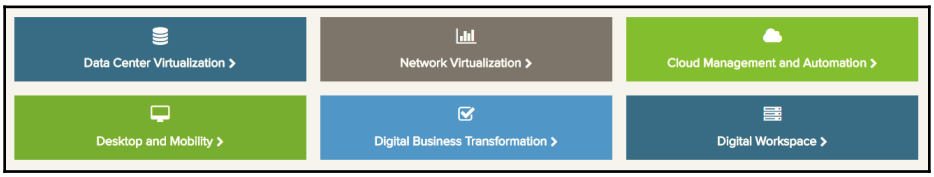

Conversion
Options
Set up the parameters for the conversion task
Source System
Destination System
Destination Virtual Machine
Destination Location
Options
Summary
Source: 172.16.21.254 [Windows 10 (64-bit)]
Destination: w10-application on Low (VMware vCenter Server 6.5.0)
Click on an option below to edit it.
Current settings:
Data to copy Edit
Copy type: Volume-b...
<\\?\Volume{300e4e...
<>: 100 MB
<>: 16 MB
<C:>: 353,74 GB
Devices Edit
vCPUs: 8 (1 sockets *...
Disk controller: SCSI L...
Memory: 15GB
Networks Edit
NIC1: Veeam Virtual L...
NIC2: Veeam Virtual L...
NIC3: Veeam Virtual L...
Services Edit
Total: 249 service(s)
Advanced opti... Edit
Synchronization: Disa...
Synchronize: N/A
Final synchronization: ...
Power on destination...
Data copy type: Select volumes to copy
Basic...
Source volumes
Destination layout
Configuration (VMX) file location: lun04_raid5 (738,28 GB)
Customize the data layout for the destination machine.
Destination layout
Size/Capacity
Type/Cluster size
Destination datastore/Co...
VirtualDisk1
354,29 GB
Thin
Thick
Thin
lun04_raid5 (738,28 ...
\\?\Volume{300...
Maintain size (450 MB)
(block level)
Maintain size (100 MB)
(block level)
Maintain size (16 MB)
Default cluster size
(block level)
C:
Min size (353,74 GB)
Default cluster size
(file level)
Move up
Move down
Remove disk
Add disk
Ignore page file and hibernation file
Create optimized partition layout
Help
Export diagnostic logs...
< Back
Next >
Cancel

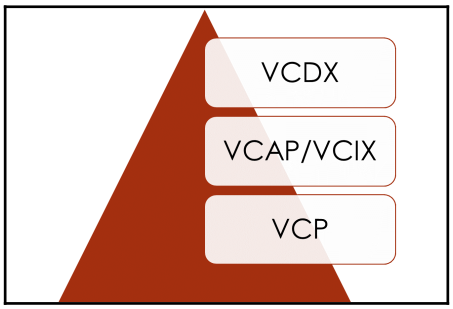

Conversion
Options
Set up the parameters for the conversion task
Source System
Destination System
Destination Virtual Machine
Destination Location
Options
Summary
Source: 172.16.21.254 [Windows 10 (... Destination: w10-application on Resources (VMware vCenter Serve...
Click on an option below to edit it.
Current settings:
Data to copy Edit
Copy type: Volume-based
<>: 100 MB
<C:>: 930,96 GB
Devices Edit
vCPUs: 8 (1 sockets * 8 cor...
Disk controller: SCSI LSI Logi...
Memory: 15GB
Networks Edit
NIC1: Veeam Virtual Lab pro...
NIC2: Veeam Virtual Lab pro...
NIC3: Veeam Virtual Lab pro...
Services Edit
Total: 249 service(s)
Advanced options Edit
Synchronization: Enabled
Synchronize: Immediately
Final synchronization: Yes
Power on destination: No
Power off source: No
Install VMware Tools: No
Synchronize
Post-conversion
Synchronize changes
Run immediately after cloning
Schedule
Run at: 06/7/2018 16:35:00
Perform final synchronization
You cannot synchronize the source with the destination when:
- FAT volumes are selected and the source is Windows Vista or later
- resizing FAT volumes and the source is Windows XP or 2003
- shrinking NTFS volumes
- changing the cluster size
- logical sector size is not 512 bytes.
Help
Export diagnostic logs...
< Back
Next >
Cancel


Conversion
Options
Set up the parameters for the conversion task
Source System
Destination System
Destination Virtual Machine
Destination Location
Options
Summary
Source: 172.16.21.254 [Windows 10 (64-bit)]
Destination: w10-application on Resources (VMware vCenter Server 6.5.0)
Click on an option below to edit it.
Current settings:
Data to copy Edit
Copy type: Volume-based
<>: 100 MB
<C:>: 930,96 GB
Devices Edit
vCPUs: 8 (1 sockets * 8 cores)
Disk controller: SCSI LSI Logic SAS
Memory: 15GB
Networks Edit
NIC1: Veeam Virtual Lab prod_lan
NIC2: Veeam Virtual Lab prod_lan
NIC3: Veeam Virtual Lab prod_lan
Services Edit
Total: 249 service(s)
Advanced options Edit
Synchronization: Enabled
Synchronize: Immediately
Final synchronization: Yes
Power on destination: No
Power off source: No
Install VMware Tools: No
Data copy type: Select volumes to copy
Basic...
Source volumes
Destination layout
Configuration (VMX) file location: lun01_raid5 (789,34 GB)
Customize the data layout for the destination machine.
Destinatio...
Size/Capacity
Type/Cluster size
Destination datastore/Co...
Virtu...
931,06 GB
Thin
lun01_raid5 (789,34 ...
Maintain size (100 MB)
Default cluster size
(block level)
C:
<Type size in GB>
4KB
(block level)
Maintain size (930,96 GB)
Min size (353,23 GB)
<Type size in GB>
<Type size in MB>
Move up
Move down
Remove disk
Add disk
Ignore page file and hibernation file
Create optimized partition layout
Help
Export diagnostic logs...
< Back
Next >
Cancel


Data copy type: Select volumes to copy
Basic...
Source volumes
Destination layout
Configuration (VMX) file location: lun04_raid5 (738,26 GB)
Customize the data layout for the destination machine.
Destination layout
Size/Capacity
Type/Clust...
Destination datastore/Copy ty...
VirtualDisk1
931,51 GB
Thick
lun04_raid5 (738,26 GB)
Thick
Thin
\\?\Volume{300e4e17-184c-49...
...ize (450 MB)
(block level)
...in size (100 MB)
(block level)
...ain size (16 MB)
Default clu...
(block level)
C:
... (930,96 GB)
4KB
(block level)
Move up
Move down
Remove disk
Add disk
Ignore page file and hibernation file
Create optimized partition layout

Appendix A: Understanding VMware Certification Paths





Appendix B: VCP6.5-DCV Certification