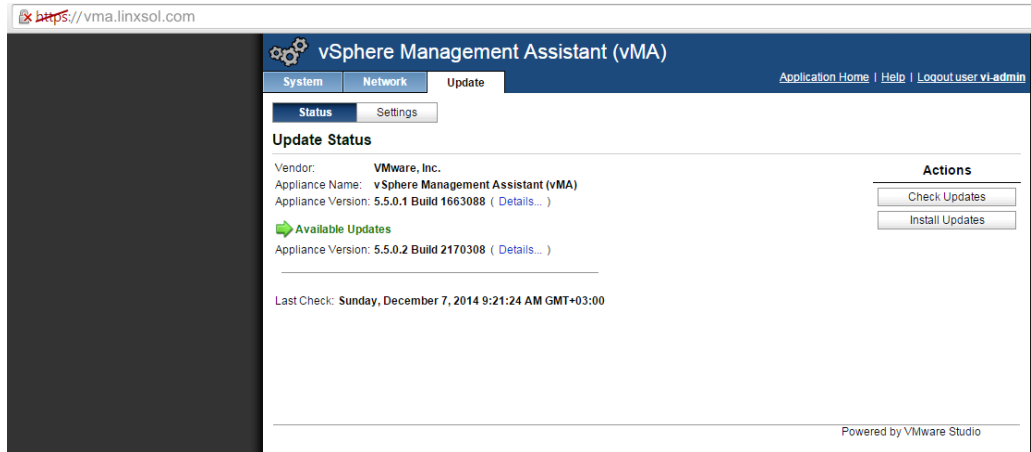


Chapter 1

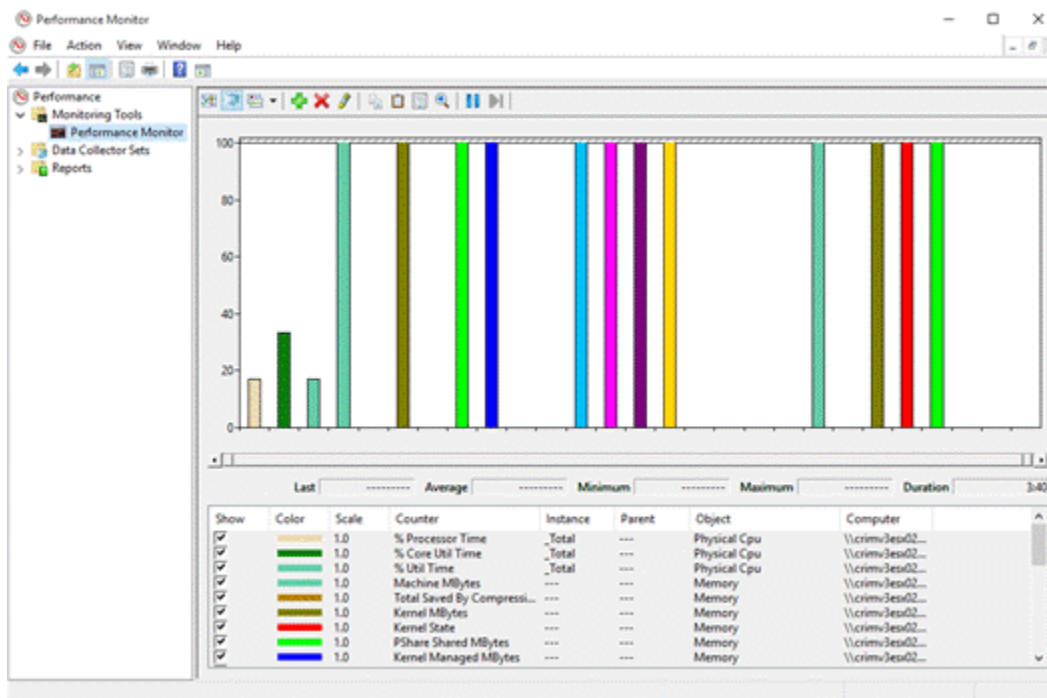


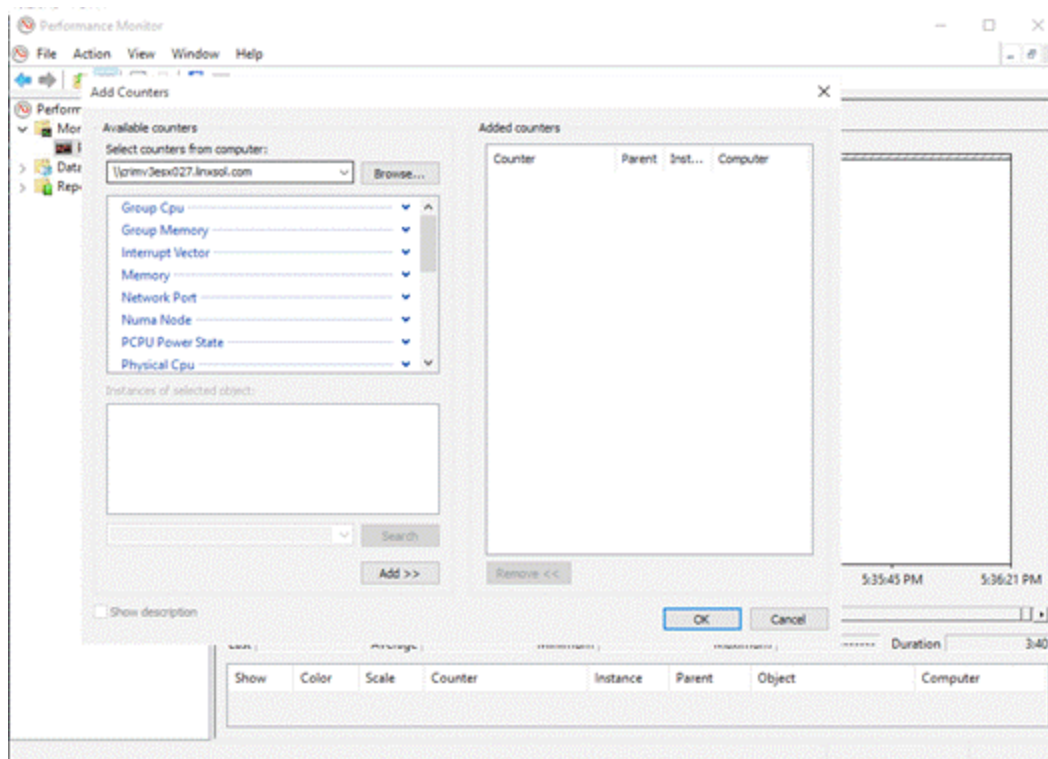
Chapter 2

Resources

CPU usage: **8005 MHz** Capacity
 40 x 2.26 GHz

Memory usage: **18841.00 MB** Capacity
 1966067.00 MB





VMware offers supported, powerful system administration tools. Please see www.vmware.com/go/sysadmintools for details.

The ESXi Shell can be disabled by an administrative user. See the vSphere Security documentation for more information.

```
> # vm-support -p -d 10 -i 5 -w /vmfs/volumes/NFSVol0
```

```
NFSVol01/ NFSVol02/
```

```
> # vm-support -p -d 10 -i 5 -w /vmfs/volumes/NFSVol01
```

```
16:31:22: Creating /vmfs/volumes/NFSVol01/esx-crimv3esx011.linxsol.com-2015-08-27-16.31.tgz
```

```
16:33:08: Gathering output from /usr/lib/vmware/vm-support/bin/dump-vmdk-rdm-info.sh /vmfs/volumes/4e8cd2a7-471bb085/WinXP (7c94c260-4687-4ad7-94cb-04f4ce1782
```

```
16:33:08: Gathering output from /usr/lib/vmware/vm-support/bin/dump-vmdk-rdm-info.sh /vmfs/volumes/fff4f3be-404e2062/WebSrv002 (ca421d7c-ed1a-4892-a6e3-45726
```

```
16:33:08: Gathering output from /usr/lib/vmware/vm-support/bin/dump-vmdk-rdm-info.sh /vmfs/volumes/4e8cd2a7-471bb085/WebSrv001 (fcd880fc-b0d9-4be7-b078-dd5cd3
```

```
16:33:08: Gathering output from /usr/lib/vmware/vm-support/bin/dump-vmdk-rdm-info.sh /vmfs/volumes/fff4f3be-404e2062/Test3(2fe109a2-67d9-451c-8656-125777b1b9e
```

```
16:33:09: Gathering output from /usr/lib/vmware/vm-support/bin/dump-vmdk-rdm-info.sh /vmfs/volumes/fff4f3be-404e2062/Test2 (5eb8c10d-33ab-4c7d-88ff-1b1c17c321
```

```
16:33:09: Gathering output from /usr/lib/vmware/vm-support/bin/dump-vmdk-rdm-info.sh /vmfs/volumes/fff4f3be-404e2062/Test4(519f1db7-e6f9-468e-a98b-4e1e85fc6ad
```

```
16:33:09: Gathering output from /usr/lib/vmware/vm-support/bin/dump-vmdk-rdm-info.sh /vmfs/volumes/4e8cd2a7-471bb085/RS-a/RS-a.vmx
```

```
16:35:19: Done.
```

Please attach this file when submitting an incident report.

To file a support incident, go to http://www.vmware.com/support/sr/sr_login.jsp

To see the files collected, run: `tar -tzf '/vmfs/volumes/NFSVol01/esx-crimv3esx011.linxsol.com-2015-08-27-16.31.tgz`

```
> #
```


vCenter Server Settings

Statistics

Select settings for collecting vCenter statistics

- Licensing
- Statistics
- Runtime Settings
- Active Directory
- Mail
- SNMP
- Ports
- Timeout Settings
- Logging Options
- Database
- Database Retention Policy
- Advanced Settings

Interval Duration	Save For	Statistics Level
<input checked="" type="checkbox"/> 5 Minutes	1 Days	1
<input checked="" type="checkbox"/> 30 Minutes	1 Week	1
<input checked="" type="checkbox"/> 2 Hours	1 Month	1

Database Size

Based on the current vCenter and inventory size, the vCenter database can be estimated. Enter the expected number of hosts.

50	Physical Hosts	Estimated space requi 14.32 GB
2000	Virtual Machines	

Click Help for details on how the vCenter database size is calculated.

Edit Statistics Interval

Statistics Interval: 5 Minutes

Keep Samples for: 1 Days

Statistics Level: Level 1

Level Description:
This level includes the basic metrics - Average Usage for CPU, Memory, Disk and Network; System Uptime, System Heartbeat and vSphere DRS metrics. Statistics for devices are not included at this level.

Help OK Cancel

To PNG...

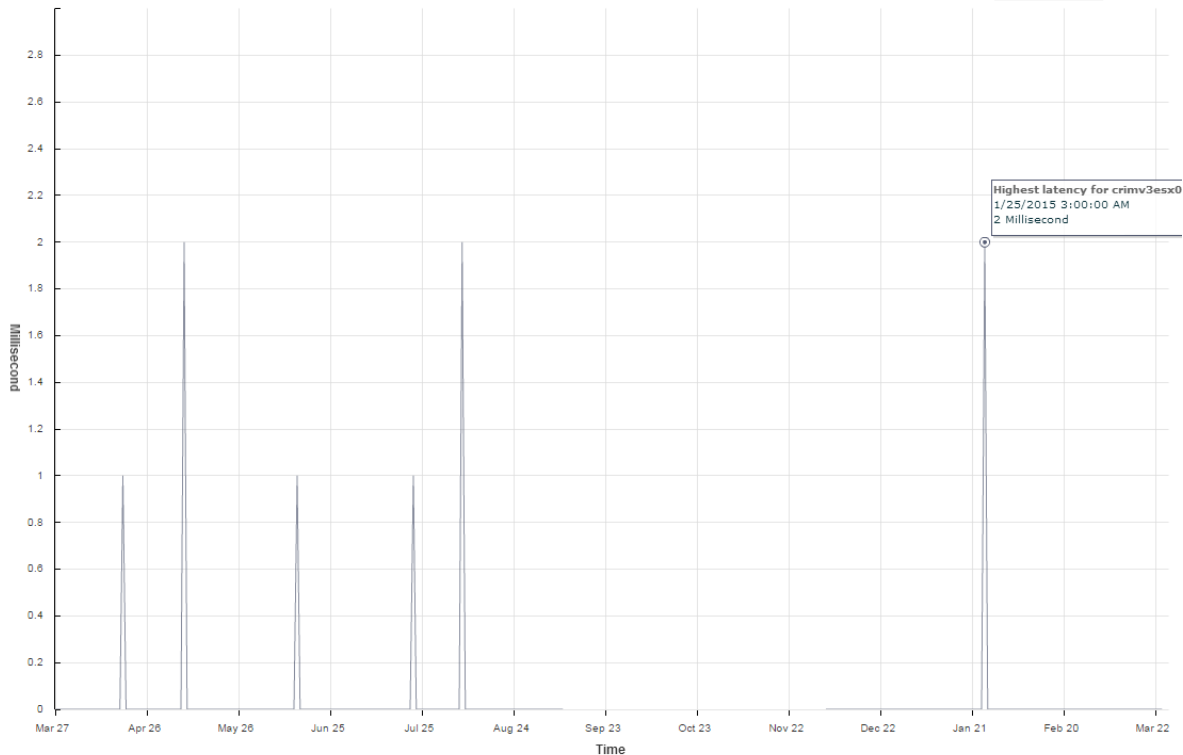
To JPEG...

To CSV...

Overview
Advanced

Disk/Last year, 3/27/2014 3:00:00 AM - 3/26/2015 3:00:00 AM Chart Options

View: Disk Metric



Highest latency for crimv3esx0
 1/25/2015 3:00:00 AM
 2 Millisecond

Performance Chart Legend

Key	Object	Measurement	Rollup	Units	Latest	Maximum	Minimum	Average
■	crimv3esx02.linuxsol.com	Highest latency	Latest	Millisecond	0	2	0	0.032

crimv3esx02.linuxsol.com - Chart Options

Chart options: Default Save Options As... Delete Options Always load these options at startup

Chart Metrics: CPU, Cluster services, Datastore, **Disk**, Memory, Network, Power, Storage adapter, Storage path, System, vSphere Replication

Timespan: Real-time
 Last: 1 Hour(s)
 From: 03/27/2015 1:03 AM
 To: 03/27/2015 1:03 AM

Select object for this chart:

- /vmfs/devices/disks/naa.6b8ca3a0eabc52001a0540b32...
- /vmfs/devices/disks/naa.6b8ca3a0eabc52001a0540d32...
- crimv3esx02.linuxsol.com

Chart Type: Line Graph

Select counters for this chart:

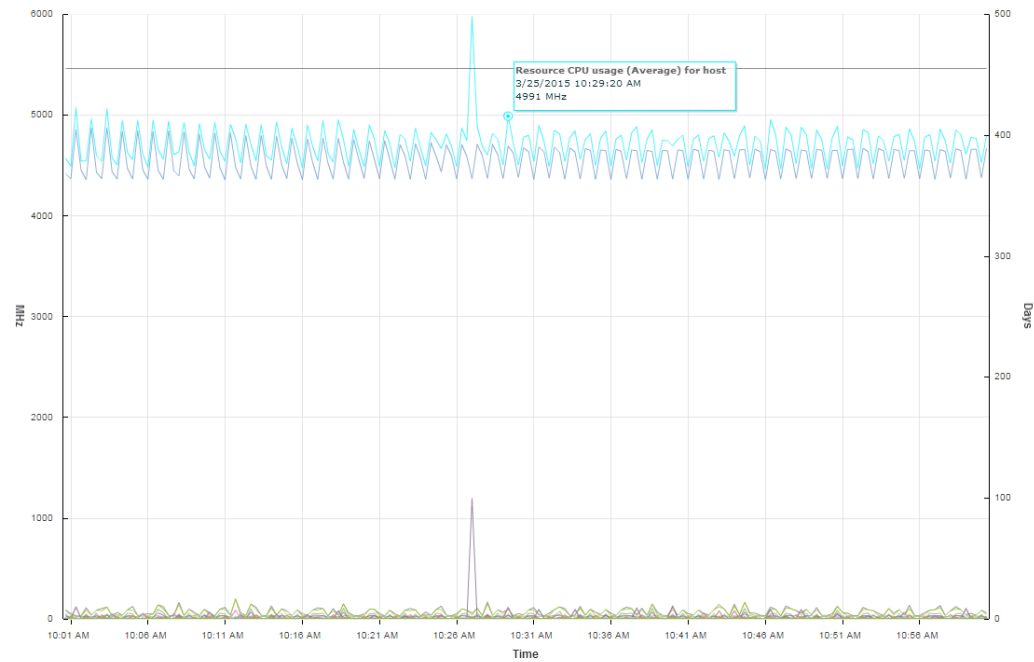
Counters	Rollups	Units	Internal Name	Stat Type	Description
<input type="checkbox"/> Average commands i...	average	Number	commandsAve...	rate	Average numb...
<input type="checkbox"/> Average read request...	average	Number	numberReadA...	rate	Average numb...
<input type="checkbox"/> Average write request...	average	Number	numberWriteAv...	rate	Average numb...
<input type="checkbox"/> Bus resets	summation	Number	busResets	delta	Number of SC...
<input type="checkbox"/> Command latency	average	Millisecond	totalLatency	absolute	Average amou...
<input type="checkbox"/> Commands aborted	summation	Number	commandsAb...	delta	Number of SC...
<input type="checkbox"/> Commands issued	summation	Number	commands	delta	Number of SC...

Help Ok Cancel

Overview

Advanced

System/Real-time, 3/25/2015 10:00:40 AM - 3/25/2015 11:00:20 AM Chart Options View: CPU



Performance Chart Legend

Key	Object	Measurement	Rollup	Units	Latest	Maximum	Minimum	Average
■	host/vm/vmvisor/dhclient	Resource CPU usage (Average)	Average	MHz	0	0	0	0
■	host/vm/vmvisor/init	Resource CPU usage (Average)	Average	MHz	0	82	0	3.528
■	host/system/svmotion	Resource CPU usage (Average)	Average	MHz	0	0	0	0
■	host/vm	Resource CPU usage (Average)	Average	MHz	60	199	30	73.406
■	host/vm/vmvisor/plugins/likewi...	Resource CPU usage (Average)	Average	MHz	0	0	0	0
■	host/system/kernel/kmanaged/...	Resource CPU usage (Average)	Average	MHz	0	0	0	0



```

vi-admin@vma:~> vifp addserver crimv3esx002.linuxsol.com --authpolicy fpauth
root@crimv3esx002.linuxsol.com's password:
vi-admin@vma:~> vifpvtarget -set crimv3esx002.linuxsol.com
vi-admin@vma:~ [crimv3esx002.linuxsol.com]> resxtop

```

I


```

10:56:12am up 438 days 1:26, 370 worlds, 1 VMs, 16 vCPUs; MEM overcommit avg: 0.00, 0.00, 0.00
PMEM /MB: 262098 total: 2677 vmk,131862 other, 127558 free
VMKMEM/MB: 261714 managed: 3231 minfree, 139761 rsvd, 121952 ursvd, high state
NUMA /MB: 131026 (60381), 131072 (66792)
PSHARE/MB: 20 shared, 20 common: 0 saving
SWAP /MB: 0 curr, 0 rclmtgt: 0.00 r/s, 0.00 w/s
ZIP /MB: 0 zipped, 0 saved
MEMCTL/MB: 0 curr, 0 target, 83813 max

```

GID	NAME	MEMSZ	GRANT	SZTGT	TCHD	TCHD W	MCTL?	MCTLSZ	MCTLTGT	MCT
32095121	scpro3 (763bc33	131072.00	131060.00	131656.54	2621.44	2621.44	Y	0.00	0.00	8
32095123	vm-vmx.18155303	131072.00	131060.00	131656.54	2621.44	2621.44	Y	0.00	0.00	8
32095124	vm-vmx.18155303	131072.00	131060.00	131656.54	2621.44	2621.44	Y	0.00	0.00	8
20065505	hostd.11353859	77.73	60.34	66.38	21.08	21.08	N	0.00	0.00	
20067162	sfcb-ProviderMa	56.10	53.41	56.10	36.92	36.92	N	0.00	0.00	
20067153	sfcb-ProviderMa	31.68	21.62	23.78	7.18	7.18	N	0.00	0.00	
20066143	vpxa.11354279	25.31	17.47	19.22	3.72	3.72	N	0.00	0.00	
20066953	fdm.11354803	18.19	12.71	13.98	2.24	2.24	N	0.00	0.00	
20067151	sfcb-ProviderMa	17.87	15.12	16.63	2.64	2.64	N	0.00	0.00	
20066069	vobd.11354219	12.29	1.38	1.52	1.27	1.27	N	0.00	0.00	
20065321	rhhttpproxy.1135	10.91	6.04	6.64	1.08	1.08	N	0.00	0.00	
832	vmsyslogd.8666	7.62	5.34	5.88	5.24	5.24	N	0.00	0.00	
20067168	sfcb-ProviderMa	6.34	1.86	2.04	0.32	0.32	N	0.00	0.00	
3115	dcui.9902	6.33	1.69	1.86	1.24	1.24	N	0.00	0.00	
898	vmkeventd.8717	6.00	1.80	1.98	1.79	1.79	N	0.00	0.00	
20065917	smartd.11354075	5.93	2.92	3.21	0.60	0.60	N	0.00	0.00	
830	vmsyslogd.8665	5.30	4.17	4.58	3.91	3.91	N	0.00	0.00	
43633273	esxtop.24684752	5.15	2.10	2.31	1.12	1.12	N	0.00	0.00	
20065391	storageRM.11353	5.00	1.43	1.57	0.12	0.12	N	0.00	0.00	
1122	vmkdevmgr.8846	4.37	1.31	1.44	1.09	1.09	N	0.00	0.00	
20065251	net-lbt.1135372	4.16	1.25	1.37	0.35	0.35	N	0.00	0.00	
20065993	dcbd.11354179	4.09	1.08	1.19	0.05	0.05	N	0.00	0.00	
20066963	sfcb-ProviderMa	3.76	2.21	2.43	1.63	1.63	N	0.00	0.00	
20065181	vmware-usbarbit	2.94	0.35	0.39	0.19	0.19	N	0.00	0.00	
20065747	net-lacp.113539	2.49	0.73	0.80	0.03	0.03	N	0.00	0.00	
336	init.8433	2.24	0.09	0.09	0.07	0.07	N	0.00	0.00	
3111	sh.9900	2.24	0.09	0.09	0.07	0.07	N	0.00	0.00	
20067139	sfcb-ProviderMa	2.04	0.41	0.45	0.27	0.27	N	0.00	0.00	
20065027	ntpd.11353577	1.76	0.38	0.41	0.21	0.21	N	0.00	0.00	


```

10.2.6.18 - PuTTY
2:54:34pm up 431 days 5:25, 369 worlds, 1 VMs, 16 vCPUs; CPU load average: 0.0
2, 0.02, 0.02
PCPU USED(%): 0.4 0.1 2.4 0.1 0.5 0.0 0.3 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.3 0.0 0.
4 0.1 0.1 0.0 0.1 0.3 0.1 0.0 0.4 0.0 0.2 0.0 0.2 0.0 0.3 0.0 AVG: 0.2
PCPU UTIL(%): 0.7 0.3 4.1 0.3 0.9 0.2 0.7 0.1 0.4 0.1 0.3 0.1 0.4 0.1 0.7 0.1 0.
9 0.2 0.3 0.2 0.3 0.6 0.4 0.2 0.9 0.2 0.6 0.2 0.6 0.2 0.7 0.2 AVG: 0.5
CORE UTIL(%): 0.8 4.3 1.1 0.8 0.4 0.3 0.4 0.7 1.
0 0.3 0.8 0.5 0.9 0.6 0.6 0.8 AVG: 0.9

```

ID	GID	NAME	NWLD	%USED	%RUN	%SYS	%WAIT	%VMWAI
1	1	idle	32	1964.95	3200.00	0.00	0.00	
32095121	32095121	scpro3 (763bc33	24	4.24	6.77	0.19	2400.00	0.0
42959579	42959579	esxstop.24303154	1	2.53	4.22	0.00	100.00	
2	2	system	10	0.16	0.26	0.00	1000.00	
8	8	helper	89	0.13	0.21	0.00	8900.00	
20066953	20066953	fdm.11354803	18	0.12	0.19	0.00	1800.00	
20066143	20066143	vpxa.11354279	19	0.05	0.08	0.00	1900.00	
20065505	20065505	hostd.11353859	25	0.05	0.07	0.00	2500.00	
20065321	20065321	rhttpproxy.1135	11	0.03	0.06	0.00	1100.00	
9	9	drivers	12	0.02	0.03	0.00	1200.00	
42846975	42846975	sshd.24239323	1	0.01	0.02	0.00	100.00	
20065181	20065181	vmware-usbarbit	2	0.01	0.02	0.00	200.00	
20065747	20065747	net-lacp.113539	3	0.01	0.02	0.00	300.00	
832	832	vmsyslogd.8666	3	0.01	0.01	0.00	300.00	

Chapter 3

```
VMware vSphere PowerCLI 5.1 Release 1
[Issuer]
0-UMware Installer

[Serial Number]
00F5925C5F5729

[Not Before]
10/29/2013 8:07:36 PM

[Not After]
4/29/2025 8:07:36 PM

[Thumbprint]
EFB2D3F6FA47F12C653A03B97BBCEFE29CEAD341

The server certificate is not valid.

WARNING: THE DEFAULT BEHAVIOR UPON INVALID SERVER CERTIFICATE WILL CHANGE IN A FUTURE RELEASE. To ensure scripts are not
affected by the change, use Set-PowerCLIConfiguration to set a value for the InvalidCertificateAction option.

Name          Port  User
----          -
crimv3esx002  443  root

PowerCLI C:\Program Files (x86)\VMware\Infrastructure\VMware PowerCLI> Get-UMHostSnmp

Enabled  Port  ReadOnly Communities
-----  -
True    161  {community1}

PowerCLI C:\Program Files (x86)\VMware\Infrastructure\VMware PowerCLI> Get-UMHostSnmp | Set-UMHostSnmp --enabled:$true
Set-UMHostSnmp : Cannot bind parameter 'HostSnmp'. Cannot convert the "--enabled:True" value of type "System.String" to type
At line:1 char:32
+ Get-UMHostSnmp | Set-UMHostSnmp <<<< --enabled:$true
+ ~~~~~
+ CategoryInfo          : InvalidArgument: (:) [Set-UMHostSnmp], ParameterBindingException
+ FullyQualifiedErrorId : CannotConvertArgumentNoMessage,VMware.UimAutomation.UiCore.Cmdlets.Commands.Host.SetUmHostSnmp

PowerCLI C:\Program Files (x86)\VMware\Infrastructure\VMware PowerCLI> Get-UMHostSnmp | Set-UMHostSnmp -enabled:$true

Enabled  Port  ReadOnly Communities
-----  -
True    161  {community1}

PowerCLI C:\Program Files (x86)\VMware\Infrastructure\VMware PowerCLI> Get-UMHostSnmp | Test-UMHostSnmp

Enabled  Port  ReadOnly Communities
-----  -
True    161  {community1}

PowerCLI C:\Program Files (x86)\VMware\Infrastructure\VMware PowerCLI>
```

```
vifp      vifptarget  vifs
vi-admin@vma:~> vifp listservers
crimv1vcs001.linxsol.com  vCenter
crimv3esx001.linxsol.com  ESXi
crimv3esx002.linxsol.com  ESXi
vi-admin@vma:~> vifptarget --set crimv3esx002.linxsol.com
vi-admin@vma:~[crimv3esx002.linxsol.com]> vicfg-snmp -c community1
Changing community list to: community1...
Complete.
vi-admin@vma:~[crimv3esx002.linxsol.com]> vicfg-snmp -t 10.2.6.91@
162/community1
Changing notification(trap) targets list to: 10.2.6.91@162/community1...
Complete.
vi-admin@vma:~[crimv3esx002.linxsol.com]> vicfg-snmp --enable
Enabling agent...
Complete.
vi-admin@vma:~[crimv3esx002.linxsol.com]>
```

```
login as: vi-admin
Welcome to vSphere Management Assistant
Using keyboard-interactive authentication.
Password:
Last login: Mon Apr 13 19:18:38 2015 from 10.5.2.77
vi-admin@vma:~> vicfg-snmp --help

Synopsis: /usr/bin/vicfg-snmp OPTIONS

Command-specific options:
  --communities
  -c          Set communities separated by comma comm1[,...] (this overwrites previous
settings)
  --disable
  -D          Stop SNMP service
  --enable
```

Getting Started | ... | webserv0029bb6943b-892043b-8920-49f3-a8a7-6c7c7b70649c) - Virtual Machine Properties

Virtual Machine Version: vmx-09

General

Product: ...
 Version: ...
 Vendor: ...
 Guest OS: ...
 VM Version: ...
 CPU: ...
 Memory: ...
 Memory Overhead: ...
 VMware Tools: ...
 IP Addresses: ...
 DNS Name: ...
 EVC Mode: ...
 State: ...
 Host: ...
 Active Tasks: ...
 vSphere HA Protect...

Commands

- Shut Down Guest
- Suspend
- Restart Guest
- Open Console
- Migrate
- Clone to New VM

Annotations

Notes:

Hardware | Options | Resources | Profiles | vServices

Settings	Summary
CPU	3600 MHz
Memory	2048 MB
Disk	Normal
Advanced CPU	HT Sharing: Any

Resource Allocation

Select a virtual hard disk from the list below and click the Shares field to change its value.

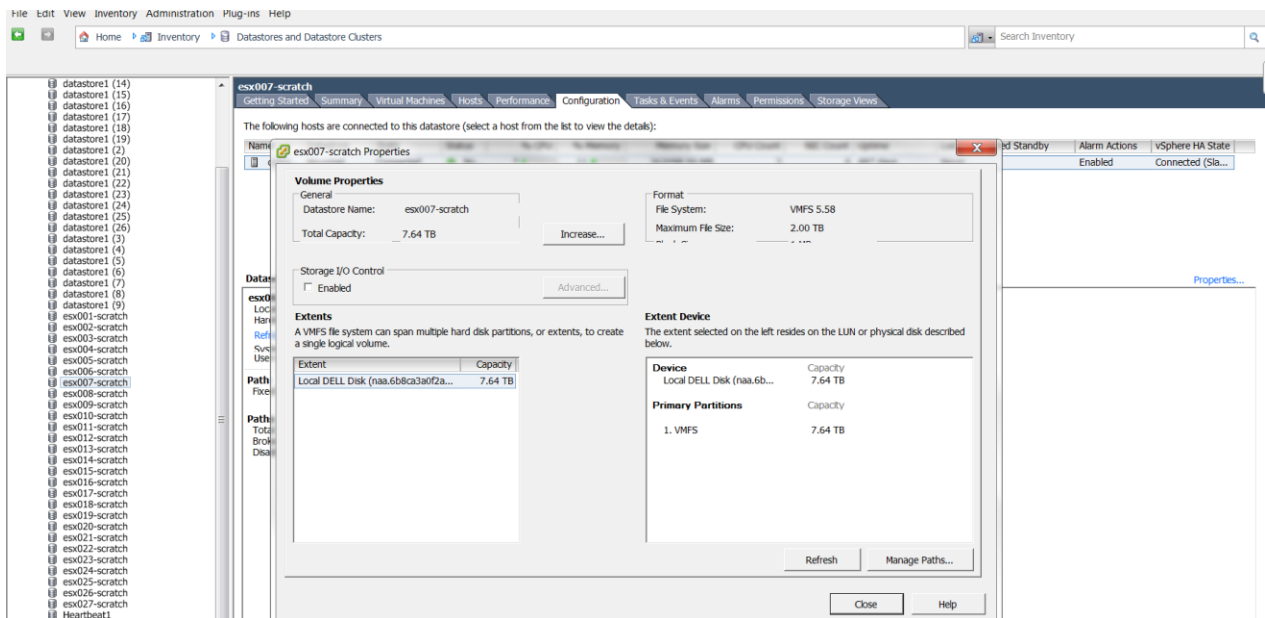
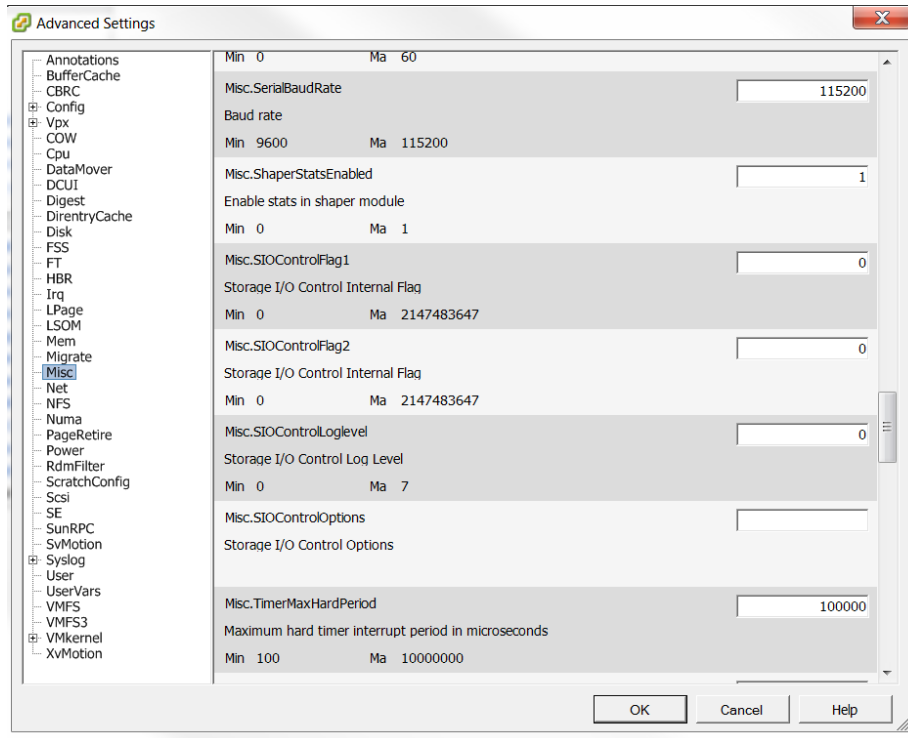
Disk	Shares	Shar...	Limit - I...
Hard d...	Normal	1000	Unlimited

Low
 Normal
 High
 Custom

Limit specifies an upper bound for storage resources that can be allocated to a virtual machine.

Help OK Cancel

Status	Details	Initiated by	vCenter Server	Requested Start...	Start Time	Completed Time



LinxSol-FatNodes Actions

Getting Started Summary **Monitor** Manage Related Objects

Issues Performance Profile Compliance Tasks Events Resource Allocation vSphere DRS **vSphere HA** Utilization Storage Reports Update Manager

Summary

Heartbeat

Configuration Issues

Hosts

Master	crimv3esx001.linxsol.com
Hosts connected to master	1
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

Advanced Runtime Info

Slot size	256 MHz 2 virtual CPUs 3140 MB
Total slots in cluster	4
Used slots	7
Available slots	
Failover slots	
Total powered-on virtual machines in cluster	5
Total hosts in cluster	2
Total good hosts in cluster	2

Refresh

Virtual Machines

Protected	27
Unprotected	0

vSphere HA Settings

Activity Task Detail

Task Details vSphere Tasks

Operation: Running Virtual Application DRST/VM (c12c334e-9f72-41fd-83b1-7b0568258319)

Job ID: 1cda4e8e-1f68-44cc-b27c-e98073411017

Type: Virtual Application

Status: Error

Service Namespace: com.vmware.vcloud

Organization: LinxSol

Owner: system

Start time: 05/09/2015 4:27 PM

Stop time: 05/09/2015 4:27 PM

Details: Failed to power on virtual machines.
 - Underlying system error: com.vmware.vim.binding.vim.fault.GenericDrsFault
 - DRS cannot find a host to power on or migrate the virtual machine.

Debug information: com.vmware.ssd.util.LMEException: Failed to power on virtual machines. - Multiple Exceptions follow:
 [com.vmware.ssd.library.exceptions.GenericVimFaultException: Underlying system error:
 com.vmware.vim.binding.vim.fault.GenericDrsFault]
 at com.vmware.vcloud.val.internal.impl.VC20VirtualEngine.powerOnVms(VC20VirtualEngine.java:3135)
 at com.vmware.ssd.backend.AbstractVAppImpl.groupPowerOnVms(AbstractVAppImpl.java:347)
 at
 com.vmware.ssd.backend.AbstractVAppImpl.parallelPerformGroupPowerOn(AbstractVAppImpl.java:298)
 at com.vmware.vcloud.vapp.impl.VAppServiceImpl.deployTask(VAppServiceImpl.java:1841)
 at com.vmware.vcloud.vapp.impl.VAppServiceImpl.executeTask(VAppServiceImpl.java:691)
 at
 com.vmware.vcloud.backendbase.management.system.TaskActivity\$ExecutePhase\$2.doInSecurityContext(TaskActivity.java:427)
 at
 com.vmware.vcloud.backendbase.management.system.TaskActivity\$ExecutePhase\$2.doInSecurityContext(TaskActivity.java:421)

0 Running 2 Failed

Powered by VMware

Getting Started | Summary | Virtual Machines | Hosts | DRS | Resource Allocation | Performance | Tasks & Events | **Alarms** | Permissions | Maps | Profile Compliance | Storage Views | vShield

View: Triggered Alarms | Definitions

Name contains: Clear

Name	Defined In	Description
vSphere HA virtual machine failover failed	CRIMV1...	Default alarm to alert when ...
vSphere HA virtual machine monitoring action	CRIMV1...	Default alarm to alert when ...
vSphere HA virtual machine monitoring error	CRIMV1...	Default alarm to alert when ...

Alarm Settings

General | Triggers | Reporting | Actions

The alarm will trigger if any of the specified events occur.

Event	Status	Conditions
Not enough resources for vSphere HA to start VM	Alert	Advanced...
vSphere HA virtual machine failover unsuccessful	Alert	Advanced...
vSphere HA failed to restart a network isolated virtual machine	Alert	Advanced...
VM powered on	Normal	Advanced...
vSphere HA restarted a virtual machine	Normal	Advanced...

Advanced settings are associated with this trigger

This alarm was defined in vcenter001.linuxsol.com. Alarm settings are read-only except when accessed through the object where they were defined.

OK Cancel Help

```

q9f92f0e67 (4) cL7wA362x002' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (2) cL7wA362x004' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (30) cL7wA362x051' J7ux20J' cow u99' ep8c939066pC3q00T9024q2490320P30 1Ln6 Vff9cJ6q
q9f92f0e67 (32) cL7wA362x050' J7ux20J' cow u99' ep8c939066pC2300T90240P331Cq4tP9 1Ln6 Vff9cJ6q
q9f92f0e67 (34) cL7wA362x052' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (33) cL7wA362x0T8' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (35) cL7wA362x0T1' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (37) cL7wA362x054' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (30) cL7wA362x053' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (5) cL7wA362x003' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (5) cL7wA362x003' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (70) cL7wA362x055' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (78) cL7wA362x057' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (71) cL7wA362x050' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (70) cL7wA362x070' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (72) cL7wA362x070' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (74) cL7wA362x072' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (73) cL7wA362x074' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (75) cL7wA362x073' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (77) cL7wA362x075' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (70) cL7wA362x0T1' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 (7) cL7wA362x005' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
q9f92f0e67 cL7wA362x00T' J7ux20J' cow u99' ep8c939043p3q300T903999t0493T20P 1Ln6 Vff9cJ6q
-----
p9f92f0e6 1W402f GNU W0NUf6Q 2f9f6
b2 c:/p/odl9w EIT06 (x80)/1W402f/1W402f1W402f/1W402f1W402f/1W402f1W402f/1W402f1W402f | E1 -0P02130
  
```

```
vi-admin@vma:~> vifp addserver crimv3esx003.linuxsol.com --authpolicy fpauth --username root
root@crimv3esx003.linuxsol.com's password:
vi-admin@vma:~> vifptarget --set crimv3esx003.linuxsol.com
vi-admin@vma:~[crimv3esx003.linuxsol.com]> vicfg-nas -l
Heartbeat1 is /heartbeat1 from nfsserver mounted
Heartbeat2 is /heartbeat2 from nfsserver mounted
NFSVol01 is /VMDK1 from nfsserver mounted
NFSVol02 is /VMDK2 from nfsserver mounted
Template is /vm_template from nfsserver mounted
vi-admin@vma:~[crimv3esx003.linuxsol.com]> vicfg-nas -d Heartbeat02
NAS volume Heartbeat02 deleted.
vi-admin@vma:~[crimv3esx003.linuxsol.com]> vicfg-nas -l
Heartbeat1 is /heartbeat1 from nfsserver mounted
NFSVol01 is /VMDK1 from nfsserver mounted
NFSVol02 is /VMDK2 from nfsserver mounted
Template is /vm_template from nfsserver mounted
vi-admin@vma:~[crimv3esx003.linuxsol.com]>
```

Getting Started Summary Monitor Manage Related Objects

Settings Alarm Definitions Tags Permissions Scheduled Tasks

vSphere HA is Turned ON Edit...

Runtime information for vSphere HA is reported under vSphere HA Monitoring

- Host Monitoring Enabled
- Admission Control Enabled
- VM Monitoring VM Monitoring Only

vSphere HA

Turn ON vSphere HA

- Enable Host Monitoring
- Enable Admission Control

Datastore Heartbeating

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

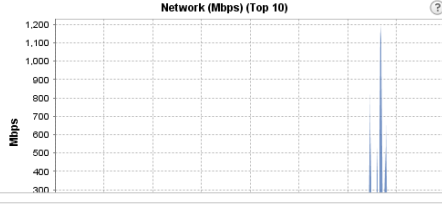
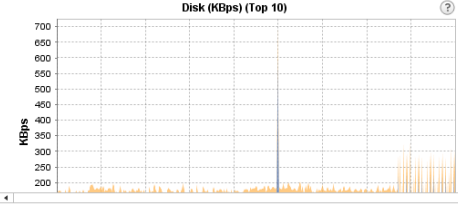
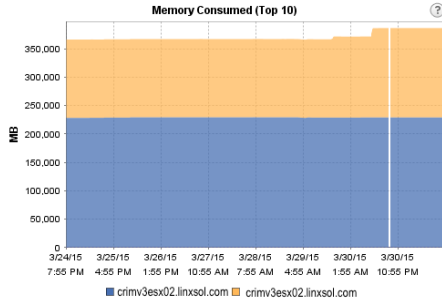
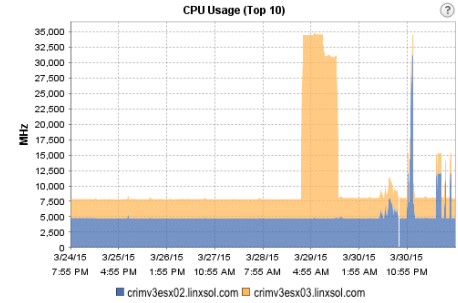
Available Heartbeat datastores

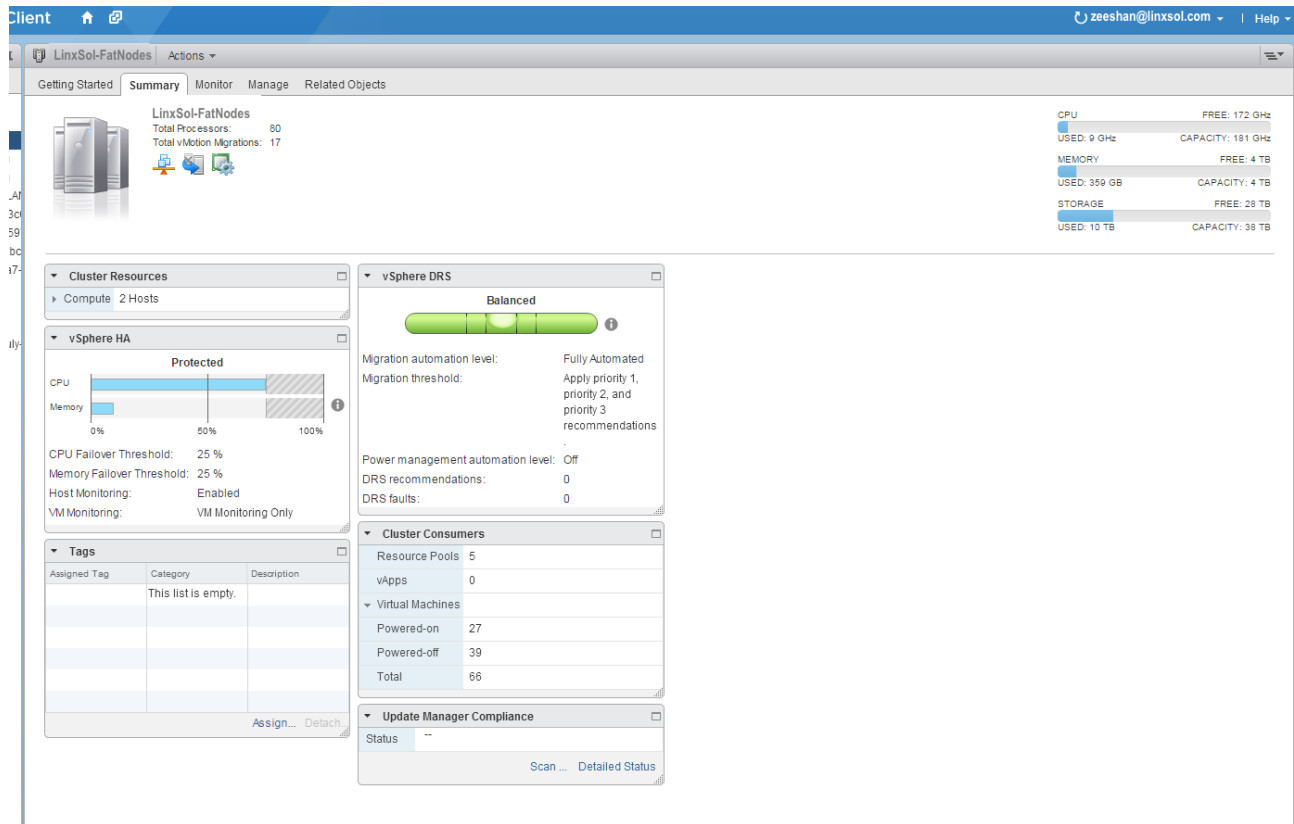
Name	Datastore Cluster	Hosts Mounting Datastore
<input type="checkbox"/> NFSVol01	N/A	27
<input type="checkbox"/> NFSVol02	N/A	27
<input type="checkbox"/> NFSVol03	N/A	2
<input checked="" type="checkbox"/> Heartbeat1	N/A	27
<input checked="" type="checkbox"/> Heartbeat2	N/A	27

OK Cancel

View: Hosts Time Range: 1 Week

1 Week Summary for LinxSol-Fat-Nodes Host(s) 1 of 1 pages 2 Host(s)





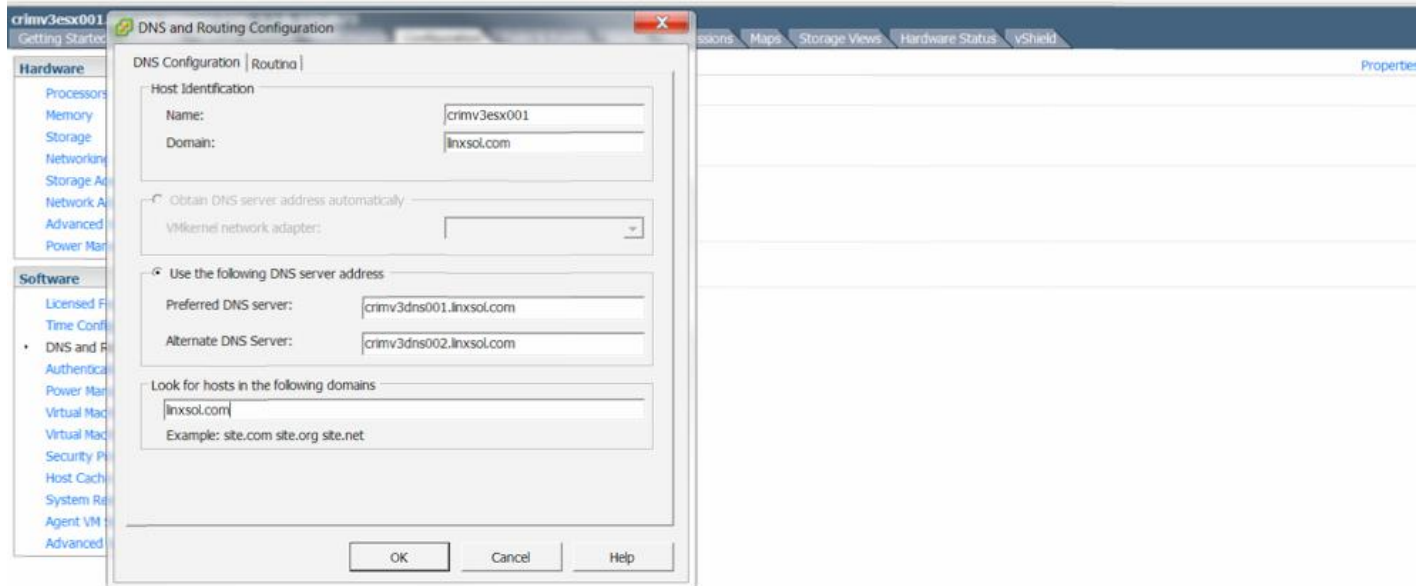
Chapter 4

```

VMware vSphere PowerCLI 6.0 Release 1
PowerCLI C:\Program Files (x86)\VMware\Infrastructure\vSphere PowerCLI> Get-VMHost | Get-VMHostNetwork | Select Hostname, DnsAddress

-----
HostName                                     DnsAddress
-----
crimv3esx001                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx002                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx003                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx004                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx005                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx006                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx007                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx008                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx009                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx010                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx011                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx012                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx013                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx014                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx015                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx016                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx017                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx018                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx019                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
crimv3esx020                                crimv3dns001.linxsol.com, crimv3dns002.linxsol.com
PowerCLI C:\Program Files (x86)\VMware\Infrastructure\vSphere PowerCLI>

```



```
10.2.6.93 - PuTTY
vi-admin@vma:~> vifptarget --set crimv3esx001.linxsol.com
vi-admin@vma:~[crimv3esx001.qcri.org]> vicfg-route
Enter username: root
Enter password:
VMkernel IPv4 default gateway is 10.2.6.1
vi-admin@vma:~[crimv3esx001.linxsol.com]> vicfg-route --family v6
Enter username: root
Enter password:
VMkernel IPv6 default gateway is not set
vi-admin@vma:~[crimv3esx001.linxsol.com]>
```


dvSwitch-Network-Pools Settings

Properties | Network Adapters | Private VLAN | NetFlow | Port Mirroring

NetFlow

Collector Settings

IP address: 10 . 2 . 6 . 91

Port: 2310

VDS IP address: 10 . 2 . 6 . 84

The vSphere distributed switch will be identified with this IP address at the NetFlow collector. Specify the VDS IP address to prevent all hosts from appearing as separate anonymous switches at the collector.

Advanced Settings

Active flow export timeout: 60

Idle flow export timeout: 15

Sampling rate: 0

Process internal flows only

Help

OK

Cancel

dvSwitch-Network-Pools Settings

Properties | Network Adapters | Private VLAN | NetFlow | Port Mirroring

Session Name	Status
Mirrored-OPENSTACK-Traffic	Disabled

Port Mirroring Session Details

Mirrored-OPENSTACK-Traffic

Status: Disabled
Description: Monitor Ingress Traffic

Port Mirroring Session Details

Allow normal IO on destination ports: No
Encapsulation VLAN: --
Preserve original VLAN: Yes
Mirrored packet length: --

Port Mirroring Session Sources

Port ID: 110 Ingress

Port Mirroring Session Destinations

Port ID: 111

Add... Edit... Delete

Help OK Cancel

Create Port Mirroring Session

Ready to Complete

Verify the settings for the new port mirroring session. Then, select the check box to enable this port mirroring session.

[General Properties](#)

[Specify Sources](#)

[Specify Destinations](#)

Ready to Complete

Enable this port mirroring session

Name:	Mirrored-OPENSTACK-Traffic
Description:	Monitor Ingress Traffic
Preserve original VLAN:	Yes
Allow normal IO on destination ports:	No
Number of port mirroring session sources:	1
Number of port mirroring session destinations:	1

Help

< Back

Finish

Cancel

Create Port Mirroring Session

Specify Destinations

Select the destination ports and uplinks of the port mirroring session

[General Properties](#)

[Specify Sources](#)

Specify Destinations

Ready to Complete

Destination type: Port

Port IDs (e.g. 1-4, 5, 10-21)

Empty list box for Port IDs

>>

<<

Name
Port
Port ID: 111
Uplink

Help

< Back

Next >

Cancel

Create Port Mirroring Session

Specify Sources
Select the source ports of the port mirroring session

General Properties
Specify Sources
Specify Destinations
Ready to Complete

Traffic direction:

Port IDs (e.g. 1-4, 5, 10-21)

Name	Type
Port ID: 110	Ingress

>>
<<

Help < Back Next > Cancel

Create Port Mirroring Session

General Properties
Specify a name and the properties of the port mirroring session

General Properties
Specify Sources
Specify Destinations
Ready to Complete

General

Name:

Description:

Port Mirroring Session Details

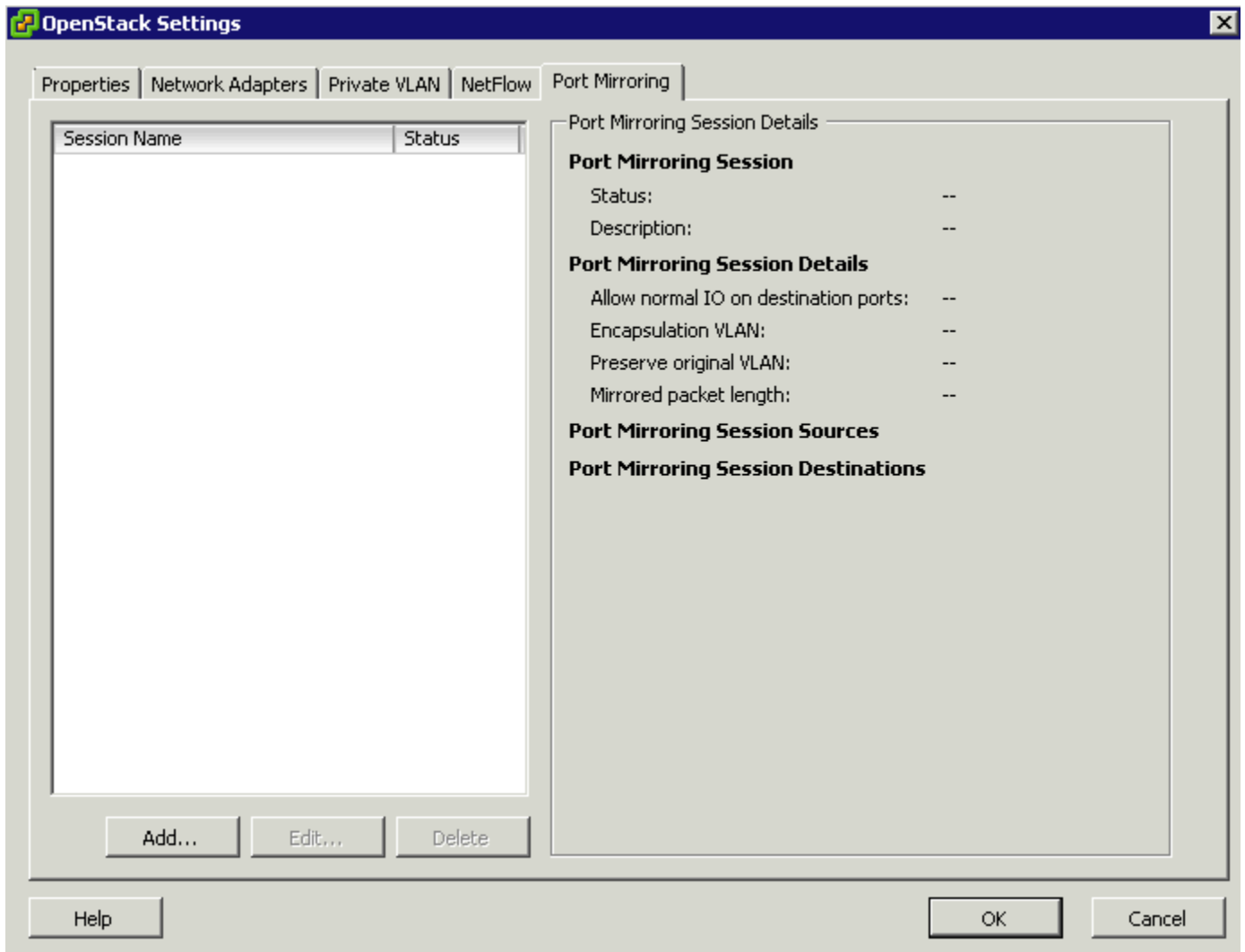
Allow normal IO on destination ports

Encapsulation VLAN

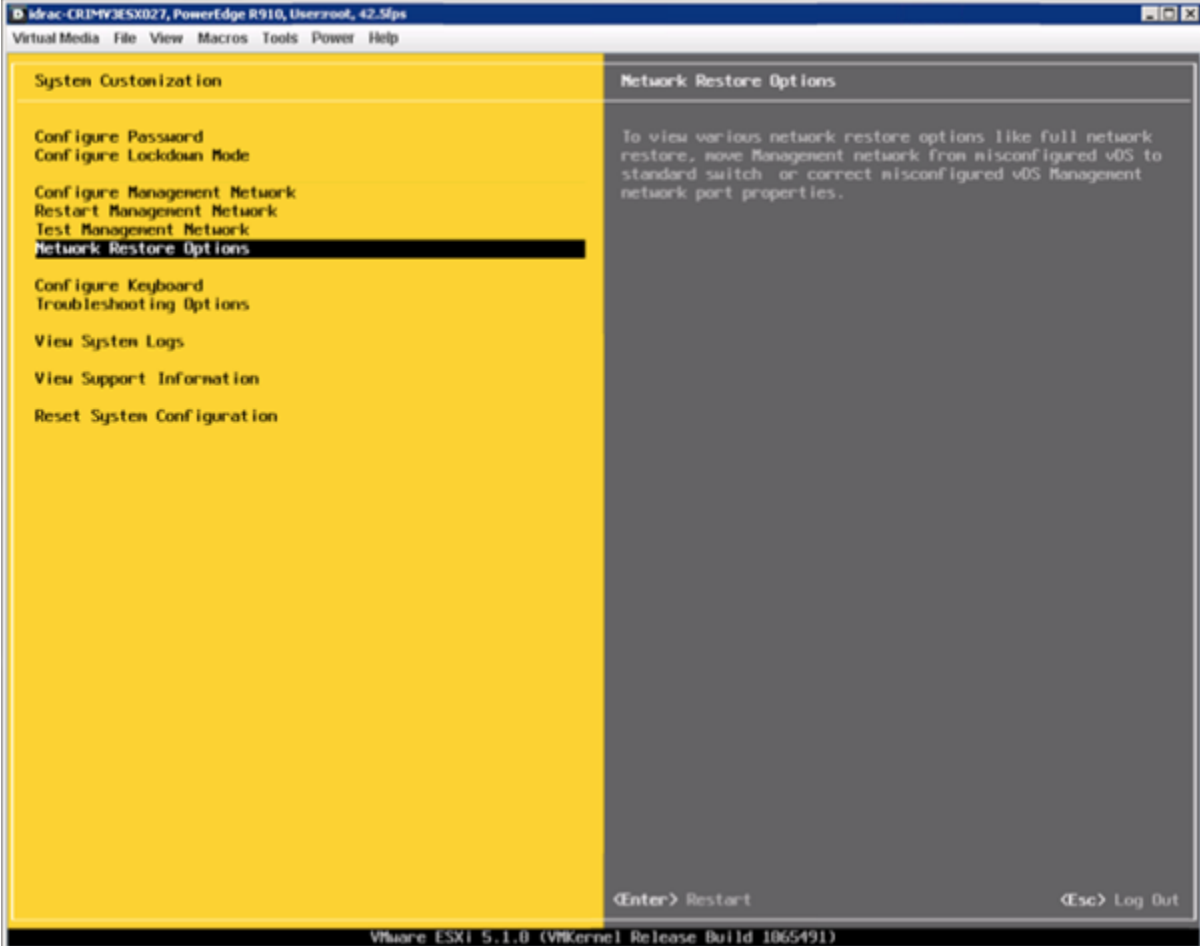
Preserve original VLAN

Mirrored packet length

Help < Back Next > Cancel



Configure Management Network	Network Adapters
<p>Network Adapters VLAN (optional)</p> <p>IP Configuration IPv6 Configuration DNS Configuration Custom DNS Suffixes</p> <p><Up/Down> Select</p>	<p>vnic1 (Embedded NIC 2) vnic8 (Embedded NIC 1)</p> <p>The adapters listed here provide the default network connection to and from this host. When two or more adapters are used, connections will be fault-tolerant and outgoing traffic will be load-balanced.</p> <p><Enter> Change</p> <p><Esc> Exit</p>



System Customization

Configure Password
Configure Lockdown Mode

Configure Management Network
Restart Management Network
Test Management Network

Network Restore Options

Configure Keyboard
Troubleshooting Options

View System Logs

View Support Information

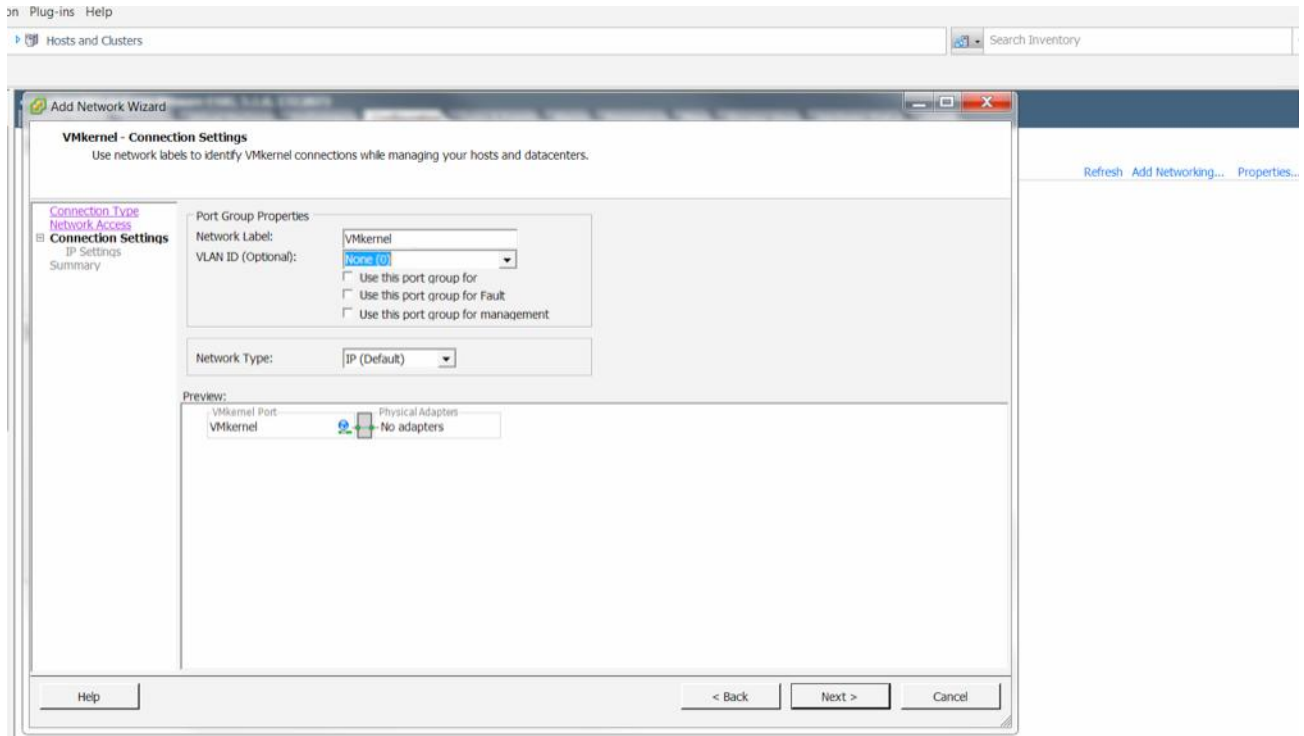
Reset System Configuration

Network Restore Options

To view various network restore options like full network restore, move Management network from misconfigured vDS to standard switch or correct misconfigured vDS Management network port properties.

<Enter> Restart

<Esc> Log Out



```

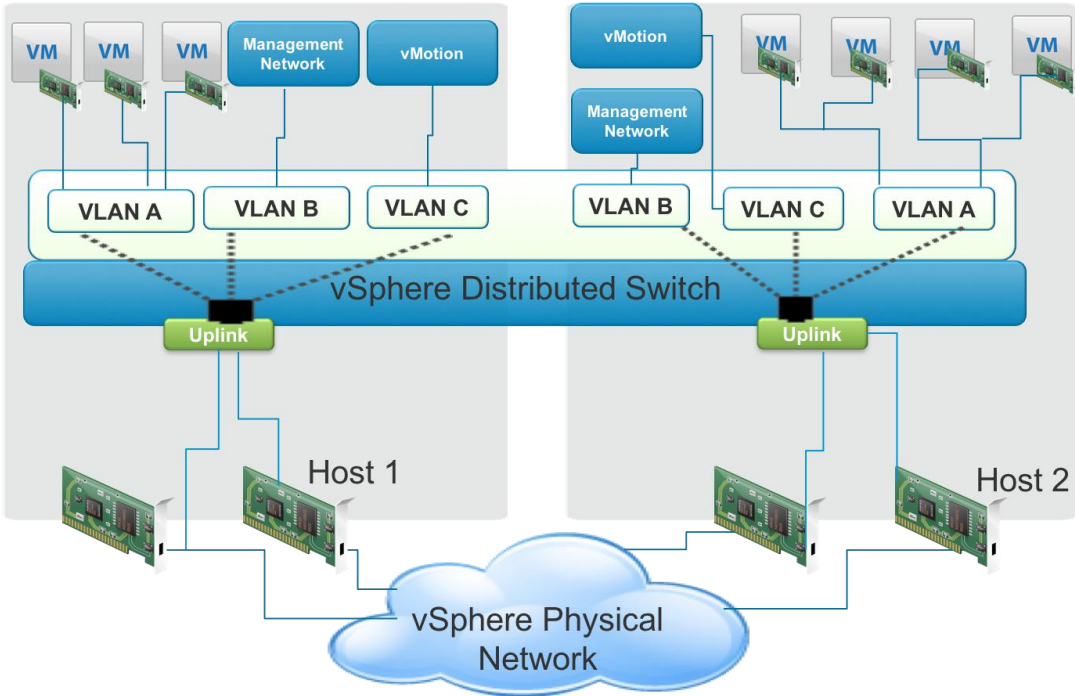
102.693 - PuTTY
vi-admin@vma:~ [ crimv3esx001.linuxsol.com > vicifg-vmknic
Enter username: root
Enter password:

Synopsis: /usr/bin/vicifg-vmknic OPTIONS [<portgroup>]

Command-specific options:
--add
-a
    Add a VMkernel NIC to the system. Requires ip, netmask, portgroup.
--delete
-d
    Delete the VMkernel NIC on the given portgroup.
--disable-vmotion
-u
    Disable VMotion for the VMkernel NIC on a specified
    portgroup.
--dvport-id
-v
    Setting DVPort ID of the connection point (valid for vSphere 4.0 and later). Requires --dvs-name parameter.
--dvs-name
-s
    Setting DVSwitch name of the connection point (valid for vSphere 4.0 and later). Requires --dvport-id parameter.
--enable-ipv6
-6
    Enable (true) or disable (false) IPv6 for next boot (valid for vSphere 4.0 and later).
--enable-vmotion
-E
    Enable VMotion for the VMkernel NIC on a specified portgroup.
--ip
-i
    The IP address for this VMkernel NIC where IP address can be:
    <X.X.X.X> - to use static IPv4 address specified
    DHCP - to enable IPv4 DHCP for address
    <X:X:X::/X> - to use static IPv6 address (valid for vSphere 4.0 and later)
    DHCPV6 - to enable IPv6 DHCP for address (valid for vSphere 4.0 and later)
    AUTOCONF - to enable IPv6 Router advertised address (valid for vSphere 4.0 and later)
--list
-l
    List VMkernel NICs on the system.
--mtu
-m

```

Networking with vSphere VLANS



```

10.2.6.93 - PuTTY
vi-admin@vma: ~ [ crimv3esx001.linuxsol.com > vicfg-vswitch -l
Enter username: root
Enter password:
Switch Name      Num Ports      Used Ports      Configured Ports  MTU      Uplinks
vSwitch0         128             7                128               1500     vmnic2,vmnic3

  PortGroup Name      VLAN ID      Used Ports      Uplinks
  vMotion              2231         1                vmnic2,vmnic3
  Management Network  2230         1                vmnic3,vmnic2

DVS Name          Num Ports      Used Ports      Configured Ports  Uplinks
OpenStack         512             4                512
  DVPort ID          In Use        Client
  130                 0
  132                 0
  0                   1             keystone.linuxsol.com.eth1
dvSwitch-External-Networks512      5                512                vmnic0,vmnic1
  DVPort ID          In Use        Client
  48                 1             vmnic0
  49                 1             vmnic1
dvSwitch-Network-Pools 512             13                512                vmnic4,vmnic5
  DVPort ID          In Use        Client
  0                   1             vmnic4
  1                   1             vmnic5
  10                  1             vmk2
  921                 0
  922                 0
  923                 0
  920                 0
  1137                1             nova (a802a868-9bc8-4777-8fa5-279adef82cc4).eth1
  1131                1             keystone (66f3d6d5-b43e-4426-b5ab-e9960d49b9b0).eth0
  1175                0
  1158                1
vi-admin@vma: ~ [ crimv3esx001.linuxsol.com >

```

```

Δωππρρ 01:00:2 ρκχζκ  ρβ  0000ρρβς  ΕΛΤΤ  ρ8:σ9:39:ε0:ρ5:ε3  Βροσρρσσ  ρσβρρρρρρρ  ηεφχρεσθε  ΙΙ  ΒCη21800  Ι0  ετδερτρρ
ε  ρητττ  Εηρρρρρρρ
Δωππρρ 01:00:4 ρκχζκ  ρβ  0000ρρβς  ΕΛΤΤ  ρ8:σ9:39:ε0:ρ5:ε4  Βροσρρσσ  ρσβρρρρρρρ  ηεφχρεσθε  ΙΙ  ΒCη21800  Ι0  ετδερτρρ
Δωππρρ 01:00:3 ρκχζκ  ρβ  Γ000ρρβς  ΕΛΤΤ  ρ8:σ9:39:ε0:ρ5:ρε  Γ200  Βροσρρσσ  ρσβρρρρρρρ  ηεφχρεσθε  ΙΙ  ΒCη21800  Γ  ετδερτρρ
Δωππρρ 01:00:5 ρκχζκ  ρβ  Γ000ρρβς  ΕΛΤΤ  ρ8:σ9:39:ε0:ρ5:ρρ  Γ200  Βροσρρσσ  ρσβρρρρρρρ  ηεφχρεσθε  ΙΙ  ΒCη21800  Γ  ετδερτρρ
ε  ρητττ  Εηρρρρρρρ
Δωππρρ 01:00:Γ ρκχζκ  ρβ  Γ000ρρβς  ΕΛΤΤ  ρ8:σ9:39:ε0:ρ5:ρρ  Βροσρρσσ  ρσβρρρρρρρ  ηεφχρεσθε  ΙΙ  ΒCη21800  Ι0  ετδερτρρ
ε  ρητττ  Εηρρρρρρρ
Δωππρρ 01:00:0 ρκχζκ  ρβ  Γ000ρρβς  ΕΛΤΤ  ρ8:σ9:39:ε0:ρ5:ρθ  Βροσρρσσ  ρσβρρρρρρρ  ηεφχρεσθε  ΙΙ  ΒCη21800  Ι0  ετδερτρρ
ηεσθε  ΒCΓ  Δητρεε  Γηρρ  ρβεερ  Δηβρεε  ηρσ  υρρρεεε  ηηη  Δεσρκτβρρρρ

```

```

~ # esxcli network vm list
World ID Name Num Ports Networks
-----
14323012 cluster08 (5fa21117-18f7-427c-84d1-c63922199e05) 1 dvportgroup-372
~ # esxcli network vm port list -w 14323012
Port ID: 50331662
vSwitch: dvSwitch-Network-Pools
Portgroup: dvportgroup-372
DVPort ID: 1063
MAC Address: 00:50:56:01:00:7e
IP Address: 0.0.0.0
Team Uplink: all(2)
Uplink Port ID: 0
Active Filters:
~ # esxcli network port stats get -p 50331662
Packet statistics for port 50331662
Packets received: 10787391024
Packets sent: 7661812086
Bytes received: 3048720170788
Bytes sent: 154147668506
Broadcast packets received: 17831672
Broadcast packets sent: 309404
Multicast packets received: 656
Multicast packets sent: 52
Unicast packets received: 10769558696
Unicast packets sent: 7661502630
Receive packets dropped: 92865923
Transmit packets dropped: 0
~ # esxcli network port filter stats get -p 50331662
~ # esxcli network nic stats get -n vmnic0
NIC statistics for vmnic0
Packets received: 2969343419
Packets sent: 155331621
Bytes received: 2264469102098
Bytes sent: 46007679331
Receive packets dropped: 0
Transmit packets dropped: 0
Total receive errors: 78507
Receive length errors: 0
Receive over errors: 22
Receive CRC errors: 0
Receive frame errors: 0
Receive FIFO errors: 78485
Receive missed errors: 0
Total transmit errors: 0
Transmit aborted errors: 0
Transmit carrier errors: 0
Transmit FIFO errors: 0
Transmit heartbeat errors: 0
Transmit window errors: 0
~ #

```

```
10.2.6.30 - PuTTY
/var/log # net-dvs -h
Warning: This is an unsupported command. Use at your own risk.
net-dvs -a [ -P maxPorts] switch_name      add a new dvswitch
net-dvs -d switch_name                    delete a dvswitch
net-dvs [ -A | -D ] -p port switch_name    add/delete a port from a dvswitch
net-dvs [ -s name=value | -u name ] -p port switch_name
                                           set/unset key/value pair property for dvport
net-dvs -r name -p port switch_name        get value for dvport property specified
net-dvs -l [ switch_name ]                 list dvs information
net-dvs -i                                 init database
net-dvs [-S | -R | -G ]                   set vmkernel state from config file/reset
                                           vmkernel state/get dvs state from vmkernel
                                           to config file
net-dvs -T                                 test dvsdata
net-dvs -v "vlanID[;t|p[0-7][;min-max,min-max...]]"
                                           set vlan configuration
net-dvs -V "primaryVID,secondaryVID,i|c|p;primaryVID,secondaryVID,i|c|p..."
                                           set PVLAN global table contents
net-dvs -E /path/acl_file -I "com.vmware.etherswitch.port.acl.output"
-p dvport switch_name                      set acl to filter dvport's egress traffic
net-dvs -E /path/acl_file -I "com.vmware.etherswitch.port.acl.input"
-p dvport switch_name                      set acl to filter dvport's ingress traffic
acl_file should be written with the following keywords:
numACLs: (required)the total number of acls in this file
```

```
10.2.6.30 - PuTTY
com.vmware.common.port.statistics:
  pktsInUnicast = 8732418723
  bytesInUnicast = 9268326389939
  pktsInMulticast = 6569431
  bytesInMulticast = 1721248420
  pktsInBroadcast = 46188401
  bytesInBroadcast = 2800175462
  pktsOutUnicast = 2790264214
  bytesOutUnicast = 5146471918663
  pktsOutMulticast = 151
  bytesOutMulticast = 14365
  pktsOutBroadcast = 114254
  bytesOutBroadcast = 6855240
  pktsInDropped = 0
  pktsOutDropped = 0
  pktsInException = 6
  pktsOutException = 0
  propType = RUNTIME
com.vmware.common.port.volatile.vlan = VLAN 0
  ranges = 0-4094
```

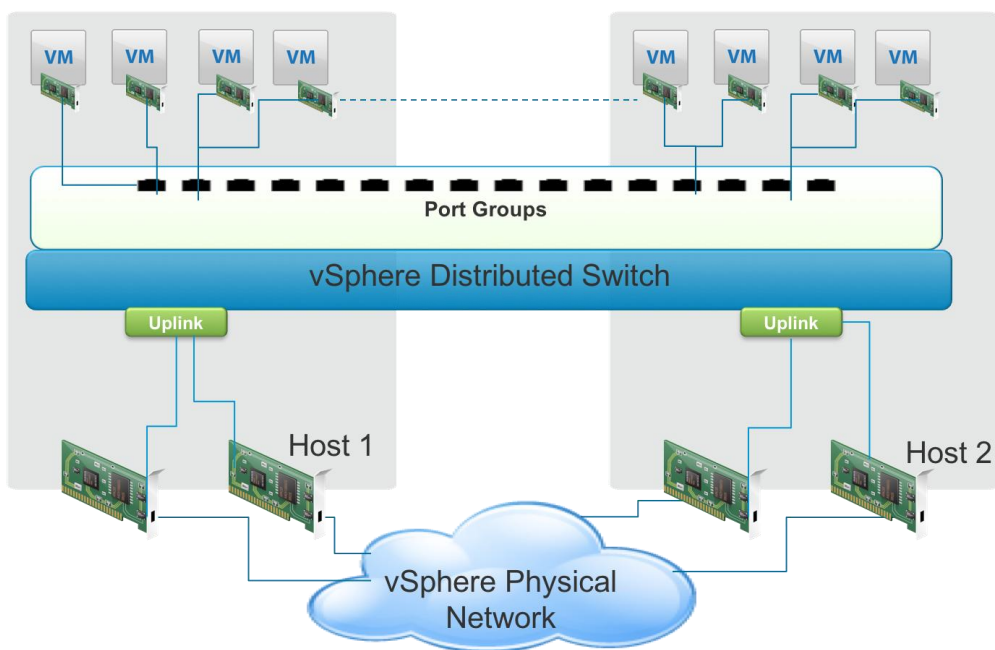


```

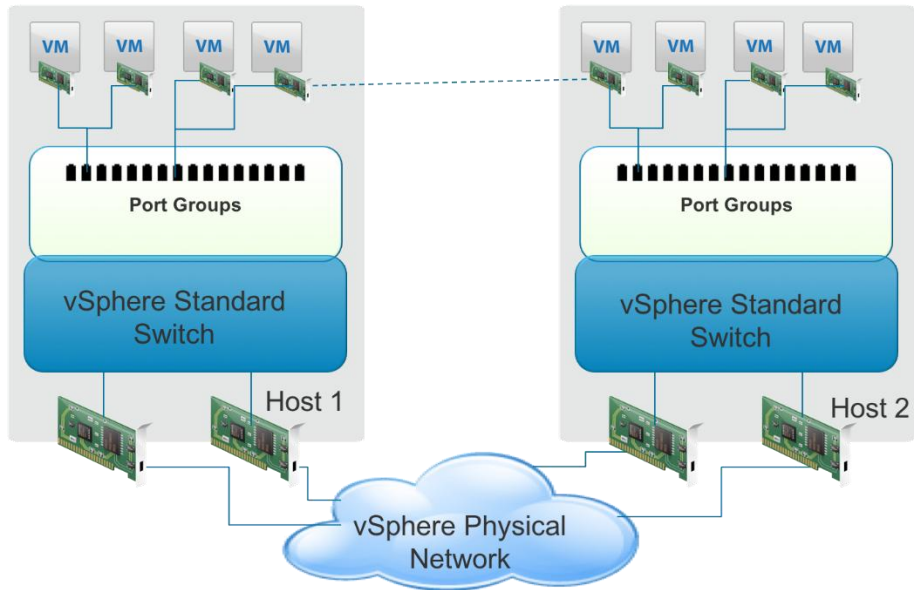
~ # net-dvs
switch 67 bc 2f 50 84 a1 77 ef-a5 73 b3 ca 9f e3 4b 64 (etherswitch)
  max ports: 512
  global properties:
    com.vmware.common.version = 0x 2. 0. 0. 0
      propType = CONFIG
    com.vmware.common.alias = dvSwitch-External-Networks , propType = CONFIG
    com.vmware.etherswitch.mtu = 1500 , propType = CONFIG
    com.vmware.etherswitch.cdp = CDP, listen
      propType = CONFIG
    com.vmware.common.respools.list:
      netsched.pools.persist.ft
      netsched.pools.persist.hbr
      netsched.pools.persist.iscsi
      netsched.pools.persist.mgmt
      netsched.pools.persist.nfs
      netsched.pools.persist.vm
      netsched.pools.persist.vmotion
      netsched.pools.persist.vsan
      propType = CONFIG
    com.vmware.common.respools.sched:
      active
      propType = CONFIG
    com.vmware.etherswitch.ipv4addr = 0.0.0.0, propType = CONFIG
    com.vmware.common.uplinkPorts:
      dvUplink1, dvUplink2
      propType = CONFIG
    com.vmware.etherswitch.ipfix:
      idle timeout = 15 seconds
      active timeout = 60 seconds
      sampling rate = 0
      collector = 0.0.0.0:2311
      internal flows only = false
      propType = CONFIG
  host properties:
    com.vmware.common.host.portset = DvsPortset-0 , propType = CONFIG

```

Networking with vSphere Distributed Switch



Networking with vSphere Standard Switches



```
VMware vSphere PowerCLI 6.0 Release 1
PowerCLI C:\> Connect-VIServer crimv3esx001.linuxol.com

Name                               Port  User
----                               -
crimv3esx001.linuxol.com          443   root

PowerCLI C:\> Get-LogType

Key          Summary
----          -
hostd       Server log in 'plain' format
vmkernel    Server log in 'plain' format
vpxa        vCenter agent log in 'plain' format

PowerCLI C:\> (Get-Log -VMHost (Get-VMHost crimv3esx001*) vmkernel).Entries | Out-File
K:\vmkernel.log
PowerCLI C:\> (Get-Log -VMHost (Get-VMHost crimv3esx001*) vmkernel).Entries | Where {$
_ -like "*failed*"}

```

```
2013-10-30T07:46:52Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 5
2013-10-30T07:46:57Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 7
2013-10-30T07:47:04Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 18
2013-10-30T07:47:22Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 20
2013-10-30T07:47:42Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 10
2013-10-30T07:47:52Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 7
2013-10-30T07:47:59Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 7
2013-10-30T07:48:06Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 14
2013-10-30T07:48:20Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 3
2013-10-30T07:48:23Z dhclient-uw[8861]: No DHCP OFFERS received.
2013-10-30T07:48:23Z dhclient-uw[8861]: No working leases in persistent database - sleeping.
2013-10-30T07:48:23Z dhclient-uw[8861]: system command failed. The command is: /usr/lib/vmware/vob/bin/addvob vob.user
one 'vmk0'
2013-10-30T07:49:38Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 6
2013-10-30T07:49:44Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 10
2013-10-30T07:49:54Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 20
2013-10-30T07:50:14Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 18
2013-10-30T07:50:32Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 10
2013-10-30T07:50:42Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 7
2013-10-30T07:50:49Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 11
2013-10-30T07:51:00Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 9
2013-10-30T07:51:09Z dhclient-uw[8861]: No DHCP OFFERS received.
2013-10-30T07:51:09Z dhclient-uw[8861]: No working leases in persistent database - sleeping.
2013-10-30T07:51:09Z dhclient-uw[8861]: system command failed. The command is: /usr/lib/vmware/vob/bin/addvob vob.user
one 'vmk0'
2013-10-30T07:52:27Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 8
2013-10-30T07:52:35Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 14
2013-10-30T07:52:49Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 14
2013-10-30T07:53:03Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 17
2013-10-30T07:53:20Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 21
2013-10-30T07:53:41Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 17
2013-10-30T07:53:58Z dhclient-uw[8861]: No DHCP OFFERS received.
2013-10-30T07:53:58Z dhclient-uw[8861]: No working leases in persistent database - sleeping.
2013-10-30T07:53:58Z dhclient-uw[8861]: system command failed. The command is: /usr/lib/vmware/vob/bin/addvob vob.user
one 'vmk0'
2013-10-30T07:54:34Z dhclient-uw[8861]: DHCPDISCOVER on vmk0 to 255.255.255.255 port 67 interval 7
```

Chapter 5

```
vi-admin@vma:~[crimv3esx001.linuxsol.com ]> vmkfstools
```

```
Synopsis: /usr/bin/vmkfstools OPTIONS [<diskpath>]
```

Command-specific options:

```
--adapterType  
-a
```

The adapter type of a disk to be created. Accepts buslogic, lsilogic or ide.

```
--blocksize  
-b
```

The block size of the VMFS file system to create. When omitted, the creation defaults to using 1MB for the blocksize.

```
--clonevirtualdisk  
-i
```

Create a copy of a virtual disk or raw disk. The copy will be in the specified disk format. Takes source disk as argument.

```
--createfs  
-C
```

Creates a VMFS file system, requires -S, and optionally -b

```
--createrdm  
-r
```

Creates raw disk mapping, takes the disk device path. Map a raw disk to a file on a VMFS file system. Once the mapping is established, it can be used to access the raw disk like a normal VMFS virtual disk. The 'file length' of the mapping is the same as the size of the raw disk that it points to.

```
--createrdmpassthru  
-z
```

General | Network Configuration | Dynamic Discovery | Static Discovery

iSCSI Properties

Name:
Alias:
Target discovery

Software Initiator
Status:

CHAP Credentials

All iSCSI targets are authenticated using these credentials unless otherwise specified in the target's CHAP settings.

The CHAP secret and Mutual CHAP secret must be different.

CHAP (target authenticates host)

Select option: Use CHAP

Use initiator name

Name: iqn.1998-01.com.vmware:crimv3esx001-64cee60f

Secret: *****

Mutual CHAP (host authenticates target)

Select option: Do not use CHAP

Use initiator name

Name:

Secret:

OK Cancel Help

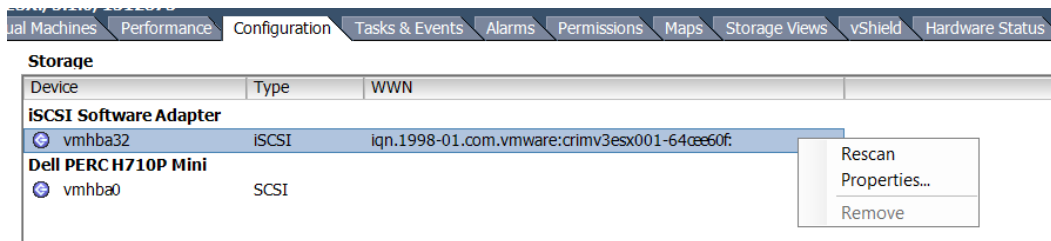
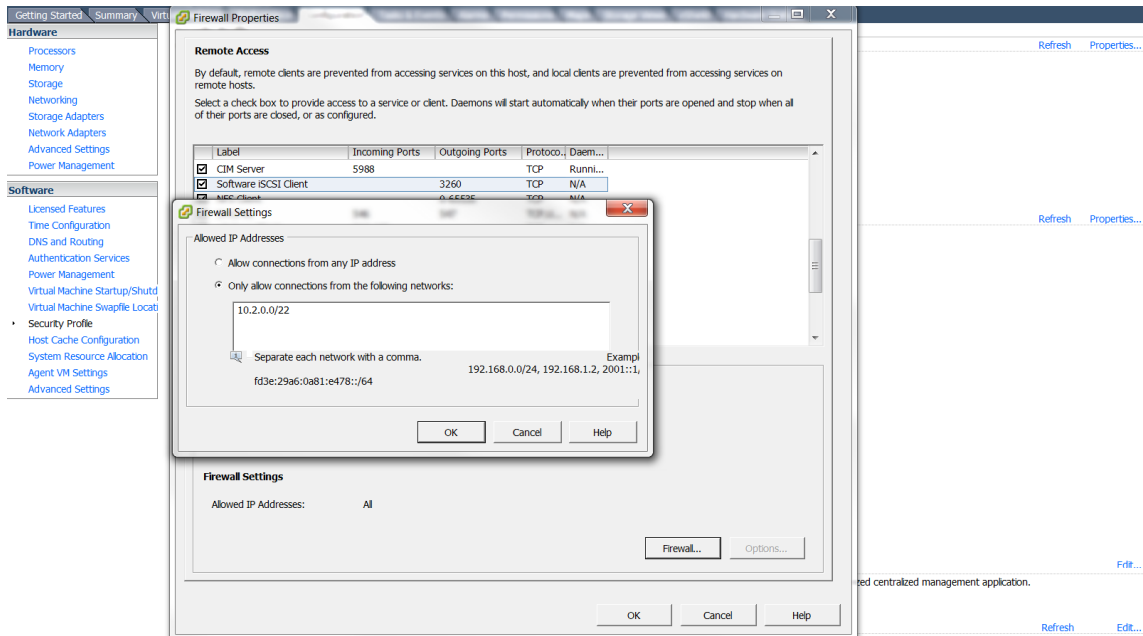
CHAP...

Advanced...

Configure...

Close

Help



```

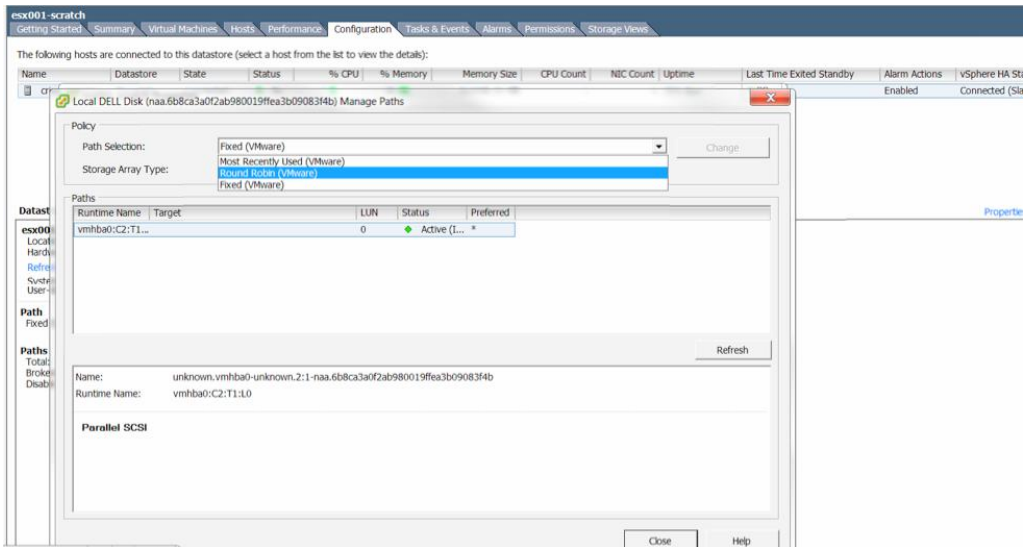
10.2.6.93 - PuTTY
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule list
Rule Class Rule Class Type Plugin Matches
-----
MP 0 runtime transport NMP transport=usb
MP 1 runtime transport NMP transport=sata
MP 2 runtime transport NMP transport=ide
MP 3 runtime transport NMP transport=block
MP 4 runtime transport NMP transport=unknown
MP 101 runtime vendor MASK_PATH vendor=DELL model=Universal Xport
MP 101 file vendor MASK_PATH vendor=DELL model=Universal Xport
MP 65535 runtime vendor NMP vendor=* model=*
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule remove --rule 101
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule load
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule list
Rule Class Rule Class Type Plugin Matches
-----
MP 0 runtime transport NMP transport=usb
MP 1 runtime transport NMP transport=sata
MP 2 runtime transport NMP transport=ide
MP 3 runtime transport NMP transport=block
MP 4 runtime transport NMP transport=unknown
MP 65535 runtime vendor NMP vendor=* model=*
vi-admin@vma:~[crimv3esx001.qcri.org]>

```

```

10.2.6.93 - PuTTY
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule list
Rule Class Rule Class Type Plugin Matches
-----
MP 0 runtime transport NMP transport=usb
MP 1 runtime transport NMP transport=sata
MP 2 runtime transport NMP transport=ide
MP 3 runtime transport NMP transport=block
MP 4 runtime transport NMP transport=unknown
MP 65535 runtime vendor NMP vendor=* model=*
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule add -r 101 -t vendor --vendor=DELL --model='Universal Xport' -A vmhba0 -C 2 -L 1 -P MASK_PATH
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule load
vi-admin@vma:~[crimv3esx001.qcri.org]> esxcli storage core claimrule list
Rule Class Rule Class Type Plugin Matches
-----
MP 0 runtime transport NMP transport=usb
MP 1 runtime transport NMP transport=sata
MP 2 runtime transport NMP transport=ide
MP 3 runtime transport NMP transport=block
MP 4 runtime transport NMP transport=unknown
MP 101 runtime vendor MASK_PATH vendor=DELL model=Universal Xport
MP 101 file vendor MASK_PATH vendor=DELL model=Universal Xport
MP 65535 runtime vendor NMP vendor=* model=*
vi-admin@vma:~[crimv3esx001.qcri.org]>

```



```

10.2.6.93 - PuTTY
Datastore: datastore1 (26) LUN: naa.6b8ca3a0eebc3d001a0544940c258b29
crimv3esx027 MOUNTED ATTACHED
Datastore: datastore1 (3) LUN: naa.6b8ca3a0f2ab8c0019ffe6d70d38aefe
crimv3esx004 MOUNTED ATTACHED
Datastore: datastore1 LUN: naa.6b8ca3a0f2ab980019ffea2907f89b62
crimv3esx001 MOUNTED ATTACHED
Datastore: esx001-scratch LUN: naa.6b8ca3a0f2ab980019ffea3b09083f4b
crimv3esx001 UNMOUNTED DETACHED
Datastore: esx002-scratch LUN: naa.6b8ca3a0f2bcb70019ffe9300a85524c
crimv3esx002 MOUNTED ATTACHED

```

```
10.2.6.93 - PuTTY
vi-admin@vma:~> ./lunManagement.pl --server vcs001.linxsol.com --username 'linxsol\zeeshan' --operation detach --datastore esx001-scratch
Enter password:
Are you sure you want to detach "esx001-scratch" from all hosts? [yes|no]: yes
Detaching LUN "0200000006b8ca3a0f2ab980019ffea3b09083f4b504552432048" from Host " crimv3esx001.linxsol.com ...
Successfully detached LUN!
vi-admin@vma:~>
```

```
10.2.6.93 - PuTTY
Datastore: datastore1 (25) LUN: naa.6b8ca3a0eebc52001a0540b327c4dfba
crimv3esx026 MOUNTED ATTACHED
Datastore: datastore1 (1) LUN: naa.6b8ca3a0f2bcb70019ffe90f08903b95
crimv3esx002 MOUNTED ATTACHED
Datastore: datastore1 (2) LUN: naa.6b8ca3a0f2f5e60019ffe7e50826382f
crimv3esx003 MOUNTED ATTACHED
Datastore: datastore1 (26) LUN: naa.6b8ca3a0eebc3d001a0544940c258b29
crimv3esx027 MOUNTED ATTACHED
Datastore: datastore1 (3) LUN: naa.6b8ca3a0f2ab8c0019ffe6d70d38aefe
crimv3esx004 MOUNTED ATTACHED
Datastore: datastore1 LUN: naa.6b8ca3a0f2ab980019ffea2907f89b62
crimv3esx001 MOUNTED ATTACHED
Datastore: esx001-scratch LUN: naa.6b8ca3a0f2ab980019ffea3b09083f4b
crimv3esx001 UNMOUNTED ATTACHED
Datastore: esx002-scratch LUN: naa.6b8ca3a0f2bcb70019ffe9300a85524c
crimv3esx002 MOUNTED ATTACHED
```

```
10.2.6.93 - PuTTY
vi-admin@vma:~> ./lunManagement.pl --server vcs001.linxsol.com --username 'linxsol.com\zeeshan' --operation unmount --datastore esx001-scratch
Enter password:
Are you sure you want to unmount "esx001-scratch" hosts? [yes|no]: yes
Unmounting VMFS Datastore "esx001-scratch" from Host " crimv3esx001.linxsol.com ...
Successfully unmounted VMFS datastore!
vi-admin@vma:~>
```



```

vi-admin@vma:~$ wget --no-check-certificate https://raw.githubusercontent.com/lamw/vghetto-scripts/master/perl/lunManagement.pl
--2015-07-19 13:43:12-- https://raw.githubusercontent.com/lamw/vghetto-scripts/master/perl/lunManagement.pl
Resolving raw.githubusercontent.com... 103.245.222.133
Connecting to raw.githubusercontent.com|103.245.222.133|:443... connected.
Unable to establish SSL connection.
vi-admin@vma:~$ clear
vi-admin@vma:~$ wget --no-check-certificate https://raw.githubusercontent.com/lamw/vghetto-scripts/master/perl/lunManagement.pl
--2015-07-19 13:43:25-- https://raw.githubusercontent.com/lamw/vghetto-scripts/master/perl/lunManagement.pl
Resolving raw.githubusercontent.com... 103.245.222.133
Connecting to raw.githubusercontent.com|103.245.222.133|:443... connected.
WARNING: certificate common name 'www.github.com' doesn't match requested host name 'raw.githubusercontent.com'.
HTTP request sent, awaiting response... 200 OK
Length: 11647 [text/plain]
Saving to: 'lunManagement.pl'

100%[=====] 11,647  --.-K/s  in 0s

2015-07-19 13:43:25 (654 MB/s) - 'lunManagement.pl' saved [11647/11647]

vi-admin@vma:~$ chmod +x lunManagement.pl
vi-admin@vma:~$ ./lunManagement.pl --server vcs001.linksol.com --username 'linksol@zeshan' --operation list
Enter password:
Datastore: datastore1 (22) LUN: naa.6b8ca3a0f2ab960019fff96307f06e06
          crimv3esx017 MOUNTED ATTACHED
Datastore: datastore1 (23) LUN: naa.6b8ca3a0f2ac24001a02ac4d0b7e7dbd
          crimv3esx018 MOUNTED ATTACHED
Datastore: esx003-scratch LUN: naa.6b8ca3a0f2f5e60019ffe7fd0994b4e0
          crimv3esx003 MOUNTED ATTACHED
Datastore: esx004-scratch LUN: naa.6b8ca3a0f2ab8c0019ffe6ea0e58a90c
          crimv3esx004 MOUNTED ATTACHED
Datastore: esx005-scratch LUN: naa.6b8ca3a0f2b3d3001a02aac910d0e017
          crimv3esx005 MOUNTED ATTACHED
Datastore: esx006-scratch LUN: naa.6b8ca3a0f2ab87001a02aacd0a31did0
          crimv3esx006 MOUNTED ATTACHED
Datastore: esx007-scratch LUN: naa.6b8ca3a0f2ab9b0019ffe43309aaf06c
          crimv3esx007 MOUNTED ATTACHED
Datastore: esx008-scratch LUN: naa.6b8ca3a0f2a6f70019ffe30d0ae3015b
          crimv3esx008 MOUNTED ATTACHED
Datastore: esx009-scratch LUN: naa.6b8ca3a0f2b09a0019ffe13b169755a5
          crimv3esx009 MOUNTED ATTACHED
Datastore: esx010-scratch LUN: naa.6b8ca3a0f2926c001a02a9680e160c61
          crimv3esx010 MOUNTED ATTACHED
Datastore: esx011-scratch LUN: naa.6b8ca3a0f2b4f30019ffe4d6014345ae8

```

Advanced Settings window showing configurations for storage handling:

- Misc.APDHandlingEnable: 1
- Enable Storage APD Handling: Min 0, Ma 1
- Misc.APDTimeout: 140
- Number of seconds a device can be in APD before failing User World I/O.
- Min 20, Ma 999999

```

10.2.6.17 - PuTTY
~ # esxcli storage filesystem list
Mount Point                                     Volume Name   UUID                                               Mounted  Type      Size      Free
-----
/vmfs/volumes/2d442ad9-bde77c84                Heartbeat1    2d442ad9-bde77c84                               true     NFS       10736377856  10735058944
/vmfs/volumes/547cdd11-3e28d74f                Heartbeat2    547cdd11-3e28d74f                               true     NFS       10736377856  10735058944
/vmfs/volumes/4e8cd2a7-471bb085                NFSVol101    4e8cd2a7-471bb085                               true     NFS       7199480176640  319246983168
/vmfs/volumes/fff4f3be-404e2062                NFSVol102    fff4f3be-404e2062                               true     NFS       6446248042496  240420429824
/vmfs/volumes/4718f268-28e60aa4                Template     4718f268-28e60aa4                               true     NFS       1797508284416  1749992964096
/vmfs/volumes/526fe8a4-a4898996-1b9d-b8ca3af0b2d9  datastore1  526fe8a4-a4898996-1b9d-b8ca3af0b2d9            true     VMFS-5    194078834688  193060667392
/vmfs/volumes/52726634-c883703c-68b7-b8ca3af0b2d9  esx001-scratch 52726634-c883703c-68b7-b8ca3af0b2d9            true     VMFS-5    8397197934592  8396137824256
/vmfs/volumes/526fe8a4-b7d84248-3b83-b8ca3af0b2d9  526fe8a4-b7d84248-3b83-b8ca3af0b2d9            true     vfat     4293591040    4253941760
/vmfs/volumes/3c8e0a70-1b13ba53-77b4-7254031ddab9  3c8e0a70-1b13ba53-77b4-7254031ddab9            true     vfat     261853184    105357312
/vmfs/volumes/9cebe174-c83048f8-39f6-b7949a8dc369  9cebe174-c83048f8-39f6-b7949a8dc369            true     vfat     261853184    105287680
/vmfs/volumes/526fe89e-9b1acf5c-19db-b8ca3af0b2d9  526fe89e-9b1acf5c-19db-b8ca3af0b2d9            true     vfat     299712512    83951616
~ #

```

Details

vmhba0
 Model: Dell PERC H710P Mini
 Targets: 2 Devices: 2 Paths: 2

View: [Devices](#) [Paths](#)

Name	Identifier	Runtime Name	Operational Sta..	LUN	Type	Drive Type	Transport	Capacity	Owner	Hardware
Local D...	naa.6b8ca3a0f2ab980019ffa2907f89b62	vmhba0:C2:T0:L0	Mounted	0	disk	Non-SSD	Parallel SCSI	185.75 GB	NMP	Not supp
Local D...	naa.6b8ca3a0f2ab980019ffa3b09083f4b	vmhba0:C2:T1:L0	Mounted	0	disk	Non-SSD	Parallel SCSI	7.64 TB	NMP	Not supp

- Processors
- Memory
- Storage
- Networking
- Storage Adapt...
- Network Adapt...
- Advanced Sett...
- Power Manag...

- Licensed Featu...
- Time Configura...
- DNS and Routi...
- Authentication
- Power Manag...
- Virtual Machine
- Virtual Machine
- Security Profile
- Host Cache Co...
- System Resour...
- Agent VM Sett...
- Advanced Sett...

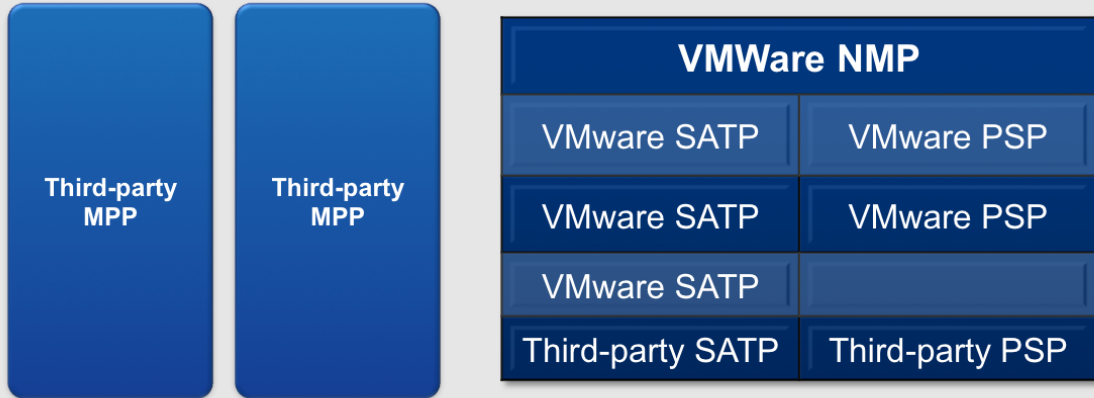
Advanced Settings

Annotations	Max number of I/O retries during disk dump	Min 0	Ma 1000
BufferCache			
CBRC			
Config	Disk.DumpPollDelay		1000
Vpx	Number of microseconds to wait between polls during a disk dump.		
COW			
Cpu		Min 1	Ma 100000
DataMover			
DCUI			
Digest	Disk.DumpPollMaxRetries		10000
DirentryCache	Max number of device poll retries during disk dump		
Disk		Min 1	Ma 100000
FSS			
FT			
HBR	Disk.EnableNaviReg		1
Irq	Enable automatic NaviAgent registration with EMC CLARiON and Invista		
LPage		Min 0	Ma 1
LSOM			
Mem			
Migrate	Disk.IdleCredit		32
Misc	Amount of idle credit that a virtual machine can gain for I/O requests		
Net		Min 1	Ma 512
NFS			
Numa	Disk.MaxLUN		256
PageRetire	Maximum number of LUNs per target scanned for		
Power		Min 1	Ma 256
RdmFilter			
ScratchConfig			
Scsi	Disk.MaxResetLatency		2000
SE	Delay in milliseconds before logging warnings and spawning new reset worlds if a reset is overdue or ta...		
SunRPC		Min 500	Ma 600000
SvMotion			
Syslog	Disk.PathEvalTime		300
User	The number of seconds between FC path evaluations		
UserVars		Min 0	Ma 31536000
VMFS			
VMFS3			
VMkernel			
XvMotion			

OK Cancel Help

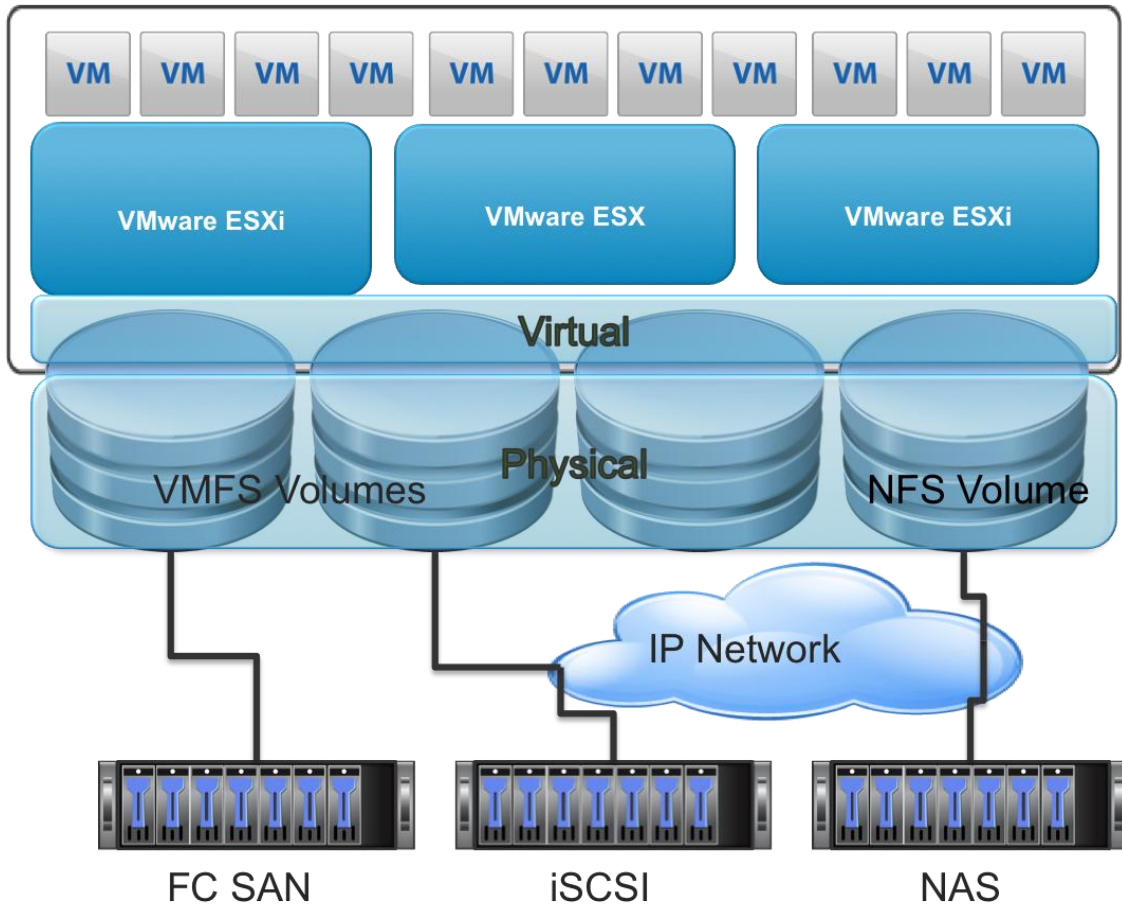
VMkernel

Pluggable Storage Architecture



Pluggable Storage Architecture

```
# tail /var/log/storagerm.log
014-01-07T12:15:50.364Z: Storage I/O Control: Starting module...
014-01-07T12:15:50.364Z: Running Storage I/O Control at host: crimv3esx001.linuxsol.com
014-07-27T12:57:51.876Z: host Uuid: 526f9e25-4db4-1844-b341-b8ca3af301cd
014-07-27T12:57:51.876Z: Storage I/O Control: connection with vobd failed, error code: -1 errno: 2
014-07-27T12:57:51.877Z: Random Seed: 877333
014-07-27T12:57:51.878Z: Launched injector thread.
014-07-27T12:57:51.878Z: Storage I/O Control: Starting module...
014-07-27T12:57:51.878Z: Running Storage I/O Control at host: crimv3esx001.linuxsol.com
014-07-27T12:57:51.878Z: <<throttled>> Storage I/O Control: connection with vobd failed, error code: -1 errno: 2
014-07-27T12:58:11.884Z: Storage I/O Control: connection with vobd established
# /etc/init.d/vobd status
obd is running
#
#
#
```



Chapter 6

```

vCenter001:~ # iptables -L
Chain INPUT (policy DROP)
target prot opt source destination
ACCEPT all -- anywhere anywhere
DROP all -- anywhere anywhere
ACCEPT all -- anywhere anywhere ctstate INVALID
ACCEPT all -- anywhere anywhere ctstate RELATED,ESTABLISHED
inbound all -- anywhere anywhere
port_filter all -- anywhere anywhere
DROP icmp -- anywhere anywhere icmp timestamp-request
DROP icmp -- anywhere anywhere icmp timestamp-reply
ACCEPT icmp -- anywhere anywhere
DROP udplite -- anywhere anywhere
LOG all -- anywhere anywhere limit: avg 2/min burst 5 LOG level warning prefix `IPfilter: Dropped:

Chain FORWARD (policy DROP)
target prot opt source destination

Chain OUTPUT (policy ACCEPT)
target prot opt source destination

Chain inbound (1 references)
target prot opt source destination
RETURN all -- anywhere anywhere

Chain port_filter (1 references)
target prot opt source destination
ACCEPT tcp -- anywhere anywhere tcp dpt:ldap
ACCEPT tcp -- anywhere anywhere tcp dpt:ldaps
ACCEPT tcp -- anywhere anywhere tcp dpt:ssh
ACCEPT udp -- anywhere anywhere udp dpt:ideafarm-door
ACCEPT tcp -- anywhere anywhere tcp dpt:ideafarm-door
ACCEPT tcp -- anywhere anywhere tcp dpt:tungsten-https
ACCEPT tcp -- anywhere anywhere tcp dpt:kerberos
ACCEPT udp -- anywhere anywhere udp dpt:kerberos
ACCEPT tcp -- anywhere anywhere tcp dpt:ttyinfo
ACCEPT udp -- anywhere anywhere udp dpt:boks
ACCEPT tcp -- anywhere anywhere tcp dpt:shell
ACCEPT udp -- anywhere anywhere udp dpt:syslog
ACCEPT tcp -- anywhere anywhere tcp dpt:fujitsu-dtens
ACCEPT tcp -- anywhere anywhere tcp dpt:troff
ACCEPT tcp -- anywhere anywhere tcp dpt:8010
ACCEPT tcp -- anywhere anywhere tcp dpt:http
ACCEPT tcp -- anywhere anywhere tcp dpt:https
ACCEPT tcp -- anywhere anywhere tcp dpt:boks-servc
ACCEPT tcp -- anywhere anywhere tcp dpt:boks-servm
ACCEPT tcp -- anywhere anywhere tcp dpt:xinupageserver
ACCEPT tcp -- anywhere anywhere tcp dpt:7444
vCenter001:~ # █

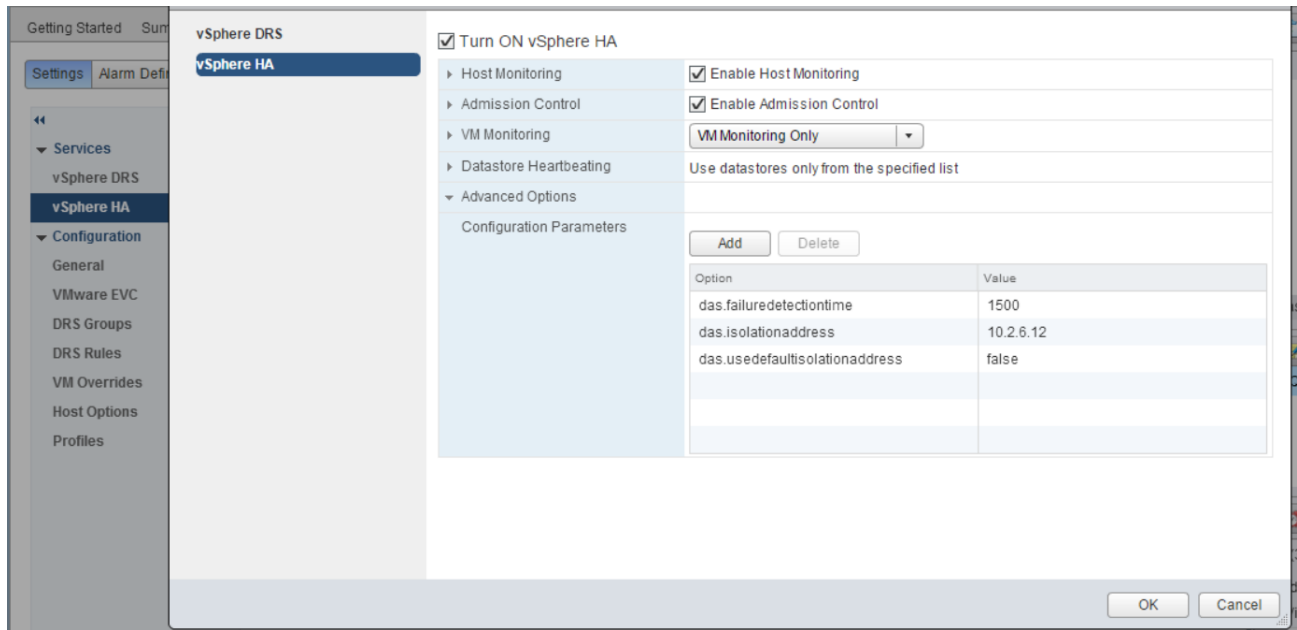
```

Configuration

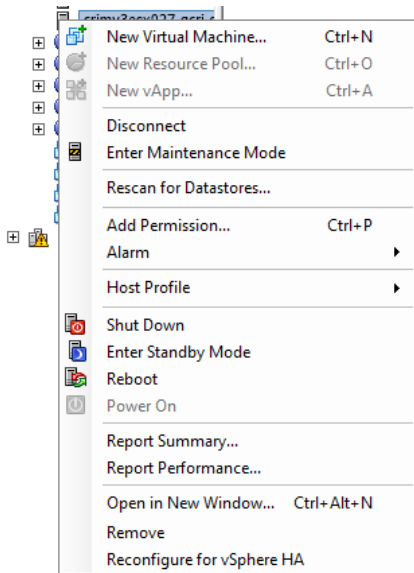
BIOS DHCP File Name:	undionly.kpxe.vmw-hardwired
iPXE Boot URL:	https://10.5.2.215:6501/vmw/rbd/tramp
Cache Size:	2.00 GiB
Cache Space In-Use:	<1 MiB

Actions

[Download TFTP Boot Zip](#)
[Download AutoDeploy Log Files](#)

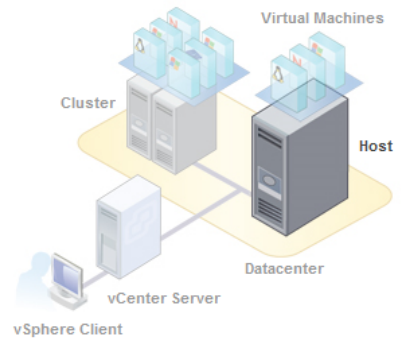


```
10.2.6.17 - PuTTY
~ # cd /opt/vmware/uninstallers/
/opt/vmware/uninstallers # ls
VMware-fdm-uninstall.sh
/opt/vmware/uninstallers # ./VMware-fdm-uninstall.sh
```



that uses virtualization software, such as ESX or ESXi, to run virtual machines. Hosts provide the physical resources that virtual machines use and manage access to storage and network.

Host Profile
Virtual Machine



Explore Further

- [Learn more about hosts](#)
- [Learn how to create virtual machines](#)
- [Enhance your datacenter](#)
 Learn about vSphere vMotion, HA, DRS, and more

Remote Access

By default, remote clients are prevented from accessing services on this host, and local clients are prevented from accessing services on remote hosts.

Select a check box to provide access to a service or client. Daemons will start automatically when their ports are opened and stop when all of their ports are closed, or as configured.

	Label	Incoming Ports	Outgoing Ports	Protocols	Daemon
<input type="checkbox"/>	Software iSCSI Client		3260	TCP	N/A
<input checked="" type="checkbox"/>	NFS Client		0-65535	TCP	N/A
<input checked="" type="checkbox"/>	DHCPv6	546	547	TCP,UDP	N/A
<input checked="" type="checkbox"/>	vSphere Client	902,443		TCP	N/A
<input type="checkbox"/>	vprobeServer	57007		TCP	Stopped
<input checked="" type="checkbox"/>	vSphere High Availability Agent	8182	8182	TCP,UDP	Running
<input type="checkbox"/>	vCenter Update Manager		80,9000-9100	TCP	N/A
<input checked="" type="checkbox"/>	vSphere Web Access	80		TCP	N/A
<input checked="" type="checkbox"/>	SNMP Server	161		UDP	Stopped
<input type="checkbox"/>	Active Directory All		88,123,137,139,389,...	UDP,TCP	N/A

Service Properties

General

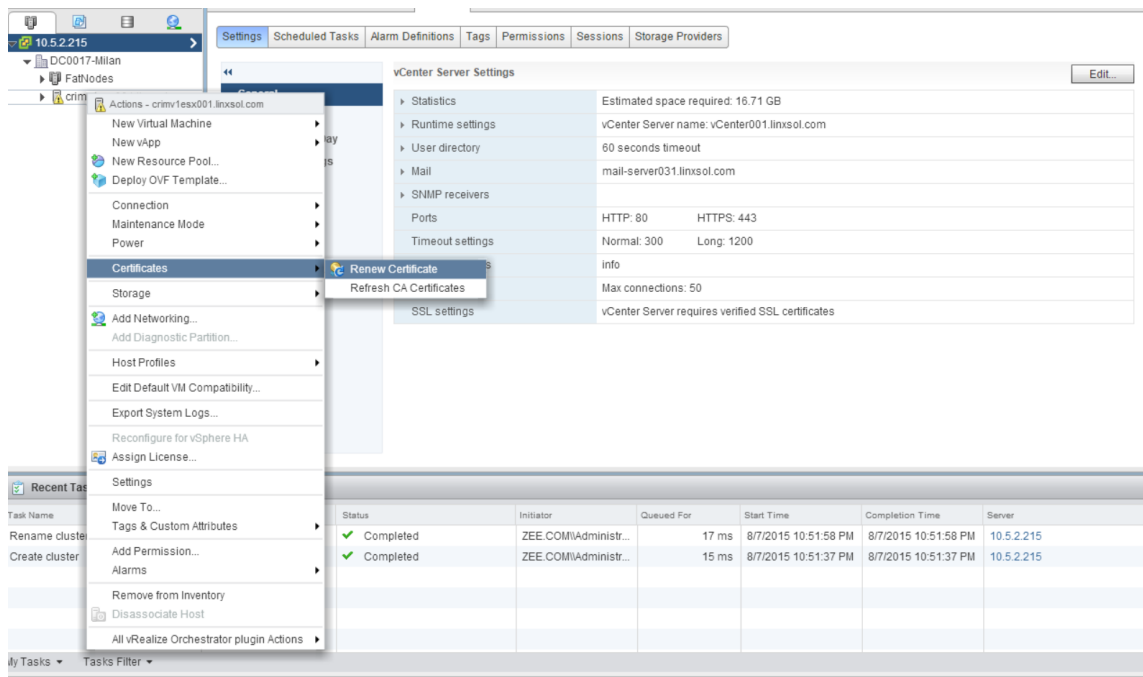
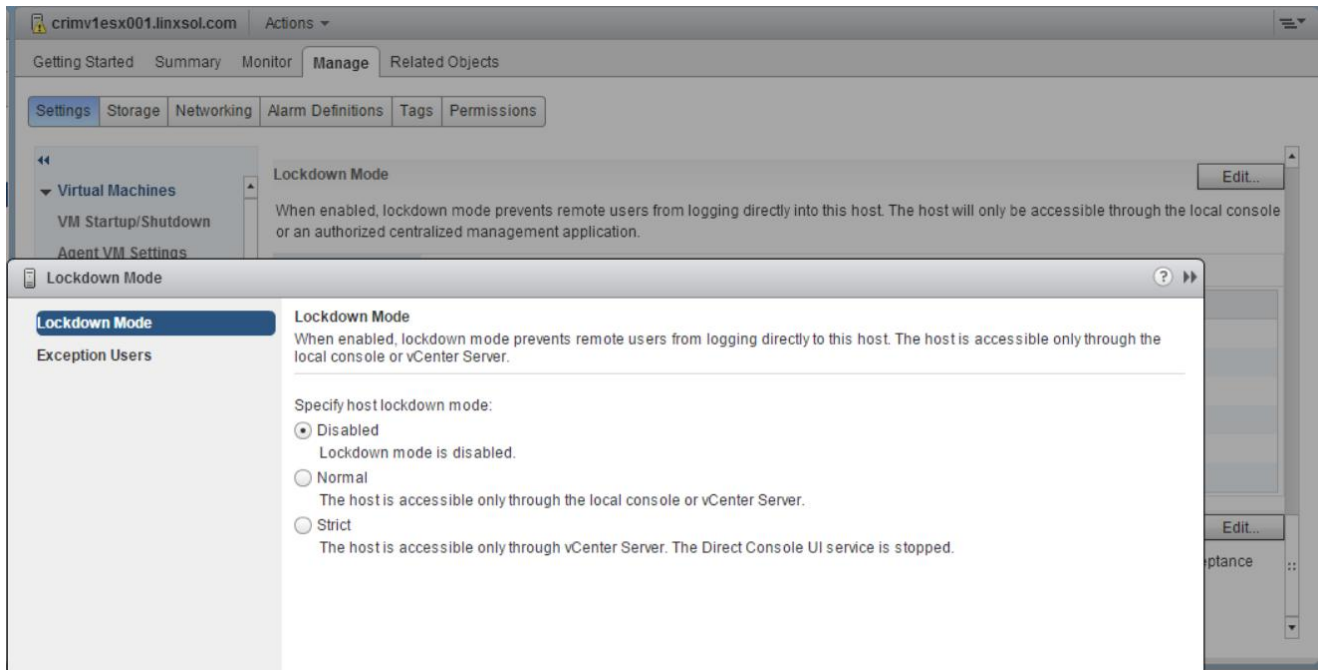
Service: SSH Server
Package Information:

Firewall Settings

Allowed IP Addresses: All

Firewall... Options...

OK Cancel Help



```
5. Replace Solution user certificates with Custom Certificate
```

```
6. Replace Solution user certificates with VMCA certificates
```

```
7. Revert last performed operation by re-publishing old certificates
```

```
8. Reset all Certificates
```

Note : Use Ctrl-D to exit.

Option[1 to 8]: 5

Please provide valid SSO password to perform certificate operations.

Password:

```
1. Generate Certificate Signing Request(s) and Key(s) for Solution User Certificates
```

```
2. Import custom certificate(s) and key(s) to replace existing Solution User Certificates
```

Option [1 or 2]: 2

Please provide valid custom certificate for solution user store : machine

File :

10.5.2.215 - PuTTY

```
localhost:/usr/lib/vmware-vmca/bin # ./certificate-manager
```

```
*** Welcome to the vSphere 6.0 Certificate Manager ***
```

```
-- Select Operation --
```

```
1. Replace Machine SSL certificate with Custom Certificate
```

```
2. Replace VMCA Root certificate with Custom Signing Certificate and replace all Certificates
```

```
3. Replace Machine SSL certificate with VMCA Certificate
```

```
4. Regenerate a new VMCA Root Certificate and replace all certificates
```

```
5. Replace Solution user certificates with Custom Certificate
```

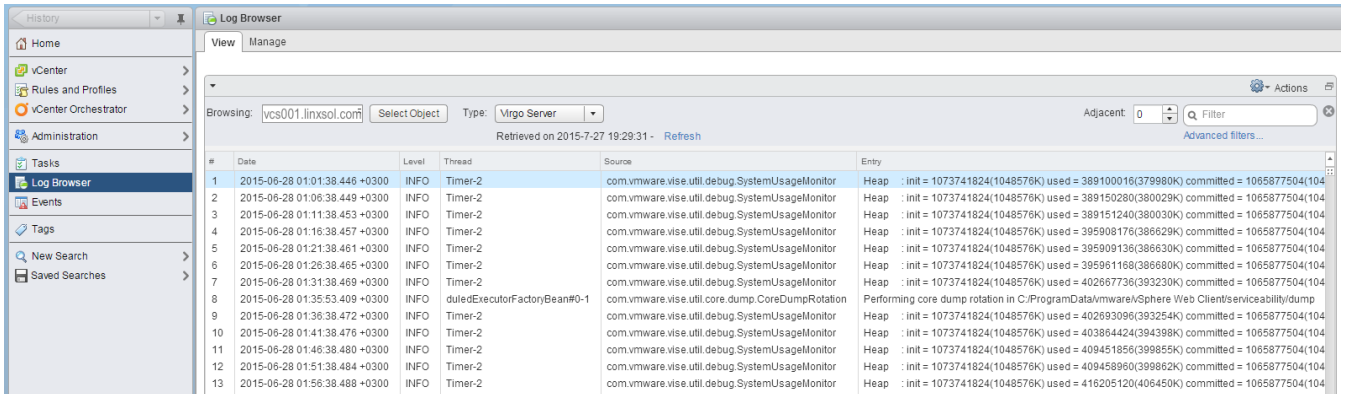
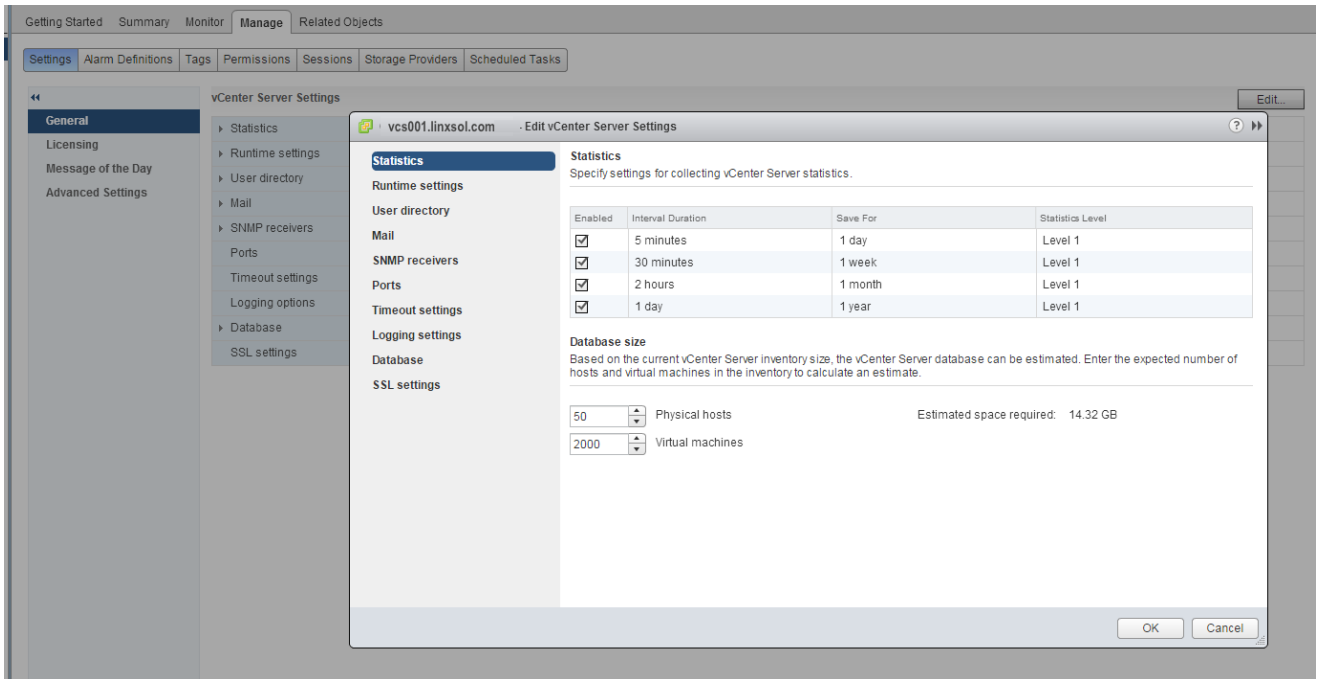
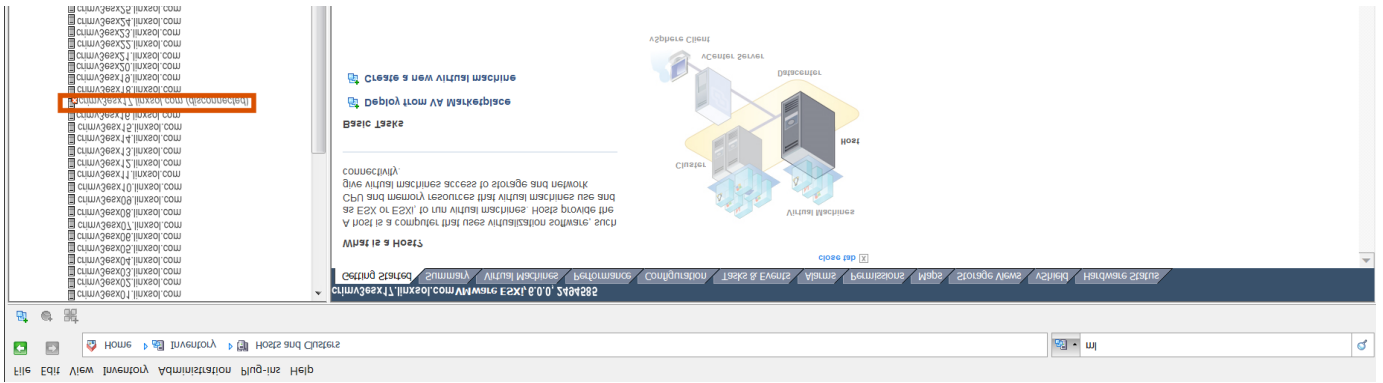
```
6. Replace Solution user certificates with VMCA certificates
```

```
7. Revert last performed operation by re-publishing old certificates
```

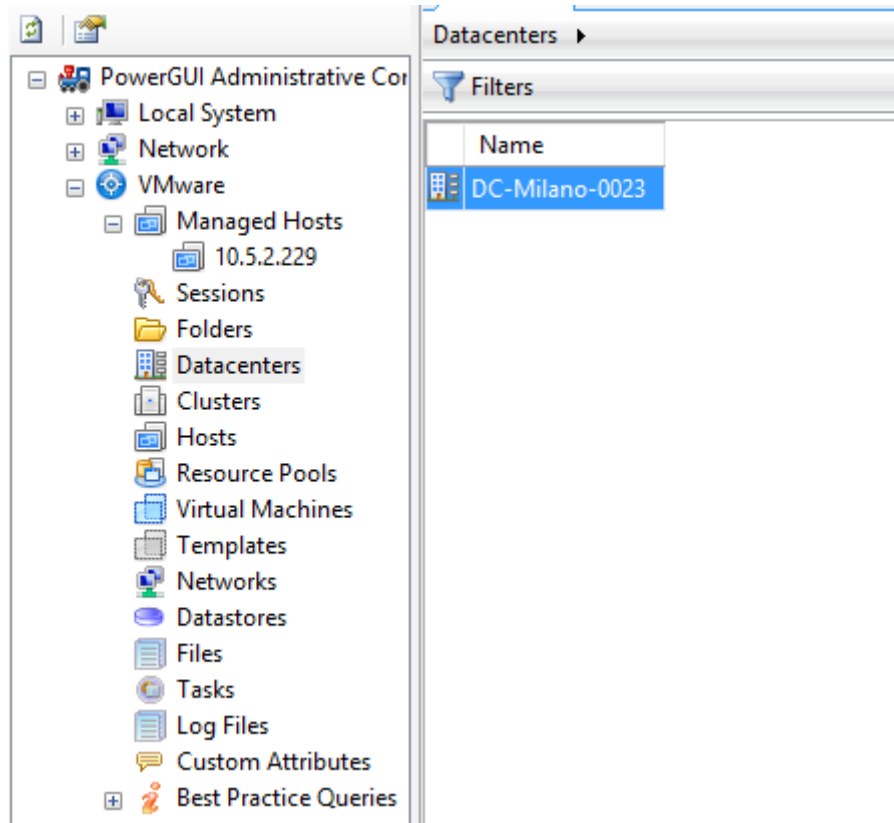
```
8. Reset all Certificates
```

Note : Use Ctrl-D to exit.

Option[1 to 8]:



Appendix A



Navigation Tree

- PowerGUI Administrative Cor...
- Local System
- Network
- VMware
 - Managed Hosts
 - 10.5.2.229
 - Sessions
 - Folders
 - Datacenters
 - Clusters
 - Hosts
 - Resource Pools
 - Virtual Machines
 - Templates
 - Networks
 - Datastores
 - Files
 - Tasks
 - Log Files
 - Custom Attributes
 - Best Practice Queries

Results

Sessions

Filters

Key	CurrentSession	UserName	FullName	LoginTime	LastActiv
52070df6-f3cd-19e3-00d6-c720d45931f7	False	LINXSOL.COM\Ad...	Administrator li...	9/14/2015 6:29:23 AM	9/14/2015
523d3451-6ef4-bb3a-e366-5efb999ae191	False	LINXSOL.COM\vp...		8/20/2015 7:33:25 PM	8/20/2015
52603050-4487-7a74-0201-6a8a69f01683	False	LINXSOL.COM\vp...		8/20/2015 7:28:38 PM	8/20/2015
526b05b3-a8f6-30b3-2a5a-6bca238323e4	False	LINXSOL.COM\vp...		8/20/2015 7:30:35 PM	8/20/2015
528edf11-aa94-171e-3824-93fa211e3234	False	LINXSOL.COM\vp...		8/20/2015 7:28:53 PM	9/14/2015
52934ba8-22c1-e66e-9f75-fd181875ec87	False	LINXSOL.COM\vp...		8/20/2015 7:33:08 PM	8/20/2015
529412c9-26d8-815e-28e2-61a1bbaf3782	False	LINXSOL.COM\vp...		8/20/2015 7:29:30 PM	9/14/2015
52f14a11-f575-35b5-2ef2-6a76dc0972a3	True	LINXSOL.COM\Ad...	Administrator li...	9/14/2015 8:21:10 AM	9/14/2015

Results

Managed Hosts

Filters

Name	Port	Protocol	ConnectionAcco	Connection	UseSingleSignOn
10.5.2.229	443	HTTPS	administrator@...		True

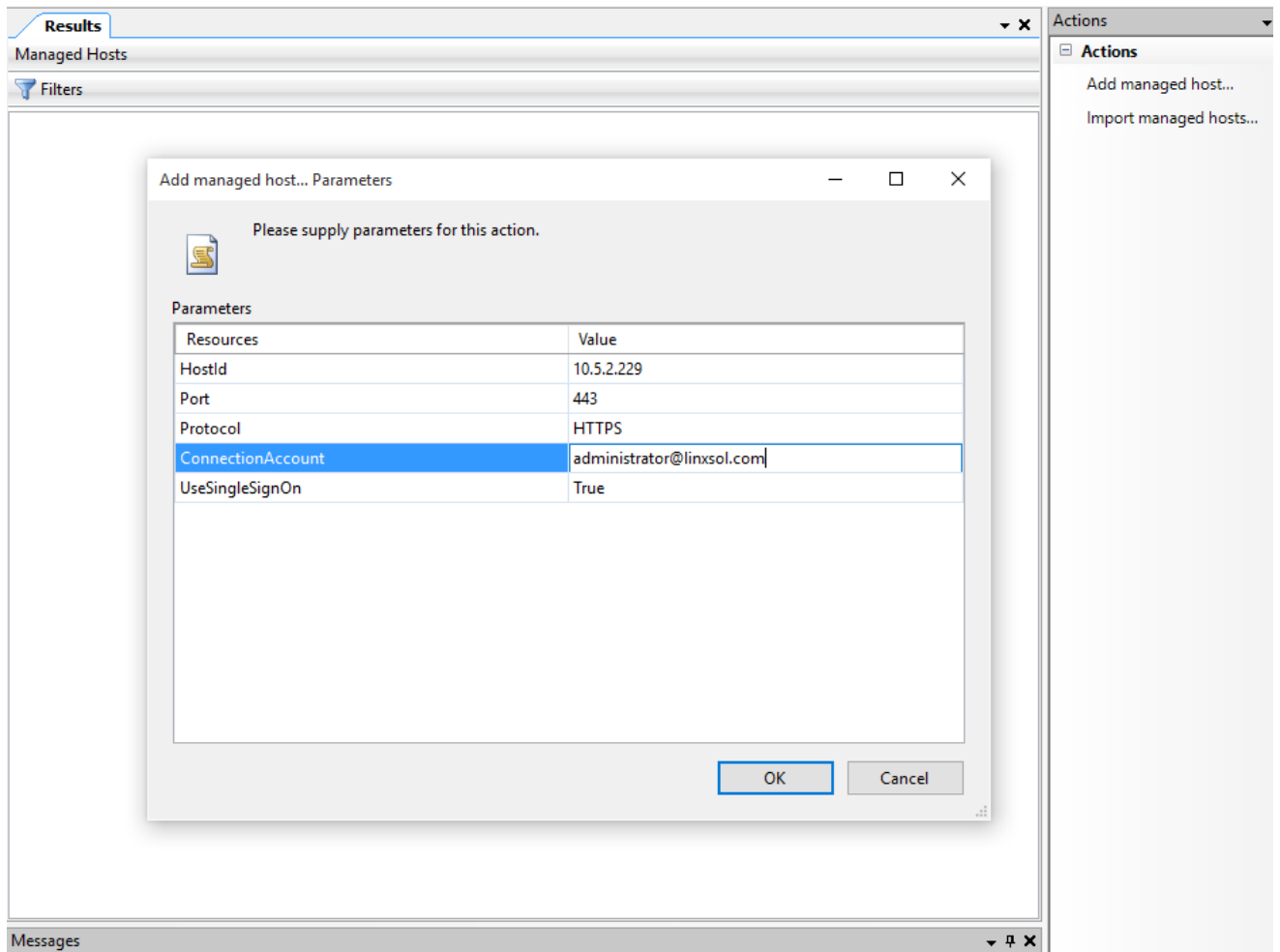
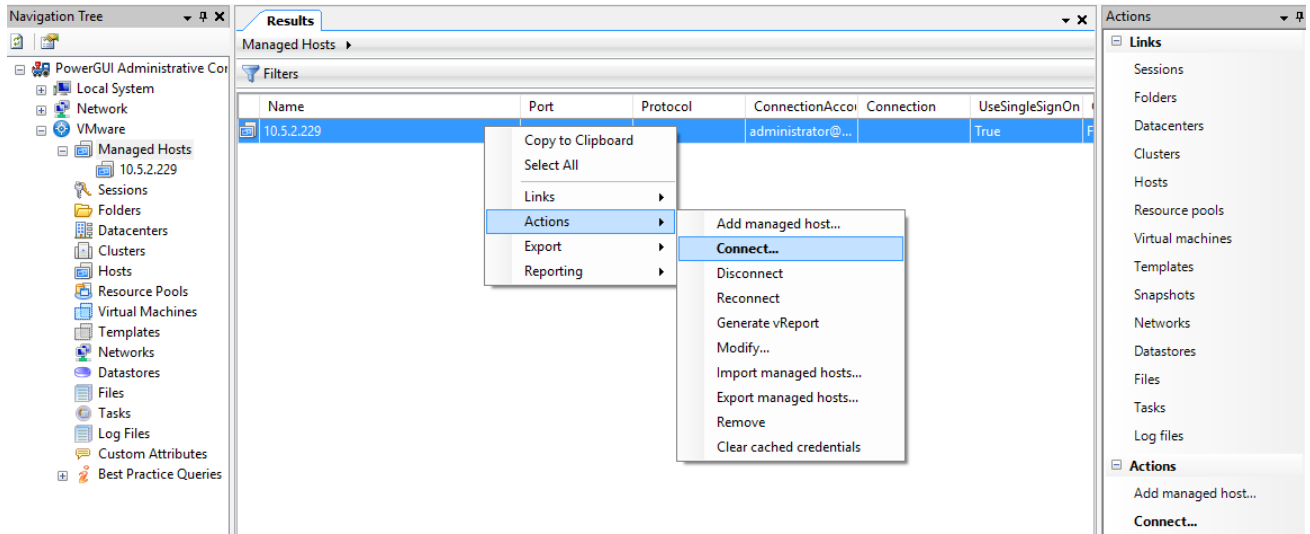
Windows PowerShell credential request

Enter your credentials.

User name: administrator@linxsol.com

Password:

OK Cancel



PowerPack Management Icon

HAEnabled	HAFailoverLevel	DrsEnabled	DrsAutomationLe
False	1	False	FullyAutomated

PowerPack Management

Import... Check for Update Remove...

- Local System** 3.0.0.0
Manage processes, services, the event log, the Registry, the file sy... [Home Page](#)
Requirements: PowerGUI 2.0.0 or later
- Network** 3.0.0.0
Remotely manage processes, services, the event log, the Registry,... [Home Page](#)
Requirements: PowerGUI 2.0.0 or later
- VMware vSphere Management** 3.0.0.1
Remotely manage your VMware vSphere infrastructure. Generate... [Home Page](#)
Requirements: PowerGUI 2.4.0 or later and VMware vSphere Powe...
Optional: Quest AD cmdlets 1.4 or later, Visio 2003 or later

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VMware

Search

VMware Community PowerPack (Previously Virtu-AI.Net PowerPack)
 ...order to use this PowerPack you will need the '...

Clone and Manage VMs
 This Clone and Manage VMs PowerPack developed in view...

VMware vSphere Management
 ...If you want to use PowerGUI and the VMware PowerPack...

VMware Image Builder & Auto Deploy PowerPack
 Version 1.9 - Initial release This PowerPack has been...

NINet.org VMWare Reporting Pack
 ...write the powerpack but I will update it as I get...

[Close](#) | [More...](#)

POWERPACKS

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Quest Coexistence...



CloudBerry Explorer...



Quest CMN Resource...

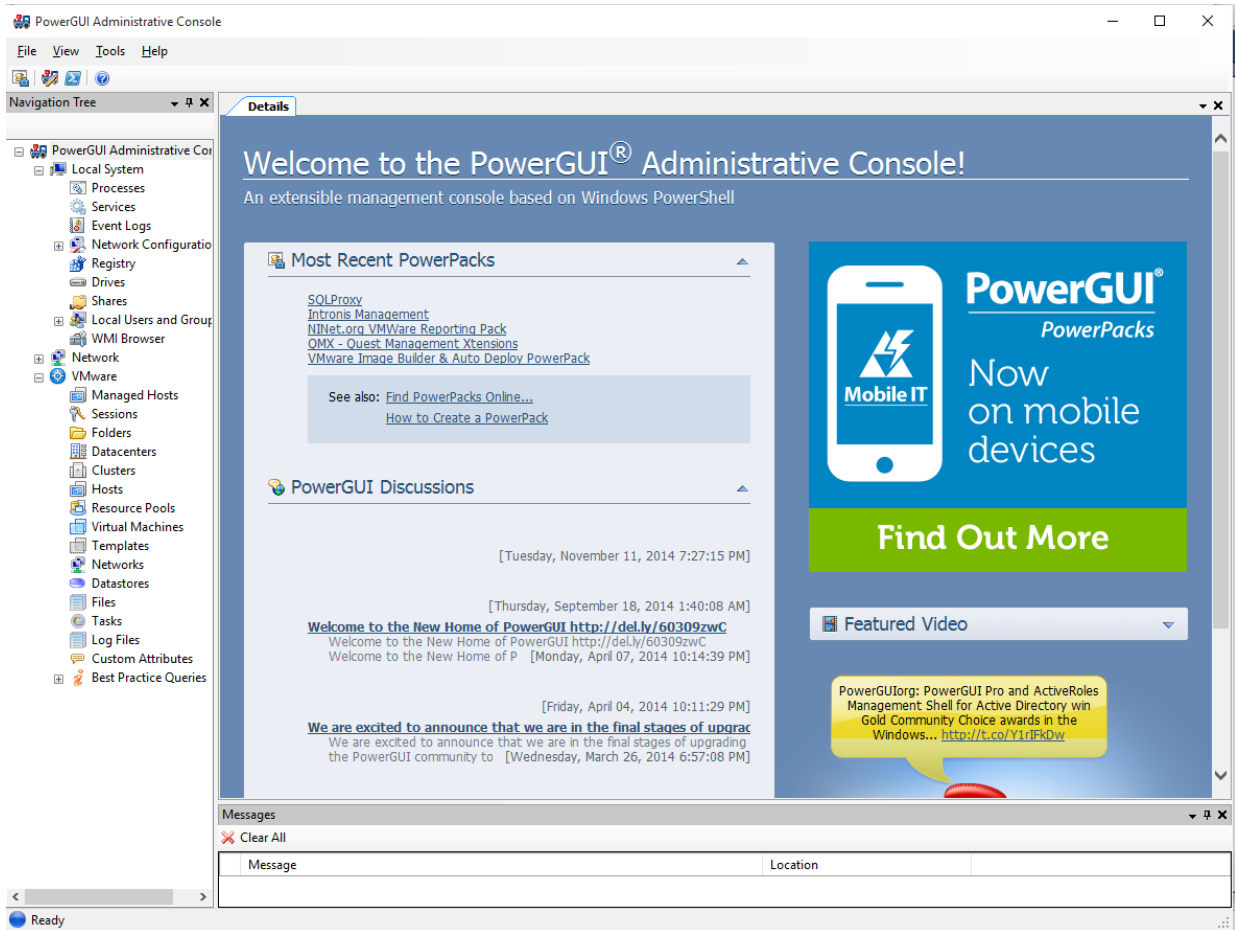


SQL Statement E...

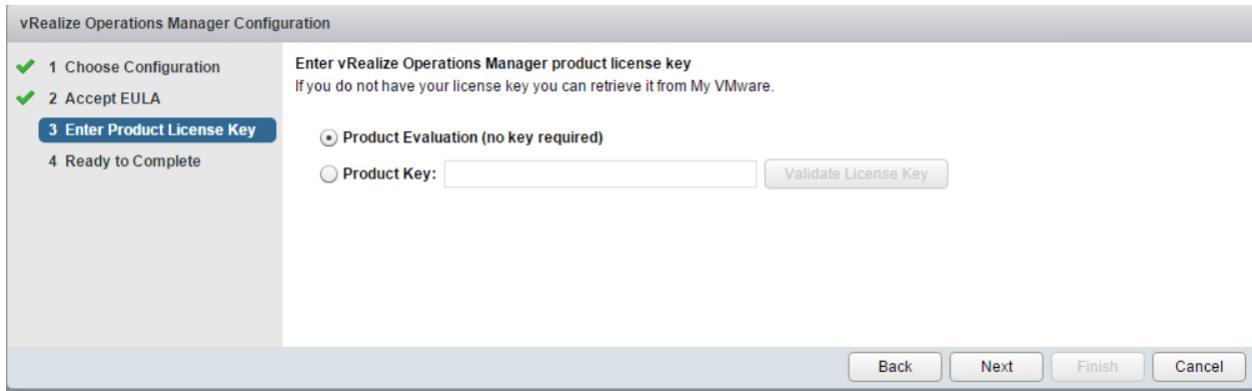
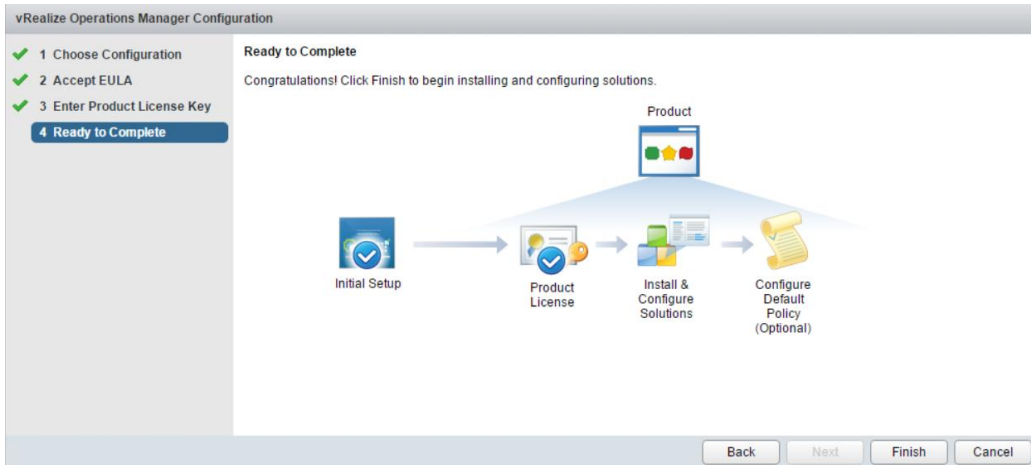
Options

[View all](#)

[View all](#)



Appendix B



- ✓ 1 Choose Configuration
- 2 Accept EULA**
- 3 Enter Product License Key
- 4 Ready to Complete

End User License Agreement

Read and agree to the End User License Agreement to continue.

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1.1 "Affiliate" means, with respect to a party at a given time, an entity that then is directly or indirectly controlled by, is under common control with, or controls that party, and here "control" means an ownership, voting or similar interest representing fifty percent (50%) or more of the total interests then outstanding of that entity.

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1.3 "Guest Operating Systems" means instances of third-party operating systems licensed by You, installed in a Virtual Machine and run using the Software.

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1.5 "License" means a license granted under Section 2.1 (General License Grant).

I accept the terms of this agreement

Back

Next

Finish

Cancel

1 Choose Configuration

- 2 Accept EULA
- 3 Enter Product License Key
- 4 Ready to Complete

Choose configuration type

Choose whether to collect data from a new environment or to import data from an earlier vCenter Operations Manager environment.

New Environment

Use this option if you want to connect vRealize Operations Manager to sources that you are not already monitoring. You will need to configure solutions to collect data from VMware vCenter or other sources.

Import Environment

Use this option if you already have an earlier vCenter Operations Manager environment, and you want to import that data and configuration into this one. You might need to install new versions of some solutions to proceed.



Back

Next

Finish

Cancel



Congratulations on setting up vRealize Operations Manager.

Log in to import data from existing vCenter Operations Manager instances or to configure Solutions to begin collecting data from your environment.

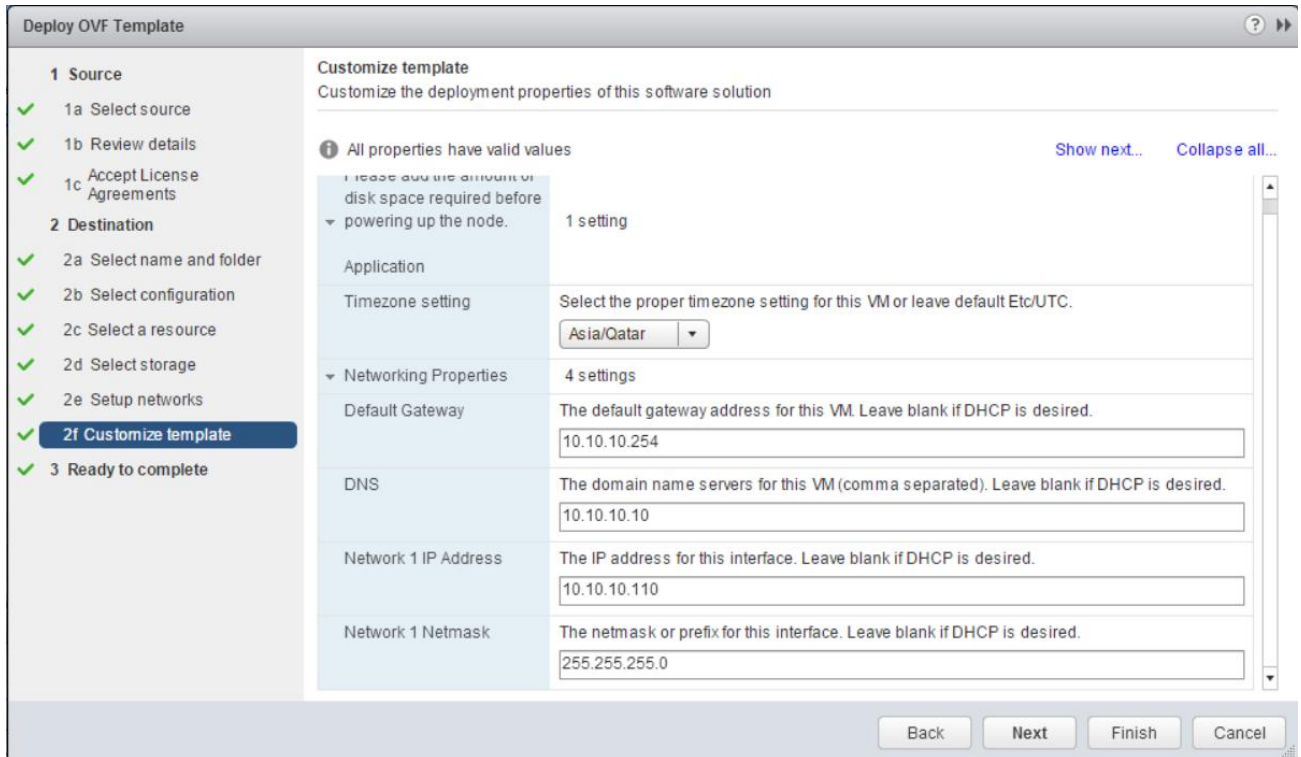
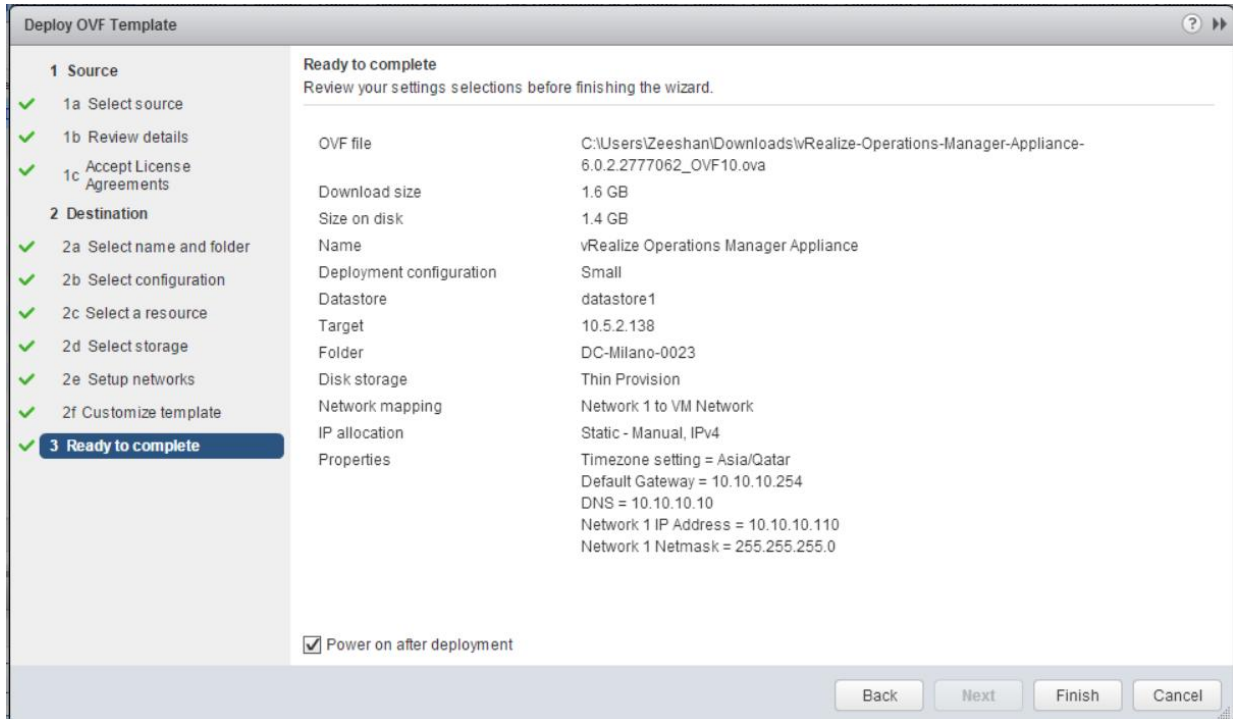
Authentication Source:

User name:

Password:

Login

VMware vRealize™ Operations Manager™



Deploy OVF Template

1 Source

- ✓ 1a Select source
- ✓ 1b Review details
- ✓ 1c Accept License Agreements

2 Destination

- ✓ 2a Select name and folder
- ✓ 2b Select configuration
- ✓ 2c Select a resource
- ✓ 2d Select storage
- ✓ 2e Setup networks**
- 2f Customize template
- 3 Ready to complete

Setup networks
Configure the networks the deployed template should use

Source	Destination	Configuration
Network 1	VM Network	✓

IP protocol: IPv4 IP allocation: Static - Manual ⓘ

Source: Network 1 - Description
The "Network 1" network

Destination: VM Network - Protocol settings
No configuration needed for this network

Back Next Finish Cancel

Deploy OVF Template

1 Source

- ✓ 1a Select source
- ✓ 1b Review details
- ✓ 1c Accept License Agreements

2 Destination

- ✓ 2a Select name and folder
- ✓ 2b Select configuration
- ✓ 2c Select a resource
- ✓ 2d Select storage**
- 2e Setup networks
- 2f Customize template
- 3 Ready to complete

Select storage
Select location to store the files for the deployed template

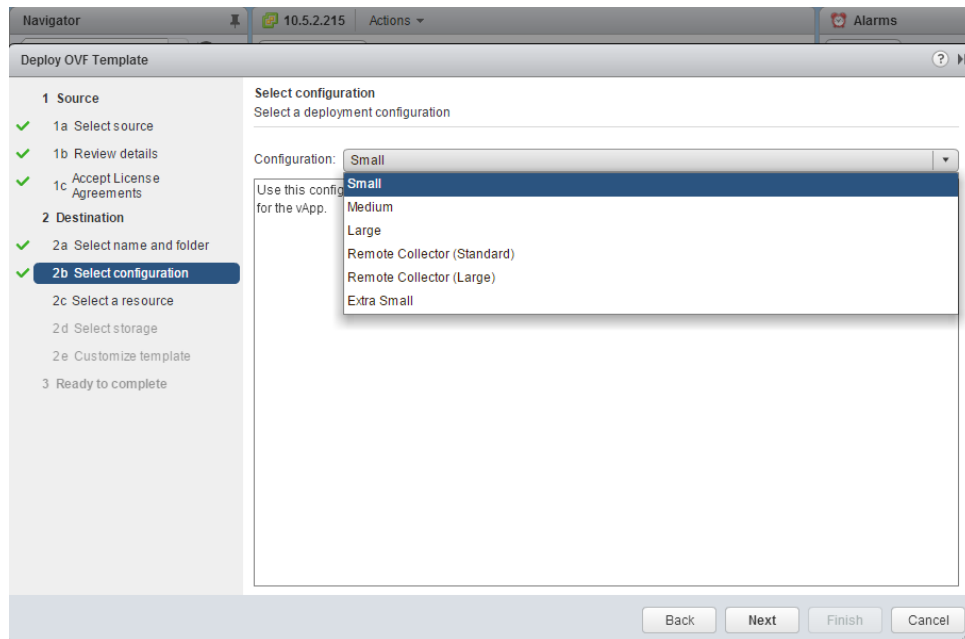
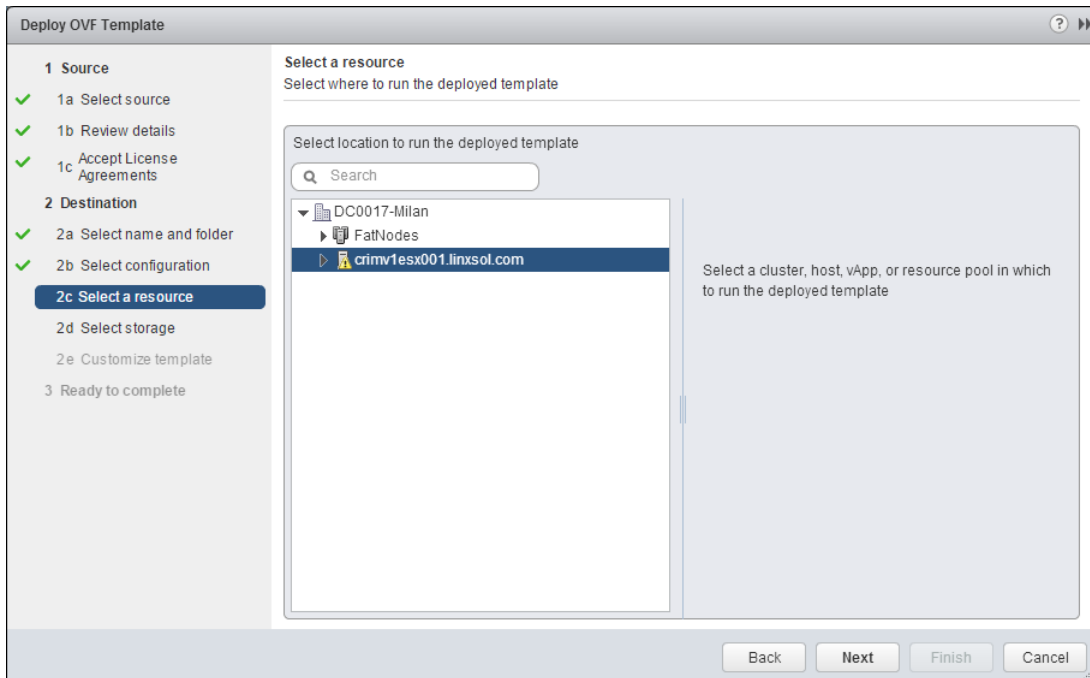
Select virtual disk format: Thin Provision

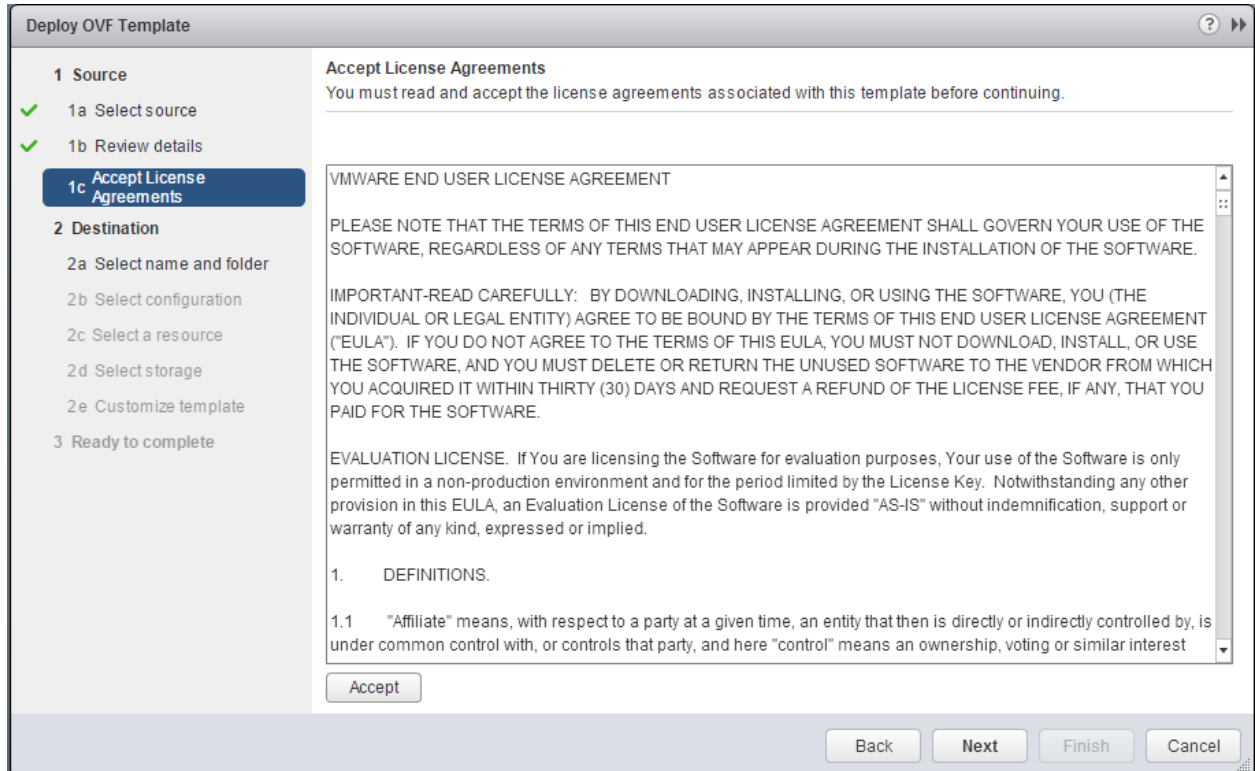
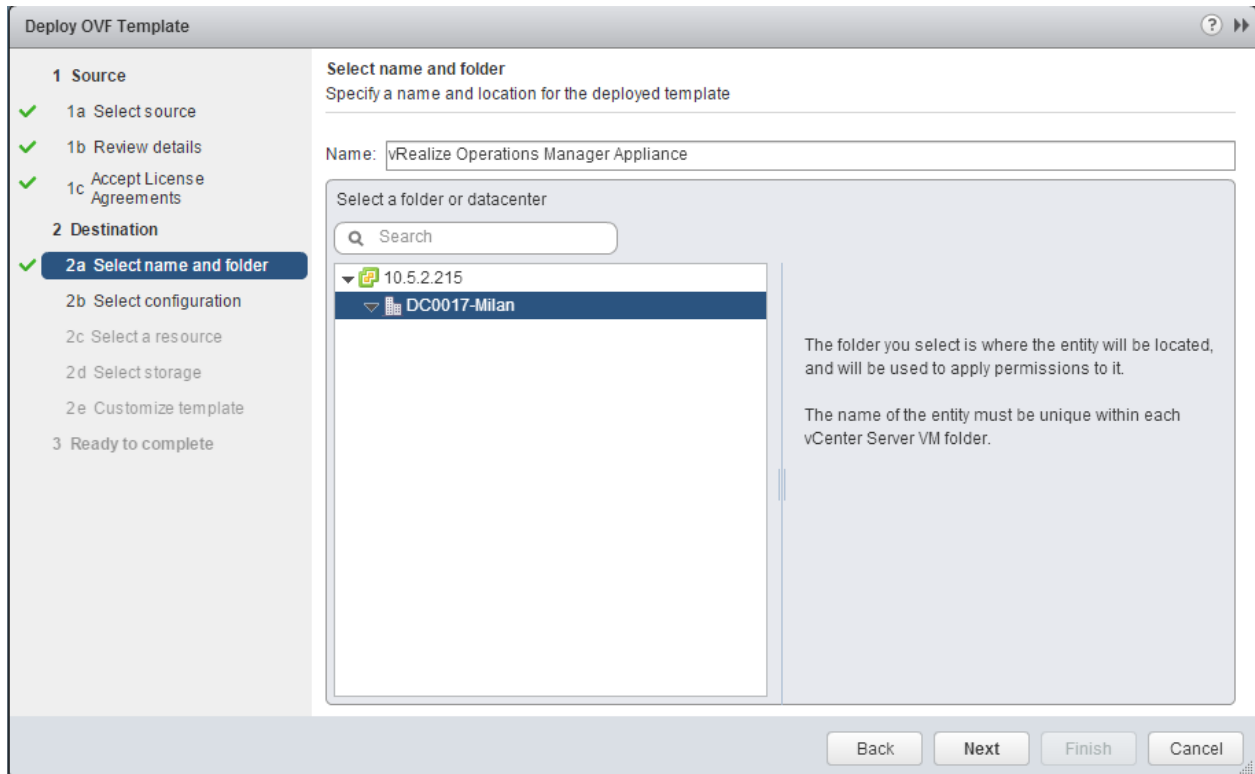
VM Storage Policy: Virtual SAN Default Storage Policy ⓘ

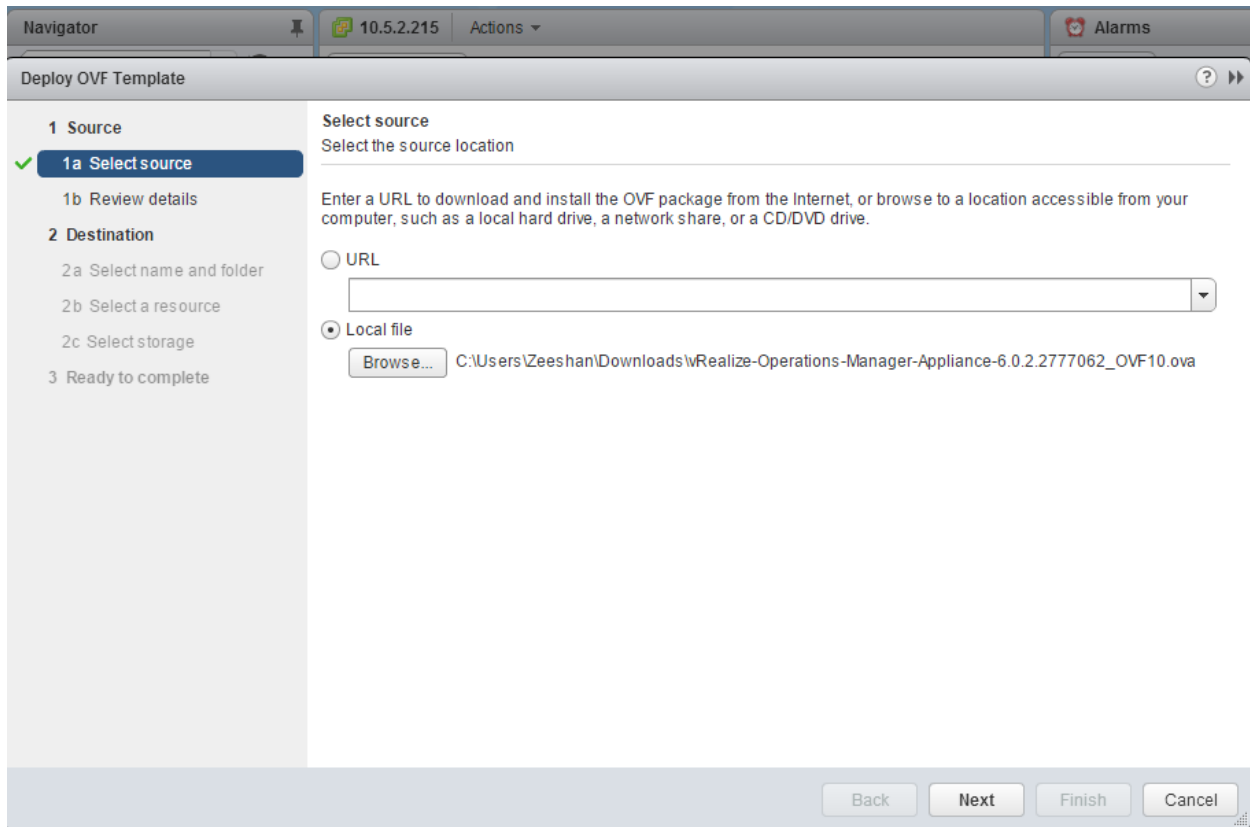
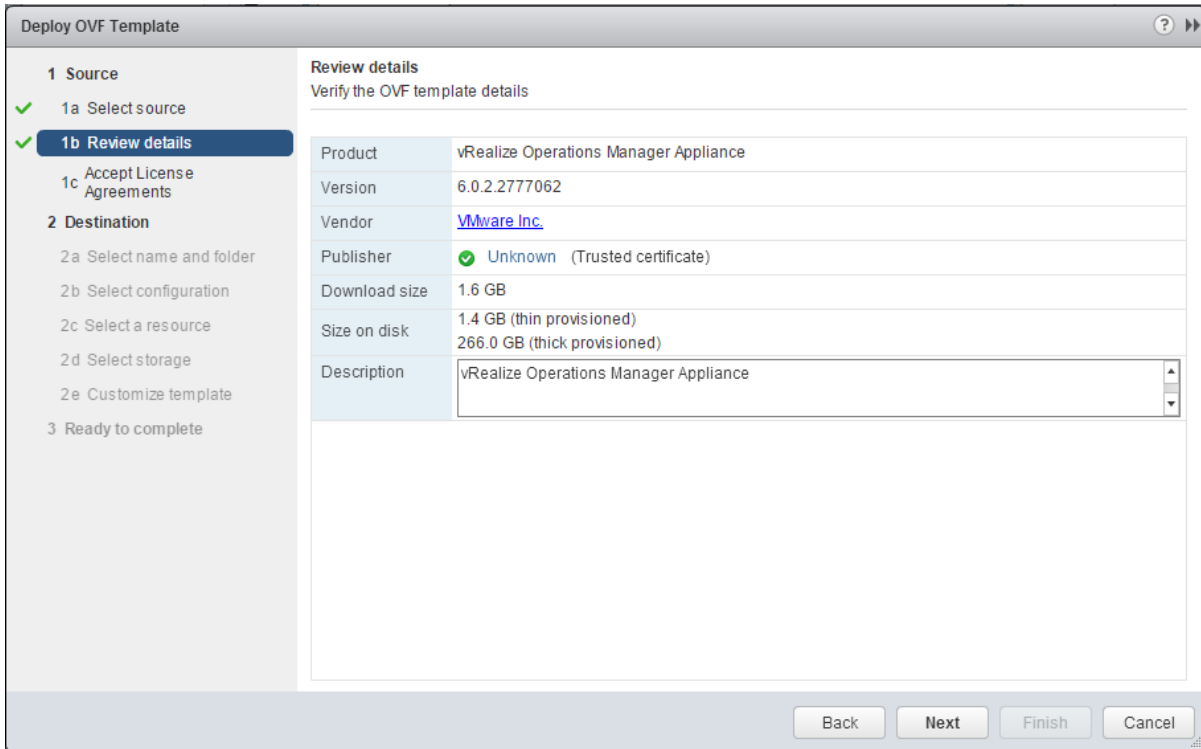
The following datastores are accessible from the destination resource that you selected. Select the destination datastore for the virtual machine configuration files and all of the virtual disks.

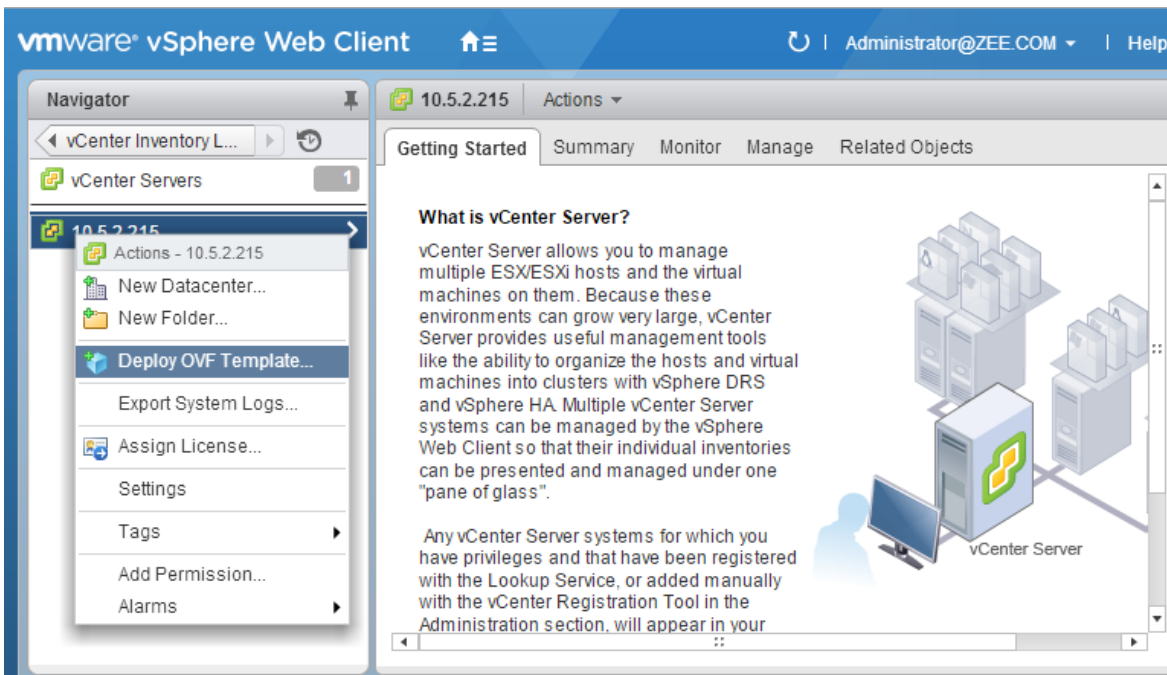
Name	Capacity	Provisioned	Free	Type	Storage DRS
Incompatible					
datastore1	1.22 TB	582.76 GB	1.02 TB	VMFS	

Back Next Finish Cancel









Appendix C

```

VMware vSphere PowerCLI 6.0 Release 1
PowerCLI C:\Program Files (x86)\VMware\Infrastructure\vSphere PowerCLI> Get-VM -Name vCenter005 | Get-HardDisk

CapacityGB    Persistence    Filename
-----
12.000        Persistent    [datastore1] vCenter005/vCenter005.vmdk
1.272         Persistent    [datastore1] vCenter005/vCenter005_1.vmdk
25.000        Persistent    [datastore1] vCenter005/vCenter005_2.vmdk
25.000        Persistent    [datastore1] vCenter005/vCenter005_3.vmdk
10.000        Persistent    [datastore1] vCenter005/vCenter005_4.vmdk
10.000        Persistent    [datastore1] vCenter005/vCenter005_5.vmdk
5.000         Persistent    [datastore1] vCenter005/vCenter005_6.vmdk
10.000        Persistent    [datastore1] vCenter005/vCenter005_7.vmdk
1.000         Persistent    [datastore1] vCenter005/vCenter005_8.vmdk
10.000        Persistent    [datastore1] vCenter005/vCenter005_9.vmdk
5.000         Persistent    [datastore1] vCenter005/vCenter005_10.vmdk
  
```

```
VMware vSphere PowerCLI 6.0 Release 1
PowerCLI C:\Program Files (x86)\VMware\Infrastructure\vsphere PowerCLI> Get-VM
```

Name	PowerState	Num CPUs	MemoryGB
VMware vRealize A...	PoweredOn	2	8.000
vCenter005	PoweredOn	2	8.000
vCenter 2012	PoweredOff	1	4.000
VMware Identity A...	PoweredOn	1	2.000
AD	PoweredOff	1	4.000
AD 2012	PoweredOff	1	4.000
vRealize Operatio...	PoweredOff	4	16.000
vCenter	PoweredOff	1	4.000

```
VMware vSphere PowerCLI 6.0 Release 1
PowerCLI C:\Program Files (x86)\VMware\Infrastructure\vsphere PowerCLI> Connect-VIServer 10.5.2.229
```

Name	Port	User
10.5.2.229	443	LINXSOL.COM\Administrator

```
PowerCLI C:\Program Files (x86)\VMware\Infrastructure\vsphere PowerCLI>
```

```
VMware vSphere PowerCLI 6.0 Release 1
PowerCLI C:\Program Files (x86)\VMware\Infrastructure\vsphere PowerCLI> Connect-VIServer 10.5.2.229
```

Specify Credential

Please specify server credential

User name: administrator@linxsol.com

Password: [REDACTED]

OK Cancel

```
VMware vSphere PowerCLI 6.0 Release 1

Welcome to VMware vSphere PowerCLI!

Log in to a vCenter Server or ESX host:          Connect-VIServer
To find out what commands are available, type:   Get-VICommand
To show searchable help for all PowerCLI commands: Get-PowerCLIHelp
Once you've connected, display all virtual machines: Get-VM
If you need more help, visit the PowerCLI community: Get-PowerCLICommunity

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PowerCLI C:\WINDOWS\system32> Set-ExecutionPolicy RemoteSigned

Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the execution
policy might expose you to the security risks described in the about_Execution_Policies help topic at
http://go.microsoft.com/fwlink/?LinkID=135170. Do you want to change the execution policy?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "N"): y
PowerCLI C:\WINDOWS\system32>
```

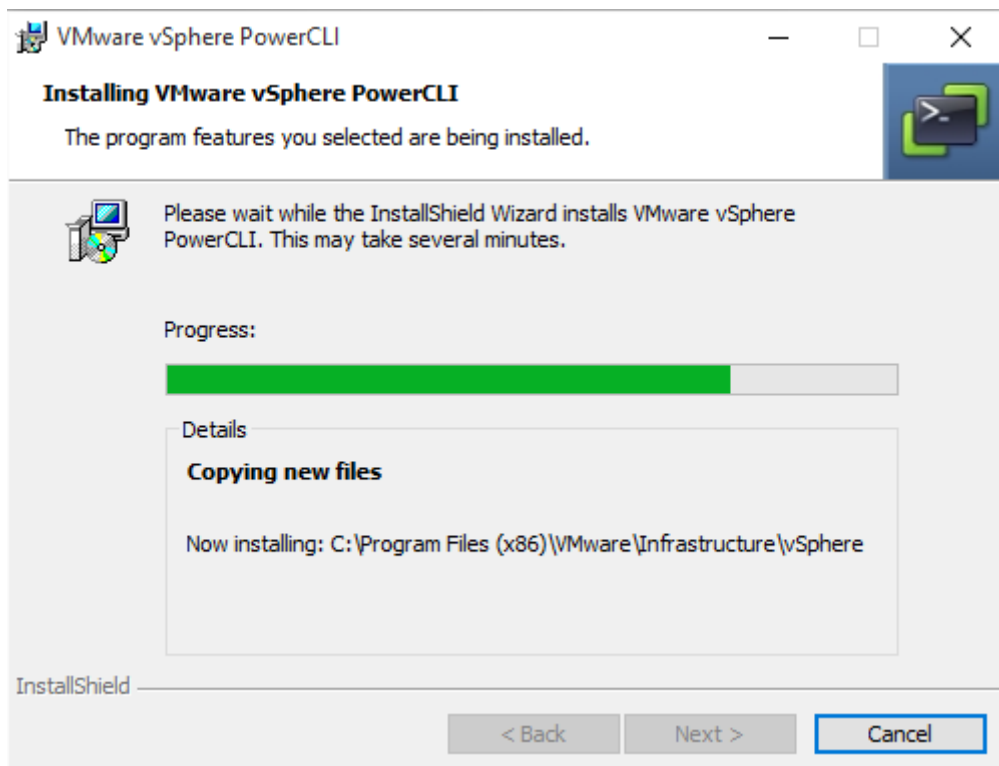
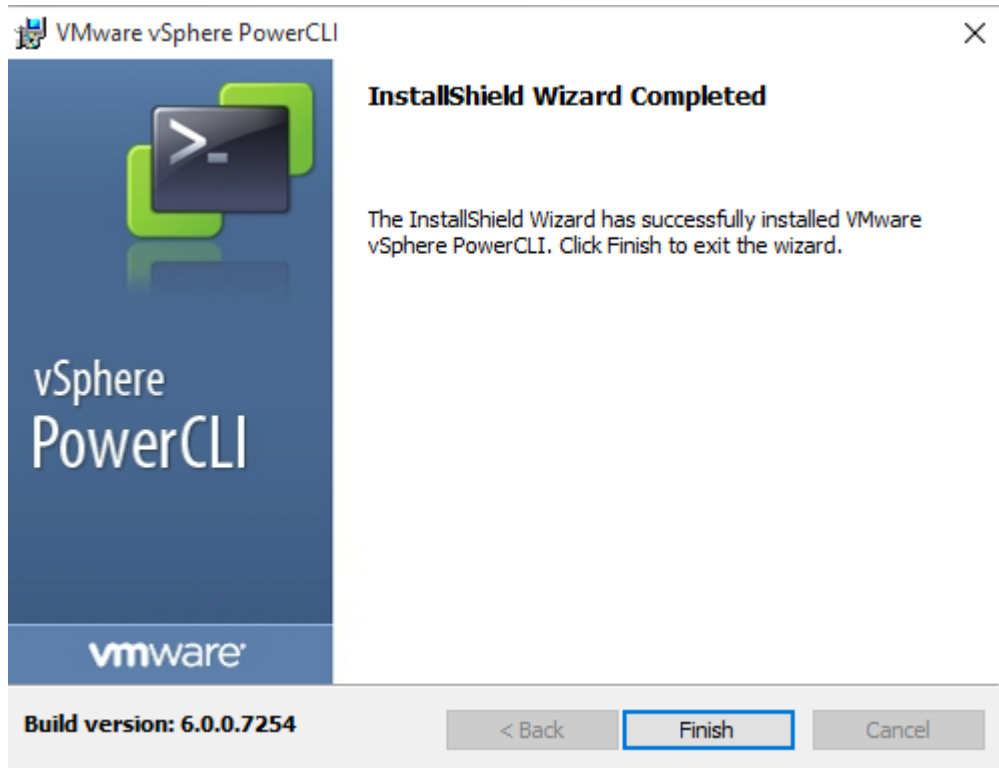
```
VMware vSphere PowerCLI 6.0 Release 1

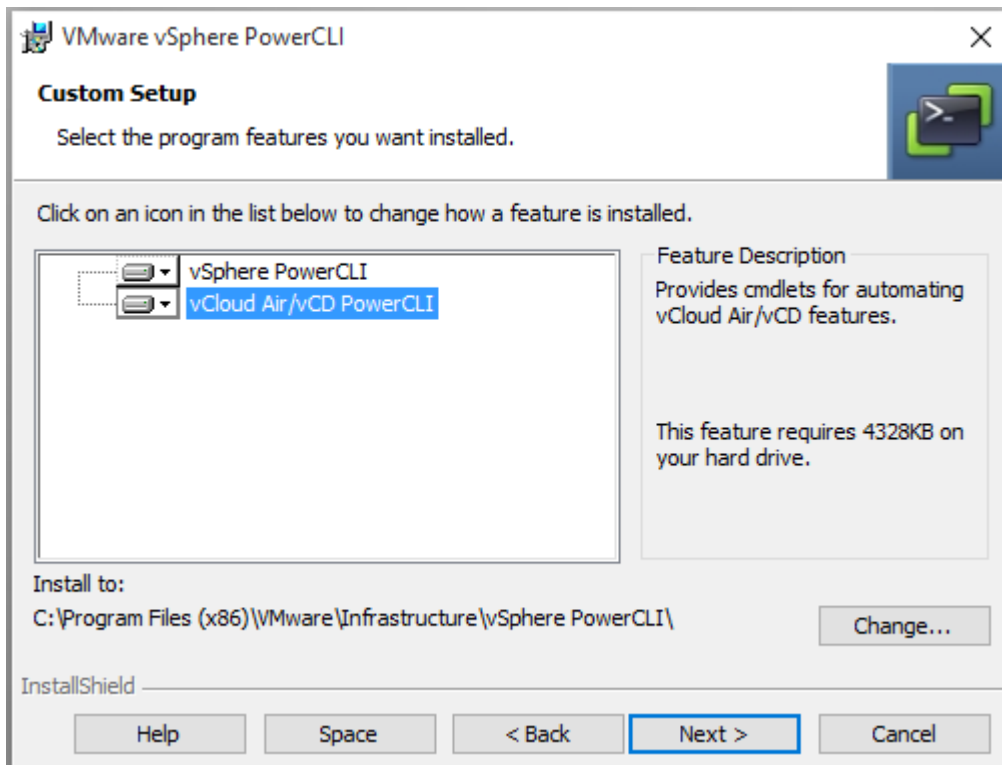
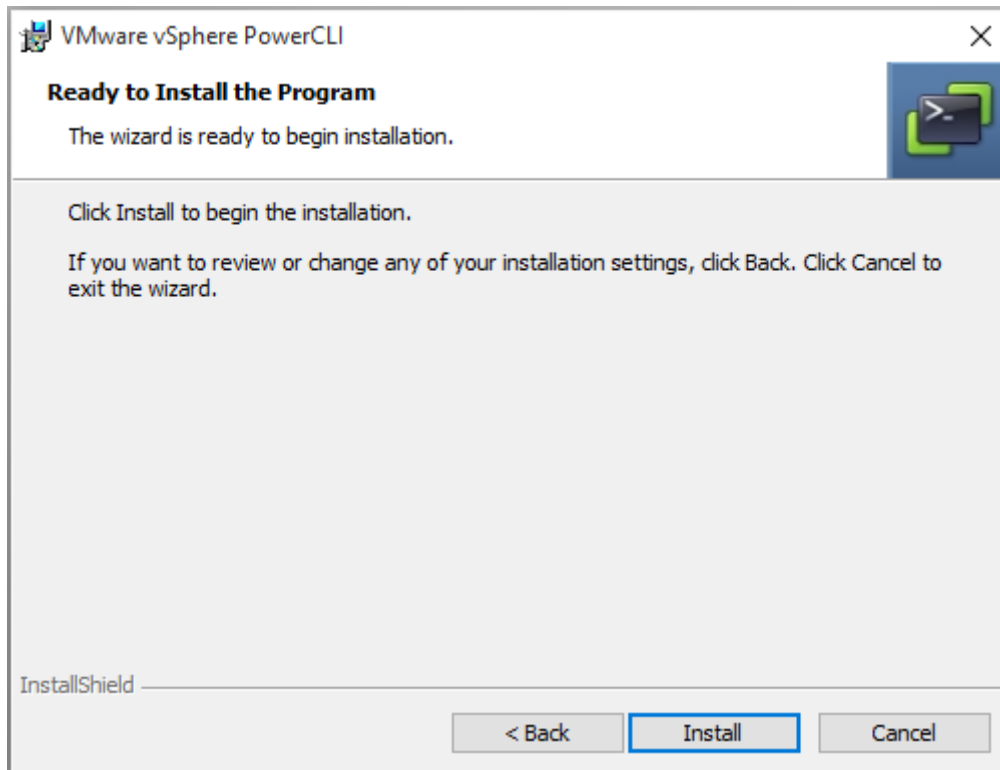
Welcome to VMware vSphere PowerCLI!

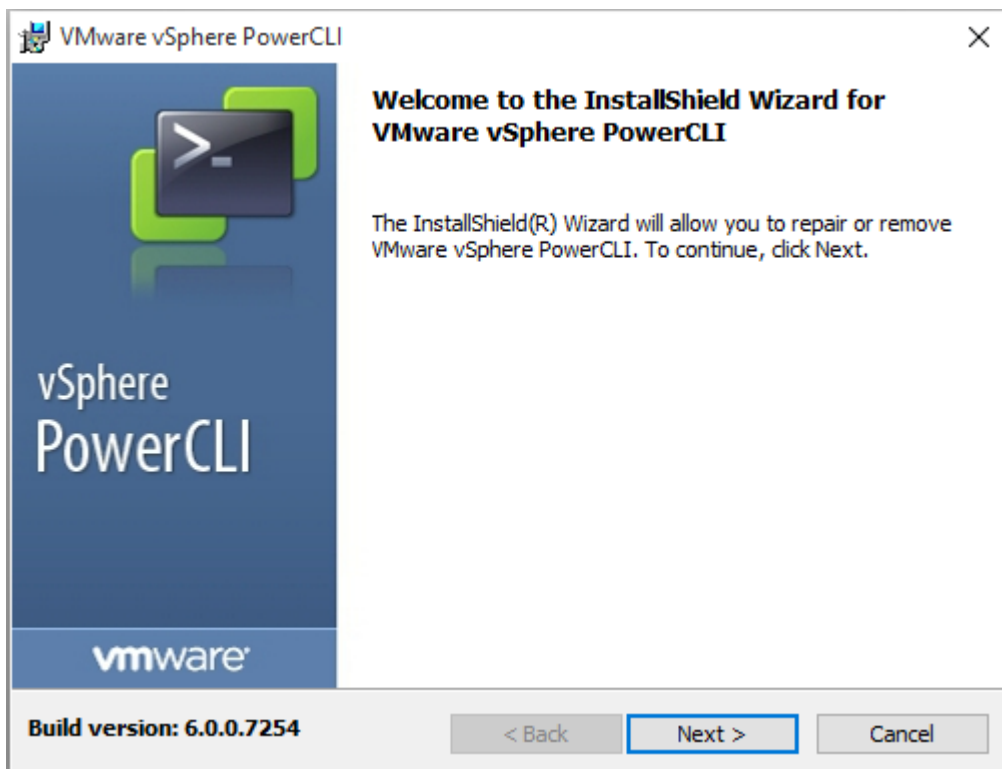
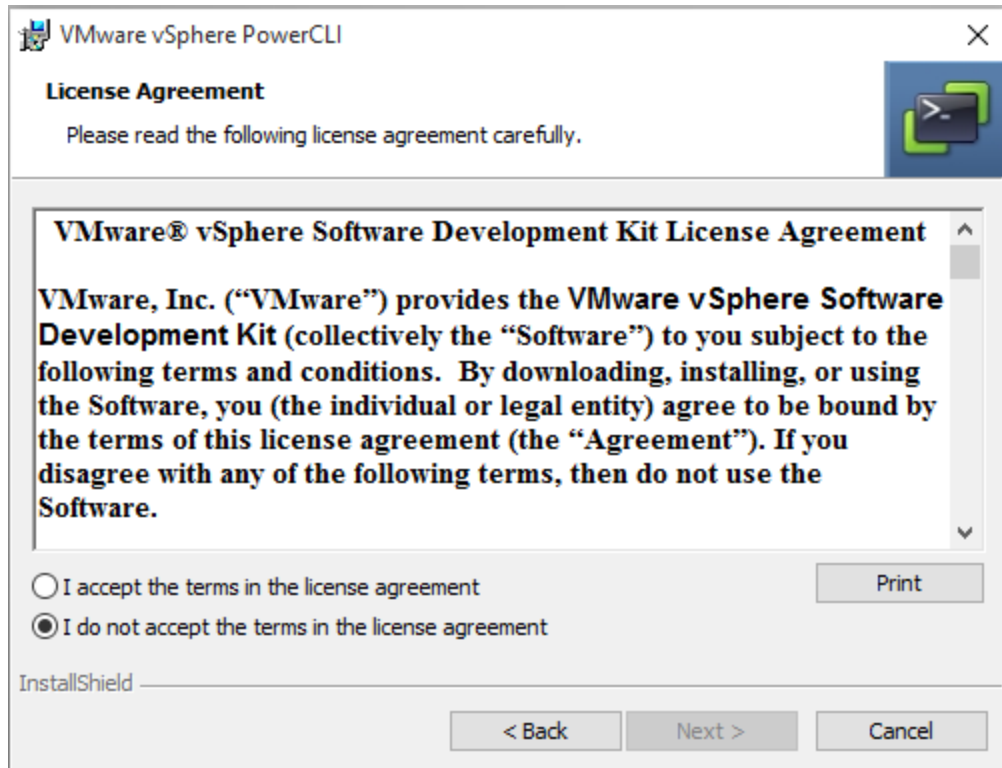
Log in to a vCenter Server or ESX host:          Connect-VIServer
To find out what commands are available, type:   Get-VICommand
To show searchable help for all PowerCLI commands: Get-PowerCLIHelp
Once you've connected, display all virtual machines: Get-VM
If you need more help, visit the PowerCLI community: Get-PowerCLICommunity

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PowerCLI C:\WINDOWS\system32>
```







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Download VMware vSphere PowerCLI 6.0 Release 1

Version	6.0.0
Description	VMware vSphere PowerCLI 6.0 Release 1
Release Date	2015-03-12
Type	Drivers & Tools

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VMware vSphere PowerCLI - installer

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