



FCoE over Enhanced vPC

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FCoE over Enhanced vPC

Objective

- Boot the UCS C server to the SAN via FCoE while maintaining SAN A and SAN B separation through the dual attached FEXes.

Task

- The GUI of the UCS C server can be accessed through the CIMC KVM via the links on the jumpbox desktop to "Z:\UCS C Servers". CIMC credentials are cisco/cisco.
- Configure LAN connectivity between your 5Ks and the UCS C server as follows:
 - Configure the 5Ks in vPC domain 5.
 - Use the mgmt0 port as the vPC Peer Keepalive link.
 - Configure the links between the 5Ks as Port-Channel 5, and use this as the vPC Peer Link.
 - Configure the links from both 5Ks to the first 2K as Port-Channel 101, FEX number 101, and vPC 101.
 - Configure the links from both 5Ks to the second 2K as Port-Channel 102, FEX number 102, and vPC 102.
 - Configure the links from the FEXes to the UCS C server as Port-Channel 10 with no dynamic negotiation.
 - Port-Channel 10 should be an 802.1Q trunk with untagged traffic in VLAN 10.
- Configure LAN connectivity between your 5Ks and their directly attached servers as follows:
 - Configure the links from your 5Ks to their first directly attached server as Port-Channel 1 and vPC 1.
 - Configure the links from your 5Ks to their second directly attached server as Port-Channel 2 and vPC 2.
 - Both of these Port-Channels should be STP edge ports and access ports in VLAN 20.
 - Configure both servers with an LACP NIC Team towards the 5Ks.
 - Use the IP addresses 20.0.0.1X/24 for the Team interface, where X is the server number, with a default gateway address of 20.0.0.254.
- Configure layer 3 connectivity between the servers as follows:
 - Configure interface VLAN 10 on both 5Ks with IP addresses 10.0.1.5X/24, where X is the device number.
 - Configure HSRPv2 group 10 on this link using a Virtual IP of 10.0.1.254.
 - Configure interface VLAN 20 on both 5Ks with IP addresses 20.0.0.5X/24, where X is the device number.
 - Configure HSRPv2 group 20 on this link using a Virtual IP of 20.0.0.254.
- Configure SAN connectivity between your first 5K and the UCS C server as follows:
 - Enable FCoE from your first 5K to FEX 101.
 - Create interface Virtual Fibre Channel 101 and bind it to FEX 101's link to the UCS C server.
 - Create VSAN 101 and map it to VLAN 101.
 - Assign VSAN 101 to the native Fibre Channel link connecting to the SAN Array and to vfc101.
- Configure SAN connectivity between your second 5K and the UCS C server as follows:
 - Enable FCoE from your second 5K to FEX 102.
 - Create interface Virtual Fibre Channel 102 and bind it to FEX 102's link to the UCS C server.
 - Create VSAN 102 and map it to VLAN 102.
 - Assign VSAN 102 to the native Fibre Channel link connecting to the SAN Array and to vfc102.
- Once complete the vfc interfaces should come up on both 5Ks, and you should be able to discover the pWWNs assigned to the C series server's vHBAs from the FLOGI databases of the 5Ks.
- Configure Zoning on your first and second 5Ks to allow only the UCS C server's pWWNs in VSANs 101 & 102 respectively to talk to the SAN Array.
- Power cycle the UCS C server from the KVM, and enter the boot selection menu by hitting F6. If properly configured, both SAN targets should appear. Choose either of the SAN targets, and if everything is correct, the server should boot VMWare ESXi from the SAN.
- Once VMware is fully loaded, you should be able to see the VMkernel management interface's IP address, and you should be able to ping this address from both your 5Ks and from your Windows Servers.

Note:

If the SAN targets are recognized, but ESXi fails to load (e.g. purple screen of death) it can be re-installed by attaching the image Z:\ISO\vmware-ESXi-6.0.0-2494585-Custom-Cisco-6.0.0.2 under the Virtual Media (VM) tab of the KVM and rebooting the server. **Note:** If you do reinstall ESXi, **make sure** that you install it to the SAN disk and not to the local disk, otherwise you will overwrite the Windows Server install on the local hard drive. Use only the credentials "root" with password "Cciadc01" during install.

- Optionally perform or verify the following tasks to test application level LAN reachability to the UCS C series server:
 - From the KVM of the C server, press F2 for **Customize System**, and login with credentials root/Cciadc01.
 - Under System Customization, select **Network Restore Options** and reset the networking settings to factory default. This will remove all previous vSwitch configurations on the server (e.g. Nexus 1000v).
 - Select **Configure Management Network**, then **Network Adapters**, and you should see two vmnics with Status as Connected; this is the server's VIC adapter connected to both FEXes. Use the space bar on both to toggle them as active adapters.
 - Next, select **IPv4 Configuration**, then statically assign the address 10.0.1.20X/24, where X is the server number (e.g. .201 for C200-1), and a gateway of 10.0.1.254. Once finished, hit ESC and then Y to apply & restart the management network.
 - Temporarily disable FEX 101's link to the UCS C server on both 5Ks until the next steps are performed to create a port channel from the ESXi side.
 - If successful, you should be able to ping the 10.0.1.20X IP address from the 5Ks and your Windows Server jumpboxes.
 - Open the vSphere Client on one of your Windows jumpboxes, then login to the C server using the IP address you assigned and the credentials root/Cciadc01.
 - From the vSphere Client GUI, select the **Configuration** tab, then **Networking**, and click **Properties** next to the Standard vSwitch0.
 - Under the **Ports** tab, select **vSwitch** then edit. Click the **NIC Teaming** tab, and set both adapters to be active. Use the following settings to create a static "on" port channel:
 - Load Balancing: Route based on IP hash
 - Network Failover Detection: Link status only
 - Notify Switches: Yes
 - Fallback: Yes
 - Back under the **Ports** tab, select **Management Network** then edit. Click the **NIC Teaming** tab, and set the same settings as the previous step:
 - Load Balancing: Route based on IP hash
 - Network Failover Detection: Link status only
 - Notify Switches: Yes
 - Fallback: Yes
 - Re-enable the link you shut down from the FEX to the C server.
 - At this point you should be able to ping the VMkernel management address from the 5Ks and your Windows Servers, and traffic should be load balanced over all southbound facing links from the 5Ks to the 2Ks, and from the 2Ks to the UCS C server.
- Optionally perform or verify the following tasks to test application level SAN reachability to the UCS C series server:
 - From the vSphere Client GUI, select the **Configuration** tab, then **Storage Adapters**, and select one of the Fibre Channel vmhbases. Right click the disk name under Details and select **Manage Paths**.
 - Under **Path Selection** choose **Round Robin (VMware)**, then **Change**. When complete, both of the paths to the target should say Active (I/O) under Status.
 - Next, choose **Storage** under the **Configuration** tab. Right click the datastore's name, and select **Browse Datastore**.
 - Under the Datastore Browser, click the **Upload files to this datastore** icon. Choose a large file or folder to upload, such as Z:\ISO.
 - While the file(s) are transferring to the datastore, shut down the link from FEX 101 to the UCS C server on both 5Ks.
 - If both paths to the SAN array are configured correctly end-to-end, the file transfer should continue via the server's other available link to FEX 102.
 - Re-enable the link from FEX 101 to the server, and disable the link from FEX 102 to the server. Likewise the file transfer should continue via the link to FEX 101.

NSK1:

```
feature fcoe
feature interface-vlan
feature hsrp
feature lacp
feature vpc
feature lldp
feature fex
!
fex 101
  fcoe
!
slot 1
  port 44-48 type fc
!
system qos
  service-policy type queuing input fcoe-default-in-policy
  service-policy type queuing output fcoe-default-out-policy
  service-policy type qos input fcoe-default-in-policy
  service-policy type network-qos fcoe-default-nq-policy
!
vlan 10,20
vlan 101
  fcoe vsan 101
!
vpc domain 5
  peer-keepalive destination 192.168.0.52
!
vsan database
  vsan 101
!
interface Vlan10
  no shutdown
  ip address 10.0.1.51/24
  hsrp version 2
  hsrp 10
  ip 10.0.1.254
!
interface Vlan20
  no shutdown
  ip address 20.0.0.51/24
  hsrp 20
  ip 20.0.0.254
!
interface port-channel1
  switchport access vlan 20
  spanning-tree port type edge
  speed 10000
  vpc 1
!
interface port-channel2
  switchport access vlan 20
  spanning-tree port type edge
  speed 10000
  vpc 2
!
interface port-channel5
  switchport mode trunk
  spanning-tree port type network
  speed 10000
  vpc peer-link
!
interface port-channel10
  switchport mode trunk
  switchport trunk native vlan 10
  speed 10000
!
interface port-channel101
  switchport mode fex-fabric
  fex associate 101
  vpc 101
!
interface port-channel102
  switchport mode fex-fabric
  fex associate 102
  vpc 102
!
interface vfc101
  bind interface Ethernet101/1/1
  no shutdown
!
vsan database
  vsan 101 interface vfc101
  vsan 101 interface fc1/48
!
interface fc1/48
  no shutdown
  switchport mode F
!
interface Ethernet1/1
  switchport access vlan 20
  channel-group 1 mode active
!
interface Ethernet1/2
  switchport access vlan 20
  channel-group 2 mode active
!
interface Ethernet1/3
  switchport mode trunk
  channel-group 5 mode active
```

```

!
interface Ethernet1/4
  switchport mode trunk
  channel-group 5 mode active
!
interface Ethernet1/21
  switchport mode fex-fabric
  fex associate 101
  channel-group 101
!
interface Ethernet1/22
  switchport mode fex-fabric
  fex associate 101
  channel-group 101
!
interface Ethernet1/23
  switchport mode fex-fabric
  fex associate 102
  channel-group 102
!
interface Ethernet1/24
  switchport mode fex-fabric
  fex associate 102
  channel-group 102
!
interface Ethernet101/1/1
  switchport mode trunk
  switchport access vlan 10
  switchport trunk native vlan 10
  channel-group 10
!
interface Ethernet102/1/1
  switchport mode trunk
  switchport access vlan 10
  switchport trunk native vlan 10
  channel-group 10
!
zone name UCS_C_TO_SAN_A vsan 101
  member pwwn 21:00:00:1b:32:07:32:23
  member pwwn 20:aa:00:25:b5:c2:00:10
!
zoneset name VSAN101 vsan 101
  member UCS_C_TO_SAN_A
!
zoneset activate name VSAN101 vsan 101

```

N5K2:

```

feature fcoe
feature interface-vlan
feature hsrp
feature lacp
feature vpc
feature lldp
feature fex
!
fex 102
  fcoe
!
slot 1
  port 44-48 type fc
!
system qos
  service-policy type queuing input fcoe-default-in-policy
  service-policy type queuing output fcoe-default-out-policy
  service-policy type qos input fcoe-default-in-policy
  service-policy type network-qos fcoe-default-nq-policy
!
vlan 10,20
vlan 102
  fcoe vsan 102
!
vpc domain 5
  peer-keepalive destination 192.168.0.51
!
vsan database
  vsan 102
!
interface Vlan10
  no shutdown
  ip address 10.0.1.52/24
  hsrp version 2
  hsrp 10
  ip 10.0.1.254
!
interface Vlan20
  no shutdown
  ip address 20.0.0.52/24
  hsrp 20
  ip 20.0.0.254
!
interface port-channel1
  switchport access vlan 20
  spanning-tree port type edge
  speed 10000
  vpc 1
!
interface port-channel2
  switchport access vlan 20
  spanning-tree port type edge
  speed 10000
  vpc 2
!

```

```

interface port-channel15
  switchport mode trunk
  spanning-tree port type network
  speed 10000
  vpc peer-link
!
interface port-channel10
  switchport mode trunk
  switchport trunk native vlan 10
  speed 10000
!
interface port-channel101
  switchport mode fex-fabric
  fex associate 101
  vpc 101
!
interface port-channel102
  switchport mode fex-fabric
  fex associate 102
  vpc 102
!
interface vfc102
  bind interface Ethernet102/1/1
  no shutdown
!
vsan database
  vsan 102 interface vfc102
  vsan 102 interface fc1/48
!
interface fc1/48
  no shutdown
  switchport mode F
!
interface Ethernet1/1
  switchport access vlan 20
  channel-group 1 mode active
!
interface Ethernet1/2
  switchport access vlan 20
  channel-group 2 mode active
!
interface Ethernet1/3
  switchport mode trunk
  channel-group 5 mode active
!
interface Ethernet1/4
  switchport mode trunk
  channel-group 5 mode active
!
interface Ethernet1/21
  switchport mode fex-fabric
  fex associate 101
  channel-group 101
!
interface Ethernet1/22
  switchport mode fex-fabric
  fex associate 101
  channel-group 101
!
interface Ethernet1/23
  switchport mode fex-fabric
  fex associate 102
  channel-group 102
!
interface Ethernet1/24
  switchport mode fex-fabric
  fex associate 102
  channel-group 102
!
interface Ethernet101/1/1
  switchport mode trunk
  switchport access vlan 10
  switchport trunk native vlan 10
  channel-group 10
!
interface Ethernet102/1/1
  switchport mode trunk
  switchport access vlan 10
  switchport trunk native vlan 10
  channel-group 10
!
zone name UCS_C_TO_SAN_B vsan 102
  member pwwn 21:00:00:1b:32:07:32:23
  member pwwn 20:aa:00:25:b5:c2:00:10
!
zoneset name VSAN102 vsan 102
  member UCS_C_TO_SAN_B
!
zoneset activate name VSAN102 vsan 102

```

Verification



Note:

For more information on the VMware ESXi configuration steps see the VMware Knowledge Base articles [Sample configuration of EtherChannel / Link Aggregation Control Protocol \(LACP\) with ESXi/ESX and Cisco/HP switches \(1004048\)](#) and [NIC teaming using EtherChannel leads to intermittent network connectivity in ESXi \(1022751\)](#).

N5K1# ping 10.0.1.201 PING 10.0.1.201 (10.0.1.201): 56 data bytes 64 bytes from 10.0.1.201: icmp_seq=0 ttl=63 time=0.723 ms 64 bytes from 10.0.1.201: icmp_seq=1 ttl=63 time=0.552 ms 64 bytes from 10.0.1.201: icmp_seq=2 ttl=63 time=1.495 ms 64 bytes from 10.0.1.201: icmp_seq=3 ttl=63 time=0.605 ms 64 bytes from 10.0.1.201: icmp_seq=4 ttl=63 time=0.552 ms

<https://t.me/learningnets>

```

--- 10.0.1.201 ping statistics --- 5 packets transmitted, 5 packets received, 0.00% packet loss round-trip min/avg/max = 0.552/0.785/1.495 ms
N5K1# show ip arp | in 10.0.1.201
10.0.1.201 00:10:05 d48c.b5bd.460c Vlan10 * N5K1# show mac address-table | in d48c.b5bd.460c
10 d48c.b5bd.460c dynamic 10 F F Po10

N5K2# ping 10.0.1.201 PING 10.0.1.201 (10.0.1.201): 56 data bytes 64 bytes from 10.0.1.201: icmp_seq=0 ttl=63 time=0.728 ms
64 bytes from 10.0.1.201: icmp_seq=1 ttl=63 time=0.593 ms
64 bytes from 10.0.1.201: icmp_seq=2 ttl=63 time=0.523 ms
64 bytes from 10.0.1.201: icmp_seq=3 ttl=63 time=0.542 ms
64 bytes from 10.0.1.201: icmp_seq=4 ttl=63 time=0.523 ms

--- 10.0.1.201 ping statistics --- 5 packets transmitted, 5 packets received, 0.00% packet loss round-trip min/avg/max = 0.523/0.581/0.728 ms
N5K2# show ip arp | in 10.0.1.201
10.0.1.201 00:10:43 d48c.b5bd.460c Vlan10

N5K2# show mac address-table | in d48c.b5bd.460c * 10 d48c.b5bd.460c dynamic 0 F F Po10

```

SAN traffic is load balanced between both Virtual Fibre Channel interfaces on the 5Ks:

```

N5K1# show interface vfc101 | in rate
 1 minute input rate 300754224 bits/sec, 37594278 bytes/sec, 18311 frames/sec
 1 minute output rate 2138064 bits/sec, 267258 bytes/sec, 854 frames/sec

N5K2# show int vfc 102 | in rate
 1 minute input rate 299131488 bits/sec, 37391436 bytes/sec, 18213 frames/sec
 1 minute output rate 2033096 bits/sec, 254137 bytes/sec, 844 frames/sec

```

A link failure is simulated between the C series server and an upstream FEX:

```

N5K1# conf t
Enter configuration commands, one per line. End with CNTL/Z.
N5K1(config)# int e101/1/1
N5K1(config-if)# shut
N5K1(config-if)# end
N5K1#

N5K2# conf t
Enter configuration commands, one per line. End with CNTL/Z.
N5K2(config)# int e101/1/1
N5K2(config-if)# shut
N5K2(config-if)# end
N5K2#

```

All traffic now fails over to FEX 102:

```

N5K1# show interface vfc101 | in rate
 1 minute input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
 1 minute output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec

N5K2# show int vfc 102 | in rate
 1 minute input rate 472567112 bits/sec, 59070889 bytes/sec, 28820 frames/sec
 1 minute output rate 4236120 bits/sec, 529515 bytes/sec, 1477 frames/sec

```

FEX 101's link is restored, and a failure is simulated on FEX 102:

```

N5K1# config t
Enter configuration commands, one per line. End with CNTL/Z.
N5K1(config)# int e101/1/1
N5K1(config-if)# no shut
N5K1(config-if)# int e102/1/1
N5K1(config-if)# shut
N5K1(config-if)# end
N5K1#

N5K2# config t
Enter configuration commands, one per line. End with CNTL/Z.
N5K2(config)# int e101/1/1
N5K2(config-if)# no shut
N5K2(config-if)# int e102/1/1
N5K2(config-if)# shut
N5K2(config-if)# end
N5K2#

```

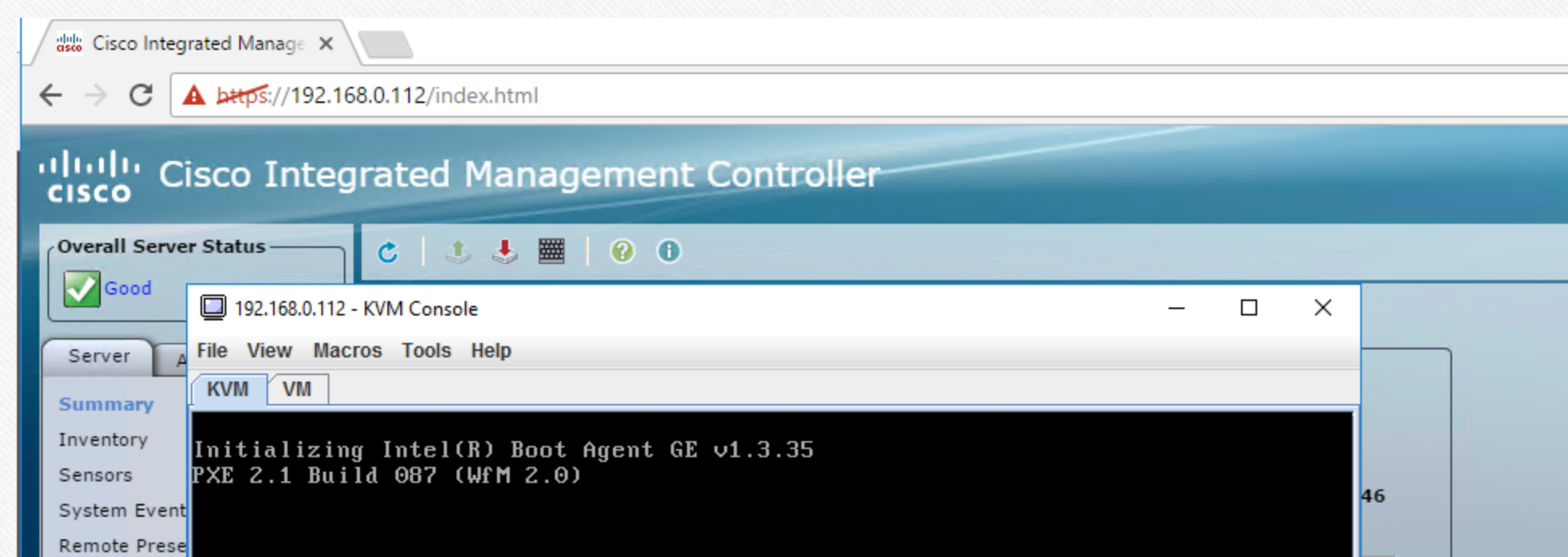
Traffic fails back over to FEX 101's link:

```

N5K1# show interface vfc101 | in rate
 1 minute input rate 423024792 bits/sec, 52878099 bytes/sec, 25848 frames/sec
 1 minute output rate 3974272 bits/sec, 496784 bytes/sec, 1419 frames/sec

N5K2# show int vfc 102 | in rate
 1 minute input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
 1 minute output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec

```



BIOS
Power Policies
Fault Summar

Initializing Intel(R) Boot Agent GE v1.3.35
PXE 2.1 Build 087 (WfM 2.0)

Cisco UIC FC, Boot Driver Version 2.2(3b)
(C) 2010 Cisco Systems, Inc.
SCST_BIO 2100001b32073223:000
Option ROM installed successfully

Cisco UIC FC, Boot Driver Version 2.2(3b)
(C) 2010 Cisco Systems, Inc.
SCST_BIO 2101001b32273223:000
Option ROM installed successfully

Current Time (UTC): Thu Jan 19 10:48:32 2017

Cisco Integrated Manage X

https://192.168.0.112/index.html

Cisco Integrated Management Controller

Overall Server Status

Good

Server

Summary

Inventory

Sensors

System Event

Remote Prese

BIOS

Power Policies

Fault Summar

192.168.0.112 - KVM Console

File View Macros Tools Help

KVM VM

Please select boot device:

SATA: HL-DT-ST DVD-RAM GT51N
Cisco Virtual CD/DVD 1.22
SATA: HGST HTS725050A7E630
SCST_BIO 2100001b32073223:000
SCST_BIO 2101001b32273223:000
Cisco Virtual FDD/HDD 1.22
Cisco Virtual Floppy 1.22
IBA GE Slot 1600 v1335
IBA GE Slot 1601 v1335
Internal EFI Shell
Enter Setup

↑ and ↓ to move selection
ENTER to select boot device
ESC to boot using defaults

Cisco Integrated Manage X

https://192.168.0.112/index.html

Cisco Integrated Management Controller

Overall Serve

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192.168.0.112 - KVM Console

File View Macros Tools Help

KVM VM

Loading VMware Hypervisor

Loading /tboot.b00
Loading /b.b00
Loading /jumpstrt.gz
Loading /useropts.gz
Loading /k.b00
Loading /chardevs.b00
Loading /a.b00
Loading /user.b00
Loading /uc_intel.b00
Loading /uc_and.b00
Loading /sb.v00
Loading /s.v00

Cisco Integrated Management Controller

192.168.0.112 - KVM Console

VMware ESXi 6.0.0 (VMKernel Release Build 2494585)
 Cisco Systems Inc UCSC-BSE-SFF-C200
 Intel(R) Xeon(R) CPU E5606 @ 2.13GHz
 8 GiB Memory

Authentication Required
 Enter an authorized login name and password for localhost..

Configured Keyboard (US Default)
 Login Name: [root]
 Password: [*****]

<Enter> OK <Esc> Cancel

<F2> Customize System/View Logs <F12> Shut Down/Restart

Cisco Integrated Management Controller

192.168.0.112 - KVM Console

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

VMware ESXi 6.0.0 (VMKernel Release Build 2494585)

Cisco Integrated Management Controller

192.168.0.112 - KVM Console

File View Macros Tools Help

KVM VM

Overall Server Good

Server A

Summary
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System Event
Remote Presence
BIOS
Power Policies
Fault Summary

Network Restore Options

Restore Network Settings

Restore Network Settings
Restore Standard Switch
Restore vDS

Restore Network Settings

Restoring the network settings will revert all network configuration and will automatically configure the network with defaults.

Restoring the network settings will stop all the running virtual machines on the host.

Restore Network Factory Settings

This option will reset the host network configuration to its default setting.

Are you sure you want to reset the host network configuration?

<F11> Yes, Reset <Esc> Cancel

<Up/Down> Select <Enter> Change <Esc> Exit

VMware ESXi 6.0.0 (VMKernel Release Build 2494585)

Cisco Integrated Management Controller

192.168.0.112 - KVM Console

File View Macros Tools Help

KVM VM

Overall Server Good

Server A

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Fault Summary

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

Configure Management Network

Hostname:
localhost

IPv4 Address:
169.254.92.128

IPv6 Addresses:
fe80::32f7:dff:fe08:814a/64

To view or modify this host's management network settings in detail, press <Enter>.

<Enter> More <Esc> Log Out

VMware ESXi 6.0.0 (VMKernel Release Build 2494585)

Cisco Integrated Management Controller

192.168.0.112 - KVM Console

File View Macros Tools Help

KVM VM

Overall Server Good

Server A

Summary
Inventory

Configure Management Network

Network Adapters

Network Adapters

vnic0 (30:f7:0d:08:81:4a)

Sensors VLAN (optional)

System Event IPv4 Configuration

Remote Presence IPv6 Configuration

BIOS DNS Configuration

Power Policies Custom DNS Suffixes

Fault Summary

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.

Network Adapters

Select the adapters for this host's default management network connection. Use two or more adapters for fault-tolerance and load-balancing.

Device Name	Hardware Label (MAC Address)	Status
<input type="checkbox"/> vmnic0	N/A (30:f7:0d:08:81:4a)	Disconnected (...)
<input type="checkbox"/> vmnic1	N/A (30:f7:0d:08:81:4b)	Disconnected
<input checked="" type="checkbox"/> vmnic2	Chassis slo... (...bd:46:0c)	Connected
<input checked="" type="checkbox"/> vmnic3	Chassis slo... (...bd:46:0d)	Connected

<D> View Details <Space> Toggle Selected <Enter> OK <Esc> Cancel

<Up/Down> Select <Enter> Change <Esc> Exit

VMware ESXi 6.0.0 (VMKernel Release Build 2494585)

Cisco Integrated Management Controller

192.168.0.112 - KVM Console

File View Macros Tools Help

KVM VM

Configure Management Network	IPv4 Configuration
Network Adapters VLAN (optional)	Automatic
IPv4 Configuration	IPv4 Address: 169.254.92.128
IPv6 Configuration	Subnet Mask: 255.255.0.0
DNS Configuration	Default Gateway: Not set
Custom DNS Suffixes	This host can obtain an IPv4 address and other networking parameters automatically if your network includes a DHCP server. If not, ask your network administrator for the appropriate settings.

IPv4 Configuration

This host can obtain network settings automatically if your network includes a DHCP server. If it does not, the following settings must be specified:

- Disable IPv4 configuration for management network
- Use dynamic IPv4 address and network configuration
- Set static IPv4 address and network configuration:

IPv4 Address	[10.0.1.201]
Subnet Mask	[255.255.255.0]
Default Gateway	[10.0.1.254]

<Up/Down> Select <Space> Mark Selected <Enter> OK <Esc> Cancel

<Up/Down> Select <Enter> Change <Esc> Exit

VMware ESXi 6.0.0 (VMKernel Release Build 2494585)

Cisco Integrated Management Controller

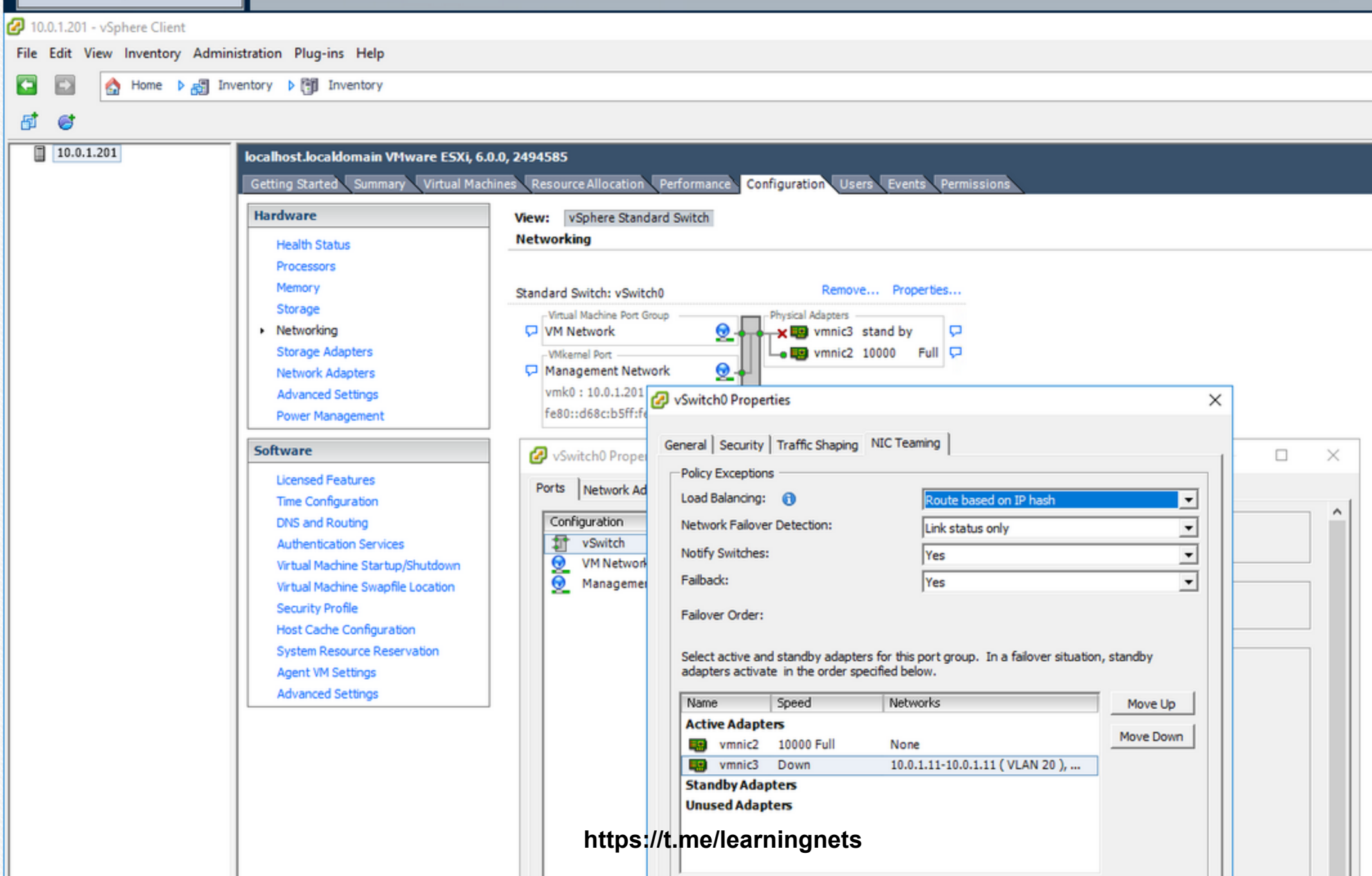
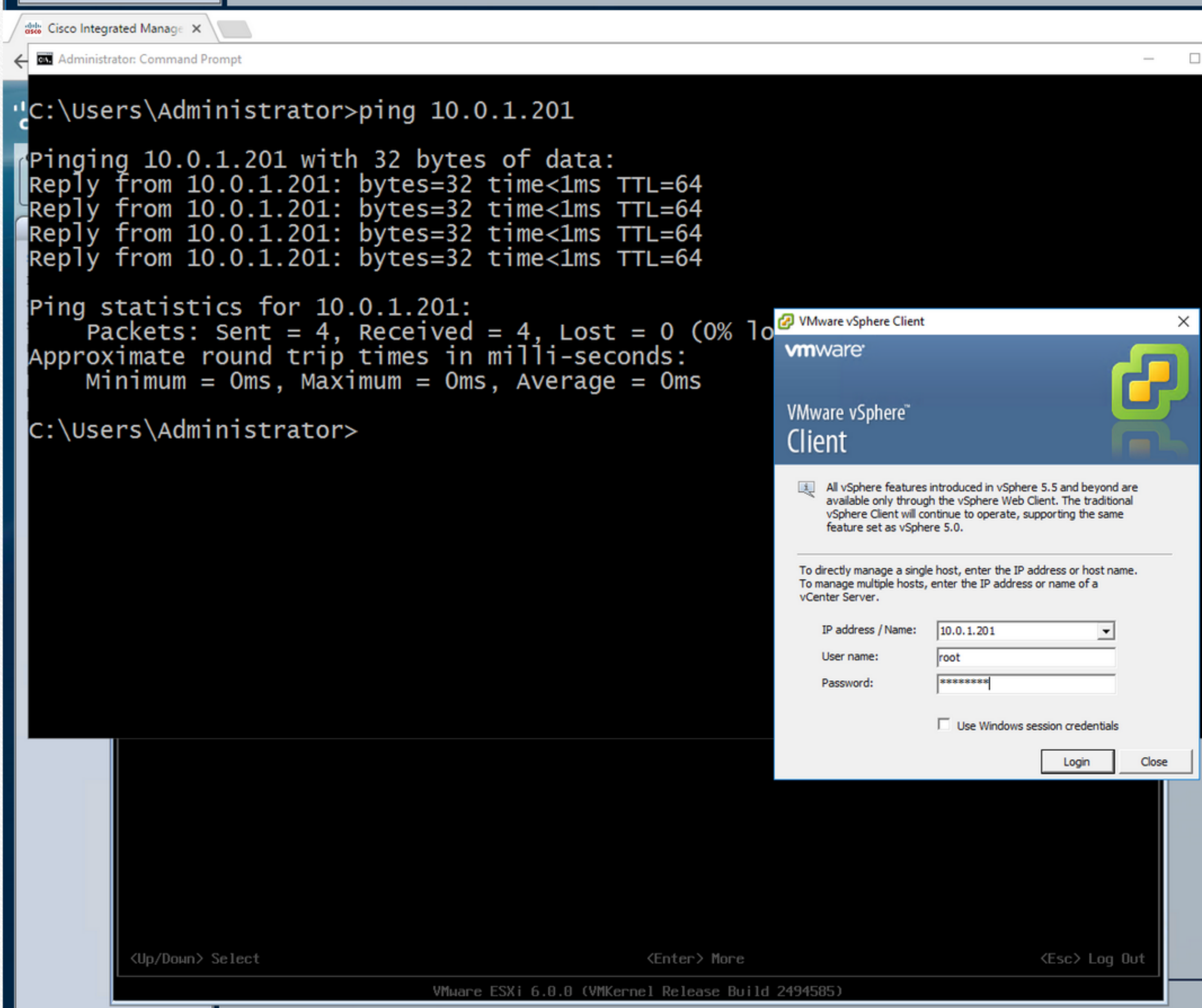
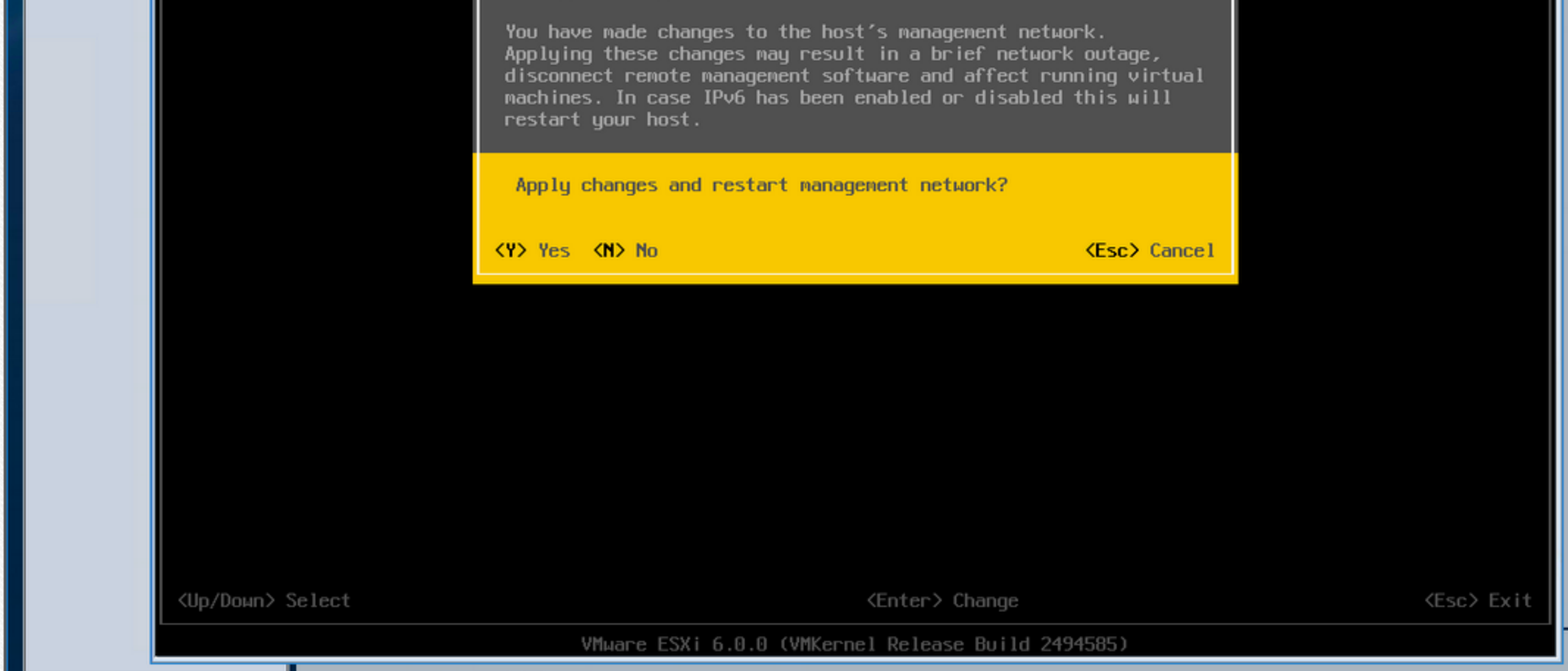
192.168.0.112 - KVM Console

File View Macros Tools Help

KVM VM

Configure Management Network	IPv4 Configuration
Network Adapters VLAN (optional)	Manual
IPv4 Configuration	IPv4 Address: 10.0.1.201
IPv6 Configuration	Subnet Mask: 255.255.255.0
DNS Configuration	Default Gateway: 10.0.1.254
Custom DNS Suffixes	This host can obtain an IPv4 address and other networking parameters automatically if your network includes a DHCP server. If not, ask your network administrator for the appropriate settings.

Configure Management Network: Confirm



Adapter Details
 Cisco Systems Inc Cisco VIC Ethernet NIC
 Name: vmnic3
 Location: PCI 0000:0c:00.0
 Driver: enic

Add...

Close

Recent Tasks

Name	Target	Status	Details	Initiated by	Req.

10.0.1.201 - vSphere Client

File Edit View Inventory Administration Plug-ins Help

Home Inventory Inventory

10.0.1.201

localhost.localdomain VMware ESXi, 6.0.0, 2494585

Getting Started Summary Virtual Machines Resource Allocation Performance Configuration Users Events Permissions

Hardware

- Health Status
- Processors
- Memory
- Storage
- Networking
- Storage Adapters
- Network Adapters
- Advanced Settings
- Power Management

View: vSphere Standard Switch
Networking

vSwitch0 Properties

Ports Network Adapters

Configuration	Summary
vSwitch	120 Ports
VM Network	Virtual Machine ...
Management Net...	vMotion and IP ...

Port Properties

Network Label:	Management Network
VLAN ID:	None (0)
vMotion:	Disabled
Fault Tolerance Logging:	Disabled
Management Traffic:	Enabled
iSCSI Port Binding:	Disabled

NIC Settings

MAC Address:	d4:8c:b5:bd:46:0c
MTU:	1500

IP Settings

IP Address:	10.0.1.201
Subnet Mask:	255.255.255.0

IPv6 Settings

IPv6 Addresses:	fe80::d68c:b5ff:febd:460c/64
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Effective Policies

Security

Management Network Properties

General IP Settings Security Traffic Shaping NIC Teaming

Policy Exceptions

Load Balancing:	<input checked="" type="checkbox"/>	Route based on IP hash
Network Failover Detection:	<input checked="" type="checkbox"/>	Link status only
Notify Switches:	<input checked="" type="checkbox"/>	Yes
Failback:	<input checked="" type="checkbox"/>	Yes

Failover Order

Override switch failover order:
Select active and standby adapters for this port group. In a failover situation, standby adapters activate in the order specified below.

Name	Speed	Networks
Active Adapters		
vmnic2	10000 Full	0.0.0.1-31.255.255.254
vmnic3	Down	None
Standby Adapters		
Unused Adapters		

Adapter Details

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Software

- Licensed Features
- Time Configuration
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- Virtual Machine Startup/Shutdown
- Virtual Machine Swapfile Location
- Security Profile
- Host Cache Configuration
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- Agent VM Settings
- Advanced Settings

Storage Adapters

Device	Type	WWN
ICH10 2 port SATA IDE Controller		
vmhba1	Block SCSI	
vmhba34	Block SCSI	
ICH10 4 port SATA IDE Controller		
vmhba0	Block SCSI	
vmhba33	Block SCSI	
USB Storage Controller		
vmhba32	Block SCSI	
Cisco VIC FCoE HBA		
vmhba2	Fibre Channel	10:00:00:00:c8:aa:00:0120:aa:00:25:b5:c2:00:10
vmhba3	Fibre Channel	10:00:00:00:c8:bb:00:0120:bb:00:25:b5:c2:00:10

Details

vmhba2

Model:	Cisco VIC FCoE HBA
WWN:	10:00:00:00:c8:aa:00:0120:aa:00:25:b5:c2:00:10
Targets:	1 Devices: 1 Paths: 1

View: Devices Paths

Name	Runtime Name	Operational State	LUN	Type	Drive Type	Transport	Capacity	Owner	Hardware Acceleration
SCST_BIO Fibre Channel Disk (eui...	vmhba2:C0:T0:L0	Mounted	0	disk	Non-SSD	Fibre Channel	50.00 GB	NMP	Supported

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vmhba1	Block SCSI	
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ICH10 4 port SATA IDE Co		
vmhba0	Block SCSI	
vmhba33	Block SCSI	
USB Storage Controller		
vmhba32	Block SCSI	
Cisco VIC FCoE HBA		
vmhba2	Fibre Channel	
vmhba3	Fibre Channel	

Details

vmhba2

Model:	Cisco VIC FCoE HBA
WWN:	10:00:00:00:c8:aa:00:0120:aa:00:25:b5:c2:00:10
Targets:	1 Devices: 1 Paths: 1

View: Devices Paths

Name	Runtime Name	Operational State	LUN	Type	Drive Type	Transport	Capacity	Owner	Hardware Acceleration
SCST_BIO Fibre Channel Disk (eui...	vmhba2:C0:T0:L0	Mounted	0	disk	Non-SSD	Fibre Channel	50.00 GB	NMP	Supported

SCST_BIO Fibre Channel Disk (eui:3437366266633231) Manage Paths

Policy	Path Selection: Round Robin (VMware)	Storage Array Type: VMW_SATP_DEFAULT_AA
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Runtime Name	Target	LUN	Status	Preferred
vmhba3:C0:T0:L0	20:01:00:1b:32:27:32:23 21:01:00:1b:32:27:32:23	0	Active (I/O)	
vmhba2:C0:T0:L0	20:00:00:1b:32:07:32:23 21:00:00:1b:32:07:32:23	0	Active (I/O)	

Fibre Channel

View: Devices Paths

Adapter: 10:00:00:00:c8:bb:00:01 20:bb:00:25:b5:c2:00:10
 Target: 20:01:00:1b:32:27:32:23 21:01:00:1b:32:27:32:23

Name: SCST_BIO Fibre Channel 0

Close

Hardware Acceleration
Supported

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View: Datasets Devices

Datasets

Identification	Device	Drive Type	Capacity	Free	Type	Last Update	Hardware Acceleration
datastore1 (1)	SCST_BIO Fibre ...	Non-SSD	42.50 GB	41.37 GB	VMFS5	1/19/2017 8:35:03 AM	Supported

Dataset Details

datastore1 (1)
 Location: /vmfs/volumes/5856e918-c34e7ac1-04d3-d48cb5bd460c
 Hardware Acceleration: Supported

42.50 GB Capacity
 1.13 GB Used
 41.37 GB Free

Path Selection
 Round Robin (VM...)

Properties
 Volume Label: datastore1 (...)
 Dataset Name: datastore1 (...)

Extents
 SCST_BIO Fibre Channel DI... 42.62 GB
 Total Formatted Capacity 42.50 GB

Paths
 Total: 2
 Broken: 0
 Disabled: 0

Formatting
 File System: VMFS 5.61
 Block Size: 1 MB

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Datasets

Identification	Device	Drive Type	Capacity	Free	Type	Last Update	Hardware Acceleration
datastore1 (1)	SCST_BIO Fibre ...	Non-SSD	42.50 GB	41.37 GB	VMFS5	1/19/2017 8:35:03 AM	Supported

Dataset Details

datastore1 (1)
 Location: Hardware A

Path Selection
 Round Robin (VM...)

Properties
 Volume Label: datastore1 (...)
 Dataset Name: datastore1 (...)

Extents
 SCST_BIO Fibre Channel DI... 42.62 GB
 Total Formatted Capacity 42.50 GB

Paths
 Total: 2
 Broken: 0
 Disabled: 0

Formatting
 File System: VMFS 5.61
 Block Size: 1 MB

Dataset Browser - [datastore1 (1)]

Upload files to this dataset [datastore1 (1)] /

Name	Size	Type	Path
n1kv		Folder	[datastore1 (1)]n1kv
.sddf		Folder	[datastore1 (1)].sddf
vmkdump		Folder	[datastore1 (1)]vmkdump
.eui.3437366266633231		Folder	[datastore1 (1)].eui.3437366266633231

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View: Datasets Devices

Datasets

Identification	Device	Drive Type	Capacity	Free	Type	Last Update	Hardware Acceleration
datastore1 (1)	SCST_BIO Fibre ...	Non-SSD	42.50 GB	41.37 GB	VMFS5	1/19/2017 8:39:48 AM	Supported

Dataset Details

datastore1 (1)
 Location: Hardware A

Path Selection
 Round Robin (VM...)

Properties
 Volume Label: datastore1 (...)
 Dataset Name: datastore1 (...)

Extents
 SCST_BIO Fibre Channel DI... 42.62 GB
 Total Formatted Capacity 42.50 GB

Paths
 Total: 2
 Broken: 0
 Disabled: 0

Formatting
 File System: VMFS 5.61
 Block Size: 1 MB

Dataset Browser - [datastore1 (1)]

Upload files to this dataset [datastore1 (1)] /

Name	Size	Type	Path
ISO		Folder	[datastore1 (1)]ISO
n1kv		Folder	[datastore1 (1)]n1kv
.sddf		Folder	[datastore1 (1)].sddf
vmkdump		Folder	[datastore1 (1)]vmkdump
.eui.3437366266633231		Folder	[datastore1 (1)].eui.3437366266633231

Uploading...

Z:\ISO\VMware-VIMSetup-all-5.1.0-799735.iso

From Z:\ISO\VMware-VIMSetup-all-5.1.0-799735.iso to [datastore1 (1)]
 ISO\VMware-VIMSetup-all-5.1.0-799735.iso

6 minute(s) and 47 second(s) remaining

Cancel



Path

Datastore Name: datastore1 (-) Total Formatted Capacity 42.50 GB

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