# **UCS SAN Troubleshooting**



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This document provides useful troubleshooting tips for Unified Computing System (UCS) SAN.

## Prerequisites

## Requirements

Cisco recommends that you have knowledge of UCS SAN.

## **Components Used**

This document is not restricted to specific software and hardware versions.

### Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

## **Troubleshooting Tips**

### Check vHBA has FLOGI into the SAN fabric.

1. Logon to UCS CLI and connect to NXOS.

# connect nxos a|b
(nxos)# show npv flogi-table

JCS-250-1# connect nxos							
Cisco Nexus Operating System (NX-OS) Software							
TAC support: http://www.cisco.com/tac							
Copyright	Copyright (c) 2002-2011, Cisco Systems, Inc. All rights reserved.						
The copyri	The copyrights to certain works contained in this software are						
owned by other third parties and used and distributed under							
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the GNU Ge	eneral	l Public I	icense (GPL) version 2.0	) or the GNU			
Lesser Ger	neral	Public Li	icense (LGPL) Version 2.1	. A copy of each			
such licer	nse is	s availabl	le at				
http://www	.ope:	nsource.or	g/licenses/gp1-2.0.php a	and			
http://www	.oper	nsource.or	g/licenses/lgpl-2.1.php				
UCS-250-A	(nxos)	# show ng	ov flogi-table				
SERVER					EXTERNAL		
SERVER INTERFACE	vsan	FCID	PORT NAME	NODE NAME	EXTERNAL INTERFACE		
SERVER INTERFACE	VSAN	FCID	PORT NAME	NODE NAME	EXTERNAL INTERFACE		
SERVER INTERFACE vic3299 vfc3454	VSAN 1000	FCID 0x5e00ec	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:e0:25:2e	EXTERNAL INTERFACE fc2/1 fc2/1		
SERVER INTERFACE  vfc3299 vfc3454 vfc3468	VSAN 1000 1000	FCID 0x5e00ec 0x5e0105 0x5e00d8	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1		
SERVER INTERFACE vfc3299 vfc3454 vfc3454 vfc3468 vfc3468	VSAN 1000 1000 1000	FCID 0x5e00ec 0x5e0105 0x5e00d8 0x5e00d2	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:b0:05:3f	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f 20:00:00:25:b5:a0:05:1f	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1 fc2/1 fc2/1		
SERVER INTERFACE 	VSAN 1000 1000 1000 1000	FCID 0x5e00ec 0x5e0105 0x5e00d8 0x5e00d2 0x5e0103	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:b0:05:3f 20:00:00:25:b5:b0:025:3f	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f 20:00:00:25:b5:a0:05:0f 20:00:00:25:b5:a0:25:1e	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1		
SERVER INTERFACE vfc3299 vfc3454 vfc3454 vfc3474 vfc3506 vfc3528	VSAN 1000 1000 1000 1000 1000 1000	FCID 0x5e00ec 0x5e0105 0x5e00d8 0x5e00d2 0x5e0103 0x5e010a	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:b0:05:3f 20:00:00:25:b5:b0:25:3f 20:00:00:25:b5:00:05:1a	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f 20:00:00:25:b5:a0:05:0f 20:00:00:25:b5:a0:25:1e 20:00:00:25:b5:a0:25:1e	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1		
SERVER INTERFACE 	VSAN 1000 1000 1000 1000 1000 1000	FCID 0x5e00ec 0x5e0105 0x5e00d8 0x5e00d2 0x5e0103 0x5e010a 0x5e010a	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:b0:25:3f 20:00:00:25:b5:b0:25:3f 20:00:00:25:b5:00:05:1a 20:00:00:25:b5:b0:30:02	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f 20:00:00:25:b5:a0:05:0f 20:00:00:25:b5:a0:25:1e 20:00:00:25:b5:a0:25:1e 20:00:00:25:b5:a0:05:01 50:01:23:45:44:55:66:bf	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1		
SERVER INTERFACE 	VSAN 1000 1000 1000 1000 1000 1000 1000	FCID 0x5e00ec 0x5e0105 0x5e00d8 0x5e00d2 0x5e0103 0x5e010a 0x5e00eb 0x5e00ca	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:b0:25:3f 20:00:00:25:b5:b0:25:3f 20:00:00:25:b5:00:05:1a 20:00:00:25:b5:b9:30:02 20:00:00:25:b5:b9:30:02 20:00:00:25:b5:b9:30:02	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f 20:00:00:25:b5:a0:05:0f 20:00:00:25:b5:a0:25:1e 20:00:00:25:b5:a0:05:01 50:01:23:45:44:55:66:bf 20:00:00:25:b5:a0:05:06	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1		
SERVER INTERFACE 	VSAN 1000 1000 1000 1000 1000 1000 1000 10	FCID 0x5e00ec 0x5e0105 0x5e00d8 0x5e0103 0x5e0103 0x5e010a 0x5e00eb 0x5e00c4 0x5e00f4	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:b0:05:3f 20:00:00:25:b5:b0:05:1a 20:00:00:25:b5:b0:05:1a 20:00:00:25:b5:b0:05:00 20:00:00:25:b5:b0:05:00 20:00:00:25:b5:b0:05:00	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f 20:00:00:25:b5:a0:05:0f 20:00:00:25:b5:a0:25:1e 20:00:00:25:b5:a0:05:01 50:01:23:45:44:55:66:bf 20:00:00:25:b5:a0:05:06 20:00:00:25:b5:a0:05:06	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1		
SERVER INTERFACE 	VSAN 1000 1000 1000 1000 1000 1000 1000 10	FCID 0x5e00ec 0x5e0105 0x5e00d8 0x5e00d2 0x5e0103 0x5e010a 0x5e00cb 0x5e00ca 0x5e00f4	PORT NAME 20:bb:0a:03:00:00:00:1d 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:b0:05:3f 20:00:00:25:b5:b0:25:3f 20:00:00:25:b5:b0:05:1a 20:00:00:25:b5:b0:05:00 20:00:00:25:b5:b0:05:00 20:00:00:25:b5:b0:05:00	NODE NAME 50:01:23:45:44:55:66:cf 20:00:00:25:b5:a0:25:2e 20:00:00:25:b5:a0:05:1f 20:00:00:25:b5:a0:05:0f 20:00:00:25:b5:a0:25:1e 20:00:00:25:b5:a0:05:01 50:01:23:45:44:55:66:bf 20:00:00:25:b5:a0:05:06 20:00:00:25:b5:a0:36:0f	EXTERNAL INTERFACE fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1 fc2/1		

Make sure the FCID of the WWPN is assigned, and VSAN is correct. 2. Alternatively, from the Cisco MDS switch, check that the WWPN has FLOGI.

SV-35-06-MDS9222i# show flogi database SV-35-06-MDS9222i# show fcns database

SV-35-06-MDS9222i# show zoneset active vsan 1000

Check the zoning on the MDS switch to make sure that the vHBA(WWPN) and the Storage target are online and in the same zone.

SV-35-06-MDS9222i# show zoneset active vsan 1000 | begin matao zone name matao vsan 1000 pwwn 20:00:00:25:b5:b3:05:0f \* fcid 0x5e00ef [pwwn 50:06:01:62:44:60:44:fa] [SPA2] <u>SAN</u> \* fcid 0x5e01ef [pwwn 50:06:01:6a:44:60:44:fa] [SPB2] target \* fcid 0x5e00d2 [pwwn 20:00:00:25:b5:b0:05:3f] \* fcid 0x5e00d8 [pwwn 20:00:00:25:b5:b0:05:1f] wwpn online pwwn 20:00:00:25:b5:b5:05:0f wwpn not online pwwn 20:00:00:25:b5:b5:05:2f

#### Check if the vHBA can see the target during the SAN Boot.

On the UCS Manager, if the blade can boot from SAN, then the UCS Manager Actual Boot Order should be able to see the WWPN of all the targets.

Boot Order Details	8
Configured Boot Order Actual Boot Order	
There may be a delay of a few minutes before the actual boot order is updated.	
Last Update: 2012-12-01T00:22:50	
🛨 🖃 🖨 Export 📚 Print	
Name	
₽-@ CD/DVD	
E HDD	
	=
(4) Elx 01 5006016A44 5044FA,00 04 0	
UCS should see the target WWPN	+
III	•

When booting up the blade, press F2 to enter BIOS and navigate to the Boot Manager. BIOS should be able to see the LUN to boot.

LUCS-250 / Chassis 1 - Server 5 - KVM Console	
File View Macros Tools Help	
📣 Boot Server, 🔩 Shutdown Server 🤐 Reset	
KVM Console Server	
KVM Virtual Media	
Aptio Setup Utility - Copyright (C) 2009 American Main Advanced Security Server Management Boot Options Rom	Megatrends, Inc. t Manager
*Available CD order DGC 50060162446044fa:0000 Internal EFI Shell WWPN and the LUN to boot	Select this option to boot now. Note: This list is not the system boot option order. Use the Boot Options menu to view and configure the system boot option order. ++ Select Screen T4 Select Item
	+/- Change Value Enter Select Field F1 General Help F9 BIOS Defaults F10 Save and Exit ESC Exit
Version 1.23.1114. Copyright (C) 2009 American M	egatrends, Inc.

For the PALO adapter, at this stage (when OS has not started yet), you can also connect to the adapter to check whether the vHBA has FLOGI and PLOGI.



After the OS has boot up, the output is different. This is expected.



For an M71KR–E adapter, when booting the server, press control + E to enter the Emulex HBA configuration utility. Then, choose the vHBA and list the booting device. The vHBA should be able to see the target.

Adapter	01: S_ID:	6E00AC PCI Bus, Device, Function (04,00,01)	)
List of	Saved Boot	Devices:	
1. Used 2. Used 3. Unused 4. Unused 5. Unused 6. Unused 7. Unused 8. Unused	DID:000000 DID:000000 DID:000000 DID:000000 DID:000000 DID:000000 DID:000000 DID:000000 DID:000000	WWPN:50060160 446044FA LUN:00 Primary Boot WWPN:50060.58 446044FA LUN:00 WWPN:00000000 00000000 LUN:00 WWPN:00000000 000000000 LUN:00 WWPN:00000000000000000000000000000000000	
		LUN ID	
Select a	a Boot Entry	y:	
Enter <x> to</x>	D Exit	<esc> to Previous Menu</esc>	

Check if the vHBA has the right LUN ID to boot from SAN.

The Boot Policy associated with the service profile has the booting configuration. Make sure that the WWPN of the target is correct and the LUN ID also matches the LUN defined in the storage.

Boot Order						
🛨 🖃 🕰 Filter 👄 Export 🗞	Print					
Name	Order	VNIC/VHBA/ISCSI VNIC	Туре	Lun ID	WOWN	<b>1</b>
@ CD-ROM	1					*
😑 📃 Storage	2					
🖨 🚍 SAN primary		fc1	Primary			
SAN Target primary			Primary	0	50:06:01:60:44:60:44:FA	
🖹 🚍 SAN secondary		fc0	Secondary	<b>X</b>		
SAN Target primary			Primary	0	50:06:01:62:44:60:44:FA	
Booting LUN ID should match the Host ID from the storage controller						
Greate ISCST vNIC Set ISCST Boot Parameters						
				0	K Apply Cancel	Help

Next is an example in for EMC storage. In the storage group, the LUN 1301 is mapped to the host with ID 0, which must match the ID defined in the boot policy.

Seneral LUNs	GE - matao_stroag Hosts Not in other Store	e_grp1: Storage Group Pr age Groups ♥	roperties		
- Available LUN	s				
Name 🛆	ID	Сара	city	Drive Type	
₽- MASPA ₽- MASPA ₽- MASPB					
- Selected LUN:	5			νū	d
Selected LUN:	ID	Capacity	Drive Type	Host ID	d
Selected LUN: Name LUN 1301	ID 1301	Capacity 10.000 GB	Drive Type FC	Host ID	d
Selected LUN Name LUN 1301 LUN 1302	ID 1301 1302	Capacity 10.000 GB 40.000 GB	Drive Type FC FC	Host ID	[d
Selected LUN Name LUN 1301 LUN 1302 LUN 1305	ID 1301 1302 1305	Capacity 10.000 GB 40.000 GB 50.000 GB	Drive Type FC FC FC	Host ID 0 1 3	d
Selected LUN: Name LUN 1301 LUN 1302 LUN 1305	ID 1301 1302 1305 make su	Capacity 10.000 GB 40.000 GB 50.000 GB re the LUN is mapped	Drive Type FC FC FC to the host w	Host ID 1 3 ith the	d
Selected LUN Name LUN 1301 LUN 1302 LUN 1305	ID 1301 1302 1305 make su right Ho	Capacity 10.000 GB 40.000 GB 50.000 GB re the LUN is mapped st ID	Drive Type FC FC FC FC FC FC	Host ID 1 3 ith the <u>Remov</u>	e
Selected LUN: Name LUN 1301 LUN 1302 LUN 1305 Warning: HLU host failover so	ID 1301 1302 1305 <i>make su</i> <i>right Ho</i> numbers higher th oftware.	Capacity 10.000 GB 40.000 GB 50.000 GB <i>re the LUN is mappe</i> <i>ist ID</i> han 255 may result in ap	Drive Type FC FC FC FC FC FC FC FC FC FC FC FC FC	Host ID 1 3 <i>ith the</i> <u>Remov</u> If not supported by the	e

Check if the FC target can see the vHBA(WWPN) and whether it has PLOGI to the target.

<ul> <li>Joyce.esx.server [10.66.71.233; Fibre; Manually registered] None Assigned</li> <li>Joyce_BFS [10.66.71.220; Fibre; Manually registered; Host Agen()gyce_BFS</li> <li>Joyce_BFS 2 [10.66.71.241; Fibre; Manually registered; Host AgOgyce_BFS_2</li> <li>Loyds-1 [10.67.80.141; Fibre; Manually registered; Host Agent n None Assigned</li> <li>Loyds-2 [10.67.80.242; Fibre; Manually registered; Host Agent n None Assigned</li> <li>Loyds-2 [10.66.71.26; Fibre; Manually registered; Host Agent n None Assigned</li> <li>Loyds-1 [10.66.67.126; Fibre; Manually registered]</li> <li>Jone Assigned</li> <li>Jone A</li></ul>	Stori logir	age see all i	the vHBA	paths
- 20:00:00:25:85:A0:05:0F:20:00:00:25:85:80:05:2F	Yes	Yes	A-0	Fibre
- 🖉 20:00:00:25:85:A0:05:0F:20:00:00:25:85:80:05:2F	Yes	Yes	B-0	Fibre
- 🧬 20:00:00:25:85:A0:05:0F:20:00:00:25:85:80:05:3F	Yes	Yes	A-2	Fibre
🗕 🊰 20:00:00:25:85:A0:05:0F:20:00:00:25:85:80:05:3F	Yes	Yes	B-2	Fibre
🖨 📠 matao-ucs250-c4-b7 [10.66.87.196; Fibre; Manually registered; hmatao_storage_grp2				
- 🦉 20:00:00:25:85:A0:05:1F:20:00:00:25:85:80:05:0F	Yes	Yes	A-0	Fibre
- # 20:00:00:25:85:A0:05:1F:20:00:00:25:85:80:05:0F	Yes	Yes	B-0	Fibre
- # 20:00:00:25:85:A0:05:1F:20:00:00:25:85:80:05:1F	Yes	Yes	A-2	Fibre
20:00:00:25:85:A0:05:1F:20:00:00:25:85:80:05:1F	Yes	Yes	B-2	Fibre

Check if Cisco customized ESXi image is used for SAN Boot.

If ESXi fails to see the LUN on the SAN while the vHBA does see the LUN during boot stage, it is likely the ESXi image does not have the right driver. Check whether the customer is using the Cisco customized ESXi image. Go to the VMware website and search for Cisco ESXi to download the Cisco customized image.

Cisco Customized image for ESXi 5.1.0

https://my.vmware.com/web/vmware/details?downloadGroup=CISCO-ESXI-5.1.0-GA-25SEP2012&productId=285

Cisco Customized image for ESXi 5.0.0 U1

Cisco Customized image for ESXi 4.1 U2

https://my.vmware.com/web/vmware/details?downloadGroup=OEM-ESXI41U2-CISCO&productId=230

vSphere 5.0 Rollp ISO images (provides an installable ESXi ISO image that includes drivers for various products produced by VMware partners), for example with C220 M3 server, CIMC 1.46c and LSI 9266–8i. Even the customized ESXi image does not have the driver to detect local storage.

https://my.vmware.com/web/vmware/details?downloadGroup=ROLLUPISO\_50\_2&productId=229

Also, refer to the rollup release note

http://www.vmware.com/support/vsphere5/doc/vsphere-esxi-50-driver-rollup2-release-notes.html

#### Check if ESXi is using the same correct fnic driver.

Enable SSH and ESX SHELL and logon to the ESXi host. Then, run vmkload\_mod s fnic.



#### Check if the host can see all the paths to the storage target from VMware ESXi.

1. Check the LUN information that can be seen by any vHBA.

~ # esxcfg-scsidevs -c		
Device UID	Device Type	Console
Device	Size	Multipath PluginDisplay Name
naa.6006016081f0280000e47af49150e111	Direct-Access	/vmfs/devices/disks/naa.60060
16081f0280000e47af49150e111 40960MB	NMP DGC Fib	pre Channel Disk (naa.600601608
lf0280000e47af49150e111)		
naa.6006016081f028007a6ffec12985e111	Direct-Access	/vmfs/devices/disks/naa.60060
6081f028007a6ffec12985e111 51200MB	NMP DGC Fibr	e Channel Disk (naa.6006016081
028007a6ffec12985e111)		
naa.6006016081f02800ca79c3b09150e111	Direct-Access	/vmfs/devices/disks/naa.60060
6081f02800ca79c3b09150e111 10240MB	NMP DGC Fibr	e Channel Disk (naa.6006016081
02800ca79c3b09150e111)		

2. Check which vHBA can see which LUNs.

~ # esxcfg-	scsidevs -A
vmhba1	naa.6006016081f0280000e47af49150e111
vmhba1	naa.6006016081f028007a6ffec12985e111
vmhba1	naa.6006016081f02800ca79c3b09150e111
vmhba2	naa.6006016081f0280000e47af49150e111

vmhba2	naa.6006016081f028007a6ffec12985e111
vmhba2	naa.6006016081f02800ca79c3b09150e111

In this example above, both vmhba1 and vmhba2 can see the 3 LUNs. 3. Check the paths to the LUNs.

```
~ # esxcfg-mpath -b
naa.6006016081f0280000e47af49150e111 : DGC Fibre Channel Disk (naa.6006016081f02800
00e47af49150e111)
   vmhba1:C0:T0:L1 LUN:1 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:3f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:6a
   44:60:44:fa
   vmhba1:C0:T1:L1 LUN:1 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:3f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:62
   44:60:44:fa
   vmhba2:C0:T0:L1 LUN:1 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:2f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:60
   44:60:44:fa
   vmhba2:C0:T1:L1 LUN:1 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:2f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:68
   44:60:44:fa
naa.6006016081f028007a6ffec12985e111 : DGC Fibre Channel Disk (naa.6006016081f028007
6ffec12985e111)
   vmhba1:C0:T0:L3 LUN:3 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:3f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:6a
   44:60:44:fa
   vmhba1:C0:T1:L3 LUN:3 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:3f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:62
   44:60:44:fa
   vmhba2:C0:T0:L3 LUN:3 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:2f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:60
   44:60:44:fa
   vmhba2:C0:T1:L3 LUN:3 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:2f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:68
   44:60:44:fa
naa.6006016081f02800ca79c3b09150e111 : DGC Fibre Channel Disk (naa.6006016081f02800c
79c3b09150e111)
   vmhba1:C0:T0:L0 LUN:0 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWPN
   20:00:00:25:b5:b0:05:3f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:6a
   44:60:44:fa
   vmhbal:C0:T1:L0 LUN:0 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:3f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:62
   44:60:44:fa
   vmhba2:C0:T0:L0 LUN:0 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:2f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:60
   44:60:44:fa
   vmhba2:C0:T1:L0 LUN:0 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWP
   20:00:00:25:b5:b0:05:2f Target: WWNN: 50:06:01:60:c4:60:44:fa WWPN: 50:06:01:68
   44:60:44:fa
```

In this example, there are four paths to each LUN: two from vmhba1 and two from vmhba2.

### **Related Information**

• Technical Support & Documentation – Cisco Systems