UCS SAN故障排除

目錄

簡介

本文檔為統一計算系統(UCS)SAN提供了有用的故障排除提示。

必要條件

需求

思科建議您瞭解UCS SAN。

採用元件

本文件所述內容不限於特定軟體和硬體版本。

慣例

如需文件慣例的詳細資訊，請參閱思科技術提示慣例。

疑難排解提示

檢查vHBA是否具有FLOGI進入SAN交換矩陣。

1. 登入到UCS CLI並連線到NXOS。

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

```
UCS-250-A# connect nxos
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
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license. Certain components of this software are licensed under
the GNU General Public License (GPL) version 2.0 or the GNU
Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php
UCS-250-A(nxos)# show npv flogi-table
--------------------------------------------------------------------------------
SERVER                                                                  EXTERNAL
INTERFACE VSAN FCID            PORT NAME               NODE NAME        INTERFACE
--------------------------------------------------------------------------------
vfc3299   1000 0x5e00ec 20:bb:0a:03:00:00:00:1d 50:01:23:45:44:55:66:cf fc2/1
vfc3454   1000 0x5e0105 20:00:00:25:b5:b0:25:2d 20:00:00:25:b5:a0:25:2e fc2/1
vfc3468   1000 0x5e00d8 20:00:00:25:b5:b0:05:1f 20:00:00:25:b5:a0:05:1f fc2/1
vfc3474   1000 0x5e00d2 20:00:00:25:b5:b0:05:3f 20:00:00:25:b5:a0:05:0f fc2/1
vfc3506   1000 0x5e0103 20:00:00:25:b5:b0:25:3f 20:00:00:25:b5:a0:25:1e fc2/1
vfc3528   1000 0x5e010a 20:00:00:25:b5:00:05:1a 20:00:00:25:b5:a0:05:01 fc2/1
vfc3607   1000 0x5e00eb 20:00:00:25:b5:b9:30:02 50:01:23:45:44:55:66:bf fc2/1
vfc3611   1000 0x5e00ca 20:00:00:25:b5:b0:05:00 20:00:00:25:b5:a0:05:06 fc2/1
vfc3617   1000 0x5e00f4 20:00:00:25:b5:b3:36:0e 20:00:00:25:b5:a0:36:0f fc2/1

Total number of flogi = 9.
```

確保已分配WWPN的FCID，並且VSAN正確。

2. 或者，從Cisco MDS交換機，檢查WWPN是否具有FLOGI。

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

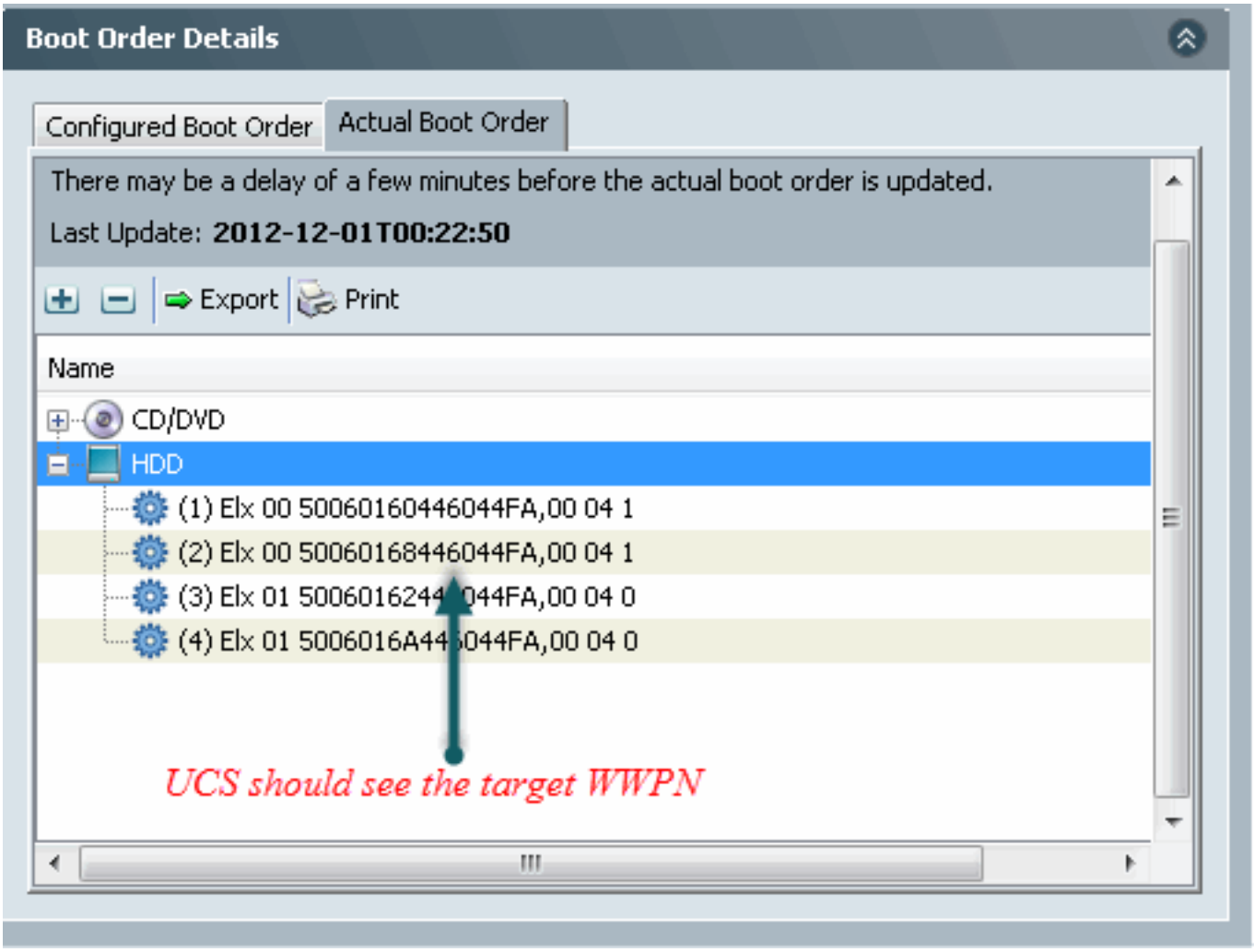
檢查MDS交換機上的分割槽，以確保vHBA(WWPN)和儲存目標處於聯機狀態且位於同一分割槽中。

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

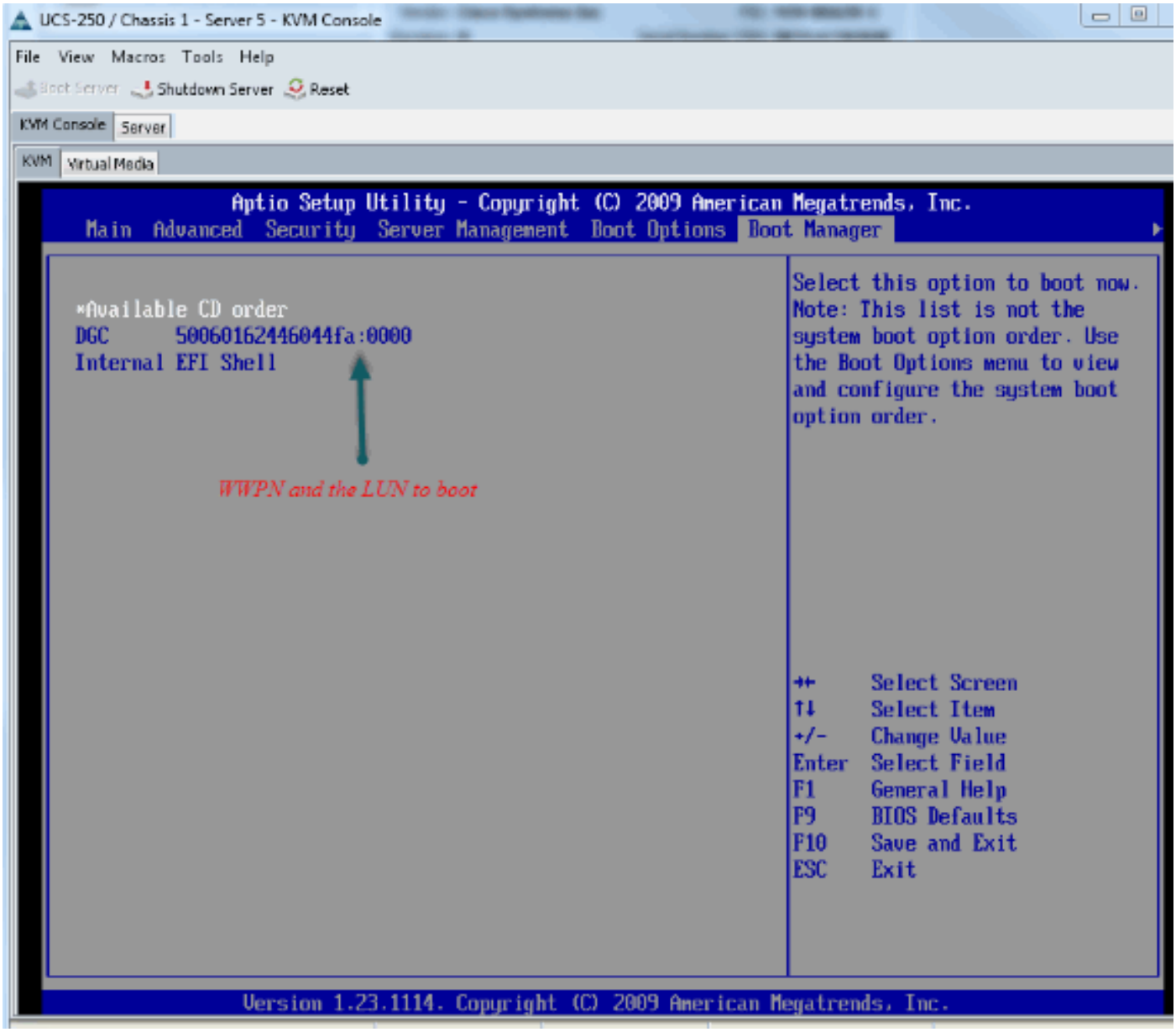
```
SV-35-06-MDS9222i# show zoneset active vsan 1000 | begin matao
  zone name matao vsan 1000
    pwwn 20:00:00:25:b5:b3:05:0f
  * fcid 0x5e00ef [pwwn 50:06:01:62:44:60:44:fa] [SPA2]   <-- SAN target
  * fcid 0x5e01ef [pwwn 50:06:01:6a:44:60:44:fa] [SPB2]   <-- SAN target
  * fcid 0x5e00d2 [pwwn 20:00:00:25:b5:b0:05:3f]          <-- wwpn online
  * 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
```

檢查vHBA在SAN引導期間是否可以看到目標。

在UCS Manager上，如果刀片可以從SAN引導，則UCS Manager「實際引導順序」應該能夠檢視所有目標的WWPN。

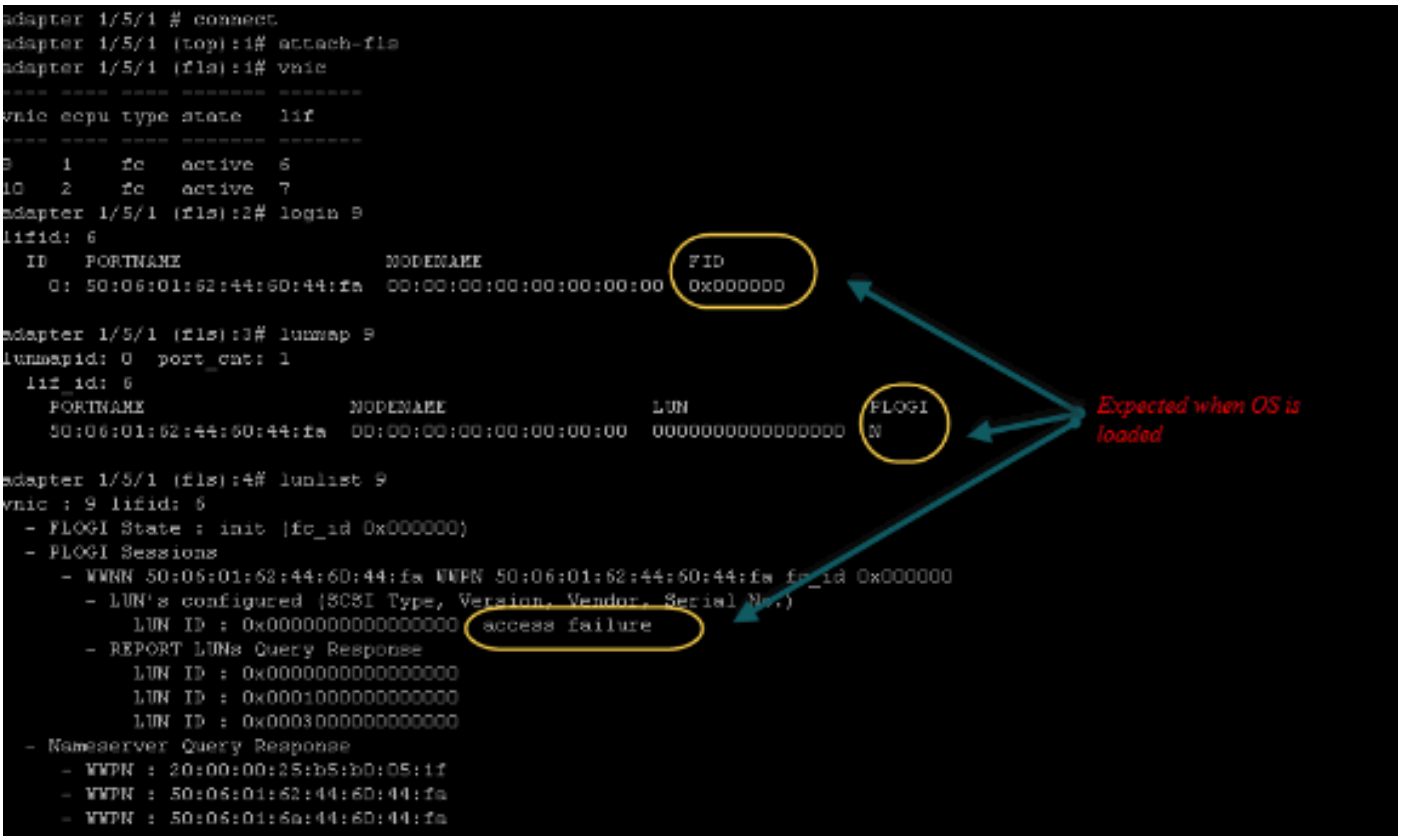


啟動刀片時，按F2進入BIOS並導航至引導管理器。BIOS應該能夠看到要啟動的LUN。

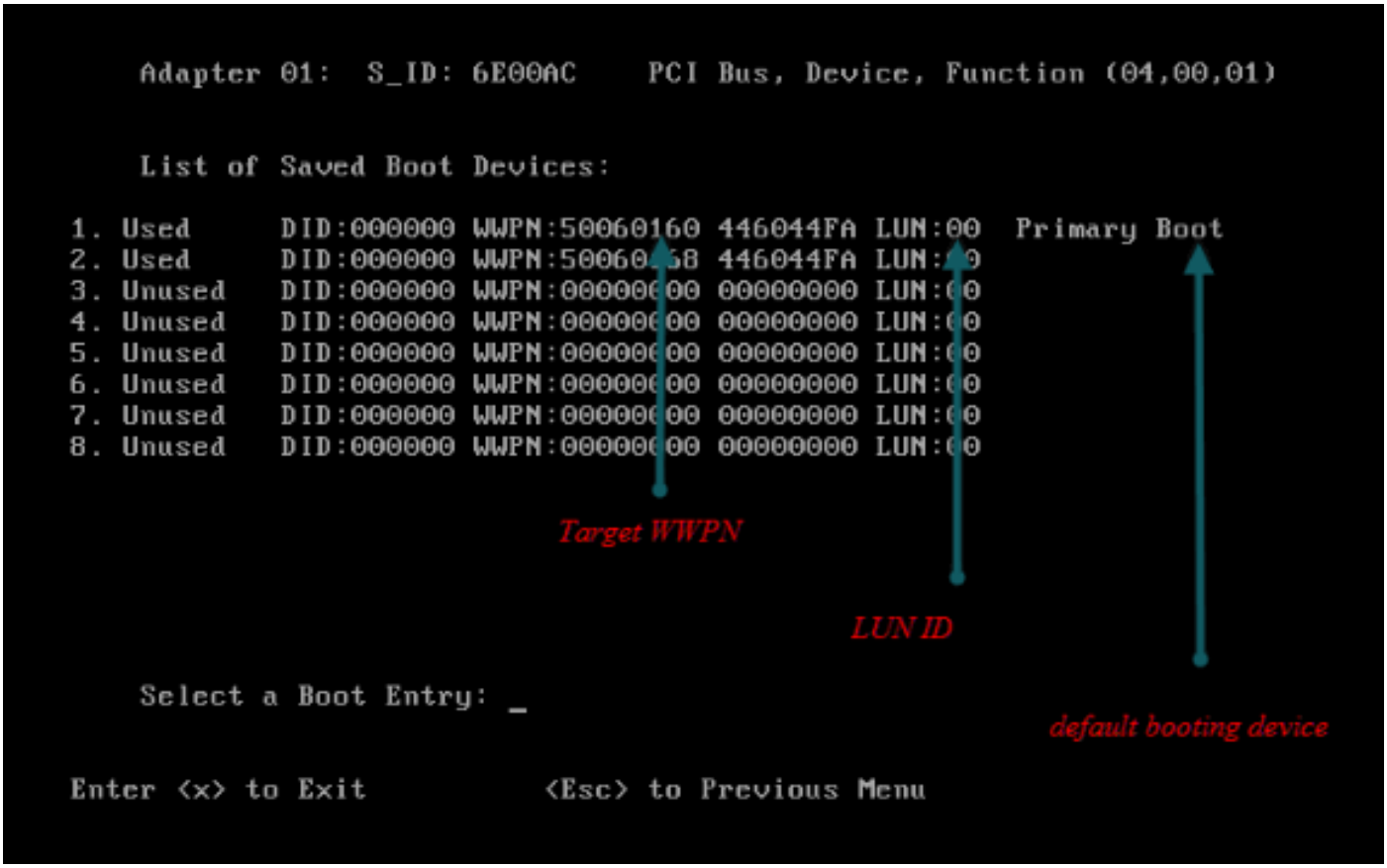


對於PALO介面卡，在此階段（OS尚未啟動時），還可以連線到介面卡以檢查vHBA是否具有FLOGI和PLOGI。

作業系統啟動後，輸出會有所不同。這是意料之中的。

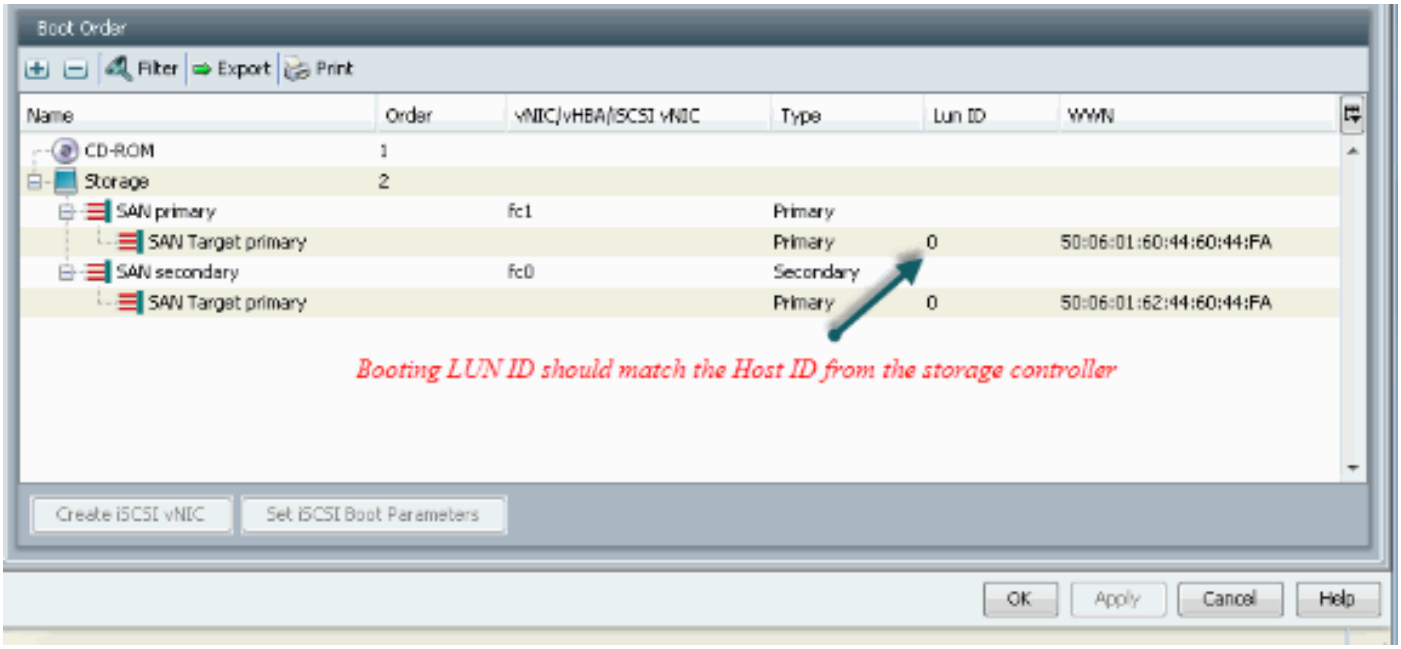


對於M71KR-E介面卡，當引導伺服器時，按control + E進入Emulex HBA配置實用程式。然後，選擇vHBA並列出引導裝置。vHBA應該能夠看到目標。

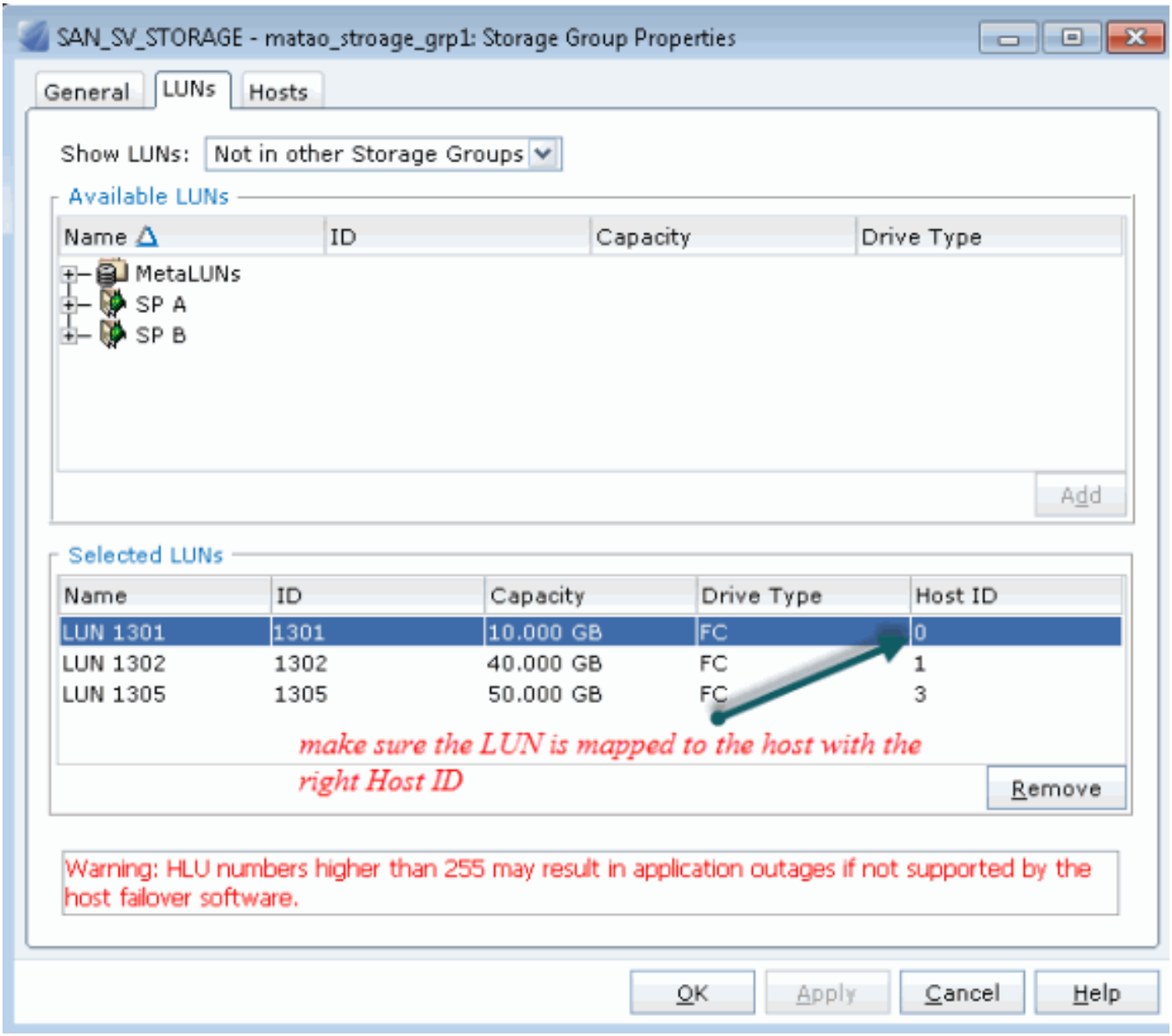


檢查vHBA是否具有從SAN引導的正確LUN ID。

與服務配置檔案關聯的引導策略具有引導配置。確保目標的WWPN正確並且LUN ID也與儲存中定義的LUN匹配。



下面是EMC儲存的一個示例。在儲存組中，LUN 1301對映到ID為0的主機，該主機必須與啟動策略中定義的ID匹配。



檢查FC目標是否可以看到vHBA(WWPN)，以及它是否具有目標的PLOGI。

檢查Cisco自定義ESXi映像是否用於SAN引導。

如果ESXi在啟動階段無法看到SAN上的LUN ，而vHBA在啟動階段無法看到LUN ，那麼ESXi映像可能沒有正確的驅動程式。檢查客戶是否使用思科自定義ESXi映像。轉到VMware網站並搜尋「Cisco ESXi」以下載Cisco自定義映像。

Cisco ESXi 5.1.0自定義映像

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

Cisco ESXi 5.0.0 U1自定義映像

https://my.vmware.com/web/vmware/details?downloadGroup=CISCO-ESXI-5.0.0-U1-28AUG2012&productId=268

Cisco ESXi 4.1 U2自定義映像

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

vSphere 5.0 Rollp ISO映像（提供一個可安裝的ESXi ISO映像，其中包括由VMware合作夥伴生產的各種產品的驅動程式），例如C220 M3伺服器、CIMC 1.46c和LSI 9266-8i。即使自定義的ESXi映像也沒有檢測本地儲存的驅動程式。

https://my.vmware.com/web/vmware/details?downloadGroup=ROLLUPISO_50_2&productId=229

此外，請參閱彙總發佈說明

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

檢查ESXi是否使用相同的正確的網絡卡驅動程式。

啟用SSH和ESX SHELL並登入到ESXi主機。然後，運行vmkload_mod -s fnic。

檢查主機是否可以看到從VMware ESXi到儲存目標的所有路徑。

1. 檢查任何vHBA都可以看到的LUN資訊。

```
~ # 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 Fibre Channel Disk (naa.600601608
```

```
1f0280000e47af49150e111)
naa.6006016081f028007a6ffec12985e111  Direct-Access    /vmfs/devices/disks/naa.600601
6081f028007a6ffec12985e111  51200MB   NMP     DGC Fibre Channel Disk (naa.6006016081f
028007a6ffec12985e111)
naa.6006016081f02800ca79c3b09150e111  Direct-Access    /vmfs/devices/disks/naa.600601
6081f02800ca79c3b09150e111  10240MB   NMP     DGC Fibre Channel Disk (naa.6006016081f
02800ca79c3b09150e111)
```

2. 檢查哪個vHBA可以看到哪些LUN。

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

在上面的此示例中， vmhba1和vmhba2都可以看到3個LUN。

3. 檢查LUN的路徑。

```
~ # 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 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
   vmhba1:C0:T1:L1 LUN:1 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: 50:06:01:62:
   44:60:44:fa
   vmhba2:C0:T0:L1 LUN:1 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWPN:
   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 WWPN:
   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.6006016081f028007a
6ffec12985e111)
   vmhba1:C0:T0:L3 LUN:3 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
   vmhba1:C0:T1:L3 LUN:3 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: 50:06:01:62:
   44:60:44:fa
   vmhba2:C0:T0:L3 LUN:3 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWPN:
   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 WWPN:
   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.6006016081f02800ca
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
   vmhba1:C0:T1: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: 50:06:01:62:
   44:60:44:fa
   vmhba2:C0:T0:L0 LUN:0 state:active fc Adapter: WWNN: 20:00:00:25:b5:a0:05:0f WWPN:
   20:00:00:25:b5:b0:05:2f  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 WWPN:
   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
```

在此示例中，每個LUN有四個路徑：兩個來自vmhba1，兩個來自vmhba2。

相關資訊

- 技術支援與文件 - Cisco Systems