

Host do iSCSI HP-UX ao exemplo de configuração MDS/IPS-8

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[Introdução](#)

Os driveres iscsi Cisco, que residem no server, são um componente-chave de uma solução de iSCSI. Estes driveres iscsi interceptam **comandos Small Computer System Interface (SCSI)**, encapsular-los em pacotes IP, e reorientam-nos ao Cisco SN 5420, Cisco SN 5428, Cisco SN5428-2, ou o documento de Cisco MDS/IPS-8. This fornece configurações de amostra para o host do iSCSI HP-UX ao SN5428.

[Pré-requisitos](#)

[Requisitos](#)

Antes que você tente esta configuração, certifique-se de que você cumpre estas exigências:

- Instale o driver iscsi que é compatível a sua versão HP-UX. A maioria de versão atual do direcionador pode ser encontrada na página da transferência do [driver iscsi Cisco \(clientes registrados somente\)](#) no cisco.com. O arquivo de README.txt é incluído no arquivo do zip(tar) do direcionador. O README contém a informação sobre o contrato de licença, instalação de driver e instruções de configuração, e uma visão geral técnica da arquitetura do driver.

- As exigências do sistema operacional e as exigências da correção de programa são descritas na seção dos *requisitos do sistema* do [driver iscsi Cisco para Release Note HP-UX](#).

Componentes Utilizados

As informações neste documento são baseadas nestas versões de software e hardware:

- Server A500 HP-UX 9000/800 com dois processadores. **Nota:** Nesta instalação de laboratório, não há nenhum adaptador do Ethernet separado para o iSCSI, e esse no uso é 100 Mb. Em todo o ambiente realista, você tem um adaptador separado do gigabit Ethernet como seu

```
iniciador de iSCSI.[/]#opt/ignite/bin/print_manifest[...] System Hardware Model:
9000/800/A500-5X Main Memory: 1024 MB Processors: 2 OS mode: 64 bit LAN hardware ID:
0x00306E1B6F51 Software ID: 586760518 Keyboard Language: Not_Applicable Storage devices HW
Path Interface SEAGATE ST318404LC 17366 Mb 0/0/1/1.15.0 SCSI C896 Ultra Wide Single-Ended
SEAGATE ST318203LC 17366 Mb 0/0/2/1.15.0 SCSI C875 Ultra Wide Single-Ended I/O Interfaces
Class H/W Path Driver Description lan 0/0/0/0 btlan3 HP PCI 10/100Base-TX Core ext_bus
0/0/1/0 c720 SCSI C896 Ultra Wide LVD ext_bus 0/0/1/1 c720 SCSI C896 Ultra Wide Single-Ended
ext_bus 0/0/2/0 c720 SCSI C875 Fast Wide Single-Ended ext_bus 0/0/2/1 c720 SCSI C875 Ultra
Wide Single-Ended tty 0/0/4/0 asio0 PCI Serial (103c1048) tty 0/0/5/0 asio0 PCI Serial
(103c1048) fc 0/2/0/0 td HP Tachyon XL2 Fibre Channel Mass Storage Adapter Installed
Software Your system was installed with HP-UX version B.11.00. Your system has the following
software products installed and configured on the system disk drive(s). Product Revision
Description A6795A B.11.00.10 PCI Tachyon TL/TS/XL2 Fibre Channel BUNDLE B.11.00 Patch
Bundle HPUXEng64RT B.11.00.01 English HP-UX 64-bit Runtime Environment HWE1100
B.11.00.0203.5 Hardware Enablement Patches for HP-UX 11.00, March 2002 OnlineDiag
B.11.00.20.09 HPUX 11.0 Support Tools Bundle, Mar 2002 UXCoreMedia B.11.00.02 HP-UX Media
Kit (Reference Only. See Description) UnlimUserLic B.11.00.02 HP-UX Unlimited-User License
XSWGRL100 B.11.00.47.08 General Release Patches, November 1999 (ACE) [...]
```

- O driver iscsi Cisco 3.3.3 para o HP-UX foi usado. Recomenda-se que você igualmente instala (pelo menos) a correção de programa cumulativa do transporte estável o mais atrasado do protocolo Protocolo de resolución de la dirección (ARP) (ARPA) do HP. Quando este documento foi redigido, este era PHNE_28538. Esta correção de programa tem diversas dependências, assim que você tem que instalá-las à medida que necessário. Para mais informação de instalação, visite a [site de suporte do oficial do HP \(clientes registrados](#)

```
somente).[/]#swlist # Initializing... # Contacting target "ape"... # # Target: ape:/ # #
Bundle(s): # A6795A B.11.00.10 PCI Tachyon TL/TS/XL2 Fibre Channel BUNDLE B.11.00 Patch
Bundle HPUXEng64RT B.11.00.01 English HP-UX 64-bit Runtime Environment HWE1100
B.11.00.0203.5 Hardware Enablement Patches for HP-UX 11.00, March 2002 OnlineDiag
B.11.00.20.09 HPUX 11.0 Support Tools Bundle, Mar 2002 QPK1100 B.11.00.56.5 Quality Pack for
HP-UX 11.00, March 2002 UXCoreMedia B.11.00.02 HP-UX Media Kit (Reference Only. See
Description) UnlimUserLic B.11.00.02 HP-UX Unlimited-User License XSWGRL100 B.11.00.47.08
General Release Patches, November 1999 (ACE) # # Product(s) not contained in a Bundle: #
ISCSI 3.3.3 ISCSI software bison 1.875 bison flex 2.5.4a flex gcc 3.2.3 gcc gettext 0.11.5
gettext less 376 less libiconv 1.9 libiconv make 3.80 make ncurses 5.2 ncurses termcap 1.3.1
termcap zsh 4.0.7 zsh [/]# swlist BUNDLE # Initializing... # Contacting target "ape"... # #
Target: ape:/ # # BUNDLE B.11.00 Patch Bundle BUNDLE.PHCO_23651 1.0 fsck_vxfs(1M) cumulative
patch BUNDLE.PHKL_28496 1.0 SCSI IO Subsystem Cumulative Patch BUNDLE.PHKL_27980 1.0 VxFS
3.1 cumulative patch: CR_EIEM BUNDLE.PHKL_22840 1.0 IDS/9000; syscalls related to
file/socket BUNDLE.PHCO_28505 1.0 user/group(add/mod/del)(1M) cumulative patch
BUNDLE.PHKL_28150 1.0 LVM Cumulative Patch w/Performance Upgrades BUNDLE.PHNE_28538 1.0
cumulative ARPA Transport patch BUNDLE.PHNE_28143 1.0 LAN product cumulative patch
BUNDLE.PHNE_27902 1.0 Cumulative STREAMS Patch BUNDLE.PHKL_29434 1.0 POSIX
AIO;getdirent;MVFS;rcp;mmap/IDS; BUNDLE.PHKL_28766 1.0 Probe, IDDS, PM, VM, PA-
8700, AIO, T600, FS, PDC, CLK BUNDLE.PHKL_28004 1.0 Fibre Channel Mass Storage Driver Patch
BUNDLE.PHKL_27729 1.0 ioscan -u incorrect display (kernel patch). BUNDLE.PHKL_24187 1.0
ioscan performance gain for SCSI Subsystem BUNDLE.PHKL_24165 1.0 Kernel Patch For "ioscan -
k" Performance BUNDLE.PHKL_23409 1.0 NFS, Large Data Space, kernel memory leak
BUNDLE.PHKL_20016 1.0 2nd CPU not recognized in G70/H70/I70 BUNDLE.PHKL_18543 1.0
```

```
PM/VM/UFS/async/scsi/io/DMAPI/JFS/perf patch BUNDLE.PHCO_27818 1.0 ioscan(1M) cumulative
patch BUNDLE.PHCO_27375 1.0 cumulative SAM/ObAM patch
```

- Cisco MDS9216 com versão de software 1.2(1a).vatican#show module Mod Ports Module-Type
Model Status ---
1/2 Gbps FC/Supervisor DS-X9216-K9-SUP active * 2 8 IP Storage Module DS-X9308-SMIP ok Mod
Sw Hw World-Wide-Name(s) (WWN) ---
----- 1 1.2(1a) 1.0 20:01:00:0c:30:57:5e:c0 to 20:10:00:0c:30:57:5e:c0 2 1.2(1a) 0.2
20:41:00:0c:30:57:5e:c0 to 20:48:00:0c:30:57:5e:c0 Mod MAC-Address(es) Serial-Num ---
----- 1 00-0b-be-f8-7f-00 to 00-0b-be-f8-7f-04
JAB070804Q3 2 00-05-30-00-a8-56 to 00-05-30-00-a8-62 JAB070205AM * this terminal session
vatican# show version Cisco Storage Area Networking Operating System (SAN-OS) Software TAC
support: http://www.cisco.com/tac Copyright (c) 2002-2003 by Cisco Systems, Inc. All rights
reserved. The copyright for certain works contained herein are owned by Andiamo Systems,
Inc. and/or other third parties and are used and distributed under license. Software BIOS:
version 1.0.8 loader: version 1.1(2) kickstart: version 1.2(1a) system: version 1.2(1a) BIOS
compile time: 08/07/03 kickstart image file is: bootflash:/k121a kickstart compile time:
9/1/2003 17:00:00 system image file is: bootflash:/s121a system compile time: 9/1/2003
17:00:00 Hardware RAM 963108 kB bootflash: 500736 blocks (block size 512b) slot0: 0 blocks
(block size 512b) vatican uptime is 1 days 6 hours 17 minute(s) 25 second(s) Last reset at
955065 usecs after Wed Sep 10 08:13:50 2003 Reason: Reset Requested by CLI command reload
System version: 1.1(2)

As informações neste documento foram criadas a partir de dispositivos em um ambiente de laboratório específico. Todos os dispositivos utilizados neste documento foram iniciados com uma configuração (padrão) inicial. Se a sua rede estiver ativa, certifique-se de que entende o impacto potencial de qualquer comando.

Convenções

O Cisco MDS 9000 que é usado neste documento refere todos os produtos de switch do Fibre Channel (o FC) na família MDS9000 (MDS 9506, MDS9509, MDS9216). A lâmina do Sistema de prevenção de intrusões da Cisco (IPS) refere o Módulo de serviços do armazenamento IP. Para obter mais informações sobre convenções de documento, consulte as [Convenções de dicas técnicas Cisco](#).

Informações de Apoio

O módulo do Sistema de prevenção de intrusões da Cisco (IPS) fornece Host IP alcança ao Fibre Channel (FC) dispositivos de armazenamento. O módulo ips é DS-X9308-SMIP. Fornece o roteamento scsi transparente. Os Host IP que usam o protocolo iscsi podem transparentemente alcançar destinos de iscsi na rede que FC o Host IP envia comandos scsi encapsulou nas unidades de dados do protocolo iscsi (PDU) a uma porta MDS9000 IPS sobre uma conexão TCP/IP. No módulo ips, a Conectividade é fornecida sob a forma das relações GE que são configuradas apropriadamente. O módulo ips permite-o de criar destinos de iscsi virtuais e traços aos alvos físicos FC disponíveis no FC SAN. Apresenta os alvos FC aos Host IP como se os alvos físicos foram anexados à rede IP.

Cada host do iSCSI que exige o acesso ao armazenamento através do módulo ips precisa de ter um driver iscsi compatível instalado. Com a ajuda do protocolo iscsi, o driver iscsi permite que um host do iSCSI transporte pedidos e respostas SCSI sobre uma rede IP. Da perspectiva de um sistema operacional do host, o driver iscsi parece ser um driver de transporte SCSI similar a um direcionador FC para um canal periférico no host. Da perspectiva do dispositivo de armazenamento, cada Host IP aparece como um host FC. Distribuir o SCSI do Host IP ao dispositivo de armazenamento FC consiste nestas ações principal:

- Transportando pedidos e respostas do iSCSI sobre uma rede IP entre anfitriões e o módulo ips
- Distribuindo pedidos e respostas SCSI entre anfitriões em uma rede IP e o dispositivo de armazenamento FC (convertendo o iSCSI ao FCP e ao FCP ao iSCSI). Este roteamento é executado pelo módulo ips.
- Transportando pedidos ou respostas FCP entre o módulo ips e dispositivos de armazenamento FC

O módulo ips não importa alvos FC ao iSCSI à revelia. Dinâmico ou mapeamento estático deve ser configurado antes que o módulo ips faça alvos FC disponíveis aos iniciadores de iSCSI. Quando ambos são configurados, os alvos estaticamente traçados FC têm um nome configurado. Este documento fornece um exemplo do mapeamento estático. Com mapeamento dinâmico, cada vez que isso que o host do iSCSI conecta ao módulo ips, uma porta nova FC N é criada e o nWWNs e os pWWN atribuídos para esta porta N podem ser diferentes. Use o método do mapeamento estático se você precisa de obter o mesmo nWWNs e os pWWN para o iSCSI o hospedam cada vez conectam ao módulo ips. O mapeamento estático pode ser usado no módulo ips para alcançar os arranjos de armazenamento inteligentes FC que têm as configurações do controle de acesso e dos números de unidade lógica (LUN) que traçam e da máscara baseadas nos pWWN ou no nWWNs do iniciador.

Você pode controlar o acesso a cada destino de iscsi estático-traçado com a criação de uma lista específica de portas IPS em que o alvo é anunciado e a criação de uma lista de nomes de nó do iniciador de iSCSI permitidos alcançá-la. O FC Zoneamento-baseou o controle de acesso e o controle de acesso iSCSI-baseado é os dois mecanismos por que o controle de acesso pode ser fornecido para o iSCSI. Ambos os métodos podem ser usados simultaneamente. Neste padrão da configuração o Zoneamento é permitido para o VSAN específico. Os módulos ips usam listas de controle de acesso nome-baseadas e FC Zoneamento-baseadas do nó de iSCSI para reforçar o controle de acesso durante a descoberta de iSCSI e a criação de sessão iSCSI.

- **descoberta de iSCSI:** Quando um host do iSCSI cria uma sessão de descoberta de iSCSI e perguntas para todos os destinos de iscsi, o módulo ips retorna somente a lista de destinos de iscsi que este host do iSCSI é permitido alcançar baseado nas políticas do controle de acesso.
- **criação de sessão iSCSI:** Quando um Host IP inicia uma sessão de iSCSI, o módulo ips verifica se o destino de iscsi especificado (na solicitação de login da sessão) é um alvo traçado estática, e se verdadeiro, verifica se o nome de nó de iSCSI do Host IP é permitido alcançar o alvo. Se o Host IP não tem o acesso, seu início de uma sessão está rejeitado.

O módulo ips, então cria uma porta virtual FC N (a porta N pode já existir) para este Host IP e faz uma pergunta do Nome do servidor FC para o FCID do alvo pWWN FC que é alcançado pelo Host IP. Usa o pWWN da porta virtual do Host IP N como o solicitador da pergunta do Nome do servidor. Assim, o Nome do servidor faz uma consulta aplicada por zona para o pWWN e responde à pergunta. Se o FCID é retornado pelo Nome do servidor, a seguir a sessão de iSCSI está aceita. Se não, a solicitação de login é rejeitada.

Configurar

Nesta seção, você é apresentado com a informação para configurar o MDS9216 e o driver iscsi Cisco para Linux.

Nota: Para encontrar a informação adicional nos comandos usados neste documento, use o [manual de configuração da referência de comando da família do Cisco MDS 9000](#) e da [família do](#)

[software do Cisco MDS 9000.](#)

Diagrama de Rede

Este documento utiliza a configuração de rede mostrada neste diagrama:

Configurações

Este documento usa as configurações mostradas aqui:

- Macaco (HP 9000/800 A500 HP-UX 11.00)
- Vatican (MDS9216)

Macaco (HP 9000/800 A500 HP-UX 11.00)

On the HP-UX host only the file /etc/iscsi.conf has to be modified:

```
[/]# cat /etc/iscsi.conf # iSCSI configuration file -
see iscsi.conf(4) # DiscoveryAddress Settings # -----
----- # Add "DiscoveryAddress=xxx" entries
for each iSCSI router instance. # The driver attempts to
discover iSCSI targets at that address # and make as
many targets as possible available for use. # 'xxx' can
be an IP address or a hostname. A TCP port number can be
# specified by appending a colon and the port number to
the address. # All entries have to start in column one
and must not contain any # whitespace. # # Example: # #
DiscoveryAddress=scsirouter1
DiscoveryAddress=10.48.69.242 !--- Configure the IP
address of the GE interface that accepts iSCSI request
from your host. # The DiscoveryAddress Settings can take
following entry. # # 1) Authentication Settings # 2)
ConnectionTimeout Settings !--- Other required driver
parameters could be changed in the iscsi.conf file.
..... [/]# cat /etc/iscsi.bindings # iSCSI bindings,
file format version 1.0. # NOTE: this file is
automatically maintained by the iSCSI daemon. # You do
not need to edit this file under most circumstances. #
If iSCSI targets in this file have been permanently
deleted, you # may wish to delete the bindings for the
deleted targets. # # Format: # bus target iSCSI # id id
TargetName # [...] 0 10 seagate 0 11 spa-vt !--- The
iSCSI driver discovery daemon process looks up each
discovered !--- target in the /etc/iscsi.bindings file.
If an entry exists in the file for the target, !--- the
corresponding SCSI target ID is assigned to the target.
If no entry !--- exists for the target, the smallest
available SCSI target ID is assigned !--- and an entry
is written to the /etc/iscsi.bindings file for this
target. !--- Note that the /etc/iscsi.bindings file
permanently contains entries !--- for all iSCSI targets
ever logged into from this host. If a target is !--- no
longer available to a host, you can manually edit the
file and remove !--- entries so that the obsolete target
no longer consumes a SCSI target ID. !--- If you know
the iSCSI target name of a target in advance, and you
want !--- it to be assigned a particular SCSI target ID,
you can add an entry !--- manually. You must stop the
iSCSI driver before editing the !--- /etc/iscsi.bindings
file. The maximum number of targets is 14. !--- Enter
```

```
[/]/sbin/init.d/iscsi start to manually start the iSCSI driver. !--- Enter [/]/sbin/init.d/iscsi stop to manually stop the iSCSI driver.
```

Vatican (Cisco MDS9216)

```
!--- If you are starting from the factory default configuration, you !--- need to setup the IP address and mask of the management interface. !--- This would normally be done during the initial setup . interface mgmt0 ip address 10.48.69.156 255.255.255.192 !--- In this configuration example, all the iSCSI targets are in a single vsan . vsan database vsan 1016 vsan 1016 interface fc1/3 vsan 1016 interface fc1/7 !--- These are the boot variables. boot system bootflash:/s111a boot kickstart bootflash:/k111a # Simple IP configuration ip domain-name cisco.com ip name-server 144.254.10.123 ip default-gateway 10.48.69.129 !--- Declare that the iSCSI initiator with the IP address of the host. # It belongs to the vsan of our choice iscsi authentication none iscsi initiator ip-address 10.48.69.238 vsan 1016 !--- Define the first virtual target, it is a JBOD. Identify the target !--- by its pWWN, advertise it on a GE interface, and allow access to the initiator. iscsi virtual-target name seagate pWWN 21:00:00:20:37:67:f7:a2 advertise interface GigabitEthernet2/1 initiator ip address 10.48.69.238 permit !--- The second target is a Clariion disk array. Since the maximum LUN number that you !--- can have under HP-UX without additional software is 7, define a mapping from FC LUN numbers !--- to the iSCSI LUN numbers you are going to present to the host. iscsi virtual-target name spa-vt pWWN 50:06:01:60:88:02:a8:2b fc-lun 0020 iscsi-lun 0003 pWWN 50:06:01:60:88:02:a8:2b fc-lun 0021 iscsi-lun 0004 advertise interface GigabitEthernet2/1 initiator ip address 10.48.69.238 permit !--- Permit access to the targets on the FC level. Create a simple zone configuration to do this. !--- Alternatively, you could have simply set the default zoning policy in vsan 1016 to permit. zone name jbod vsan 1016 member pwwn 21:00:00:20:37:67:f7:a2 member symbolic-nodename 10.48.69.238 zone name spa vsan 1016 member pwwn 50:06:01:60:88:02:a8:2b member symbolic-nodename 10.48.69.238 zoneset name iscsidoc vsan 1016 member jbod member spa zoneset activate name iscsidoc vsan 1016 !--- Set the IP address and mask of the GE interface and enable it. interface GigabitEthernet2/1 ip address 10.48.69.242 255.255.255.192 iscsi authentication none no shutdown # Lastly we bring up the iSCSI interface up interface iscsi2/1 no shutdown
```

Verificar

Esta seção fornece a informação que você pode se usar para confirmar corretamente seus trabalhos da configuração e para os pesquisar defeitos caso que você observa problemas.

Os determinados comandos de exibição são apoiados pela [ferramenta de consulta de comandos \(clientes registrados somente\)](#), que permite que você ver uma análise do emissor de comando de execução.

Comandos host HP-UX

- **netstat-n** ou **lsof** — verifica as conexões de TCP.
- **iscsi-ls** — mostra os dispositivos atualmente disponíveis.
- **dmesg** — recolhe mensagens de diagnóstico.

Comandos MDS/IPS-8

- **zona da mostra** — informação da zona dos indicadores.
- **mostre o base de dados do flogi** — informação do servidor dos indicadores FLOGI.
- **mostre o base de dados dos fcns** — informação do Nome do servidor dos indicadores para um VSAN específico.
- **mostre a sociedade vsan** — informação da relação dos indicadores para VSAN diferentes.
- **iscsi da mostra** — várias informações de iSCSI dos indicadores.
- **mostra IP** — várias informação dos indicadores sobre Serviços IP.
- **scsi alvo da mostra** — dispositivos dos indicadores SCSI para o VSAN específico (para traçar o FC-LUNs ao iSCSI-LUNs).
- **relação da mostra** — informação dos indicadores sobre várias relações.
- **mostre a rota IP** — informação da rota IP dos indicadores.

Troubleshooting

Esta seção fornece informações que podem ser usadas para o troubleshooting da sua configuração.

Está aqui a informação de Troubleshooting relevante a esta configuração:

- Indicadores do macaco (HP 9000/800 A500 HP-UX 11.00)
- Indicadores de Vatican (MDS9216)
- Indicadores do Fabric Manager e do gerenciador de dispositivo

Macaco (HP 9000/800 A500 HP-UX 11.00)

```
# /sbin/init.d/iscsi stop Waiting for iscsid to
terminate ..... Waiting for iscsid to terminate .....
Waiting for iscsid to terminate ..... Waiting for iscsid
to terminate ..... Waiting for iscsi_[tr]x_threads to
terminate ..... [/# /sbin/init.d/iscsi start Number of
indices in scsi_isc table used by System: 5 Index used
by iSCSI controller: 255 Number of free indices: 251
[/# netstat -n | grep '10.48.69.242' tcp 0 0
10.48.69.238.49501 10.48.69.242.3260 ESTABLISHED tcp 0 0
10.48.69.238.49500 10.48.69.242.3260 ESTABLISHED tcp 0 0
10.48.69.238.49499 10.48.69.242.3260 ESTABLISHED !--- If
you have lsof, you can also try the following: [/# lsof
-i @10.48.69.242 COMMAND PID USER FD TYPE DEVICE
SIZE/OFF NODE NAME iscsid 2836 root lu inet 0x41aa9268
0t1300 TCP ape.cisco.com:49499->10.48.69.242:3260
(ESTABLISHED) !--- Note that ioscan does not report
iSCSI devices. To see the list !--- of available iSCSI
devices from the host, issue the iscsi-ls command. [/#
iscsi-ls -l
#####
##### TARGET NAME = seagate TARGET ID = 10 ADDRESS =
```

```
10.48.69.242:3260,128 STATUS = CONNECTED
10.48.69.238:49501 <-> 10.48.69.242:3260 9/19/2003
15:40:42 SESSION = ISID 00023d000001 TSID 80 LUN 0 =
DISK c255t10d0 'SEAGATE ST318203FC 0004' BLOCKS :
35566479 BLOCKSIZE : 512 CAPACITY : 17366.00MB
#####
##### TARGET NAME = spa-vt TARGET ID = 11 ADDRESS =
10.48.69.242:3260,128 STATUS = CONNECTED
10.48.69.238:49500 <-> 10.48.69.242:3260 9/19/2003
15:40:42 SESSION = ISID 00023d000001 TSID 80 LUN 4 =
DISK c255t11d4 'DGC RAID 1 0632' BLOCKS : 6291419
BLOCKSIZE : 512 CAPACITY : 3071.00MB LUN 3 = DISK
c255t11d3 'DGC RAID 1 0632' BLOCKS : 10485607 BLOCKSIZE
: 512 CAPACITY : 5119.00MB !--- To see detailed
statistics for currently established iSCSI sessions, use
this: [/]# iscsi-ls -c
#####
##### TARGET NAME = seagate TARGET ID = 10 ADDRESS =
10.48.69.242:3260,128 STATUS = CONNECTED
10.48.69.238:49501 <-> 10.48.69.242:3260 9/19/2003
15:40:42 SESSION = ISID 00023d000001 TSID 80 InitialR2T
= Yes FirstBurstLength = 262144 Bytes MaxBurstLength =
16776192 Bytes Header Digest = 1 Data Digest = 1 Login
Timeout = 15 Seconds Auth Timeout = 45 Seconds Active
Timeout = 5 Seconds Idle Timeout = 60 Seconds Ping
Timeout = 5 Seconds
#####
##### TARGET NAME = spa-vt TARGET ID = 11 ADDRESS =
10.48.69.242:3260,128 STATUS = CONNECTED
10.48.69.238:49500 <-> 10.48.69.242:3260 9/19/2003
15:40:42 SESSION = ISID 00023d000001 TSID 80 InitialR2T
= Yes FirstBurstLength = 262144 Bytes MaxBurstLength =
16776192 Bytes Header Digest = 1 Data Digest = 1 Login
Timeout = 15 Seconds Auth Timeout = 45 Seconds Active
Timeout = 5 Seconds Idle Timeout = 60 Seconds Ping
Timeout = 5 Seconds !--- Here are some of the entries
you can expect to find in the syslog: [/]# dmesg [...]
iSCSI: session 0x4179b000 target 11 accepted the
preferred value (None) DataDigest=CRC32C iSCSI: session
0x41a64800 target 10 accepted the preferred value (None)
DataDigest=CRC32C iSCSI: Direct Access Device found at
lun 3 on target 11 Vendor Id : DGC Product Id : RAID 1
Product Rev: 0632 iSCSI: Direct Access Device found at
lun 0 on target 10 Vendor Id : SEAGATE Product Id :
ST318203FC Product Rev: 0004 iSCSI: Direct Access Device
found at lun 4 on target 11 Vendor Id : DGC Product Id :
RAID 1 Product Rev: 0632 iSCSI: iscsi_recv_cmd: session
(0x4179b000) recv_cmd(sc) (0x41844800), Cmd 0x25, status
0x2, senselen 18, sense key 06, ASC/ASCQ 29/00, task
(0x40718b00) to (host 255 target 11 lun 3), TargetAlias
spa-vt Sense 70000600 0000000a 00000000 29000000 0000
READ_CAPACITY result = 0x2 Target = 0xb LUN = 0x3 iSCSI:
iscsi_recv_cmd: task (0x40718b00) itt 9 to (host 255
target 11 lun 3), Cmd 0x25, U(Overflow/Underflow)
underflow, received 0(task->rxdata), residual 8,
expected 8 iSCSI: iscsi_recv_cmd: session (0x4179b000)
recv_cmd(sc) (0x41844800), Cmd 0x25, status 0x2,
senselen 18, sense key 06, ASC/ASCQ 29/00, task
(0x40718c00) to (host 255 target 11 lun 4), TargetAlias
spa-vt Sense 70000600 0000000a 00000000 29000000 0000
READ_CAPACITY result = 0x2 Target = 0xb LUN = 0x4 iSCSI:
iscsi_recv_cmd: task (0x40718c00) itt 11 to (host 255
target 11 lun 4), Cmd 0x25, U(Overflow/Underflow)
underflow, received 0(task->rxdata), residual 8,
```


expected 8

Indicadores de Vatican (MDS9216)

```
vatican# show zone status vsan 1016 VSAN: 1016 default-
zone: deny distribute: active only Interop: Off Full
Zoning Database : Zonesets:1 Zones:3 Aliases: 0 Active
Zoning Database : Name: iscsidoc Zonesets:1 Zones:3
Status: Activation completed at Wed Sep 17 13:03:56 2003
vatican# show zone active vsan 1016 zone name jbod vsan
1016 * fcid 0x7902e8 [pwwn 21:00:00:20:37:67:f7:a2] *
fcid 0x790100 [symbolic-nodename 10.48.69.238] zone name
spa vsan 1016 * fcid 0x790104 [pwwn
50:06:01:60:88:02:a8:2b] * fcid 0x790100 [symbolic-
nodename 10.48.69.238] zone name spb vsan 1016 * fcid
0x790105 [pwwn 50:06:01:68:88:02:a8:2b] * fcid 0x790100
[symbolic-nodename 10.48.69.238] vatican# show flogi
database vsan 1016 -----
----- INTERFACE VSAN
FCID PORT NAME NODE NAME -----
----- fc1/3 1016
0x7902e8 21:00:00:20:37:67:f7:a2 20:00:00:20:37:67:f7:a2
fc1/7 1016 0x790104 50:06:01:60:88:02:a8:2b
50:06:01:60:11:02:a8:2b fc1/11 1016 0x790105
50:06:01:68:88:02:a8:2b 50:06:01:60:11:02:a8:2b iscsi2/1
1016 0x790100 20:03:00:0c:30:57:5e:c2
20:02:00:0c:30:57:5e:c2 Total number of flogi = 4.
vatican# show fcns database vsan 1016 VSAN 1016: -----
----- FCID TYPE PWWN (VENDOR) FC4-TYPE:FEATURE ---
-----
----- 0x790100 N 20:03:00:0c:30:57:5e:c2
(Cisco) scsi-fcp:init isc..w 0x790104 N
50:06:01:60:88:02:a8:2b (Clariion) scsi-fcp:target
0x790105 N 50:06:01:68:88:02:a8:2b (Clariion) scsi-
fcp:target 0x7902e8 NL 21:00:00:20:37:67:f7:a2 (Seagate)
scsi-fcp:target Total number of entries = 4 --- FCID
0x790100 is the virtual N port(HBA) for the iSCSI host.
vatican# show fcns database detail vsan 1016 -----
----- VSAN:1016 FCID:0x790100 -----
----- port-wwn (vendor) :20:03:00:0c:30:57:5e:c2
(Cisco) node-wwn :20:02:00:0c:30:57:5e:c2 class :2,3
node-ip-addr :10.48.69.238 ipa :ff ff ff ff ff ff ff ff
fc4-types:fc4_features:scsi-fcp:init iscsi-gw symbolic-
port-name : symbolic-node-name :10.48.69.238 port-type
:N port-ip-addr :0.0.0.0 fabric-port-wwn
:20:41:00:0c:30:57:5e:c0 hard-addr :0x000000 -----
----- VSAN:1016 FCID:0x790104 -----
----- port-wwn (vendor) :50:06:01:60:88:02:a8:2b
(Clariion) node-wwn :50:06:01:60:11:02:a8:2b class :3
node-ip-addr :0.0.0.0 ipa :ff ff ff ff ff ff ff ff fc4-
types:fc4_features:scsi-fcp:target symbolic-port-name :
symbolic-node-name : port-type :N port-ip-addr :0.0.0.0
fabric-port-wwn :20:07:00:0c:30:57:5e:c0 hard-addr
:0x000000 ----- VSAN:1016
FCID:0x790105 ----- port-wwn (vendor)
:50:06:01:68:88:02:a8:2b (Clariion) node-wwn
:50:06:01:60:11:02:a8:2b class :3 node-ip-addr :0.0.0.0
ipa :ff ff ff ff ff ff ff ff fc4-
types:fc4_features:scsi-fcp:target symbolic-port-name :
symbolic-node-name : port-type :N port-ip-addr :0.0.0.0
fabric-port-wwn :20:0b:00:0c:30:57:5e:c0 hard-addr
:0x000000 ----- VSAN:1016
FCID:0x7902e8 ----- port-wwn (vendor)
:21:00:00:20:37:67:f7:a2 (Seagate) node-wwn
```

```
:20:00:00:20:37:67:f7:a2 class :3 node-ip-addr :0.0.0.0
ipa :ff ff ff ff ff ff ff fc4-
types:fc4_features:scsi-fcp:target symbolic-port-name :
symbolic-node-name : port-type :NL port-ip-addr :0.0.0.0
fabric-port-wwn :20:03:00:0c:30:57:5e:c0 hard-addr
:0x000000 Total number of entries = 4 vatican# show
iscsi initiator iSCSI Node name is 10.48.69.238 iSCSI
Initiator name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale iSCSI
alias name: ape Node WWN is 20:02:00:0c:30:57:5e:c2
(dynamic) Member of vsans: 1016 Number of Virtual
n_ports: 1 Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
(dynamic) Interface iSCSI 2/1, Portal group tag: 0x80
VSAN ID 1016, FCID 0x790100 vatican# show iscsi
initiator configured iSCSI Node name is 10.48.69.238
Member of vsans: 1016 vatican# show iscsi initiator
detail iSCSI Node name is 10.48.69.238 iSCSI Initiator
name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale iSCSI
alias name: ape Node WWN is 20:02:00:0c:30:57:5e:c2
(dynamic) Member of vsans: 1016 Number of Virtual
n_ports: 1 Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
(dynamic) Interface iSCSI 2/1, Portal group tag is 0x80
VSAN ID 1016, FCID 0x790100 2 FC sessions, 2 iSCSI
sessions iSCSI session details Target: spa-vt
Statistics: PDU: Command: 10, Response: 10 Bytes: TX:
416, RX: 0 Number of connection: 1 TCP parameters Local
10.48.69.242:3260, Remote 10.48.69.238:49500 Path MTU:
1500 bytes Retransmission timeout: 300 ms Round trip
time: Smoothed 62 ms, Variance: 3 Advertized window:
Current: 256 KB, Maximum: 256 KB, Scale: 3 Peer receive
window: Current: 576 KB, Maximum: 576 KB, Scale: 4
Congestion window: Current: 4 KB Target: seagate
Statistics: PDU: Command: 4, Response: 4 Bytes: TX: 304,
RX: 0 Number of connection: 1 TCP parameters Local
10.48.69.242:3260, Remote 10.48.69.238:49501 Path MTU:
1500 bytes Retransmission timeout: 300 ms Round trip
time: Smoothed 62 ms, Variance: 3 Advertized window:
Current: 256 KB, Maximum: 256 KB, Scale: 3 Peer receive
window: Current: 576 KB, Maximum: 576 KB, Scale: 4
Congestion window: Current: 4 KB FCP Session details
Target FCID: 0x790104 (S_ID of this session: 0x790100)
pWWN: 50:06:01:60:88:02:a8:2b, nWWN:
50:06:01:60:11:02:a8:2b Session state: LOGGED_IN 1 iSCSI
sessions share this FC session Target: spa-vt Negotiated
parameters RcvDataFieldSize 1024 our_RcvDataFieldSize
1392 MaxBurstSize 0, EMPD: FALSE Random Relative Offset:
FALSE, Sequence-in-order: Yes Statistics: PDU: Command:
0, Response: 10 Target FCID: 0x7902e8 (S_ID of this
session: 0x790100) pWWN: 21:00:00:20:37:67:f7:a2, nWWN:
20:00:00:20:37:67:f7:a2 Session state: LOGGED_IN 1 iSCSI
sessions share this FC session Target: seagate
Negotiated parameters RcvDataFieldSize 1392
our_RcvDataFieldSize 1392 MaxBurstSize 0, EMPD: FALSE
Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 4 vatican# show
iscsi initiator iscsi-session detail iSCSI Node name is
10.48.69.238 iSCSI Initiator name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale iSCSI
alias name: ape Node WWN is 20:02:00:0c:30:57:5e:c2
(dynamic) Member of vsans: 1016 Number of Virtual
n_ports: 1 Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
(dynamic) Interface iSCSI 2/1, Portal group tag is 0x80
VSAN ID 1016, FCID 0x790100 2 FC sessions, 2 iSCSI
```

```
sessions iSCSI session details Target: spa-vt
Statistics: PDU: Command: 10, Response: 10 Bytes: TX:
416, RX: 0 Number of connection: 1 TCP parameters Local
10.48.69.242:3260, Remote 10.48.69.238:49500 Path MTU:
1500 bytes Retransmission timeout: 300 ms Round trip
time: Smoothed 62 ms, Variance: 2 Advertized window:
Current: 256 KB, Maximum: 256 KB, Scale: 3 Peer receive
window: Current: 576 KB, Maximum: 576 KB, Scale: 4
Congestion window: Current: 4 KB Target: seagate
Statistics: PDU: Command: 4, Response: 4 Bytes: TX: 304,
RX: 0 Number of connection: 1 TCP parameters Local
10.48.69.242:3260, Remote 10.48.69.238:49501 Path MTU:
1500 bytes Retransmission timeout: 300 ms Round trip
time: Smoothed 62 ms, Variance: 2 Advertized window:
Current: 256 KB, Maximum: 256 KB, Scale: 3 Peer receive
window: Current: 576 KB, Maximum: 576 KB, Scale: 4
Congestion window: Current: 4 KB vatican# show iscsi
initiator fcp-session detail iSCSI Node name is
10.48.69.238 iSCSI Initiator name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale iSCSI
alias name: ape Node WWN is 20:02:00:0c:30:57:5e:c2
(dynamic) Member of vsans: 1016 Number of Virtual
n_ports: 1 Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
(dynamic) Interface iSCSI 2/1, Portal group tag is 0x80
VSAN ID 1016, FCID 0x790100 2 FC sessions, 2 iSCSI
sessions FCP Session details Target FCID: 0x790104 (S_ID
of this session: 0x790100) pWWN:
50:06:01:60:88:02:a8:2b, nWWN: 50:06:01:60:11:02:a8:2b
Session state: LOGGED_IN 1 iSCSI sessions share this FC
session Target: spa-vt Negotiated parameters
RcvDataFieldSize 1024 our_RcvDataFieldSize 1392
MaxBurstSize 0, EMPD: FALSE Random Relative Offset:
FALSE, Sequence-in-order: Yes Statistics: PDU: Command:
0, Response: 10 Target FCID: 0x7902e8 (S_ID of this
session: 0x790100) pWWN: 21:00:00:20:37:67:f7:a2, nWWN:
20:00:00:20:37:67:f7:a2 Session state: LOGGED_IN 1 iSCSI
sessions share this FC session Target: seagate
Negotiated parameters RcvDataFieldSize 1392
our_RcvDataFieldSize 1392 MaxBurstSize 0, EMPD: FALSE
Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 4 vatican# show
iscsi virtual-target configured target: seagate * Port
WWN 21:00:00:20:37:67:f7:a2 == The "*" means you have
both discovery and target session. If there is no "*" in
front of the pWWN, it means you only have discovery
session. Configured node No. of LU mapping: 1 iSCSI LUN:
0000, FC LUN: 0000 No. of advertised interface: 1
GigabitEthernet 2/1 No. of initiators permitted: 1
initiator 10.48.69.238/32 is permitted all initiator
permit is disabled target: spa-vt * Port WWN
50:06:01:60:88:02:a8:2b Secondary PWWN
50:06:01:68:88:02:a8:2b Configured node No. of LU
mapping: 2 iSCSI LUN: 0003, FC LUN: 0020 iSCSI LUN:
0004, FC LUN: 0021 No. of advertised interface: 1
GigabitEthernet 2/1 No. of initiators permitted: 1
initiator 10.48.69.238/32 is permitted all initiator
permit is disabled vatican# show iscsi stats iscsi 2/1
iscsi2/1 5 minutes input rate 16 bits/sec, 2 bytes/sec,
0 frames/sec 5 minutes output rate 16 bits/sec, 2
bytes/sec, 0 frames/sec iSCSI statistics 50932 packets
input, 60370640 bytes Command 3659 pdus, Data-out 41069
pdus, 56533832 bytes, 2476 fragments output 115926
packets, 112863536 bytes Response 3374 pdus (with sense
206), R2T 1897 pdus Data-in 103999 pdus, 106404584 bytes
```

```

vatican# show ips arp interface gigabitethernet 2/1
Protocol Address Age (min) Hardware Addr Type Interface
Internet 10.48.69.200 0 0008.e21e.c7bc ARPA
GigabitEthernet2/1 Internet 10.48.69.201 5
0202.3d30.45c9 ARPA GigabitEthernet2/1 Internet
10.48.69.206 5 0202.3d30.45ce ARPA GigabitEthernet2/1
Internet 10.48.69.209 3 0202.3d30.45d1 ARPA
GigabitEthernet2/1 Internet 10.48.69.226 2
0060.08f6.bc1a ARPA GigabitEthernet2/1 Internet
10.48.69.229 4 0800.209e.edab ARPA GigabitEthernet2/1
Internet 10.48.69.231 1 0002.b3c1.7dab ARPA
GigabitEthernet2/1 Internet 10.48.69.233 0
0010.4200.7d5b ARPA GigabitEthernet2/1 Internet
10.48.69.238 0 0030.6elb.6f51 ARPA GigabitEthernet2/1
Internet 10.48.69.239 10 0030.6elc.a00b ARPA
GigabitEthernet2/1 Internet 10.48.69.241 0
000b.cdaf.b4c3 ARPA GigabitEthernet2/1 Internet
10.48.69.248 4 0202.3d30.45f8 ARPA GigabitEthernet2/1
Internet 10.48.69.252 1 0202.3d30.45fc ARPA
GigabitEthernet2/1 Internet 10.10.2.28 7 0202.3d0a.021c
ARPA GigabitEthernet2/1 vatican# show ips stats tcp
interface gigabitethernet 2/1 detail TCP Statistics for
port GigabitEthernet2/1 TCP send stats 261205 segments,
117757220 bytes 140632 data, 51907 ack only packets 2655
control (SYN/FIN/RST), 0 probes, 2639 window updates
63382 segments retransmitted, 90885612 bytes 63382
retransmitted while on ethernet send queue, 1 packets
split 13327 delayed acks sent TCP receive stats 249073
segments, 72669 data packets in sequence, 61525764 bytes
in sequence 2335 predicted ack, 68605 predicted data 0
bad checksum, 0 multi/broadcast, 0 bad offset 0 no
memory drops, 0 short segments 4396 duplicate bytes, 205
duplicate packets 0 partial duplicate bytes, 0 partial
duplicate packets 0 out-of-order bytes, 2625 out-of-
order packets 0 packet after window, 0 bytes after
window 0 packets after close 80504 acks, 117762158 ack
bytes, 0 ack toomuch, 96274 duplicate acks 0 ack packets
left of snd_una, 7 non-4 byte aligned packets 54199
window updates, 0 window probe 6343 pcb hash miss, 709
no port, 6 bad SYN, 0 paws drops TCP Connection Stats 0
attempts, 2718 accepts, 2718 established 2716 closed, 15
drops, 0 conn drops 3 drop in retransmit timeout, 10
drop in keepalive timeout 0 drop in persist drops, 0
connections drained TCP Miscellaneous Stats 37062
segments timed, 41787 rtt updated 817 retransmit
timeout, 1 persist timeout 22654 keepalive timeout,
22643 keepalive probes TCP SACK Stats 0 recovery
episodes, 0 data packets, 0 data bytes 0 data packets
retransmitted, 0 data bytes retransmitted 0 connections
closed, 0 retransmit timeouts TCP SYN Cache Stats 2720
entries, 2718 connections completed, 0 entries timed out
0 dropped due to overflow, 2 dropped due to RST 0
dropped due to ICMP unreachable, 0 dropped due to bucket
overflow 0 abort due to no memory, 2 duplicate SYN, 183
no-route SYN drop 0 hash collisions, 0 retransmitted TCP
Active Connections Local Address Remote Address State
Send-Q Recv-Q 10.48.69.242:3260 10.48.69.238:49499
ESTABLISH 0 0 10.48.69.242:3260 10.48.69.238:49500
ESTABLISH 0 0 10.48.69.242:3260 10.48.69.238:49501
ESTABLISH 0 0 0.0.0.0:3260 0.0.0.0:0 LISTEN 0 0 vatican#
discover scsi-target local discovery started vatican#
show scsi-target devices vsan 1016 -----
-----
--- VSAN FCID PWWN VENDOR MODEL REV -----

```

```
-----
---- 1016 0x790104 50:06:01:60:88:02:a8:2b DGC RAID 0
0632 1016 0x7902e8 21:00:00:20:37:67:f7:a2 SEAGATE
ST318203FC 0004 vatican# show scsi-target lun vsan 1016
- RAID from DGC (Rev 0632) FCID is 0x790104 in VSAN
1016, PWWN is 50:06:01:60:88:02:a8:2b -----
```

```
-----
---- LUN Capacity Status Serial Number Device-Id (MB) --
-----
```

```
----- 0x0 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b da:05:b6:a9:b6:9d:7b:00
C:1 A:0 T:0 00:00:00:00 0x1 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 6a:66:0d:74:cb:33:88:6c
C:1 A:0 T:0 00:01:00:00 0x2 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b ec:81:5b:a2:c4:43:0d:8a
C:1 A:0 T:0 00:02:00:00 0x3 2147 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b e0:47:b3:be:3b:00:e0:d5
C:1 A:0 T:0 00:03:00:00 0x4 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 00:51:5b:7f:3d:9a:7b:ce
C:1 A:0 T:0 00:04:00:00 0x5 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b ab:b1:ae:80:59:c0:fc:f0
C:1 A:0 T:0 00:05:00:00 0x6 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b ad:91:58:af:d2:fd:c7:47
C:1 A:0 T:0 00:06:00:00 0x7 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b b1:ef:e7:6c:44:5c:16:97
C:1 A:0 T:0 00:07:00:00 0x8 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 84:4f:09:60:30:1e:fc:50
C:1 A:0 T:0 00:08:00:00 0x9 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b aa:6d:e2:0e:ce:7a:cc:21
C:1 A:0 T:0 00:09:00:00 0xa 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 5b:66:67:89:6c:f2:d1:56
C:1 A:0 T:0 00:0a:00:00 0xb 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b a9:32:bd:04:4a:bb:3d:9b
C:1 A:0 T:0 00:0b:00:00 0xc 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b cd:d9:96:f7:57:3f:07:0c
C:1 A:0 T:0 00:0c:00:00 0xd 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 0c:e5:ba:39:68:ca:d6:f0
C:1 A:0 T:0 00:0d:00:00 0xe 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 60:6e:ee:76:98:fc:ab:97
C:1 A:0 T:0 00:0e:00:00 0xf 1074 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 8b:58:80:7b:12:fb:6b:12
C:1 A:0 T:0 00:0f:00:00 0x10 1074 Online f60004202091
C:1 A:0 T:3 60:06:01:60:88:02:a8:2b
a1:2f:6d:b0:c3:d6:c2:46 C:1 A:0 T:0 00:10:00:00 0x11
1074 Online f60004202091 C:1 A:0 T:3
60:06:01:60:88:02:a8:2b 2c:48:c4:74:25:4b:26:dd C:1 A:0
T:0 00:11:00:00 0x20 5369 Online f60004202091 C:1 A:0
T:3 60:06:01:60:88:02:a8:2b ba:18:6a:40:22:40:94:75 C:1
A:0 T:0 00:20:00:00 0x21 3221 Online f60004202091 C:1
A:0 T:3 60:06:01:60:88:02:a8:2b 74:d2:42:9e:31:8d:ff:86
C:1 A:0 T:0 00:21:00:00 - ST318203FC from SEAGATE (Rev
0004) FCID is 0x7902e8 in VSAN 1016, PWWN is
21:00:00:20:37:67:f7:a2 -----
```

```
----- LUN
Capacity Status Serial Number Device-Id (MB) -----
```

```
----- 0x0 18210 Online LRE8091500007039 C:1 A:0
T:3 20:00:00:20:37:67:f7:a2 vatican# show interface
iscsi 2/1 iscsi2/1 is up Hardware is GigabitEthernet
Port WWN is 20:41:00:0c:30:57:5e:c0 Admin port mode is
ISCSI Port mode is ISCSI Speed is 1 Gbps iSCSI initiator
is identified by name Number of iSCSI session: 0, Number
of TCP connection: 0 Configured TCP parameters Local
Port is 3260 PMTU discover is enabled, reset timeout is
```

```
3600 sec Keepalive-timeout is 60 sec Minimum-retransmit-
time is 300 ms Max-retransmissions 4 Sack is disabled
Maximum allowed bandwidth is 500000 kbps Minimum
available bandwidth is 500000 kbps Estimated round trip
time is 10000 usec 5 minutes input rate 16 bits/sec, 2
bytes/sec, 0 frames/sec 5 minutes output rate 16
bits/sec, 2 bytes/sec, 0 frames/sec iSCSI statistics
Input 50920 packets, 60370032 bytes Command 3659 pdus,
Data-out 41069 pdus, 56533832 bytes fragments 2476
Output 115914 packets, 112862928 bytes Response 3374
pdus (with sense 206), R2T 1897 pdus Data-in 103999
pdus, 106404584 bytes vatican# show interface
gigabitethernet 2/1 GigabitEthernet2/1 is up Hardware is
GigabitEthernet, address is 0005.3000.a85a Internet
address is 10.48.69.242/26 MTU 1500 bytes Port mode is
IPS Speed is 1 Gbps Beacon is turned off Auto-
Negotiation is turned on iSCSI authentication: NONE 5
minutes input rate 440 bits/sec, 55 bytes/sec, 0
frames/sec 5 minutes output rate 80 bits/sec, 10
bytes/sec, 0 frames/sec 850346 packets input, 127958119
bytes 6488 multicast frames, 0 compressed 0 input
errors, 0 frame, 0 overrun 0 fifo 289960 packets output,
201600774 bytes, 0 underruns 0 output errors, 0
collisions, 0 fifo 0 carrier errors vatican# show ip
route Codes: C - connected, S - static Default gateway
is 10.48.69.129 C 10.48.69.192/26 is directly connected,
gigabitethernet2-1 C 10.48.69.128/26 is directly
connected, mgmt0
```

[Indicadores do Fabric Manager e do gerenciador de dispositivo](#)

Esta seção fornece capturas de tela do Fabric Manager MDS 1.2(1a) e do gerenciador de dispositivo 1.2(1a).

Diagrama de topologia do Fabric Manager

O gerenciador de dispositivo

Selecione **FC- > LUN** no gerenciador de dispositivo para indicar os pWWN, o LUN ID, e a capacidade de seus LUN.

Selecione **IP > - iSCSI** no gerenciador de dispositivo para indicar as sessões de iSCSI.

[Informações Relacionadas](#)

- [driver iscsi para perguntas mais frequentes HP-UX 11.00](#)
- [Downloads do software do iSCSI de Cisco](#)
- [Pesquisando defeitos o driver iscsi para HP-UX 11.00](#)
- [Suporte Técnico - Cisco Systems](#)