

Configurando o host do iSCSI de Solaris ao MDS/IPS-8

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[Introdução](#)

Os direcionadores do Small Computer Systems Interface over IP (iSCSI) de Cisco são um componente-chave da solução de iSCSI. Esses drivers da iSCSI residem no servidor, onde eles:

- Comandos do iSCSI da interceptação.
- Encapsular os comandos em pacotes IP.
- Reorientar os comandos ao Cisco SN 5420, ao Cisco SN 5428, ao Cisco SN5428-2, ou ao Cisco MDS/IPS-8.

Este documento fornece configurações de amostra para o host do iSCSI de Solaris a Cisco MDS/IPS-8.

[Pré-requisitos](#)

[Requisitos](#)

Certifique-se de atender a estes requisitos antes de tentar esta configuração:

- Instale o driver iscsi que é compatível com sua versão de Solaris e crie então a configuração de iSCSI no Cisco MDS 9000. Refira [driveres iscsi Cisco \(clientes registrados somente\)](#) para a maioria de versão atual do direcionador (solaris-iscsi-3.3.5.tar.Z). Um arquivo de README.txt é incluído no arquivo do FECHO DE CORRER do direcionador (ALCATRÃO). O

arquivo de README.txt contém: Informação do contrato de licença Instalação de driver e instruções de configuração Uma visão geral técnica da arquitetura do driver

- Refira as seções dos requisitos do sistema no [driver iscsi Cisco para Release Note de Sun Solaris](#) para o operating system (OS) e as exigências da correção de programa.
- O driver iscsi Cisco para Sun Solaris é executado somente em máquinas de SPARC. O direcionador não funciona com nenhuns outros tipos de processamento (por exemplo, x86).

Componentes Utilizados

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

- SunOS 5.9, SPARC Ultra-4 E450#`uname -a` SunOS baboon 5.9 Generic sun4u sparc SUNW,Ultra-4
- Driver iscsi Cisco 3.3.3 para Solaris#`pkginfo -l cscoiscsi` PKGINST: CSCCoiscsi NAME: Cisco iSCSI device driver CATEGORY: system ARCH: sparc VERSION: 3.3.3 BASEDIR: /opt/CSCCoiscsi VENDOR: Cisco Systems, Inc. DESC: Cisco iSCSI device driver 3.3.3 PSTAMP: solaris-920030807170521 INSTDATE: Aug 25 2003 23:41 HOTLINE: For contracted support, 1-800-553-2447, Cisco Technical Assistance Center (TAC) EMAIL: For online help, go to <http://www.cisco.com/> STATUS: completely installed FILES: 74 installed pathnames 16 shared pathnames 29 directories 32 executables 2182 blocks used (approx) #`iscsi-ls -v` iSCSI driver version: 3.3.3
- Cisco MDS9216 com Software Release 1.1.2canterbury#`show module` Mod Ports Module-Type Model Status --- ---

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	1.1(2)	1.0	20:01:00:0c:30:6c:24:40	to 20:10:00:0c:30:6c:24:40	2	1.1(2)	0.3	20:41:00:0c:30:6c:24:40	to 20:48:00:0c:30:6c:24:40	Mod	MAC-Address(es)	Serial-Num	---
1	00-0b-be-f8-7f-08	to 00-0b-be-f8-7f-0c	JAB070804QK	2	00-05-30-00-ad-e2	to 00-05-30-00-ad-ee	JAB070806SB	*	this terminal session				

canterbury#`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 1.0.7 loader: version 1.0(3a) kickstart: version 1.1(2) system: version 1.1(2) BIOS compile time: 03/20/03 kickstart image file is: bootflash:/k112 kickstart compile time: 7/13/2003 20:00:00 system image file is: bootflash:/s112 system compile time: 7/13/2003 20:00:00 Hardware RAM 963112 kB bootflash: 500736 blocks (block size 512b) slot0: 0 blocks (block size 512b) canterbury uptime is 16 days 20 hours 51 minute(s) 36 second(s) Last reset at 684726 usecs after Mon Aug 11 13:53:17 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

Consulte as [Convenções de Dicas Técnicas da Cisco](#) para obter mais informações sobre convenções de documentos.

Informações de Apoio

O módulo de armazenamento de IP fornece Host IP alcança ao Fibre Channel (FC) dispositivos de armazenamento. O módulo de armazenamento de IP é um DS-X9308-SMIP que forneça o roteamento transparente do iSCSI. Os Host IP que usam o protocolo iscsi podem

transparentemente alcançar alvos do iSCSI ([FCP] do protocolo FC) na rede FC. O Host IP envia os comandos do iSCSI encapsulados nas unidades de dados do protocolo iscsi (PDU) a uma porta do armazenamento IP do Cisco MDS 9000 sobre uma conexão TCP/IP. As relações do gigabit Ethernet que são configuradas apropriadamente no módulo de armazenamento de IP fornecem a Conectividade. O módulo de armazenamento de IP:

- Permite-o de criar destinos de iscsi virtuais e traça-os aos alvos físicos FC disponíveis no FC SAN
- Apresenta os alvos FC aos Host IP como se os alvos físicos são anexados localmente à rede IP

Cada host do iSCSI que exige o acesso ao armazenamento através do módulo de armazenamento de IP deve ter um driver iscsi compatível instalado. O driver iscsi permite que um host do iSCSI transporte pedidos e respostas do iSCSI sobre uma rede IP com o protocolo iscsi. Da perspectiva de um OS do host, o driver iscsi parece ser um driver de transporte iSCSI similar a um direcionador FC para um canal periférico no host. Cada Host IP aparece como um host FC da perspectiva do dispositivo de armazenamento.

Termine estas etapas para distribuir o iSCSI do Host IP ao dispositivo de armazenamento FC:

- Transporte pedidos e respostas do iSCSI sobre uma rede IP entre anfitriões e o módulo de armazenamento de IP.
- Use o módulo de armazenamento de IP para distribuir pedidos e respostas do iSCSI entre anfitriões em uma rede IP e o dispositivo de armazenamento FC (iSCSI do converso ao FCP e vice-versa).
- Transporte pedidos ou respostas FCP entre o módulo de armazenamento de IP e dispositivos de armazenamento FC.

O módulo de armazenamento de IP não importa alvos FC ao iSCSI à revelia. Você deve configurar dinâmico ou o mapeamento estático de modo que o módulo de armazenamento de IP faça alvos FC disponíveis aos iniciadores de iSCSI. Os alvos estaticamente traçados FC têm um nome configurado quando ambos são configurados. Esta configuração fornece exemplos do mapeamento estático.

Cada vez que isso que o host do iSCSI conecta ao módulo de armazenamento de IP com o mapeamento dinâmico:

- Uma porta nova FC N é criada.
- Os nomes mundiais do nó (nWWNs) e os nomes mundiais da porta (pWWN) atribuídos para esta porta N podem ser diferentes.

Use o método do mapeamento estático se você deve obter o mesmo nWWNs e os pWWN para o iSCSI hospedam cada vez que conecta ao módulo de armazenamento de IP. Você pode usar o mapeamento estático no módulo de armazenamento de IP para alcançar os arranjos de armazenamento inteligentes FC que têm:

- Controle de acesso
- Mapeamento do número de unidade lógica (LUN) e configuração do mascaramento que é baseada nos pWWN ou no nWWNs do iniciador

Especifique estes artigos para controlar o acesso a cada destino de iscsi estático-traçado:

- Uma lista de armazenamento IP move em qual é anunciado
- Uma lista de nomes de nó do iniciador de iSCSI que é permitido o acesso

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. Você pode usar ambos os métodos simultaneamente. O Zoneamento do padrão foi permitido para uma rede de área específica do Virtual Storage (VSAN) nesta configuração. Os módulos de armazenamento de IP 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.

O iniciador de iSCSI pode estaticamente ser definido pelo endereço IP de Um ou Mais Servidores Cisco ICM NT ou pelo nome qualificado do iSCSI (IQN). Uma opção do proxy-iniciador permite a criação dinâmica dos iniciadores de iSCSI em SAN-IOS 1.3 para o Switches de Cisco MDS.

a descoberta de iSCSI ocorre quando um host do iSCSI cria uma sessão de descoberta de iSCSI e perguntas para todos os destinos de iscsi. O módulo de armazenamento de IP retorna somente a lista de destinos de iscsi que as políticas do controle de acesso permitem que o host do iSCSI alcance.

a criação de sessão iSCSI ocorre quando um Host IP inicia uma sessão de iSCSI. O módulo de armazenamento de IP verifica:

- Se o destino de iscsi especificado (na solicitação de login da sessão) é um alvo traçado estática
- Que o nome de nó de iSCSI do Host IP está permitido alcançar o alvo

O início de uma sessão é rejeitado se o Host IP não tem o acesso.

O módulo de armazenamento de IP então:

- Cria uma porta virtual FC N (a porta N pode já existir) para este Host IP
- Faz uma pergunta do Nome do servidor FC para o Fiber Channel ID (FCID) do alvo pWWN FC esse os acessos do Host IP

O módulo de armazenamento de 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. A sessão de iSCSI é aceita se o Nome do servidor retorna o FCID. Se não, a solicitação de login é rejeitada.

[Configurar](#)

Nesta seção, você encontrará informações para configurar os recursos descritos neste documento.

Nota: Use a ferramenta [Command Lookup Tool](#) ([apenas para clientes registrados](#)) para obter mais informações sobre os comandos usados neste documento.

[Diagrama de Rede](#)

Este documento utiliza a seguinte configuração de rede:

[Configurações](#)

Este documento utiliza as seguintes configurações:

- [babuíno \(SunOS 5.9, SPARC E450\)](#)
- [canterbury \(Cisco MDS9216\)](#)

babuíno (SunOS 5.9, SPARC E450)

Altere estes arquivos no host de Solaris:

- /etc/iscsi.conf
- /etc/iscsi.bindings
- /kernel/drv/sd.conf

Isto é configuração de exemplo output: bash-2.05#**cat /etc/iscsi.conf** # iSCSI configuration file - see iscsi.conf(4) # DiscoveryAddress Settings # ----- # Add "DiscoveryAddress=xxx" entries for each iSCSI router instance. # The driver will attempt 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=10.48.69.199 *!--- Configure the IP address of the GE interface that accepts iSCSI !--- requests from your host.* # The DiscoveryAddress Settings can take following entry. # # 1) Authentication Settings # 2) ConnectionTimeout Settings *!--- Other required driver parameters can be changed in the iscsi.conf file. !--- Output is suppressed.* bash-2.05#**cat /etc/iscsi.bindings** # iSCSI bindings, file format version 1.0. # NOTE: this file is automatically maintained by the iSCSI daemon. # You should 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 0 san-fc-jbod-1 0 1 clariion 0 2 clariion-lun-3-4-5 *!--- The iSCSI driver discovery daemon process looks up each discovered target !--- in the /etc/iscsi.bindings file. !--- The corresponding iSCSI target ID is assigned to the target if an entry exists in the file for the target. !--- The smallest available iSCSI target ID !--- is assigned if no entry exists for the target, 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. !--- You can manually edit the file and remove !--- entries so that the obsolete target no longer consumes an iSCSI target ID if a target is no longer available to a host. !--- Add an entry manually if you know the iSCSI target name !--- in advance and want it to be assigned a particular iSCSI target ID. !---*
- Stop the iSCSI driver before you edit the /etc/iscsi.bindings !--- file. Issue the !--- /etc/init.d/iscsi start command to manually start the iSCSI driver. !--- Issue the /etc/init.d/iscsi stop command to manually stop the iSCSI driver. bash-2.05#**cat /kernel/drv/sd.conf** name="sd" class="scsi" class_prop="atapi" target=0 lun=0; name="sd" class="scsi" target=1 lun=0; name="sd" class="scsi" target=1 lun=1; name="sd" class="scsi" target=1 lun=2; # Start iSCSI auto-generated configuration -- do NOT alter

```

or delete this line # You may need to add additional
lines to probe for additional LUNs # or targets. You
SHOULD delete any lines that represent iSCSI targets #
or LUNs that are not used. name="sd" parent="iscsi"
target=0 lun=0; name="sd" parent="iscsi" target=1 lun=0;
name="sd" parent="iscsi" target=1 lun=1; name="sd"
parent="iscsi" target=1 lun=2; name="sd" parent="iscsi"
target=2 lun=3; name="sd" parent="iscsi" target=2 lun=4;
name="sd" parent="iscsi" target=2 lun=5; name="sd"
parent="iscsi" target=2 lun=0; # End iSCSI auto-
generated configuration -- do NOT alter or delete this
line !--- The corresponding entries for these devices
must be made in the standard device configuration files
!--- if the targets that get discovered by the iSCSI
driver at any point in time !--- do not have a
corresponding entry in the standard device configuration
files (for example, /kernel/drv/sd.conf or
/kernel/drv/st.conf). !--- Then reboot the system and
issue the standard Solaris administrative commands !---
(devfsadm, drvconfig) once the system comes up. !--- You
do not need to reboot the system if the entries in the
device configuration files are already present. However,
the standard device configuration !--- commands
(devfsadm, drvconfig, and so on) must be issued to
configure the !--- new iSCSI devices in the system.

```

canterbury (Cisco MDS9216)

```

!--- Output is suppressed. vsan database vsan 777 !---
VSAN 777 has been used for iSCSI targets. !--- Output is
suppressed. vsan database vsan 777 interface fc1/4 vsan
777 interface fc1/7 !--- Output is suppressed. boot
system bootflash:/s112 boot kickstart bootflash:/k112 ip
domain-name cisco.com ip name-server 144.254.10.123 ip
default-gateway 10.48.69.129 ip routing iscsi
authentication none iscsi initiator ip-address
10.48.69.235 !--- Identifies the iSCSI initiator based
on the IP address. A virtual N port is !--- created for
each network interface card (NIC) or network interface.
vsan 777 !--- VSAN 777 has been used for iSCSI targets.
Configure the initiator IP address. !--- Targets via
VSAN 777 are accessible by iSCSI initiators. iscsi
virtual-target name san-fc-jbod-1 pWWN
21:00:00:20:37:67:f7:a2 advertise interface
GigabitEthernet2/1 initiator ip address 10.48.69.235
permit !--- Create a static iSCSI virtual target for LUN
0, 1, and 2 of CLARiION. iscsi virtual-target name
clariion pWWN 50:06:01:60:88:02:a8:2b fc-lun 0000 iscsi-
lun 0000 pWWN 50:06:01:60:88:02:a8:2b fc-lun 0001 iscsi-
lun 0001 pWWN 50:06:01:60:88:02:a8:2b fc-lun 0002 iscsi-
lun 0002 advertise interface GigabitEthernet2/1
initiator ip address 10.48.69.235 permit !--- Create a
static iSCSI virtual target for LUN 3, 4, and 5 of
CLARiION. iscsi virtual-target name clariion-lun-3-4-5
pWWN 50:06:01:60:88:02:a8:2b fc-lun 0003 iscsi-lun 0003
pWWN 50:06:01:60:88:02:a8:2b fc-lun 0004 iscsi-lun 0004
pWWN 50:06:01:60:88:02:a8:2b fc-lun 0005 iscsi-lun 0005
advertise interface GigabitEthernet2/1 initiator ip
address 10.48.69.235 permit !--- Output is suppressed.
switchname canterbury !--- Output is suppressed. zone
default-zone permit vsan 777 !--- Output is suppressed.
interface GigabitEthernet2/1 ip address 10.48.69.199
255.255.255.192 iscsi authentication none switchport mtu
2156 no shutdown !--- Output is suppressed. interface

```

```
fc1/4 no shutdown !--- Output is suppressed. interface
fc1/7 no shutdown interface mgmt0 ip address
10.48.69.156 255.255.255.192 interface iscsi2/1 no
shutdown
```

Verificar

Use esta seção para confirmar se a sua configuração funciona corretamente.

A [Output Interpreter Tool \(apenas para clientes registrados\)](#) (OIT) suporta determinados comandos show. Use a OIT para exibir uma análise da saída do comando show.

- **o netstat - n** — verifica as conexões de TCP no host de Solaris.
- **o iscsi-ls - l** — mostra os dispositivos que estão atualmente disponíveis no host de Solaris.
- **mostre o estado da zona** — Exibe informação de zona.
- **mostre a base de dados dos fcns 777 vsan** — Mostra a informação do Nome do servidor para um VSAN específico.
- **mostre a base de dados do flogi 777 vsan** — Mostra a informação do servidor do início de uma sessão da tela (FLOGI) para um VSAN específico.
- **mostre a sociedade vsan** — Mostra informação de interface para VSAN diferentes.
- **mostre o detalhe do iniciador do iscsi** — Exibe informação de iniciador iSCSI.
- **mostre o detalhe da iscsi-sessão do iniciador do iscsi** — Mostra a informação detalhada para a sessão do iniciador de iSCSI.
- **mostre o detalhe da sessão FCP do iniciador do iscsi** — Mostra a informação detalhada para a sessão FCP do iniciador de iSCSI.
- **mostre a gigabitethernet da relação tcp dos ips stat 2/1 de detalhe** — estatísticas das mostras TCP para uma relação específica GE.
- **mostre o virtual-alvo do iscsi configurado** — Mostra a iSCSI os alvos virtuais que foram configurados no Cisco MDS 9000.
- **mostre o iniciador do iscsi configurado** — Mostra os iniciadores de iSCSI que foram configurados no Cisco MDS 9000.
- **show ips arp interface gigabitethernet 2/1** — Informação do Address Resolution Protocol (ARP) do armazenamento IP das mostras para uma relação específica GE.
- **mostre a dispositivos do scsi alvo 777 vsan** — Mostra dispositivos iscsi para um VSAN específico (para traçar FC LUN ao iSCSI LUN).
- **mostre o iscsi 2/1 int** — Mostra relações do iSCSI.
- **mostre o iscsi 2/1 stats do iscsi** — Mostra estatísticas do iSCSI.
- **mostre o gigabitethernet 2/1 int** — Mostra a relação GE.
- **mostre a rota IP** — Informação da rota IP das mostras.

Troubleshooting

Use esta seção para resolver problemas de configuração.

Procedimento de Troubleshooting

- [saída do babuíno](#)
- [saída de canterbury Cisco MDS9216](#)

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

saída do babuíno

```

bash-2.05# /etc/init.d/iscsi stop iSCSI is stopping. Aug
28 09:42:08 baboon iscsimod: iSCSIs: closing connection
to target 2 at 10.48.69.199 Aug 28 09:42:08 baboon
iscsimod: iSCSIs: closing connection to target 1 at
10.48.69.199 Aug 28 09:42:08 baboon iscsimod: iSCSIs:
closing connection to target 0 at 10.48.69.199 bash-
2.05# /etc/init.d/iscsi start iSCSI is starting. bash-
2.05# bash-2.05# netstat -n TCP: IPv4 Local Address
Remote Address Swind Send-Q Rwind Recv-Q State -----
-----
-- ----- 10.48.69.235.32797 10.48.69.199.3260 65535 0
49172 0 ESTABLISHED 10.48.69.235.32798 10.48.69.199.3260
9379072 0 263152 0 ESTABLISHED 10.48.69.235.32799
10.48.69.199.3260 9379072 0 263152 0 ESTABLISHED Active
UNIX domain sockets Address Type Vnode Conn Local Addr
Remote Addr 30002d95c88 dgram 30000205828 00000000
/tmp/portal /etc/iscsi.bindings # 0 0 san-fc-jbod-1 0 1
clariion bash-2.05# devfsadm Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 0, Cmd 0x4d,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 0, Cmd 0x5e,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 1, Cmd 0x00,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000600
0000000a 00000000 29000000 0000 Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 1, Cmd 0x4d,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 1, Cmd 0x5e,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 2, Cmd 0x00,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000600
0000000a 00000000 29000000 0000 Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 2, Cmd 0x4d,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:45:04 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 1 lun 2, Cmd 0x5e,
Sense: Aug 28 09:45:04 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:45:05 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 0 lun 0, Cmd 0x1c,
Sense: Aug 28 09:45:05 baboon iscsimod: 70000500
0000000a 00000000 35010300 0000 bash-2.05# format output
AVAILABLE DISK SELECTIONS: 0. c0t0d0 <SUN18G cyl 7506
alt 2 hd 19 sec 248> /pci@1f,4000/scsi@3/sd@0,0 1.
c0t1d0 <SUN18G cyl 7506 alt 2 hd 19 sec 248>
/pci@1f,4000/scsi@3/sd@1,0 2. c3t0d0 <SEAGATE-
ST318203FC-0004 cyl 9770 alt 2 hd 12 sec 303>
/iscsipseudo/iscsi@0/sd@0,0 3. c3t1d0 <DGC-RAID0-0632
cyl 5459 alt 2 hd 3 sec 128> /iscsipseudo/iscsi@0/sd@1,0
4. c3t1d1 <DGC-RAID0-0632 cyl 5459 alt 2 hd 3 sec 128>
/iscsipseudo/iscsi@0/sd@1,1 5. c3t1d2 <DGC-RAID0-0632
cyl 5459 alt 2 hd 3 sec 128> /iscsipseudo/iscsi@0/sd@1,2
6. c3t2d0 <drive not available>
/iscsipseudo/iscsi@0/sd@2,0 !--- After you add the
clariion-lun-3-4-5 virtual target on the Cisco MDS 9216.

```



```

/etc/iscsi.bindings 0 0 san-fc-jbod-1 0 1 clariion 0 2
clariion-lun-3-4-5 bash-2.05#bash-2.05# netstat -n TCP:
IPv4 Local Address Remote Address Swind Send-Q Rwind
Recv-Q State -----
----- 10.48.69.235.32797
10.48.69.199.3260 65535 0 49172 0 TIME_WAIT
10.48.69.235.32798 10.48.69.199.3260 9379072 0 263152 0
ESTABLISHED 10.48.69.235.32799 10.48.69.199.3260 9379072
0 263152 0 ESTABLISHED 10.48.69.235.32800
10.48.69.199.3260 65535 0 49108 0 ESTABLISHED
10.48.69.235.32801 10.48.69.199.3260 9379072 0 263152 0
ESTABLISHED Active UNIX domain sockets Address Type
Vnode Conn Local Addr Remote Addr 30002d95c88 dgram
30000205828 00000000 /tmp/portal bash-2.05# devfsadm Aug
28 09:47:58 baboon iscsimod: NOTICE: iSCSIs: bus 0 tgt 2
lun 3, Cmd 0x00, Sense: Aug 28 09:47:58 baboon iscsimod:
70000600 0000000a 00000000 29000000 0000 Aug 28 09:47:58
baboon iscsimod: NOTICE: iSCSIs: bus 0 tgt 2 lun 3, Cmd
0x4d, Sense: Aug 28 09:47:58 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:47:58 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 2 lun 3, Cmd 0x5e,
Sense: Aug 28 09:47:58 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:47:58 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 2 lun 4, Cmd 0x00,
Sense: Aug 28 09:47:58 baboon iscsimod: 70000600
0000000a 00000000 29000000 0000 Aug 28 09:47:58 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 2 lun 4, Cmd 0x5e,
Sense: Aug 28 09:47:58 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:47:58 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 2 lun 5, Cmd 0x00,
Sense: Aug 28 09:47:58 baboon iscsimod: 70000600
0000000a 00000000 29000000 0000 Aug 28 09:47:58 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 2 lun 5, Cmd 0x4d,
Sense: Aug 28 09:47:58 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 Aug 28 09:47:58 baboon
iscsimod: NOTICE: iSCSIs: bus 0 tgt 2 lun 5, Cmd 0x5e,
Sense: Aug 28 09:47:58 baboon iscsimod: 70000500
0000000a 00000000 20000000 0000 And the format output:
0. c0t0d0 <SUN18G cyl 7506 alt 2 hd 19 sec 248>
/pci@1f,4000/scsi@3/sd@0,0 1. c0t1d0 <SUN18G cyl 7506
alt 2 hd 19 sec 248> /pci@1f,4000/scsi@3/sd@1,0 2.
c3t0d0 <SEAGATE-ST318203FC-0004 cyl 9770 alt 2 hd 12 sec
303> /iscsipseudo/iscsi@0/sd@0,0 3. c3t1d0 <DGC-RAID0-
0632 cyl 5459 alt 2 hd 3 sec 128>
/iscsipseudo/iscsi@0/sd@1,0 4. c3t1d1 <DGC-RAID0-0632
cyl 5459 alt 2 hd 3 sec 128> /iscsipseudo/iscsi@0/sd@1,1
5. c3t1d2 <DGC-RAID0-0632 cyl 5459 alt 2 hd 3 sec 128>
/iscsipseudo/iscsi@0/sd@1,2 6. c3t2d0 <drive not
available> /iscsipseudo/iscsi@0/sd@2,0 7. c3t2d3 <DGC-
RAID0-0632 cyl 10920 alt 2 hd 3 sec 128>
/iscsipseudo/iscsi@0/sd@2,3 8. c3t2d4 <DGC-RAID0-0632
cyl 5459 alt 2 hd 3 sec 128> /iscsipseudo/iscsi@0/sd@2,4
9. c3t2d5 <DGC-RAID0-0632 cyl 5459 alt 2 hd 3 sec 128>
/iscsipseudo/iscsi@0/sd@2,5 !--- Issue the iscsi-ls -v
command to see iSCSI driver version. bash-2.05# iscsi-ls
-v iSCSI driver version: 3.3.3 !--- Issue the iscsi-ls -
l or iscsi-ls commands to see the devices that are
currently available. bash-2.05# iscsi-ls -l
*****
***** TARGET NAME san-fc-jbod-1
TARGET ID 0: ADDRESS = 10.48.69.199:3260, 128 STATUS =
Connected 10.48.69.235:32798<->10.48.69.199:3260
8/28/2003 09:43:59 SESSION = ISID 00023d000001 TSID 128
PID 463 LUN 0 = DISK c3t0d0 (sd296) 'SEAGATE-ST318203FC-

```

```
0004' SERIAL# LRE80915 BLOCKS: 35566479 BLOCK SIZE: 512
*****
***** TARGET NAME clariion TARGET ID
1: ADDRESS = 10.48.69.199:3260, 128 STATUS = Connected
10.48.69.235:32799<->10.48.69.199:3260 8/28/2003
09:43:59 SESSION = ISID 00023d000001 TSID 128 PID 464
LUN 0 = DISK c3t1d0 (sd297) 'DGC-RAID 0-0632' SERIAL#
008E080000CL BLOCKS: 2097023 BLOCK SIZE: 512 LUN 1 =
DISK c3t1d1 (sd298) 'DGC-RAID 0-0632' SERIAL#
0127AB0000CL BLOCKS: 2097023 BLOCK SIZE: 512 LUN 2 =
DISK c3t1d2 (sd299) 'DGC-RAID 0-0632' SERIAL#
02E4180000CL BLOCKS: 2097023 BLOCK SIZE: 512
*****
***** TARGET NAME clariion-lun-3-4-5
TARGET ID 2: ADDRESS = 10.48.69.199:3260, 128 STATUS =
Connected 10.48.69.235:32801<->10.48.69.199:3260
8/28/2003 09:46:42 SESSION = ISID 00023d000001 TSID 128
PID 482 LUN 0 : SCSI Inquiry failed - Bad file number
LUN 3 = DISK c3t2d3 (sd371) 'DGC-RAID 0-0632' SERIAL#
03E0A1E330CL BLOCKS: 4194047 BLOCK SIZE: 512 LUN 4 =
DISK c3t2d4 (sd372) 'DGC-RAID 0-0632' SERIAL#
04E9A1E330CL BLOCKS: 2097023 BLOCK SIZE: 512 LUN 5 =
DISK c3t2d5 (sd373) 'DGC-RAID 0-0632' SERIAL#
0594B1E330CL BLOCKS: 2097023 BLOCK SIZE: 512
*****
***** !-- Issue the iscsi-ls -c
command to see detailed statistics for currently
established iSCSI sessions. bash-2.05# iscsi-ls -c
*****
***** TARGET NAME san-fc-jbod-1
TARGET ID 0: ADDRESS = 10.48.69.199:3260, 128 STATUS =
Connected 10.48.69.235:32798<->10.48.69.199:3260
8/28/2003 09:43:59 SESSION = ISID 00023d000001 TSID 128
PID 463 InitialR2T = Yes MaxRecvDataSegmentLength =
131072 Bytes MaxXmitDataSegmentLength = 2048 Bytes
FirstBurstLength = 262144 Bytes MaxBurstLength =
16776192 Bytes LoginTimeout = 15 Seconds AuthTimeout =
45 Seconds ActiveTimeout = 5 Seconds IdleTimeout = 60
Seconds PingTimeout = 5 Seconds HeaderDigest = None
DataDigest = None ConnFailTimeout = Default MultiPath =
None
*****
***** TARGET NAME clariion TARGET ID
1: ADDRESS = 10.48.69.199:3260, 128 STATUS = Connected
10.48.69.235:32799<->10.48.69.199:3260 8/28/2003
09:43:59 SESSION = ISID 00023d000001 TSID 128 PID 464
InitialR2T = Yes MaxRecvDataSegmentLength = 131072 Bytes
MaxXmitDataSegmentLength = 2048 Bytes FirstBurstLength =
262144 Bytes MaxBurstLength = 16776192 Bytes
LoginTimeout = 15 Seconds AuthTimeout = 45 Seconds
ActiveTimeout = 5 Seconds IdleTimeout = 60 Seconds
PingTimeout = 5 Seconds HeaderDigest = None DataDigest =
None ConnFailTimeout = Default MultiPath = None
*****
***** TARGET NAME clariion-lun-3-4-5
TARGET ID 2: ADDRESS = 10.48.69.199:3260, 128 STATUS =
Connected 10.48.69.235:32801<->10.48.69.199:3260
8/28/2003 09:46:42 SESSION = ISID 00023d000001 TSID 128
PID 482 InitialR2T = Yes MaxRecvDataSegmentLength =
131072 Bytes MaxXmitDataSegmentLength = 2048 Bytes
FirstBurstLength = 262144 Bytes MaxBurstLength =
16776192 Bytes LoginTimeout = 15 Seconds AuthTimeout =
45 Seconds ActiveTimeout = 5 Seconds IdleTimeout = 60
Seconds PingTimeout = 5 Seconds HeaderDigest = None
```

```
DataDigest = None ConnFailTimeout = Default MultiPath =
None
*****
***** !--- You can see these iSCSI
connections in the /var/adm/messages or dmesg: Aug 28
09:43:59 baboon iscsid[454]: [ID 702911 daemon.notice]
version 3.3.3 ( 7-Aug-2003) Aug 28 09:43:59 baboon
iscsid[463]: [ID 702911 daemon.notice] iSCSI normal
session to san-fc-jbod-1 established Aug 28 09:43:59
baboon iscsid[463]: [ID 702911 daemon.notice] logged
into target san-fc-jbod-1 -- id 0, Initiator sid
00023d000001, target sid 128 Aug 28 09:43:59 baboon
iscsid[464]: [ID 702911 daemon.notice] iSCSI normal
session to clariion established Aug 28 09:43:59 baboon
iscsid[464]: [ID 702911 daemon.notice] logged into
target clariion -- id 1, Initiator sid 00023d000001,
target sid 128 Aug 28 09:45:23 baboon iscsi: [ID 318680
kern.notice] NOTICE: tran_start disabled to bus 0,
target 2, lun 0 Aug 28 09:46:42 baboon iscsid[482]: [ID
702911 daemon.notice] iSCSI normal session to clariion-
lun-3-4-5 established Aug 28 09:46:42 baboon
iscsid[482]: [ID 702911 daemon.notice] logged into
target clariion-lun-3-4-5 -- id 2, Initiator sid
00023d000001, target sid 128
```

saída de canterbury Cisco MDS9216

```
canterbury#show zone status VSAN: 1 default-zone: permit
distribute: active only Interop: Off Full Zoning
Database : Zonesets:0 Zones:0 Aliases: 0 Active Zoning
Database : Database Not Available Status: Deactivation
completed at Fri Aug 22 11:47:53 2003 VSAN: 777 default-
zone: permit distribute: active only Interop: Off. Full
Zoning Database : Zonesets:0 Zones:0 Aliases: 0 Active
Zoning Database : Database Not Available Status: Default
zoning policy changed to permit at Mon Aug 25 20:19:31
2003 !--- VSAN 777 has been used for this configuration,
and default-zone behavior has been !--- set to permit.
canterbury#show flogi da vsan 777 -----
-----
INTERFACE VSAN FCID PORT NAME NODE NAME -----
-----
--- fc1/4 777 0x7000e8 21:00:00:20:37:67:f7:a2
20:00:00:20:37:67:f7:a2 fc1/7 777 0x700103
50:06:01:60:88:02:a8:2b 50:06:01:60:11:02:a8:2b iscsi2/1
777 0x700100 21:02:00:0c:30:6c:24:42
21:01:00:0c:30:6c:24:42 Total number of flogi = 3.
canterbury#show fcns database vsan 777 VSAN 777: -----
-----
----- FCID TYPE PWWN (VENDOR) FC4-TYPE:FEATURE ---
-----
----- 0x7000e8 NL 21:00:00:20:37:67:f7:a2
(Seagate) scsi-fcp:target 0x700100 N
21:02:00:0c:30:6c:24:42 (Cisco) scsi-fcp:init isc..w
0x700103 N 50:06:01:60:88:02:a8:2b (Clariion) scsi-
fcp:target Total number of entries = 3 !--- FCID
OX700100 is the virtual N port (HBA) for the iSCSI host.
canterbury#show fcns database detail vsan 777 -----
----- VSAN:777 FCID:0x7000e8 -----
----- 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 :20:04:00:0c:30:6c:24:40 hard-addr
```

```

:0x000000 ----- VSAN:777
FCID:0x700100 ----- port-wwn (vendor)
:21:02:00:0c:30:6c:24:42 (Cisco) node-wwn
:21:01:00:0c:30:6c:24:42 class :2,3 node-ip-addr
:10.48.69.235 ipa :ff ff ff ff ff ff ff fc4-
types:fc4_features:scsi-fcp:init iscsi-gw !--- Virtual N
port for host. symbolic-port-name : symbolic-node-name
:10.48.69.235 port-type :N port-ip-addr :0.0.0.0 fabric-
port-wwn :20:41:00:0c:30:6c:24:40 hard-addr :0x000000 --
----- VSAN:777 FCID:0x700103 -----
----- 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 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:30:6c:24:40 hard-addr
:0x000000 Total number of entries = 3 canterbury#show
vsan membership vsan 777 interfaces: fc1/4 fc1/7
canterbury#show iscsi initiator iSCSI Node name is
10.48.69.235 iSCSI Initiator name: iqn.1987-
05.com.cisco:01.894b196796e7 iSCSI alias name: baboon
Node WWN is 21:01:00:0c:30:6c:24:42 (dynamic) Member of
vsans: 777 Number of Virtual n_ports: 1 Virtual Port WWN
is 21:02:00:0c:30:6c:24:42 (dynamic) Interface iSCSI
2/1, Portal group tag: 0x80 VSAN ID 777, FCID 0x700100
canterbury#show iscsi initiator detail iSCSI Node name
is 10.48.69.235 iSCSI Initiator name: iqn.1987-
05.com.cisco:01.894b196796e7 iSCSI alias name: baboon
Node WWN is 21:01:00:0c:30:6c:24:42 (dynamic) Member of
vsans: 777 Number of Virtual n_ports: 1 Virtual Port WWN
is 21:02:00:0c:30:6c:24:42 (dynamic) Interface iSCSI
2/1, Portal group tag is 0x80 VSAN ID 777, FCID 0x700100
2 FC sessions, 3 iSCSI sessions iSCSI session details
Target: san-fc-jbod-1 Statistics: PDU: Command: 24,
Response: 24 Bytes: TX: 3504, RX: 0 Number of
connection: 1 TCP parameters Local 10.48.69.199:3260,
Remote 10.48.69.235:32798 Path MTU: 1500 bytes
Retransmission timeout: 300 ms Round trip time: Smoothed
4 ms, Variance: 6 Advertized window: Current: 256 KB,
Maximum: 257 KB, Scale: 3 Peer receive window: Current:
9159 KB, Maximum: 9159 KB, Scale: 8 Congestion window:
Current: 11 KB Target: clariion-lun-3-4-5 Statistics:
PDU: Command: 73, Response: 73 Bytes: TX: 9740, RX: 0
Number of connection: 1 TCP parameters Local
10.48.69.199:3260, Remote 10.48.69.235:32801 Path MTU:
1500 bytes Retransmission timeout: 300 ms Round trip
time: Smoothed 7 ms, Variance: 13 Advertized window:
Current: 256 KB, Maximum: 257 KB, Scale: 3 Peer receive
window: Current: 9159 KB, Maximum: 9159 KB, Scale: 8
Congestion window: Current: 11 KB Target: clariion
Statistics: PDU: Command: 101, Response: 101 Bytes: TX:
14828, RX: 0 Number of connection: 1 TCP parameters
Local 10.48.69.199:3260, Remote 10.48.69.235:32799 Path
MTU: 1500 bytes Retransmission timeout: 300 ms Round
trip time: Smoothed 2 ms, Variance: 1 Advertised window:
Current: 256 KB, Maximum: 257 KB, Scale: 3 Peer receive
window: Current: 9159 KB, Maximum: 9159 KB, Scale: 8
Congestion window: Current: 11 KB FCP Session details
Target FCID: 0x7000e8 (S_ID of this session: 0x700100)
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: san-fc-jbod-1
Negotiated parameters RcvDataFieldSize 2048

```

```
our_RcvDataFieldSize 2048 MaxBurstSize 0, EMPD: FALSE
Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 24 Target FCID:
0x700103 (S_ID of this session: 0x700100) pWWN:
50:06:01:60:88:02:a8:2b, nWWN: 50:06:01:60:11:02:a8:2b
Session state: LOGGED_IN 2 iSCSI sessions share this FC
session Target: clariion-lun-3-4-5 Target: clariion
Negotiated parameters RcvDataFieldSize 1024
our_RcvDataFieldSize 2048 MaxBurstSize 0, EMPD: FALSE
Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 174
canterbury#show iscsi initiator iscsi-session detail
iSCSI Node name is 10.48.69.235 iSCSI Initiator name:
iqn.1987-05.com.cisco:01.894b196796e7 iSCSI alias name:
baboon Node WWN is 21:01:00:0c:30:6c:24:42 (dynamic)
Member of vsans: 777 Number of Virtual n_ports: 1
Virtual Port WWN is 21:02:00:0c:30:6c:24:42 (dynamic)
Interface iSCSI 2/1, Portal group tag is 0x80 VSAN ID
777, FCID 0x700100 2 FC sessions, 3 iSCSI sessions iSCSI
session details Target: san-fc-jbod-1 Statistics: PDU:
Command: 24, Response: 24 Bytes: TX: 3504, RX: 0 Number
of connection: 1 TCP parameters Local 10.48.69.199:3260,
Remote 10.48.69.235:32798 Path MTU: 1500 bytes
Retransmission timeout: 300 ms Round trip time: Smoothed
4 ms, Variance: 6 Advertized window: Current: 256 KB,
Maximum: 257 KB, Scale: 3 Peer receive window: Current:
9159 KB, Maximum: 9159 KB, Scale: 8 Congestion window:
Current: 11 KB Target: clariion-lun-3-4-5 Statistics:
PDU: Command: 73, Response: 73 Bytes: TX: 9740, RX: 0
Number of connection: 1 TCP parameters Local
10.48.69.199:3260, Remote 10.48.69.235:32801 Path MTU:
1500 bytes Retransmission timeout: 300 ms Round trip
time: Smoothed 7 ms, Variance: 13 Advertized window:
Current: 256 KB, Maximum: 257 KB, Scale: 3 Peer receive
window: Current: 9159 KB, Maximum: 9159 KB, Scale: 8
Congestion window: Current: 11 KB Target: clariion
Statistics: PDU: Command: 101, Response: 101 Bytes: TX:
14828, RX: 0 Number of connection: 1 TCP parameters
Local 10.48.69.199:3260, Remote 10.48.69.235:32799 Path
MTU: 1500 bytes Retransmission timeout: 300 ms Round
trip time: Smoothed 2 ms, Variance: 1 Advertized window:
Current: 256 KB, Maximum: 257 KB, Scale: 3 Peer receive
window: Current: 9159 KB, Maximum: 9159 KB, Scale: 8
Congestion window: Current: 11 KB canterbury#show iscsi
initiator fcp-session detail iSCSI Node name is
10.48.69.235 iSCSI Initiator name: iqn.1987-
05.com.cisco:01.894b196796e7 iSCSI alias name: baboon
Node WWN is 21:01:00:0c:30:6c:24:42 (dynamic) Member of
vsans: 777 Number of Virtual n_ports: 1 Virtual Port WWN
is 21:02:00:0c:30:6c:24:42 (dynamic) Interface iSCSI
2/1, Portal group tag is 0x80 VSAN ID 777, FCID 0x700100
2 FC sessions, 3 iSCSI sessions FCP Session details
Target FCID: 0x7000e8 (S_ID of this session: 0x700100)
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: san-fc-jbod-1
Negotiated parameters RcvDataFieldSize 2048
our_RcvDataFieldSize 2048 MaxBurstSize 0, EMPD: FALSE
Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 24 Target FCID:
0x700103 (S_ID of this session: 0x700100) pWWN:
50:06:01:60:88:02:a8:2b, nWWN: 50:06:01:60:11:02:a8:2b
Session state: LOGGED_IN 2 iSCSI sessions share this FC
session Target: clariion-lun-3-4-5 Target: clariion
```

```
Negotiated parameters RcvDataFieldSize 1024
our_RcvDataFieldSize 2048 MaxBurstSize 0, EMPD: FALSE
Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 174
canterbury#show ips stats tcp interface gigabitethernet
2/1 detail TCP Statistics for port GigabitEthernet2/1
TCP send stats 28621 segments, 4231096 bytes 15842 data,
12335 ack only packets 168 control (SYN/FIN/RST), 0
probes, 210 window updates 66 segments retransmitted,
63724 bytes 66 retransmitted while on ethernet send
queue, 1127 packets split 480 delayed acks sent TCP
receive stats 36728 segments, 12911 data packets in
sequence, 2668162 bytes in sequence 0 predicted ack,
12050 predicted data 0 bad checksum, 0 multi/broadcast,
0 bad offset 0 no memory drops, 0 short segments 48
duplicate bytes, 1 duplicate packets 0 partial duplicate
bytes, 0 partial duplicate packets 0 out-of-order bytes,
164 out-of-order packets 0 packet after window, 0 bytes
after window 0 packets after close 12621 acks, 3486850
ack bytes, 0 ack toomuch, 11652 duplicate acks 0 ack
packets left of snd_una, 6 non-4 byte aligned packets
8333 window updates, 0 window probe 624 pcb hash miss,
79 no port, 0 bad SYN, 0 paws drops TCP Connection Stats
0 attempts, 231 accepts, 231 established 227 closed, 14
drops, 0 conn drops 0 drop in retransmit timeout, 2 drop
in keepalive timeout 0 drop in persist drops, 0
connections drained TCP Miscellaneous Stats 11761
segments timed, 12027 rtt updated 51 retransmit timeout,
304 persist timeout 10452 keepalive timeout, 10450
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 233 entries, 231
connections completed, 1 entries timed out 0 dropped due
to overflow, 1 dropped due to RST 0 dropped due to ICMP
unreach, 0 dropped due to bucket overflow 0 abort due to
no memory, 4 duplicate SYN, 76 no-route SYN drop 0 hash
collisions, 0 retransmitted TCP Active Connections Local
Address Remote Address State Send-Q Recv-Q
10.48.69.199:3260 10.48.69.235:32798 ESTABLISH 0 0
10.48.69.199:3260 10.48.69.235:32799 ESTABLISH 0 0
10.48.69.199:3260 10.48.69.235:32800 ESTABLISH 0 0
10.48.69.199:3260 10.48.69.235:32801 ESTABLISH 0 0
0.0.0.0:3260 0.0.0.0:0 LISTEN 0 0 canterbury#show iscsi
virtual-target configured target: san-fc-jbod-1 * Port
WWN 21:00:00:20:37:67:f7:a2 !--- The * means that you
have both discovery and target sessions. !--- You only
have a discovery session if there is no * in front of
the pWWN. Configured node No. of advertised interface: 1
GigabitEthernet 2/1 No. of initiators permitted: 3
initiator iqn.1987-
05.com.cisco.02.89451e183581.mcandegew2k1 is permitted
initiator 10.48.69.235/32 is permitted initiator
10.48.69.232/32 is permitted all initiator permit is
disabled target: clariion * Port WWN
50:06:01:60:88:02:a8:2b Configured node No. of LU
mapping: 3 iSCSI LUN: 0000, FC LUN: 0000 iSCSI LUN:
0001, FC LUN: 0001 iSCSI LUN: 0002, FC LUN: 0002 No. of
advertised interface: 1 GigabitEthernet 2/1 No. of
initiators permitted: 1 initiator 10.48.69.235/32 is
permitted all initiator permit is disabled target:
clariion-lun-3-4-5 * Port WWN 50:06:01:60:88:02:a8:2b
Configured node No. of LU mapping: 3 iSCSI LUN: 0003, FC
LUN: 0003 iSCSI LUN: 0004, FC LUN: 0004 iSCSI LUN: 0005,
```

```

FC LUN: 0005 No. of advertised interface: 1
GigabitEthernet 2/1 No. of initiators permitted: 1
initiator 10.48.69.235/32 is permitted all initiator
permit is disabled canterbury#show iscsi initiator
configured iSCSI Node name is 10.48.69.235 Member of
vsans: 777 canterbury#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
10.48.69.206 7 0005.9ba6.95ff ARPA GigabitEthernet2/1
Internet 10.48.69.209 4 0009.7c60.561f ARPA
GigabitEthernet2/1 Internet 10.48.69.226 0
0060.08f6.bcla ARPA GigabitEthernet2/1 Internet
10.48.69.229 15 0800.209e.edab ARPA GigabitEthernet2/1
Internet 10.48.69.233 0 0010.4200.7d5b ARPA
GigabitEthernet2/1 Internet 10.48.69.235 9
0800.20b6.6559 ARPA GigabitEthernet2/1 Internet
10.48.69.238 5 0030.6e1b.6f51 ARPA GigabitEthernet2/1
Internet 10.48.69.239 12 0030.6e1c.a00b ARPA
GigabitEthernet2/1 Internet 10.48.69.248 5
0202.3d30.45f8 ARPA GigabitEthernet2/1 Internet
10.48.69.252 1 0202.3d30.45fc ARPA GigabitEthernet2/1
Internet 10.10.2.28 9 0202.3d0a.021c ARPA
GigabitEthernet2/1 canterbury#show scsi-target devices
vsan 777 -----
----- VSAN FCID PWWN VENDOR
MODEL REV -----
----- 777 0x7000e8
21:00:00:20:37:67:f7:a2 SEAGATE ST318203FC 0004 777
0x700103 50:06:01:60:88:02:a8:2b DGC RAID 0 0632
canterbury#show scsi-target lun vsan 777 - ST318203FC
from SEAGATE (Rev 0004) FCID is 0x7000e8 in VSAN 777,
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 - RAID from DGC (Rev
0632) FCID is 0x700103 in VSAN 777, 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 canterbury#show interface iscsi 2/1
iscsi2/1 is up Hardware is GigabitEthernet Port WWN is
20:41:00:0c:30:6c:24:40 Admin port mode is ISCSI Port
mode is ISCSI Speed is 1 Gbps iSCSI initiator is
identified by name Number of iSCSI session: 4, Number of
TCP connection: 4 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 800000 kbps Minimum available
bandwidth is 800000 kbps Estimated round trip time is
100000 usec 5 minutes input rate 168 bits/sec, 21
bytes/sec, 0 frames/sec 5 minutes output rate 728
bits/sec, 91 bytes/sec, 0 frames/sec iSCSI statistics
Input 12209 packets, 2668348 bytes Command 3282 pdus,
Data-out 1038 pdus, 1989664 bytes Output 14762 packets,
3486596 bytes Response 3059 pdus (with sense 77), R2T
153 pdus Data-in 3215 pdus, 2744116 bytes
canterbury#show iscsi stats iscsi 2/1 iscsi2/1 5 minutes
input rate 168 bits/sec, 21 bytes/sec, 0 frames/sec 5
minutes output rate 728 bits/sec, 91 bytes/sec, 0
frames/sec iSCSI statistics 12209 packets input, 2668348
bytes Command 3282 pdus, Data-out 1038 pdus, 1989664
bytes, 0 fragments output 14762 packets, 3486596 bytes
Response 3059 pdus (with sense 77), R2T 153 pdus Data-in
3215 pdus, 2744116 bytes canterbury#show interface
gigabitethernet 2/1 GigabitEthernet2/1 is up Hardware is
GigabitEthernet, address is 0005.3000.ade6 Internet
address is 10.48.69.199/26 MTU 2156 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 392 bits/sec, 49 bytes/sec, 0
frames/sec 5 minutes output rate 64 bits/sec, 8
bytes/sec, 0 frames/sec 126128 packets input, 12476013
bytes 2 multicast frames, 0 compressed 0 input errors, 0
frame, 0 overrun 0 fifo 43443 packets output, 6256174
bytes, 0 underruns 0 output errors, 0 collisions, 0 fifo
0 carrier errors canterbury#show ip route Codes: C -
connected, S - static Gateway of last resort 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
```


Saída do Fabric Manager e do gerenciador de dispositivo

Esta seção fornece o exemplo de saída do Fabric Manager MDS 1.1(2) e do gerenciador de dispositivo 1.1.(2).

Diagrama de topologia do Fabric Manager

Este é um screen shot da amostra da opinião do gerenciador de dispositivo 1.1(2) em canterbury.

1. Selecione **FC > LUN** na janela de gerenciador do dispositivo para indicar os pWWN, LUN ID, e a capacidade de seus LUN.
2. Selecione **IP > iSCSI** para indicar as sessões de iSCSI.

Informações Relacionadas

- [Suporte por tecnologia do Small Computer Systems Interface over IP \(iSCSI\)](#)
- [Driveres iscsi Cisco \(clientes registrados somente\)](#)
- [Release Note para o driver iscsi de Cisco Sun Solaris](#)
- [Troubleshooting do iSCSI Driver para Solaris](#)
- [Suporte Técnico e Documentação - Cisco Systems](#)