

Configurar el host del iSCSI de Solaris al MDS/IPS-8

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[Introducción](#)

Los drivers del Small Computer Systems Interface over IP (iSCSI) de Cisco son un componente crucial de la solución iSCSI. Estos drivers iSCSI residen en el servidor, donde:

- Comandos del iSCSI de la interceptación.
- Encapsule los comandos en los paquetes del IP.
- Reoriente los comandos al Cisco SN 5420, al Cisco SN 5428, a Cisco SN5428-2, o a Cisco MDS/IPS-8.

Este documento proporciona las configuraciones de muestra para el host del iSCSI de Solaris a Cisco MDS/IPS-8.

[prerrequisitos](#)

[Requisitos](#)

Asegúrese de cumplir estos requisitos antes de intentar esta configuración:

- Instale el driver iSCSI que es compatible con su versión de Solaris y después cree la configuración de iSCSI en el Cisco MDS 9000. Refiera a los [driveres iSCSI de Cisco \(clientes registrados solamente\)](#) para la mayoría de la versión actual del driver (solaris-iscsi-3.3.5.tar.Z). Un archivo de README.txt se incluye en el archivo de la CREMALLERA del

driver (ALQUITRÁN). El archivo de README.txt contiene: Información del acuerdo de licencia Instalación del driver y instrucciones de configuración Una descripción técnica general de la arquitectura del driver

- Refiera a las secciones de los requisitos del sistema en [driver iSCSI de Cisco para los Release Note de Sun Solaris](#) para el operating system (OS) y los requisitos de la corrección.
- El driver iSCSI de Cisco para Sun Solaris se ejecuta solamente en las máquinas de SPARC. El driver no funciona con ninguna otra tipos de procesador (por ejemplo, x86).

Componentes Utilizados

La información que contiene este documento se basa en las siguientes versiones de software y hardware.

- SunOs 5.9, SPARC Ultra-4 E450#`uname -a` SunOS baboon 5.9 Generic sun4u sparc SUNW,Ultra-4
- Driver iSCSI de Cisco 3.3.3 para Solaris#`pkginfo -l cscoiscsi` PKGINST: CSCoiscsi NAME: Cisco iSCSI device driver CATEGORY: system ARCH: sparc VERSION: 3.3.3 BASEDIR: /opt/CSCoiscsi 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 con el Software Release 1.1.2canterbury#`show module` Mod Ports Module-Type Model Status --- --- 1 16 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)

La información que contiene este documento se creó a partir de los dispositivos en un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si la red está funcionando, asegúrese de haber comprendido el impacto que puede tener cualquier comando.

Convenciones

Consulte [Convenciones de Consejos Técnicos Cisco](#) para obtener más información sobre las convenciones del documento.

Antecedentes

Módulo de almacenamiento de IP proporciona los host IP acceso a los dispositivos de

almacenamiento del Fibre Channel (FC). Módulo de almacenamiento de IP es un DS-X9308-SMIP que proporciona el encaminamiento transparente del iSCSI. Los host IP que utilizan el protocolo iSCSI pueden transparentemente acceder a los blancos del iSCSI ([FCP] del protocolo FC) en la red FC. El host IP envía los comandos del iSCSI encapsulados en las unidades de datos del protocolo iSCSI (PDU) a un puerto del almacenamiento IP del Cisco MDS 9000 sobre una conexión TCP/IP. Interfaces del Gigabit Ethernet (GE) que se configuran apropiadamente en el módulo de almacenamiento de IP la conectividad del proporcionar. Módulo de almacenamiento de IP:

- Le permite crear los destinos iSCSI virtuales y los asocia a los blancos físicos FC disponibles en el FC SAN
- Presenta los blancos FC a los host IP como si los blancos físicos localmente se asocian a la red del IP

Cada host del iSCSI que requiere el acceso al almacenamiento vía el módulo de almacenamiento de IP debe tener un driver iSCSI compatible instalado. El driver iSCSI permite que un host del iSCSI transporte las peticiones y las respuestas del iSCSI sobre una red del IP con el protocolo iSCSI. Desde la perspectiva de un host OS, el driver iSCSI aparece ser un driver de transporte iSCSI similar a un driver FC para un canal periférico en el host. Cada host IP aparece como host FC desde la perspectiva del dispositivo de almacenamiento.

Complete estos pasos para rutear el iSCSI del host IP al dispositivo de almacenamiento FC:

- Transporte las peticiones y las respuestas del iSCSI sobre una red del IP entre los host y el módulo de almacenamiento de IP.
- Utilice el módulo de almacenamiento de IP para rutear las peticiones y las respuestas del iSCSI entre los host en una red del IP y el dispositivo de almacenamiento FC (iSCSI del convertido al FCP y vice versa).
- Transporte las peticiones o las respuestas FCP entre el módulo de almacenamiento de IP y los dispositivos de almacenamiento FC.

El módulo de almacenamiento de IP no importa los blancos FC al iSCSI por abandono. Usted debe configurar dinámico o la correlación estática de modo que el módulo de almacenamiento de IP ponga los blancos FC a disposición de los iniciadores iSCSI. Los blancos estáticamente asociados FC tienen un nombre configurado cuando se configuran ambos. Esta configuración proporciona los ejemplos de la correlación estática.

Cada vez que eso que el host del iSCSI conecta con el módulo de almacenamiento de IP con la correspondencia dinámica:

- Se crea un nuevo puerto FC N.
- Los nombres mundiales del nodo (nWWNs) y los nombres mundiales del puerto (pWWNs) afectados por un aparato para este puerto N pueden ser diferentes.

Utilice el método de la correlación estática si usted debe obtener el mismo nWWNs y el pWWNs para el iSCSI recibe cada vez que conecta con el módulo de almacenamiento de IP. Usted puede utilizar la correlación estática en el módulo de almacenamiento de IP para acceder a los conjuntos de almacenamiento inteligentes FC que tienen:

- Control de acceso
- Asignación del número de unidad lógica (LUN) y configuración de enmascaramiento que se basan en el pWWNs o el nWWNs del iniciador

Especifique estos elementos para controlar el acceso a cada destino iSCSI estático-asociado:

- Una lista de almacenamiento IP vira hacia el lado de babor en cuál él se hace publicidad
- Una lista de Nombres del nodo del iniciador iSCSI que no se prohíben el acceso

El FC Establecimiento de zonas-basó el control de acceso y el control de acceso iSCSI-basado es los dos mecanismos por los cuales el control de acceso se puede proporcionar para el iSCSI. Usted puede utilizar ambos métodos simultáneamente. Han permitido al Establecimiento de zonas predeterminado para una red de área específica del almacenamiento virtual (VSAN) en esta configuración. Los módulos de almacenamiento IP utilizan las listas nombre-basadas y FC Establecimiento de zonas-basadas del nodo iSCSI de control de acceso para aplicar el control de acceso durante el descubrimiento iSCSI y la creación de sesión iSCSI.

El iniciador iSCSI se puede definir estáticamente por la dirección IP o por el nombre completo del iSCSI (IQN). Una opción del proxy-**iniciador** habilita la creación dinámica de los iniciadores iSCSI en SAN-IO 1.3 para el Switches de Cisco MDS.

el descubrimiento iSCSI ocurre cuando un host del iSCSI crea una sesión de detección de iSCSI y las interrogaciones para todos los destinos iSCSI. Módulo de almacenamiento de IP devuelve solamente la lista de destinos iSCSI que las directivas del control de acceso permitan que el host del iSCSI acceda.

la creación de sesión iSCSI ocurre cuando un host IP inicia a una sesión iSCSI. Módulo de almacenamiento de IP verifica:

- Si el destino iSCSI especificado (en el pedido de registro de la sesión) es una blanco asociada los parásitos atmosféricos
- Que el nombre de nodo iSCSI del host IP está permitido acceder la blanco

Se rechaza el login si el host IP no tiene acceso.

Módulo de almacenamiento de IP entonces:

- Crea un puerto virtual FC N (el puerto N puede existir ya) para este host IP
- Hace una interrogación del Servidor de nombres FC para el Canal de fibra ID (FCID) del pWWN de la blanco FC que el host IP accede

Módulo de almacenamiento de IP utiliza el pWWN del puerto virtual del host IP N como el solicitante de la interrogación del Servidor de nombres. Así, el Servidor de nombres hace una consulta impuesta por zona para el pWWN y responde a la interrogación. Validan a la sesión iSCSI si el Servidor de nombres vuelve el FCID. Si no, se rechaza el pedido de registro.

[Configurar](#)

En esta sección encontrará la información para configurar las funciones descritas en este documento.

Nota: Use la herramienta [Command Lookup Tool \(clientes registrados solamente\)](#) para encontrar más información sobre los comandos usados en este documento.

[Diagrama de la red](#)

En este documento, se utiliza esta configuración de red:

[Configuraciones](#)

En este documento, se utilizan estas configuraciones:

- [babuino \(SunOs 5.9, SPARC E450\)](#)
- [Cantorbery \(Cisco MDS9216\)](#)

babuino (SunOs 5.9, SPARC E450)

Modifique estos archivos en el host de Solaris:

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

Esto es configuración de muestra hecha salir: 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="ataapi" 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.

```

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

Verificación

Use esta sección para confirmar que su configuración funciona correctamente.

[La herramienta Output Interpreter Tool \(clientes registrados solamente\)](#) (OIT) soporta ciertos comandos show. Utilice la OIT para ver un análisis del resultado del comando show.

- **el netstat - n** — verifica las conexiones TCP en el host de Solaris.
- **iscsi-ls - l** — muestra los dispositivos que están actualmente disponibles en el host de Solaris.
- **muestre el estatus de la zona** — Muestra información de la zona.
- **muestre la base de datos vsan 777 del fcns** — Muestra la información del Servidor de nombres para un VSAN específico.
- **muestre la base de datos vsan 777 del flogi** — Información del servidor del login de la tela de las demostraciones (FLOGI) para un VSAN específico.
- **muestre la calidad de miembro del vsan** — Muestra información de la interfaz para diversos VSAN.
- **muestre el detalle del iniciador del iscsi** — Muestra información del iniciador iSCSI.
- **muestre el detalle de la iscsi-sesión del iniciador del iscsi** — Muestra la información detallada para la sesión del iniciador de iSCSI.
- **muestre el detalle del fcp session del iniciador del iscsi** — Muestra la información detallada para el iniciador iSCSI de sesión FCP.
- **muestre a gigabitethernet de la interfaz tcp de las estadísticas de ips 2/1 detalle** — las estadísticas de las demostraciones TCP para una interfaz específica de GE.
- **muestre la virtual-blanco del iscsi configurada** — Muestra a iSCSI los blancos virtuales que se han configurado en el Cisco MDS 9000.
- **muestre el iniciador del iscsi configurado** — Muestra los iniciadores iSCSI que se han configurado en el Cisco MDS 9000.
- **show ips arp interface gigabitethernet 2/1** — Información del Address Resolution Protocol (ARP) del almacenamiento IP de las demostraciones para una interfaz específica de GE.
- **muestre los dispositivos vsan 777 del scsi-target** — Muestra los dispositivos iSCSI para un VSAN específico (asociar FC LUN al iSCSI LUN).
- **muestre el iscsi 2/1 internacional** — Muestra las interfaces del iSCSI.
- **muestre el iscsi 2/1 stats del iscsi** — Muestra las estadísticas del iSCSI.
- **muestre el gigabitethernet 2/1 internacional** — Muestra la interfaz de GE.
- **ruta de IP de la demostración** — Información de la ruta de IP de las demostraciones.

Troubleshooting

Use esta sección para resolver problemas de configuración.

Procedimiento de Troubleshooting

- [salida del babuino](#)
- [salida de Cantorbery Cisco MDS9216](#)
- [Salida del Fabric Manager y del administrador de dispositivo](#)

salida del babuino

```

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 clarion 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 clarion-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 clarion 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 clarion-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

```

salida de Cantorbery 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 0030.6elb.6f51 ARPA GigabitEthernet2/1
Internet 10.48.69.239 12 0030.6elc.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

```


Esta sección proporciona la salida de muestra del Fabric Manager MDS 1.1(2) y del administrador de dispositivo 1.1.(2).

Diagrama de topología del Fabric Manager

Ésta es una captura de pantalla de la muestra de la opinión del administrador de dispositivo 1.1(2) sobre Cantorbery.

1. Seleccione **FC > los LUN** en la ventana de administrador de dispositivo para visualizar el pWWNs, las identificaciones de LUN, y la capacidad de sus LUN.
2. Seleccione **IP > iSCSI** para visualizar a las sesiones iSCSI.

Información Relacionada

- [Soporte de tecnología del Small Computer Systems Interface over IP \(iSCSI\)](#)
- [Driveres iSCSI de Cisco \(clientes registrados solamente\)](#)
- [Release Note para el driver iSCSI del Cisco Sun Solaris](#)
- [Resolución de problemas de controladores iSCSI para Solaris](#)
- [Soporte Técnico y Documentación - Cisco Systems](#)