

# 配置SolarisiSCSI主机到MDS/IPS-8

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## 简介

思科小型计算机系统IP接口(iSCSI)驱动程序是iSCSI解决方案的关键组件。这些iSCSI驱动在服务器驻留，他们：

- 截取iSCSI命令。
- 封装命令到IP信息包。
- 重定向命令对Cisco SN 5420、Cisco SN 5428、Cisco SN 5428-2或者思科MDS/IPS-8。

本文为Solaris iSCSI主机提供配置示例给思科MDS/IPS-8。

## 先决条件

### 要求

尝试进行此配置之前，请确保满足以下要求：

- 安装是与您的Solaris版本兼容的iSCSI驱动然后创建在Cisco MDS 9000的iSCSI配置。参考[Cisco iSCSI驱动\(仅限注册用户\)](#)驱动程序(solaris-iscsi-3.3.5.tar.Z)的多数当前版本的。README.txt文件在驱动程序ZIP(TAR)文件包括。README.txt文件包含：许可证协议信息驱动程序续安装和配置说明驱动器体系结构的技术概要
- 在[Cisco iSCSI驱动方面](#)参考系统要求部分操作系统(OS)的[Sun Solaris版本注释的](#)并且修补需求。
- Sun Solaris的Cisco iSCSI驱动在SPARC机器仅运行。驱动程序不与任何其他处理器类型一起使用(例如，x86)。

## 使用的组件

本文档中的信息基于以下软件和硬件版本：

- SunOS 5.9 , SPARC Ultra-4 E450#`uname -a` SunOS baboon 5.9 Generic sun4u sparc SUNW,Ultra-4
- Solaris的Cisco iSCSI驱动3.3.3#`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 MDS 9216用软件版本1.1.2canterbury#`show module`

```
Mod Ports Module-Type Model Status
-----
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)
```

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

## 规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

## 背景信息

IP存储体提供IP主机存取对于光纤信道(FC)存储设备。IP存储体是DS-X9308-SMIP该提供透明iSCSI路由。使用iSCSI协议的IP主机能透明访问在FC网络的iSCSI (FC协议[FCP])目标。IP主机发送在iSCSI协议数据单元封装的iSCSI命令(PDU)到TCP/IP连接的Cisco MDS 9000 IP存储设备端口。适当地在IP存储体配置的千兆以太网(GE)接口提供连接。IP存储体：

- 使您创建虚拟iSCSI目标并且映射他们到物理FC目标可用在FC SAN
- 提交FC目标到IP主机，好象物理目标本地附加对IP网络

通过IP存储体要求对存储设备的访问的每台iSCSI主机必须有安装的一兼容的iSCSI驱动。iSCSI驱动允许iSCSI主机传输iSCSI请求和答复在一个IP网络与iSCSI协议。从主机OS的角度，iSCSI驱动看来是iSCSI传输驱动程序类似于一个周边信道的一FC驱动程序在主机。每台IP主机出现作为FC主机从存储设备的角度。

完成这些步骤从IP主机路由iSCSI到FC存储设备：

- 传输iSCSI请求和答复在IP网络在主机和IP存储体之间。
- 请使用IP存储体路由iSCSI请求和答复在主机在IP网络和FC存储设备(转换iSCSI之间对FCP反之亦然)。
- 传输FCP请求或答复在IP存储体和FC存储设备之间。

默认情况下IP存储体不导入FC目标对iSCSI。您必须配置动态或静态映射，以便IP存储体安排FC目标可用iSCSI创始者。当两个配置时，静态被映射的FC目标有一已配置的名称。此配置提供静态映射示例。

每次iSCSI主机连接到有动态映射的IP存储体的那：

- 一个新的FC N端口创建。
- 节点全世界名称(nWWNs)和为此N端口(pWWNs)分配的端口全世界名称可以不同的。

请使用静态映射方法，如果必须获取同样nWWNs，并且iSCSI的pWWNs每次主机连接到IP存储体。您能使用在IP存储体的静态映射访问有的智能FC存储阵列：

- 访问控制
- 根据发起者的pWWNs或nWWNs的逻辑单元编号(LUN)映射和屏蔽的配置

指定这些项目控制对每个静态映射的iSCSI目标的访问：

- IP他们通告的存储设备端口列表
- iSCSI允许访问的发起者节点名列表

FC基于分区的访问控制和基于iSCSI的访问控制是访问控制可以为iSCSI提供的二个机制。您能同时使用两个方法。默认区域为一个特定虚拟存储区域网络(VSAN)允许在此配置方面。IP存储体使用基于域名的iSCSI的节点和FC基于分区的访问控制列表在iSCSI发现和iSCSI会话创建时强制执行访问控制。

iSCSI发起者可以静态定义由IP地址或由iSCSI合格名称(IQN)。代理发起者选项启用iSCSI创始者动态创建在SAN-IO 1.3的Cisco MDS交换机的。

当iSCSI主机创建一iSCSI发现会话和查询所有iSCSI目标的，iSCSI发现发生。IP存储体返回访问控制策略允许iSCSI主机访问iSCSI目标仅的列表。

当IP主机启动iSCSI会话，iSCSI会话创建发生。IP存储体验证：

- 如果指定的iSCSI目标(在会话登录请求)是静态被映射的目标
- IP主机的iSCSI节点名允许访问目标

如果IP主机不访问，登录拒绝。

IP存储体然后：

- 创建一个FC虚拟N端口(N端口能已经存在)此IP主机的
- 执行光纤通道ID的(FCID IP主机访问的)一FC名称服务器查询FC目标pwwn

IP存储体使用IP主机虚拟N端口的pwwn作为名称服务器查询的请求方。因此，名称服务器执行的一次强制的pwwn区域查询并且回应查询。如果名称服务器返回FCID，iSCSI会话接受。否则，登录请求被拒绝。

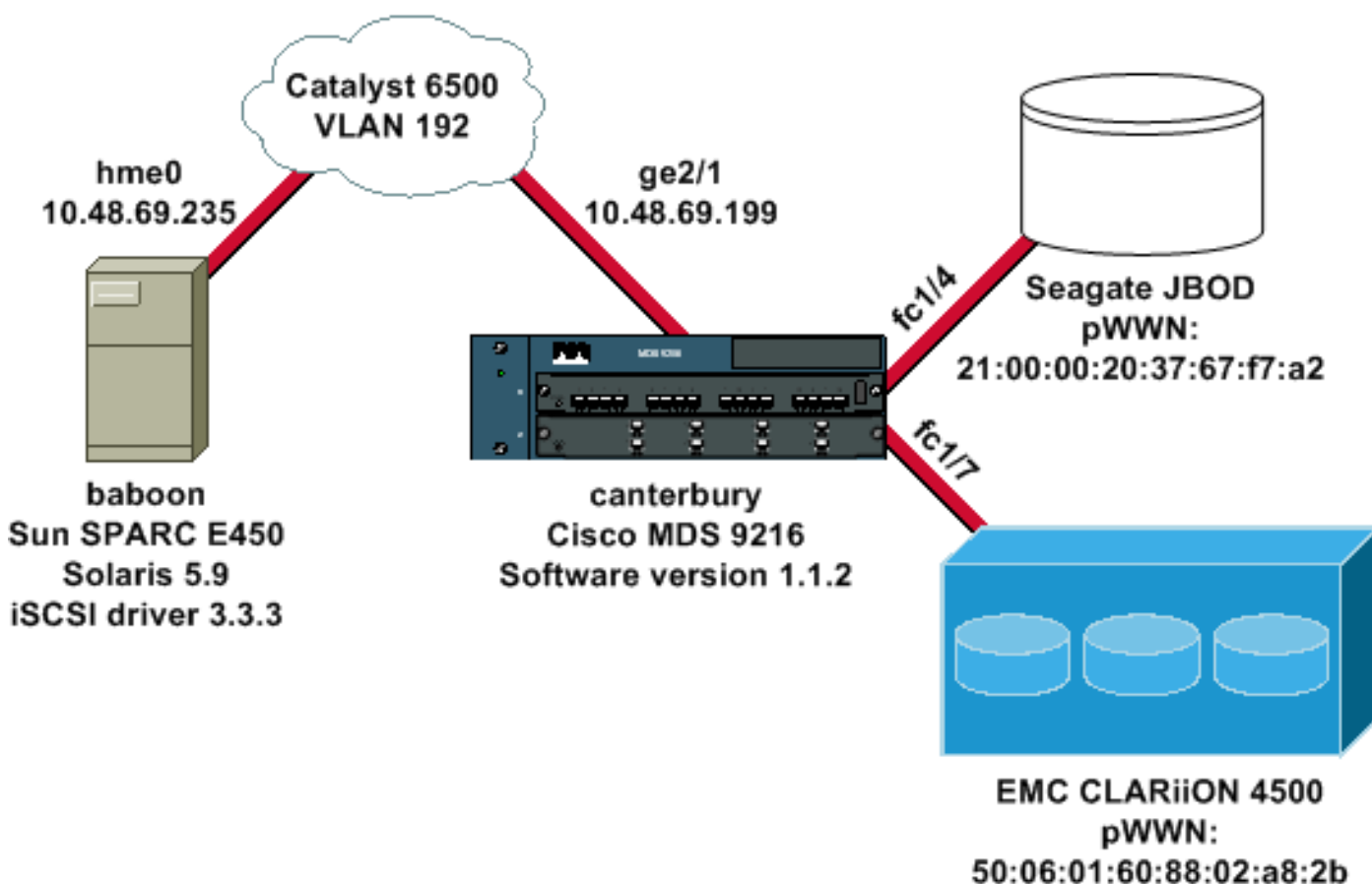
## 配置

本部分提供有关如何配置本文档所述功能的信息。

注意：有关本文档所用命令的详细信息，请使用[命令查找工具](#)（仅限注册用户）。

## 网络图

本文档使用以下网络设置：



## 配置

本文档使用以下配置：

- [狒狒\(SunOS 5.9 , SPARC E450\)](#)
- [坎特伯雷\(Cisco MDS 9216\)](#)

### 狒狒(SunOS 5.9 , SPARC E450)

修改在Solaris主机的这些文件：

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

这是输出的配置示例：

```
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.

## 坎特伯雷(Cisco MDS 9216)

```
!--- 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
```

## 验证

使用本部分可确认配置能否正常运行。

[命令输出解释程序](#) ( [仅限注册用户](#) ) (OIT) 支持某些 **show** 命令。使用 OIT 可查看对 **show** 命令输出的分析。

- **netstat-n** —验证在Solaris主机的TCP连接。
- **iscsi-ls -l** —显示是现在可以得到的在Solaris主机的设备。
- **show zone status** —显示区域信息。
- **show fcns database vsan 777** —显示一特定VSAN的名称服务器信息。
- **show flogi database vsan 777** —显示结构一特定VSAN的登录(FLOGI)服务器信息。



- **show vsan membership** —显示不同的VSAN的接口信息。
- **show iscsi initiator detail** —显示iSCSI发起者信息。
- **show iscsi initiator iscsi-session detail** —显示iSCSI发起者会话的详细信息。
- **show iscsi initiator fcp-session detail** —显示iSCSI发起者FCP会话的详细信息。
- **show ips stats tcp interface gigabitethernet 2/1 detail** —显示特定GE接口的TCP统计信息。
- **show iscsi virtual-target configured** —显示iSCSI在Cisco MDS 9000配置的虚拟目标。
- **show iscsi initiator configured** —显示在Cisco MDS 9000配置的iSCSI创始者。
- **show ips arp interface gigabitethernet 2/1** —显示IP存储设备特定GE接口的地址解析服务(ARP)信息。
- **show scsi-target devices vsan 777** —显示一特定VSAN的iSCSI设备(映射FC LUN到iSCSI LUN)。
- **show int iscsi 2/1** —显示iSCSI接口。
- **show iscsi stats iscsi 2/1** —显示iSCSI统计信息。
- **show int gigabitethernet 2/1** —显示GE接口。
- **show ip route** —显示Ip route信息。

## 故障排除

使用本部分可排除配置故障。

### 故障排除步骤

- [獬獬输出](#)
- [坎特伯雷Cisco MDS 9216输出](#)
- [组织管理器和设备管理器输出](#)

#### 獬獬输出

```

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 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

```

### 坎特伯雷Cisco MDS 9216输出

```

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 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 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 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.bcl1a 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

```

```

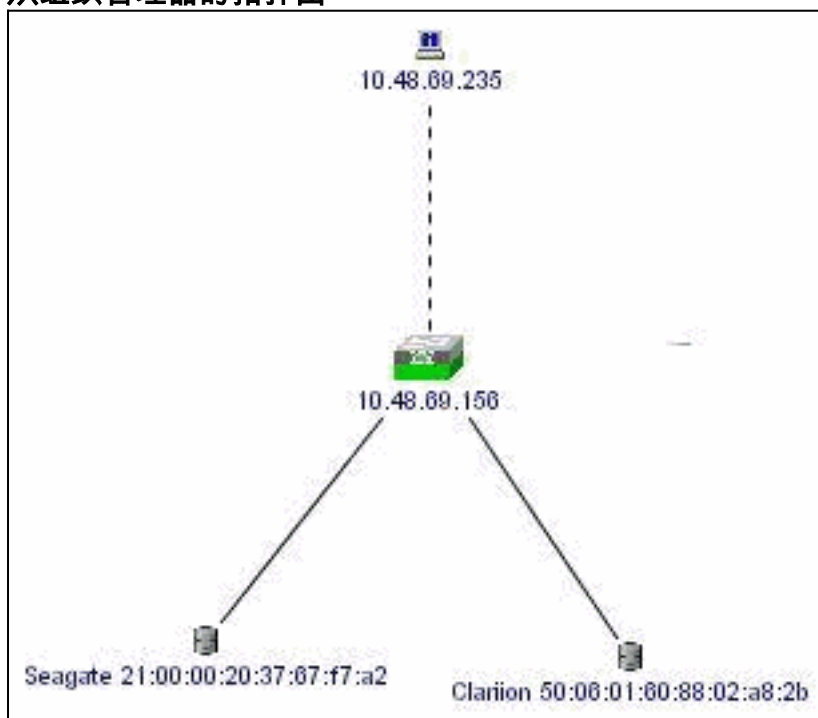
bytes/sec, 0 frames/sec 5 minutes output rate 728
bits/sec, 91 bytes/sec, 0 frames/sec iSCSI statistics
Input 12209 packets, 2668348 bytes Command 3282 pdus,
Data-out 1038 pdus, 1989664 bytes Output 14762 packets,
3486596 bytes Response 3059 pdus (with sense 77), R2T
153 pdus Data-in 3215 pdus, 2744116 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

```

## 组织管理器和设备管理器输出

此部分提供从MD组织管理器1.1(2)和设备管理器的输出示例: 1.1.(2)。

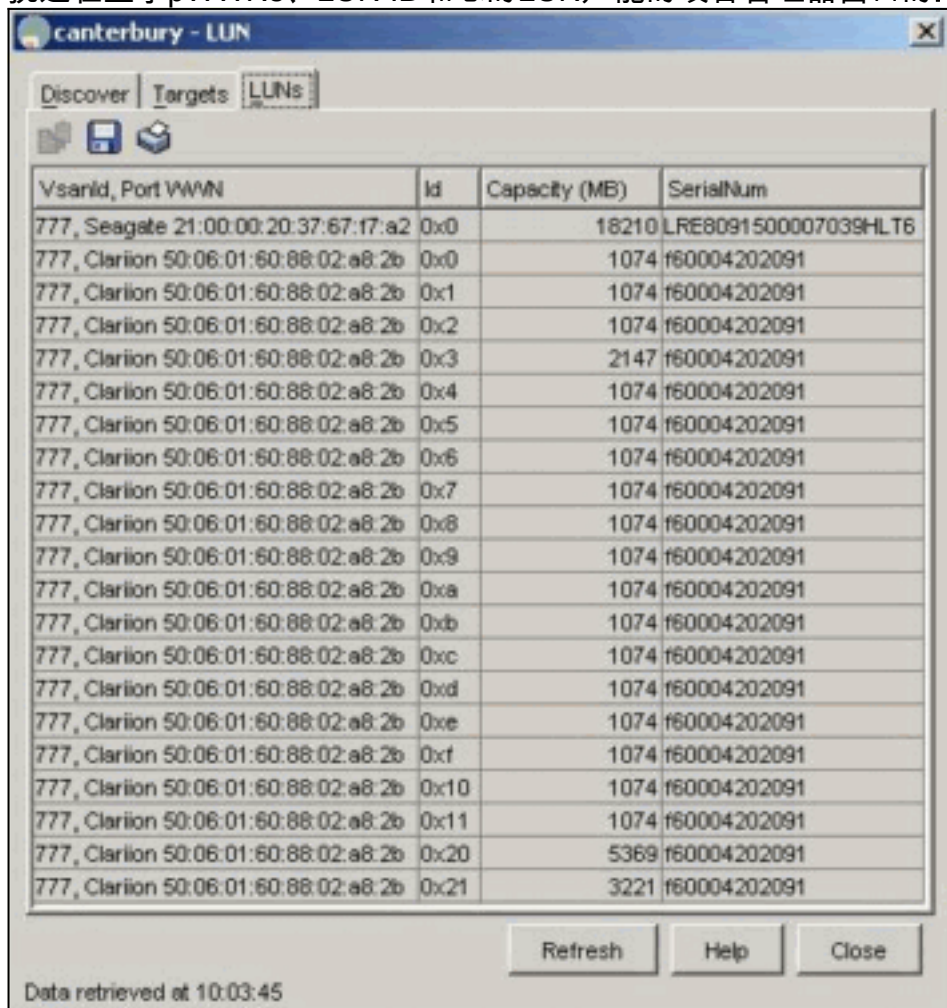
### 从组织管理器的拓扑图



这是设备管理器1.1(2)查阅的示例屏幕画面在坎特伯雷的。



1. 挑选在显示pWWNs、LUN ID和您的LUN产能的设备管理器窗口的FC > LUN。



2. 精选显示iSCSI会话的IP > iSCSI。

canterbury - iSCSI

Initiators Targets Sessions Sessions Detail Session Statistics

Type	Direction	Initiator			Target		
		Name or IpAddress	Alias	Id	Name	Alias	Id
normal	inbound	10.48.69.235	baboon	00:02:3d:00:00:01	san-fc-ibod-1		128
normal	inbound	10.48.69.235	baboon	00:02:3d:00:00:01	clarion		128
discovery	inbound	10.48.69.235	baboon	00:02:3d:00:00:01			128
normal	inbound	10.48.69.235	baboon	00:02:3d:00:00:01	clarion-lun-3-4-5		128

4 row(s)

Connection... Refresh Help Close

## 相关信息

- [小型计算机系统IP接口\(iSCSI\)技术支持](#)
- [Cisco iSCSI驱动\(仅限注册用户\)](#)
- [思科Sun Solaris iSCSI驱动的版本注释](#)
- [用于 Solaris 的 iSCSI 驱动程序故障排除](#)
- [技术支持和文档 - Cisco Systems](#)