

HP-UX对MDS/IPS-8配置示例的iSCSI主机

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Conventions](#)

[背景信息](#)

[Configure](#)

[Network Diagram](#)

[配置](#)

[Verify](#)

[HP-UX主机命令](#)

[MDS/IPS-8命令](#)

[Troubleshoot](#)

[组织管理器和设备管理器显示](#)

[Introduction](#)

Cisco iSCSI驱动，在服务器驻留，是iSCSI解决方案的一个关键组件。这些iSCSI驱动器拦截小型计算机系统接口(SCSI)命令，封装他们到IP信息包，并且重定向他们对Cisco SN 5420、Cisco SN 5428、Cisco SN 5428-2或者Cisco MDS/IPS-8.This文件HP-UX iSCSI主机的提供配置示例对SN5428。

[Prerequisites](#)

[Requirements](#)

在您尝试此配置前，请切记您符合这些要求：

- 安装是兼容对您的HP-UX版本的iSCSI驱动器。驱动程序的当前版本可以在Cisco.com的[Cisco iSCSI驱动\(仅限注册用户\)](#)下载页找到。README.txt文件在驱动程序zip(tar)文件包含。README包含关于许可证协议的信息、驱动安装和配置说明和驱动器体系结构的技术概要。
- 操作系统的需求和补丁程序需求在[Cisco iSCSI驱动的 System Requirements](#)部分描述的[HP-UX版本注释](#)。

[Components Used](#)

本文档中的信息基于以下软件和硬件版本：

- HP-UX 9000/800 A500服务器用两个处理器。**Note:** 在此实验室设置，没有iSCSI的单独的以太网适配器，并且那个在使用中是100 Mb。在所有可实现的环境里，您有一台独立的千兆以太网 (GE)适配器作为您的iSCSI发起者。

```
[/]# /opt/ignite/bin/print_manifest[...]
```

System Hardware

```
Model:          9000/800/A500-5X
Main Memory:    1024 MB
Processors:     2
OS mode:        64 bit
LAN hardware ID: 0x00306E1B6F51
Software ID:    586760518
Keyboard Language: Not_Applicable
```

Storage devices	HW Path	Interface
SEAGATE ST318404LC 17366 Mb	0/0/1/1.15.0	SCSI C896 Ultra Wide Single-Ended
SEAGATE ST318203LC 17366 Mb	0/0/2/1.15.0	SCSI C875 Ultra Wide Single-Ended

I/O Interfaces

Class	H/W Path	Driver	Description
lan	0/0/0/0	btlan3	HP PCI 10/100Base-TX Core
ext_bus	0/0/1/0	c720	SCSI C896 Ultra Wide LVD
ext_bus	0/0/1/1	c720	SCSI C896 Ultra Wide Single-Ended
ext_bus	0/0/2/0	c720	SCSI C875 Fast Wide Single-Ended
ext_bus	0/0/2/1	c720	SCSI C875 Ultra Wide Single-Ended
tty	0/0/4/0	asio0	PCI Serial (103c1048)
tty	0/0/5/0	asio0	PCI Serial (103c1048)
fc	0/2/0/0	td	HP Tachyon XL2 Fibre Channel Mass Storage

Adapter

Installed Software

Your system was installed with HP-UX version B.11.00.

Your system has the following software products installed and configured on the system disk drive(s).

Product	Revision	Description
A6795A	B.11.00.10	PCI Tachyon TL/TS/XL2 Fibre Channel
BUNDLE	B.11.00	Patch Bundle
HPUXEng64RT	B.11.00.01	English HP-UX 64-bit Runtime Environment
HWE1100	B.11.00.0203.5	Hardware Enablement Patches for HP-UX 11.00, March 2002
OnlineDiag	B.11.00.20.09	HPUX 11.0 Support Tools Bundle, Mar 2002
UXCoreMedia	B.11.00.02	HP-UX Media Kit (Reference Only. See Description)
UnlimUserLic	B.11.00.02	HP-UX Unlimited-User License
XSWGR1100	B.11.00.47.08	General Release Patches, November 1999 (ACE)

[...]

- 使用了HP-UX的Cisco iSCSI驱动3.3.3。建议您从HP也安装(至少)最新的稳定的地址解析协议 (ARPA)传输渐增补丁程序。当本文被写作了，这是PHNE_28538。此补丁程序有几依靠，因此您必须安装他们，当需要时候。对于更多安装信息，请访问正式[HP支持站点 \(仅限注册用户\)](#)。

```
[/]# swlist
# Initializing...
# Contacting target "ape"...
#
# Target:  ape:/
#
#
# Bundle(s):
#
```

```

A6795A          B.11.00.10    PCI Tachyon TL/TS/XL2 Fibre Channel
BUNDLE          B.11.00       Patch Bundle
HPUXEng64RT     B.11.00.01    English HP-UX 64-bit Runtime Environment
HWE1100         B.11.00.0203.5 Hardware Enablement Patches for HP-UX 11.00,
March 2002
OnlineDiag      B.11.00.20.09 HPUX 11.0 Support Tools Bundle, Mar 2002
QPK1100         B.11.00.56.5  Quality Pack for HP-UX 11.00, March 2002
UXCoreMedia     B.11.00.02    HP-UX Media Kit (Reference Only. See
Description)
UnlimUserLic    B.11.00.02    HP-UX Unlimited-User License
XSWGR1100       B.11.00.47.08 General Release Patches, November 1999 (ACE)

```

```

#
# Product(s) not contained in a Bundle:
#

```

```

ISCSI           3.3.3         ISCSI software
bison           1.875         bison
flex            2.5.4a        flex
gcc             3.2.3         gcc
gettext         0.11.5        gettext
less            376           less
libiconv        1.9           libiconv
make            3.80          make
ncurses         5.2           ncurses
termcap         1.3.1         termcap
zsh             4.0.7         zsh

```

```

[/]# swlist BUNDLE
# Initializing...
# Contacting target "ape"...
#
# Target:  ape:/
#

```

```

# BUNDLE          B.11.00       Patch Bundle
BUNDLE.PHCO_23651 1.0           fsck_vxfs(1M) cumulative patch
BUNDLE.PHKL_28496 1.0           SCSI IO Subsystem Cumulative Patch
BUNDLE.PHKL_27980 1.0           VxFS 3.1 cumulative patch: CR_EIEM
BUNDLE.PHKL_22840 1.0           IDS/9000; syscalls related to file/socket
BUNDLE.PHCO_28505 1.0           user/group(add/mod/del)(1M) cumulative patch
BUNDLE.PHKL_28150 1.0           LVM Cumulative Patch w/Performance Upgrades
BUNDLE.PHNE_28538 1.0           cumulative ARPA Transport patch
BUNDLE.PHNE_28143 1.0           LAN product cumulative patch
BUNDLE.PHNE_27902 1.0           Cumulative STREAMS Patch
BUNDLE.PHKL_29434 1.0           POSIX AIO;getdirentries;MVFS;rcp;mmap/IDS;
BUNDLE.PHKL_28766 1.0           Probe, IDDS, PM, VM, PA-8700, AIO, T600, FS, PDC, CLK
BUNDLE.PHKL_28004 1.0           Fibre Channel Mass Storage Driver Patch
BUNDLE.PHKL_27729 1.0           ioscan -u incorrect display (kernel patch).
BUNDLE.PHKL_24187 1.0           ioscan performance gain for SCSI Subsystem
BUNDLE.PHKL_24165 1.0           Kernel Patch For "ioscan -k" Performance
BUNDLE.PHKL_23409 1.0           NFS, Large Data Space, kernel memory leak
BUNDLE.PHKL_20016 1.0           2nd CPU not recognized in G70/H70/I70
BUNDLE.PHKL_18543 1.0           PM/VM/UFS/async/scsi/io/DMAPI/JFS/perf patch
BUNDLE.PHCO_27818 1.0           ioscan(1M) cumulative patch
BUNDLE.PHCO_27375 1.0           cumulative SAM/ObAM patch

```

• 有软件版本的1.2(1a) Cisco MDS 9216。

```

vatican# 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  1.2(1a)    1.0    20:01:00:0c:30:57:5e:c0 to 20:10:00:0c:30:57:5e:c0
2  1.2(1a)    0.2    20:41:00:0c:30:57:5e:c0 to 20:48:00:0c:30:57:5e:c0

Mod  MAC-Address(es)                Serial-Num
---
1  00-0b-be-f8-7f-00 to 00-0b-be-f8-7f-04  JAB070804Q3
2  00-05-30-00-a8-56 to 00-05-30-00-a8-62  JAB070205AM

```

* this terminal session

vatican# **show version**

```

Cisco Storage Area Networking Operating System (SAN-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2003 by Cisco Systems, Inc. All rights reserved.
The copyright for certain works contained herein are owned by
Andiamo Systems, Inc. and/or other third parties and are used and
distributed under license.

```

Software

```

BIOS:      version 1.0.8
loader:    version 1.1(2)
kickstart: version 1.2(1a)
system:    version 1.2(1a)

```

```

BIOS compile time:      08/07/03
kickstart image file is: bootflash:/k121a
kickstart compile time: 9/1/2003 17:00:00
system image file is:   bootflash:/s121a
system compile time:    9/1/2003 17:00:00

```

Hardware

```
RAM 963108 kB
```

```
bootflash: 500736 blocks (block size 512b)
slot0:      0 blocks (block size 512b)

```

```
vatican uptime is 1 days 6 hours 17 minute(s) 25 second(s)
```

```

Last reset at 955065 usecs after Wed Sep 10 08:13:50 2003
Reason: Reset Requested by CLI command reload
System version: 1.1(2)

```

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

[Conventions](#)

Cisco MDS 9000在的本文使用是指在MDS 9000系列(MD 9506的所有光纤信道(FC)交换产品，MDS9509，MDS9216)。思科入侵防御系统(IPS)前端是指IP存储服务模块。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](#)

思科入侵防御系统(IPS)模块提供IP主机访问对光纤信道(FC)存储设备。IPS模块是DS-X9308-SMIP。它提供透明SCSI路由。使用iSCSI协议的IP主机能透明访问在IP主机在iSCSI协议数据单元的FC网络的iSCSI目标(PDUs)发送SCSI命令集封装对在TCP/IP连接的一个MDS9000 IPS端口。在IPS模块上，连接提供以适当地配置的GE接口的形式。IPS模块enable (event)创建虚拟iSCSI目标

的您和映射他们对物理FC目标可用在FC SAN。它提交FC目标到IP主机，好象物理目标附有了IP网络。

通过IPS模块要求对存储的访问的每台iSCSI主机需要有安装的一个兼容的iSCSI驱动器。在iSCSI协议帮助下，iSCSI驱动器允许iSCSI主机传输SCSI请求和回应到IP网络。从操作系统的主机的角度，iSCSI驱动器看来是SCSI传输驱动程序类似于一条周边信道—FC驱动程序在主机。从存储设备的角度，每台IP主机出现作为FC主机。路由SCSI从IP主机到FC存储设备包括这些主要动作：

- 传输iSCSI请求和回应到IP网络在主机和IPS模块之间
- 路由SCSI请求和回应到主机在IP网络和FC存储设备之间(转换iSCSI成FCP和FCP成iSCSI)。此路由由IPS模块执行。
- 传输FCP请求或回应到IPS模块和FC存储设备之间

默认情况下IPS模块不导入FC目标iSCSI。在IPS模块安排FC目标可用iSCSI所有者前，动态或静态映射必须配置。当配置时两个，静态被映射的FC目标有一个被配置的名字。本文提供静态映射示例。使用动态映射，每次那iSCSI主机连接到IPS模块，一个新的FC N端口被创建，并且为此N端口和pWWNs分配的nWWNs可能是不同的。请使用静态映射方法，如果需要获得同样nWWNs，并且iSCSI的pWWNs主机它每次连接到IPS模块。静态映射在IPS模块可以用于访问有映射和屏蔽配置的访问控制和Logical Unit Numbers (LUN)根据所有者的pWWNs或nWWNs的智能FC存储阵列。

您能控制对每个静态映射的iSCSI目标的访问与目标做通告的IPS端口一张特定列表的创建和iSCSI发起者允许的节点名列表的创建访问它。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提供的两个机制。可以同时使用两个方法。在此配置默认值区域为特定VSAN允许。IPS模块使用基于域名的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发现**：当iSCSI主机创建一次iSCSI发现会话和查询所有iSCSI目标的时，IPS模块回归iSCSI目标仅列表此iSCSI主机允许访问基于访问控制策略。
- **iSCSI会话创建**：当IP主机启动iSCSI会话时，IPS模块验证指定的iSCSI目标(在会话登录请求)是否是静态被映射的目标和，如果真，验证IP主机的iSCSI节点名是否允许访问目标。如果IP主机不访问，其登录被拒绝。

IPS模块，然后创建一个FC虚拟N端口(N端口可能已经存在)此IP主机的并且执行由IP主机获取FC目标pwwn FCID的一次FC名称服务器查询。它使用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pwwn的一次强制执行的区域查询并且回应查询。如果FCID由名称服务器返回，则iSCSI会话被接受。否则，登录请求被拒绝。

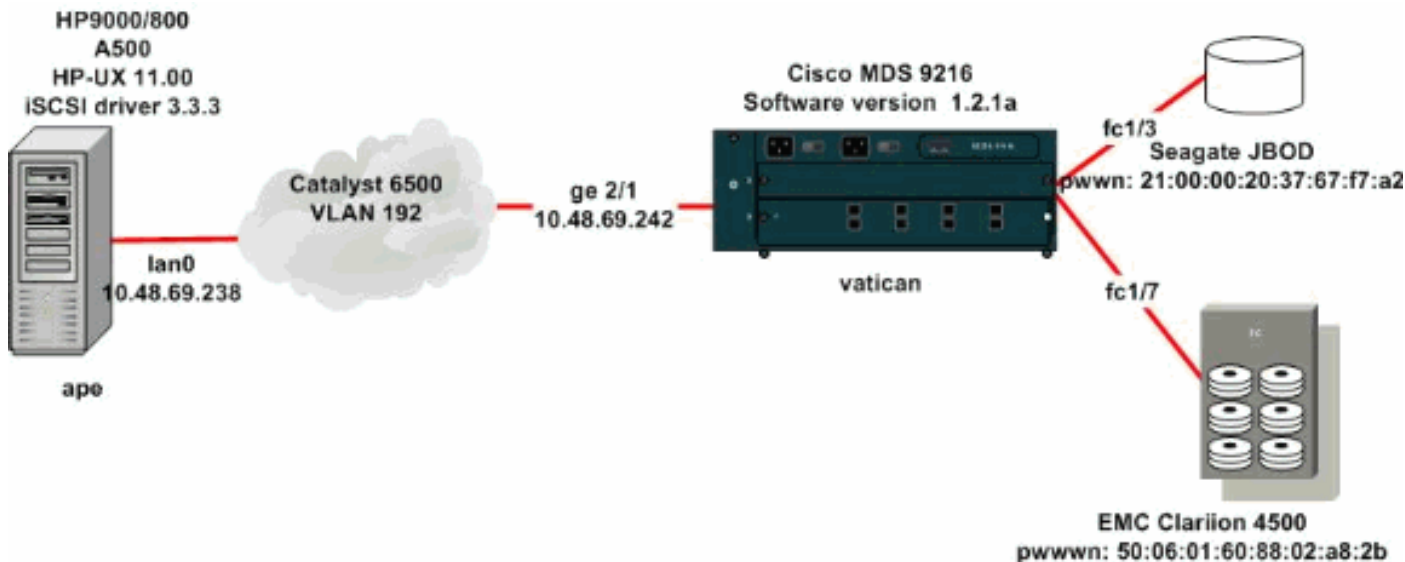
[Configure](#)

在此部分，向您介绍信息配置MDS9216和Cisco iSCSI驱动Linux的。

Note: 要寻找关于用于本文的命令的其他信息，请使用[Cisco MDS 9000系列命令参考](#)和[Cisco MDS 9000系列软件配置指南](#)。

[Network Diagram](#)

本文档使用此图中所示的网络设置：



配置

本文档使用此处所示的配置：

- 猿(HP 9000/800 A500 HP-UX 11.00)
- 梵蒂冈(MDS9216)

猿(HP 9000/800 A500 HP-UX 11.00)

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

[/]# cat /etc/iscsi.conf
# iSCSI configuration file - see iscsi.conf(4)
# DiscoveryAddress Settings
# -----
# Add "DiscoveryAddress=xxx" entries for each iSCSI
router instance.
# The driver attempts to discover iSCSI targets at that
address
# and make as many targets as possible available for
use.
# 'xxx' can be an IP address or a hostname. A TCP port
number can be
# specified by appending a colon and the port number to
the address.
# All entries have to start in column one and must not
contain any
# whitespace.
#
# Example:
# DiscoveryAddress=scsirouter1
DiscoveryAddress=10.48.69.242

!--- Configure the IP address of the GE interface that
accepts iSCSI request from your host.

# The DiscoveryAddress Settings can take following
entry.
#
# 1) Authentication Settings
# 2) ConnectionTimeout Settings
```

```
!--- Other required driver parameters could be changed
in the iscsi.conf file.
```

```
.....
```

```
[/]# cat /etc/iscsi.bindings
# iSCSI bindings, file format version 1.0.
# NOTE: this file is automatically maintained by the
iSCSI daemon.
# You do not need to edit this file under most
circumstances.
# If iSCSI targets in this file have been permanently
deleted, you
# may wish to delete the bindings for the deleted
targets.
#
# Format:
# bus   target   iSCSI
# id    id        TargetName
#
[...]
0      10        seagate
0      11        spa-vt
```

```
!--- The iSCSI driver discovery daemon process looks up
each discovered !--- target in the /etc/iscsi.bindings
file. If an entry exists in the file for the target, !--
- the corresponding SCSI target ID is assigned to the
target. If no entry !--- exists for the target, the
smallest available SCSI target ID is assigned !--- and
an entry is written to the /etc/iscsi.bindings file for
this target. !--- Note that the /etc/iscsi.bindings file
permanently contains entries !--- for all iSCSI targets
ever logged into from this host. If a target is !--- no
longer available to a host, you can manually edit the
file and remove !--- entries so that the obsolete target
no longer consumes a SCSI target ID. !--- If you know
the iSCSI target name of a target in advance, and you
want !--- it to be assigned a particular SCSI target ID,
you can add an entry !--- manually. You must stop the
iSCSI driver before editing the !--- /etc/iscsi.bindings
file. The maximum number of targets is 14. !--- Enter
[/]#/sbin/init.d/iscsi start to manually start the iSCSI
driver.
```

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

梵蒂冈(Cisco MDS 9216)

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

```
[/]# cat /etc/iscsi.conf
# iSCSI configuration file - see iscsi.conf(4)
# DiscoveryAddress Settings
# -----
# Add "DiscoveryAddress=xxx" entries for each iSCSI
router instance.
# The driver attempts to discover iSCSI targets at that
address
```

```
# and make as many targets as possible available for
use.
# 'xxx' can be an IP address or a hostname. A TCP port
number can be
# specified by appending a colon and the port number to
the address.
# All entries have to start in column one and must not
contain any
# whitespace.
#
# Example:
#
# DiscoveryAddress=scsirouter1
DiscoveryAddress=10.48.69.242

!--- Configure the IP address of the GE interface that
accepts iSCSI request from your host.

# The DiscoveryAddress Settings can take following
entry.
#
# 1) Authentication Settings
# 2) ConnectionTimeout Settings

!--- Other required driver parameters could be changed
in the iscsi.conf file.

.....

[/# cat /etc/iscsi.bindings
# iSCSI bindings, file format version 1.0.
# NOTE: this file is automatically maintained by the
iSCSI daemon.
# You do not need to edit this file under most
circumstances.
# If iSCSI targets in this file have been permanently
deleted, you
# may wish to delete the bindings for the deleted
targets.
#
# Format:
# bus    target  iSCSI
# id     id      TargetName
#
[...
0       10      seagate
0       11      spa-vt

!--- The iSCSI driver discovery daemon process looks up
each discovered !--- target in the /etc/iscsi.bindings
file. If an entry exists in the file for the target, !--
- the corresponding SCSI target ID is assigned to the
target. If no entry !--- exists for the target, the
smallest available SCSI target ID is assigned !--- and
an entry is written to the /etc/iscsi.bindings file for
this target. !--- Note that the /etc/iscsi.bindings file
permanently contains entries !--- for all iSCSI targets
ever logged into from this host. If a target is !--- no
longer available to a host, you can manually edit the
file and remove !--- entries so that the obsolete target
no longer consumes a SCSI target ID. !--- If you know
the iSCSI target name of a target in advance, and you
want !--- it to be assigned a particular SCSI target ID,
you can add an entry !--- manually. You must stop the
```



```
iSCSI driver before editing the !--- /etc/iscsi.bindings
file. The maximum number of targets is 14. !--- Enter
[/]#/sbin/init.d/iscsi start to manually start the iSCSI
driver.

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

Verify

此部分提供您能使用适当地确认您的配置工作和排除故障的信息，万一注意问题。

确定请显示[命令查找工具](#)支持命令([仅限注册用户](#))，允许您查看show命令输出分析。

HP-UX主机命令

- **netstat-n**或**lsof** —验证TCP连接。
- **iscsi-ls** —显示现在可以得到的设备。
- **dmesg** —收集诊断消息。

MDS/IPS-8命令

- **show zone** —显示区域信息。
- **show flogi database** —显示FLOGI服务器信息。
- **show fcns database** —显示一特定VSAN名称服务器信息。
- **show vsan membership** —显示不同的VSAN接口信息。
- **show iscsi** —显示多种iSCSI信息。
- **show ips** —显示关于IP服务的多种信息。
- **show scsi-target** —显示特定VSAN的SCSI设备(映射对iSCSI-LUN的FC-LUNs)。
- **show interface** —显示关于多种接口的信息。
- **show ip route** —显示IP路由信息。

Troubleshoot

本部分提供的信息可用于对配置进行故障排除。

这是故障排除信息与此配置有关：

- 从猿(HP 9000/800 A500 HP-UX 11.00)显示
- 从梵蒂冈(MDS9216)显示
- 组织管理器和设备管理器显示

猿(HP 9000/800 A500 HP-UX 11.00)

```
# /sbin/init.d/iscsi stop
Waiting for iscsid to terminate .....
Waiting for iscsid to terminate .....
Waiting for iscsid to terminate .....
Waiting for iscsid to terminate .....
Waiting for iscsi_[tr]x_threads to terminate .....
```

```

[/]# /sbin/init.d/iscsi start
Number of indices in scsi_isc table used by System: 5
Index used by iSCSI controller: 255
Number of free indices: 251
[/]# netstat -n | grep '10.48.69.242'
tcp        0      0 10.48.69.238.49501
10.48.69.242.3260 ESTABLISHED
tcp        0      0 10.48.69.238.49500
10.48.69.242.3260 ESTABLISHED
tcp        0      0 10.48.69.238.49499
10.48.69.242.3260 ESTABLISHED

!--- If you have lsof, you can also try the following:

[/]# lsof -i @10.48.69.242
COMMAND  PID USER   FD   TYPE    DEVICE SIZE/OFF NODE
NAME
iscsid   2836 root    lu   inet 0x41aa9268 0t1300 TCP
ape.cisco.com:49499->10.48.69.242:3260 (ESTABLISHED)

!--- Note that ioscan does not report iSCSI devices. To
see the list
!--- of available iSCSI devices from the host, issue the
iscsi-ls command.

[/]# iscsi-ls -l

#####
#####

TARGET NAME      = seagate
TARGET ID        = 10
ADDRESS          = 10.48.69.242:3260,128
STATUS           = CONNECTED 10.48.69.238:49501 <->
10.48.69.242:3260
                  9/19/2003 15:40:42
SESSION          = ISID 00023d000001 TSID 80

LUN             0      = DISK c255t10d0 'SEAGATE
ST318203FC      0004'
                  BLOCKS : 35566479 BLOCKSIZE : 512
CAPACITY : 17366.00MB

#####
#####

TARGET NAME      = spa-vt
TARGET ID        = 11
ADDRESS          = 10.48.69.242:3260,128
STATUS           = CONNECTED 10.48.69.238:49500 <->
10.48.69.242:3260
                  9/19/2003 15:40:42
SESSION          = ISID 00023d000001 TSID 80

LUN             4      = DISK c255t11d4 'DGC      RAID 1
0632'
                  BLOCKS : 6291419 BLOCKSIZE : 512
CAPACITY : 3071.00MB

LUN             3      = DISK c255t11d3 'DGC      RAID 1
0632'
                  BLOCKS : 10485607 BLOCKSIZE : 512

```

CAPACITY : 5119.00MB

!--- To see detailed statistics for currently established iSCSI sessions, use this:

```
[/]# iscsi-ls -c
```

```
#####  
#####
```

```
TARGET NAME      = seagate  
TARGET ID        = 10  
ADDRESS          = 10.48.69.242:3260,128  
STATUS           = CONNECTED 10.48.69.238:49501 <->  
10.48.69.242:3260  
                  9/19/2003 15:40:42  
SESSION          = ISID 00023d000001 TSID 80  
InitialR2T      = Yes  
FirstBurstLength = 262144 Bytes  
MaxBurstLength  = 16776192 Bytes  
Header Digest   = 1  
Data Digest     = 1  
Login Timeout   = 15 Seconds  
Auth Timeout    = 45 Seconds  
Active Timeout  = 5 Seconds  
Idle Timeout    = 60 Seconds  
Ping Timeout    = 5 Seconds
```

```
#####  
#####
```

```
TARGET NAME      = spa-vt  
TARGET ID        = 11  
ADDRESS          = 10.48.69.242:3260,128  
STATUS           = CONNECTED 10.48.69.238:49500 <->  
10.48.69.242:3260  
                  9/19/2003 15:40:42  
SESSION          = ISID 00023d000001 TSID 80  
InitialR2T      = Yes  
FirstBurstLength = 262144 Bytes  
MaxBurstLength  = 16776192 Bytes  
Header Digest   = 1  
Data Digest     = 1  
Login Timeout   = 15 Seconds  
Auth Timeout    = 45 Seconds  
Active Timeout  = 5 Seconds  
Idle Timeout    = 60 Seconds  
Ping Timeout    = 5 Seconds
```

!--- Here are some of the entries you can expect to find in the syslog: [/]**# dmesg**

```
[...]  
iSCSI: session 0x4179b000 target 11 accepted the preferred value (None) DataDigest=CRC32C  
iSCSI: session 0x41a64800 target 10 accepted the preferred value (None) DataDigest=CRC32C  
iSCSI: Direct Access Device found at lun 3 on target 11  
Vendor Id : DGC  
Product Id : RAID 1  
Product Rev: 0632  
iSCSI: Direct Access Device found at lun 0 on target 10  
Vendor Id : SEAGATE  
Product Id : ST318203FC  
Product Rev: 0004  
iSCSI: Direct Access Device found at lun 4 on target 11  
Vendor Id : DGC
```

```

Product Id : RAID 1                               Product
Rev: 0632
iSCSI: iscsi_recv_cmd: session (0x4179b000)
recv_cmd(sc) (0x41844800), Cmd 0x25, status 0x2,
      senselen 18, sense key 06, ASC/ASCQ 29/00,
task (0x40718b00) to (host 255 target 11 lun 3),
      TargetAlias spa-vt
      Sense 70000600 0000000a 00000000 29000000 0000

READ_CAPACITY result = 0x2 Target = 0xb LUN = 0x3
iSCSI: iscsi_recv_cmd: task (0x40718b00) itt 9 to (host
255 target 11 lun 3), Cmd 0x25,
      U(Overflow/Underflow) underflow, received
0(task->rxdata), residual 8, expected 8
iSCSI: iscsi_recv_cmd: session (0x4179b000)
recv_cmd(sc) (0x41844800), Cmd 0x25, status 0x2,
senselen 18,
      sense key 06, ASC/ASCQ 29/00, task
(0x40718c00) to (host 255 target 11 lun 4), TargetAlias
spa-vt
      Sense 70000600 0000000a 00000000 29000000 0000

READ_CAPACITY result = 0x2 Target = 0xb LUN = 0x4
iSCSI: iscsi_recv_cmd: task (0x40718c00) itt 11 to
(host 255 target 11 lun 4), Cmd 0x25,
      U(Overflow/Underflow) underflow, received
0(task->rxdata), residual 8, expected 8

```

从梵蒂冈(MDS9216)显示

```

vatican# show zone status vsan 1016
VSAN: 1016 default-zone: deny distribute: active only
Interop: Off
Full Zoning Database :
  Zonesets:1 Zones:3 Aliases: 0
Active Zoning Database :
  Name: iscsidoc Zonesets:1 Zones:3
Status: Activation completed at Wed Sep 17 13:03:56
2003

```

```

vatican# show zone active vsan 1016
zone name jbod vsan 1016
* fcid 0x7902e8 [pwwn 21:00:00:20:37:67:f7:a2]
* fcid 0x790100 [symbolic-nodename 10.48.69.238]

zone name spa vsan 1016
* fcid 0x790104 [pwwn 50:06:01:60:88:02:a8:2b]
* fcid 0x790100 [symbolic-nodename 10.48.69.238]

zone name spb vsan 1016
* fcid 0x790105 [pwwn 50:06:01:68:88:02:a8:2b]
* fcid 0x790100 [symbolic-nodename 10.48.69.238]

```

```

vatican# show flogi database vsan 1016

```

```

-----
INTERFACE  VSAN    FCID          PORT NAME
NODE NAME
-----
fc1/3      1016  0x7902e8    21:00:00:20:37:67:f7:a2
20:00:00:20:37:67:f7:a2
fc1/7      1016  0x790104    50:06:01:60:88:02:a8:2b

```

```
50:06:01:60:11:02:a8:2b
 fc1/11      1016  0x790105  50:06:01:68:88:02:a8:2b
50:06:01:60:11:02:a8:2b
 iscsi2/1    1016  0x790100  20:03:00:0c:30:57:5e:c2
20:02:00:0c:30:57:5e:c2
```

Total number of flogi = 4.

```
vatican# show fcns database vsan 1016
```

```
VSAN 1016:
```

```
-----
FCID          TYPE  PWWN                               (VENDOR)
FC4-TYPE:FEATURE
-----
0x790100      N      20:03:00:0c:30:57:5e:c2 (Cisco)
scsi-fcp:init isc..w
0x790104      N      50:06:01:60:88:02:a8:2b (Clariion)
scsi-fcp:target
0x790105      N      50:06:01:68:88:02:a8:2b (Clariion)
scsi-fcp:target
0x7902e8      NL     21:00:00:20:37:67:f7:a2 (Seagate)
scsi-fcp:target
Total number of entries = 4
```

--- FCID 0x790100 is the virtual N port(HBA) for the iSCSI host.

```
vatican# show fcns database detail vsan 1016
```

```
-----
VSAN:1016 FCID:0x790100
-----
```

```
port-wwn (vendor)      :20:03:00:0c:30:57:5e:c2 (Cisco)
node-wwn                :20:02:00:0c:30:57:5e:c2
class                   :2,3
node-ip-addr            :10.48.69.238
ipa                     :ff ff ff ff ff ff ff ff
fc4-types:fc4_features:scsi-fcp:init iscsi-gw
symbolic-port-name     :
symbolic-node-name     :10.48.69.238
port-type               :N
port-ip-addr           :0.0.0.0
fabric-port-wwn        :20:41:00:0c:30:57:5e:c0
hard-addr               :0x000000
```

```
-----
VSAN:1016 FCID:0x790104
-----
```

```
port-wwn (vendor)      :50:06:01:60:88:02:a8:2b
(Clariion)
node-wwn                :50:06:01:60:11:02:a8:2b
class                   :3
node-ip-addr            :0.0.0.0
ipa                     :ff ff ff ff ff ff ff ff
fc4-types:fc4_features:scsi-fcp:target
symbolic-port-name     :
symbolic-node-name     :
port-type               :N
port-ip-addr           :0.0.0.0
fabric-port-wwn        :20:07:00:0c:30:57:5e:c0
hard-addr               :0x000000
```

```
-----
VSAN:1016 FCID:0x790105
```

```
-----
port-wwn (vendor)      :50:06:01:68:88:02:a8:2b
(Clariion)
node-wwn               :50:06:01:60:11:02:a8:2b
class                 :3
node-ip-addr          :0.0.0.0
ipa                   :ff ff ff ff ff ff ff ff
fc4-types:fc4_features:scsi-fcp:target
symbolic-port-name    :
symbolic-node-name    :
port-type             :N
port-ip-addr          :0.0.0.0
fabric-port-wwn       :20:0b:00:0c:30:57:5e:c0
hard-addr             :0x000000
-----
```

VSAN:1016 FCID:0x7902e8

```
-----
port-wwn (vendor)      :21:00:00:20:37:67:f7:a2
(Seagate)
node-wwn               :20:00:00:20:37:67:f7:a2
class                 :3
node-ip-addr          :0.0.0.0
ipa                   :ff ff ff ff ff ff ff ff
fc4-types:fc4_features:scsi-fcp:target
symbolic-port-name    :
symbolic-node-name    :
port-type             :NL
port-ip-addr          :0.0.0.0
fabric-port-wwn       :20:03:00:0c:30:57:5e:c0
hard-addr             :0x000000
-----
```

Total number of entries = 4

vatican# **show iscsi initiator**

```
iSCSI Node name is 10.48.69.238
  iSCSI Initiator name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale
  iSCSI alias name: ape
  Node WWN is 20:02:00:0c:30:57:5e:c2 (dynamic)
  Member of vsans: 1016
  Number of Virtual n_ports: 1
  Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
(dynamic)
  Interface iSCSI 2/1, Portal group tag: 0x80
  VSAN ID 1016, FCID 0x790100
```

vatican# **show iscsi initiator configured**

```
iSCSI Node name is 10.48.69.238
  Member of vsans: 1016
```

vatican# **show iscsi initiator detail**

```
iSCSI Node name is 10.48.69.238
  iSCSI Initiator name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale
  iSCSI alias name: ape
  Node WWN is 20:02:00:0c:30:57:5e:c2 (dynamic)
  Member of vsans: 1016
  Number of Virtual n_ports: 1

  Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
(dynamic)
  Interface iSCSI 2/1, Portal group tag is 0x80
```

VSAN ID 1016, FCID 0x790100
2 FC sessions, 2 iSCSI sessions
iSCSI session details

Target: spa-vt

Statistics:

PDU: Command: 10, Response: 10

Bytes: TX: 416, RX: 0

Number of connection: 1

TCP parameters

Local 10.48.69.242:3260, Remote

10.48.69.238:49500

Path MTU: 1500 bytes

Retransmission timeout: 300 ms

Round trip time: Smoothed 62 ms, Variance:

3

Advertized window: Current: 256 KB,

Maximum: 256 KB, Scale: 3

Peer receive window: Current: 576 KB,

Maximum: 576 KB, Scale: 4

Congestion window: Current: 4 KB

Target: seagate

Statistics:

PDU: Command: 4, Response: 4

Bytes: TX: 304, RX: 0

Number of connection: 1

TCP parameters

Local 10.48.69.242:3260, Remote

10.48.69.238:49501

Path MTU: 1500 bytes

Retransmission timeout: 300 ms

Round trip time: Smoothed 62 ms, Variance:

3

Advertized window: Current: 256 KB,

Maximum: 256 KB, Scale: 3

Peer receive window: Current: 576 KB,

Maximum: 576 KB, Scale: 4

Congestion window: Current: 4 KB

FCP Session details

Target FCID: 0x790104 (S_ID of this session:
0x790100)

pWWN: 50:06:01:60:88:02:a8:2b, nWWN:
50:06:01:60:11:02:a8:2b

Session state: LOGGED_IN

1 iSCSI sessions share this FC session

Target: spa-vt

Negotiated parameters

RcvDataFieldSize 1024 our_RcvDataFieldSize
1392

MaxBurstSize 0, EMPD: FALSE

Random Relative Offset: FALSE, Sequence-in-
order: Yes

Statistics:

PDU: Command: 0, Response: 10

Target FCID: 0x7902e8 (S_ID of this session:
0x790100)

pWWN: 21:00:00:20:37:67:f7:a2, nWWN:
20:00:00:20:37:67:f7:a2

Session state: LOGGED_IN

1 iSCSI sessions share this FC session

Target: seagate

Negotiated parameters

RcvDataFieldSize 1392 our_RcvDataFieldSize
1392

```
MaxBurstSize 0, EMPD: FALSE
Random Relative Offset: FALSE, Sequence-in-
order: Yes
Statistics:
PDU: Command: 0, Response: 4

vatican# show iscsi initiator iscsi-session detail
iSCSI Node name is 10.48.69.238
iSCSI Initiator name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale
iSCSI alias name: ape
Node WWN is 20:02:00:0c:30:57:5e:c2 (dynamic)
Member of vsans: 1016
Number of Virtual n_ports: 1
Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
(dynamic)
Interface iSCSI 2/1, Portal group tag is 0x80
VSAN ID 1016, FCID 0x790100
2 FC sessions, 2 iSCSI sessions
iSCSI session details
Target: spa-vt
Statistics:
PDU: Command: 10, Response: 10
Bytes: TX: 416, RX: 0
Number of connection: 1
TCP parameters
Local 10.48.69.242:3260, Remote
10.48.69.238:49500
Path MTU: 1500 bytes
Retransmission timeout: 300 ms
Round trip time: Smoothed 62 ms, Variance:
2
Advertized window: Current: 256 KB,
Maximum: 256 KB, Scale: 3
Peer receive window: Current: 576 KB,
Maximum: 576 KB, Scale: 4
Congestion window: Current: 4 KB
Target: seagate
Statistics:
PDU: Command: 4, Response: 4
Bytes: TX: 304, RX: 0
Number of connection: 1
TCP parameters
Local 10.48.69.242:3260, Remote
10.48.69.238:49501
Path MTU: 1500 bytes
Retransmission timeout: 300 ms
Round trip time: Smoothed 62 ms, Variance:
2
Advertized window: Current: 256 KB,
Maximum: 256 KB, Scale: 3
Peer receive window: Current: 576 KB,
Maximum: 576 KB, Scale: 4
Congestion window: Current: 4 KB

vatican# show iscsi initiator fcp-session detail
iSCSI Node name is 10.48.69.238
iSCSI Initiator name: iqn.1987-
05.com.cisco.01.a06c4e2b8b247cadceb8af1a8474dale
iSCSI alias name: ape
Node WWN is 20:02:00:0c:30:57:5e:c2 (dynamic)
Member of vsans: 1016
Number of Virtual n_ports: 1
Virtual Port WWN is 20:03:00:0c:30:57:5e:c2
```



```

(dynamic)
  Interface iSCSI 2/1, Portal group tag is 0x80
  VSAN ID 1016, FCID 0x790100
  2 FC sessions, 2 iSCSI sessions
  FCP Session details
    Target FCID: 0x790104 (S_ID of this session:
0x790100)
      pWWN: 50:06:01:60:88:02:a8:2b, nWWN:
50:06:01:60:11:02:a8:2b
      Session state: LOGGED_IN
      1 iSCSI sessions share this FC session
      Target: spa-vt
      Negotiated parameters
        RcvDataFieldSize 1024 our_RcvDataFieldSize
1392
        MaxBurstSize 0, EMPD: FALSE
        Random Relative Offset: FALSE, Sequence-in-
order: Yes
      Statistics:
        PDU: Command: 0, Response: 10
      Target FCID: 0x7902e8 (S_ID of this session:
0x790100)
        pWWN: 21:00:00:20:37:67:f7:a2, nWWN:
20:00:00:20:37:67:f7:a2
        Session state: LOGGED_IN
        1 iSCSI sessions share this FC session
        Target: seagate
        Negotiated parameters
          RcvDataFieldSize 1392 our_RcvDataFieldSize
1392
          MaxBurstSize 0, EMPD: FALSE
          Random Relative Offset: FALSE, Sequence-in-
order: Yes
        Statistics:
          PDU: Command: 0, Response: 4

vatican# show iscsi virtual-target configured
target: seagate
  * Port WWN 21:00:00:20:37:67:f7:a2
  === The "*" means you have both discovery and target
session. If there
  is no "*" in front of the pWWN, it means you only have
discovery session.
  Configured node
    No. of LU mapping: 1
      iSCSI LUN: 0000, FC LUN: 0000
    No. of advertised interface: 1
      GigabitEthernet 2/1
    No. of initiators permitted: 1
      initiator 10.48.69.238/32 is permitted
      all initiator permit is disabled
target: spa-vt
  * Port WWN 50:06:01:60:88:02:a8:2b
  Secondary PWWN 50:06:01:68:88:02:a8:2b
  Configured node
    No. of LU mapping: 2
      iSCSI LUN: 0003, FC LUN: 0020
      iSCSI LUN: 0004, FC LUN: 0021
    No. of advertised interface: 1
      GigabitEthernet 2/1
    No. of initiators permitted: 1
      initiator 10.48.69.238/32 is permitted
      all initiator permit is disabled

```

```

vatican# show iscsi stats iscsi 2/1
iscsi2/1
  5 minutes input rate 16 bits/sec, 2 bytes/sec, 0
frames/sec
  5 minutes output rate 16 bits/sec, 2 bytes/sec, 0
frames/sec
  iSCSI statistics
    50932 packets input, 60370640 bytes
      Command 3659 pdus, Data-out 41069 pdus,
56533832 bytes, 2476 fragments
      output 115926 packets, 112863536 bytes
      Response 3374 pdus (with sense 206), R2T 1897
pdus
      Data-in 103999 pdus, 106404584 bytes

vatican# show ips arp interface gigabitethernet 2/1
Protocol      Address      Age (min)    Hardware Addr
Type  Interface
Internet      10.48.69.200      0      0008.e21e.c7bc
ARPA GigabitEthernet2/1
Internet      10.48.69.201      5      0202.3d30.45c9
ARPA GigabitEthernet2/1
Internet      10.48.69.206      5      0202.3d30.45ce
ARPA GigabitEthernet2/1
Internet      10.48.69.209      3      0202.3d30.45d1
ARPA GigabitEthernet2/1
Internet      10.48.69.226      2      0060.08f6.bc1a
ARPA GigabitEthernet2/1
Internet      10.48.69.229      4      0800.209e.edab
ARPA GigabitEthernet2/1
Internet      10.48.69.231      1      0002.b3c1.7dab
ARPA GigabitEthernet2/1
Internet      10.48.69.233      0      0010.4200.7d5b
ARPA GigabitEthernet2/1
Internet      10.48.69.238      0      0030.6e1b.6f51
ARPA GigabitEthernet2/1
Internet      10.48.69.239     10      0030.6e1c.a00b
ARPA GigabitEthernet2/1
Internet      10.48.69.241      0      000b.cdaf.b4c3
ARPA GigabitEthernet2/1
Internet      10.48.69.248      4      0202.3d30.45f8
ARPA GigabitEthernet2/1
Internet      10.48.69.252      1      0202.3d30.45fc
ARPA GigabitEthernet2/1
Internet      10.10.2.28        7      0202.3d0a.021c
ARPA GigabitEthernet2/1

vatican# show ips stats tcp interface gigabitethernet
2/1 detail
TCP Statistics for port GigabitEthernet2/1
  TCP send stats
    261205 segments, 117757220 bytes
    140632 data, 51907 ack only packets
    2655 control (SYN/FIN/RST), 0 probes, 2639 window
updates
    63382 segments retransmitted, 90885612 bytes
    63382 retransmitted while on ethernet send queue,
1 packets split
    13327 delayed acks sent
  TCP receive stats
    249073 segments, 72669 data packets in sequence,
61525764 bytes in sequence
    2335 predicted ack, 68605 predicted data
    0 bad checksum, 0 multi/broadcast, 0 bad offset

```

```

    0 no memory drops, 0 short segments
    4396 duplicate bytes, 205 duplicate packets
    0 partial duplicate bytes, 0 partial duplicate
packets
    0 out-of-order bytes, 2625 out-of-order packets
    0 packet after window, 0 bytes after window
    0 packets after close
    80504 acks, 117762158 ack bytes, 0 ack toomuch,
96274 duplicate acks
    0 ack packets left of snd_una, 7 non-4 byte
aligned packets
    54199 window updates, 0 window probe
    6343 pcb hash miss, 709 no port, 6 bad SYN, 0
paws drops
    TCP Connection Stats
    0 attempts, 2718 accepts, 2718 established
    2716 closed, 15 drops, 0 conn drops
    3 drop in retransmit timeout, 10 drop in
keepalive timeout
    0 drop in persist drops, 0 connections drained
    TCP Miscellaneous Stats
    37062 segments timed, 41787 rtt updated
    817 retransmit timeout, 1 persist timeout
    22654 keepalive timeout, 22643 keepalive probes
    TCP SACK Stats
    0 recovery episodes, 0 data packets, 0 data bytes
    0 data packets retransmitted, 0 data bytes
retransmitted
    0 connections closed, 0 retransmit timeouts
    TCP SYN Cache Stats
    2720 entries, 2718 connections completed, 0
entries timed out
    0 dropped due to overflow, 2 dropped due to RST
    0 dropped due to ICMP unreachable, 0 dropped due to
bucket overflow
    0 abort due to no memory, 2 duplicate SYN, 183
no-route SYN drop
    0 hash collisions, 0 retransmitted
    TCP Active Connections
    Local Address      Remote Address      State
Send-Q  Recv-Q
    10.48.69.242:3260  10.48.69.238:49499
ESTABLISH 0      0
    10.48.69.242:3260  10.48.69.238:49500
ESTABLISH 0      0
    10.48.69.242:3260  10.48.69.238:49501
ESTABLISH 0      0
    0.0.0.0:3260      0.0.0.0:0
LISTEN 0      0
vatican# discover scsi-target local
discovery started

vatican# show scsi-target devices vsan 1016
-----
VSAN      FCID      PWWN      VENDOR
MODEL      REV
-----
    1016    0x790104  50:06:01:60:88:02:a8:2b  DGC
RAID 0      0632
    1016    0x7902e8  21:00:00:20:37:67:f7:a2  SEAGATE
ST318203FC  0004
vatican# show scsi-target lun vsan 1016

```

- RAID from DGC (Rev 0632)
FCID is 0x790104 in VSAN 1016, PWWN is
50:06:01:60:88:02:a8:2b

```
-----  
-----  
LUN      Capacity  Status  Serial Number  Device-Id  
      (MB)  
-----  
-----  
0x0      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
da:05:b6:a9:b6:9d:7b:00  
C:1 A:0  
T:0 00:00:00:00  
0x1      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
6a:66:0d:74:cb:33:88:6c  
C:1 A:0  
T:0 00:01:00:00  
0x2      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
ec:81:5b:a2:c4:43:0d:8a  
C:1 A:0  
T:0 00:02:00:00  
0x3      2147      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
e0:47:b3:be:3b:00:e0:d5  
C:1 A:0  
T:0 00:03:00:00  
0x4      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
00:51:5b:7f:3d:9a:7b:ce  
C:1 A:0  
T:0 00:04:00:00  
0x5      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
ab:b1:ae:80:59:c0:fc:f0  
C:1 A:0  
T:0 00:05:00:00  
0x6      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
ad:91:58:af:d2:fd:c7:47  
C:1 A:0  
T:0 00:06:00:00  
0x7      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
b1:ef:e7:6c:44:5c:16:97  
C:1 A:0  
T:0 00:07:00:00  
0x8      1074      Online  f60004202091  C:1 A:0 T:3  
60:06:01:60:88:02:a8:2b  
84:4f:09:60:30:1e:fc:50  
C:1 A:0  
T:0 00:08:00:00
```

0x9	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
aa:6d:e2:0e:ce:7a:cc:21				
				C:1 A:0
T:0 00:09:00:00				
0xa	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
5b:66:67:89:6c:f2:d1:56				
				C:1 A:0
T:0 00:0a:00:00				
0xb	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
a9:32:bd:04:4a:bb:3d:9b				
				C:1 A:0
T:0 00:0b:00:00				
0xc	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
cd:d9:96:f7:57:3f:07:0c				
				C:1 A:0
T:0 00:0c:00:00				
0xd	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
0c:e5:ba:39:68:ca:d6:f0				
				C:1 A:0
T:0 00:0d:00:00				
0xe	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
60:6e:ee:76:98:fc:ab:97				
				C:1 A:0
T:0 00:0e:00:00				
0xf	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
8b:58:80:7b:12:fb:6b:12				
				C:1 A:0
T:0 00:0f:00:00				
0x10	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
a1:2f:6d:b0:c3:d6:c2:46				
				C:1 A:0
T:0 00:10:00:00				
0x11	1074	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
2c:48:c4:74:25:4b:26:dd				
				C:1 A:0
T:0 00:11:00:00				
0x20	5369	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
ba:18:6a:40:22:40:94:75				
				C:1 A:0
T:0 00:20:00:00				
0x21	3221	Online	f60004202091	C:1 A:0 T:3
60:06:01:60:88:02:a8:2b				
74:d2:42:9e:31:8d:ff:86				

C:1 A:0

T:0 00:21:00:00

- ST318203FC from SEAGATE (Rev 0004)

FCID is 0x7902e8 in VSAN 1016, PWWN is

21:00:00:20:37:67:f7:a2

```
-----  
-----  
LUN      Capacity  Status  Serial Number  Device-Id  
      (MB)  
-----  
-----  
0x0      18210      Online  LRE8091500007039 C:1 A:0 T:3  
20:00:00:20:37:67:f7:a2
```

vatican# **show interface iscsi 2/1**

iscsi2/1 is up

Hardware is GigabitEthernet

Port WWN is 20:41:00:0c:30:57:5e:c0

Admin port mode is ISCSI

Port mode is ISCSI

Speed is 1 Gbps

iSCSI initiator is identified by name

Number of iSCSI session: 0, Number of TCP

connection: 0

Configured TCP parameters

Local Port is 3260

PMTU discover is enabled, reset timeout is 3600

sec

Keepalive-timeout is 60 sec

Minimum-retransmit-time is 300 ms

Max-retransmissions 4

Sack is disabled

Maximum allowed bandwidth is 500000 kbps

Minimum available bandwidth is 500000 kbps

Estimated round trip time is 10000 usec

5 minutes input rate 16 bits/sec, 2 bytes/sec, 0
frames/sec

5 minutes output rate 16 bits/sec, 2 bytes/sec, 0
frames/sec

iSCSI statistics

Input 50920 packets, 60370032 bytes

Command 3659 pdus, Data-out 41069 pdus,
56533832 bytes fragments 2476

Output 115914 packets, 112862928 bytes

Response 3374 pdus (with sense 206), R2T 1897
pdus

Data-in 103999 pdus, 106404584 bytes

vatican# **show interface gigabitethernet 2/1**

GigabitEthernet2/1 is up

Hardware is GigabitEthernet, address is
0005.3000.a85a

Internet address is 10.48.69.242/26

MTU 1500 bytes

Port mode is IPS

Speed is 1 Gbps

Beacon is turned off

Auto-Negotiation is turned on

iSCSI authentication: NONE

5 minutes input rate 440 bits/sec, 55 bytes/sec, 0
frames/sec

```
5 minutes output rate 80 bits/sec, 10 bytes/sec, 0
frames/sec
850346 packets input, 127958119 bytes
6488 multicast frames, 0 compressed
0 input errors, 0 frame, 0 overrun 0 fifo
289960 packets output, 201600774 bytes, 0 underruns
0 output errors, 0 collisions, 0 fifo
0 carrier errors

vatican# show ip route

Codes: C - connected, S - static

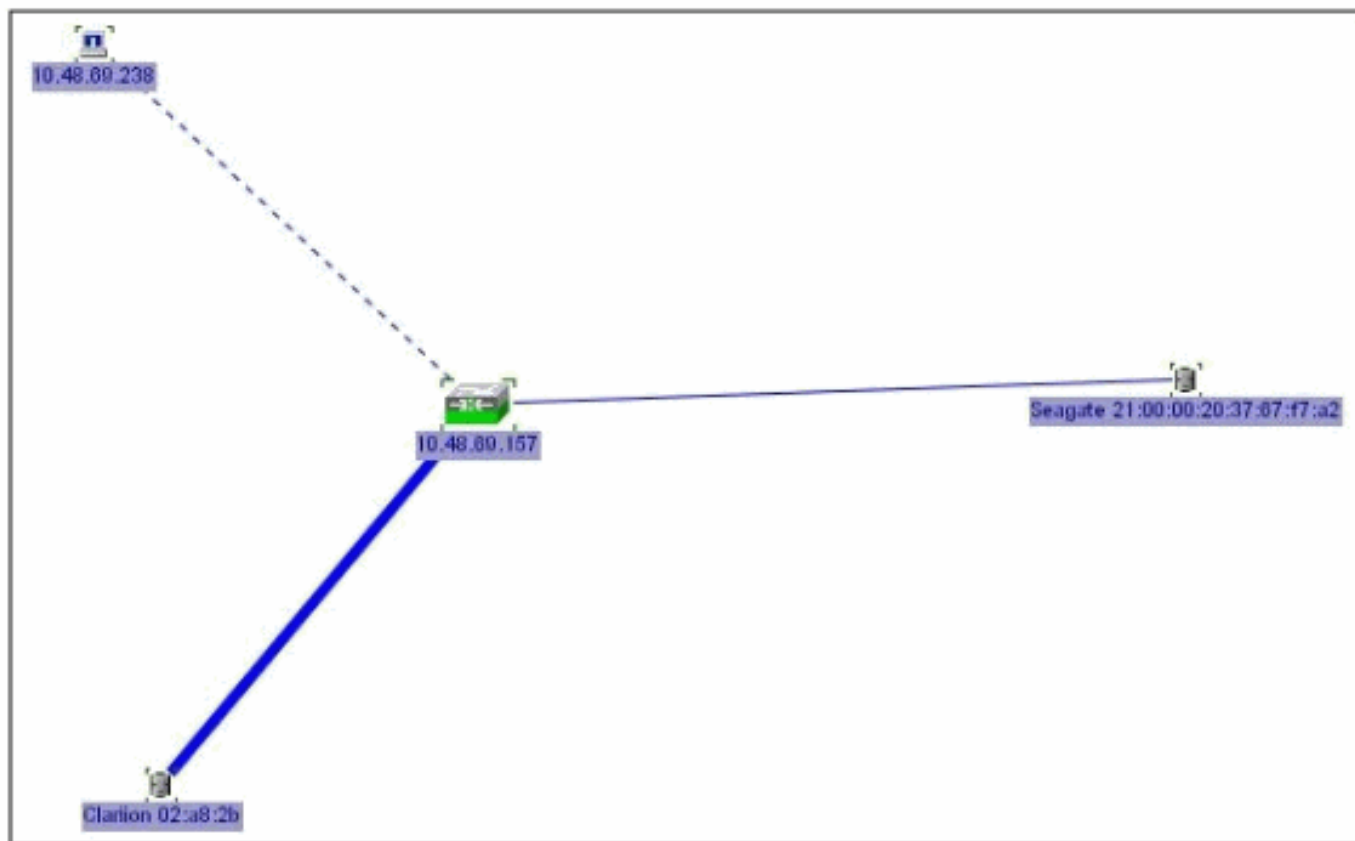
Default gateway is 10.48.69.129

C 10.48.69.192/26 is directly connected,
gigabitethernet2-1
C 10.48.69.128/26 is directly connected, mgmt0
```

组织管理器和设备管理器显示

此部分提供从MD组织管理器1.2(1a)和设备管理器的屏幕获取1.2(1a)。

从组织管理器的拓扑图



设备管理器



选择在显示pWWNs、LUN您的LUNs ID和容量的设备管理器的FC- > LUNs。

vatican - LUN

Discover | Targets | **LUNs**

VsanId, Port WWN	Id	Capacity (MB)	SerialNum
1016, Clariion 50:06:01:60:88:02:a8:2b	0x0	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x1	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x2	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x3	2147	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x4	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x5	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x6	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x7	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x8	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x9	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0xa	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0xb	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0xc	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0xd	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0xe	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0xf	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x10	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x11	1074	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x20	5369	f60004202091
1016, Clariion 50:06:01:60:88:02:a8:2b	0x21	3221	f60004202091
1016, Seagate 21:00:00:20:37:67:f7:a2	0x0	18210	LRE8091500007039HLT6

Refresh Help Close

21 row(s)

选择IP > -在显示iSCSI会话的设备管理器的iSCSI。

vatican - iSCSI

Initiators | Targets | Sessions | **Sessions Detail** | Session Statistics

Name or IpAddress	TargetName	Immediate Data	Ready To Transfer		Burst Size		Data InOrder		Connection Number	Recovery Level
			Initial	MaxOutstanding	First	Max	Sequence	PDU		
10.48.69.238		false	true	1	0	0	false	false	1	0
10.48.69.238	spa-vt	false	true	1	0	0	false	false	1	0
10.48.69.238	seagate	false	true	1	0	0	false	false	1	0

Refresh Help Close

Data retrieved at 17:49:36