

Windows服务器2003年对MDS/IPS-8配置示例的iSCSI主机

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简介

Cisco的iSCSI驱动，在服务器上位于，是iSCSI解决方法的关键组件。这些iSCSI驱动拦截SCSI命令，压缩它们到IP包，并重发它们到Cisco SN 5420、Cisco SN 5428，Cisco SN5428-2或者Cisco MDS/IPS-8。本文为Solaris iSCSI主机提供配置示例给MDS/IPS-8。

开始使用前

[规则](#)

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)。

IPS刀片是指IP存储设备服务模块。有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

先决条件

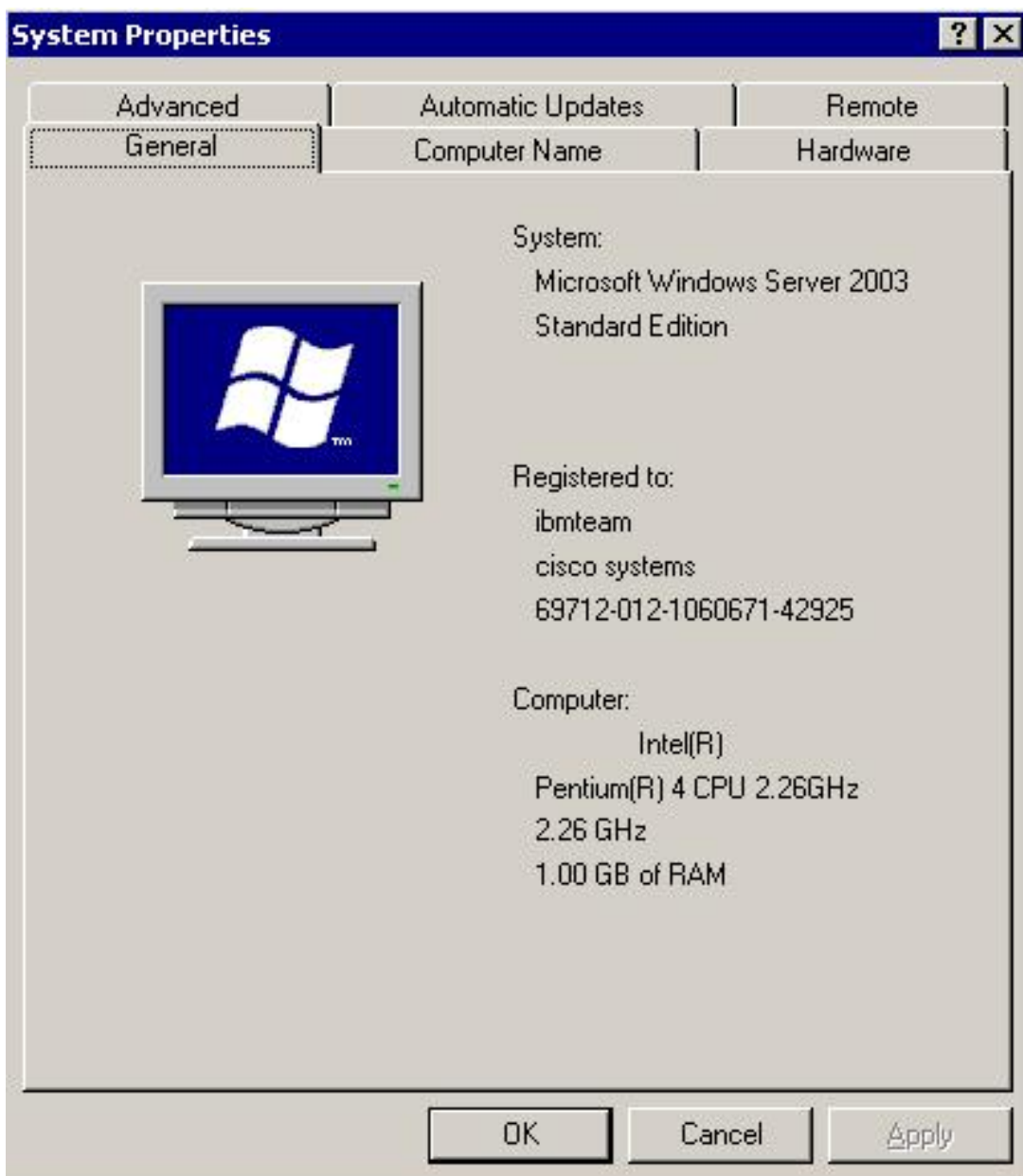
安装是兼容对您的Windows服务器2003年版本的iSCSI驱动。驱动程序的多数当前版本可以在[Windows服务器2003年](#)(仅限注册用户)页的[Cisco iSCSI驱动](#)找到在Cisco.com。README.txt文件包括在驱动程序zip(tar)文件中。README包含关于许可证协议的信息、驱动程序安装和配置说明以及驱动体系结构的技术概要。

Microsoft Windows的Cisco iSCSI驱动2003年需要Windows服务器2003年企业版或标准版或者网上版本。

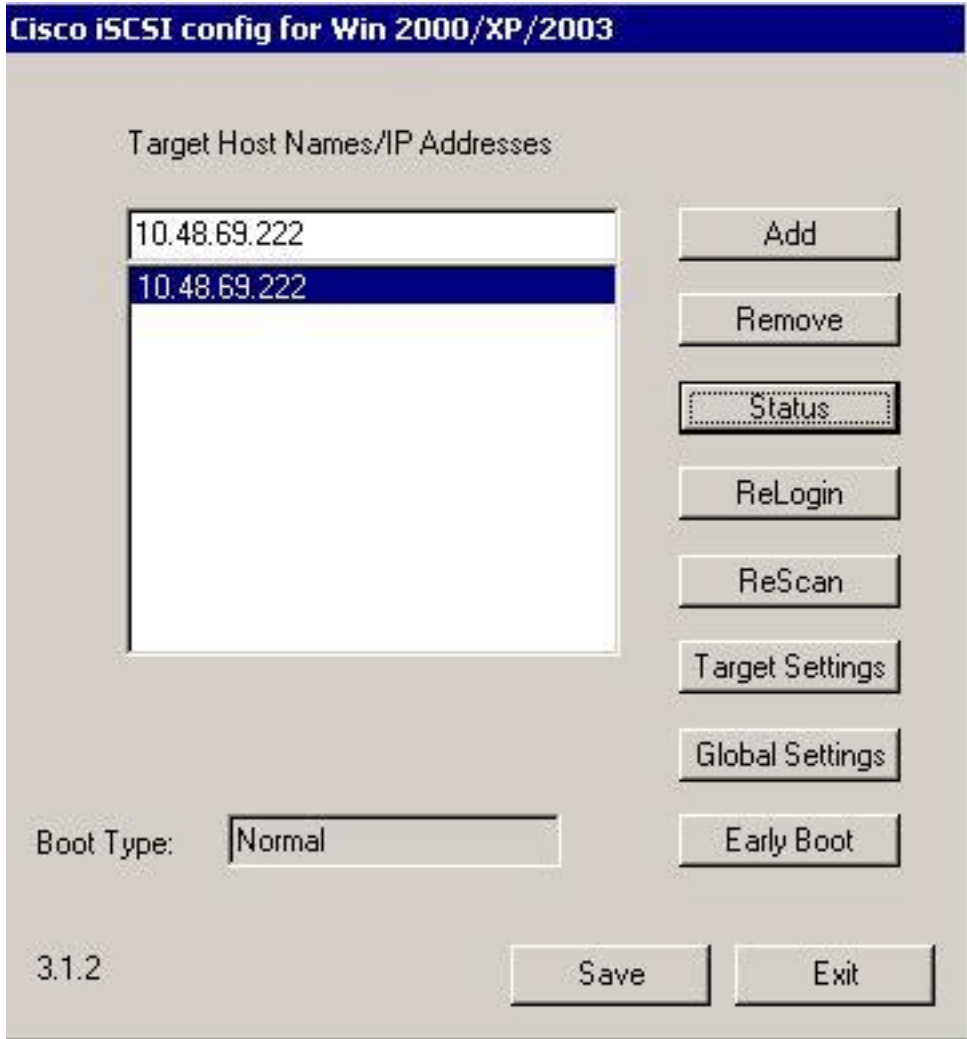
使用的组件

本文档中的信息基于以下软件和硬件版本。

- 主机与Windows服务器2003年标准版



- Windows服务器的Cisco iSCSI驱动3.1.2 2003年。iSCSI驱动版本能被看到在iSCSI Config窗口的左下。



- 有软件版本的1.2(1a) Cisco MDS 9216

```

canterbury# show module Mod Ports Module-Type Model Status ---
-----
----- 1 16 1/2 Gbps FC/Supervisor DS-X9216-K9-SUP active * 2 8 IP
Storage Services Module DS-X9308-SMIP ok Mod Sw Hw World-Wide-Name(s) (WWN) ---
-----
----- 1 1.2(1a) 1.0 20:01:00:0c:30:6c:24:40 to
20:10:00:0c:30:6c:24:40 2 1.2(1a) 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 ver
```

```

Cisco Storage Area Networking Operating System (SAN-OS) Software
TAC support: http://www.cisco.com/tac
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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 960080 kB
```

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

```
Canterbury uptime is 1 days 12 hours 3 minute(s) 29 second(s)
```

```
Last reset at 39578 usecs after Mon Oct 13 07:32:38 2003
```

```
Reason: Reset Requested by CLI command reload
```

```
System version: 1.2(1a)
```

本文档中的信息都是基于特定实验室环境中的设备创建的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您是在真实网络上操作，请确保您在使用任何命令前已经了解其潜在影响。

背景理论

IP存储体提供IP主机存取对于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SCSI (FCP)目标 (PDU)发送SCSI命令集封装到在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千兆以太网(GE)接口的形式。IPS模块使您创建虚拟iSCSI目标并且映射他们到在FC SAN上可用的物理FC目标。它提交FC目标到IP主机，好象物理目标本地附加对IP网络。

通过IPS模块要求对存储设备的访问的每台iSCSI主机需要有安装的一兼容的iSCSI驱动。使用iSCSI协议，iSCSI驱动允许iSCSI主机传输SCSI请求和答复在IP网络。从主机操作系统的角度，iSCSI驱动看来是SCSI运输驱动程序，与主机中一条外围通道的FC驱动程序相似。从存储设备的角度，每台IP主机出现为一台FC主机。

路由SCSI从IP主机到FC存储设备包括以下主要操作：

- 传输iSCSI请求和答复在IP网络在主机和IPS模块之间。
- 路由SCSI请求和答复在主机在IP网络和FC存储设备之间(转换iSCSI对FCP反之亦然)。此运输路线由IPS模块执行。
- 传输FCP请求或答复在IPS模块和FC存储设备之间。

默认情况下IP存储模块不导入FC目标到iSCSI。在IPS模块安排FC目标可用iSCSI创始者前，动态或静态映射必须配置。当两个都被配置后，静态被映射的FC目标有一个配置的名称。在此配置中您将参见静态映射示例。使用动态映射，每次iSCSI主机连接对IPS模块一个新的FC N端口创建，并且为此N端口和pWWNs分配的nWWNs可能不同的。请使用静态映射方法，如果您需要iSCSI主机每次获得同样nWWN和pWWN，它接到IPS模块。静态映射在IPS模块可以用于访问有映射的访问控制和的LUN/根据创始者的pWWNs和nWWNs的屏蔽的配置的智能FC存储阵列。

您能通过指定的IPS端口列表将是通告和指定iSCSI允许的发起者节点名列表控制对每个静态映射的iSCSI目标的访问访问它。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提供的二个机制。可以同时使用两个方法。在此配置默认区域为特定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主机创建一个iSCSI发现会话并询问所有iSCSI目标时，IPS模块返回iSCSI目标列表此iSCSI主机允许基于接入控制策略的接入。
- **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(在会议登录请求)是否静态映射到目标，如果是，验证IP主机的iSCSI节点名是否允许访问目标。如果IP主机没有权限，其登录被拒绝。

IP存储体创建一个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主机访问FC目标pwwn FCID的一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，名称服务器执行的一次强制的pwwn区域查询并且回应查询。如果FCID由名称服务器返回，则iSCSI会话接受。否则，登录请求被拒绝。

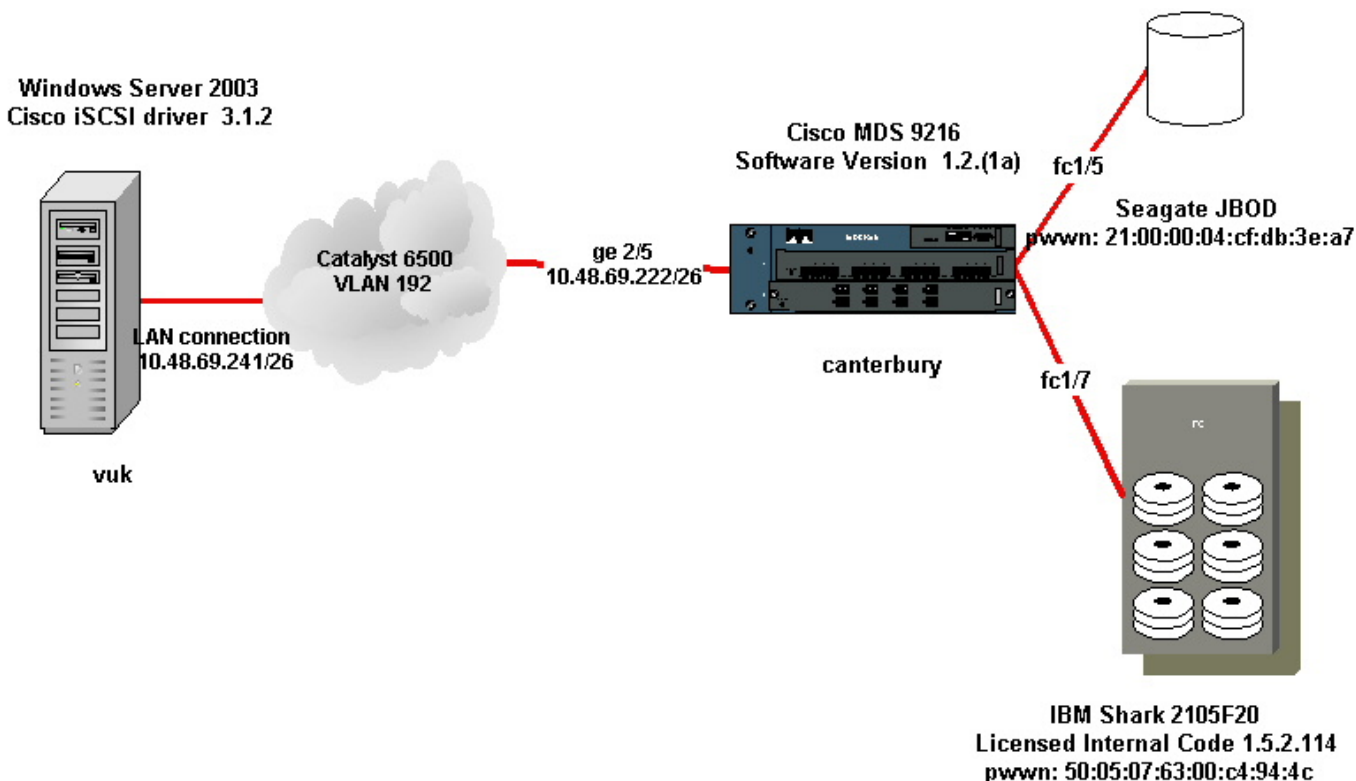
配置

在此部分，您提交以信息配置MDS9216和Cisco iSCSI驱动Solaris的。

注意：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](#)。

网络图

本文档使用下图所示的网络设置。



配置

本文档使用如下所示的配置。

- Vuk (Windows服务器2003)

• 坎特伯雷(MDS9216)

Vuk (Windows服务器2003)

初始配置任务包括以下操作：

- 设置的MDS9000系列系统的iSCSI Itarget IP地址驱动程序将访问。
- 设置iSCSI目标认证用户用户名和密码。
- 保存iSCSI目标配置和设置驱动程序的启动类型。

要配置驱动程序，请执行以下步骤：

1. 作为有管理员权限的一个用户登录到计算机。
2. 点击**开始**，指向**设置**，点击**控制面板**然后双击**iSCSI设置**。**Iscsi设置**程序造成思科iSCSI设置成功2000/XP/2003对话框的能显示。
3. 在Win 2000对话框的Cisco iSCSI设置，请配置SCSI路由实例的IP地址在MDS9000系列系统的如下：在**目标主机主机名/IP地址**文本框，请键入SCSI路由实例的IP地址在MDS9000系列系统的。在本例中配置示例，IP地址是10.48.69.222。单击**Add**。IP地址在**Target Host Names/IP Addresses**文本框下的显示区被显示。

Cisco iSCSI config for Win 2000/XP/2003

Target Host Names/IP Addresses

10.48.69.222

10.48.69.222

Add

Remove

Status

ReLogin

ReScan

Target Settings

Global Settings

Early Boot

Boot Type: Normal

3.1.2

Save Exit

4. 单击保存并且退出。
5. 重新启动计算机。

坎特伯雷(Cisco MDS 9216)

```

vsan database
vsan 222 name ozden
!--- VSAN 222 has been used for iSCSI targets. vsan database vsan
222 interface fc1/5 !--- Seagate is connected to fc1/5. vsan 222
interface fc1/6 vsan 222 interface fc1/7 !--- IBM Shark is
connected to fc1/7. vsan 222 interface fc1/8 !--- System boot
variables. boot system bootflash:/s121a boot kickstart
bootflash:/k121a !--- IP configurations. ip domain-name cisco.com
ip name-server 144.254.10.123 ip default-gateway 10.48.69.129 ip
routing iscsi authentication none !--- Identify the iSCSI
initiator based on the IP address of your host. !--- A static
virtual N port is defined for each NIC or network interface. !---
LUN-mapping and LUN-masking on the storage device has to be done
with the static pWWN !--- that you have defined for the
initiator. Refer to the Enterprise Storage Server Specialist !---
(ESSS) screen capture in the Fabric Manager and Device Manager
Displays section !--- for more information. iscsi initiator ip-
address 10.48.69.241 static nWWN 22:01:00:0c:30:6c:24:42 static
pWWN 21:03:00:0c:30:6c:24:42 !--- Targets via Vsan 222 are
accessible by iSCSI initiators. vsan 222 !--- A virtual target has
been defined for the JBOD. The target has !--- been identified by
it's pWWN. The target has been advertised via !--- GE interface
2/5. Host 10.48.69.241 is the only initiator. iscsi virtual-
target name seagate pWWN 21:00:00:04:cf:db:3e:a7 fc-lun 0x0000
iscsi-lun 0x0000 advertise interface GigabitEthernet2/5 initiator
ip address 10.48.69.241 permit !--- A virtual target has been
defined for the IBM Shark. The target has been identified by the
pWWN. !--- Do not specify the LUN if you wish to map the entire
FC target to an iSCSI target. !--- In the virtual-target shark-
lun, LUN-mapping options have been used. FC-LUN 0x0000 has been
!--- mapped to iSCSI-LUN 0x0000. It is also possible to map FC-
LUN 0x0000 to a different iSCSI-LUN number. iscsi virtual-target
name shark-lun pWWN 50:05:07:63:00:c4:94:4c fc-lun 0x0000 iscsi-
lun 0x0000 pWWN 50:05:07:63:00:c4:94:4c fc-lun 0x0001 iscsi-lun
0x0001 advertise interface GigabitEthernet2/5 initiator ip
address 10.48.69.241 permit line console exec-timeout 0 line vty
exec-timeout 0 ntp server 10.48.64.100 switchname canterbury ..
zone default-zone permit vsan 1 !--- Default zone policy is set
to permit for VSAN 222. zone default-zone permit vsan 222
interface GigabitEthernet2/5 ip address 10.48.69.222
255.255.255.192 no shutdown ... interface fc1/5 no shutdown
interface fc1/6 interface fc1/7 no shutdown ... interface mgmt0
ip address 10.48.69.156 255.255.255.192 !---The iSCSI interface
has to be set no shut. interface iscsi2/5 no shutdown

```

验证

本部分所提供的信息可用于确认您的配置是否正常工作。

- **show zone status** -显示区域信息。
- **show fcns database vsan 222** -显示一特定VSAN的名称服务器信息。
- **show flogi database vsan 222** -显示一特定VSAN的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 2/5 detail** -显示特定GE接口的TCP统计信息。

- **show iscsi virtual-target configured** -显示在MDS9000配置的iSCSI虚拟目标。
- **show iscsi initiator configured** -显示在MDS9000配置的iSCSI创始者。
- **show ips arp interface gigabitethernet 2/5** -显示IPS特定GE接口的arp信息。
- **show scsi-target lun vsan 222** -显示特定VSAN的SCSI设备(映射对iSCSI-LUN的FC-LUNs)。
- **show int iscsi 2/5** -显示iSCSI接口。
- **show iscsi stats iscsi 2/5** -显示iSCSI统计信息。
- **show int gigabitethernet 2/5** -显示GE接口。
- **show ip route** -显示Ip route信息。

故障排除

本部分提供的信息可用于对配置进行故障排除。

注意：要寻找关于排除故障IP存储设备问题的其他信息，请使用[Cisco MDS 9000系列故障排除指南](#)。

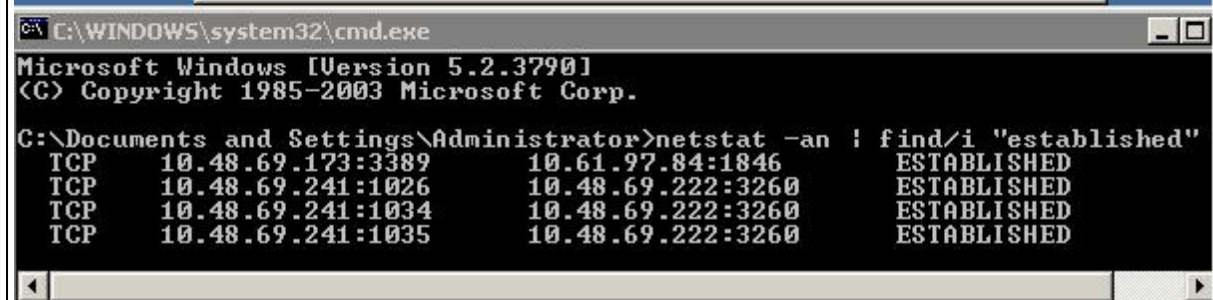
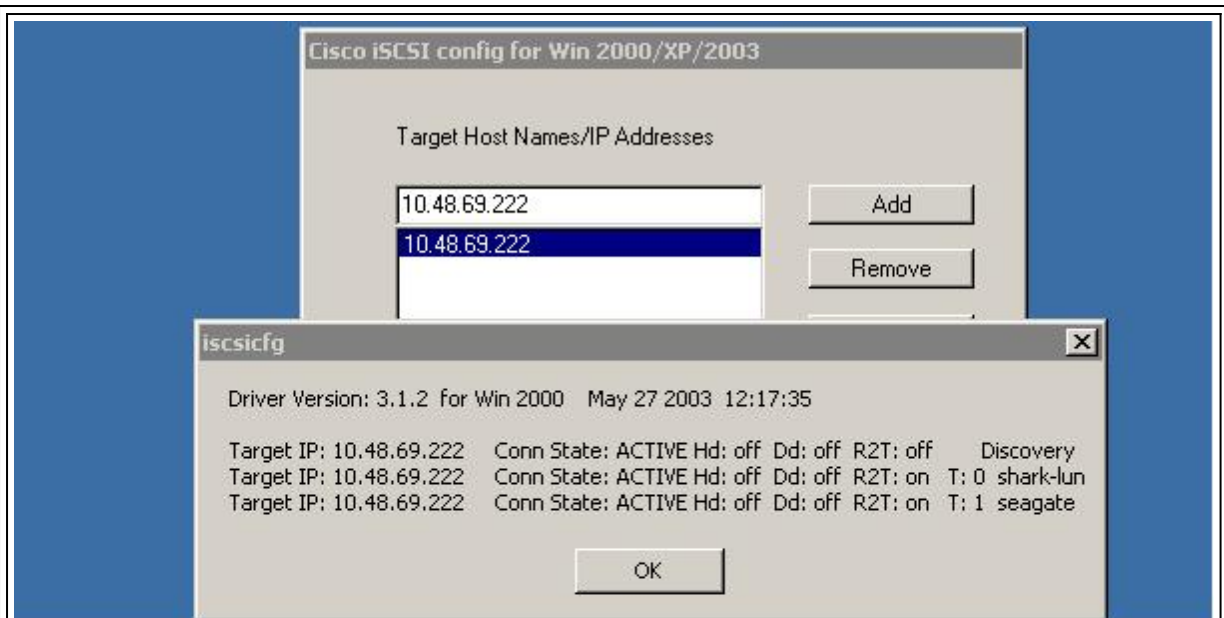
故障排除步骤

下面提供与本配置有关的故障排除信息。

- 从Vuk (Windows服务器显示2003)
- 从坎特伯雷Cisco MDS 9216显示

从Vuk (Windows服务器显示2003)

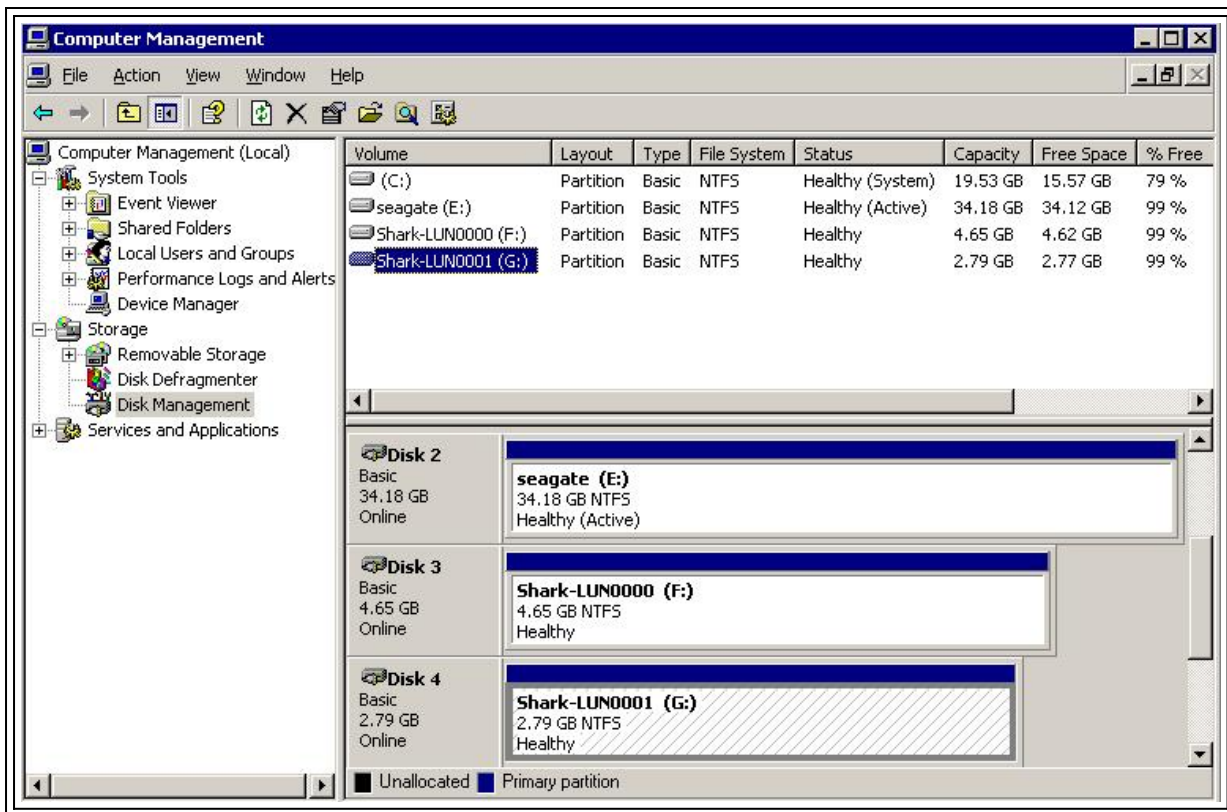
在思科iSCSI Config窗口，请点击**状态**检查主机是否顺利地登录iSCSI目标。在line命令，请发出**netstat - an|find/i “设立”**看到在10.48.69.222之间的已建立TCP会话。



要看到新的磁盘，请用鼠标右键单击我的在桌面的计算机。双击计算机管理器。
在系统工具下的控制台结构树中，请点击设备管理器



对于适当作用在Windows 2003服务器下的驱动程序，驱动程序需要创建一个假磁盘驱动器。这将出现作为一张未知磁盘在磁盘管理MMC应用程序下。因为在任何情况下，不影响性能或作用系统用户能忽略此。不能删除它。
要管理存储设备，请用鼠标右键单击我的在桌面的计算机。双击计算机管理器。在存储设备下的控制台结构树中，请点击磁盘管理。



从坎特伯雷(Cisco MDS 9216)显示

```

canterbury#show vsan membership vsan 1 interfaces: fc1/3 fc1/10
fc1/12 fc1/13 fc1/14 fc1/16 vsan 222 interfaces: fc1/5 fc1/6
fc1/7 fc1/8 vsan 4094(isolated_vsan) interfaces: canterbury#show
zone status VSAN: 1 default-zone: permit distribute: active only
Interop: 100 Full Zoning Database : Zonesets:0 Zones:0 Aliases: 0
Active Zoning Database : Database Not Available Status: VSAN: 222
default-zone: permit distribute: active only Interop: 100 Full
Zoning Database : Zonesets:0 Zones:0 Aliases: 0 Active Zoning
Database : Database Not Available Status: !--- VSAN 222 has been
used for this configuration, default-zone behavior has been set
to permit. canterbury#show flogi database vsan 222 -----
-----
INTERFACE VSAN FCID PORT NAME NODE NAME -----
----- fc1/5 222
0x62011e 21:00:00:04:cf:db:3e:a7 20:00:00:04:cf:db:3e:a7 fc1/7
222 0x620003 50:05:07:63:00:c4:94:4c 50:05:07:63:00:c0:94:4c
iscsi2/5 222 0x620001 21:03:00:0c:30:6c:24:42
22:01:00:0c:30:6c:24:42 Total number of flogi = 3. !--- FCID
0X620001 is the virtual N port(HBA) for the iSCSI host Vuk.
canterbury#show fcns database vsan 222 VSAN 222: -----
----- FCID
TYPE PWWN (VENDOR) FC4-TYPE:FEATURE -----
----- 0x620001 N
21:03:00:0c:30:6c:24:42 (Cisco) scsi-fcp:init isc..w 0x620003 N
50:05:07:63:00:c4:94:4c (IBM) scsi-fcp:target fc.. 0x62011e NL
21:00:00:04:cf:db:3e:a7 (Seagate) scsi-fcp:target Total number of
entries = 3 canterbury#show fcns database detail vsan 222 -----
----- VSAN:222 FCID:0x620001 -----
port-wwn (vendor) :21:03:00:0c:30:6c:24:42 (Cisco) node-wwn
:22:01:00:0c:30:6c:24:42 class :2,3 node-ip-addr :10.48.69.241
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 :10.48.69.241 port-type :N port-ip-addr
:0.0.0.0 fabric-port-wwn :20:51:00:0c:30:6c:24:40 hard-addr
:0x000000 ----- VSAN:222 FCID:0x620003 -----
----- port-wwn (vendor) :50:05:07:63:00:c4:94:4c
(IBM) node-wwn :50:05:07:63:00:c0:94:4c class :2,3 node-ip-addr
:0.0.0.0 ipa :ff ff ff ff ff ff ff fc4-
types:fc4_features:scsi-fcp:target fcsb2-ch-cu fcsb2-cu-ch
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 ----- VSAN:222 FCID:0x62011e -----
----- port-wwn (vendor) :21:00:00:04:cf:db:3e:a7
(Seagate) node-wwn :20:00:00:04:cf:db:3e:a7 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
:20:05:00:0c:30:6c:24:40 hard-addr :0x000000 Total number of
entries = 3 canterbury#show iscsi session Initiator 10.48.69.241
Initiator name iqn.1987-05.com.cisco:02.9a74eb40e94d.vuk-win2003
Session #1 Discovery session, ISID 00023d000023, Status active
Session #2 Target shark-lun VSAN 222, ISID 00023d000024, Status
active, no reservation Session #3 Target seagate VSAN 222, ISID
00023d000025, Status active, no reservation canterbury#show iscsi
initiator iSCSI Node name is 10.48.69.241 iSCSI Initiator name:
iqn.1987-05.com.cisco:02.9a74eb40e94d.vuk-win2003 iSCSI alias
name: VUK-WIN2003 Node WWN is 22:01:00:0c:30:6c:24:42 (dynamic)
Member of vsans: 222 Number of Virtual n_ports: 1 Virtual Port
WWN is 21:03:00:0c:30:6c:24:42 (configured) Interface iSCSI 2/5,
Portal group tag: 0x84 VSAN ID 222, FCID 0x620001 canterbury#show
iscsi initiator detail iSCSI Node name is 10.48.69.241 iSCSI
Initiator name: iqn.1987-05.com.cisco:02.9a74eb40e94d.vuk-win2003
iSCSI alias name: VUK-WIN2003 Node WWN is 22:01:00:0c:30:6c:24:42
(dynamic) Member of vsans: 222 Number of Virtual n_ports: 1
Virtual Port WWN is 21:03:00:0c:30:6c:24:42 (configured)
Interface iSCSI 2/5, Portal group tag is 0x84 VSAN ID 222, FCID
0x620001 2 FC sessions, 2 iSCSI sessions iSCSI session details
Target: seagate Statistics: PDU: Command: 16, Response: 16 Bytes:
TX: 188, RX: 0 Number of connection: 1 TCP parameters Local
10.48.69.222:3260, Remote 10.48.69.241:1035 Path MTU: 1500 bytes
Retransmission timeout: 350 ms Round trip time: Smoothed 165 ms,
Variance: 46 Advertized window: Current: 125 KB, Maximum: 125 KB,
Scale: 1 Peer receive window: Current: 118 KB, Maximum: 118 KB,
Scale: 1 Congestion window: Current: 9 KB Target: shark-lun
Statistics: PDU: Command: 2343, Response: 2343 Bytes: TX:
46363700, RX: 45494272 Number of connection: 1 TCP parameters
Local 10.48.69.222:3260, Remote 10.48.69.241:1034 Path MTU: 1500
bytes Retransmission timeout: 390 ms Round trip time: Smoothed
136 ms, Variance: 65 Advertized window: Current: 125 KB, Maximum:
125 KB, Scale: 1 Peer receive window: Current: 118 KB, Maximum:
118 KB, Scale: 1 Congestion window: Current: 11 KB FCP Session
details Target FCID: 0x62011e (S_ID of this session: 0x620001)
pWWN: 21:00:00:04:cf:db:3e:a7, nWWN: 20:00:00:04:cf:db:3e:a7
Session state: LOGGED_IN 1 iSCSI sessions share this FC session
Target: seagate Negotiated parameters RcvDataFieldSize 1404
our_RcvDataFieldSize 1404 MaxBurstSize 0, EMPD: FALSE Random
Relative Offset: FALSE, Sequence-in-order: Yes Statistics: PDU:
Command: 0, Response: 16 Target FCID: 0x620003 (S_ID of this
session: 0x620001) pWWN: 50:05:07:63:00:c4:94:4c, nWWN:
50:05:07:63:00:c0:94:4c Session state: LOGGED_IN 1 iSCSI sessions
share this FC session Target: shark-lun Negotiated parameters
RcvDataFieldSize 2048 our_RcvDataFieldSize 1404 MaxBurstSize 0,
EMPD: FALSE Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 2343 canterbury#show iscsi
initiator iscsi-session detail iSCSI Node name is 10.48.69.241

```

```
iSCSI Initiator name: iqn.1987-05.com.cisco:02.9a74eb40e94d.vuk-
win2003 iSCSI alias name: VUK-WIN2003 Node WWN is
22:01:00:0c:30:6c:24:42 (dynamic) Member of vsans: 222 Number of
Virtual n_ports: 1 Virtual Port WWN is 21:03:00:0c:30:6c:24:42
(configured) Interface iSCSI 2/5, Portal group tag is 0x84 VSAN
ID 222, FCID 0x620001 2 FC sessions, 2 iSCSI sessions iSCSI
session details Target: seagate Statistics: PDU: Command: 16,
Response: 16 Bytes: TX: 188, RX: 0 Number of connection: 1 TCP
parameters Local 10.48.69.222:3260, Remote 10.48.69.241:1035 Path
MTU: 1500 bytes Retransmission timeout: 350 ms Round trip time:
Smoothed 165 ms, Variance: 46 Advertized window: Current: 125 KB,
Maximum: 125 KB, Scale: 1 Peer receive window: Current: 118 KB,
Maximum: 118 KB, Scale: 1 Congestion window: Current: 9 KB
Target: shark-lun Statistics: PDU: Command: 2343, Response: 2343
Bytes: TX: 46363700, RX: 45494272 Number of connection: 1 TCP
parameters Local 10.48.69.222:3260, Remote 10.48.69.241:1034 Path
MTU: 1500 bytes Retransmission timeout: 390 ms Round trip time:
Smoothed 136 ms, Variance: 65 Advertized window: Current: 125 KB,
Maximum: 125 KB, Scale: 1 Peer receive window: Current: 118 KB,
Maximum: 118 KB, Scale: 1 Congestion window: Current: 11 KB
canterbury#show iscsi initiator fcp-session detail iSCSI Node
name is 10.48.69.241 iSCSI Initiator name: iqn.1987-
05.com.cisco:02.9a74eb40e94d.vuk-win2003 iSCSI alias name: VUK-
WIN2003 Node WWN is 22:01:00:0c:30:6c:24:42 (dynamic) Member of
vsans: 222 Number of Virtual n_ports: 1 Virtual Port WWN is
21:03:00:0c:30:6c:24:42 (configured) Interface iSCSI 2/5, Portal
group tag is 0x84 VSAN ID 222, FCID 0x620001 2 FC sessions, 2
iSCSI sessions FCP Session details Target FCID: 0x62011e (S_ID of
this session: 0x620001) pWWN: 21:00:00:04:cf:db:3e:a7, nWWN:
20:00:00:04:cf:db:3e:a7 Session state: LOGGED_IN 1 iSCSI sessions
share this FC session Target: seagate Negotiated parameters
RcvDataFieldSize 1404 our_RcvDataFieldSize 1404 MaxBurstSize 0,
EMPD: FALSE Random Relative Offset: FALSE, Sequence-in-order: Yes
Statistics: PDU: Command: 0, Response: 16 Target FCID: 0x620003
(S_ID of this session: 0x620001) pWWN: 50:05:07:63:00:c4:94:4c,
nWWN: 50:05:07:63:00:c0:94:4c Session state: LOGGED_IN 1 iSCSI
sessions share this FC session Target: shark-lun Negotiated
parameters RcvDataFieldSize 2048 our_RcvDataFieldSize 1404
MaxBurstSize 0, EMPD: FALSE Random Relative Offset: FALSE,
Sequence-in-order: Yes Statistics: PDU: Command: 0, Response:
2343 canterbury#show ips stats tcp interface gigabitethernet 2/5
TCP Statistics for port GigabitEthernet2/5 Connection Stats 0
active openings, 345 accepts 0 failed attempts, 0 reset received,
345 established Segment stats 160524 received, 158647 sent, 1
retransmitted 0 bad segments received, 1 reset sent TCP Active
Connections Local Address Remote Address State Send-Q Recv-Q
10.48.69.222:3260 10.48.69.241:1026 ESTABLISH 0 0
10.48.69.222:3260 10.48.69.241:1034 ESTABLISH 0 0
10.48.69.222:3260 10.48.69.241:1035 ESTABLISH 0 0 0.0.0.0:3260
0.0.0.0:0 LISTEN 0 0 canterbury#show ips stats tcp interface
gigabitethernet 2/5 detail TCP Statistics for port
GigabitEthernet2/5 TCP send stats 158647 segments, 132538432
bytes 113573 data, 44411 ack only packets 318 control
(SYN/FIN/RST), 0 probes, 344 window updates 1 segments
retransmitted, 48 bytes 1 retransmitted while on ethernet send
queue, 0 packets split 29286 delayed acks sent TCP receive stats
160524 segments, 102518 data packets in sequence, 125344708 bytes
in sequence 0 predicted ack, 94889 predicted data 0 bad checksum,
0 multi/broadcast, 0 bad offset 0 no memory drops, 0 short
segments 0 duplicate bytes, 0 duplicate packets 0 partial
duplicate bytes, 0 partial duplicate packets 0 out-of-order
bytes, 0 out-of-order packets 0 packet after window, 0 bytes
after window 0 packets after close 58221 acks, 132539086 ack
bytes, 0 ack toomuch, 6563 duplicate acks 0 ack packets left of
```

```

snd_una, 0 non-4 byte aligned packets 37322 window updates, 0
window probe 865 pcb hash miss, 171 no port, 1 bad SYN, 0 paws
drops TCP Connection Stats 0 attempts, 345 accepts, 345
established 342 closed, 341 drops, 0 conn drops 0 drop in
retransmit timeout, 10 drop in keepalive timeout 0 drop in
persist drops, 0 connections drained TCP Miscellaneous Stats
26399 segments timed, 26398 rtt updated 1 retransmit timeout, 0
persist timeout 6702 keepalive timeout, 6692 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 345
entries, 345 connections completed, 0 entries timed out 0 dropped
due to overflow, 0 dropped due to RST 0 dropped due to ICMP
unreach, 0 dropped due to bucket overflow 0 abort due to no
memory, 0 duplicate SYN, 2 no-route SYN drop 0 hash collisions, 0
retransmitted TCP Active Connections Local Address Remote Address
State Send-Q Recv-Q 10.48.69.222:3260 10.48.69.241:1026 ESTABLISH
0 0 10.48.69.222:3260 10.48.69.241:1034 ESTABLISH 0 0
10.48.69.222:3260 10.48.69.241:1035 ESTABLISH 0 0 0.0.0.0:3260
0.0.0.0:0 LISTEN 0 0 canterbury#show iscsi virtual-target
configured target: seagate * Port WWN 21:00:00:04:cf:db:3e:a7 !--
- The "*" means you have both discovery and target session. If
there is no "*" in !--- front of the pWWN, it means either you
only have discovery session or !--- you have no active session.
Configured node No. of LU mapping: 1 iSCSI LUN: 0x0000, FC LUN:
0x0000 No. of advertised interface: 1 GigabitEthernet 2/5 No. of
initiators permitted: 1 initiator 10.48.69.241/32 is permitted
all initiator permit is disabled target: shark-lun * Port WWN
50:05:07:63:00:c4:94:4c Configured node No. of LU mapping: 2
iSCSI LUN: 0x0000, FC LUN: 0x0000 iSCSI LUN: 0x0001, FC LUN:
0x0001 No. of advertised interface: 1 GigabitEthernet 2/5 No. of
initiators permitted: 1 initiator 10.48.69.241/32 is permitted
all initiator permit is disabled canterbury#show iscsi initiator
configured iSCSI Node name is 10.48.69.241 Member of vsans: 222
No. of PWWN: 1 Port WWN is 21:03:00:0c:30:6c:24:42
canterbury#show ips arp interface gigabitethernet 2/5 Protocol
Address Age (min) Hardware Addr Type Interface Internet
10.48.69.200 0 0008.e21e.c7bc ARPA GigabitEthernet2/5 Internet
10.48.69.202 4 0202.3d30.45ca ARPA GigabitEthernet2/5 Internet
10.48.69.206 4 0202.3d30.45ce ARPA GigabitEthernet2/5 Internet
10.48.69.226 10 0060.08f6.bcl1a ARPA GigabitEthernet2/5 Internet
10.48.69.229 10 0800.209e.edab ARPA GigabitEthernet2/5 Internet
10.48.69.232 5 0003.4796.34c3 ARPA GigabitEthernet2/5 Internet
10.48.69.238 5 0030.6elb.6f51 ARPA GigabitEthernet2/5 Internet
10.48.69.239 11 0030.6elc.a00b ARPA GigabitEthernet2/5 Internet
10.48.69.241 4 000b.cdaf.b4c3 ARPA GigabitEthernet2/5 Internet
10.48.69.248 2 0202.3d30.45f8 ARPA GigabitEthernet2/5 Internet
10.10.2.28 5 0202.3d0a.021c ARPA GigabitEthernet2/5
canterbury#show scsi-target devices vsan 222 -----
----- VSAN
FCID PWWN VENDOR MODEL REV -----
----- 222 0x62011e
21:00:00:04:cf:db:3e:a7 SEAGATE ST336753FC 0003 222 0x620003
50:05:07:63:00:c4:94:4c IBM 2105F20 .114 !--- All LUNs that have
been exported by the IBM Shark are not shown in the display
output. canterbury#show scsi-target lun vsan 222 - ST336753FC
from SEAGATE (Rev 0003) FCID is 0x62011e in VSAN 222, PWWN is
21:00:00:04:cf:db:3e:a7 -----
----- LUN Capacity Status Serial
Number Device-Id (MB) -----
----- 0x0 36704 Online
3HX00Q2600007326 C:1 A:0 T:3 20:00:00:04:cf:db:3e:a7 - 2105F20
from IBM (Rev .114) FCID is 0x620003 in VSAN 222, PWWN is
50:05:07:63:00:c4:94:4c -----

```



```

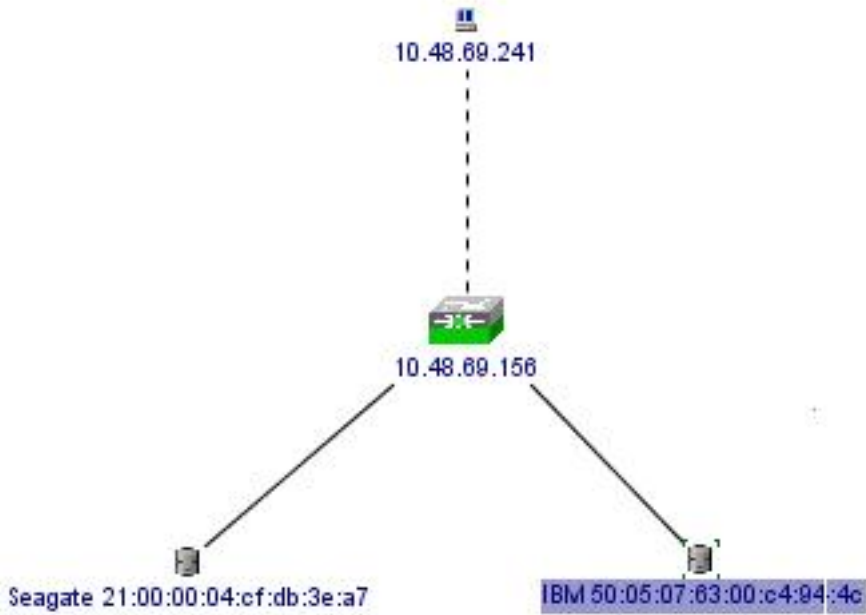
----- LUN Capacity Status Serial
Number Device-Id (MB) -----
----- 0x5100 4000 Online 10022196
C:2 A:0 T:1 IBM 2105 0x5101 4000 Online 10122196 C:2 A:0 T:1 IBM
2105 .... 0x5011 5000 Online 01122196 C:2 A:0 T:1 IBM 2105 0x5012
5000 Online 01222196 C:2 A:0 T:1 IBM 2105 0x5013 5000 Online
01322196 C:2 A:0 T:1 IBM 2105 0x5014 5000 Online 01422196 C:2 A:0
T:1 IBM 2105 0x5400 3000 Online 40022196 C:2 A:0 T:1 IBM 2105
0x5401 5000 Online 40122196 C:2 A:0 T:1 IBM 2105 0x5200 3000
Online 20022196 C:2 A:0 T:1 IBM 2105 0x5201 3000 Online 20122196
C:2 A:0 T:1 IBM 2105 0x5202 3000 Online 20222196 C:2 A:0 T:1 IBM
2105 0x5203 3000 Online 20322196 C:2 A:0 T:1 IBM 2105 0x5204 3000
Online 20422196 C:2 A:0 T:1 IBM 2105 0x5205 3000 Online 20522196
C:2 A:0 T:1 IBM 2105 0x5206 3000 Online 20622196 C:2 A:0 T:1 IBM
2105 0x5207 3000 Online 20722196 C:2 A:0 T:1 IBM 2105 0x5208 3000
Online 20822196 C:2 A:0 T:1 IBM 2105 0x5209 3000 Online 20922196
C:2 A:0 T:1 IBM 2105 ..... canterbury#show int iscsi 2/5 iscsi2/5
is up Hardware is GigabitEthernet Port WWN is
20:51:00:0c: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: 3, Number of TCP connection: 3
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 QOS code point is 0 Forwarding mode: pass-thru TMF
Queueing Mode : disabled 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 132567 packets,
125344708 bytes Command 8637 pdus, Data-out 117005 pdus,
118916096 bytes Output 113573 packets, 132538432 bytes Response
8439 pdus (with sense 10), R2T 3913 pdus Data-in 93902 pdus,
127070632 bytes canterbury#show iscsi stats iscsi 2/5 iscsi2/5 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 132567 packets input, 125344708 bytes Command 8637
pdus, Data-out 117005 pdus, 118916096 bytes, 0 fragments output
113573 packets, 132538432 bytes Response 8439 pdus (with sense
10), R2T 3913 pdus Data-in 93902 pdus, 127070632 bytes
canterbury#show int gigabitethernet 2/5 GigabitEthernet2/5 is up
Hardware is GigabitEthernet, address is 0005.3000.adea Internet
address is 10.48.69.222/26 MTU 1500 bytes Port mode is IPS Speed
is 1 Gbps Beacon is turned off Auto-Negotiation is turned on 5
minutes input rate 224 bits/sec, 28 bytes/sec, 0 frames/sec 5
minutes output rate 80 bits/sec, 10 bytes/sec, 0 frames/sec
205453 packets input, 138346789 bytes 0 multicast frames, 0
compressed 0 input errors, 0 frame, 0 overrun 0 fifo 165673
packets output, 141485482 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,
GigabitEthernet2/5 C 10.48.69.128/26 is directly connected, mgmt0
canterbury#

```

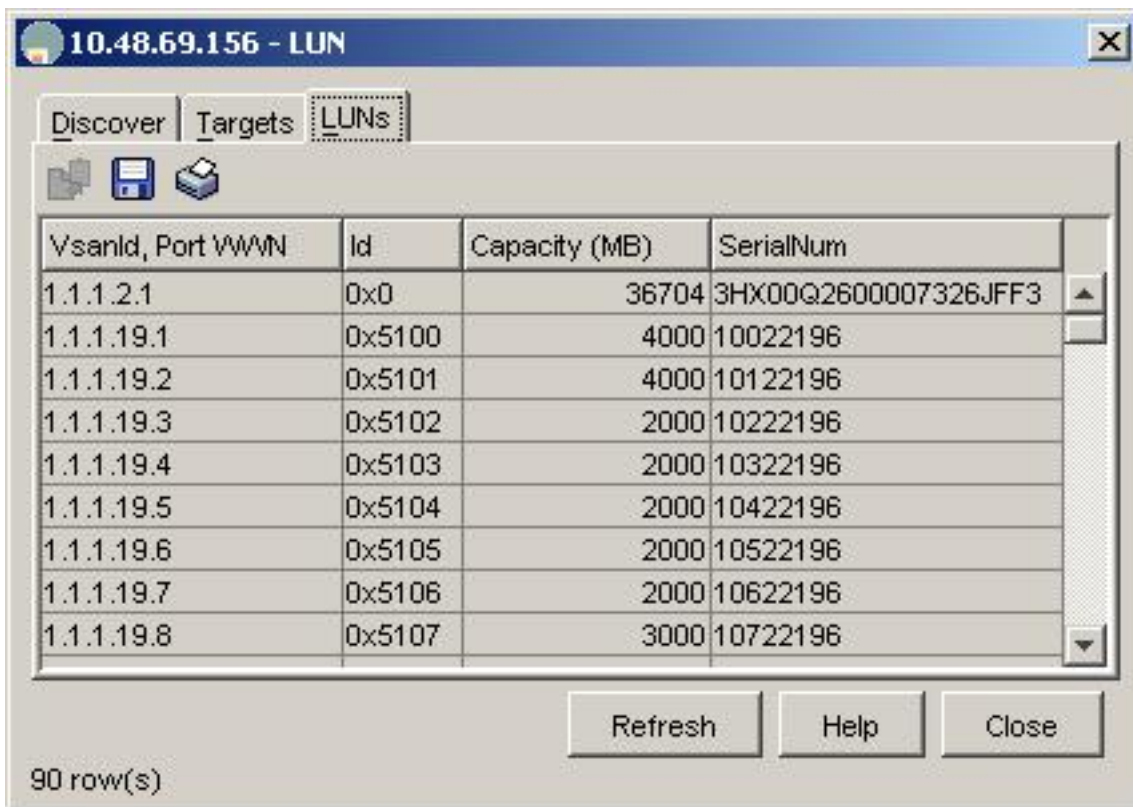
组织管理器和设备管理器显示

此部分提供从MD组织管理器1.2(2)和设备管理器的屏幕截图1.2(2)。

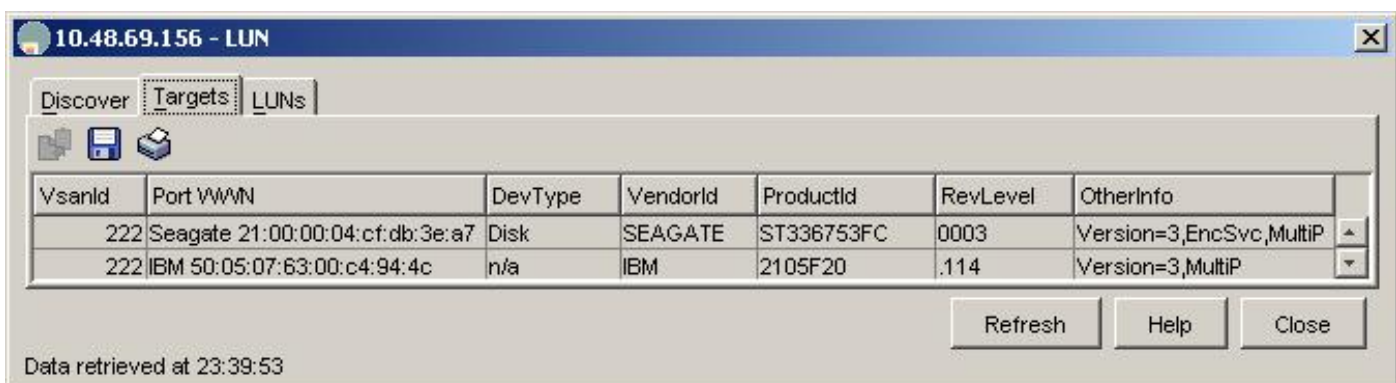
从组织管理器的拓扑图



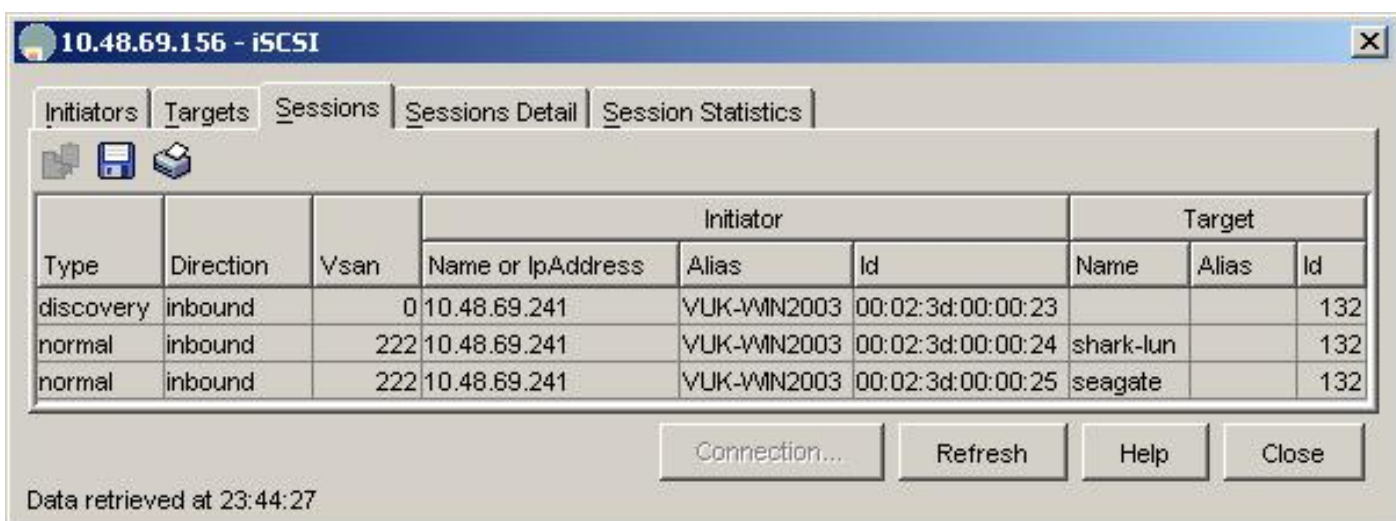
选择FC-LUNs显示pWWNs、LUN ID和您的从设备管理器的LUN产能。



选择FC-LUNs显示从设备管理器的目标。



选择ip-iscsi显示从设备管理器的iSCSI会话。



IBM鲨鱼定义

此部分提供从Enterprise Storage Server Specialist (ESSS)的屏幕截图。

为发起者定义的一台主机在与静态WWPN 21:03:00:0c:30:6c:24:42的ESS定义。两音量分配到此主机。

The screenshot displays the Enterprise Storage Server Specialist (ESS) interface. The title bar reads "Specialist - shark1" and "Enterprise Storage Server Specialist". The main window is titled "Open System Storage".

Host Systems

Nickname	Host Type	Attachment	WWPN	Hostname/IP Address
sonja_fci1	PC Server (Win 2000 or Win NT 4.0)	FC	2800000653389EA0	sonja
sonja_fci2	PC Server (Win 2000 or Win NT 4.0)	FC	2900000653389EA0	sonja
vuk-iscsi	PC Server (Win 2000 or Win NT 4.0)	FC	2103000C306C2442	vuk

Assigned Volumes (Total: 2 volumes)

Volume	Vol Type	Size	Storage Type	Location	LSS	Shared
012-22196	Open System	05.0 GB	RAID Array	Device Adapter Pair 1 Cluster 1, Loop A Array 2, Vol 018	LSS: 0x010	Yes
209-22196	Open System	03.0 GB	RAID Array	Device Adapter Pair 2 Cluster 1, Loop A Array 2, Vol 009	LSS: 0x012	Yes

Java Applet Window

相关信息

- [思科iSCSI软件下载\(仅限注册用户\)](#)
- [Windows 2000 系统的 iSCSI 驱动器常见问题](#)
- [思科Windows 2000 iSCSI驱动的版本注释](#)
- [用于 Windows 2000 的 iSCSI 驱动程序故障排除](#)
- [Cisco MDS 9000系列故障排除指南，版本1.2\(1a\)](#)
- [技术支持和文档 - Cisco Systems](#)