High Availability iSCSI diskless boot solution

Multiple diskless boot server load balance

2013/9/20

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Overview

SANDeploy provides a series of high performance, high availability and reliable iSCSI Diskless Boot solutions for any size of business.

Without SANDeploy every client PC need a hard disk, employees download software casually, network admin would have to setup and update one by one.

In this document, we will show you how to implement high available iSCSI Diskless Boot solution with SANDeploy.

We take two servers below as examples.

	DATA	SYNC
Server01	192.168.0.111	192.168.1.111
Server02	192.168.0.112	192.168.1.112

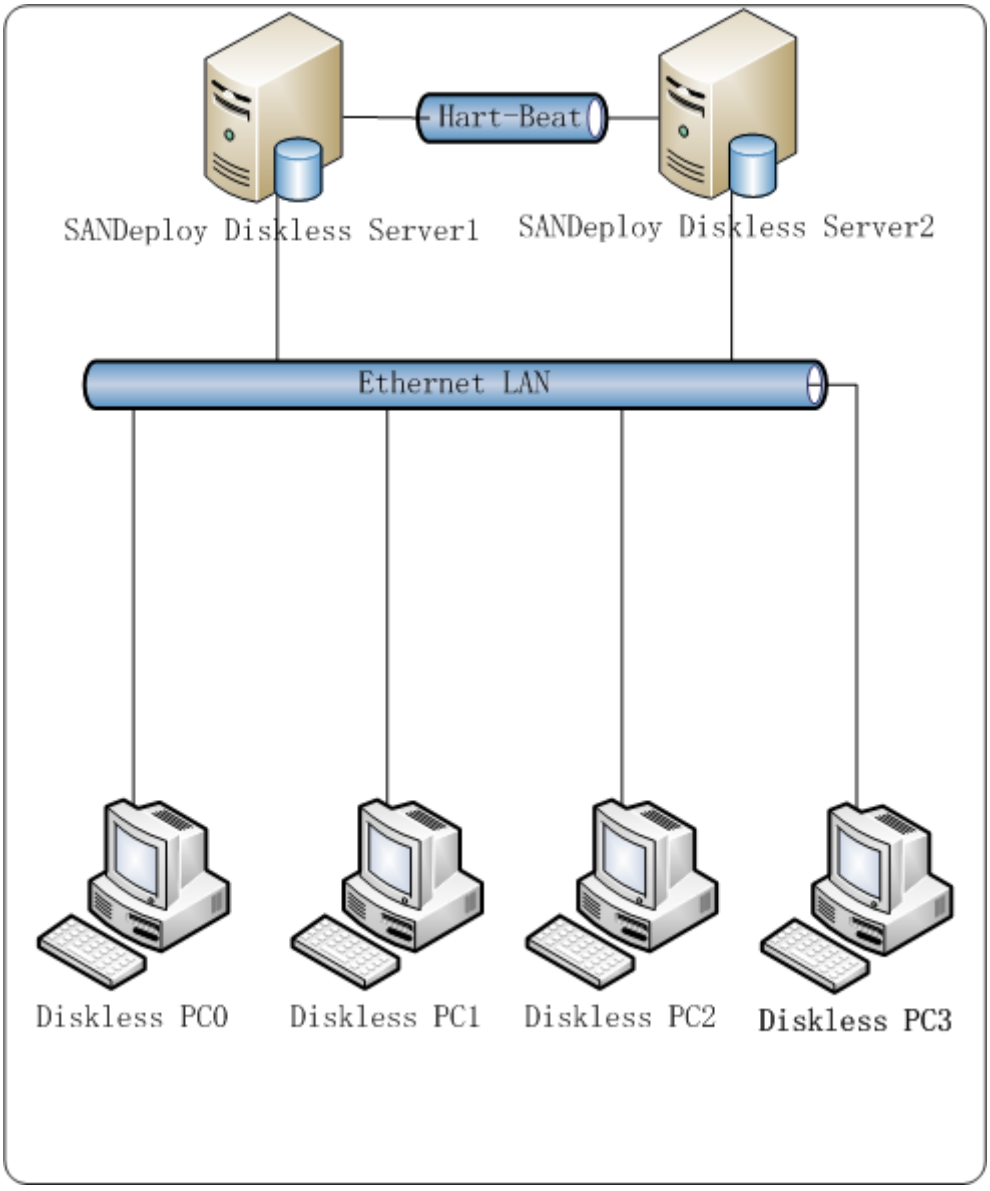
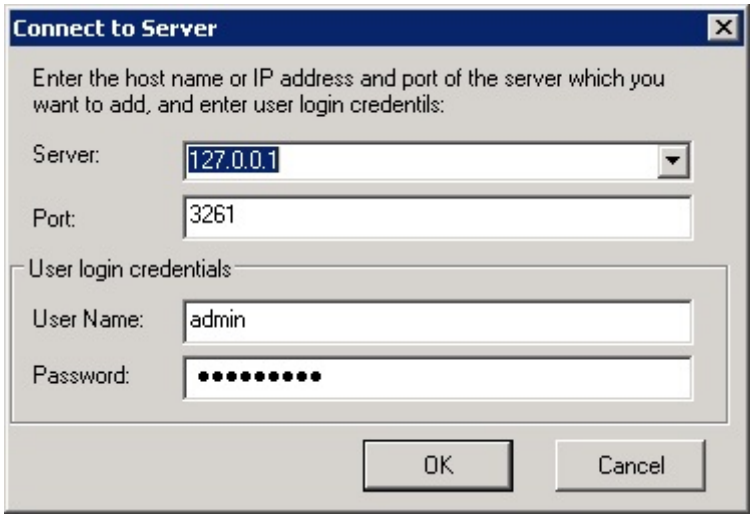


Figure 1, Multiple iSCSI BOOT Servers high-availability (Load Balance) with SANDeploy

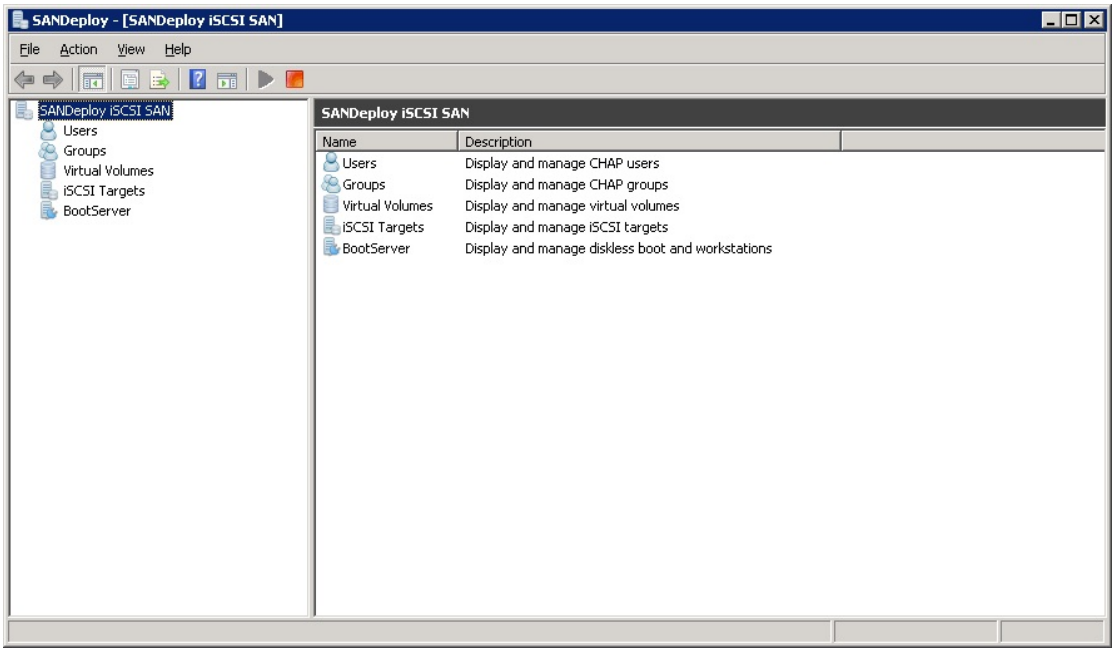
Configure Server01

Create target

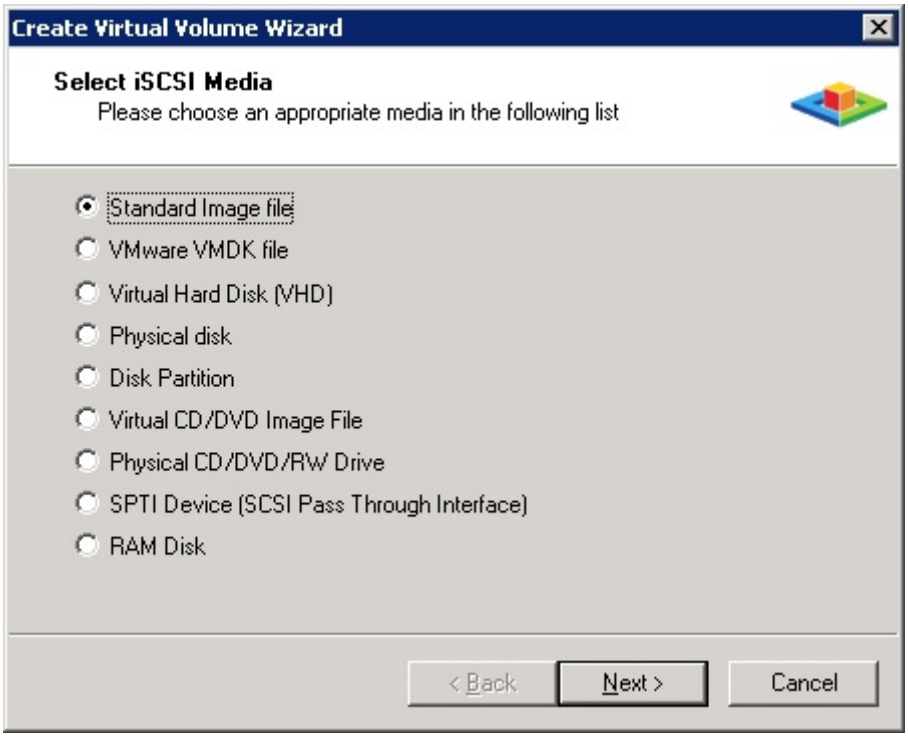
Launch the management console



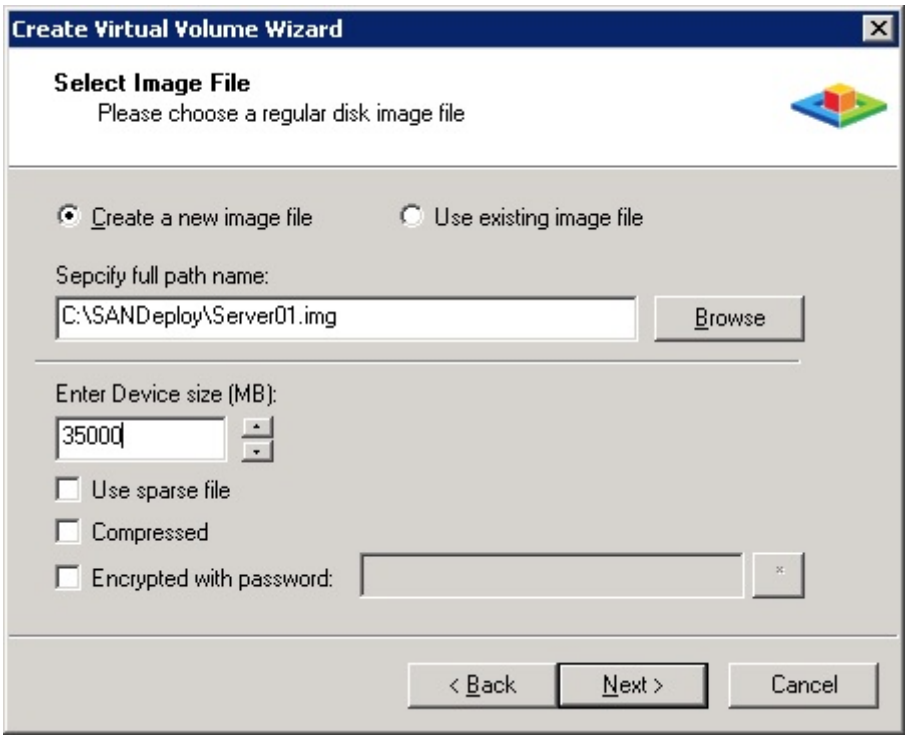
Press OK button



Right click the Virtual Volumes and then press create new volume

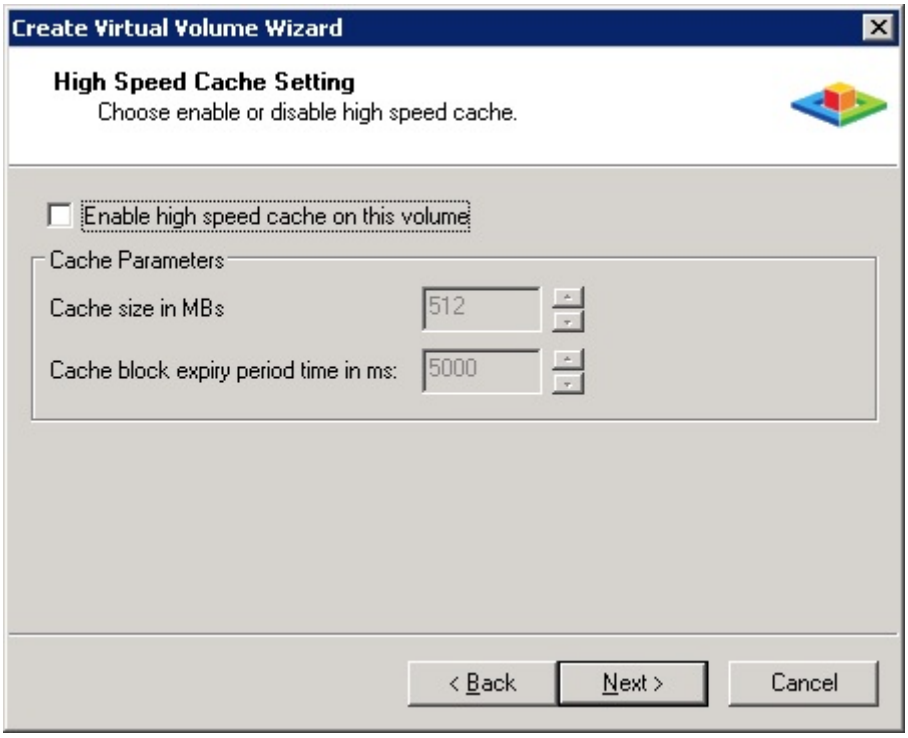


Select Standard Image file and the press Next.

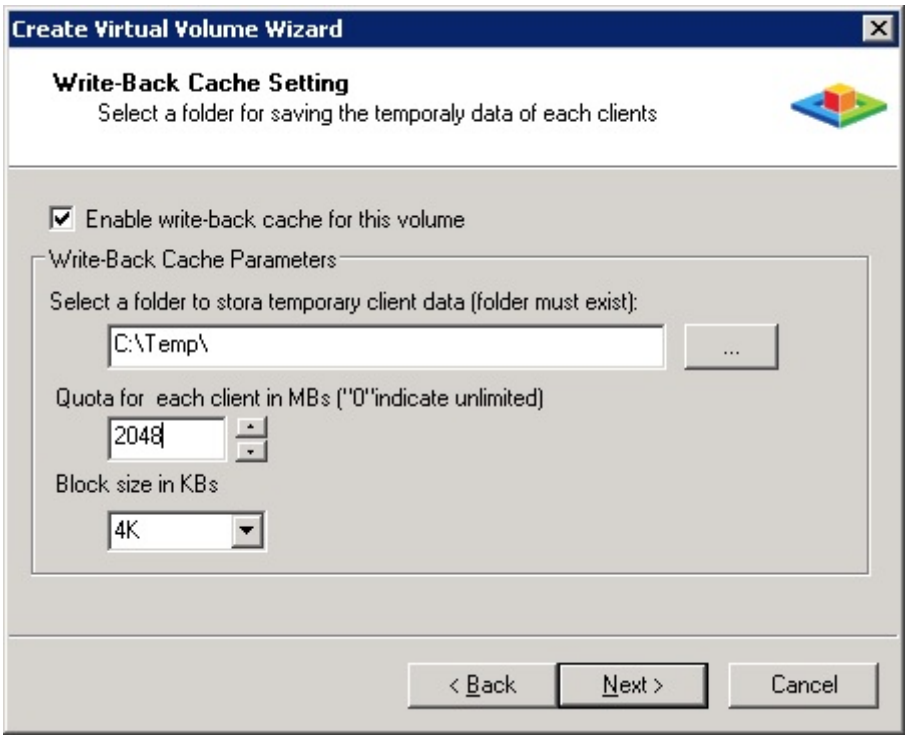


Specify the full path name and size.

Press Next to continue.

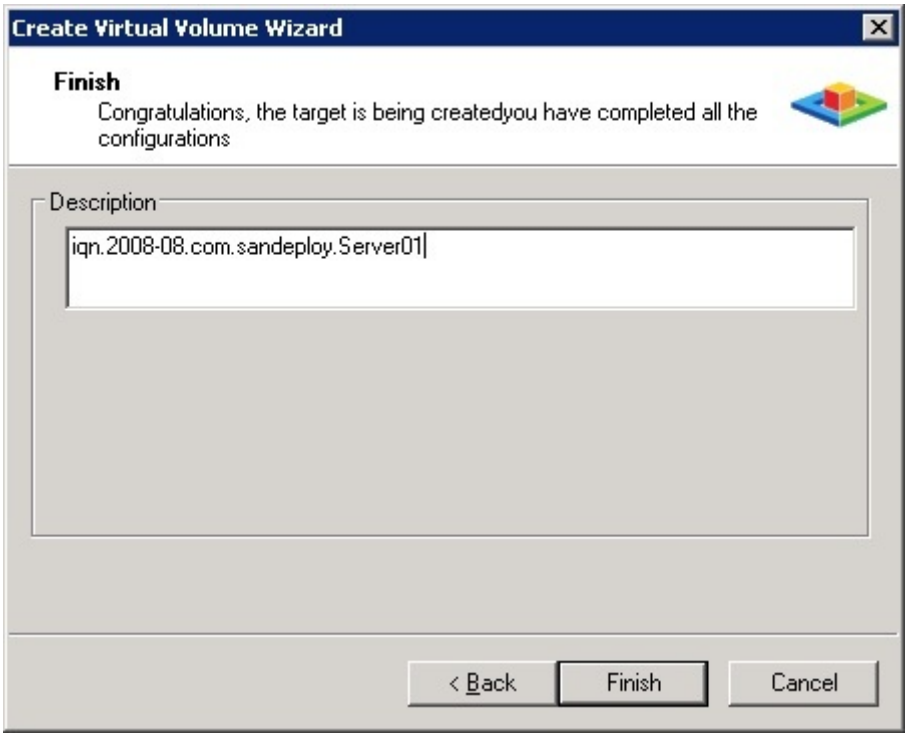


Uncheck cache. Press Next to continue.

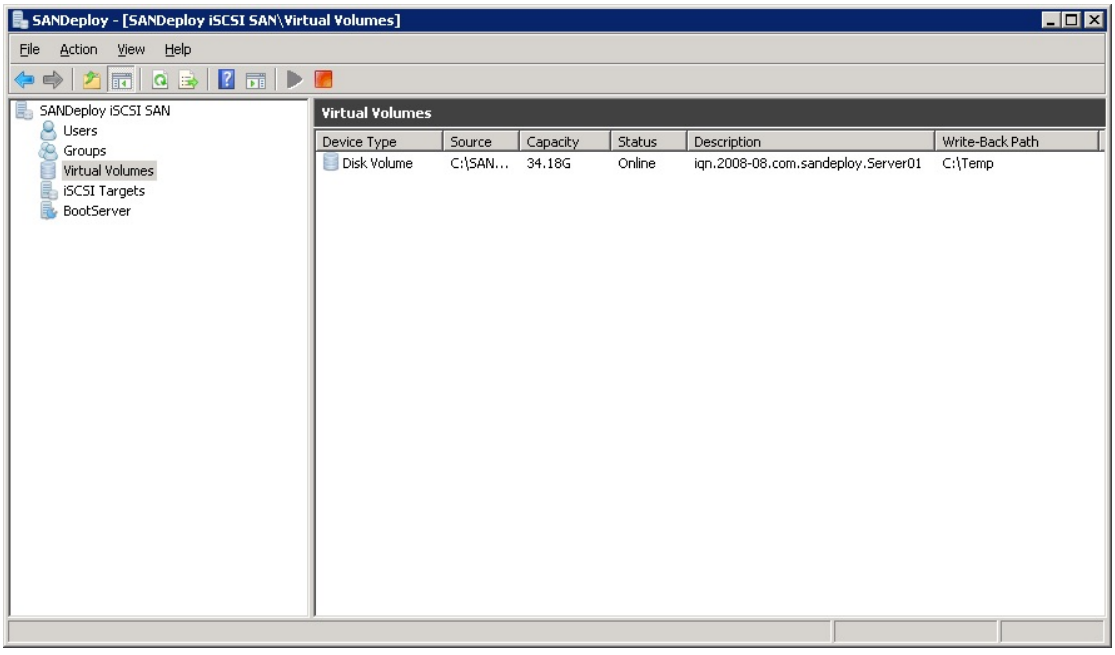


Enable write-back cache for this volume.

The quota of write-back for each client depends on your demands and you can alter the size.

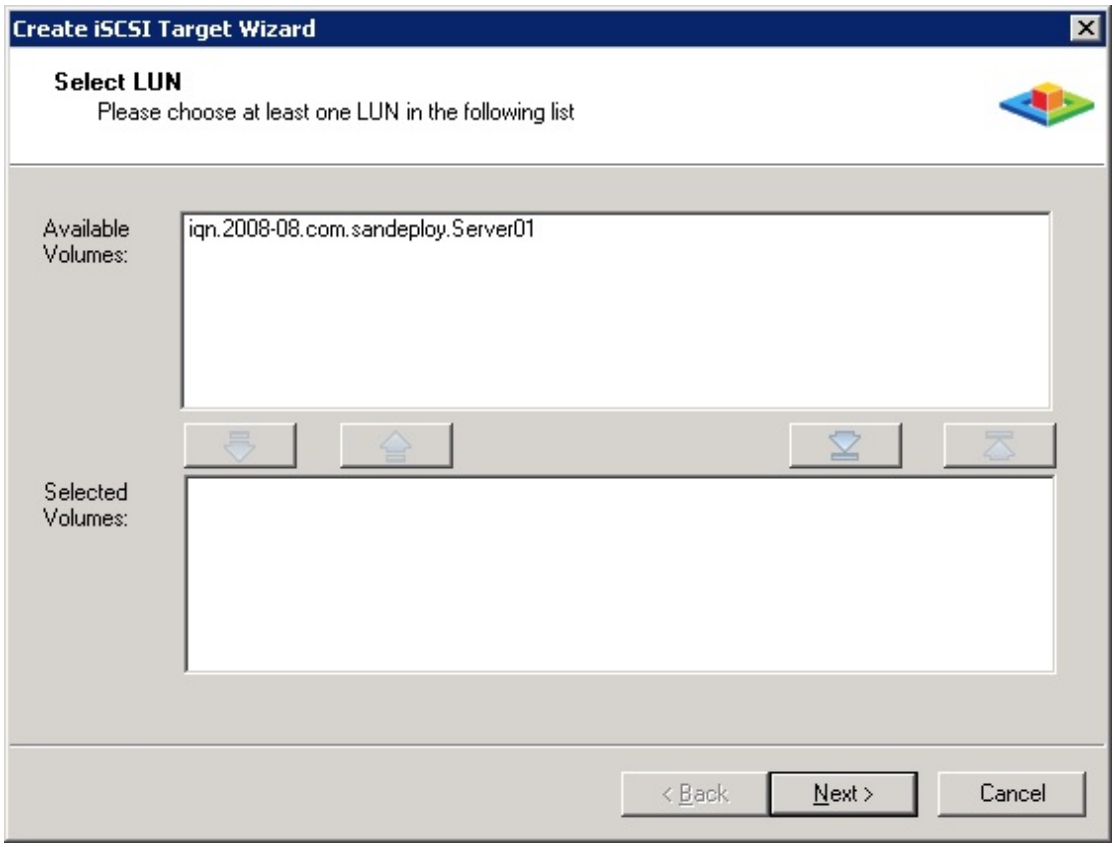


Modify the volume description and then press Finish.

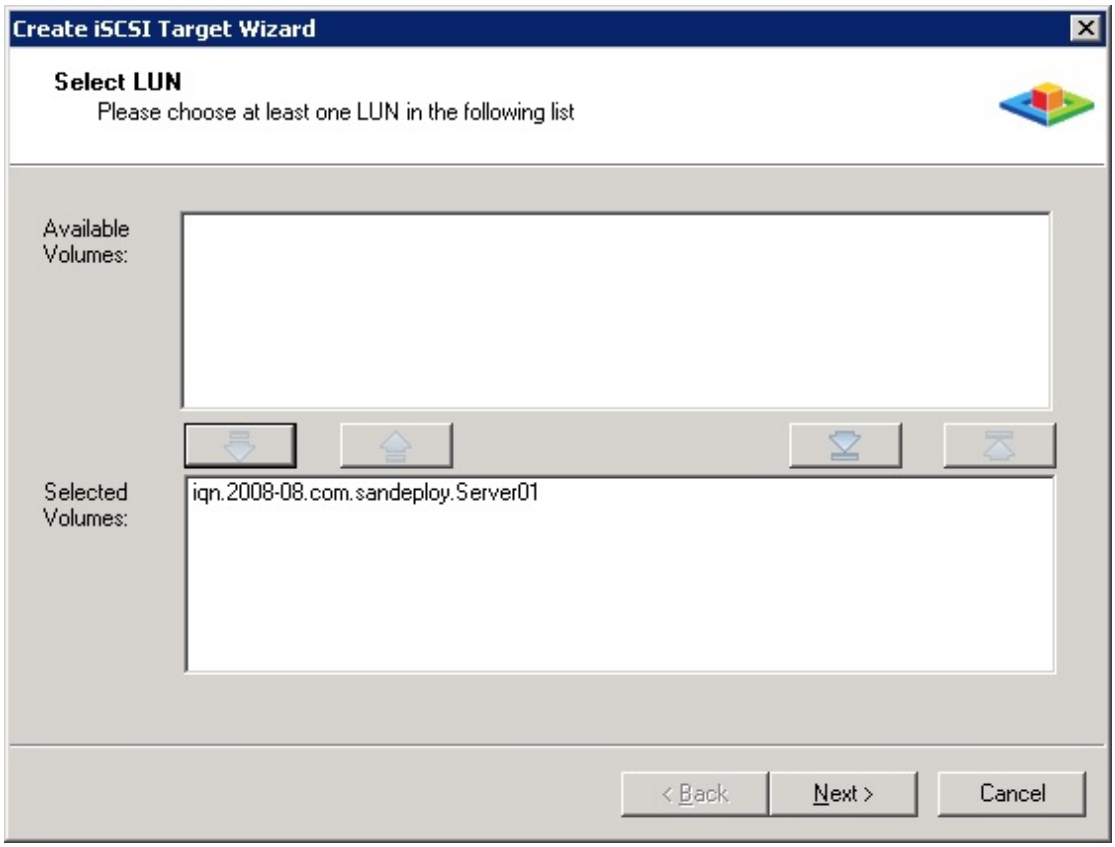


Now create target with the volume we have just created.

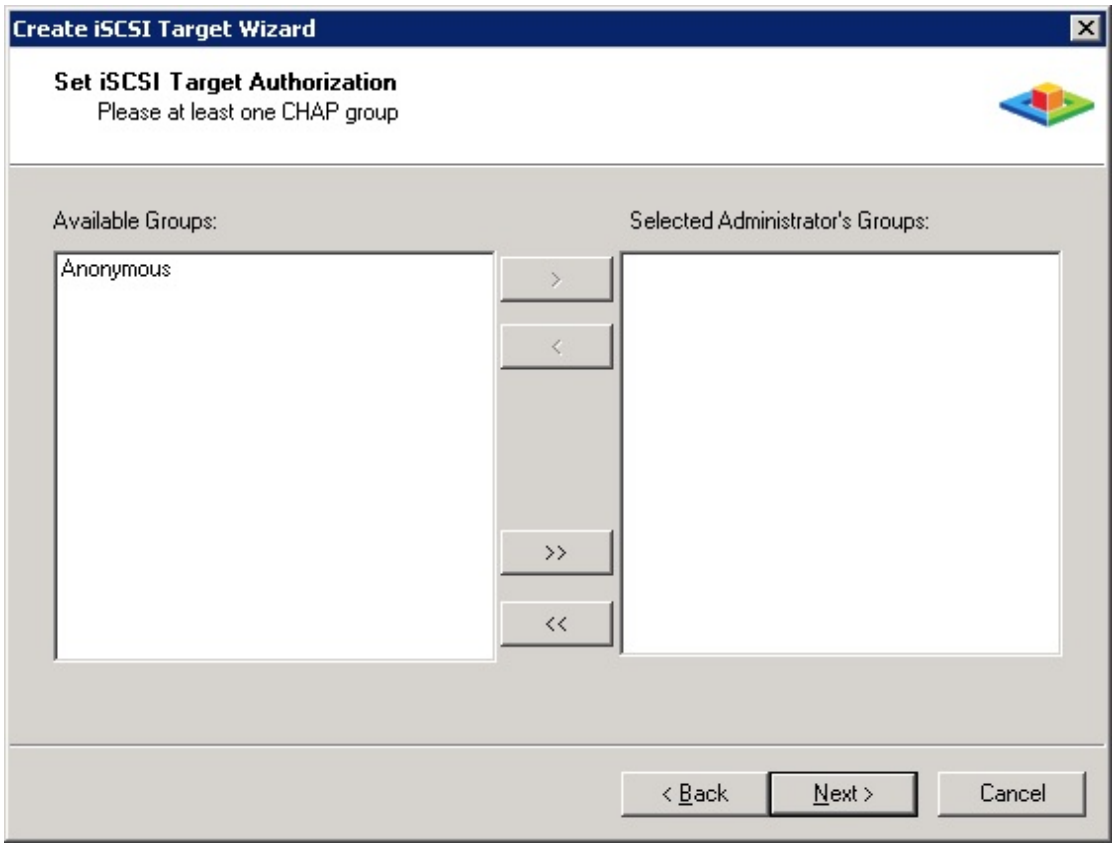
Right click the iSCSI Targets and then press create new target.



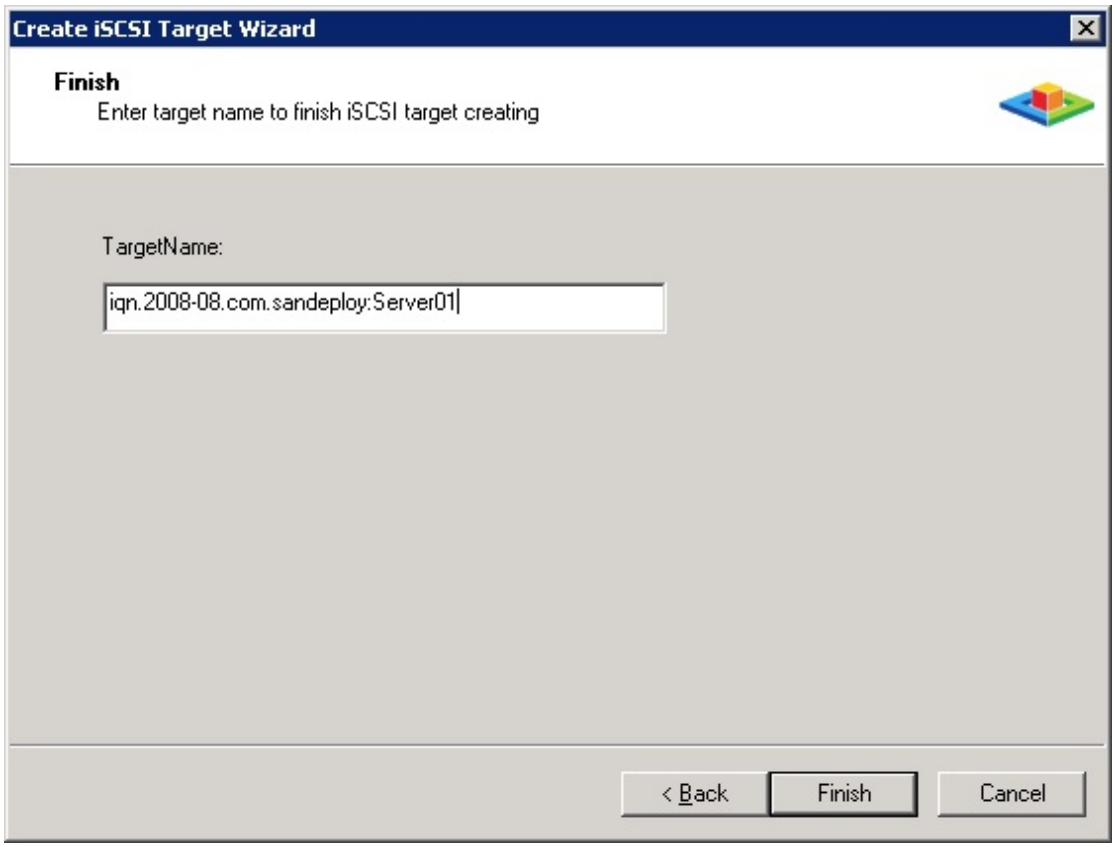
Select the Available Volumes and move it to the Selected Volumes.



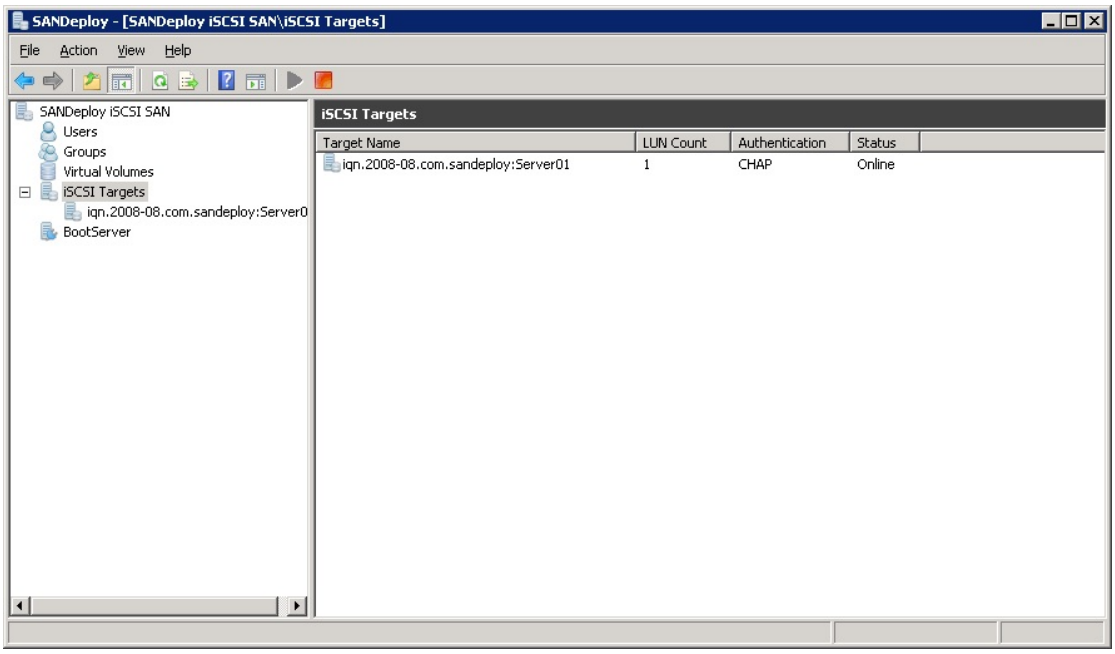
Press Next to continue.



Leave it default and press Next to continue.

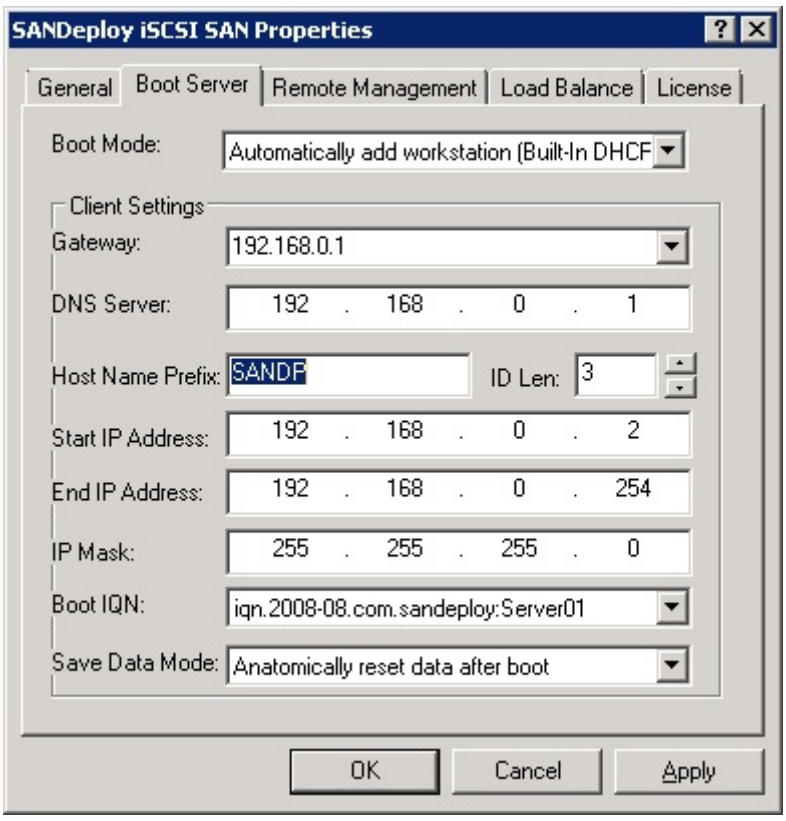


Enter the TargetName and Press Finish to complete the process.



Configure server properties

Right click the root menu and press the properties.



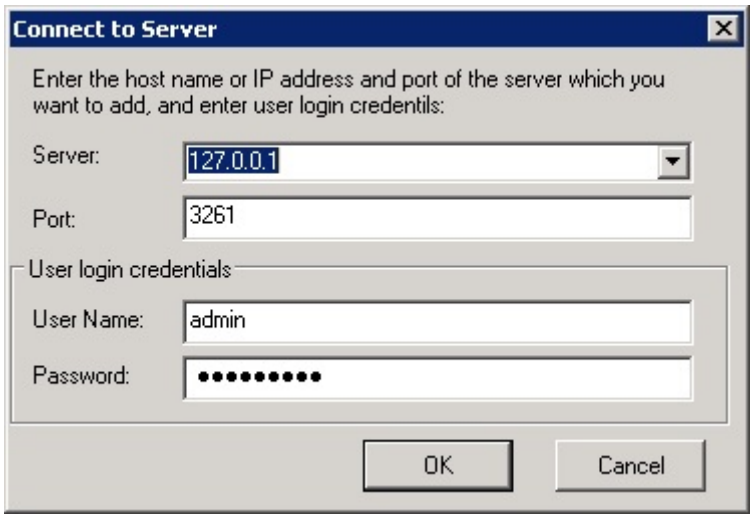
Open the Boot Server tab

Configure the Boot Mode and Save Data Mode.

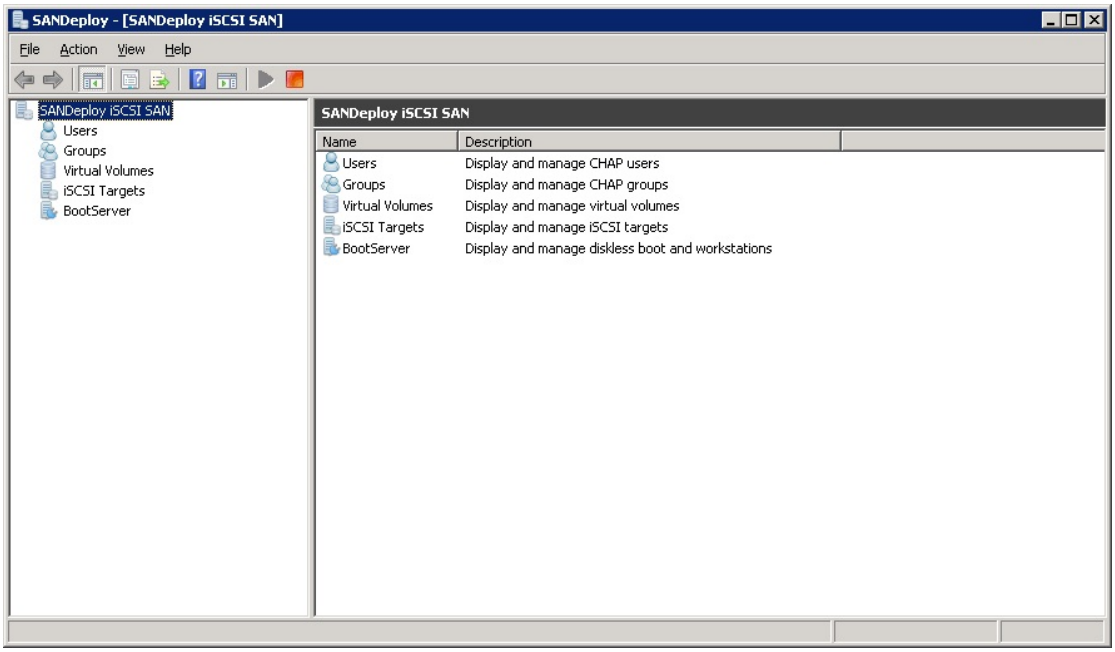
Configure Server02

Create target

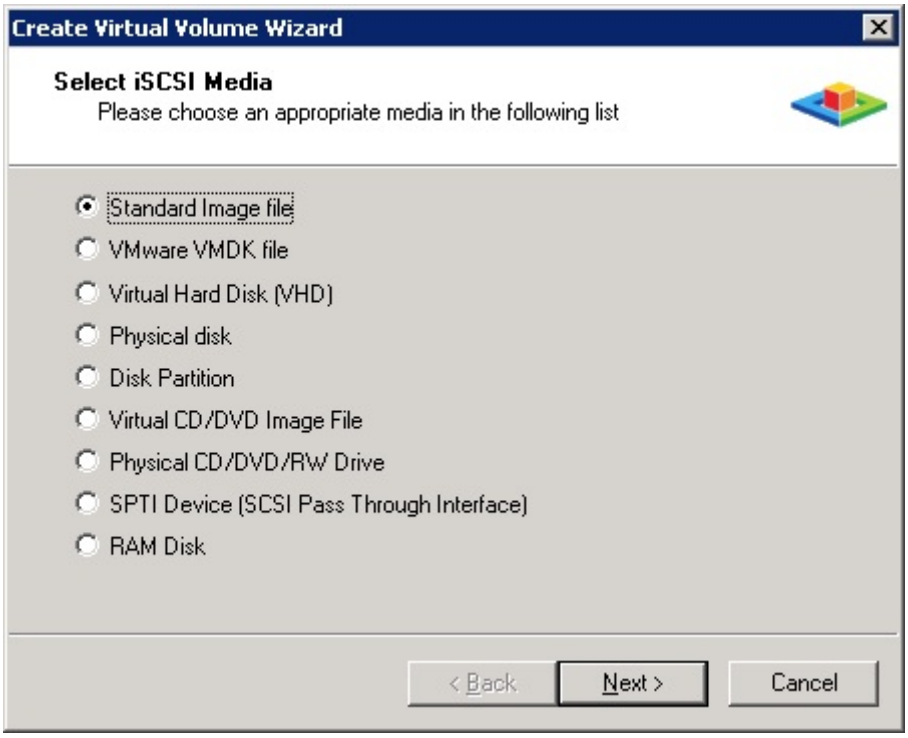
Launch the management console



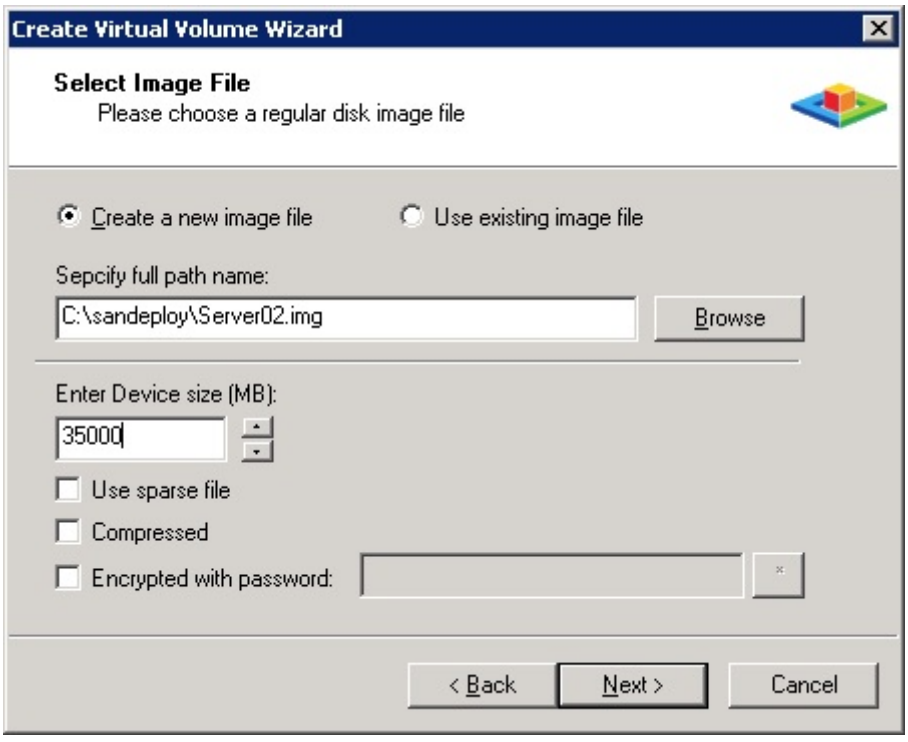
Press OK to log in.



Right click the Virtual Volumes and then press Create Virtual Volume.

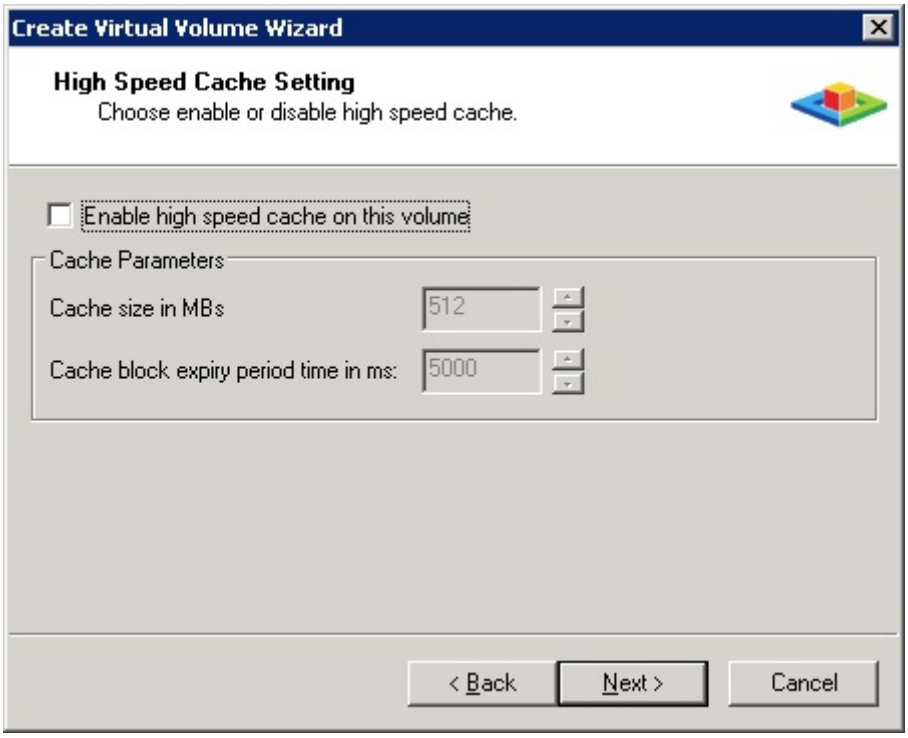


Choose Standard Image file and press Next to continue.



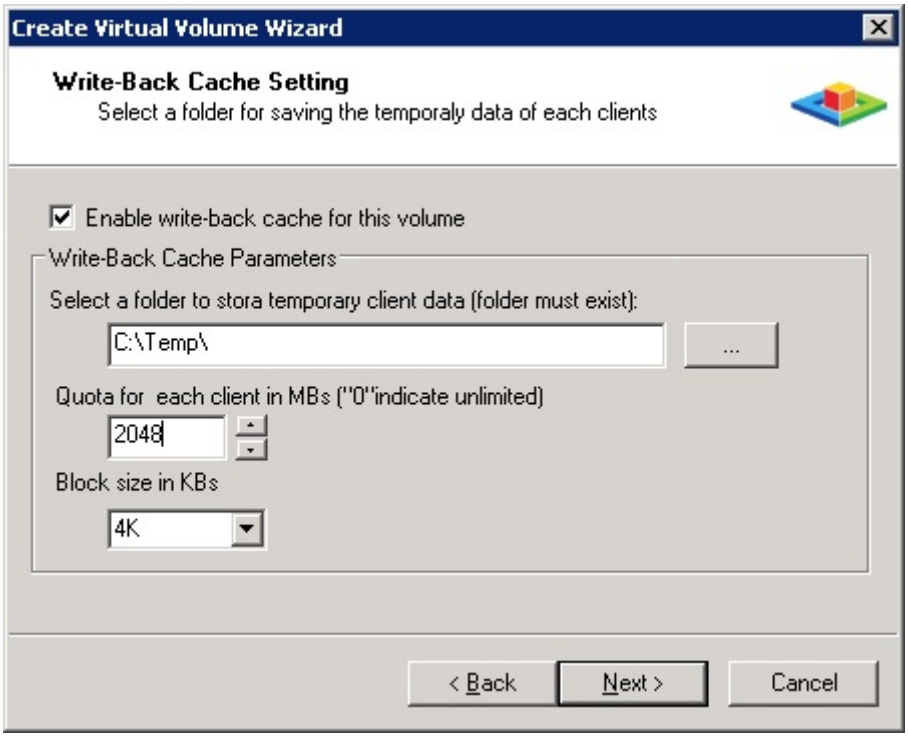
Specify full path name and size.

Press Next button.



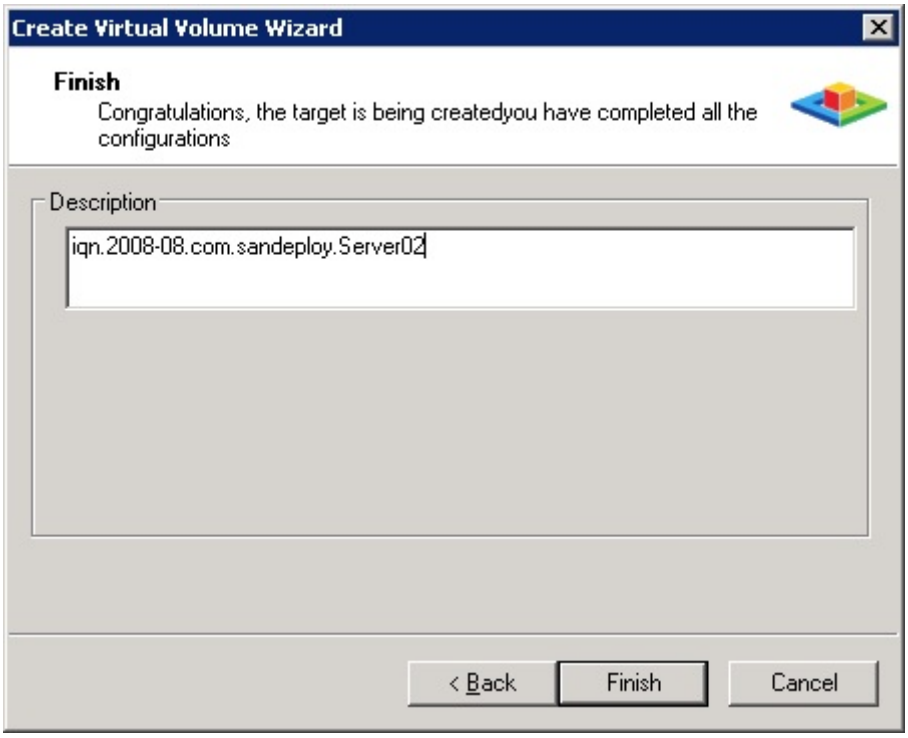
Uncheck Enable high speed cache on this volume.

Press Next button to continue.

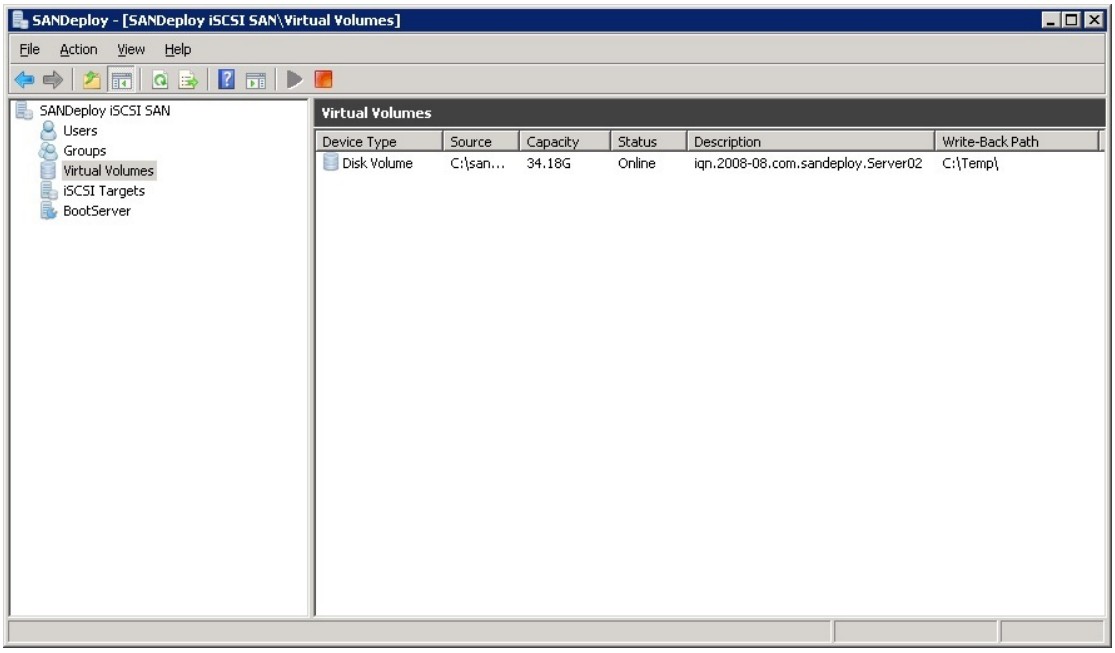


Enable write-back cache for this volume.

Press Next to continue.

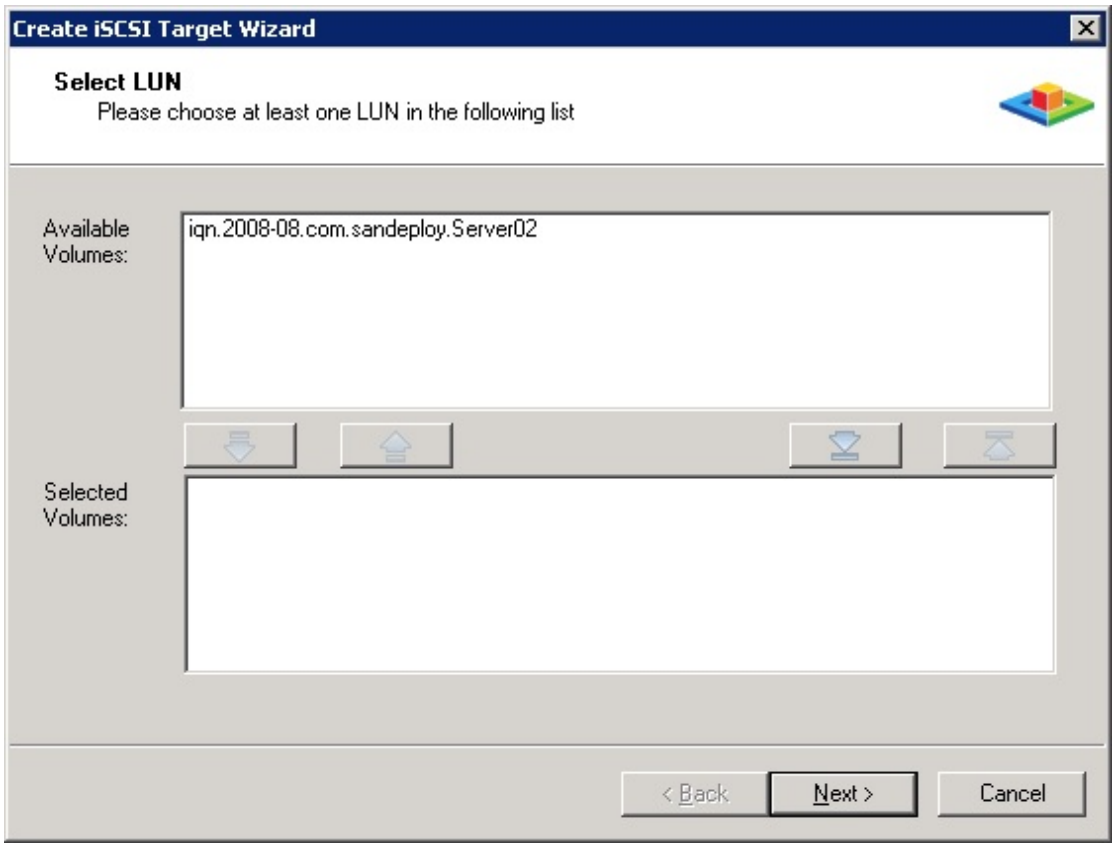


Press Finish to complete the creation.

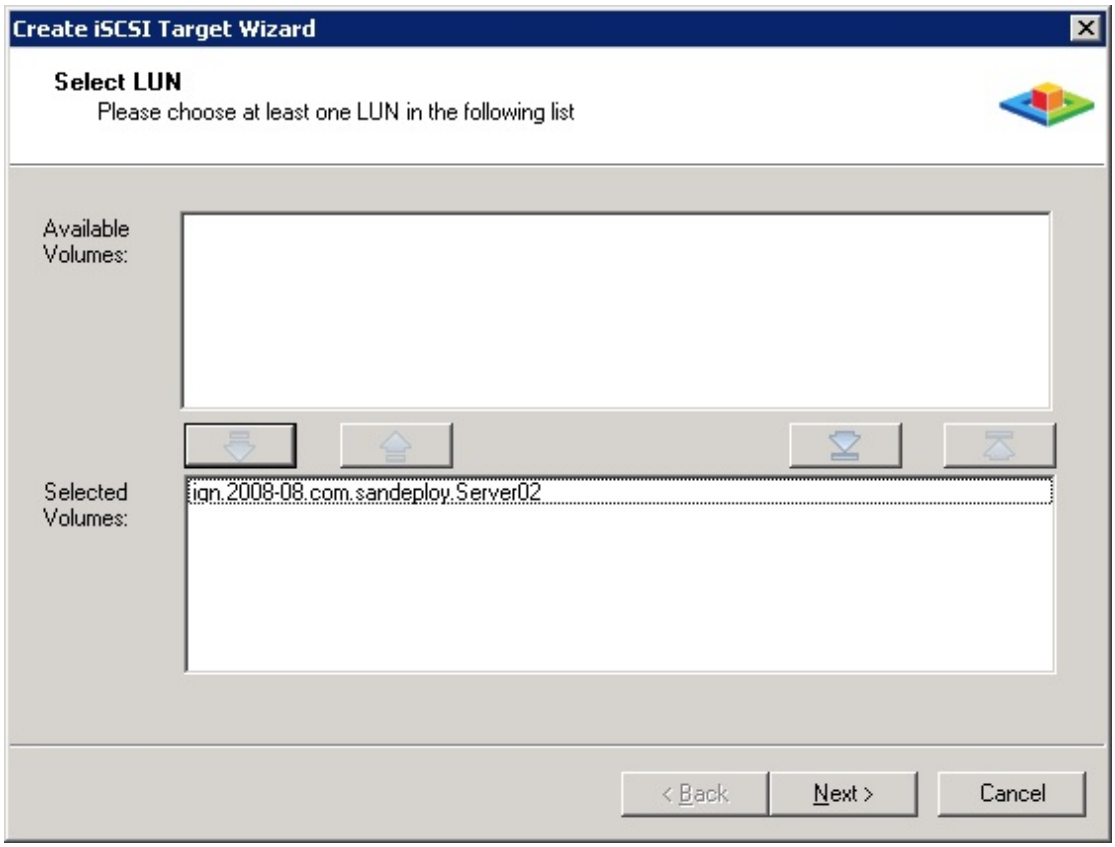


Now we can create the target with the volume we have just created.

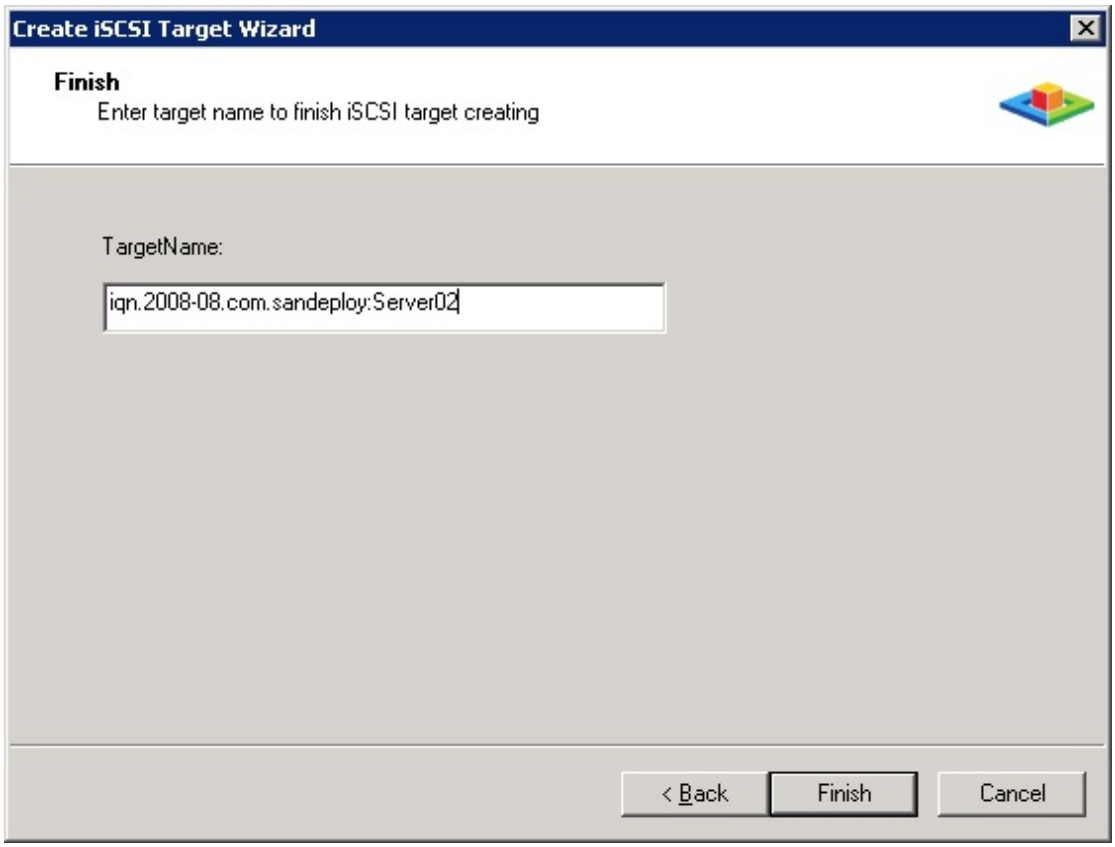
Right click the iSCSI Targets and press Create new target.



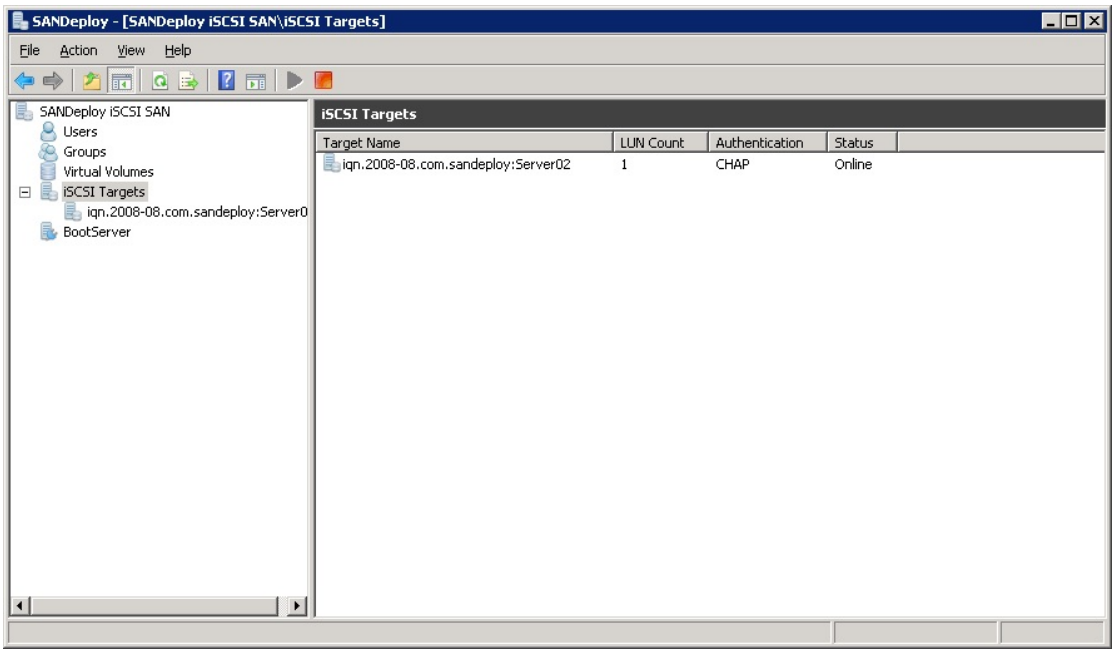
Choose the volume in Available Volumes and move it to Selected Volumes.



Press Next to continue.

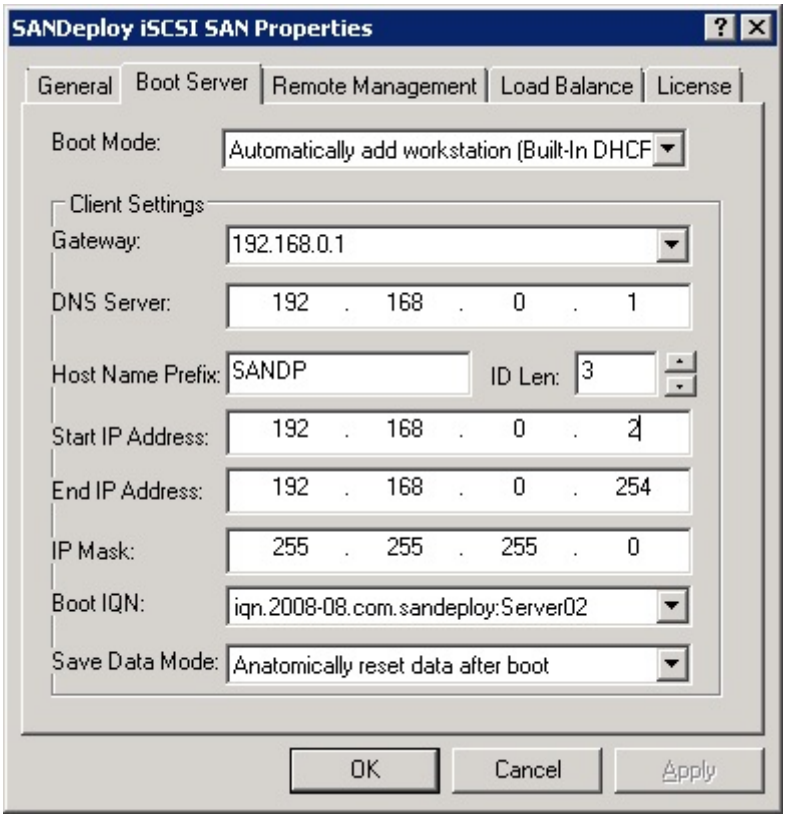


Enter the target name and press Finish to create the target.



Configure server properties.

Right click the root menu and press the properties.



Open the Boot Server tab

Configure the Boot Mode and Save Data Mode.

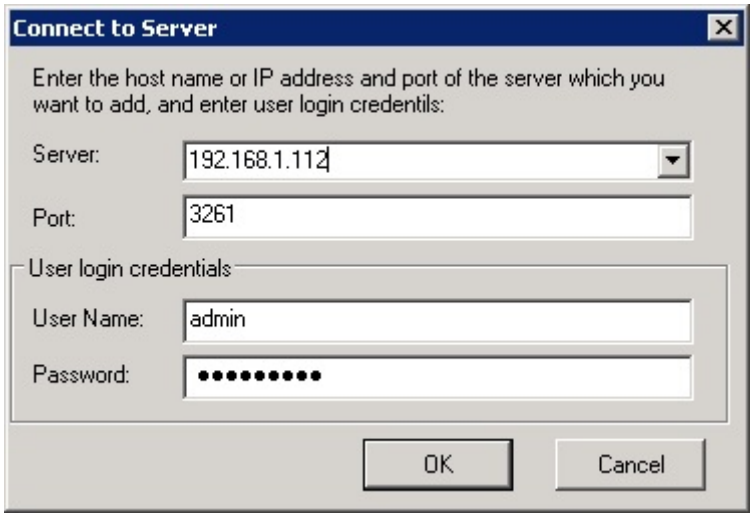
Configure High Available

Load Balance on Server01

Launch the server properties tab on Server01

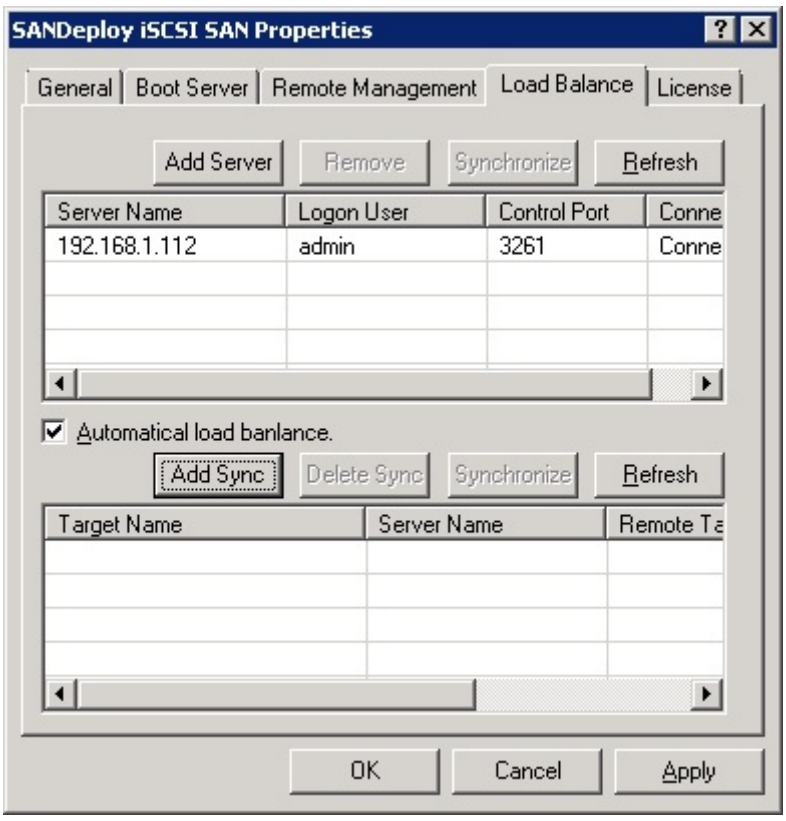
And turn to Load Balance page.

Press Add Server

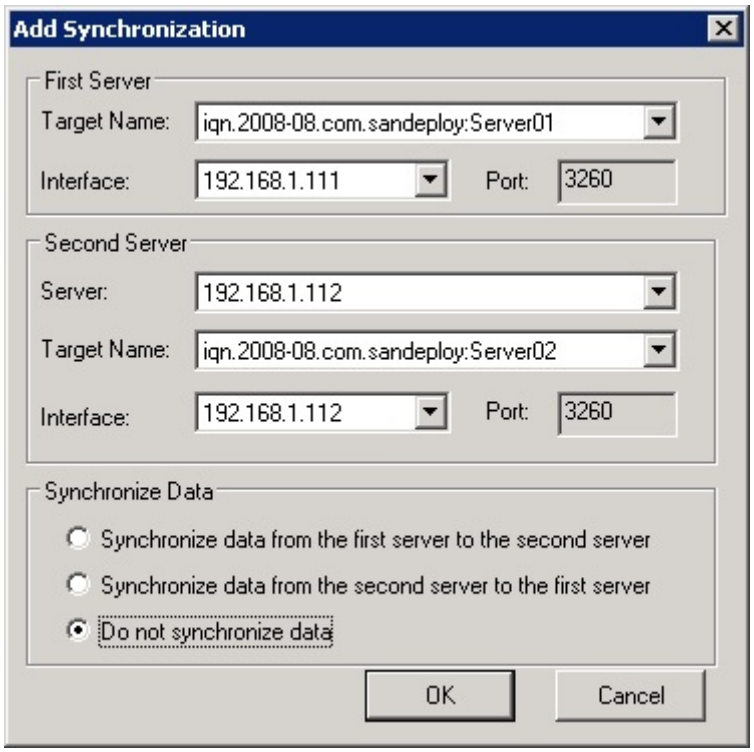


Type the Address of Server02.

Press OK to add Server02.



And then press Add Sync.

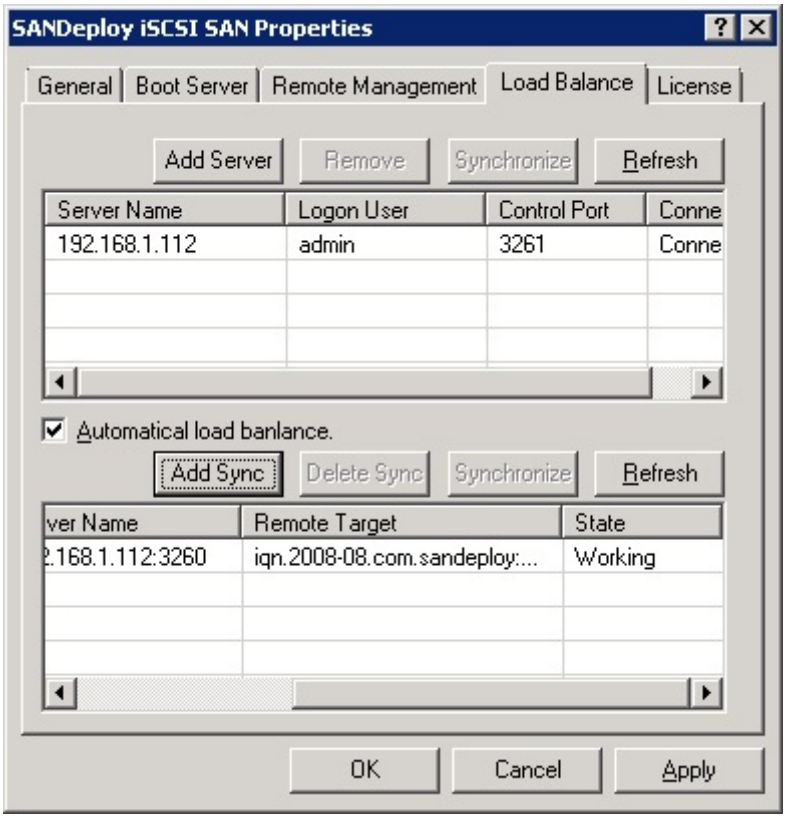


Specify the interface and Synchronize Data.

Note: specify the interface which we define as SYNC and it is not

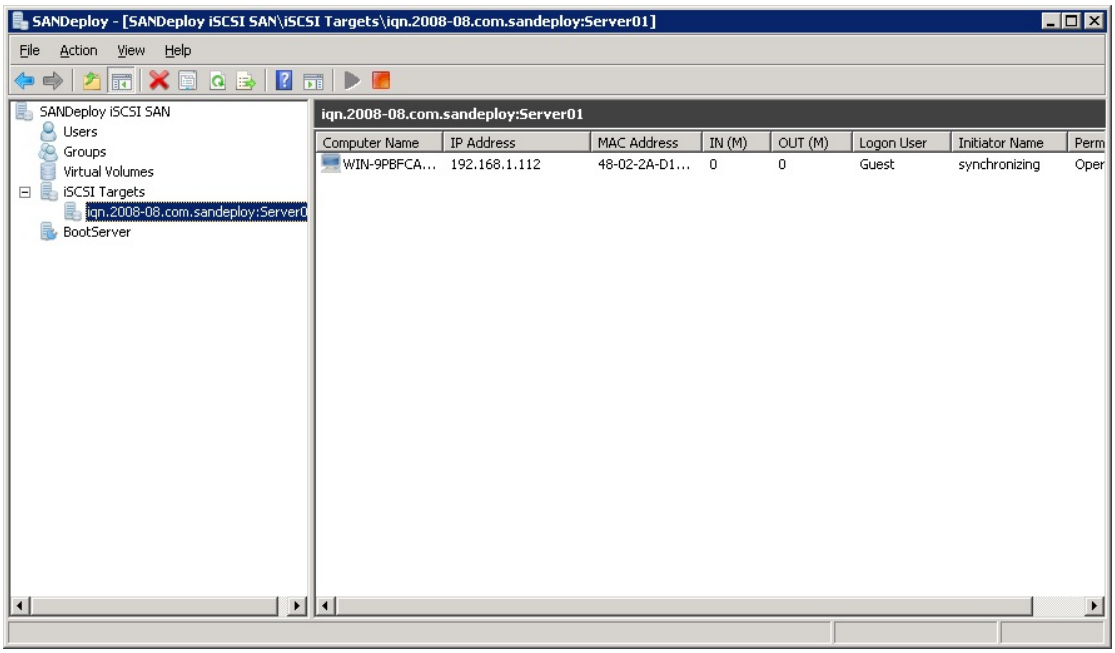
necessary to synchronize data between two servers if the volumes are newly created.

Press OK to finish it.



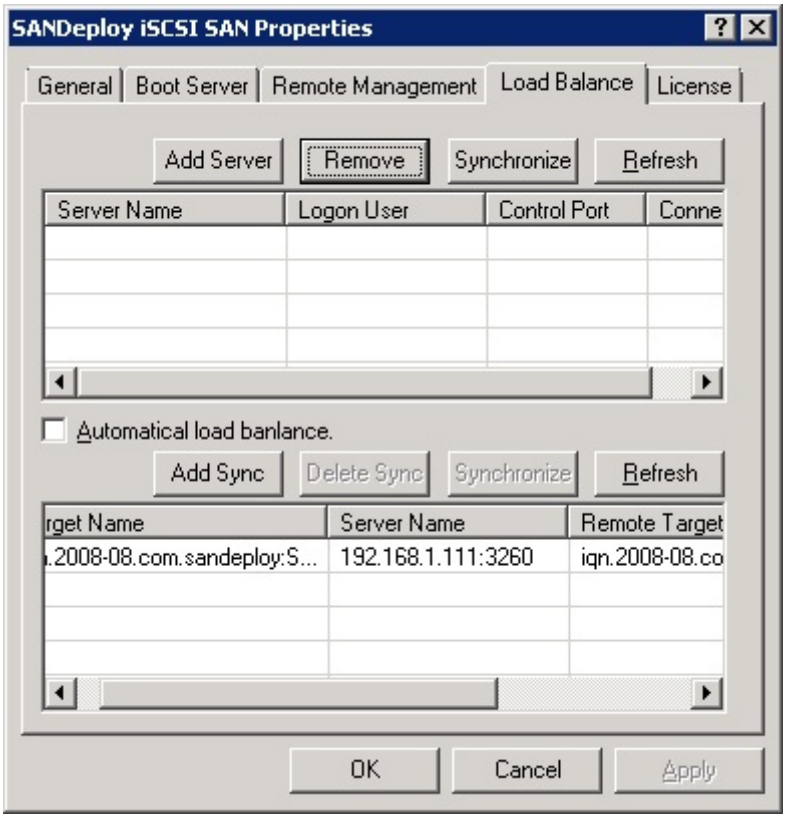
If it is successful the State will turn to Working.

And in the management console you will see the initiator.

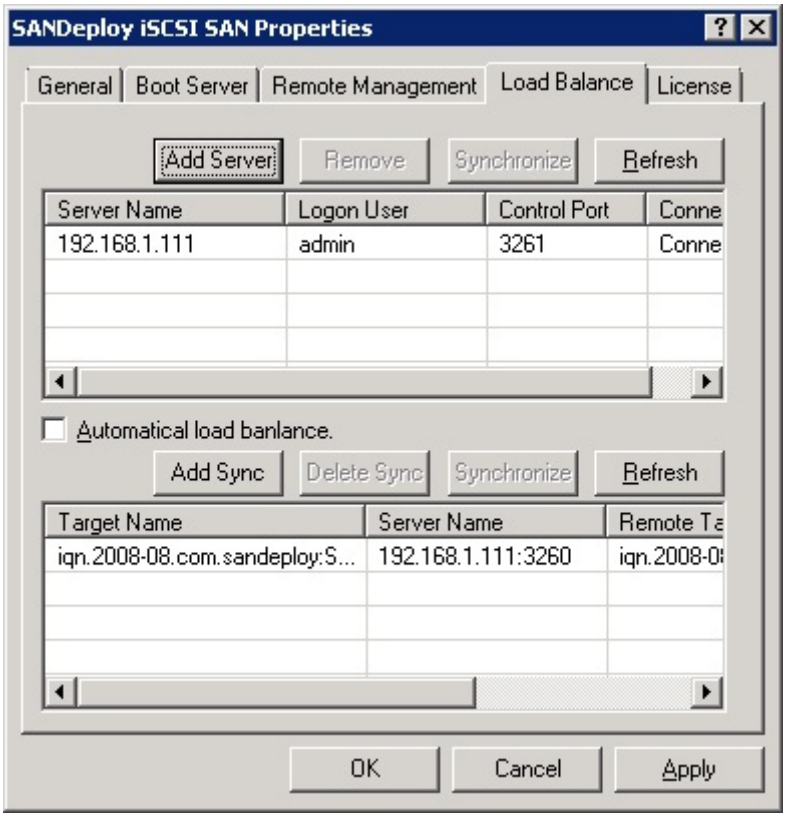


Load Balance on Server02

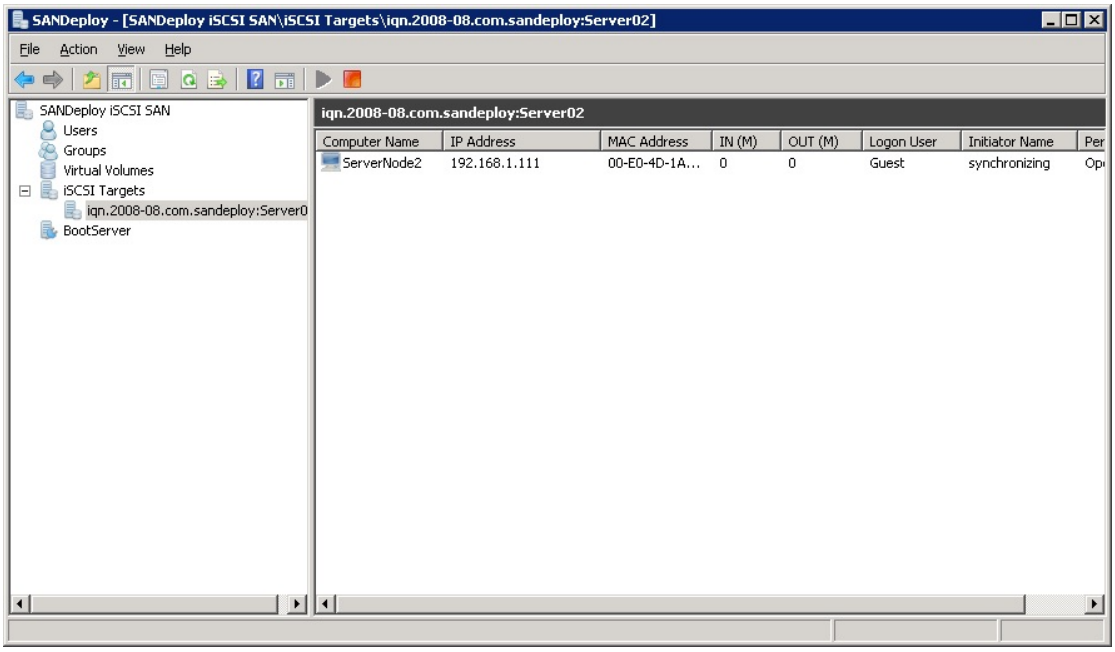
After the Load Balance on Server01 has been configured , the SYNC will be automatically added to Server02.



You just need to add Server01.



In the management console you will see the initiator.



Arriving here, the Servers are configured completely.

Upload system

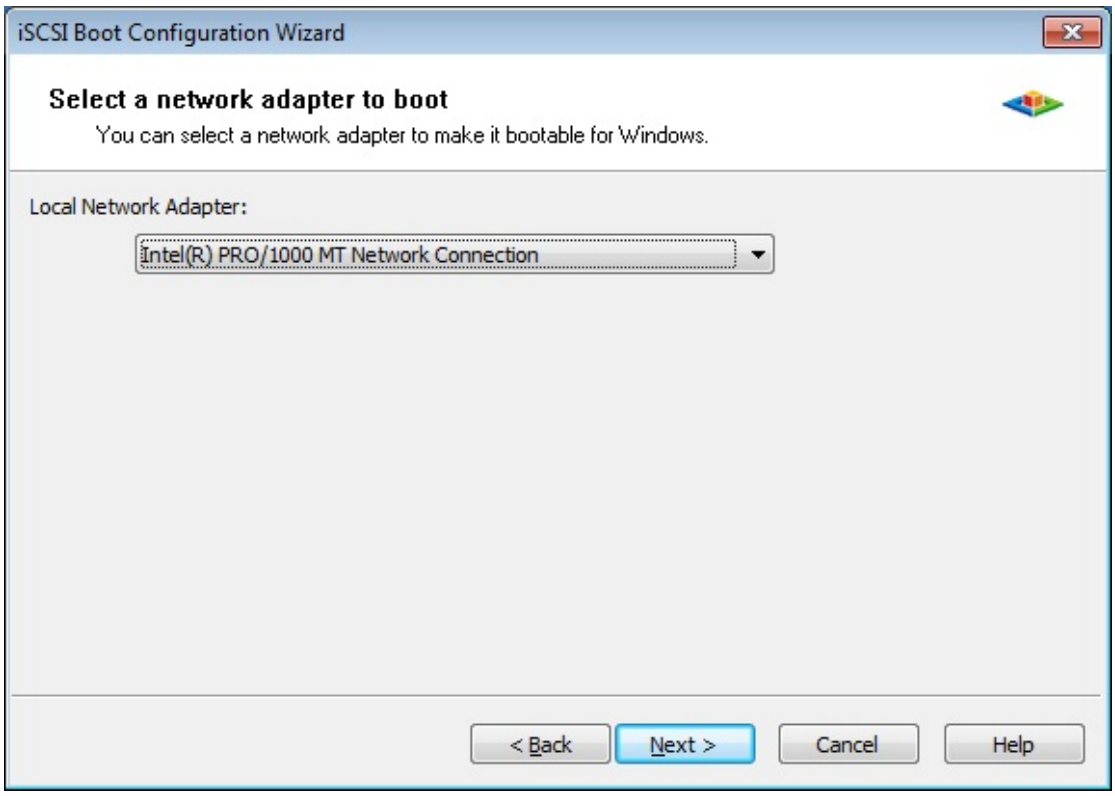
Install client tools

First we should open the iscsi initiator service on client.

We can get client tools from Server installation directory.

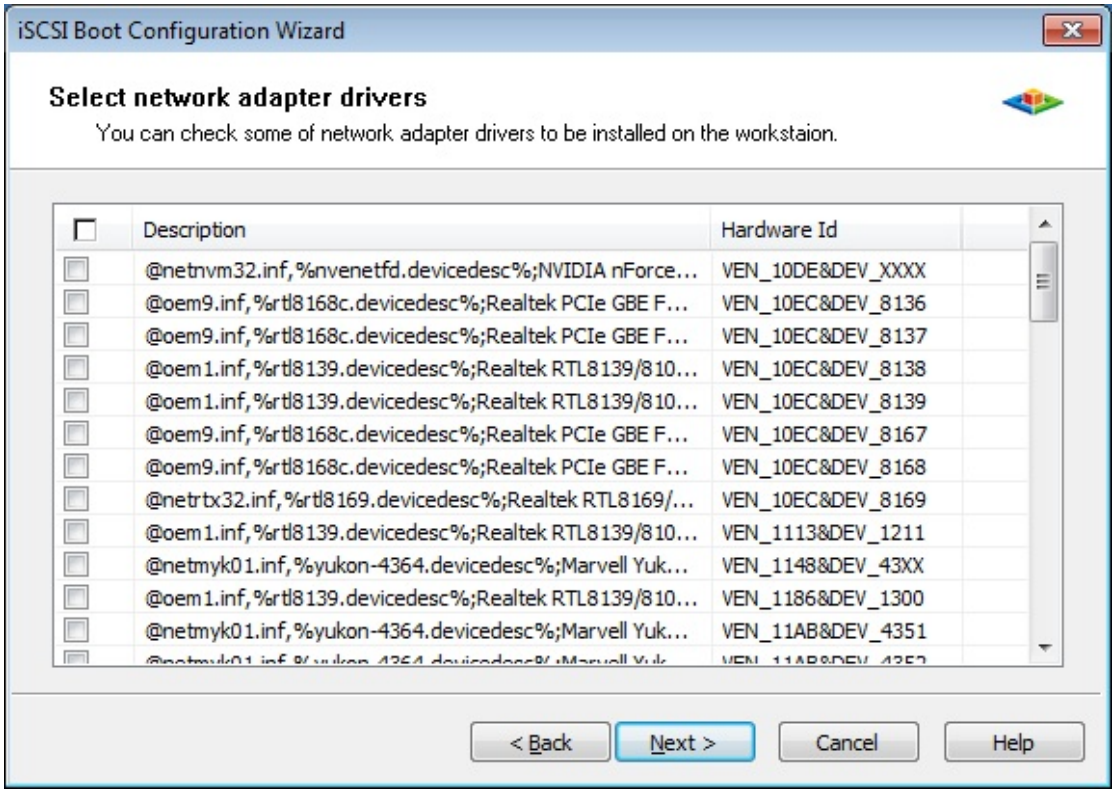
Double click ConfigWizardx64 .If it is x86, double click ConfigWizard.

Press Next to continue.

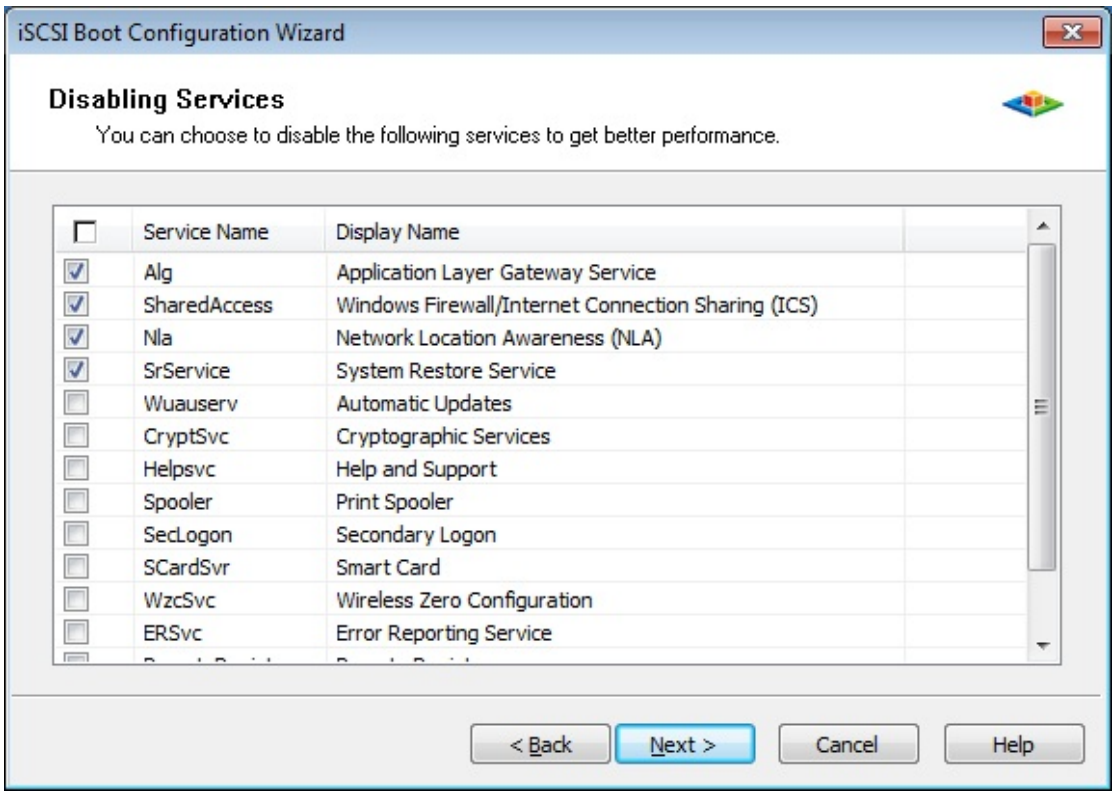


Select the Local Network Adapter

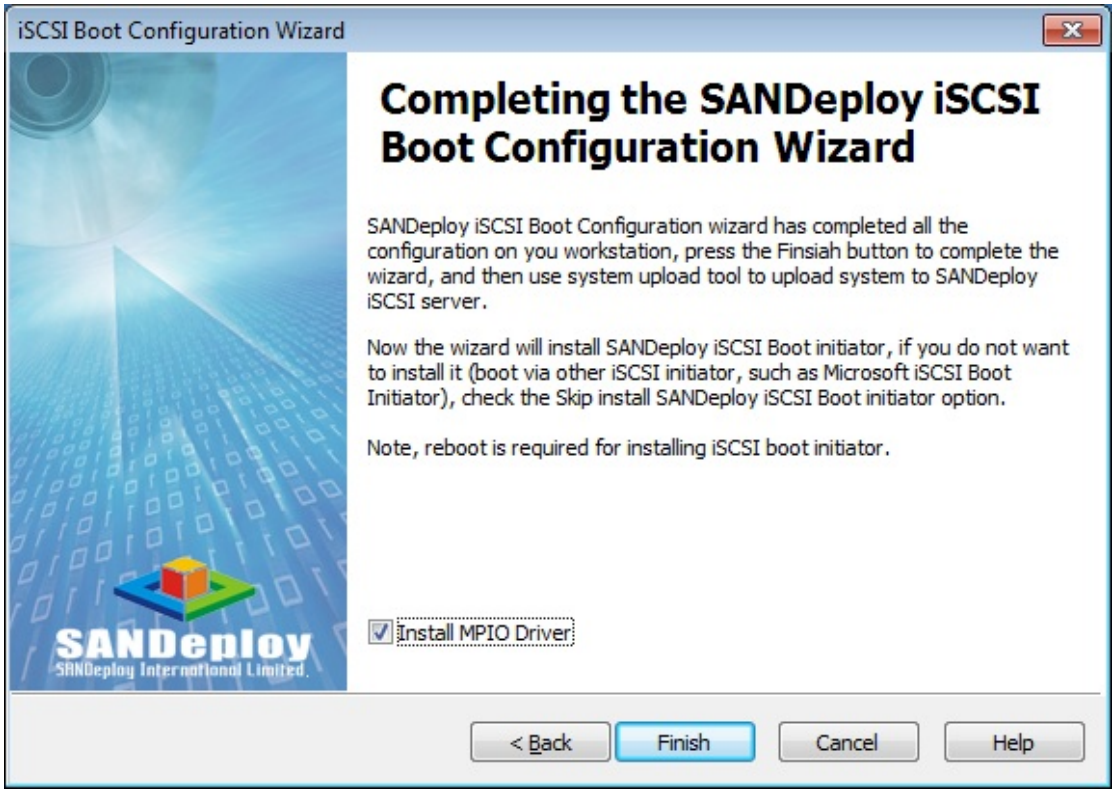
Press Next to continue.



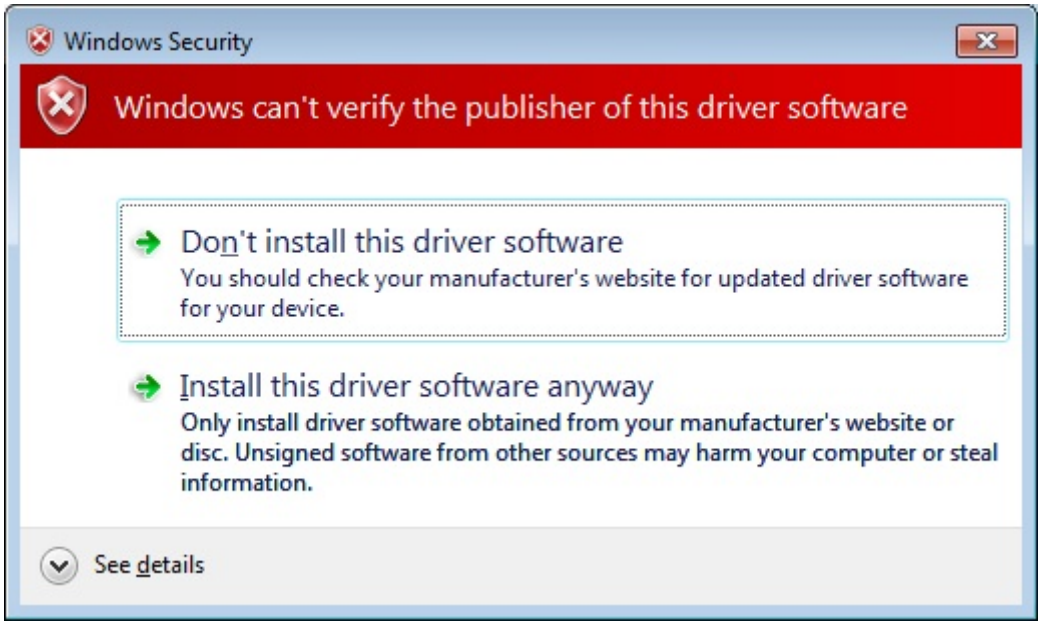
Leave it default, press Next to continue.



Press Next



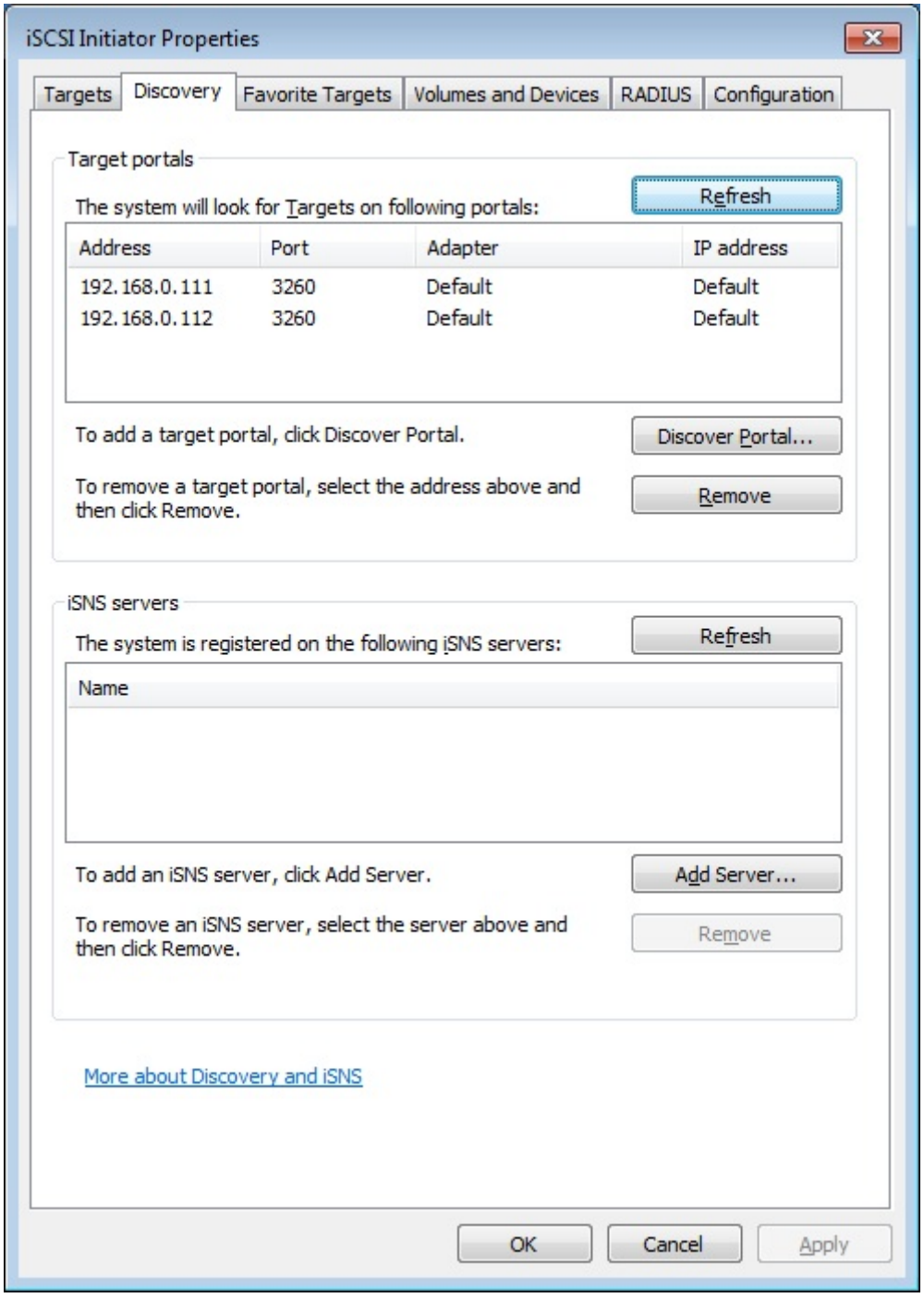
Check Install MPIO Driver.



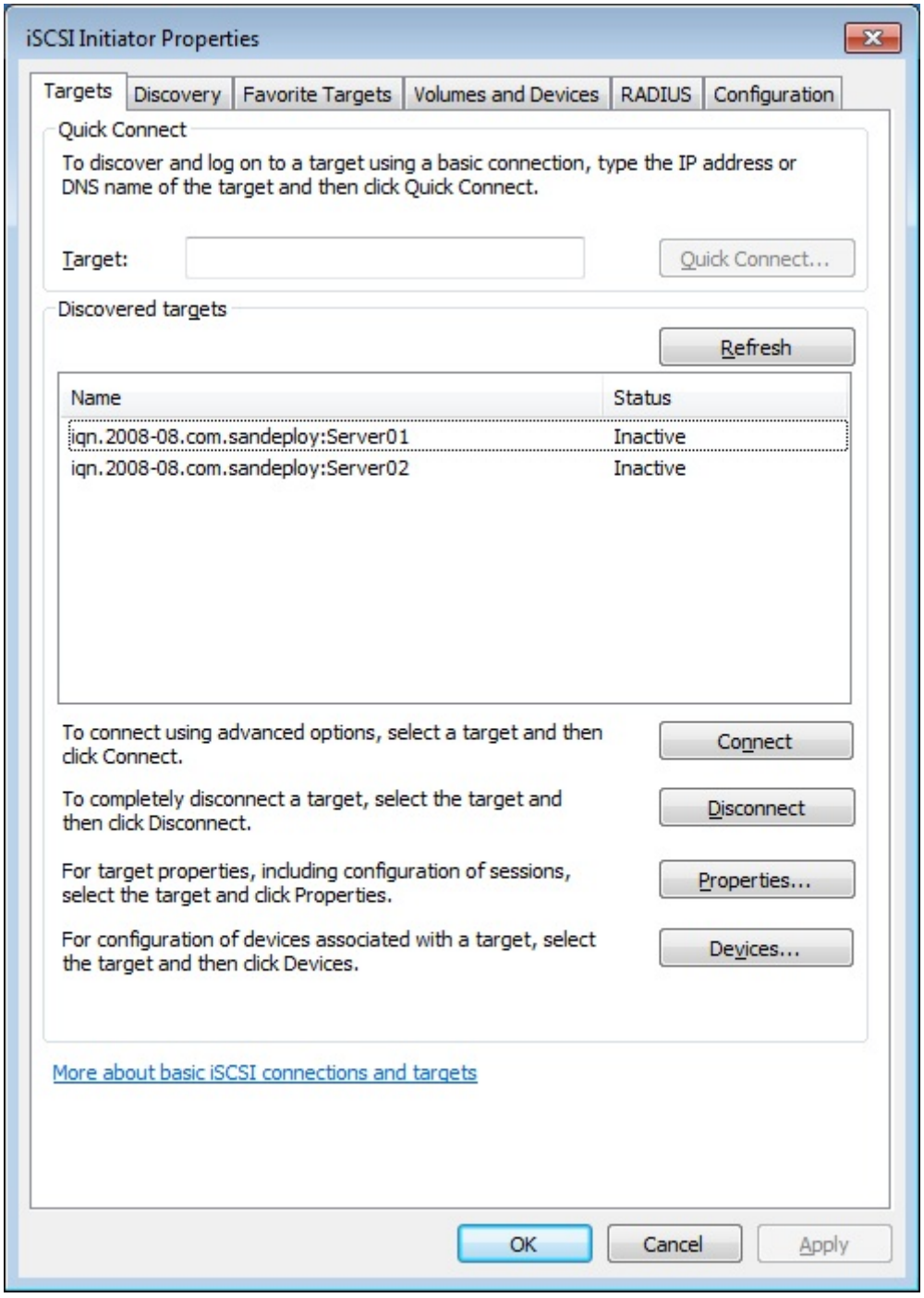
Choose Install this driver software anyway.

Log into targets

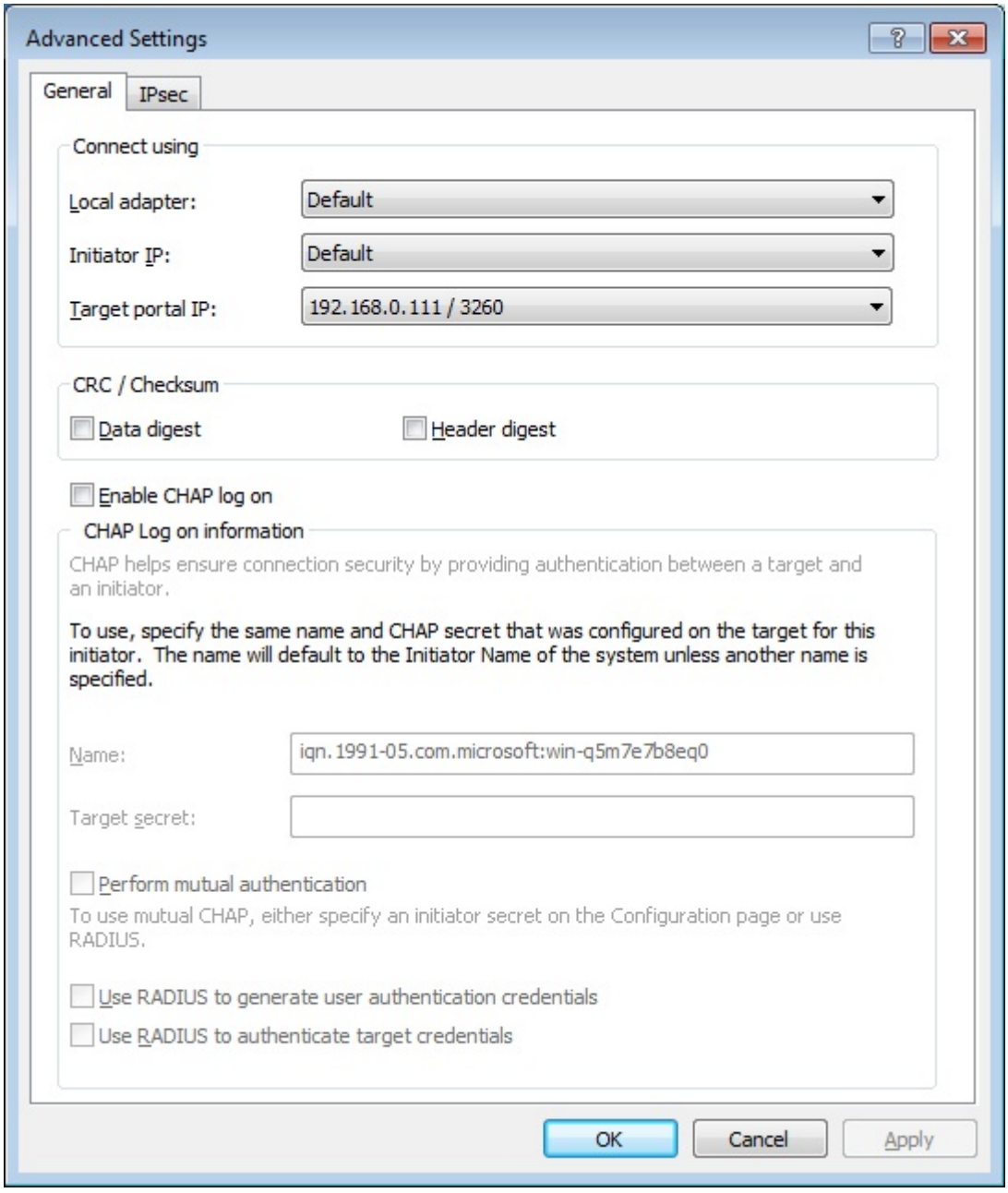
Open the iSCSI initiator and enter the IP Addresses of two servers.



And turn to Targets page.



Connect to two targets

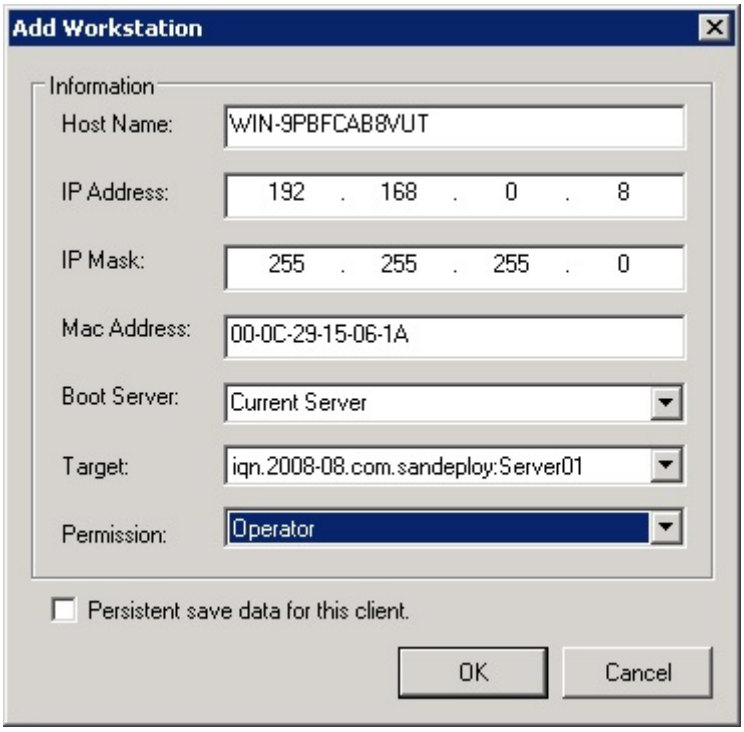


Specify the Target portal IP.

And then press OK and uncheck

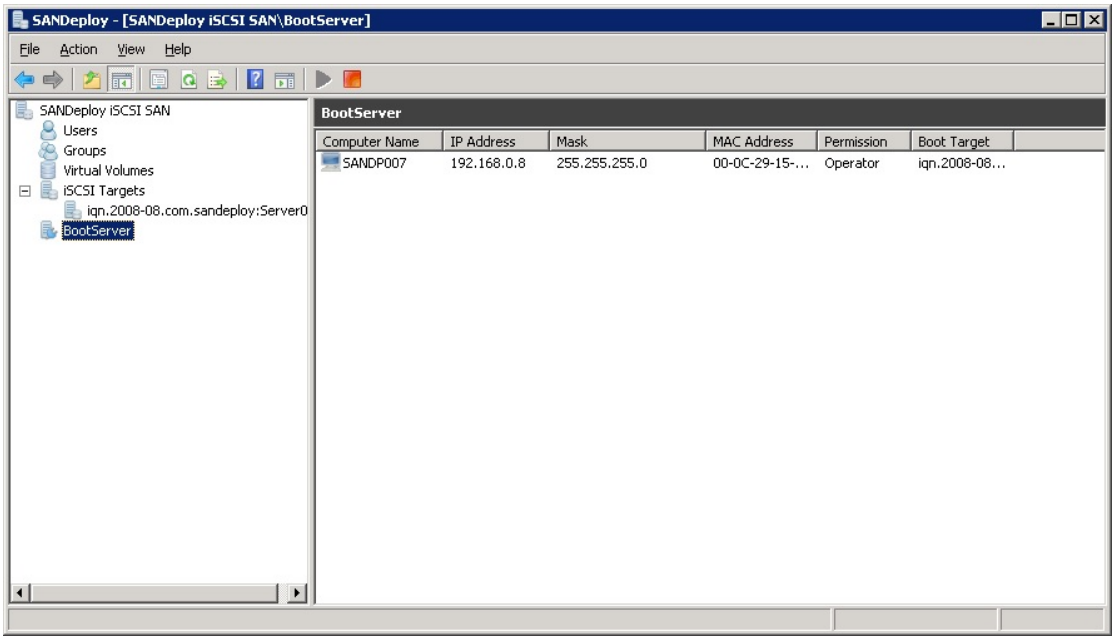
After client has connected to target, you should change the permission of client on Servers.

Select the initiator and press Add to Workstations

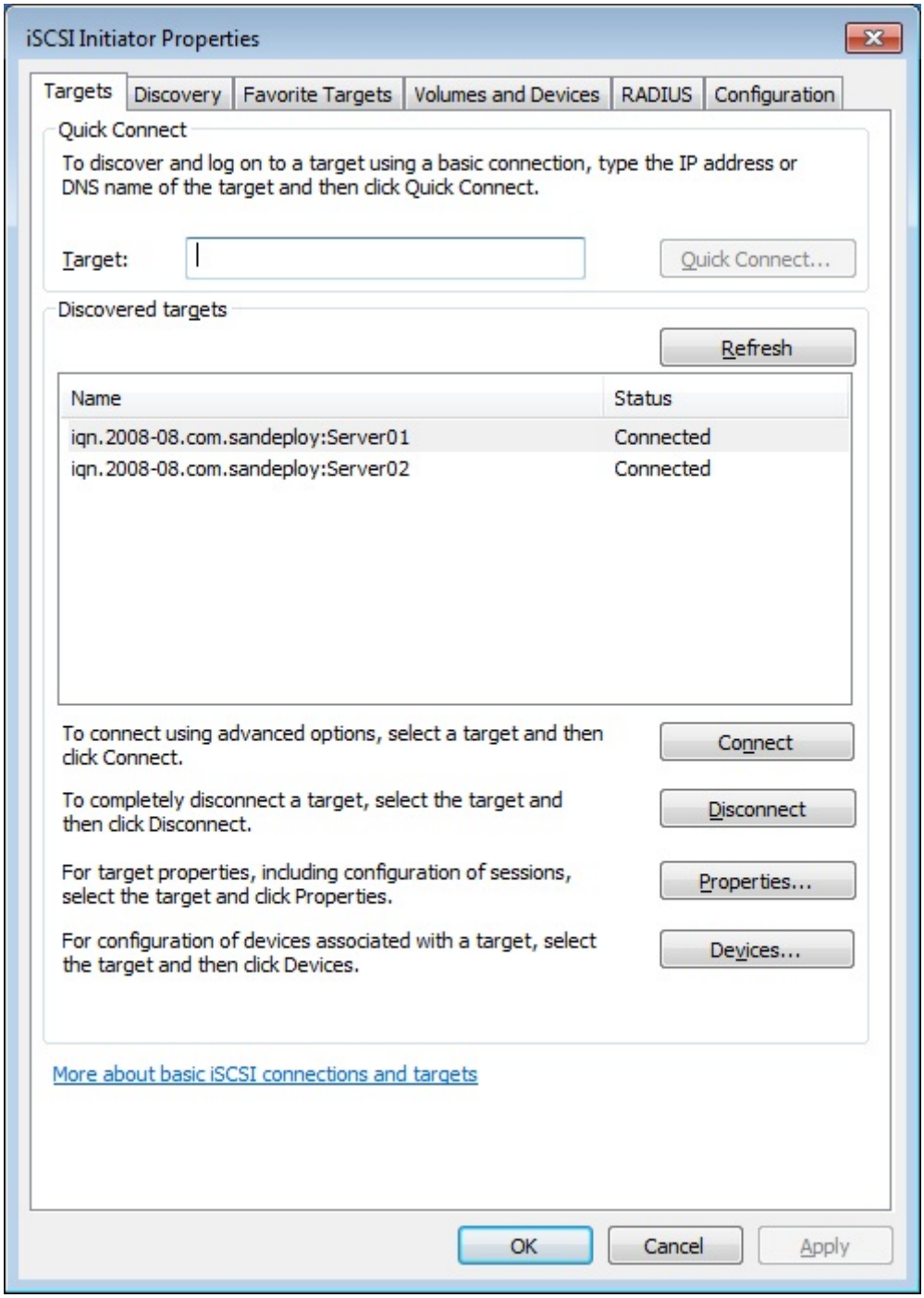


Change the Permission to Operator.

Press OK to add it.

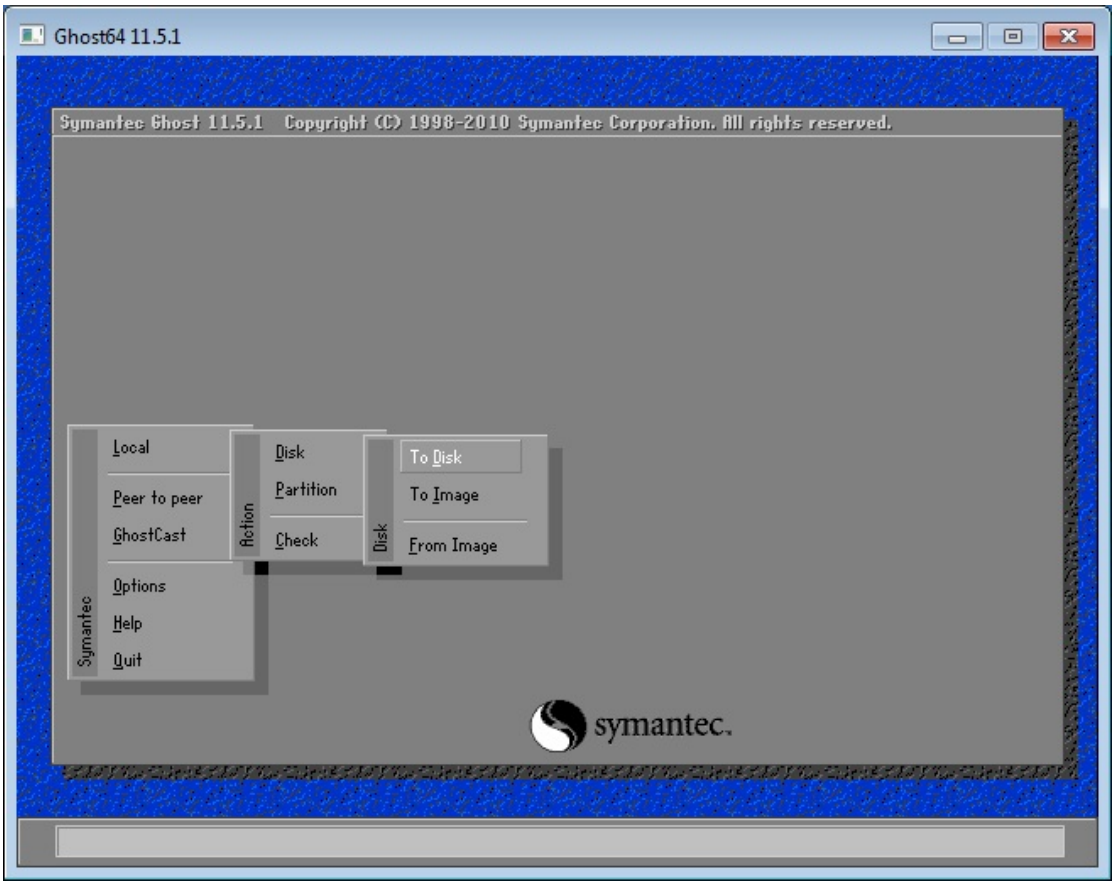


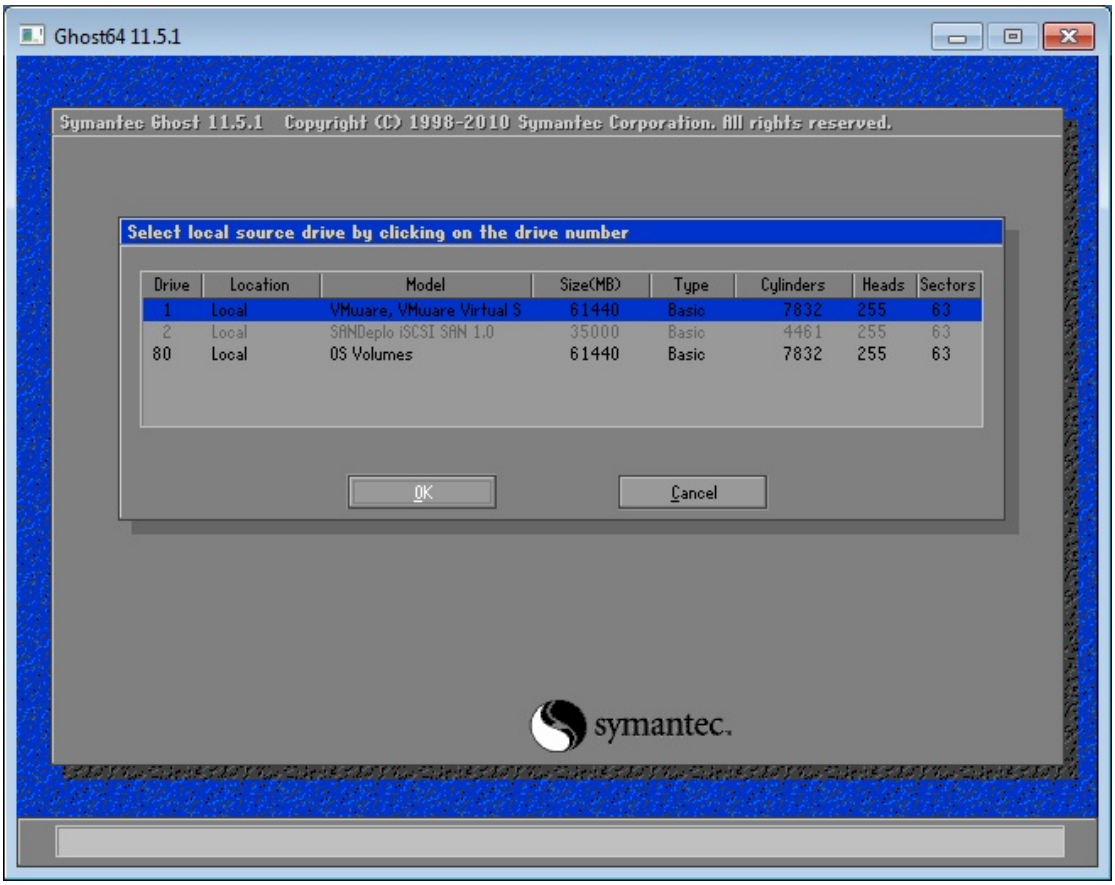
After you have added it to workstation, you should disconnect it and log into targets again.

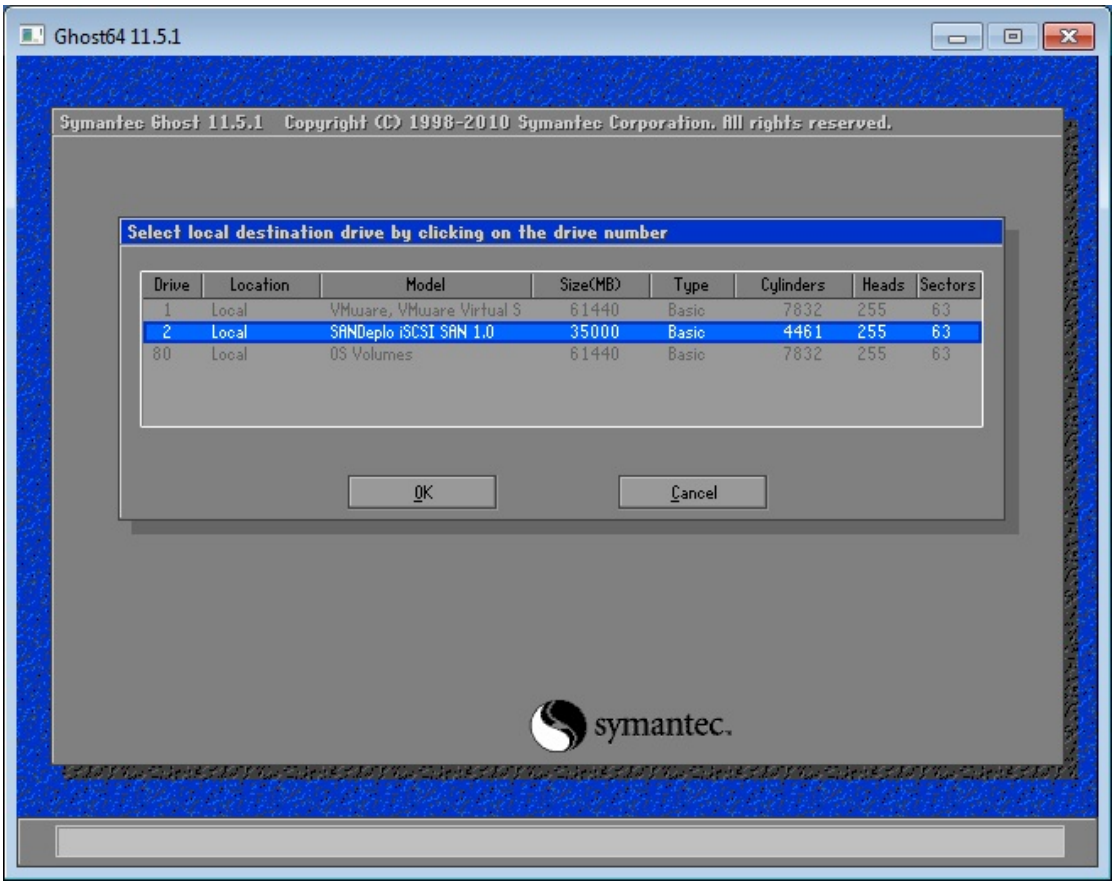


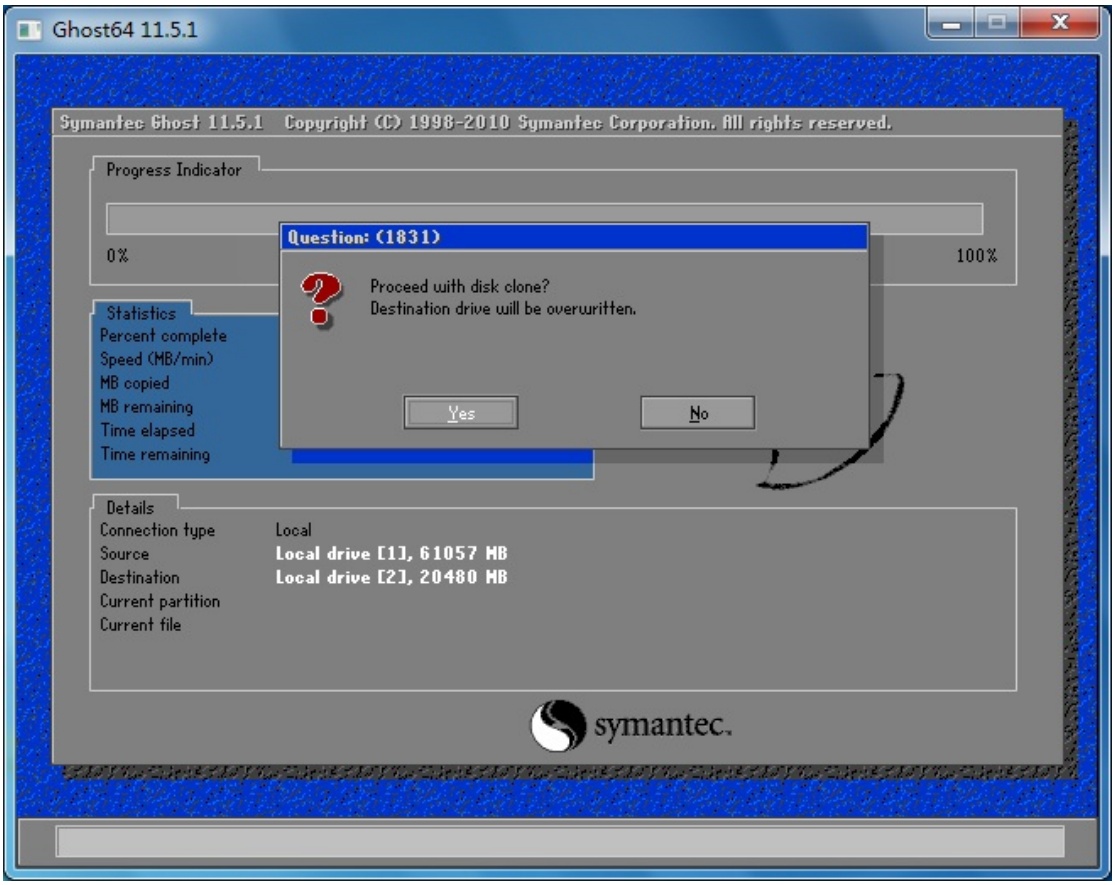
Ghost system

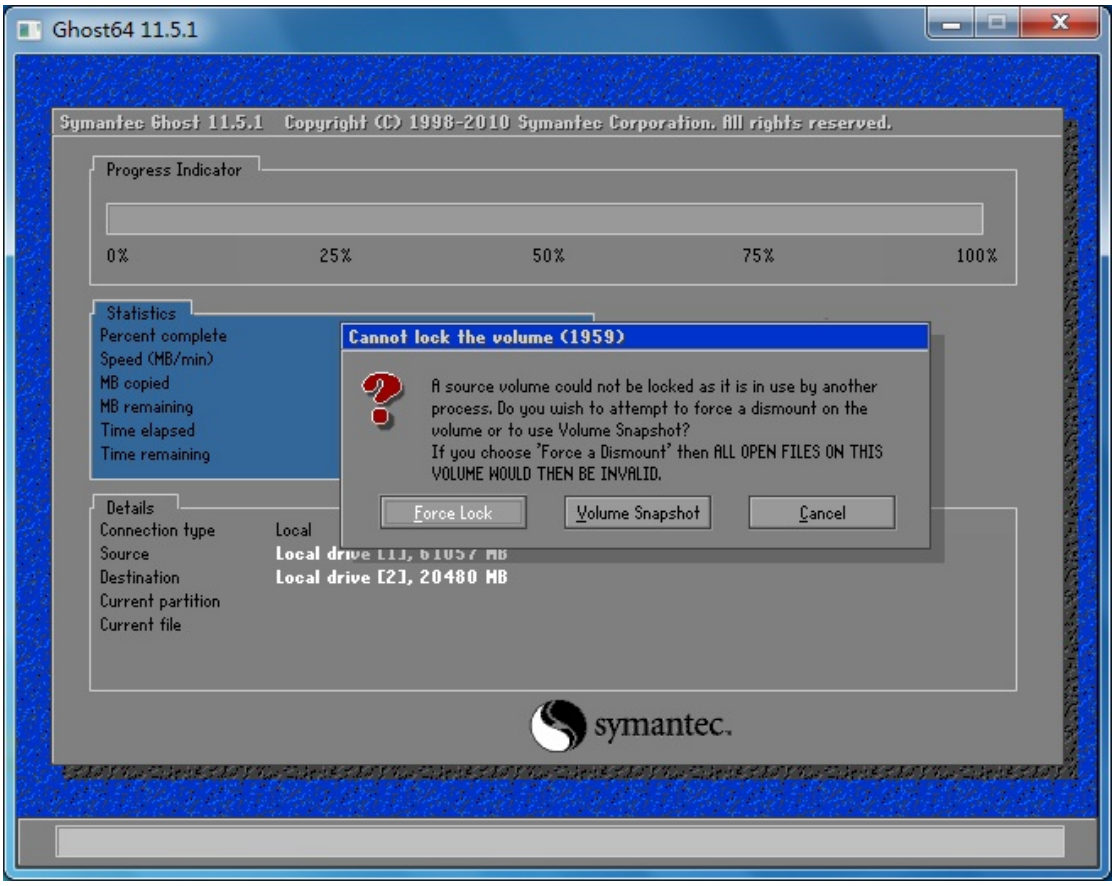
We use ghost to replicate system

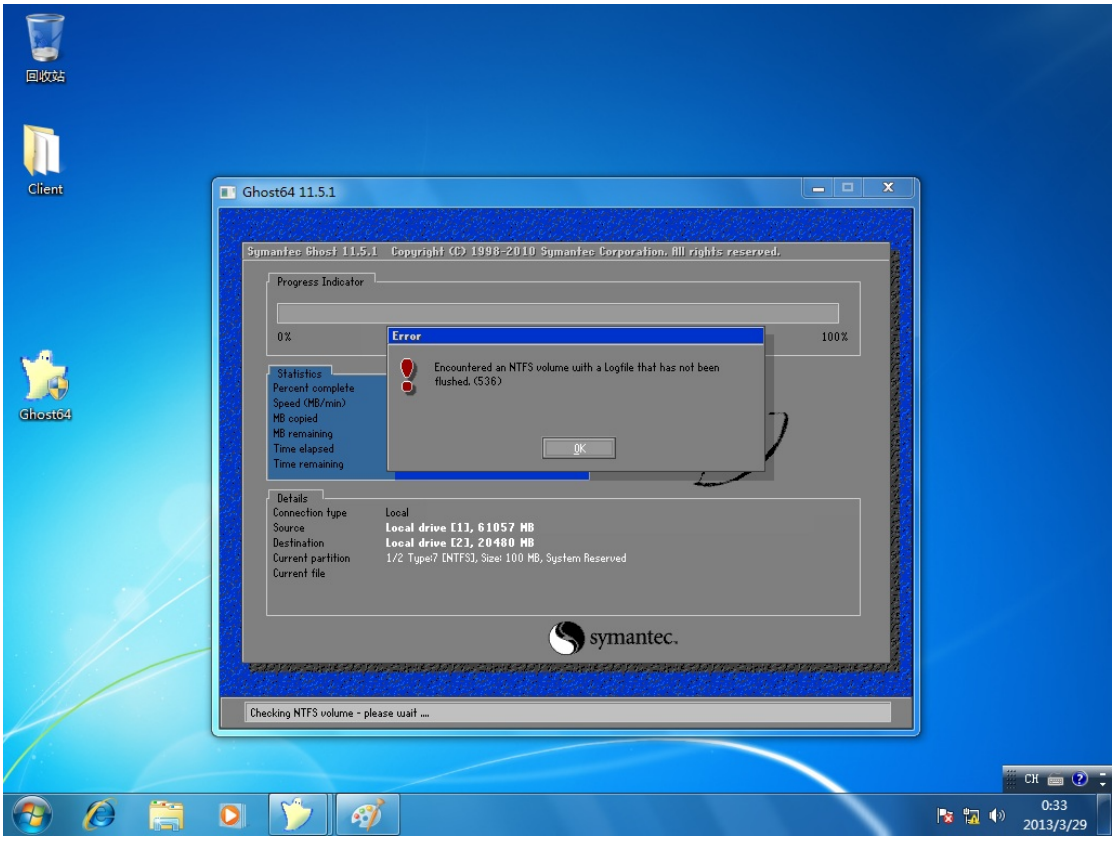

Ghost64 11.5.1
Symantec Ghost 11.5.1 Copyright (C) 1998-2010 Symantec Corporation. All rights reserved.
Local
Peer to peer
GhostCast
Options
Help
Quit
Symantec
Disk
Partition
Check
Action
To Disk
To Image
From Image
Disk
symantec.

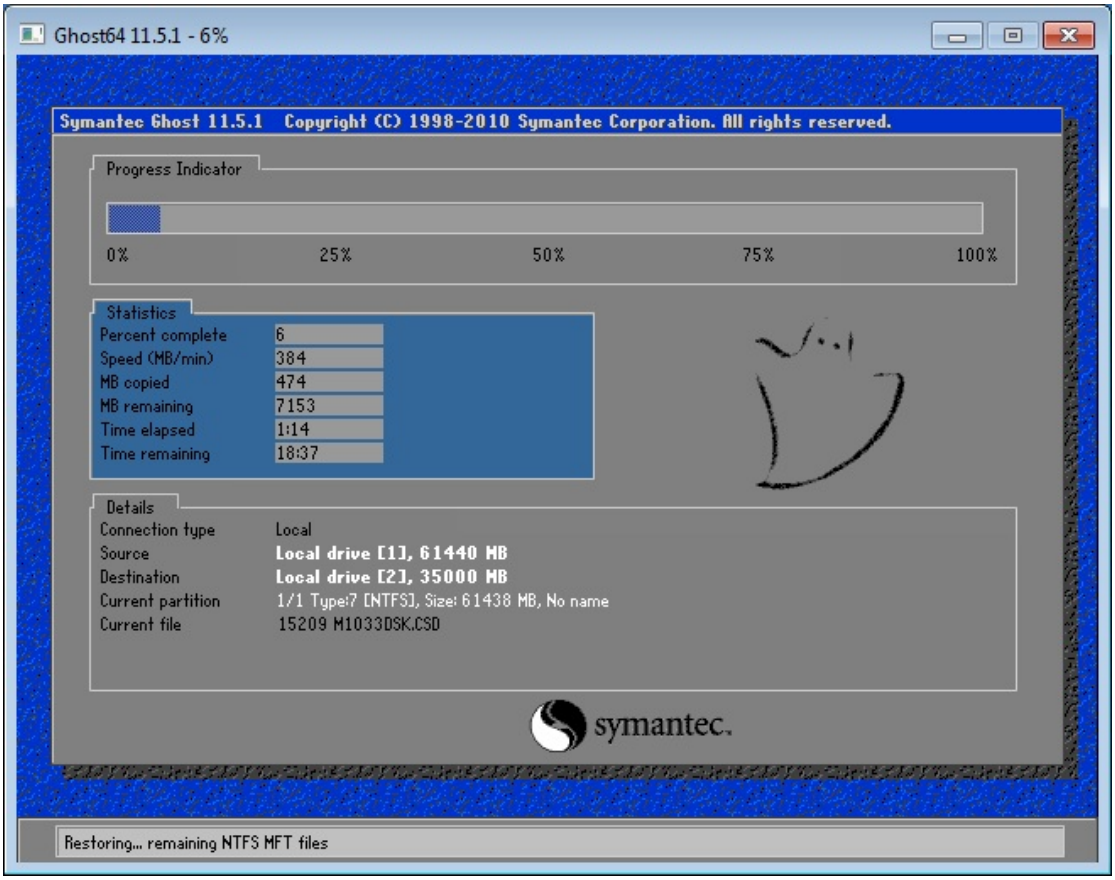

Ghost64 11.5.1
Symantec Ghost 11.5.1 Copyright (C) 1998-2010 Symantec Corporation. All rights reserved.
Select local source drive by clicking on the drive number
Drive Location Model Size(MB) Type Cylinders Heads Sectors
1 Local VMware, VMware Virtual S 61440 Basic 7832 255 63
2 Local SANDeplo iSCSI SAN 1.0 35000 Basic 4461 255 63
80 Local OS Volumes 61440 Basic 7832 255 63
OK
Cancel
symantec.

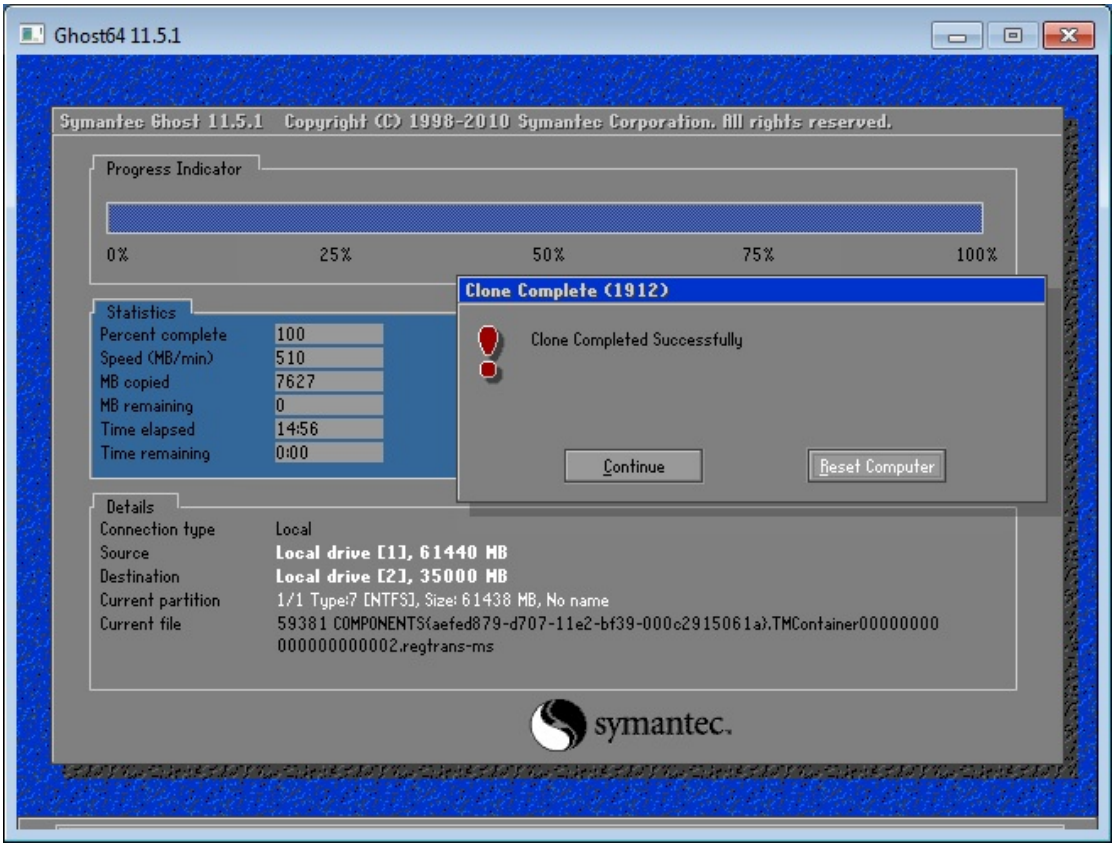

Ghost64 11.5.1
Symantec Ghost 11.5.1 Copyright (C) 1998-2010 Symantec Corporation. All rights reserved.
Select local destination drive by clicking on the drive number
Drive Location Model Size(MB) Type Cylinders Heads Sectors
1 Local VMware, VMware Virtual S 61440 Basic 7832 255 63
2 Local SANDeplo iSCSI SAN 1.0 35000 Basic 4461 255 63
80 Local OS Volumes 61440 Basic 7832 255 63
OK
Cancel
symantec.


Ghost64 11.5.1
Symantec Ghost 11.5.1 Copyright (C) 1998-2010 Symantec Corporation. All rights reserved.
Progress Indicator
0%
100%
Question: (1831)
Proceed with disk clone?
Destination drive will be overwritten.
Yes
No
Statistics
Percent complete
Speed (MB/min)
MB copied
MB remaining
Time elapsed
Time remaining
Details
Connection type Local
Source Local drive [1], 61057 MB
Destination Local drive [2], 20480 MB
Current partition
Current file
symantec.


Ghost64 11.5.1
Symantec Ghost 11.5.1 Copyright (C) 1998-2010 Symantec Corporation. All rights reserved.
Progress Indicator
0%
25%
50%
75%
100%
Statistics
Percent complete
Speed (MB/min)
MB copied
MB remaining
Time elapsed
Time remaining
Cannot lock the volume (1959)
A source volume could not be locked as it is in use by another process. Do you wish to attempt to force a dismount on the volume or to use Volume Snapshot?
If you choose 'Force a Dismount' then ALL OPEN FILES ON THIS VOLUME WOULD THEN BE INVALID.
Force Lock
Volume Snapshot
Cancel
Details
Connection type
Local
Source
Destination
Local drive [2], 20480 MB
Current partition
Current file
symantec.


回收站
Client
Ghost64
Ghost64 11.5.1
Symantec Ghost 11.5.1 Copyright (C) 1998-2010 Symantec Corporation. All rights reserved.
Progress Indicator
0%
100%
Error
Encountered an NTFS volume with a Logfile that has not been flushed. (536)
OK
Statistics
Percent complete
Speed (MB/min)
MB copied
MB remaining
Time elapsed
Time remaining
Details
Connection type
Local
Source
Local drive [1], 61057 MB
Destination
Local drive [2], 20480 MB
Current partition
1/2 Type=7 [NTFS], Size=100 MB, System Reserved
Current file
symantec.
Checking NTFS volume - please wait ...
0:33
2013/3/29





After the system has been ghosted successfully, you should disconnect it

from targets .Other clients can boot from iSCSI.