iStorage Server virtual CD/DVD-RW

Auto-mounting feature

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Overview

KernSafe iStorage Server is an advanced and powerful, full-featured software-only iSCSI Target that fully conforms to the latest iSCSI Standard 1.0 (former Draft 20). It is an IP SAN solution allowing you to quickly export existing storages such as disk images, VHD files, physical disks, partitions, CD/DVD-ROMs, tapes or any other type of SCSI based devices and even a variety of popular CD/DVD images to the client machines. The software thus delivers immediate benefits, as it allows storage to be consolidated, virtualized and centrally managed. iStorage Server also provides RAID-1 (mirror) feature enabling you to create two iSCSI devices for mirror backup. Except for that, you can create a High-Available cluster that will characterize with minimum downtime to assure business continuity. Furthermore, iStorage Server also supports a lot of features such as: VHD (Virtual Hard Disk) target, virtual burner, snapshots, STPI, RAID-1 and failover, these features are very important and popular in storage industry world and make iStorage Server suitable for any size of business.

This article will demonstrate how to use new auto-mounting feature in virtual CD/DVD burner. When connecting from client to iSCSI Target which is a virtual CD/DVD-burner you will see new optical burner connected to your computer. You may then use it just like a normal burner with difference that you don’t need to use any optical disks, instead you will burn directly to ISO file. That ISO file will be created on a server machine that is running iStorage Server and automatically mounted as another iSCSI target. Auto-mounting will also make sure that after burning one optical drive, another blank one will get automatically inserted. That is a perfect solution for easy, fast and convenient data backup since you may use any burning software of your choice.

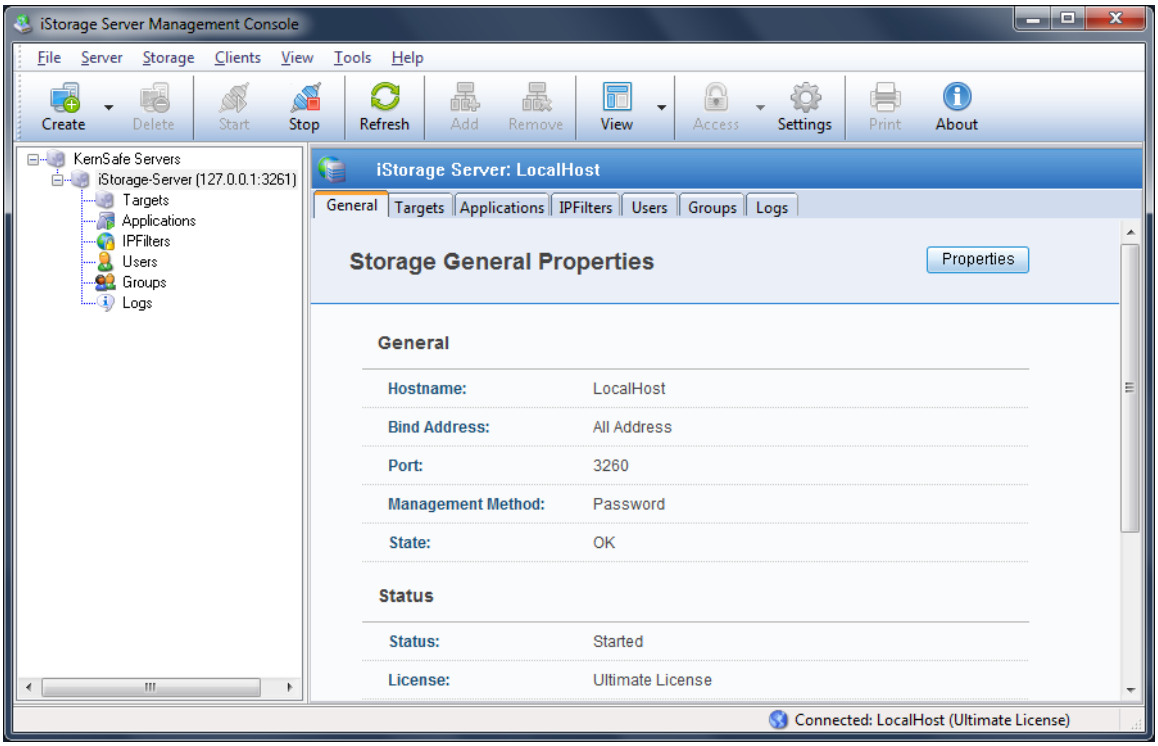
In this case we will need at least two computers – machine with installed iStorage Server and a client machine with or without physical burner.

Configuring iStorage Server

We will create iSCSI Target using iStorage Server new feature – virtual CD/DVD-RW burner.

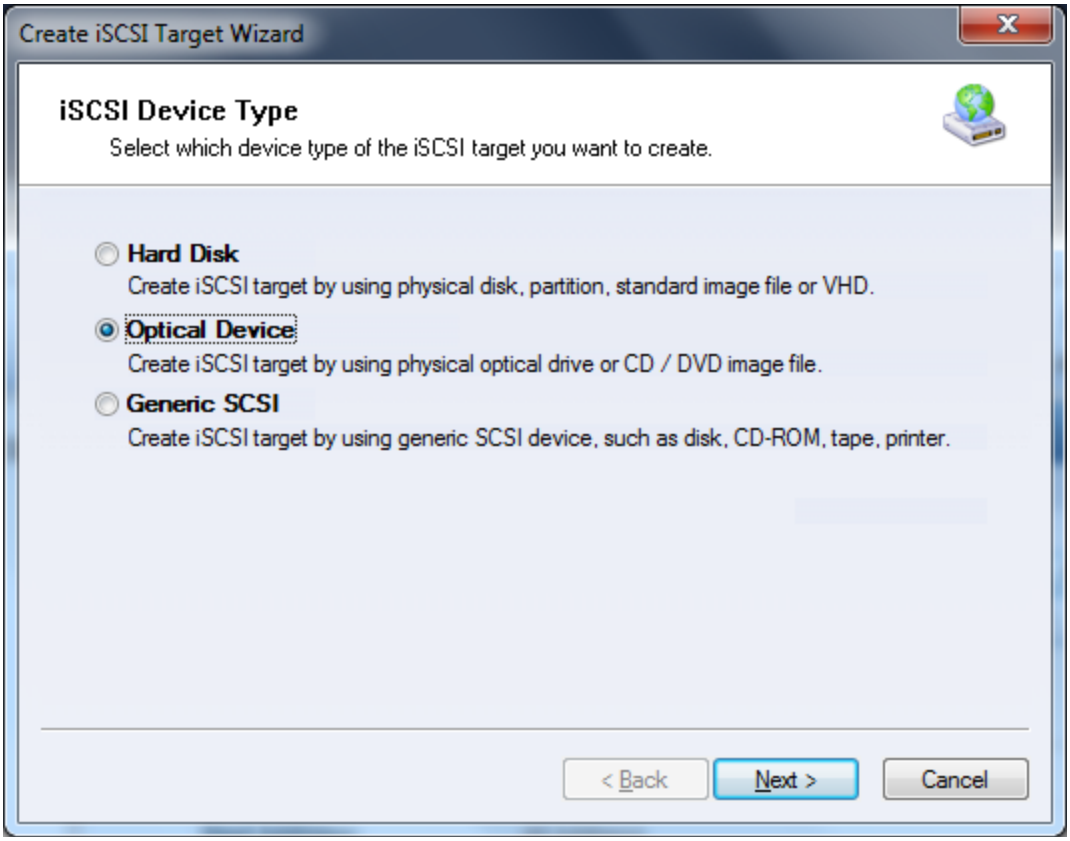
Creating Target

Open **iStorage Server Management Console**.



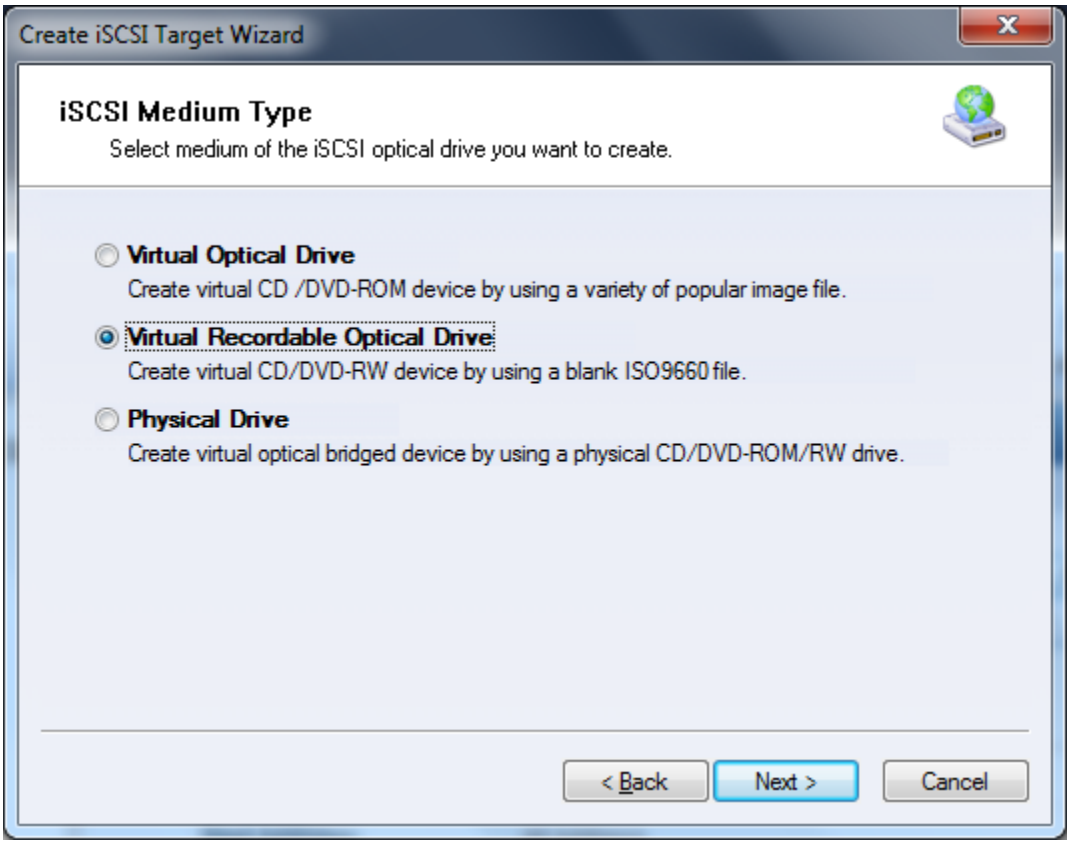
Launch the **iStorage Server Management Consolle**, press the **Create** button on the toolbar, the **Create iSCSI Target Wizard** will appear.

Select device type.



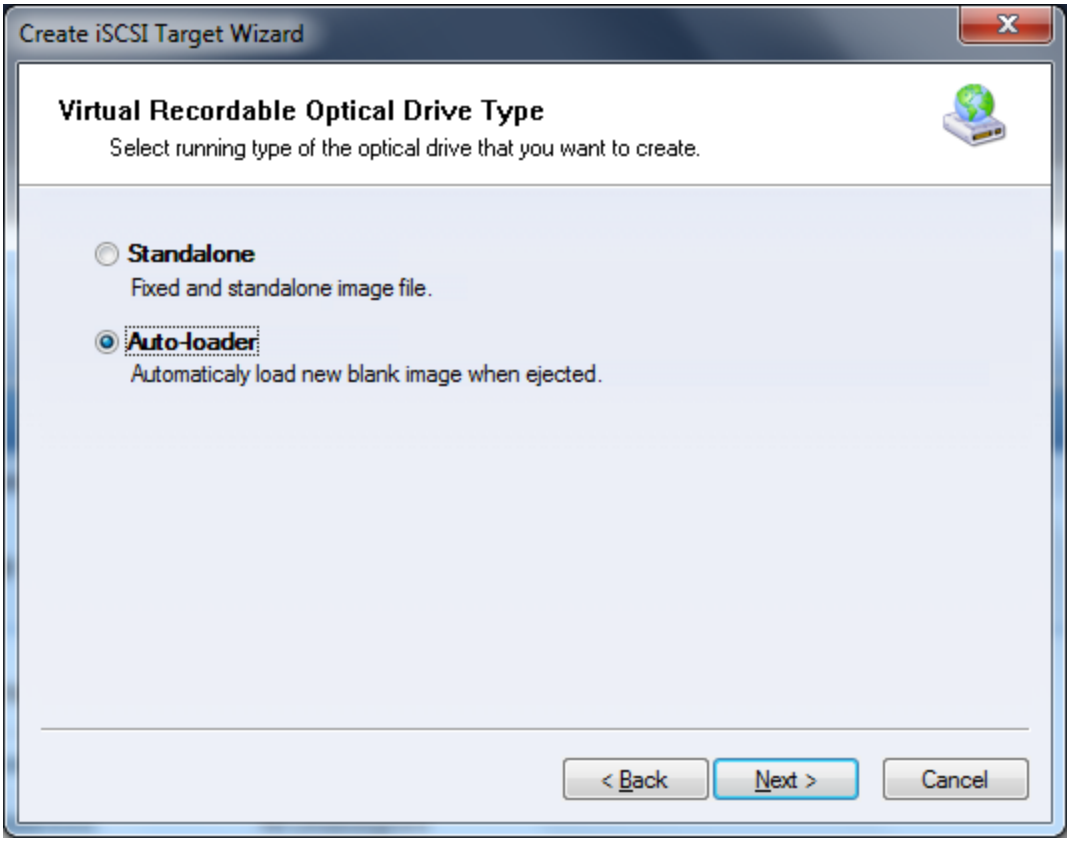
Choose **Optical Device**.

Press the **Next** button to continue.



Choose **Virtual Recordable Optical Drive** in **iSCSI Medium Type** page.

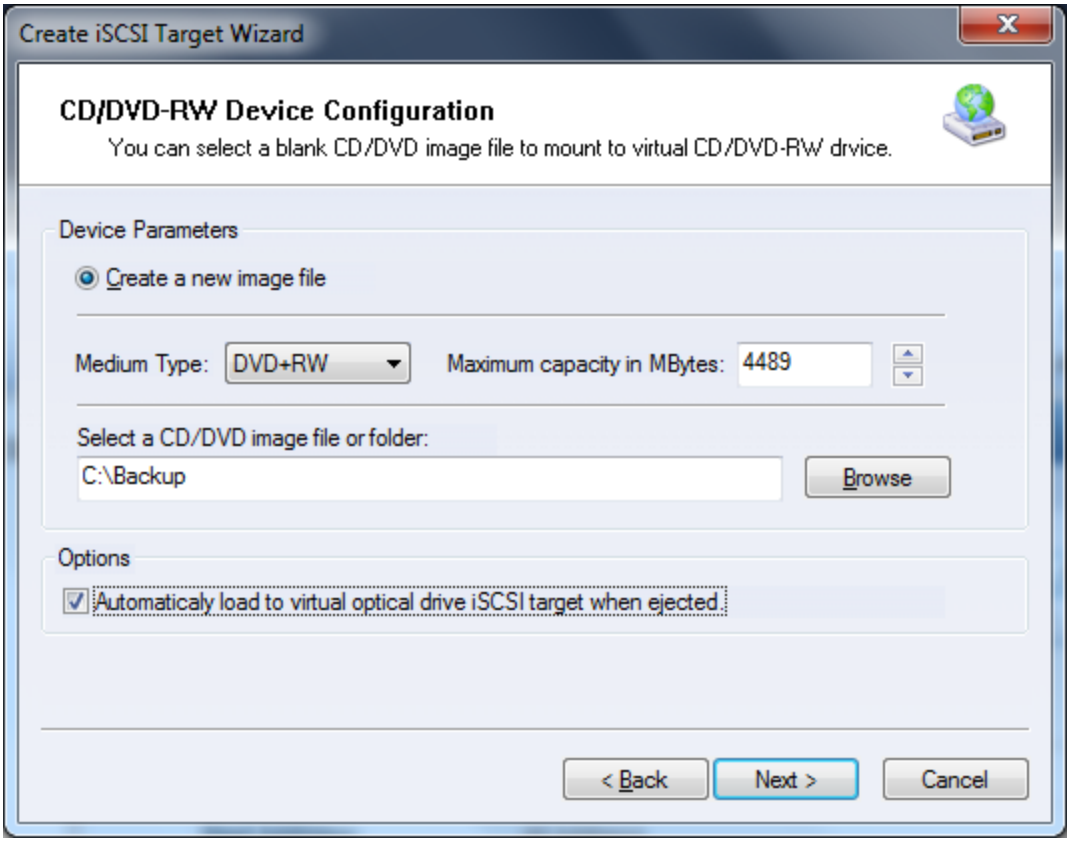
Press the **Next** button to continue.



Choose **Auto-Loader** option.

Note:
Choosing Standalone option, will mount only one image and that image will stay mounted after burning process will finish.

Press the **Next** button to continue.

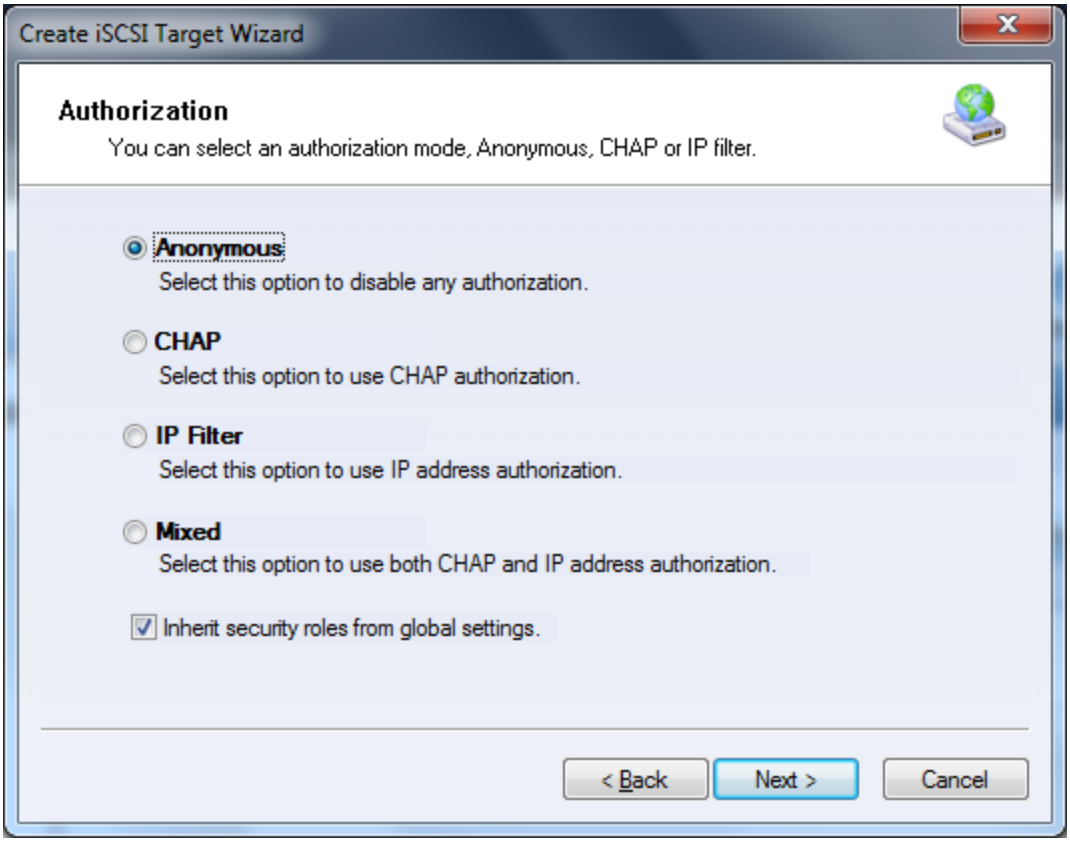


Choose your **Medium Type** and specify its **Maximum capacity**.
Select where you wish to save your images.

Note:
By selecting option **Automatically loads new blank image when old one is ejected**, you will need to select folder where you wish to save all ISO files that will be created after finishing burning on a client machine.

To preserve free space, all ISO files are dynamically expanded, therefore their size depends on size of content.

Press the **Next** button to continue.



Choose the Authentication Mechanism. Decide which authentication mechanisms you would want to use: **Anonymous**, **CHAP**, **IP Filter** or **Mixed** authentication.

1) Anonymous

All initiators will get full access permission without any authorization required.

2) CHAP (Challenge-handshake authentication protocol)

All initiators need to specify a CHAP user and secret to connect to the target. iStorage Server has a built-in user called “Guest”, which is used for initiators without CHAP secret specified.

3) IP Filters

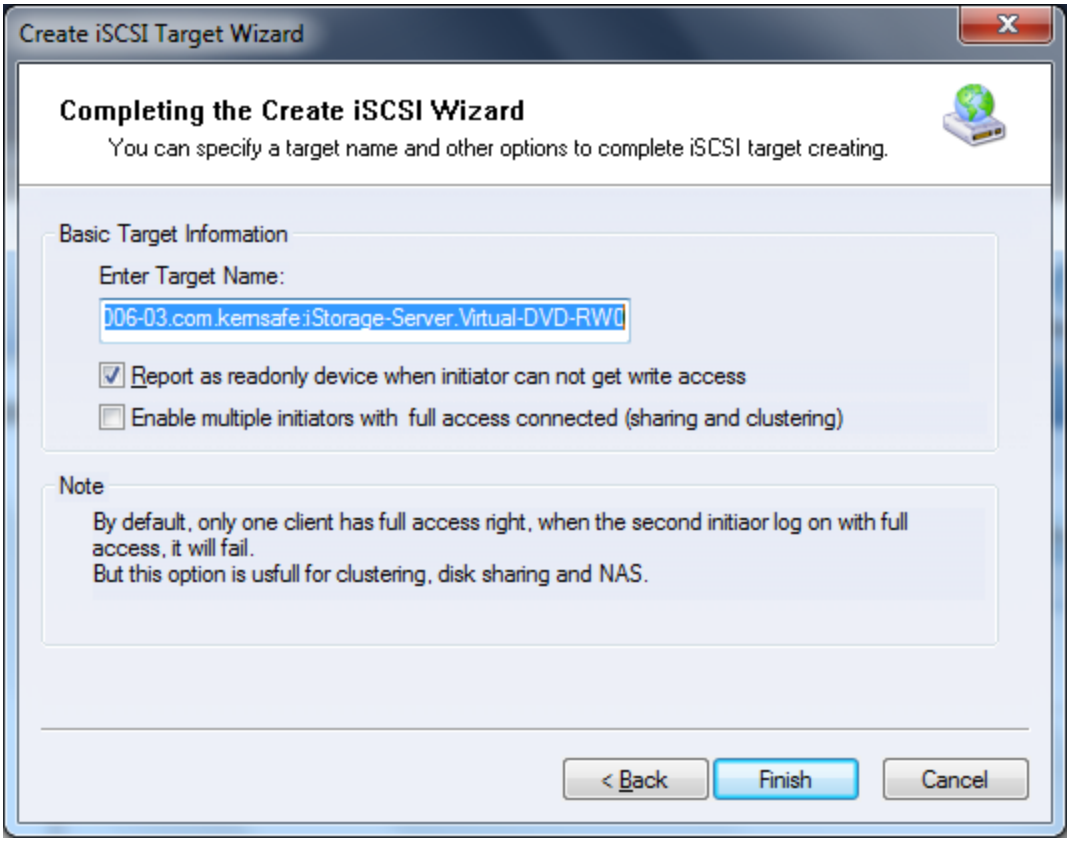
All initiators will be authorized by the incoming IP address defined by IP Filter roles.

4) Mixed

Security policy is determined by both CHAP and IP Filters.

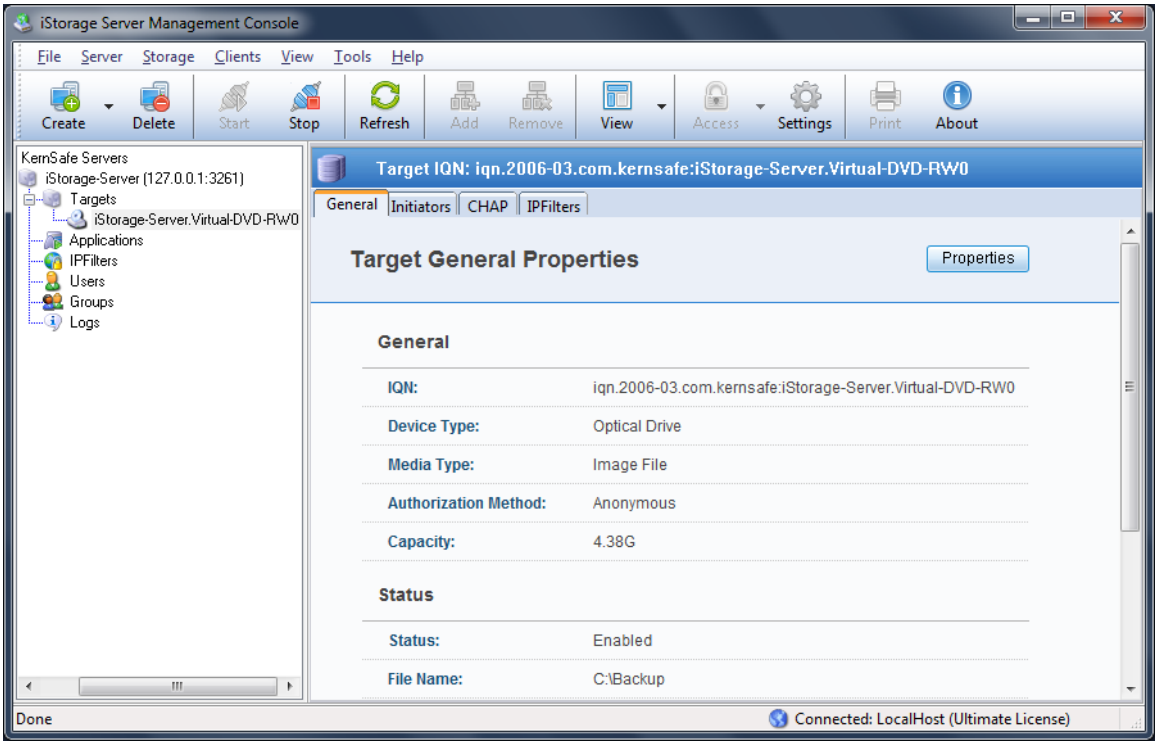
If you check **Inherit security roles from global settings**, all client security roles are form global settings, otherwise, each client will have its own permission.

Press the **Next** button to continue.



Enter the name for your target device.
If you check **Report as readonly device when initiator cannot get write access**, the system will give you a report when you load the target without write access.

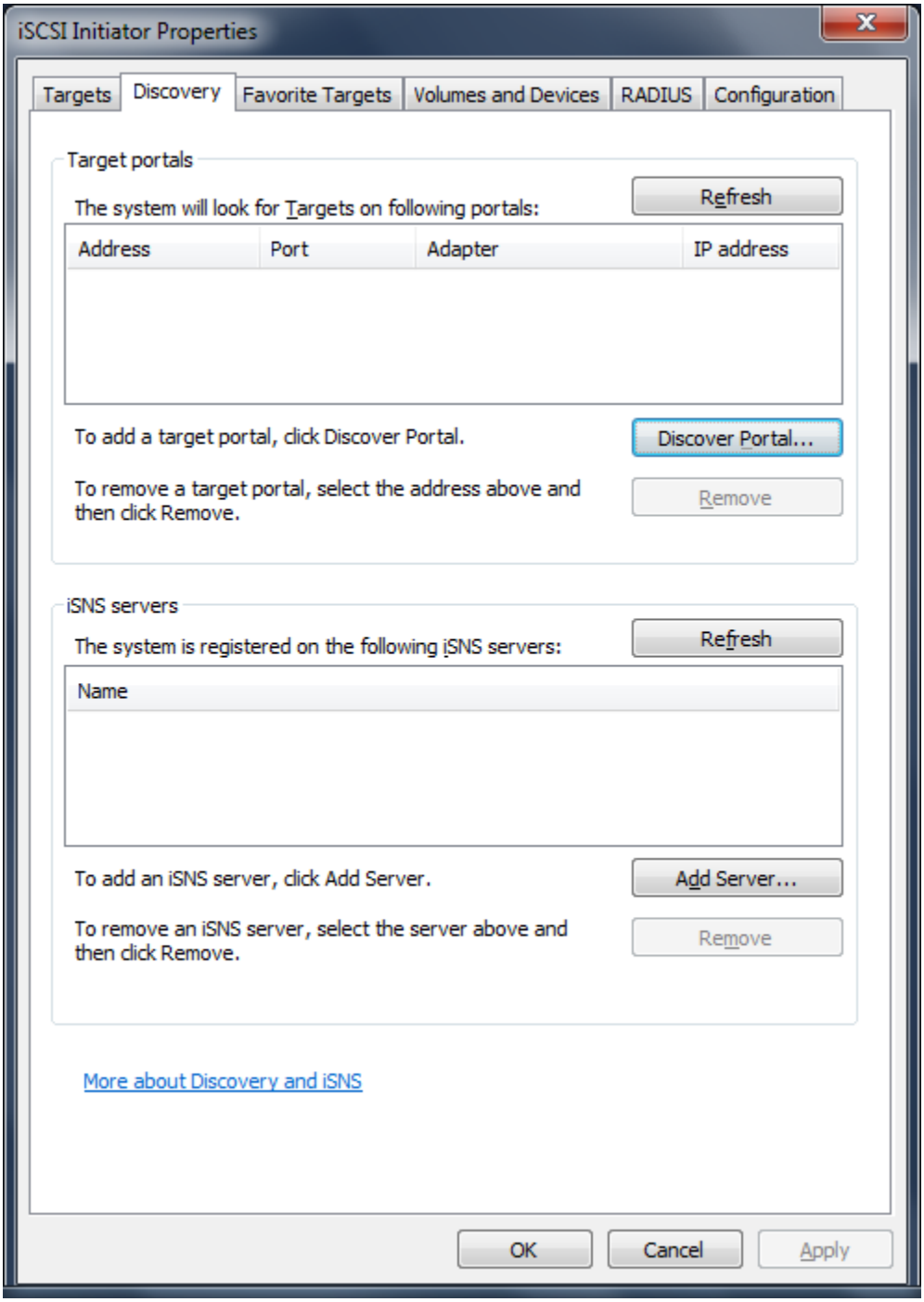
Press the **Finish** button to continue.



After successfully creating an iSCSI Target, you should be able to see it in your **Targets** list in **iStorage Server Management Console**.

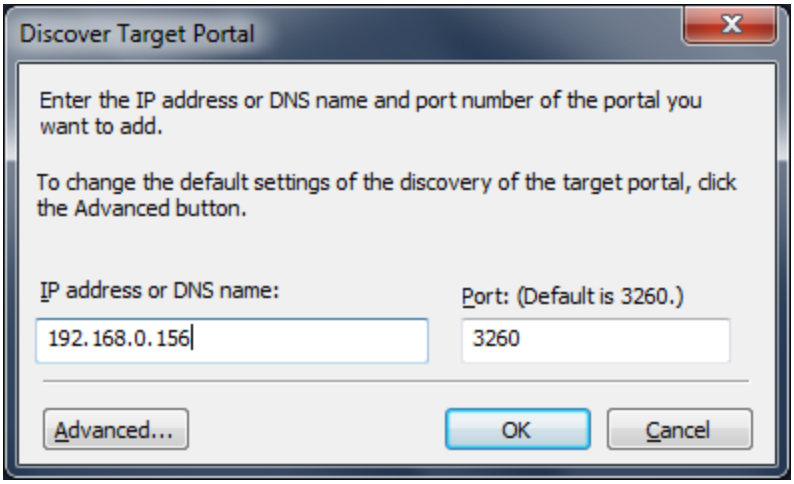
Logging on to the target

On client machine, open iSCSI initiator, in this case I will use **Microsoft iSCSI Initiator**.



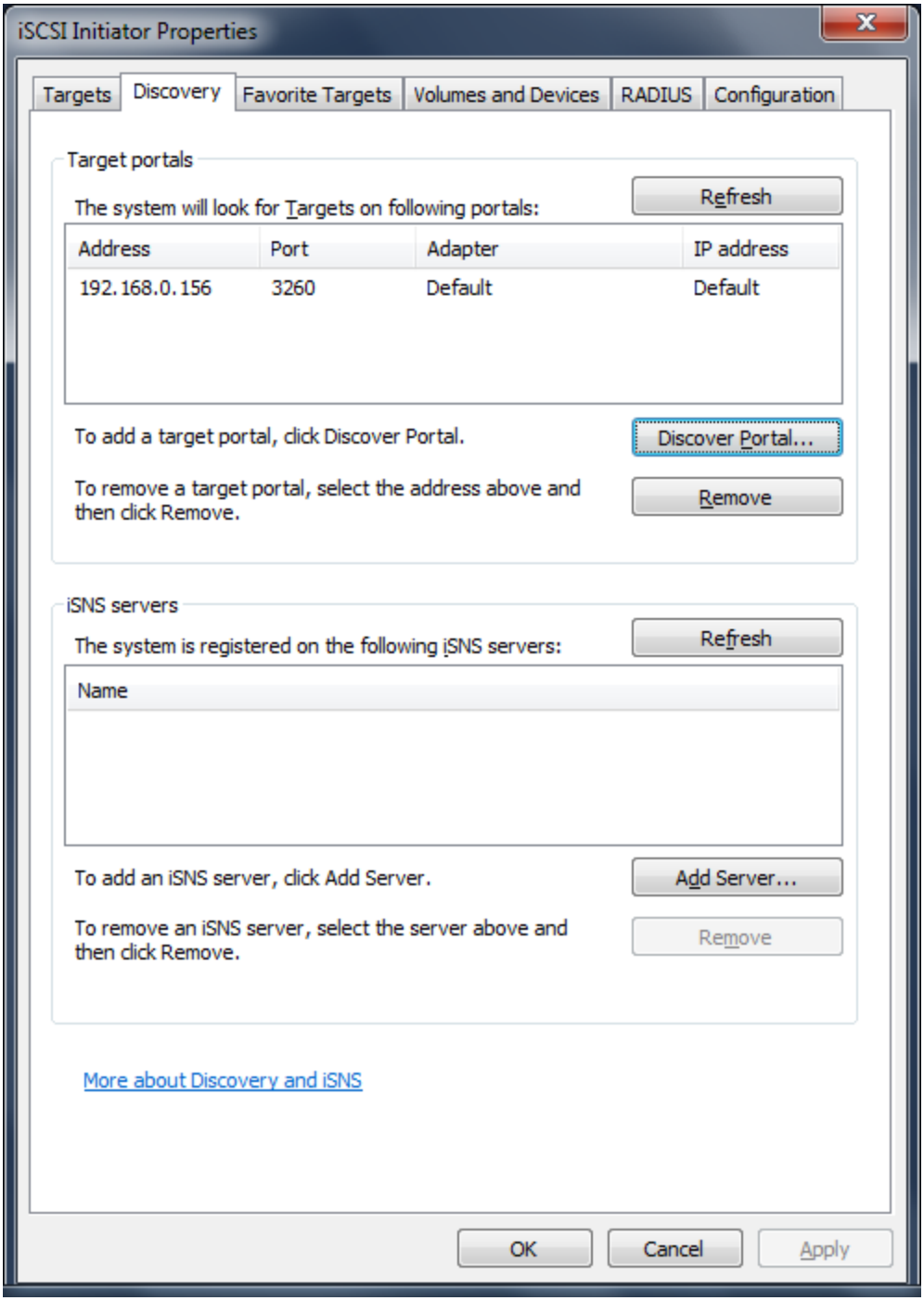
Select **Discovery** tab page.

Press the **Discover Portal…** button, the **Discover Target Portal** dialog will appear.

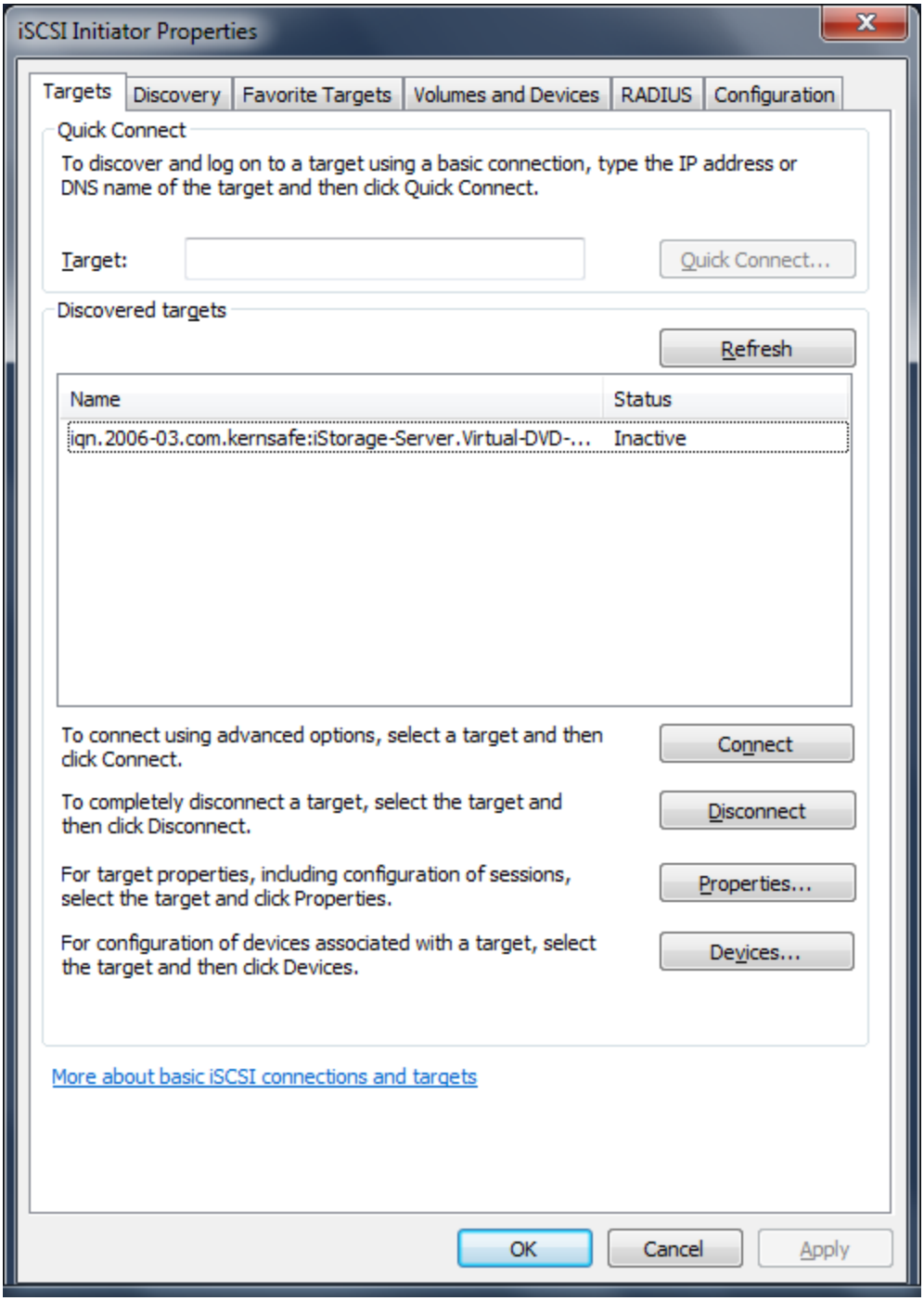


Type the **IP address** and **Port** of your server. Default port is 3260.

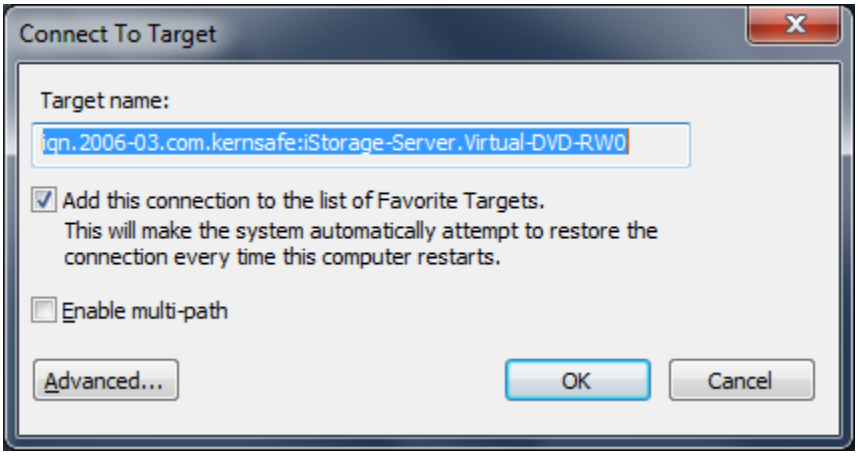
Press the **OK** button to continue.



Change to **Targets** tab.



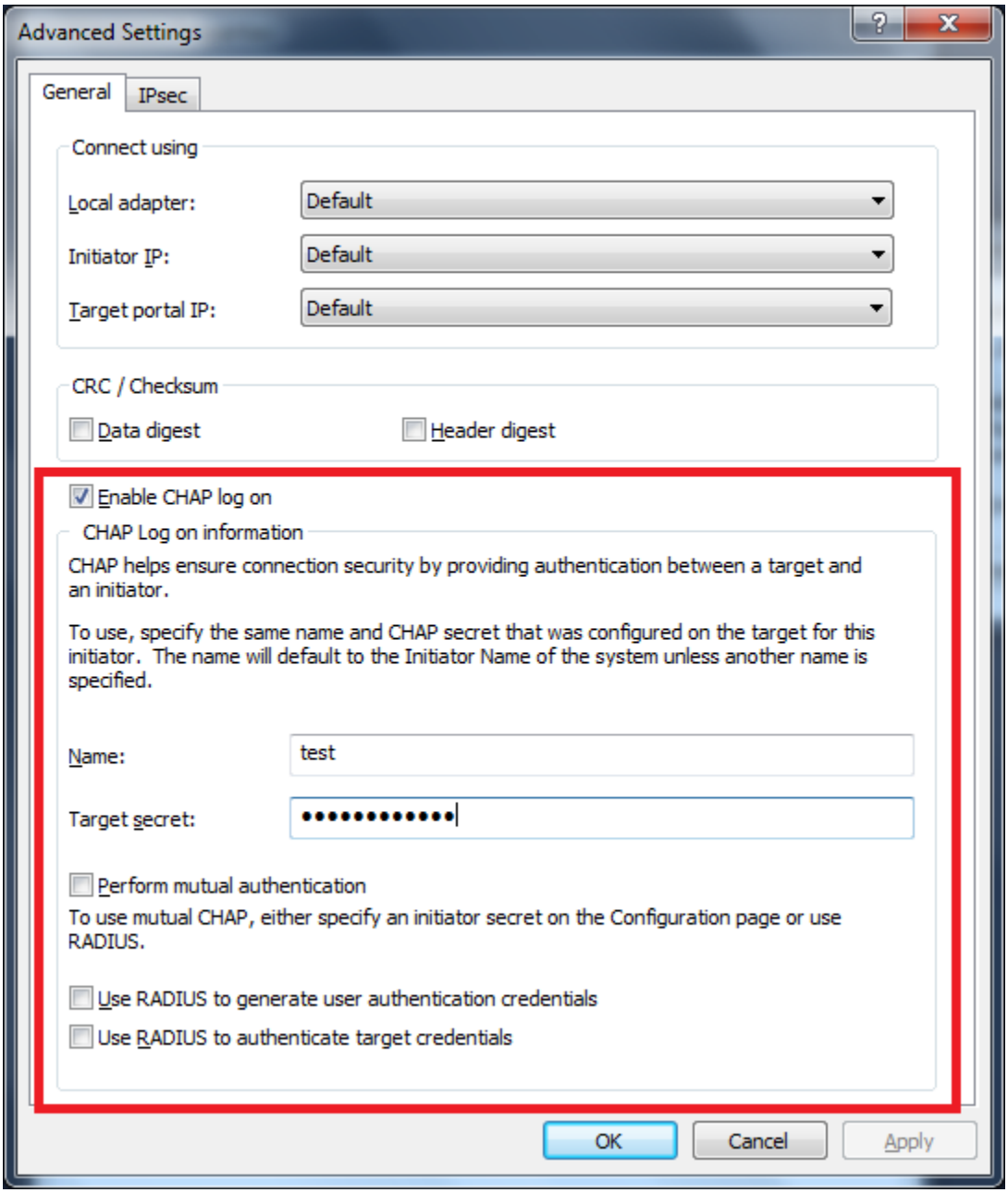
Select the target in the **Targets** list, and then press the **Connect** button.
Then the **Connect to Target** dialog will appear.



If your iSCSI target is using **IP filter** or **Anonymous** authorization, just press the **OK** button to continue.

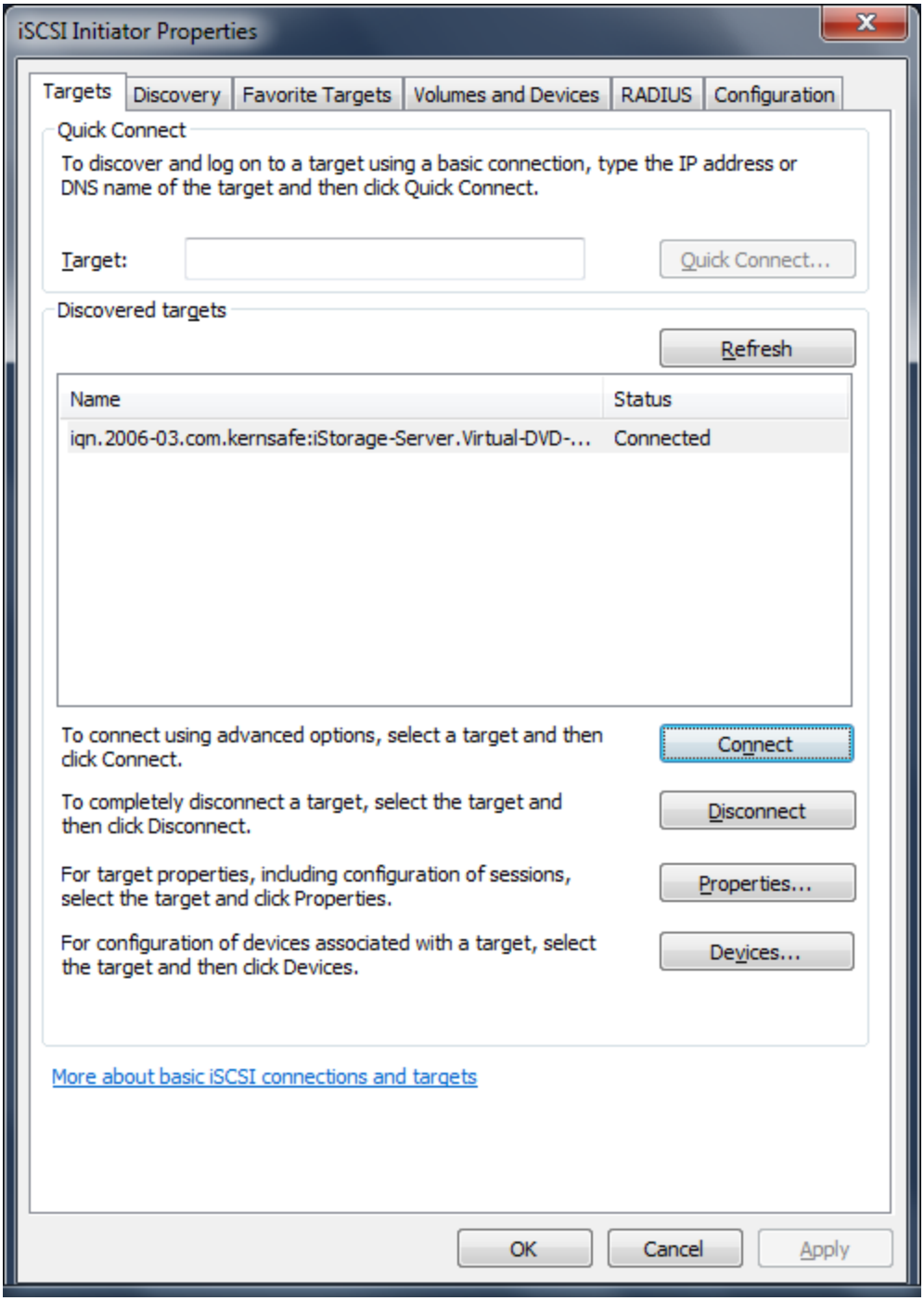
Check **Add this connection to the list of Favorite Targets**, to log-on this target automatically after system boots.

If your iSCSI target is using **CHAP user authorization**, press the **Advanced…** button, the **Advanced Settings** dialog will appear.

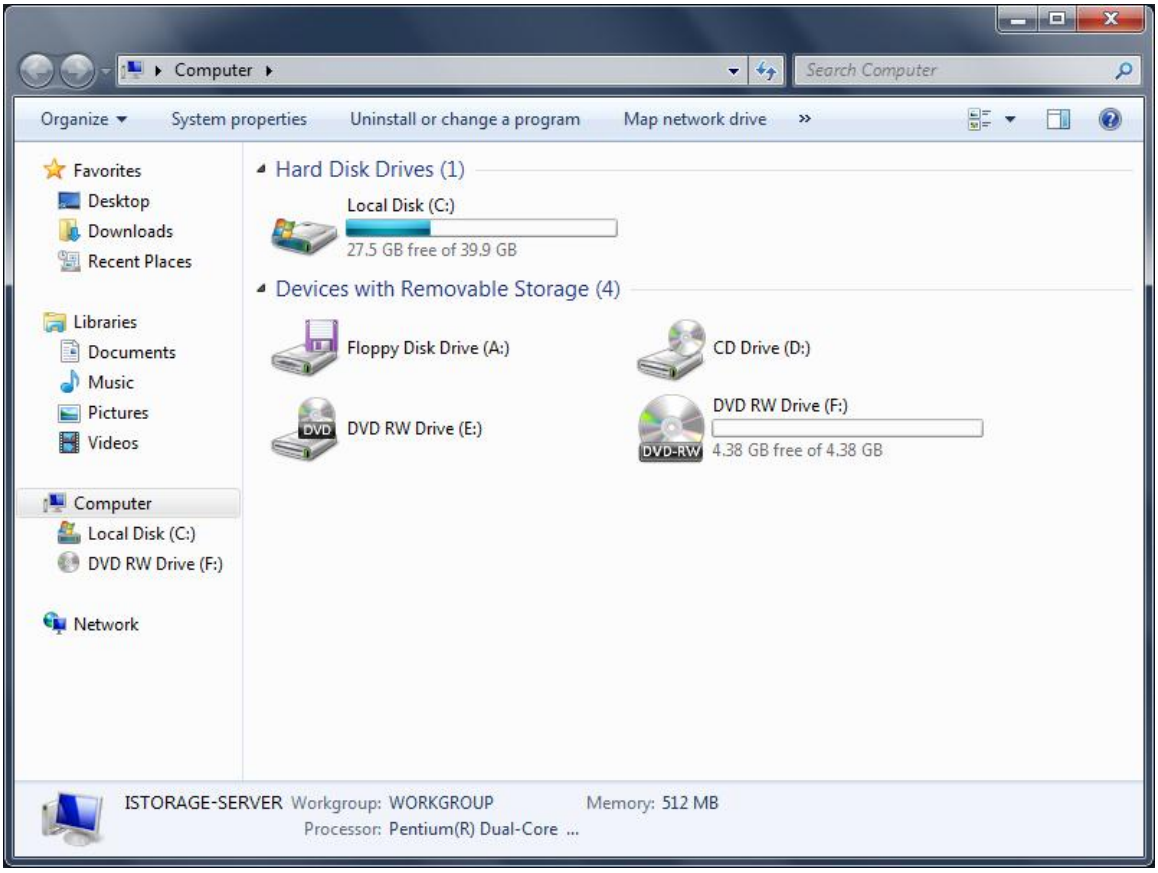


Select **Enable CHAP log on** and type **Name** and **Target secret**.

Press the **OK** button to continue.



When the connection is successfully created, you will see the connection in the **Status** column.



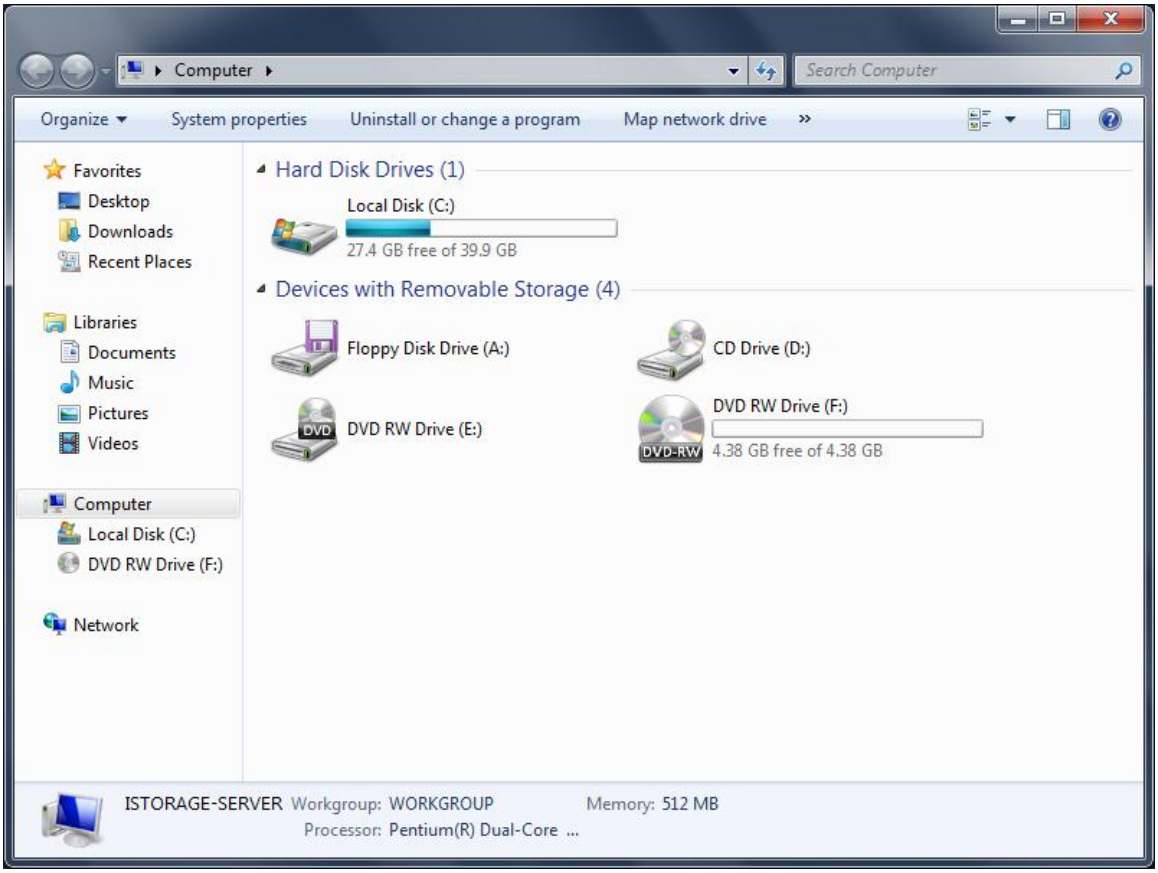
After opening **Computer** window, you will see new virtual optical drive with blank disk inside that is ready to burn. You may now operate the iSCSI optical drive just as a normal CD/DVD drive.

Burning data onto ISO file on the remote server

Using Microsoft Default Software

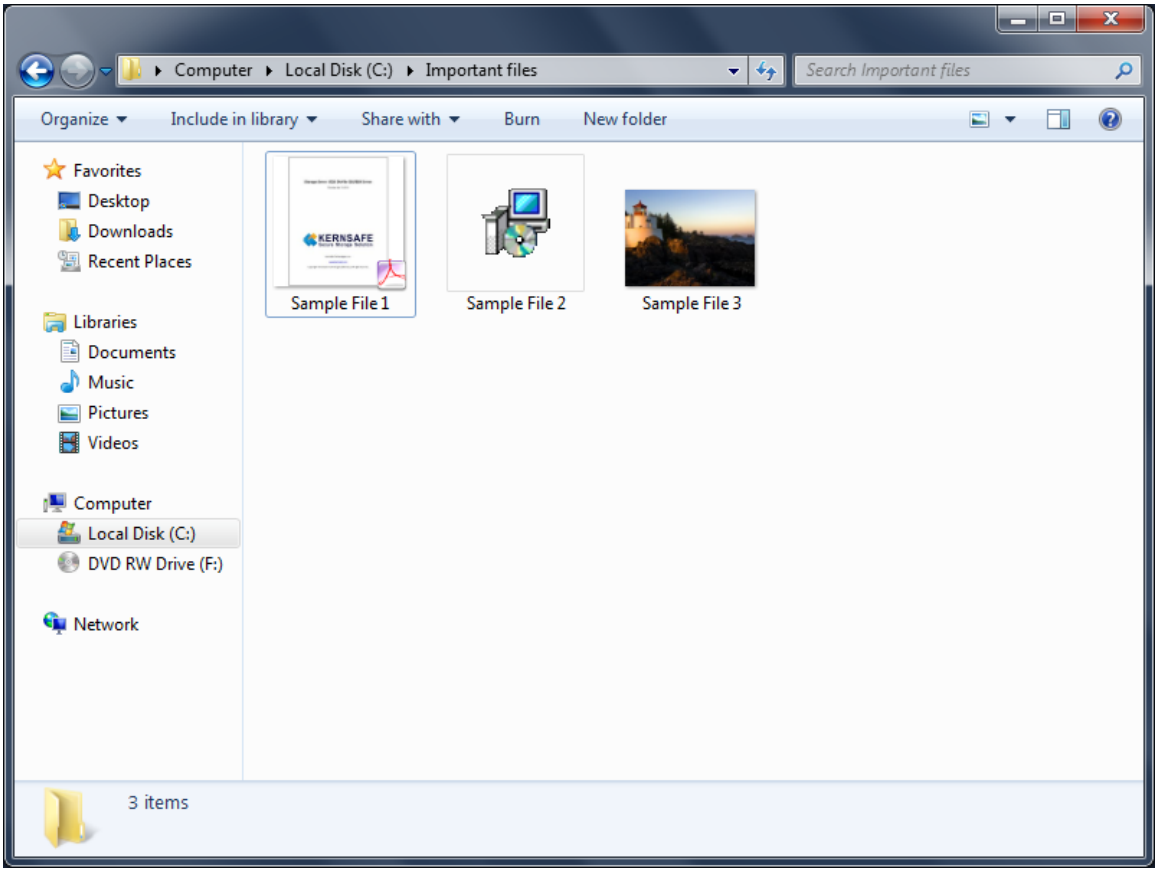
If you want to burn data onto an ISO file on the remote server using default Microsoft software, please do as follows.

Open **My Computer**.

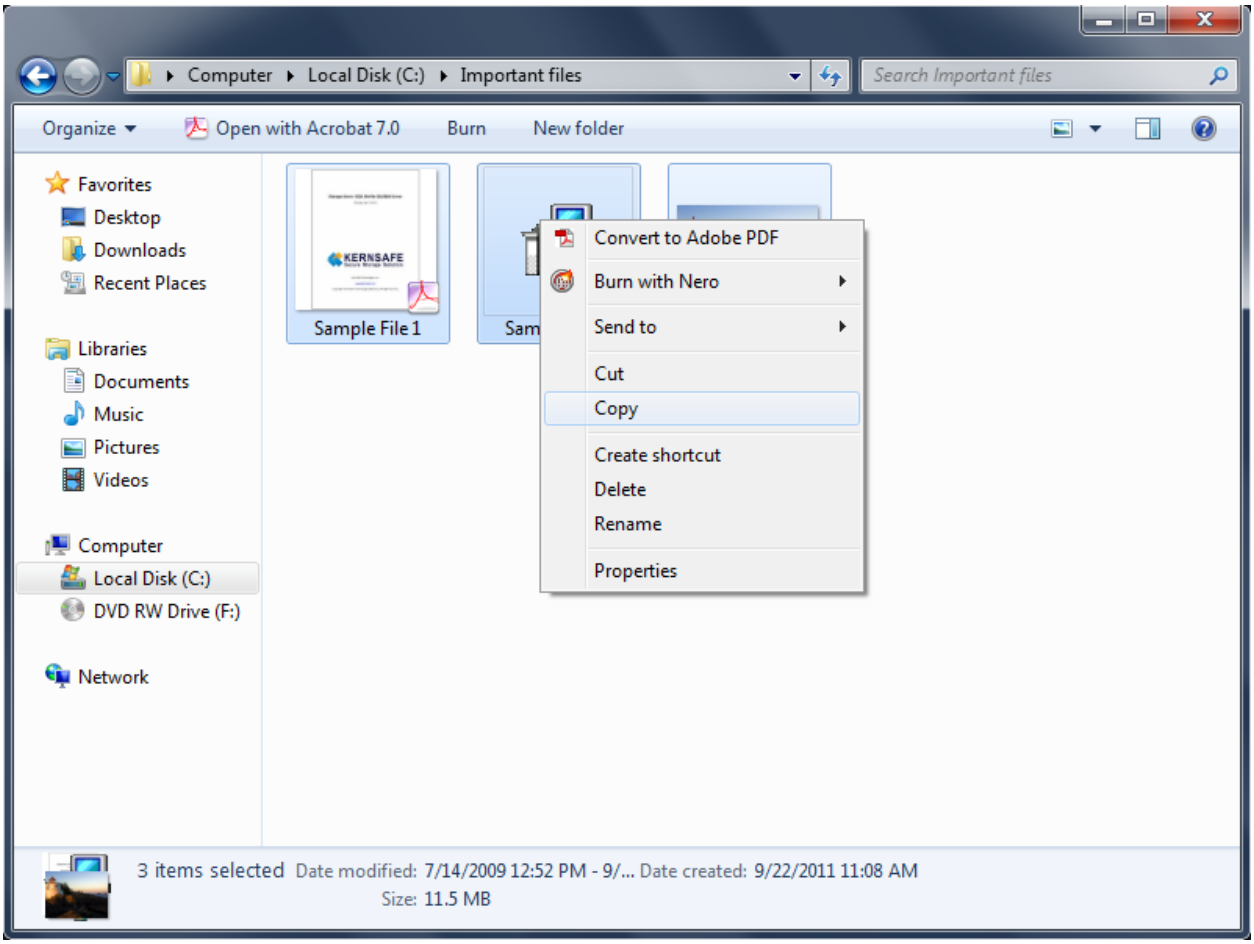


You will notice new virtual optical burner with bank disk ready to burn.

Browse to the data you wish to burn.



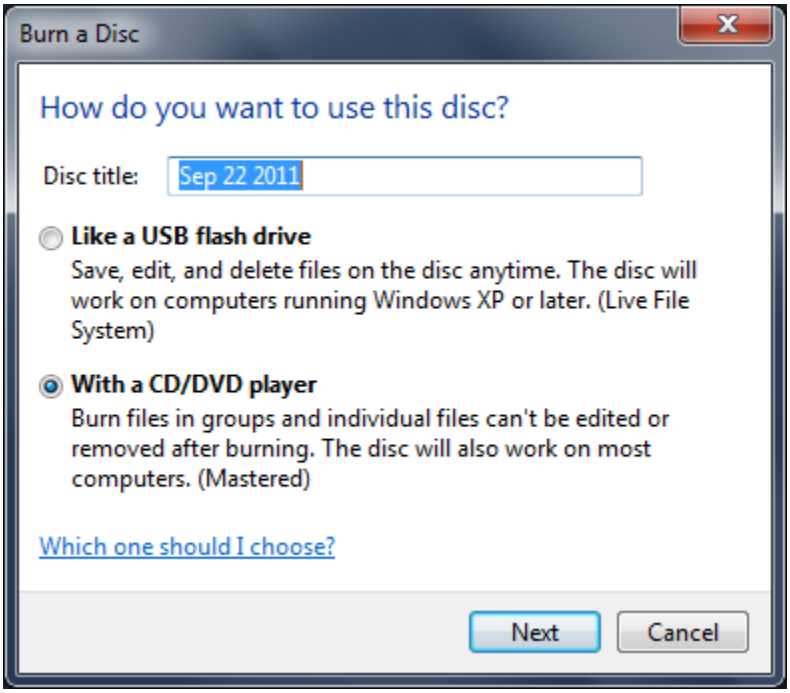
Select the data and copy it by either pressing **CTRL+C** after selection, or choose **Copy** from the content menu.



Open **My Computer**.

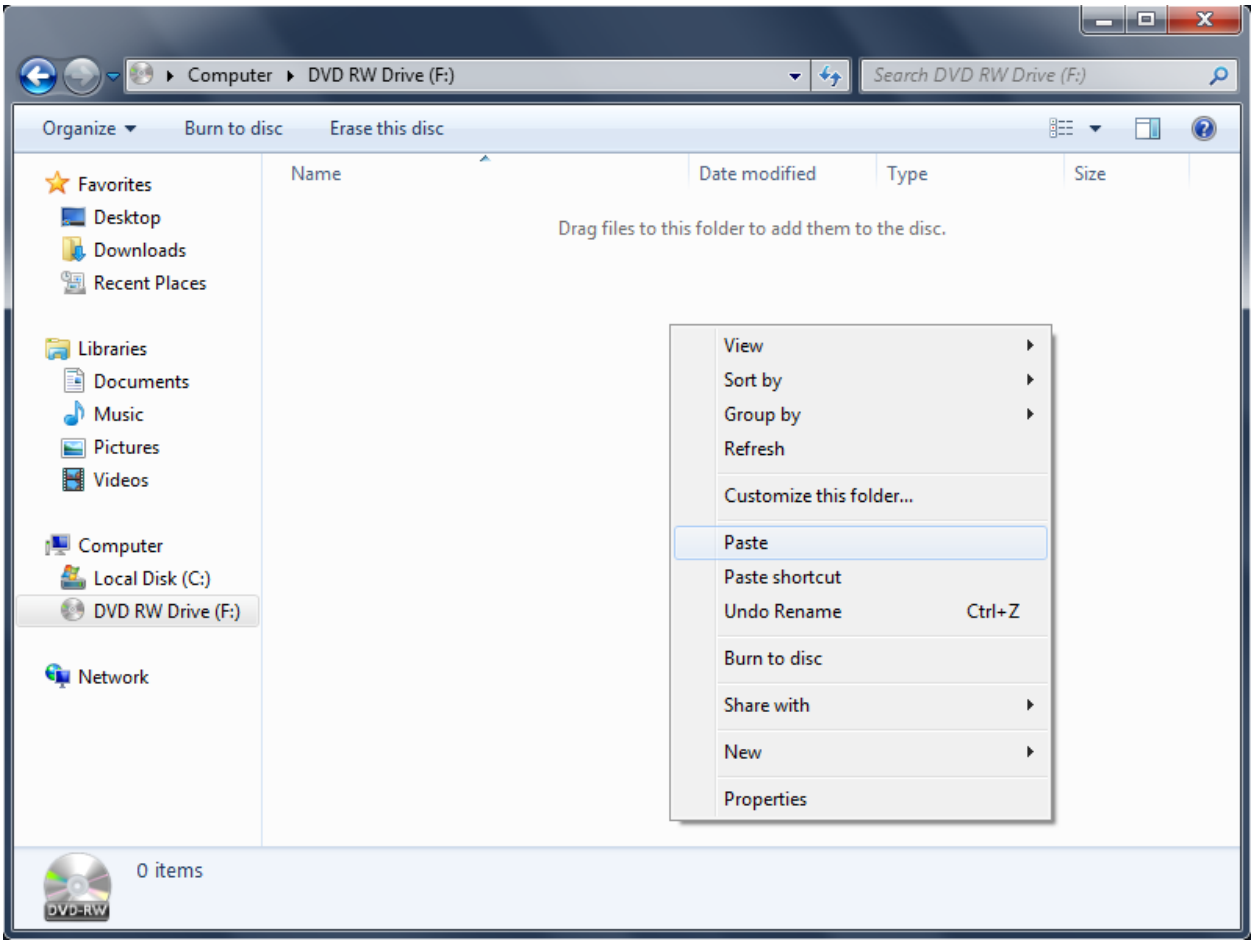
Open **virtual burner** which you want to use for burning the data.

Before accessing blank disk, you may see following window.



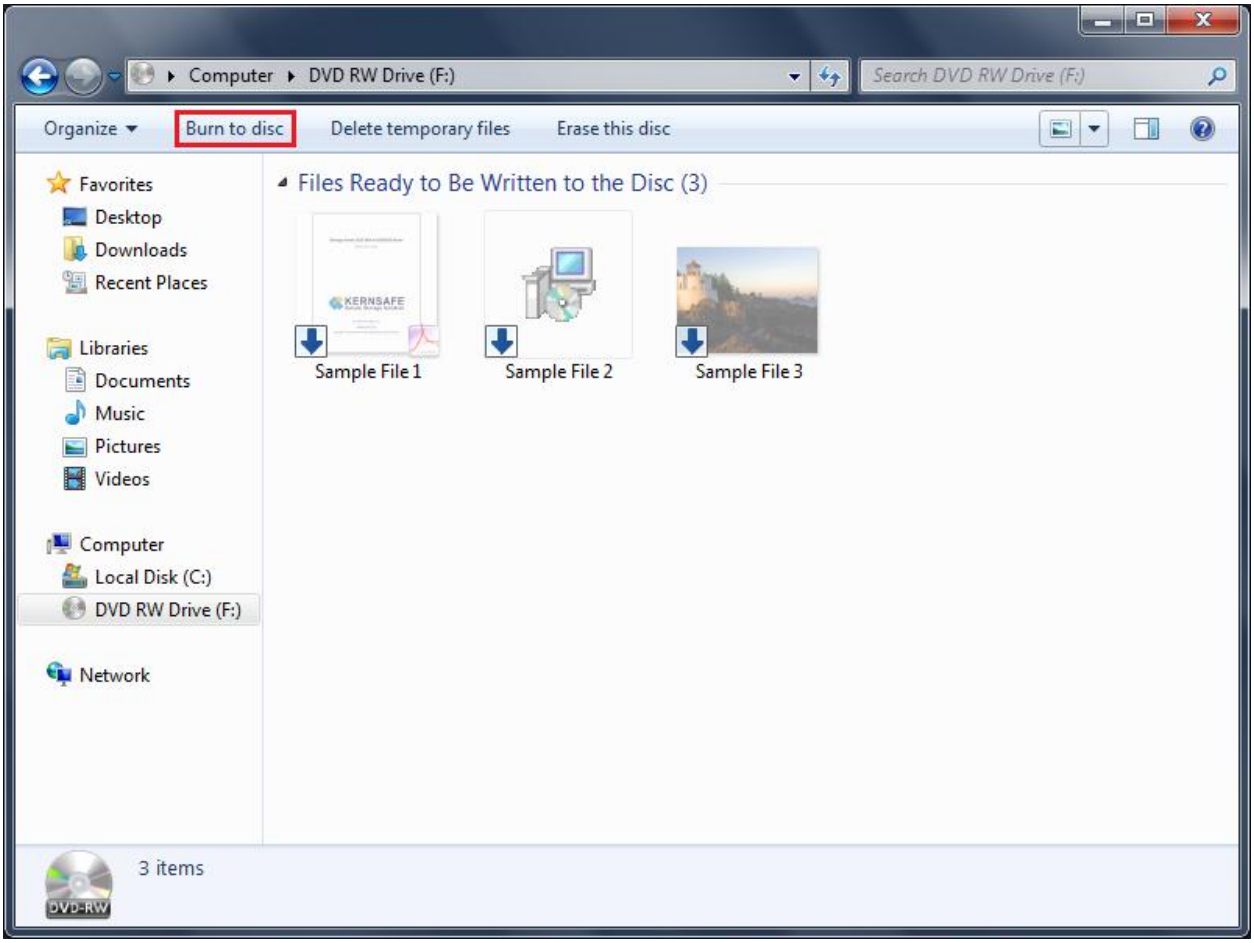
Please specify **Disk title** and choose **With a CD/DVD player** option.

Press **Next** button to continue.



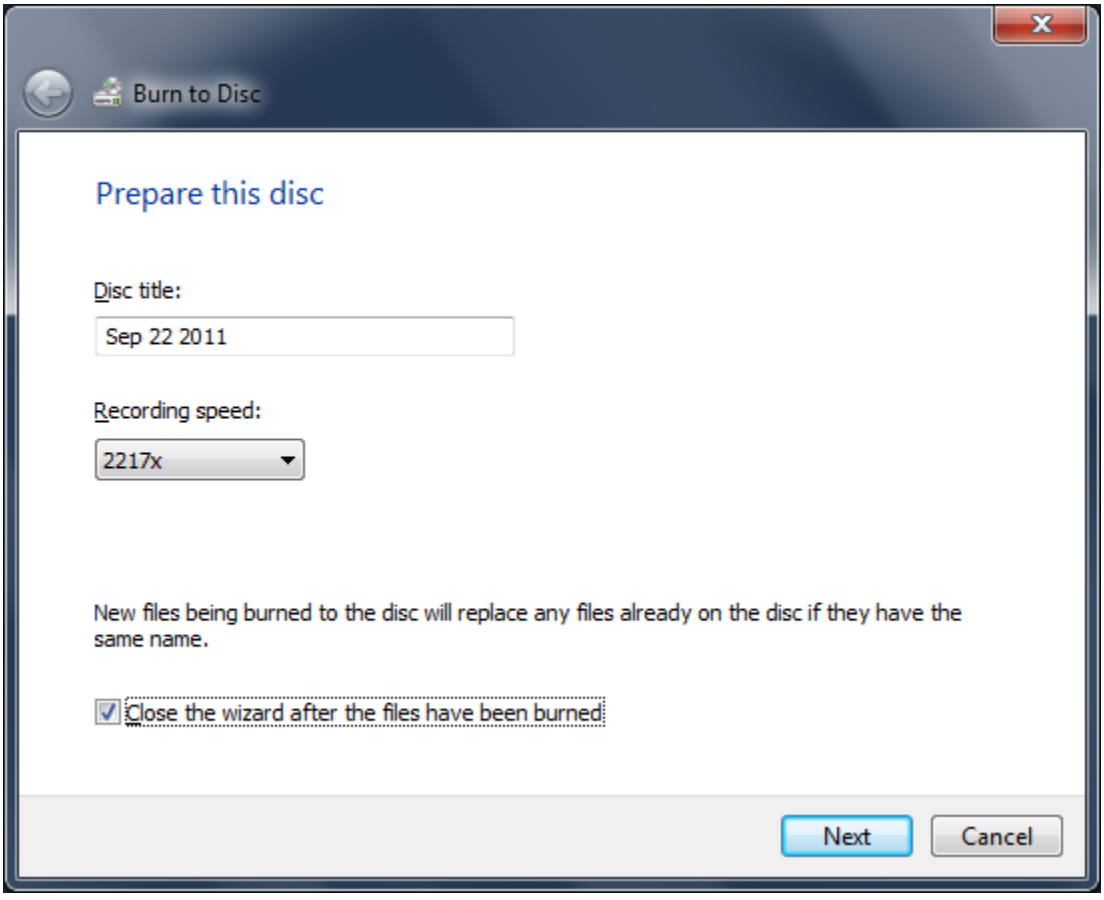
Paste copied files on to a virtual CD/DVD burner by either pressing **CTRL+V**, or choosing **Paste** from the content menu.

After successfully pasting the temporary files on to a virtual CD/DVD burner, you should see that those files are ready to be written on the ISO file.



Click **Burn to disc** button, to continue.

A **Burn to Disc Wizard** will appear.

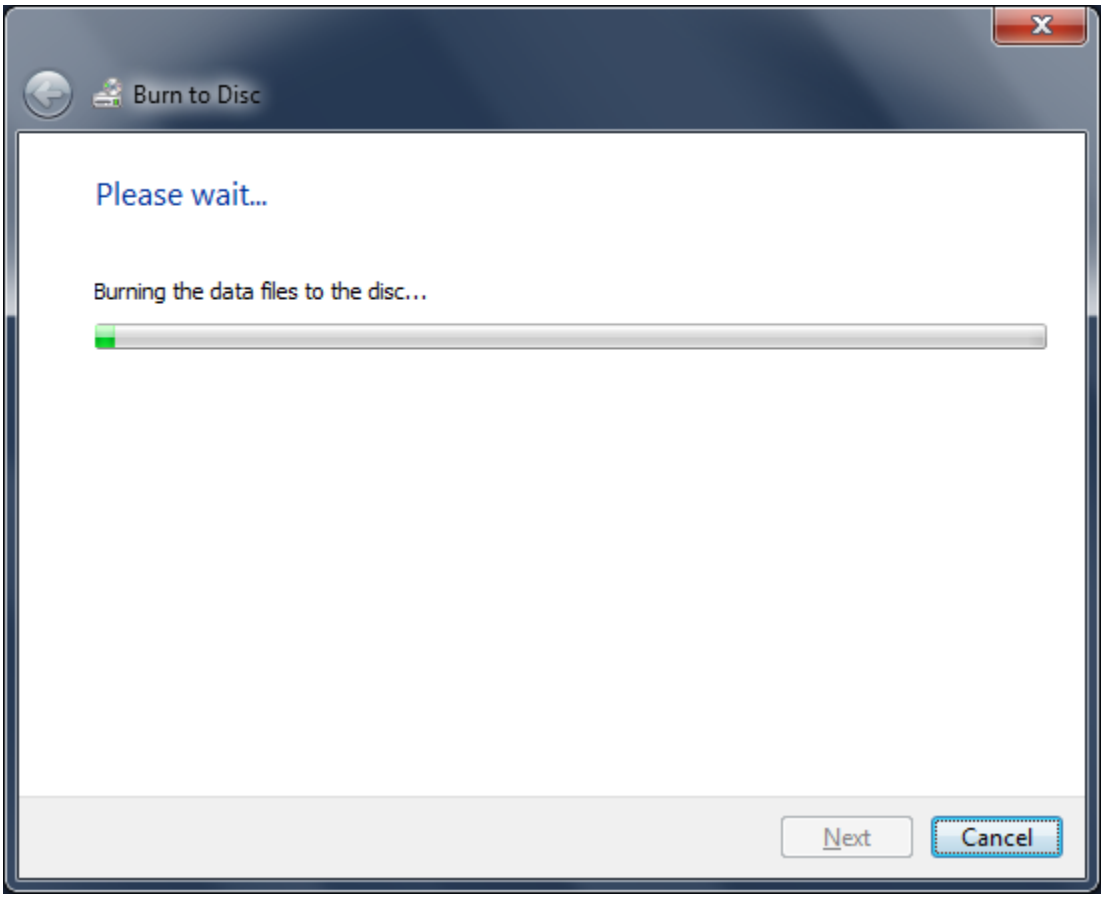


If you didn’t specify disk title at the beginning of disk initialization, you may do it now.

Please keep the default recording speed.

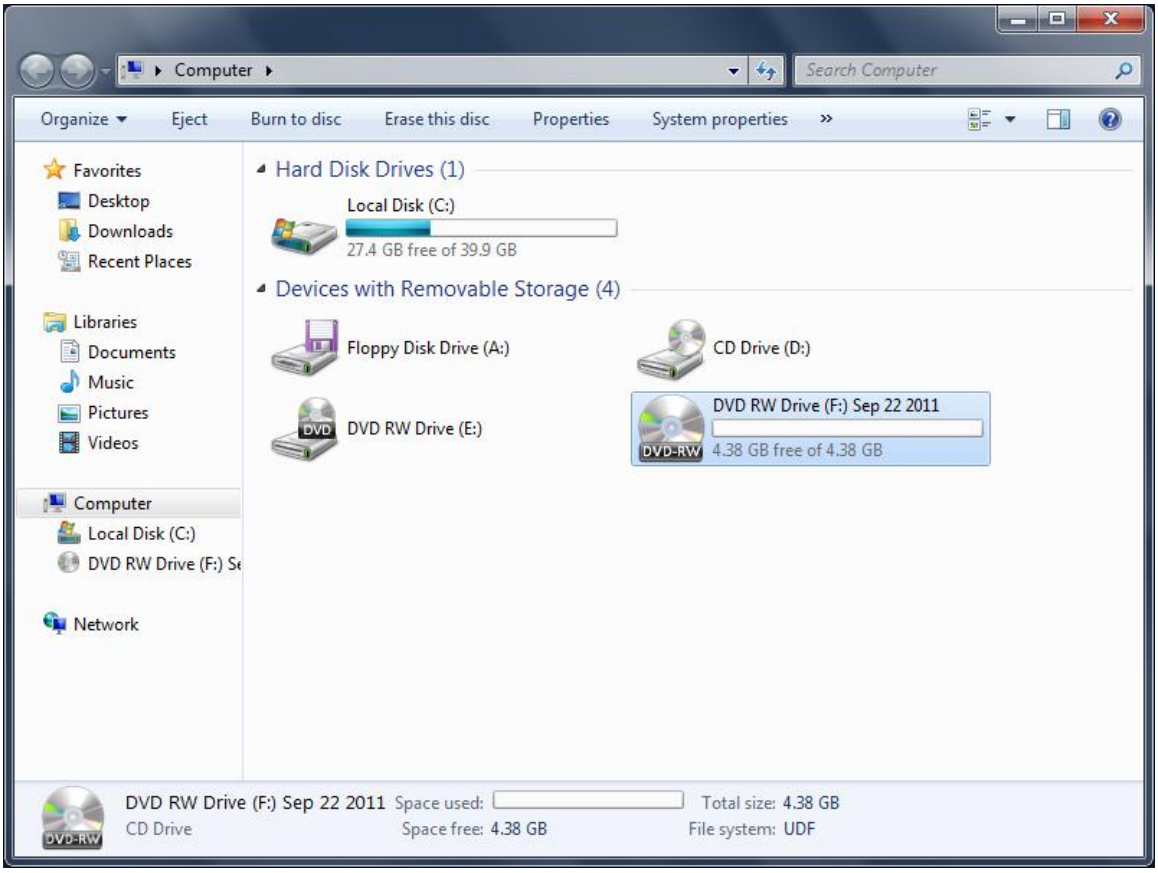
Selecting option **Close the wizard after the files have been burned** will result in closing **Burn to disk** wizard immediately after recording process will finish.

Press the **Next** button to continue.



System will burn the data you selected onto ISO file that is stored on a server machine.
Please wait for the completion of the process.

After burning process will finish, if you will open **Computer** window you will see that another blank disk is already mounted and ready to be burned.

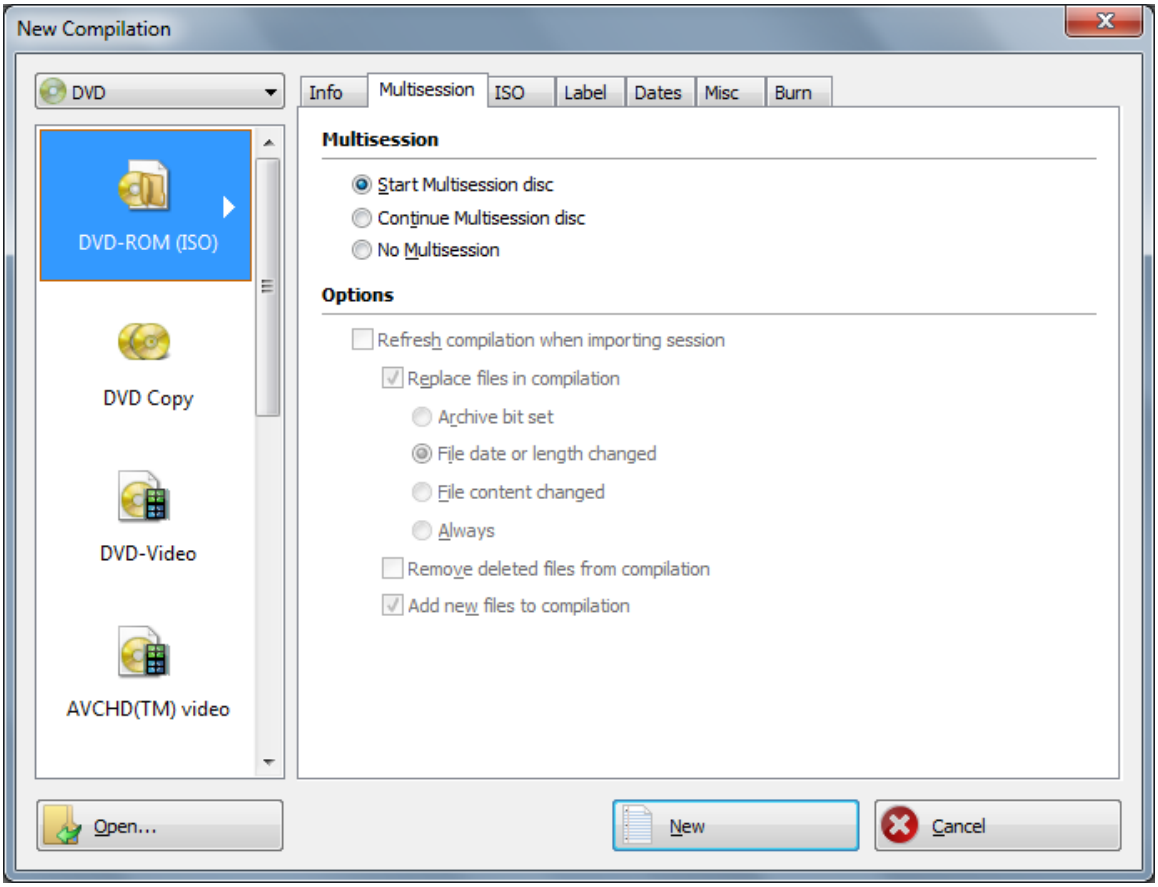


You may write data onto it using the exactly same steps as described above.

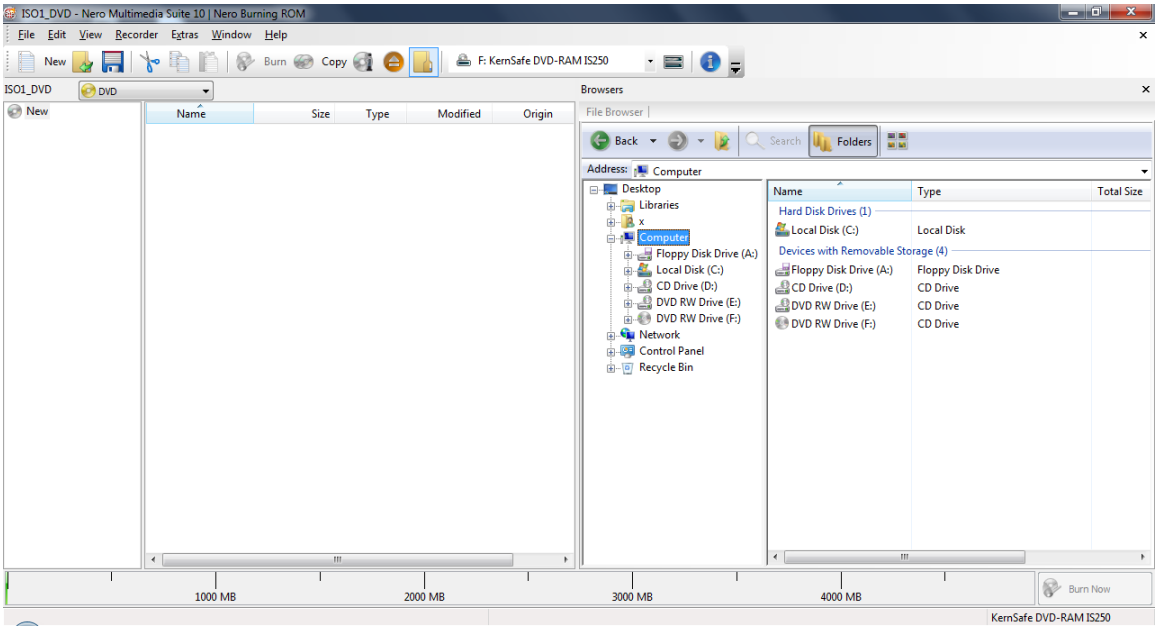
Using Nero Burning ROM

Open Nero Burning ROM, you can download the trail version by following this link http://www.nero.com/eng/downloads-nero-burning-rom-trial.php.

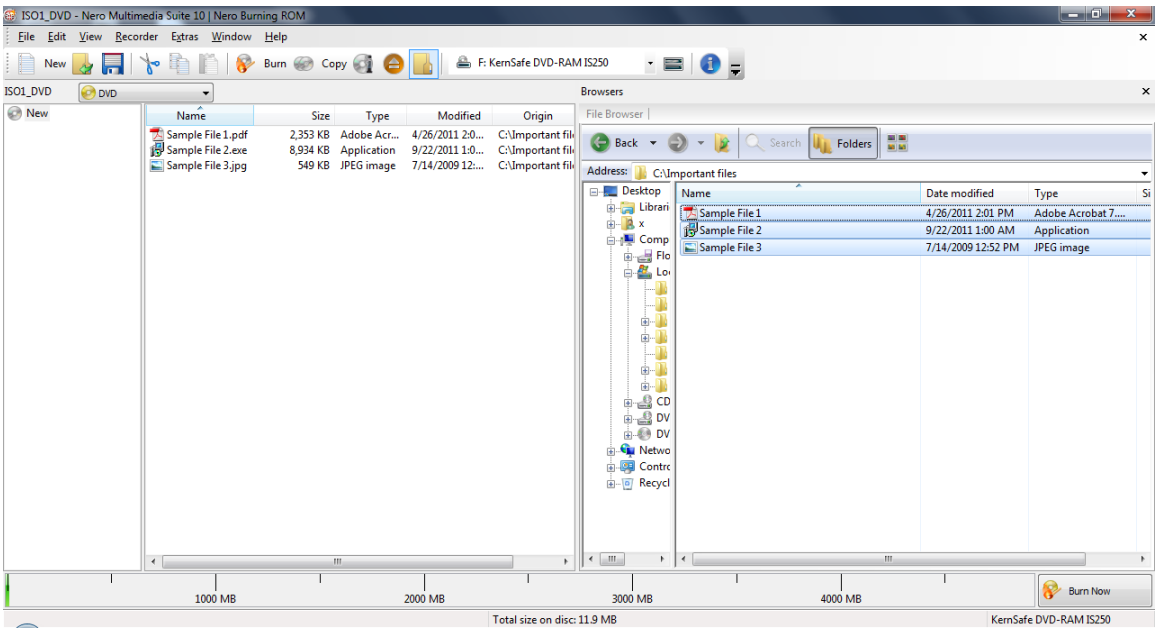
A **New Compilation** window will show up.



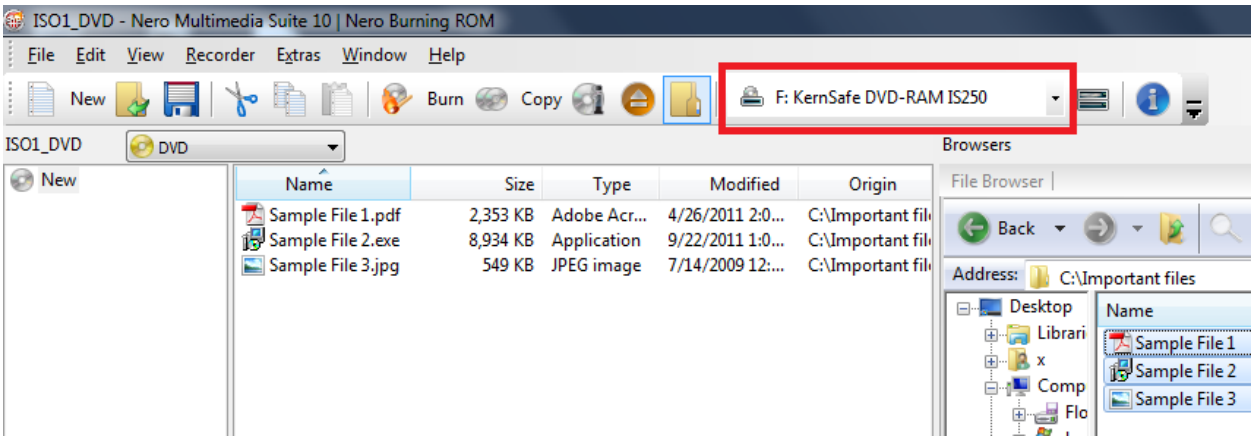
Choose either **CD** or **DVD**, depending on which media you had chosen while creating iSCSI target. Click **New** button, to continue.



Browse to the directory where you have files you want to burn.



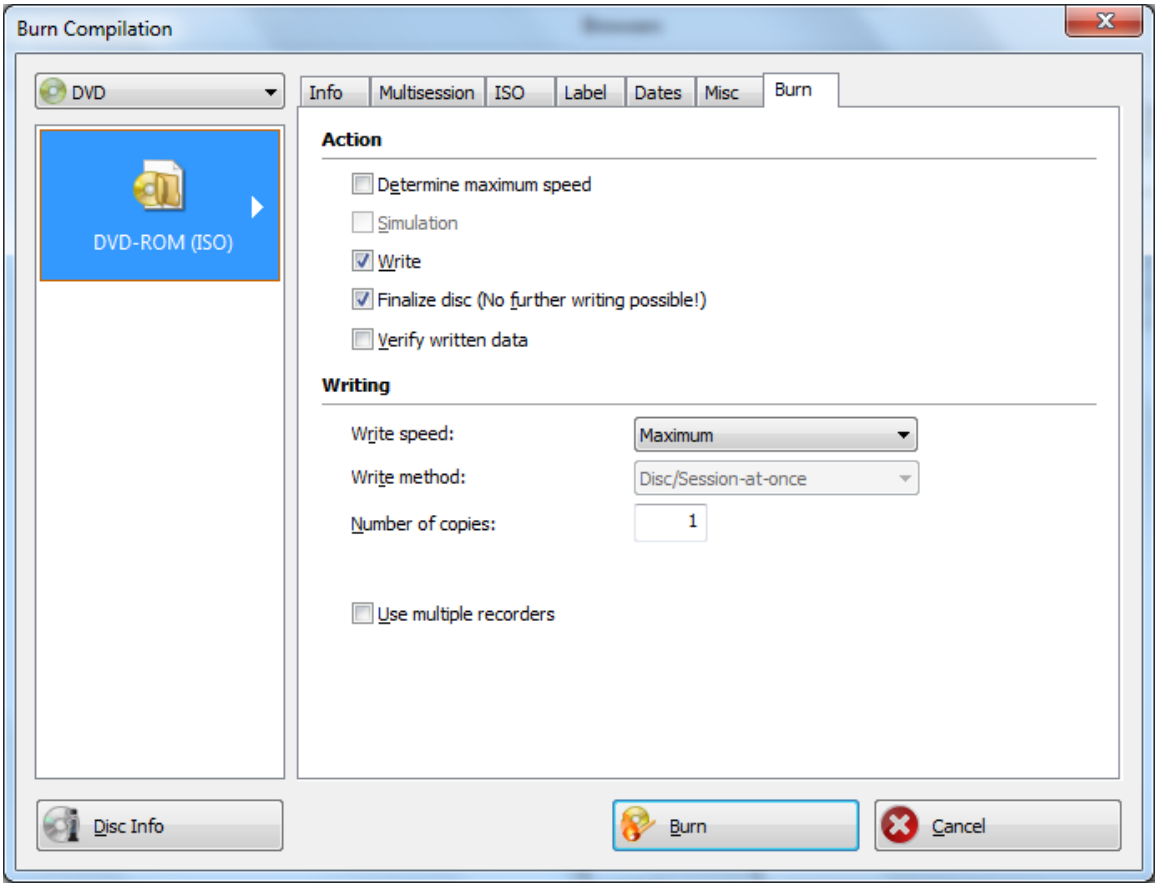
Drag and drop files you want to burn on to the media.



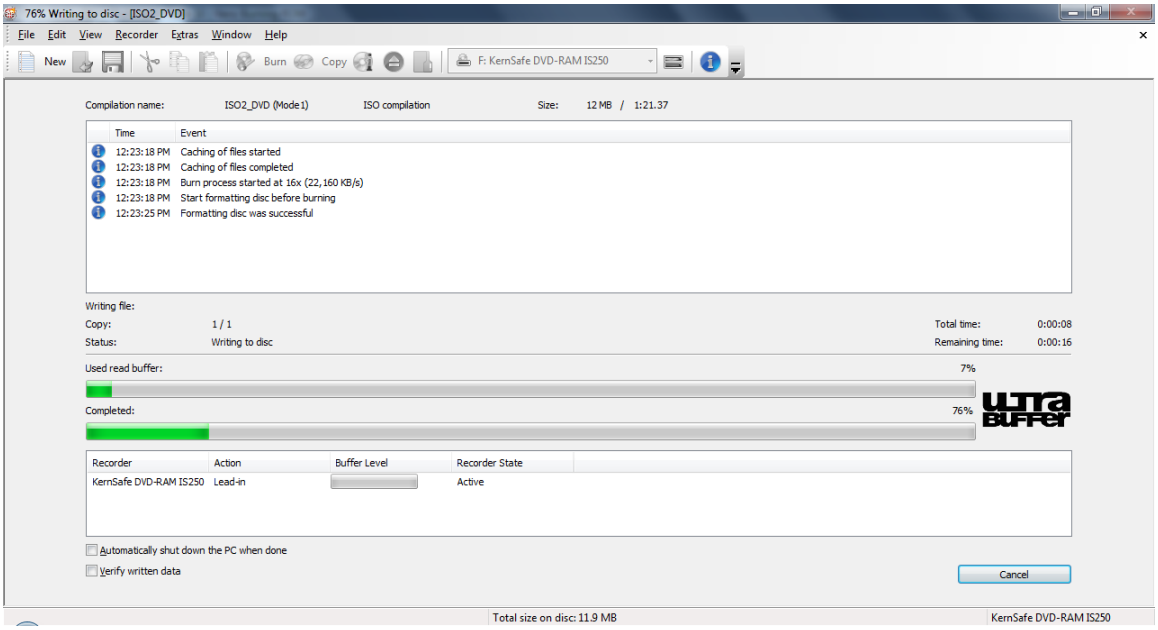
Before burning, please make sure that **KernSafe DVD-RAM** burner is chosen from burners list.

Press **Burn** button, located on the menu bar, to continue.

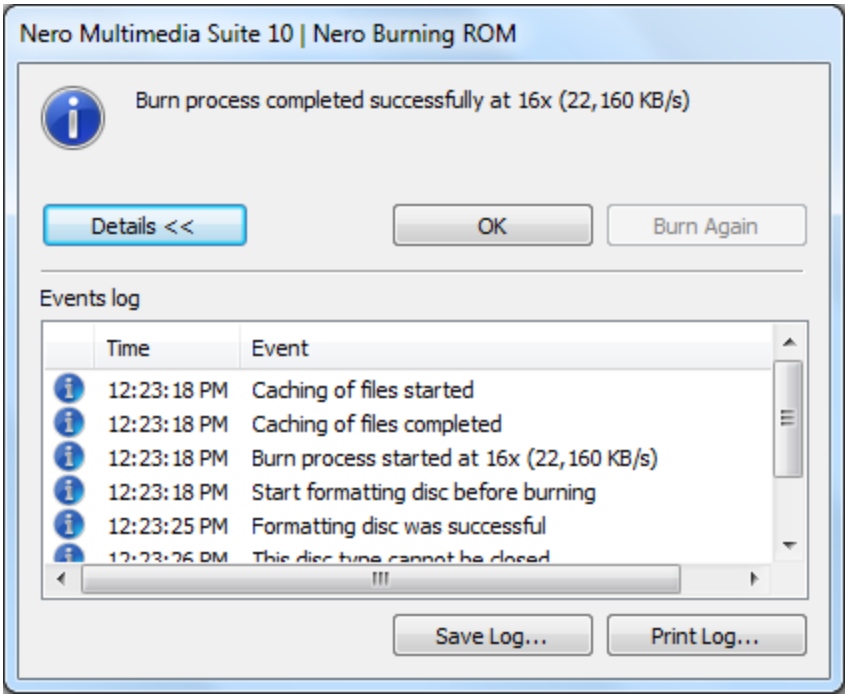
A **Burn Compilation** window will appear.



Please leave writing speed by it default value and click the **Burn** button to start burning the data onto ISO file on a remote server.

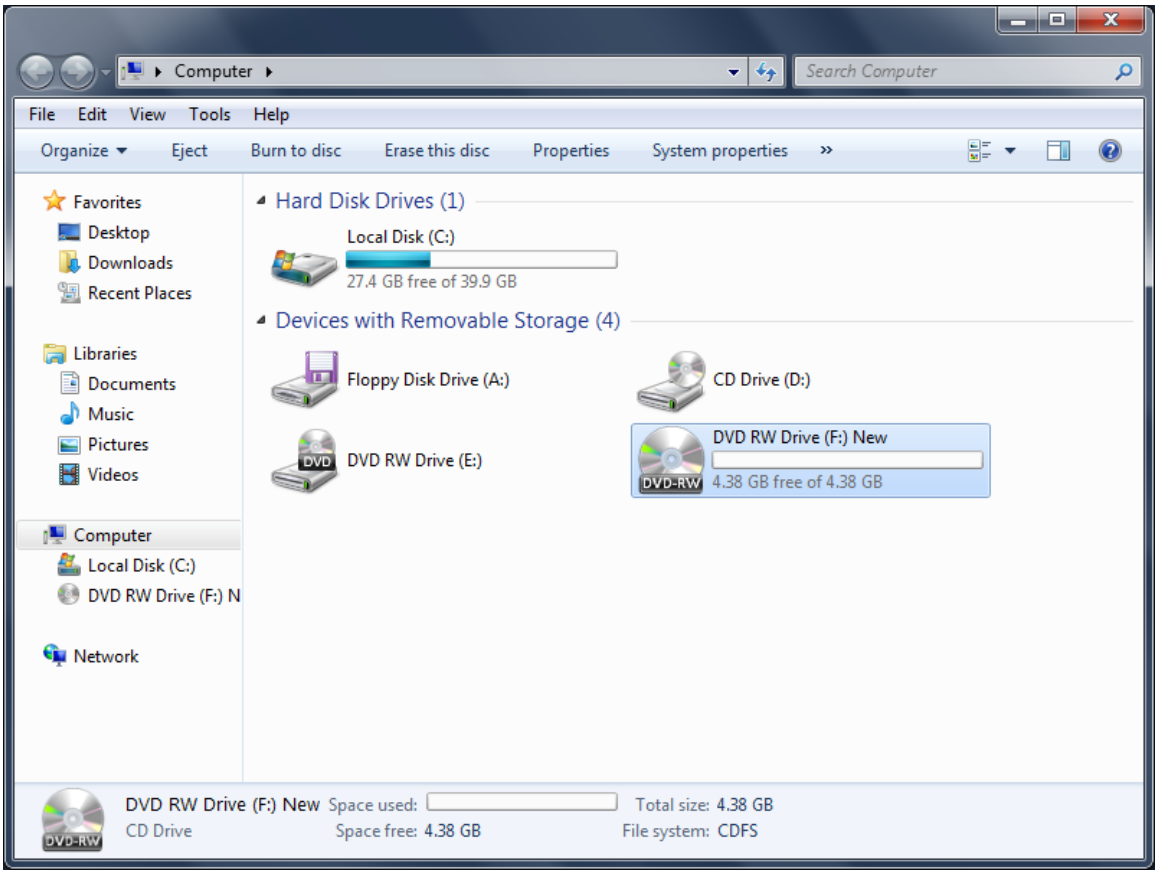


The burning process using virtual CD/DVD-RW burner to an ISO file will start.



After burning will finish, a window will appear that process was finished successfully.

Press **OK** button, to continue and finish burning to an ISO file.

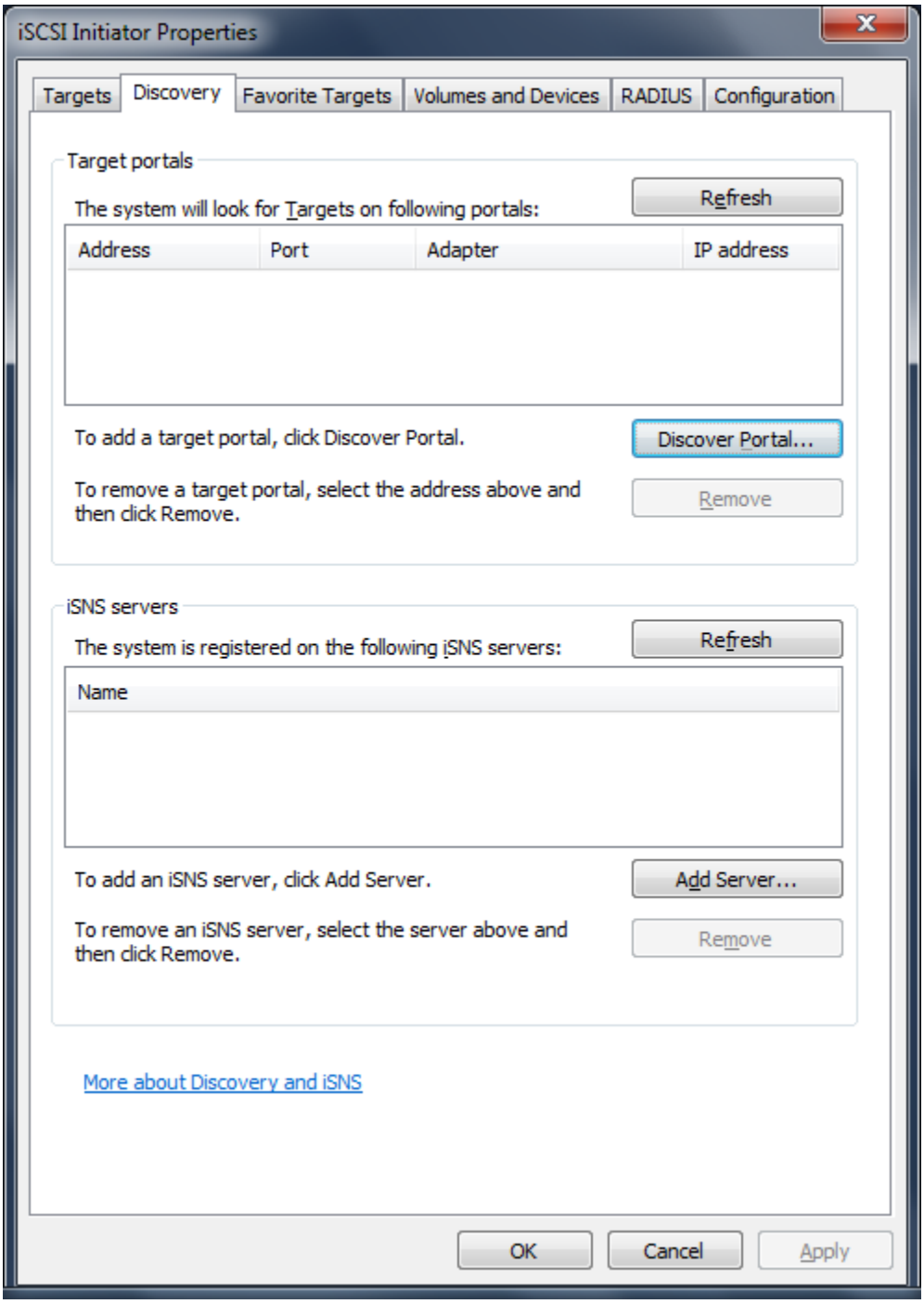


If you will access **Computer** window, you will see that new blank file is already inserted and ready to burn new data.

Accessing burned data

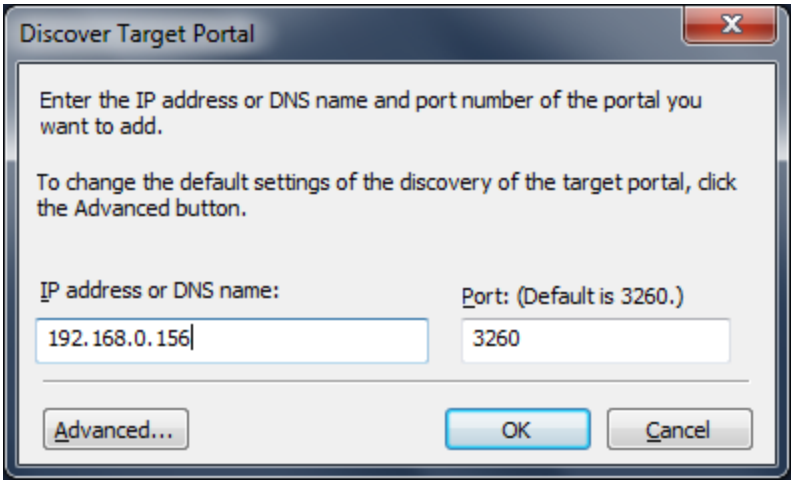
Every ISO file burned using auto-mount feature is automatically added as an iSCSI target. You may access them just by connecting to them by iSCSI Initiator.

Open initiator, in this case I will use **Microsoft iSCSI Initiator**.



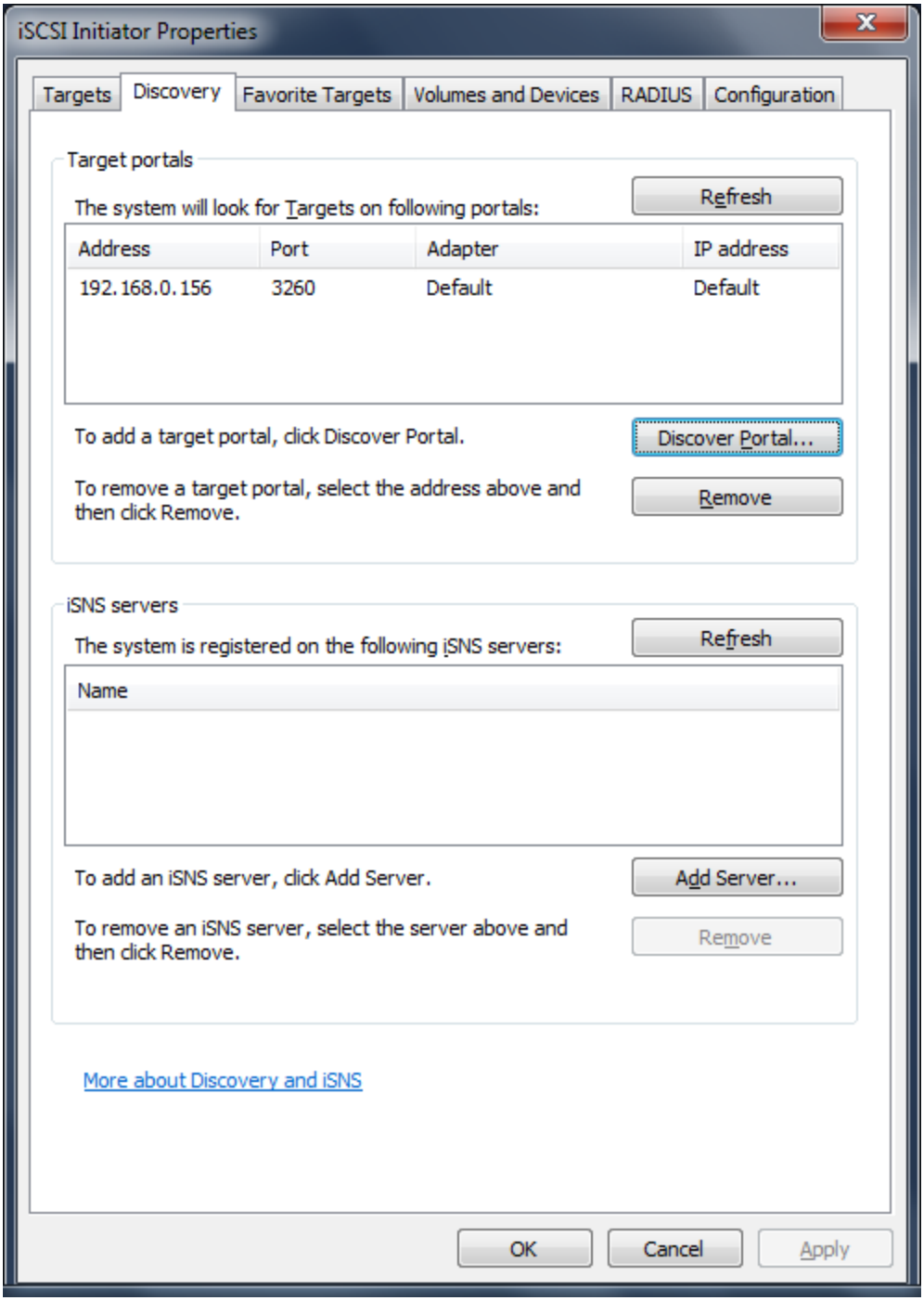
Select **Discovery** tab page.

Press the **Discover Portal…** button, the **Discover Target Portal** dialog will appear.

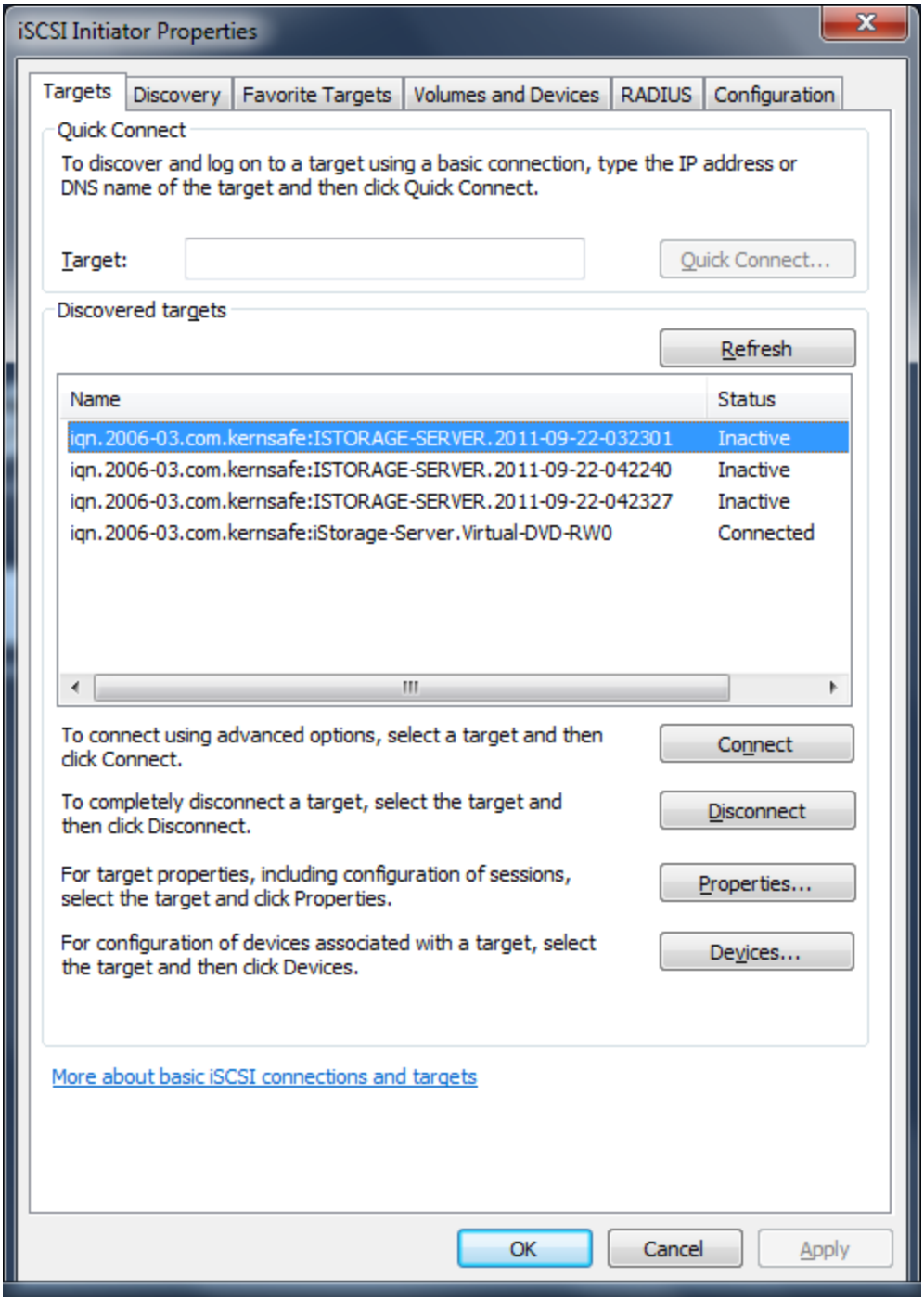


Type the **IP address** and **Port** of your server. Default port is 3260.

Press the **OK** button to continue.



Change to **Targets** tab.



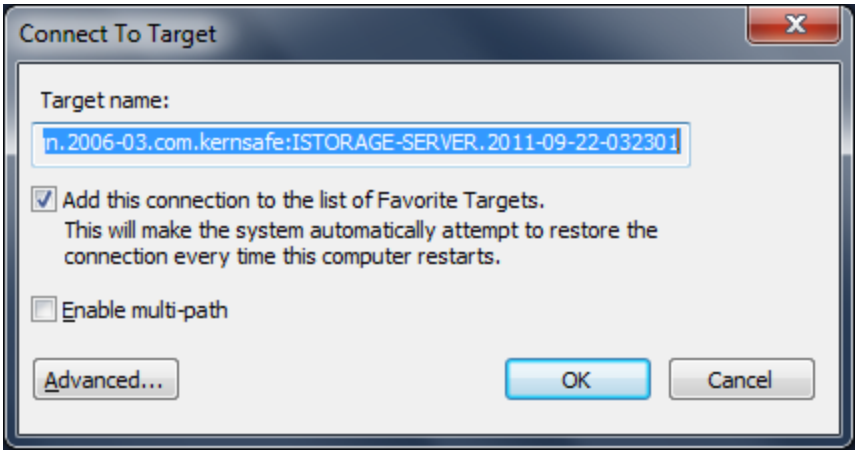
Select the target in the **Targets** list, and then press the **Connect** button.

Note:
Auto-mount feature create iSCSI target names using following template:

ISTORAGE-SERVER.XXX-XX-XX-ZZZZZZ

Where *XXX-XX-XX* is date in format YEAR-MM-DD and *ZZZZZZ* is system time while creating target HHMMSS.

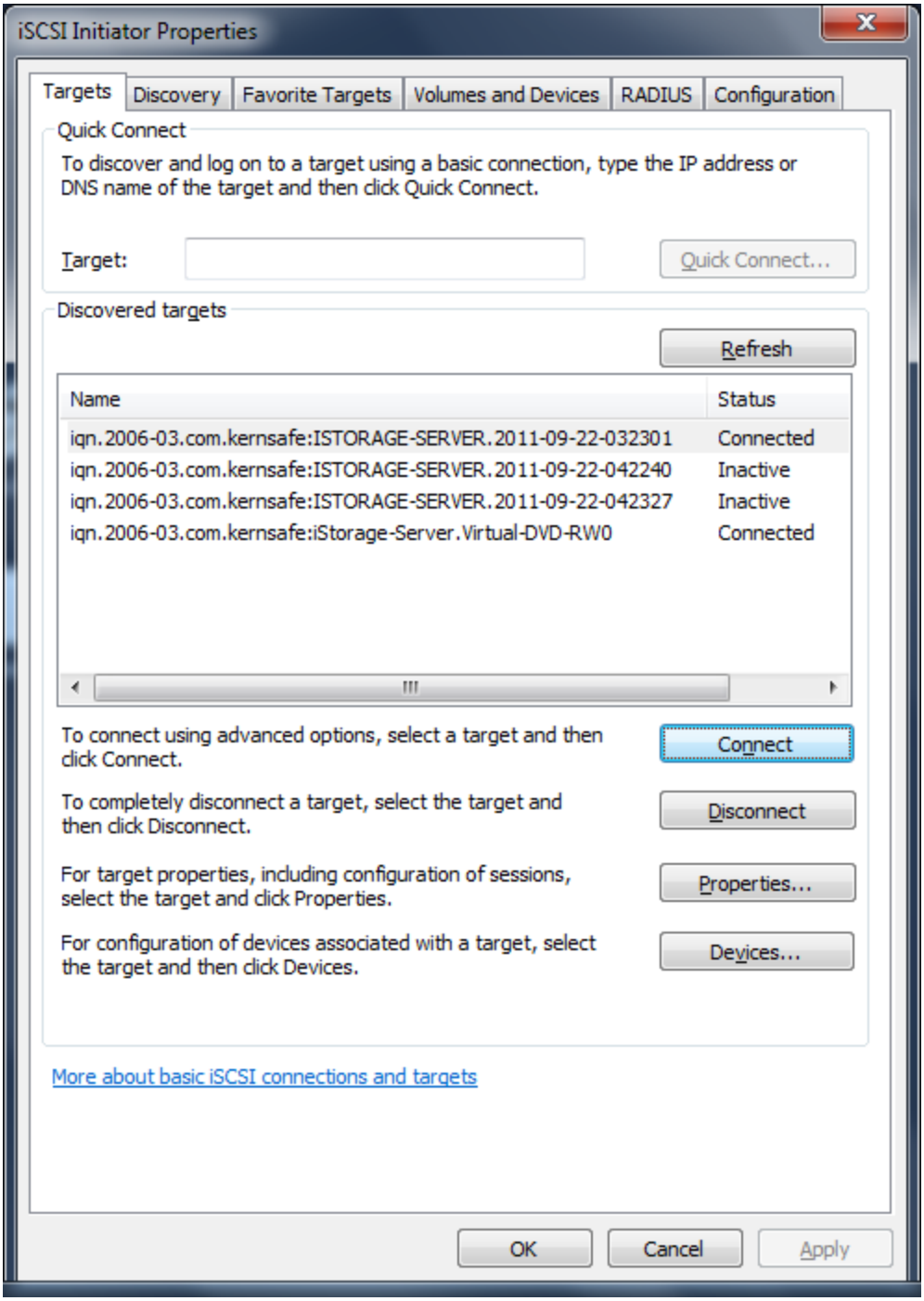
Then the **Connect to Target** dialog will appear.



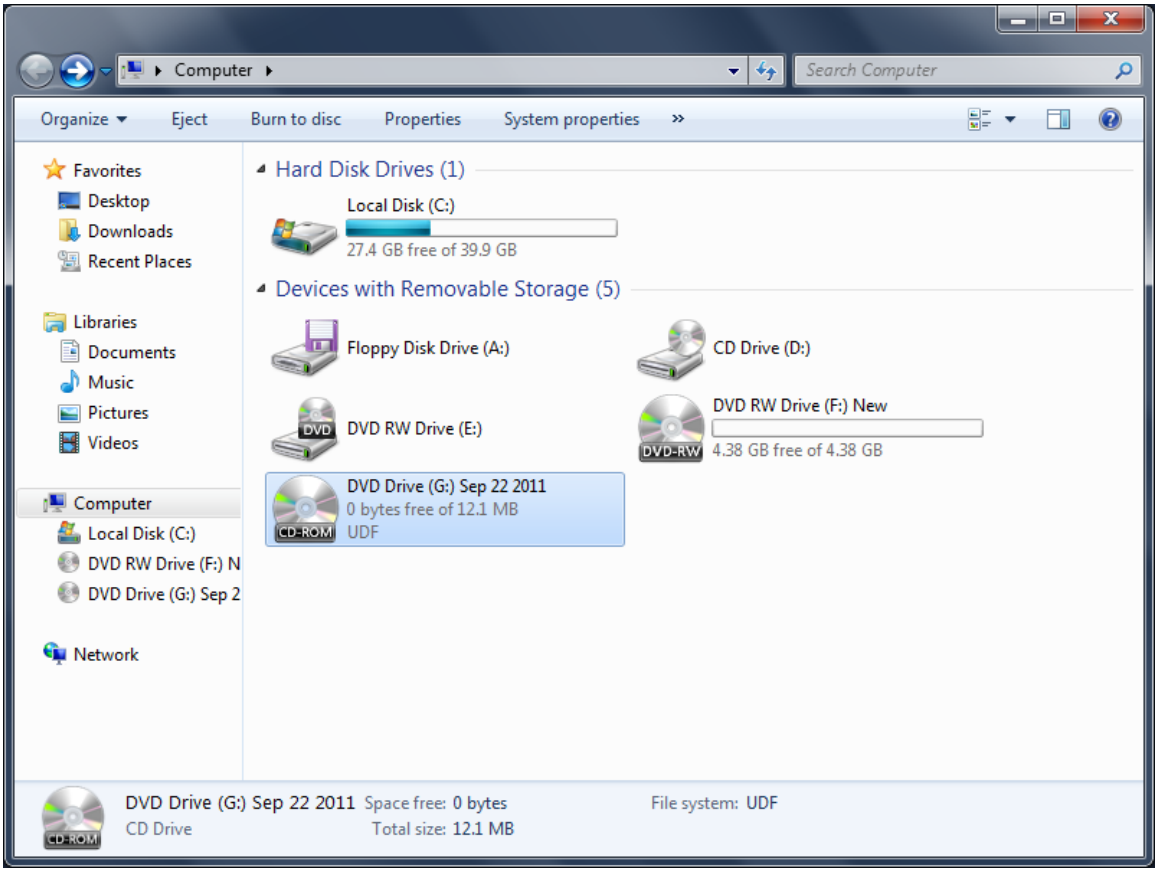
Checking **Add this connection to the list of Favorite Targets** option, will result that this target will be automatically mounted after system boots.

Note:
Target created using auto-mount feature aren't CHAP protected thus they don't require any further authorization.

Press the **OK** button to continue.

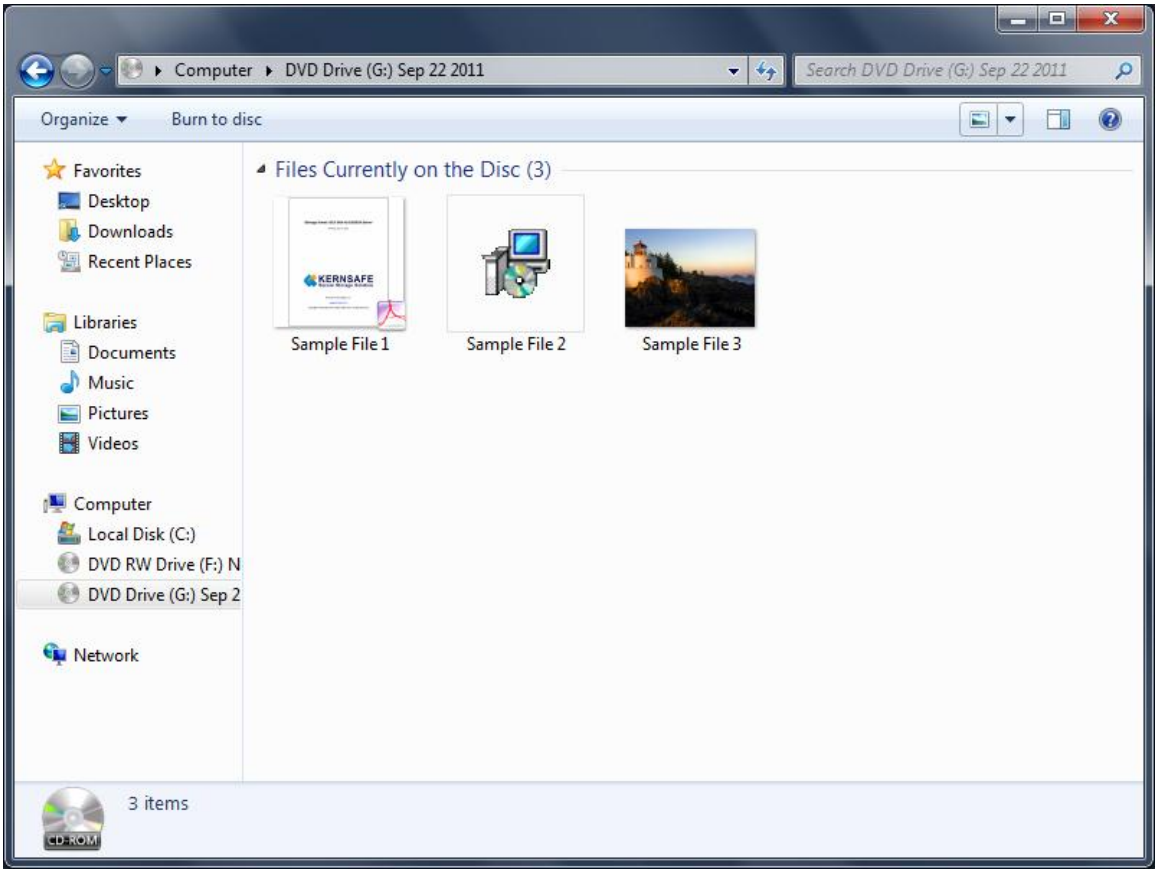


When the connection is successfully created, you will see the connection in the **Status** column.



After opening **Computer** window, you will see your compilation name that you set up before burning.

You may open that drive and access all previously written files.



Contact

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Forum:	http://www.kernsafe.com/forum

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