# iStorage Server: Remote CD/DVD burning

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KernSafe Technologies, Inc.

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# **Table of Contents**

Overview	3
Configuring on iStorage Server	4
Preparing server to burn a CD/DVD	4
Creating Target	4
Logging on to the target1	11
Burning data on to a CD/DVD on the remote server1	19
Using Microsoft Default Software1	19
Using Nero Burning ROM	28
Contact	33

### **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. Furthermore, iStorage Server also supports a lot of features such as: VHD (Virtual Hard Disk) target, 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 remotely burn CD/DVD using KernSafe iStorage. Basic idea of remote CD/DVD burning is to create backups on optical disc's but using remote CD/DVD burners. The benefit of that is you don't need to have an optical drive to do it, you can use one remotely. It saves you time and money because every client can use the same optical drive.

In this case we will need at two computers - server with installed iStorage Server software and CD/DVD burner as well as client.

# **Configuring on iStorage Server**

### Preparing server to burn a CD/DVD

We will connect to the Physical Drive which in this case will be a CD/DVD burner on the server machine running iStorage Server software.

### **Creating Target**

Open iStorage Server Management Console.

3 iStorage Server Management Console				
<u>S</u> torage <u>C</u> lients <u>V</u> iew <u>T</u> ools <u>H</u> elp				
Create Delete Start Stop	Refresh Add Remove	View Access Settings	Print About	
E kernsafe	iStorage Server: kernsa	fe		
Applications Gene	ral Targets Applications IPFilte	rs Users Groups Logs		
Users Sroups Logs	Storage General Pro	perties	Properties	<u>^</u>
	General			
	Hostname:	kernsafe		
	Bind Address:	All Address		Ξ
	Port:	3260		
	Management Method:	Active Directory		
	State:	ок		
	Status			
	Status:	Started		
	License:	Ultimate License		
	Server Portal			
Done			🔇 Connected: kernsa	fe (Ultimate License)

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

Select device type.



Choose CD/ DVD Device.

Press the **Next** button to continue.



Chose **Physical Drive**, to create a bridged connection.

Device Parameters Select one of the below	devices to create as a target:		
Device Name	Description	Size	
V L:	HL-DT-ST DVD-RAM GH22LP20 1.02	NO DISC	
M:	SBQTM U30HA30XE7 1.03	1.86G	
Options	access on this device		

From the list of available devices choose your optical drive.

**NOTE:** Make sure option **Persistent exclusive access on this device** is checked on the Vista Operating System or newest versions of Windows.

Press the **Next** button to continue.

Create iSCSI Target Wizard	
Authorization You can select an authorization mode, Anonymous, CHAP or IP filter.	
Anonymous	
Select this option to disable any authorization.	
© CUAD	
Select this option to use CHAP authorization	
O IP Filter	
Select this option to use IP address authorization.	
Mixed	
Select this option to use both CHAP and IP address authorization.	
Inherit security roles from global settings.	
	_
	ן ר

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.

Create iSCSI Target Wizard	X
<b>Completing the Create iSCSI Wizard</b> You can specify a target name and other options to complete iSCSI target creating.	<u></u>
Basic Target Information         Enter Target Name:         iqn.2006-03.com.kemsafe.kemserver.CD-ROML         Image: Report as readonly device when initiator can not get write access         Image: Enable multiple initiators with full access connected (sharing and clustering)	
Note By default, only one client has full access right, when the second initiaor log on with full access, it will fail. But this option is usfull for clustering, disk sharing and NAS.	
< <u>B</u> ack Finish C	ancel

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.

③ iStorage Server Management Console	le					_ 0 <mark>_ x</mark>
<u>Storage</u> <u>Clients</u> <u>View</u> <u>T</u> ools <u>H</u>	Help					
Create Delete Start	Stop Refresh Add Remove View	Access Set	ttings Print About			
E@ kernsafe ⊡@ Targets & kernserver.CD-ROML	iStorage Server: kernsafe	ins Logs				
	Target Name	Device Type	Source	Capacity	Authentication	Status
Users	iqn.2006-03.com.kernsafe:kernserver.CD-ROML	CD-ROM	CD-ROM(L:)	2.00K	Anonymous	Enabled
Logs						
Done			6	Connected: k	ernsafe (Ultimate Lice	ense)

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

## Logging on to the target

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

iSCSI Initia	tor Properti	es			×
Targets	Discovery	Favorite Targets	Volumes and Devices	RADIUS Config	uration
Targe	t portals				
The s	system will loo	k for <u>T</u> argets on f	following portals:	R <u>e</u> fresh	
Addr	ess	Port	Adapter	IP addres	s
To ac To re then	ld a target po move a targe click Remove.	rtal, click Discove t portal, select th	r Portal. e address above and	Discover Port	tal
iSNS s The s Nam	ervers :ystem is regi: e	stered on the follo	owing <u>i</u> SNS servers:	Re <u>f</u> resh	
To ac	ld an iSNS ser	ver, dick Add Ser	ver.	A <u>d</u> d Server	
To re then	move an iSNS click Remove.	server, select th	e server above and	Re <u>m</u> ove	
Mor	e about Disco	very and iSNS			
			ОК	Cancel	Apply

Select the **Discovery** tab page.

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

Discover Target Portal	×
Enter the IP address or DNS name and want to add.	port number of the portal you
To change the default settings of the d the Advanced button.	iscovery of the target portal, dick
IP address or DNS name:	<u>P</u> ort: (Default is 3260.)
192.168.0.3	3260
Advanced	OK <u>C</u> ancel

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

Press the **OK** button to continue.

SI Initiator Proper	ties		
Targets Discovery	Favorite Targe	ts Volumes and Devices	RADIUS Configuration
Target portals			Refrech
The system will lo	ok for <u>T</u> argets o	n following portals:	
Address	Port	Adapter	IP address
192.168.0.3	3260	Default	Default
To add a target p	oortal, click Disco	ver Portal.	Discover Portal
To remove a targ then click Remov	jet portal, select e.	the address above and	<u>R</u> emove
Name			
To add an iSNS s	erver, dick Add S	Gerver.	A <u>d</u> d Server
To remove an iSN then dick Remov	IS server, select e.	the server above and	Re <u>m</u> ove
More about Disc	overy and iSNS		
		ОК	Cancel

Change to Targets tab.

iSCSI Initiator Properties	×
Targets         Discovery         Favorite Targets         Volumes and Devices           Quick Connect	RADIUS Configuration
Target:	Quick Connect
Discovered targets	Refresh
Name	Status
ign.2006-03.com.kernsafe:kernserver.CD-ROML	Inactive
To connect using advanced options, select a target and then click Connect.	Connect
To completely disconnect a target, select the target and then dick Disconnect.	Disconnect
For target properties, including configuration of sessions, select the target and click Properties.	Properties
For configuration of devices associated with a target, select the target and then click Devices. <u>More about basic iSCSI connections and targets</u>	De <u>v</u> ices
ОК	Cancel Apply

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

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

Connect To Target	×
Target name:	
ign.2006-03.com.kernsafe:kernserver.CD	)-ROML
Add this connection to the list of Favori This will make the system automatically connection every time this computer re	ite Targets. attempt to restore the starts.
Enable multi-path	
Advanced	OK Cancel

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.

Press the **OK** button to continue.

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

Advanced Settings	? <mark>×</mark>
General IPsec	
Connect using	
Local adapter:	Default
Initiator IP:	Default
Target portal IP:	Default
CRC / Checksum	
Data digest	Header digest
Enable CHAP log on	
CHAP Log on informati CHAP helps ensure conr	ion nection security by providing authentication between a target and
an initiator.	
initiator. The name will specified.	default to the Initiator Name of the system unless another name is
<u>N</u> ame:	test
Target <u>s</u> ecret:	••••••
Perform mutual auth	entication
To use mutual CHAP, eit RADIUS.	ther specify an initiator secret on the Configuration page or use
Use RADIUS to gene	rate user authentication credentials
Use <u>R</u> ADIUS to auth	enticate target credentials
	OK Cancel Apply

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

Press the **OK** button to continue.

iSCSI Initiator Properties	×
Targets         Discovery         Favorite Targets         Volumes and Devices         R           Quick Connect         To discover and log on to a target using a basic connection, type         DNS name of the target and then click Quick Connect.	ADIUS Configuration
Target:	Quick Connect
	<u>R</u> efresh
Name St	atus
ign.2006-03.com.kernsafe:kernserver.CD-ROML Co	onnected
To connect using advanced options, select a target and then click Connect.	Connect
To completely disconnect a target, select the target and then click Disconnect.	Disconnect
For target properties, including configuration of sessions, select the target and click Properties.	Properties
For configuration of devices associated with a target, select the target and then click Devices.	De <u>v</u> ices
More about basic iSCSI connections and targets	
ОК	Cancel Apply

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

			l		x
O ⊂ 🖳 ト Com	puter 🕨	✓ 4 Search Computer			٩
Organize 🔻 Autol	Play Eject Burn to disc Delete temporary files	Erase this disc »	<u> </u>	•	0
🔆 Favorites	Hard Disk Drives (3)				
🥽 Libraries	<ul> <li>Devices with Removable Storage (1)</li> <li>DVD RW Drive (L:)</li> </ul>				
🖳 Computer	4.37 GB free of 4.37 GB				
<table-of-contents> Network</table-of-contents>					
DVD RW D CD Drive	Orive (L:) Space used: Total size: 4.3 Space free: 4.37 GB	37 GB			

Now, you may now operate the iSCSI optical drive just as a normal CD/DVD drive.

## Burning data on to a CD/DVD on the remote server

### **Using Microsoft Default Software**

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

#### Open My Computer.

									x
	Computer	•			✓ 49 Sec	rch Computer			 ٩
Organize 🔻	AutoPlay	Eject	Burn to disc	Delete temporary files	Erase this disc	»	ii = 1	•	?
쑦 Favorites		▷ Hard D	oisk Drives (3)						
📜 Libraries		Device	s with Remov DVD RW Drive (I	able Storage (1)					
🖳 🖳 Computer		DVD+RW	4.37 GB free of 4	I.37 GB					
🗣 Network									
DVD DVD+RW CD D	RW Drive ( Drive	L:) Space us Space fr	ed: ee: 4.37 GB	Total size: 4.37	GB				

Browse to the data you want to burn.



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

G → Libraries →	Documents > Back	tUp 👻 🐓	Search BackUp
Organize 👻 🕼 Open	Share with 🔻	E-mail Burn New folder	<b>□</b> • <b>□ 0</b>
🔆 Favorites	Documents BackUp	library	Arrange by: Folder 🔻
Computer	Sample File	7-Zip         Scan with Microsoft Security Essentials         Share with         Burn with Nero         Send to         Cut         Copy         Create shortcut         Delete         Rename         Properties	
3 items selected	Size: 15.0 Date modified: 1/12	MB Date created: 1/20/2011 2/2011 3:35 AM - 1/2	1:19 PM

### Open My Computer.

Open **Disc Drive** which you want to use for burning the data.

**NOTE**: Please make sure there is a disc in optical drive in the remote server.

						X
Computer	<ul> <li>DVD RW Drive (L:)</li> </ul>		<b>-</b>	Search DVD RW	Drive (L:)	م
Organize 🔻 🛛 Burn to disc	c Erase this disc				•	0
🔆 Favorites	Name	<b>^</b> [	Date modified	Туре	Size	
📜 Libraries		Drag files to this fo View Sort by	lder to add the	m to the disc.		
Computer		Group by Refresh	×			
		Customize this folder				
		Paste Paste shortcut Undo Delete	Ctrl+Z			
		Burn to disc Share with	+			
		New	+			
		Properties				
0 items						

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

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



Click Burn to disc, to continue.

A Burn to Disc Wizard will appear.

🕞 🔮 Burn to Disc	×
Prepare this disc	
Disc title: Jan 17 2011	
Recording speed:	
New files being burned to the disc will replace any files already on the disc if they have the same name.	
Close the wizard after the files have been burned	_
<u>N</u> ext Cancel	

Type your CD/DVD title.

Press the **Next** button to continue.

🕞 🔮 Burn to Disc	×
Please wait	
Burning the data files to the disc	
	Next Cancel

System will burn the data you selected on to disc.

Please wait for the completion of the process.



After successful burning, click **Finish** button to continue.



You can now view files you burned by opening drive window.

### **Using Nero Burning ROM**

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

New Compilation						
🐼 CD 🔹	Info Multisession ISO Label Dates Misc Burn					
CD DVD	Multisession					
	Start Multisession disc					
CD-ROM (ISO)	Con <u>t</u> inue Multisession disc     No Multisession					
	Options					
	Refresh compilation when importing session					
	Replace files in compilation					
Audio CD	Archive bit set					
	File date or length changed					
	Eile content changed					
Mixed Mode CD	<u>A</u> lways					
Mixed Mode CD	Remove deleted files from compilation					
	✓ Add new files to compilation					
CD EXTRA						
-						
Open	New Cancel					

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

Chose either **CD** or **DVD**, depending on which media you want to write your data.

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.

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

A Burn Compilation window will appear.

Burn Compilation	X
Ø DVD 🔻	Info Multisession ISO Label Dates Misc Burn
DVD-ROM (ISO)	Action Determine maximum speed Simulation Write Finalize disc (No further writing possible!) Verify written data
	Writing         Write speed:       4x (5,540 KB/s)         Write method:       Disc/Session-at-once         Number of copies:       1
	Use multiple recorders
Disc Info	Burn     Cancel

Set up your write speed and click the **Burn** button to start burning the data on the remote burner.

Checking option **Verify written data**, will result in checking checksums of the files, therefore preventing in accidently writing data with errors. This option is recommended.

Checking option **Finalize disc (No further writing possible!)** will result in impossibility of later adding files to the compilation.

💮 50% Writ	ting to disc - [ISO1_DVD]			the same law	a benefit in the	Passing Strength	and the second		
New		🖺 😥 Burn 🍘 Copy 🛃	🖨 🔥 🚔 L: HL-DT-	T-ST DVD-R	AM GH22LP20 👻	= 🔕 🚯 -	-		
File Edit	View Recorder Extras	Window Help							×
	Tree Berner (Bren	Truck Tob							~
	Compilation name:	ISO 1_DVD (Mode 1)	ISO compilation	Size	: 16 MB / 1	45.13			
	Time Ev	ent							
	5:02:04 PM Ca	ching of files started							
	5:02:04 PM Ca 5:02:04 PM Bu	iching of files completed rn process started at 4x (5,540 KB/s)							
	Writing file:								1
	Copy:	1/1						Total time:	0:00:05
	Status:	Writing at 4x (5,540 KB/s)						Remaining time:	0:00:01
	Used read buffer:							18%	
	Completed:							50%	FRE
	Recorder	Action Buff	fer Level Recorder S	State					
	HL-DT-ST DVD-RAM G	H Lead-in	Active						
	Automatically shut o	lown the PC when done							
	Verify written data							Can	cel
				т.	And share on allow 4	4 140			
				10	otal size on disc: 1	0.4 IVID		н	LED FOT DVD-RAW 0H22LP20

The burning process on the Remote CD/DVD drive will start.

Nero M	Iultimedia Su	ite 10 Trial   Nero Burning ROM						
Data verification completed successfully								
	Details <<	OK Burn Again						
Event	ts log		_					
	Time	Event						
0	1:57:53 PM	Caching of files started						
	1:57:53 PM	Caching of files completed	=					
	1:57:53 PM	Burn process started at 4x (5,540 KB/s)						
	1:58:16 PM	This disc type cannot be closed						
	1:58:16 PM	Burn process completed successfully at 4x (5,540 KB/s)	_					
	1+58+16 DM	Data verification started	Ť					
		····						
		Save Log Print Log						

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

Press **OK** button, to continue and finish burning CD/DVD on the remote optical drive.



You can now view files you burned by opening drive window.

## Contact

- Support: <u>support@kernsafe.com</u>
- Sales: <u>sales@kernsafe.com</u>
- Home Page: <u>http://www.kernsafe.com/</u>
- Product Page: <u>http://www.kernsafe.com/product/istorage-server.aspx</u>
- Licenses <u>http://www.kernsafe.com/product/istorage-server/license-</u> <u>compares.aspx</u>
- Forum: <u>http://www.kernsafe.com/forum/</u>



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