

FlexNAS/NetServ as iSCSI Target

Revision History

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<u>What is iSCSI</u>

iSCSI is a technology that to use network resources and **NAStorage** space to serve the another machine (**iSCSI-initiator**) of space demand. **iSCSI** can be used to transmit data over local area networks (**LAN**s), wide area networks (**WAN**s), or the Internet and can enable location-independent data storage and retrieval. The protocol allows clients (called initiators) to send **SCSI** commands (**CDB**s) to SCSI storage devices (**target**s) on remote servers. It is a popular storage area network (**SAN**) protocol, allowing organizations to consolidate storage into data center storage arrays while providing hosts (such as database and web servers) with the illusion of locally-attached disks.



Add iSCSI target



Go to Admin Home -> Volume Manager -> iSCSI page for following settings.

Snap <mark>S</mark> hot		Logout Admin Home	I User Home I Help
1	Server Settings Specify server name and date/time. Upgrade firmware, enable UPS and shutdown.	Disc Server Cache and manage CD/DVD on hard disks. Mount and share cached CD/DVD images.	
	Network Settings Configure IP address, file sharing protocols, SNMP, email and SSL settings.	Backup and Restore Snapshot, Tape backup, CD/DVD writing, USB, SmartSync and system recovery.	
3	Volume Manager Administer JBOD or RAID volumes and set up global hot-spare disks, ISCSI.	Virus Protection Real-time and scheduled virus scanning, virus pattern file updates.	
	Security Manager Share folders and assign permissions. Maintain user database and quotas.	Event and Log Configure event notification and view event logs.	
(BHH)	Status and Statistic Monitor system status. Show active connections and open files.		
			1 1
Server Network Volum	ne Security Disc Server Back te Expand Migrate Scan iSCS	kup Virus Scan Event Status Recycle	0
iSCSI target Mana	gement		5
			GRefresh
iSCSI target list			
No iSCSI target			
	Add		



Click "Add" button to create the **iSCSI target**, then input following information like below screenshot.

Target user name: 500GBtarget			
iSCSI target LUN:		219	69
Target Volume Name	RAID Type	Free S	LUN size
nasdisk	JBOD	764GB	500 GB 🔻
Tar the disk space to the iS Pas target in advance, you enable this option for that Mutual CHAP: Initiator name:	CSI -Z, 0~9) can -Z, a~Z, 0~9) c.		
Password:	(A~Z, a~z, 0~9)		
CRC/Checksum (optional) Data digest Header digest			

After click Apply button, you will see the target start to initiate then become "Ready" status.

iSCSI target Manage	ement				
	4				GR
SCSI target list					
iSCSI qualified name	Capacity	LUN allocation	Comment	Status	Action
500GBtarget	500GB	OMB	Windows Storag	re Initiatin	g 🐹
		_			
SCSI target list					
SCSI target list	Capacity	LUN allocation	Comment	Status	Action



You have to add iSCSI initiator's IP address for allow the client to connect to NAStorage with iSCSI.

Server Network Volume S	ecurity 🏖 Disc	Server Ba	ckup Virus So	an Event	t Status
Information Create Delete E	Expand Migrate	Scan iSCSI	Recycle		0
iSCSI target Managemen	nt				
⇒ Specify List of iSCSI Allow					
Enter the initiator name or IP	10.1.4.78				Add initiator
Denv. all initiators	rs				
Deny all iniciators					
	D	elete initia	tor		
)		
			_		
		\sim			
Server Network Volume S		Server Ba	kun Virus Sc	an Event	Status
Server Network Volume S Information Create Delete E	ecurity 🖉 Disc Expand Migrate	Server Ba	kup Virus Sc Recycle	an Event	Status ?
Server Network Volume S Information Create Delete E	ecurity	Server Ba Scan ISCSI	ckup Virus Sc Recycle	an Event	Status ?
Server Network Volume S Information Create Delete E iSCSI target Management	ecurity	Server Ba Scan iSCSI	ckup Virus Sc Recycle	an Event	Status ?
Server Network Volume S Information Create Delete E iSCSI target Management Specify List of iSCSI Allow	ecurity 2 Disc Expand Migrate nt	Server Ba Scan ISCSI	ckup Virus Sc Recycle	an Event	Status
Server Network Volume S Information Create Delete E isCSI target Management Specify List of iSCSI Allow Enter the initiator name or IP	ecurity	Server Bar Scan iSCSI	ckup Virus Sc Recycle	an Event	Add initiator
Server Network Volume S Information Create Delete E iSCSI target Manageme Specify List of iSCSI Allow Enter the initiator name or IP List of the allowed iSCSI initiato	ecurity 2 Disc Expand Migrate nt	Server Bau Scan iSCSI	ckup Virus Sc Recycle	an Event	Add initiator
Server Network Volume S Information Create Delete E iSCSI target Manageme Specify List of iSCSI Allow Enter the initiator name or IP List of the allowed iSCSI initiato	ecurity 2 Disc Expand Migrate nt :: ::	Server Bau Scan ISCS	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E iSCSI target Managemen ⇒ Specify List of iSCSI Allow . Enter the initiator name or IP ⇒ List of the allowed iSCSI initiator 10.1.4.78	ecurity 2 Disc Expand Migrate nt ::	Server Bau Scan ISCSI Initiator nam	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E ISCSI target Management Specify List of ISCSI Allow Enter the initiator name or IP List of the allowed ISCSI initiator	ecurity 2 Disc Expand Migrate nt ::	Server Bau Scan ISCSI Initiator nam	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E iSCSI target Manageme Specify List of iSCSI Allow Enter the initiator name or IP List of the allowed iSCSI initiato	ecurity 2 Disc Expand Migrate nt : : : :	Server Bau Scan iSCSI Initiator nam	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E iSCSI target Manageme Specify List of iSCSI Allow Enter the initiator name or IP List of the allowed iSCSI initiato	ecurity 2 Disc Expand Migrate nt :: :: :: :: :: :: :: :: :: :: :: :: ::	Server Bau Scan ISCSI Initiator nam	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E ISCSI target Management Specify List of ISCSI Allow Enter the initiator name or IP List of the allowed ISCSI initiator	ecurity Disc Expand Migrate nt :: :: ::	Server Bau Scan ISCSI Initiator nam	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E ISCSI target Manageme Specify List of ISCSI Allow • Enter the initiator name or IP List of the allowed ISCSI initiator	ecurity Disc Expand Migrate nt :: :: :: : : : : : : : : : : : : : :	Server Bau Scan ISCSI Initiator nam elete initia	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E iSCSI target Management Specify List of iSCSI Allow Enter the initiator name or IP List of the allowed iSCSI initiato	ecurity 2 Disc Expand Migrate nt :::::::::::::::::::::::::::::::::::	Server Bau Scan iSCSI Initiator nam elete initia	e/IP	an Event	Add initiator
Server Network Volume S Information Create Delete E iSCSI target Manageme Specify List of iSCSI Allow Enter the initiator name or IP List of the allowed iSCSI initiato	ecurity 2 Disc Expand Migrate nt 	Server Bau Scan iSCSI Initiator nam elete initia client to anymore, eckbox to	e/IP	an Event	Add initiator

Connect to iSCSI target



Windows 7 has installed **iSCSI initiator** by default; you can start that from **Control Panel** -> **System and Security** -> **Administrative Tools**.

Favorites	Name	Date modified	Туре	Size	
Desktop	Component Services	7/14/2009 12:46 PM	Shortcut		2 KB
Downloads	Computer Management	7/14/2009 12:41 PM	Shortcut		2 KB
🖳 Recent Places	Data Sources (ODBC)	7/14/2009 12:41 PM	Shortcut		2 KB
	Event Viewer	7/14/2009 12:42 PM	Shortcut		2 KB
詞 Libraries	iSCSI Initiator	7/14/2009 12:41 PM	Shortcut		2 KB
Documents	Local Security Policy	10/18/2011 4:15 PM	Shortcut		2 KB
👌 Music	Performance Monitor	7/14/2009 12:41 PM	Shortcut		2 KB
E Pictures	🕞 Print Management	10/18/2011 4:15 PM	Shortcut		2 KB
Videos	Services	7/14/2009 12:41 PM	Shortcut		2 KB
	System Configuration	7/14/2009 12:41 PM	Shortcut		2 KB
🖳 Computer	🛞 Task Scheduler	7/14/2009 12:42 PM	Shortcut		2 KB
	P Windows Firewall with Advanced Security	7/14/2009 12:41 PM	Shortcut		2 KB
🗣 Network	Windows Memory Diagnostic	7/14/2009 12:41 PM	Shortcut		2 KB
	😹 Windows PowerShell Modules	7/14/2009 12:52 PM	Shortcut		3 KB



After execute the **iSCSI Initiator**, you will see the pop up message like below, you have to click "**Yes**" button to start the **iSCSI service**.





Select **Discovery** menu and click "**Discover Portal...**" button, then input IP address of **NAS iSCSI Target**.

	Y Favorite Targe	ets Volumes and Devices	s RADIUS Configuration
Target portals			76
The system will	look for Targets o	on following portals:	Refresh
Address	Port	Adapter	IP address
To add a target	portal, click Disco	over Portal.	Discover Portal
To remove a ta then dick Remo	rget portal, select ve.	the address above and	Remove
iscover Target Pr	ortal		
Enter the IP addre want to add. To change the defi he Advanced butt	ess or DNS name a ault settings of the on.	nd port number of the po e discovery of the target	rtal you esh
P address or DNS	name:	Port: (Default is 3	3260.)
10.1.2.31		3260	
Advanced		4 ок	Cancel
More about Di	scovery and ISNS	ОК	Cancel
SI Initiator Prope	erties		
SI Initiator Prope argets Discover Target portals	erties / Favorite Targe	ets Volumes and Devices	s RADIUS Configuration
SI Initiator Prope argets Discover Target portals The system will Address	Favorite Targe V Favorite Targe look for Targets o Port	ets Volumes and Devices on following portals: Adapter	s RADIUS Configuration Refresh IP address



Select **Targets** menu, you will see the **iSCSI Target** appeared; select it and click "**Connect**" button for connect to the **iSCSI Target**.

	Favorite Targets Volumes an	d Devices RAD	IUS Configuration	
Quick Connect	-		1 2	
To discover and log o	on to a target using a basic co	nnection, type th	e IP address or	
DNS name of the targ	get and then click Quick Conne	ect.		
Trunch			O ide Connect	
larget.			Quick connects.	
iscovered targets			-	_
			Refresh	
Name		Statu	S	
ign.iSCSI:500GBtarg	get.NASD8FFA811	Inact	ive	
Fo connect using adv dick Connect. Fo completely disconi then dick Disconnect For target properties select the target and	vanced options, select a targe nect a target, select the targe s, including configuration of se d click Properties. devices associated with a targ click Devices.	t and the 2 card and ssions, et, select	Connect Disconnect Properties Devices	
For configuration of (the target and then (
For configuration of of the target and then of the target and then of the target and then of the target and	Farget			
For configuration of o the target and then o Connect To T	Farget		×	
For configuration of o the target and then o Connect To T Target name: [gn.ISCS1:500	Target : JGB target, NASD8FFA8 11		×	
For configuration of of the target and then of Connect To T Target name:	Farget : JGBtarget.NASD8FFA811	raets.		
For configuration of of the target and then of Connect To T Target name: Ign.ISCSI:500	Target : IGBtarget.NASD9FFA311 onnection to the list of Favorite Ta ake the system automatically atten overy time this comparison the restore	rgets.		
For configuration of o the target and then o Connect To T Target name: Ign.ISCSI1500 I Add this co This will ma connection	Farget : IGBLarget.NASD8FFA811 prinection to the list of Favorite Tar ake the system automatically atten every time this computer restarts	rgets. npt to restore the S.	×	
For configuration of of the target and then of Connect To T Target name: Ign.ISCSI:500 I Add this co This will ma connection	Target : IGBtarget.NASD8FFA811 onnection to the list of Favorite Ta ake the system automatically atten h every time this computer restarts ti-path	rgets. npt to restore the s.		
For configuration of of the target and then of Connect To T Target name: Ign.ISCSIR500 I Add this co This will ma connection Enable mult Advanced	Target : <u>VGBtarget.NASD8FFA311</u> prinection to the list of Favorite Tar ake the system automatically attem in every time this computer restarts ti-path 3	rgets. npt to restore the s.	Cancel	
For configuration of of the target and then of Connect To T Target name: Ign/ISCSI(500) I Add this co This will ma connection Enable mult Advanced	Farget : DGBLarget.NASD8FFA811 prinection to the list of Favorite Tar ake the system automatically attem is every time this computer restarts ti-path	rgets. npt to restore the s.	Cancel	
For configuration of of the target and then of Connect To T Target name: Ign.iSCSI:500 I Add this co This will ma connection Enable multi Advanced	Target : IGBtarget.NASDSFFA811 onnection to the list of Favorite Talake the system automatically atten n every time this computer restarts ti-path 3	rgets. npt to restore the s.	Cancel	
For configuration of of the target and then of Connect To T Target name: Ign.ISCSI:500 I Add this co This will ma connection Enable mult Advanced	Farget IGBtarget.NASD8FFA311 onnection to the list of Favorite Tarake the system automatically attem the every time this computer restarts (ti-path 3	rgets. npt to restore the s,	Cancel	
For configuration of of the target and then of Connect To T Target name: ign/ISCSI:500 I Add this co This will ma connection Enable mult Advanced	Farget : IGBLarget.NASD8FFA811 onnection to the list of Favorite Ta ake the system automatically atten every time this computer restarts ti-path	rgets. npt to restore the s.	Cancel	



Right click on **Computer** of **Start** Menu and select "**Manage**" to enter "**Disk Management**" window, you will see a new disk there, click "**OK**" to initialize the disk.

• 🔿 🔁 📆 🚺 👔 🤅	X 📽 🖻 🔍 🔙			
Computer Management (Local	Volume Lay	out Type File System Status	Capacity	Actions
 Bystem Tools Task Scheduler 	(D:) Sim WIN7 (C:) Sim	pple Basic NTFS Healthy (System, Active, Primary Partition) pple Basic NTFS Healthy (Boot, Page File, Crash Dump, Primary Partition)	19.07 GB 152.66 GI	Disk Management
 Event Viewer Shared Folders 				More Actions
Local Users and Groups Derformance				
Device Manager		Initialize Disk		
Storage Disk Management		You must initialize a disk before Logical Disk Manager can access it.		
Services and Applications		Select disks:		
		Use the following partition style for the selected disks:	•	
	C D'1 A	MBR (Master Boot Record) GPT (GUID Partition Table)		
	Basic	Note: The GPT partition style is not recognized by all previous versions of		
	Online	Windows. It is recommended for disks larger than 2TB, or disks used on Itanium-based computers.		
		OK Cancel	=	
	Basic	WINZ (C)		
	152.67 GB Online	152.66 GB NTFS Healthy (Rot Page File Crack Dump Priman/Partition)		
		rearry (book, rage file, clash burip, Filmary Falabory		
	GDisk 2			
	500.00 GB	500.00 GB		
	Not Initialized	Unallocated		



Enable iSCSI authentication (one-way)



Change the option of **iSCSI authentication** to **CHAP** (Challenge-Handshake Authentication Protocol), and input user name and password.

iSCSI target configurat	ion		
 iSCSI qualified nam 	e		
Target user name:	500GBtarget		
 iSCSI target LUN Ca 	apacity : 500GB		
Allocate the disk	space now		
Comment:	Windows Storage		
 iSCSI authentication 	1		
O None			
CHAP			a state of the second s
Target user name:	iSCSI	(A~Z, a~z, 0~9)	
Password 2		• (A~Z, a~z, 0~9)	You have to input 16 characte
Re-enter password:			at least for the password.
Mutual CHAP:			
Initiator name:		(A~Z, a~z, 0~9)	
Password:		(A~Z. a~z. 0~9)	
Re-enter password			
CRC/Checksum (on	tional)	15	
Data digest			
Header diaset			
i neader digest			



Add iSCSI target from Discovery menu of iSCSI Initiator (Refer to Page. 6).

rgets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
arge	et portals				
The :	system will lo	ok for Targets on fo	ollowing portals:		Refresh
Add	ress	Port	Adapter	I	P address
Auu					



Select **Targets** menu of **iSCSI Initiator** (Refer to Page. 7) to click "**Connect**" button then click "**Advanced...**" button for Input user name and password for connect to **iSCSI target**.

Target name:	and the second se
iqn.iSCSI:500GBtarget.NASD8F	FA811
Add this connection to the lis This will make the system au connection every time this or	t of Favorite Targets. tomatically attempt to restore the omputer restarts.
📃 Enable multi-path	

the same design of the same of the			
Connect using			
Local adapter:	Default 👻		
Initiator IP:	Default		
Target portal IP:	Default		
CRC / Checksum			
Data digest	Header digest		
Fnable CHAP log	100		
CHAP Log on infor	mation		
To use, specify the	same name and CHAP secret that was configured on the target for this		
initiator. The name specified.	will default to the Initiator Name of the system unless another name is		
initiator. The name specified.	will default to the Initiator Name of the system unless another name is		
initiator. The name specified. Name: Target secret:	3 SCSI		
initiator. The name specified. Name: Target secret:	suthentication		
initiator. The name specified. Name: Target secret: Perform mutual a To use mutual CHAP RADIUS.	3 SCSI authentication 2, either specify an initiator secret on the Configuration page or use		



Click "OK" button to connect to iSCSI target.



The **iSCSI target** will be connected and you can see the **iSCS target** as the **local disk volume** on your PC

argets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
Quick C	Connect				-
To disc	over and log	on to a target usin	ig a basic connection, t	ype the IP	address or
DINS na	ame of the ta	arget and then dick	Quick Connect.		
Target			2	Ou	uick Connect
1040.#450					
Discove	ered targets				
-				10	Refresh
Name				Status	_
ign.iS	CSI: 500GBta	arget.NASD8FFA81	1	Connecte	d
To con dick Co	nect using a	dvanced options, se	elect a target and then		Connect
To con dick Co To corr then d	nect using a onnect. Ipletely disco	dvanced options, se onnect a target, sel ct.	elect a target and then ect the target and		Connect Disconnect
To con click Co To corr then d For tar select	nect using a onnect. Inpletely disco ick Disconne ick Disconne the target ar	dvanced options, se onnect a target, sel ct. es, including configu nd click Properties.	elect a target and then ect the target and uration of sessions,		Connect Disconnect Properties

Enable iSCSI authentication (mutual CHAP)



Change the option of **iSCSI authentication** to **CHAP** (Challenge-Handshake Authentication Protocol), and enable **Mutual CHAP** for input name and password.

iSC SI target configurat	tion			
 iSCSI qualified nam 	le l			
Target user name:	500CRtexast			
in anget user hame.	Storaget			
 ISCSI target LUN Ca 	apacity: 500GB			
Allocate the disk	space now			
Comment:	Windows Storage			
iSCSI authentication	1			
© None				
CHAP				
Taraatusasaama	(Lagar		1	
Target user name.	15051 (A~	Z, a~z, 0~9)		
Password: 2	*****	(A~Z, a~z, 0~9)		
Re-enter password			J	
Mutual CHAP			States -	
Initiator name:	(iacai)//	7 0 0	1. 1	
initiator name	13C31 (A~	2, a~2, 0~9)		You have to input 16 characters
Password: 4	******	(A~Z, a~z, 0~9)		at least for the password and
Re-enter password	•••••	ji j		target's password
CRC/Checksum (or	otional)			
🔲 Data digest				
Header digest				



Execute iSCSI Initiator then select Configuration menu for input Initiator name and password.

iSCSI Initiator Properties
Targets Discovery Favorite Targets Volumes and Devices Configuration
Configuration settings here are global and will affect any future connections made with the initiator.
Any existing connections may continue to work, but can fail if the system restarts or the initiator otherwise tries to reconnect to a target.
When connecting to a target, advanced connection features allow specific control of a particular connection.
Initiator Name:
iqn. 1991-05.com.microsoft:eric-pc
iscsi 2 Change Iscsi 2 Change Iscsi 2 Change Use control on changing the name as your currently connected targets may not be available after system restart.) 4
Use Default Use Default 4 OK Cancel iSCSI Initian Mutual CHAP secret X3 The iSCSI initian The iSCSI initian The isc onfigured on each target that you wish to use mutual CHAP. X4 X4 <td< td=""></td<>
Mutual ChaP requires the use of initiator authentication when connecting to the target, this can be done by using the advanced options when making connections to the target.
The Initiator name and nascword 6 Initiator CHAP secret
have to same to what input in the
web page of NAStorage. Clear Clear



Add **iSCSI target** from **Discovery** menu of **iSCSI Initiator** (Refer to Page. 6).

Targets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
Targe	t portale				
runge	L por tais				
The s	system will lo	ok for Targets on fo	ollowing portals:		Refresh
The s	system will lo	ok for Targets on fo Port	ollowing portals: Adapter	I	Refresh P address



Select **Targets** menu of **iSCSI Initiator** (Refer to Page. 7) to click "**Connect**" button then click "**Advanced...**" button for Input user name and password for connect to **iSCSI target**.

	Connect To Target
	Target name:
	Ign.iSCSI:500GBtarget.NASD8FFA811
	Add this connection to the list of Favorite Targets. This will make the system automatically attempt to restore the connection every time this computer restarts.
1	Enable multi-path Advanced OK Cancel
CHAP	le CHAP log on
CHAP he	elps ensure connection security by providing authentication between a target and
an initial	tor.
To use, initiator. specified	specify the same name and CHAP secret that was configured on the target for this . The name will default to the Initiator Name of the system unless another name is d.
Name:	3 ISCSI
Target c	
Targets	
🛛 🛛 Perfo	orm mutual authentication
To use n	nutual CHAP, either specify an initiator secret on the Configuration page or use
I DATATION OF	, and then, and the second sec
RADIUS	
RADIUS	RADIUS to generate user authentication credentials
RADIUS	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use f	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use f	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use I Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use I Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use I Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials 5 OK Cancel Apply Connect To Target X
RADIUS Use I Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
Capitolica	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials Connect To Target Target name: (IniSCSI:500GEtarget.NASDSFFA811) Add this connection to the list of Favorite Targets. This will make the system automatically attempt to restore the connection every time this computer restarts.
RADIUS Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials
RADIUS Use I	RADIUS to generate user authentication credentials RADIUS to authenticate target credentials Connect To Target Target name:



The **iSCSI target** will be connected and you can see the **iSCS target** as the **local disk volume** on your PC

alucia Lliscover	v Favorite Targets	Volumes and Devices	RADIUS	Configuration
Quick Connect	, indicate rangeta	Trolance and bettees	100000	comgaratori
To discover and I DNS name of the	og on to a target usir target and then dick	ng a basic connection, Quick Connect.	type the IP	address or
Target:			Qu	iick Connect
Discovered targe	ts		[Refresh
Nama			Status	
ign iscst+500cB	target NACDREEAR1	1	Connecter	-
To connect using dick Connect. To completely dis then dick Disconr For target proper select the target	advanced options, s connect a target, sel nect. rties, including config and click Properties.	elect a target and ther ect the target and uration of sessions,		Connect Disconnect Properties
For configuration the target and the	of devices associate en dick Devices.	d with a target, select		Devices
_	utoPlay			
🥪 A				
	New Volu General options - Open folder to Using Window	me (F:) o view files s Explorer for backup s Backup		

CRC/Checksum



CRC is an error-detecting code, you can enable "Data digest" and "Header digest" to let iSCSI Initiator make sure data are delivered correctly via iSCSI protocol.

 iSCSI qualified nam 	e			
Target user name:	500GBtarget			
 iSCSI target LUN Ca 	apacity : 500GB			
Allocate the disk	space now			
Comment	Windows Storage			
 iSCSI authentication 	1			
None				
CHAP				
Target user name:	(A	-Z, a~z, 0~9)		
Password:		(A~Z, a~z, 0~9)		
Re-enter password:				Performing CRC check,
Mutual CHAP		-	\geq	don't need to enable is
Initiator name:	(A	-7 a~7 0~9)		authentication.
Password		(4-7 0-7 0-0)		
De enter necessaria		_ (A~2, a~2, 0~9)	J	
CPC/Chacksum (or	tional)			
1 Data digest	lionary			
Header digest				
ineader uigest				



Select **Targets** menu of **iSCSI Initiator** (Refer to Page. 7) to click "**Connect**" button then click "**Advanced...**" button for enable **CRC** check algorithm in **iSCSI Initiator**.

Target name:	
ign.iSCSI:500GBtarget.NASD8	FA811
The state of the second	at of Farmathe Tananta
Add this connection to the in This will make the system au connection every time this connection	tomatically attempt to restore the omputer restarts.
 Add this connection to the in This will make the system au connection every time this c Enable multi-path 	tomatically attempt to restore the omputer restarts.



Enable the **CRC** check algorithm with "**Data digest**" or "**Header digest**", you can also enable both check simultaneously.

eneral I	Psec	
Connect	using	
Local ada	pter:	Default
Initiator I	P:	Default
Target po	ortal IP:	Default 👻
CRC / Ch	necksum	
🔽 Data (digest	Z Header digest
E cashl		
Enable	e CHAP log o	
CHAP L	e CHAP log o og on inform	on Nation
CHAP L CHAP hel an initiato	e CHAP log o og on inform ps ensure o or,	on nation onnection security by providing authentication between a target and
CHAP L CHAP L CHAP hel an initiato	e CHAP log o og on inform ps ensure o or.	on nation onnection security by providing authentication between a target and
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Click "OK" for connect to iSCSI target.

Connect To Target	×
Target name:	
iqn.iSCSI:500GBtarget.NASD8FFA811	
Add this connection to the list of Fa This will make the system automatic connection every time this computer	vorite Targets. ally attempt to restore the r restarts.
🔲 Enable multi-path	
Advanced	OK Cancel

<u>TroubleShooting</u>

If you are encountering some problems to connect **iSCSI target**, you can check what kind of problem and find the possible reasons from the topic below:

1. iSCSI target disappear suddenly

I cannot access my local disk volume anymore, the letter is disappeared.

Possible reasons

Network connection has something wrong or **NAStorage** already shutdown for a while.

Troubleshooting steps



You probably will see the **iSCSI Initiator** status is "**Reconnecting...**" like below screenshot.

First step is to check the network environment is still working properly or not, it includes network cables, switching devices or devices (PC & **NAStorage**) itself ...etc.

3	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
Quick C	Connect				
To disc DNS na	over and log ame of the ta	g on to a target usir arget and then click	ng a basic connection, t Quick Connect.	ype the IP	address or
Target	: 1			Qu	uick Connect
Discove	ered targets				
					Refresh
	6			Status	
Name				2000/02/02/02/02	



If **NAStorage** is disconnected, you can check the related **Event Logs** for find out the root cause.

configurati	ion Web Reminder System Log D	evice Log Security Log
0 8	System Log	Display: 100 💌 Severity: Info.
Legend: I=I	nformation, W=Warning, E=Error	
)ate/Time	Description

1		2011/11/11 16:45:44	Set static IP address for LAN 2 - 192.168.2.1	
1	-	2011/11/11 16:45:42	et static IP address for LAN 1 - 10.1.2.31	
1		2011/11/11 16:45:34	System start up. F/W: 1.09.	
1		2011/11/11 16:44:32	Reboot system.	
	_			

1	2011/11/11 14:51:46	Set static IP address for LAN 2 - 192.168.2.1
1	2011/11/11 14:51:44	Set static IP address for LAN 1 - 10.1.2.31
1	2011/11/11 14:51:36	System start up. FW: 1.09.
1	2011/11/11 14:45:33	System shut down - by scheduled.

2. Cannot perform iSCSI authentication

NAStorage already enabled **iSCSI authentication**, but **iSCSI Initiator** cannot connect to **iSCSI target**.

Possible reasons

- 1. iSCSI target didn't set iSCSI authentication correctly.
- 2. iSCSI Initiator doesn't set authentication correctly.

Troubleshooting steps



Check the setting on **NAStorage** to make sure the authentication is enabled correctly like screenshot.

SCSI target configurati	on				
 iSCSI qualified name 	9				
Target user name:	500GBtarget				
 iSCSI target LUN Ca 	pacity : 500GB				
Allocate the disk	space now				
Comment:	Windows Storage				
 iSCSI authentication 					
O None					
CHAP					
Target user name:	iSCSI	(A~Z	, a~z, 0~9)		
Password:	•••••	144611525	(A~Z, a~z, 0~9)		
Re-enter password:	•••••	-			
Mutual CHAP:					
Initiator name:	iscsi	(A~7	a~7 0~9)		
Password			(A=7 2=7 0=9)		
Do optor popoword		_	(, 2, 8-2, 0-3)		
CDC/Chackourt (ar	ianal)				
ORC/Criecksum (op	lional)		NHW/	After enable CHAP and input	
				name and password, you	
Header digest				for activate the settings.	



There are two locations can set the **CHAP** log on information, one is under **Discovery** menu of iSCSI Initiator, another one is under **Targets** menu of iSCSI Initiator.

You have to select **Targets** menu for input the **CHAP** log on information for connect to **iSCSI target**.

ISCSI Initiator Properties	CHAP helps ensure connection securit CHAP helps ensure connection securit
To usage and by on to a target daily a bag DNs name of the target and then click Quick Target: Target: Discovered targets Discovered targets Enable multi-path Name Advanced OK	To use, specify the same name and CHAP secret that was configured on the target for this initiator. The name will default to the Initiator Name of the system unless another name is specified. Name: ISCSI Target samet:
To connect using advanced options, select a target and then Connect	Image: Charge of the second