

DNS-1200-05

Version 1.00

ShareCenter Pro™

User Manual

Business Class Networking

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Introduction

The D-Link ShareCenter Pro 1200 (DNS-1200-05) Unified network storage addresses the ever-growing data storage requirements for SMB users. The need for data consolidation and data sharing make this enclosure an ideal solution. Small and medium businesses looking for a central storage location for sharing or backing up data. SMBs will appreciate the ease of use of the NAS file server feature as well as the fast access performance of iSCSI. The ShareCenter Pro 1200 is a hybrid NAS/iSCSI storage enclosure, which offers concurrent NAS/iSCSI functionality. In addition, the ShareCenter Pro 1200 has a rich set of SMB features for the small and medium business-minded user.

The included CD contains D-Link's Easy Search Utility. This utility allows you to locate the ShareCenter on the network and map drives to your computer. Backup software is also included on the CD. This software allows you to backup your files from a computer to the ShareCenter manually, by a schedule, or in real-time. Real-time backups are a great way to safeguard against unfortunate accidents that may result in the loss of important files.

Combining ease of use with rich set of SMB features, the ShareCenter Pro 1200 is a great solution for any small and medium business environment. Centralize and manage your data the way you want, and keep it safe with the ShareCenter Pro 1200 Unified network storage!

Product Overview Package Contents

- D-Link ShareCenter Pro 1200
- CD-ROM with Manual and Software
- Quick Installation Guide
- Power Cord
- Cat5 Ethernet Cable
- Front Panel Lock Key



Note: Using a power supply with a different voltage than the one included with the ShareCenter will cause damage and void the warranty for this product.

Note: The ShareCenter Pro 1200 should only be maintained by the authorized server manager or IT administrator. The ShareCenter Pro 1200 should be locked using the Front Panel Key. Only certified staff who have the Key are allowed to unlock it.

If any of the above items are missing, please contact your reseller.

System Requirements

For best results, the following minimum requirements are recommended on any system used to configure and use the ShareCenter:

- Computer with: 1Ghz processor / 512 MB RAM / 200 MB available space / CD-ROM drive
- Internet Explorer version 6.0 or Mozilla Firefox 1.0 and above
- Windows® XP (with Service Pack 2) or Vista™
- 3.5" SATA Hard Drive(s)

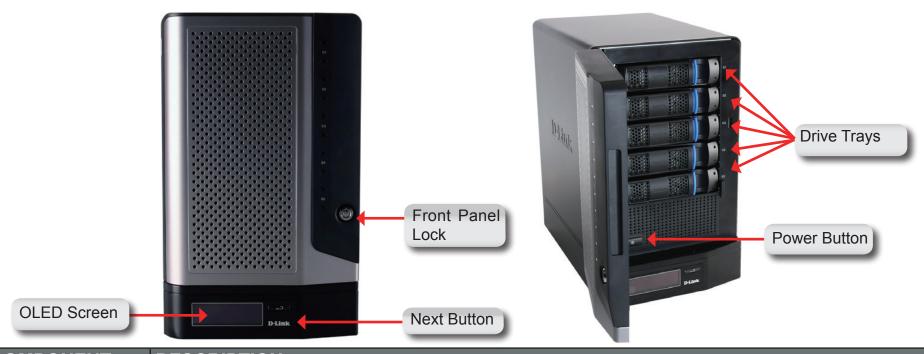
Features

The ShareCenter Pro 1200 Unified network SMB packed with a wide variety of features geared toward the small and medium business environment. Some of these features are listed below:

- **Five** 3.5-inches SATA Standard Drive with capacity support up to 2 TB
- 2 Gigabit Ethernet ports
- 2 USB 2.0 ports
 - UPS, printer, and external storage support
- Concurrent iSCSI/NAS: Offering solutions for supporting both file sharing by NAS function and access performance by iSCSI block device
- Data Protection: Supports RAID 0/1/5/5+Spare/6/ JBOD and S.M.A.R.T. disk diagnostic.
- Ease of Use: iSCSI targets appear as a local drive on your client PC. Access NAS files via the easy-to-use web file manager.
- Accessibility: Share files across the network or over the Internet via FTP or the web file manager.
- Security: Create users, groups, and iSCSI targets with password authentication.
- Account management: Manage users/groups and Read/Write permission
- iSNS
- Virtual Disks
- Thin-provisioning
- DDNS
- Volume Snapshot
- Up to 64 iSCSI Targets
- SNMP (D-View 6.0 compatible)

- CHAP
- Link Aggregation
- Fail-over/Fail-back
- VLAN tag Support
- DFS Support
- AES Support
- FTP / FXP w/ TLS/SSL
- NFS
- ADS support
- Backup
 - Remote backup
 - Local backup
 - External backup
 - PC client to NAS backup
- Web File Manager
- Print server
- Scheduled downloads from web or FTP sites.
- Power management to conserve energy and extend hard drive life.
 - Schedule power on/off
 - Hard disk hibernation
 - SMART for hard disk health scan
 - D-Link Green Ethernet

Hardware Overview Front Panel



COMPONENT	DESCRIPTION			
Front Panel Lock	Turn key to up position to unlock. Turn key to left position to lock.			
OLED Screen	This screen displays detailed information about the following: System Information, HD Volume Information and Error Messages			
Next Button	Use this button to display the System Information, HD Volume Information, and Error Messages on the OLED. Press the button once to alternate between the different Status screens.			
Drive Trays	Use the screws to fasten the SATA hard drives with the trays and insert to the ShareCenter.			
Power Button	Use this button to switch the device on or off.			
	To switch on the device press the button once.			
	To switch off the device hold the button down for 5 seconds.			

Rear Panel (Connections)



COMPONENT	DESCRIPTION		
Gigabit Ethernet Port	Use the Gigabit Ethernet Port to connect the ShareCenter to the local network.		
Power Receptacle	Connect the supplied power cord to the receptacle.		
USB Connector	Two USB 2.0 (Type A) connectors. The USB Host ports are for Print Servers, USB memory disks or USB UPS monitoring.		
Reset Button	Press this button for more than 5 seconds to reset the unit to factory defaults.		
Cooling Fan	The cooling fan is used to cool the hard drives and feature speed control. When the unit is first powered on the fans rotate at a low speed and rotate at a high speed when the temperature rises above 36 °C.		

Using the OLED

The ShareCenter features an OLED that enables the administrator to easily view information about the ShareCenter. The OLED display screen displays the system information, hard drive volume information and error messages. The OLED has three different screens:

- System Information- This screen shows the following information:
 - The hostname of the ShareCenter
 - The IP address of the ShareCenter
 - The hard drive slots information
- Hard Drive Volume information- This screen shows the following information:
 - The percentage of space used on the hard drives.
- Error Messages- This screen shows error messages when there is any system failure.

Press the button once to alternate between the different **Status** screens.

LED Indicator Lights

On each hard drive tray there are 2 LED indicator lights. The meaning of the LED colors are shown below:

Hard Drive Tray LED Lights	Color	Status	Description
Top LED	Blue	Static	Disk is powered on and operational
Bottom LED	Green	Blinking	Disk is being accessed
	Red	Static	Disk has failed or is offline

Installation Hardware Setup

Follow the instructions below to install a hard drive, connect to the network and power on the ShareCenter. Open the shipping carton for the ShareCenter and carefully remove and unwrap its contents. Follow the instructions below to setup the ShareCenter. If this is the first time using the ShareCenter or if a new hard disk is installed, use the Easy Search utility located on the Installation CD and follow the instructions for setting up, configuring and formatting the new drive.

To install ShareCenter on your local network, refer to the steps below:

- 1. Put a 3.5" SATA hard drive into a drive tray and use screws to fasten the hard drive with the tray. There are four holes for fastening the screws. Two holes are circled in red in the image, and the other two holes are on the other side of the drive tray.
- 2. Open the faceplate to access the drive bays.





3. Insert the tray into a bay.



4. Depress the blue button to lock it into place.



5. Connect an Ethernet cable to the available Ethernet port. This cable should connect the ShareCenter to your local network via a router or switch, or directly to a computer for configuration.



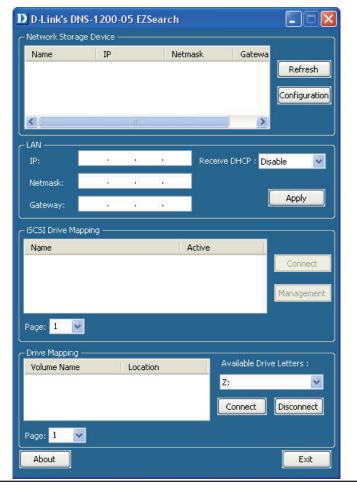
6. Connect the supplied power adapter to the power receptacle.



Configuration Easy Search Utility

When first powered on, during the initial boot sequence, the ShareCenter will wait to be assigned an IP address via DHCP. If it does not receive a DHCP assigned IP address, by default it will have a self-assigned IP address in the range of 169.254.0.0 to 169.254.255.255. It is recommended to use the included D-Link Easy Search Utility when accessing and configuring the ShareCenter for the first time. If you want to change the IP address before logging in or are unable to connect to the ShareCenter IP address, you can use the Easy Search Utility provided on the product CD to locate the device on your network and make any needed changes.

Network The Easy Search Utility displays any ShareCenter devices it detects on the network **Storage Device** here. Click **Refresh** to refresh the device list. Refresh Configuration Click Configuration to access the Web based configuration of the ShareCenter. Configure the LAN Settings for the ShareCenter LAN here. Click Apply to save changes to the LAN Apply Settings. Displays the available iSCSI targets on iSCSI Drive ShareCenter. **Mapping** Click **Connect** to connect to the iSCSI target. Connect Click **Management** to edit the information. **Management Drive Mapping** Volumes available for mapping are displayed here **Available Drive** Choose an available drive letter. Click **Connect** to map the selected volume. Click Disconnect Letters to disconnect the selected mapped volume. Click About to view the software version of the About Easy Search Utility. Click **Exit** to close the utility. Exit



Getting Started

To run the Easy Search Utility, insert the ShareCenter CD into your CD-ROM drive:



Select the listed ShareCenter and click the **Configuration** button. This will launch the computer's default web browser and direct it to the IP address listed for the device. Make sure the browser is not configured to use a proxy server.

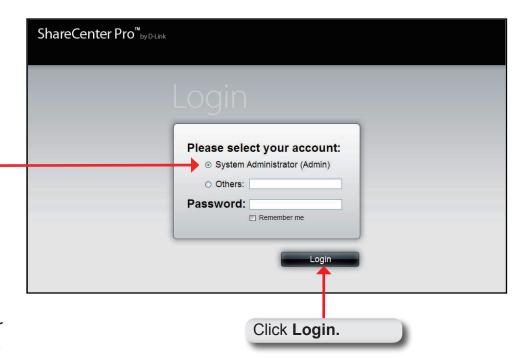
Note: The computer used to access the ShareCenter web-based configuration manager must be on the same subnet as the ShareCenter. If your network is using a DHCP server and the computer receives IP settings from DHCP server, the ShareCenter will automatically be in the same subnet.



The Login screen will appear:

Select **System Administrator** and leave the password field blank.

Note: The computer, used to access the ShareCenter web-based configuration, manager must be on the same subnet as the ShareCenter. If your network is using a DHCP server and the computer receives IP settings from DHCP, the ShareCenter will automatically be in the same subnet.



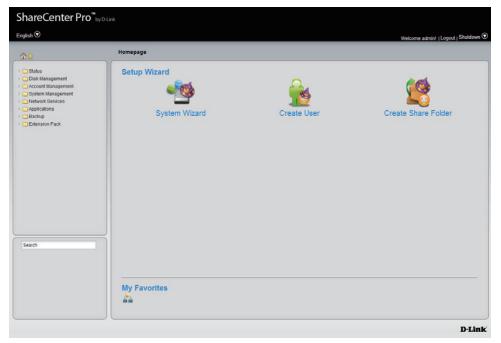
Web UI

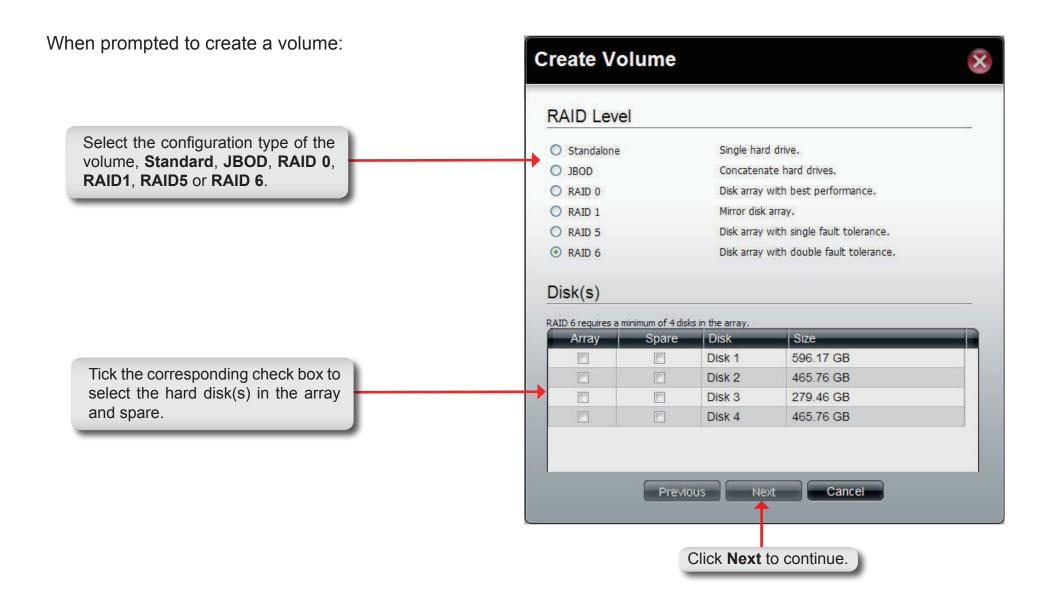
The ShareCenter Web UI defaults to the Create Volume page, if no volume has been created. Once a volume has been created, the web UI defaults to the Homepage (1). The main categories for configuration are located in the folders at the left of the page. Click the folder icon to see the categories of the folder. The categories available for configuration include:

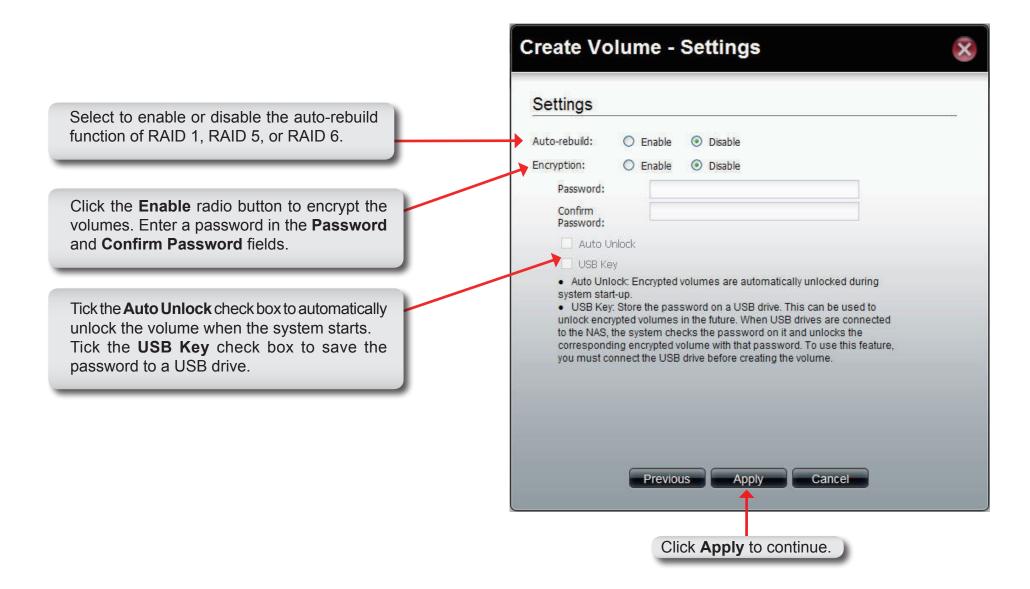
- Homepage- Contains the System Wizard, Create User, Create Share Folder and My Favorites.
- Status- Contains the System Status and Hard Drive Status.
- Disk Management- Allows the ShareCenter administrator to create/configure a Volume, iSCSI Target, Virtual Volume, and perform Disk Diagnostic.
- Account Management- Allows the ShareCenter administrator to configure Admin Password, Users, Groups and Share Folders
- System Management- Contains Network, Time and Date, System Settings, Power Management, Email Alerts, Firmware Upgrade and Logs.
- Network Services- Contains File Sharing, Dynamic DNS, SNMP and Network Discovery Services.
- Applications- Contains Web File Manager and Download Management.
- Backup- Contains Volume Snapshot, Local Backup, Remote Backup and External Bakup.
- Extension Pack- Allows the ShareCenter administrator to add more applications to the device.

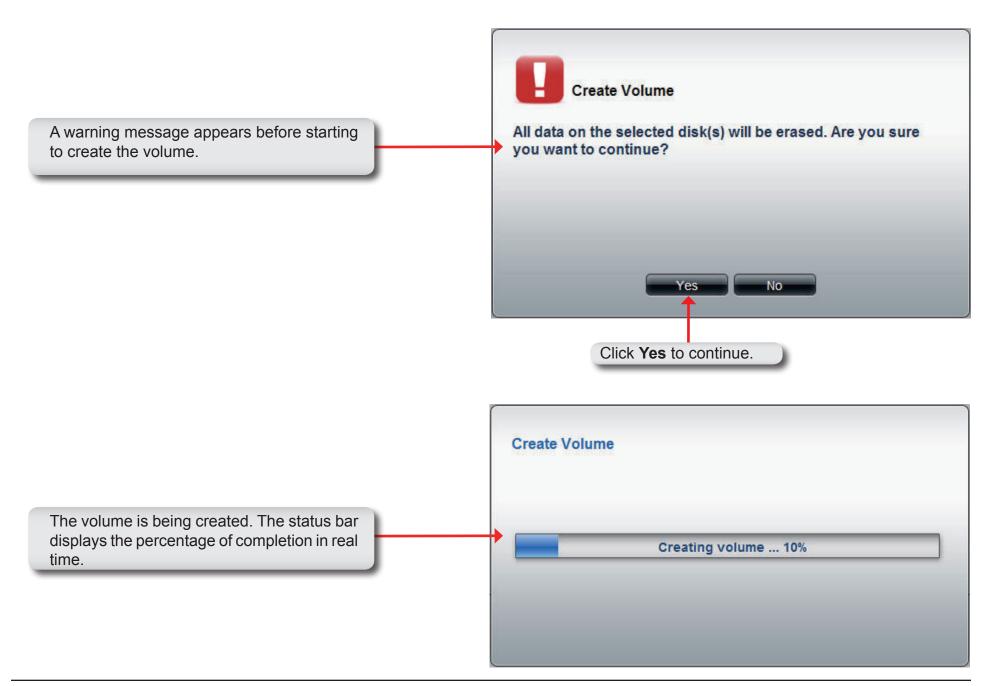
These pages and their configuration options will be discussed in detail in the following pages of this manual.

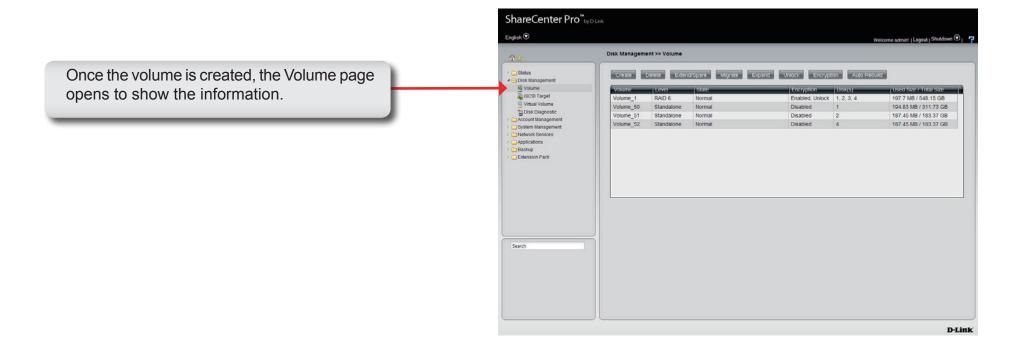
Note: After logging in to the ShareCenter for the first time it is recommended to add a password to the admin account.





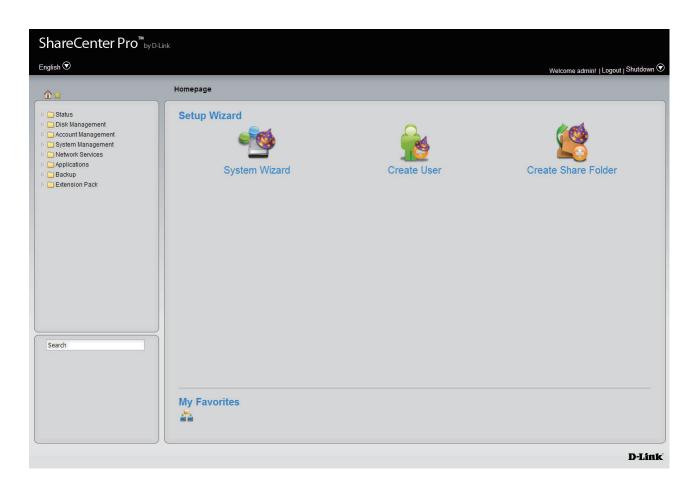






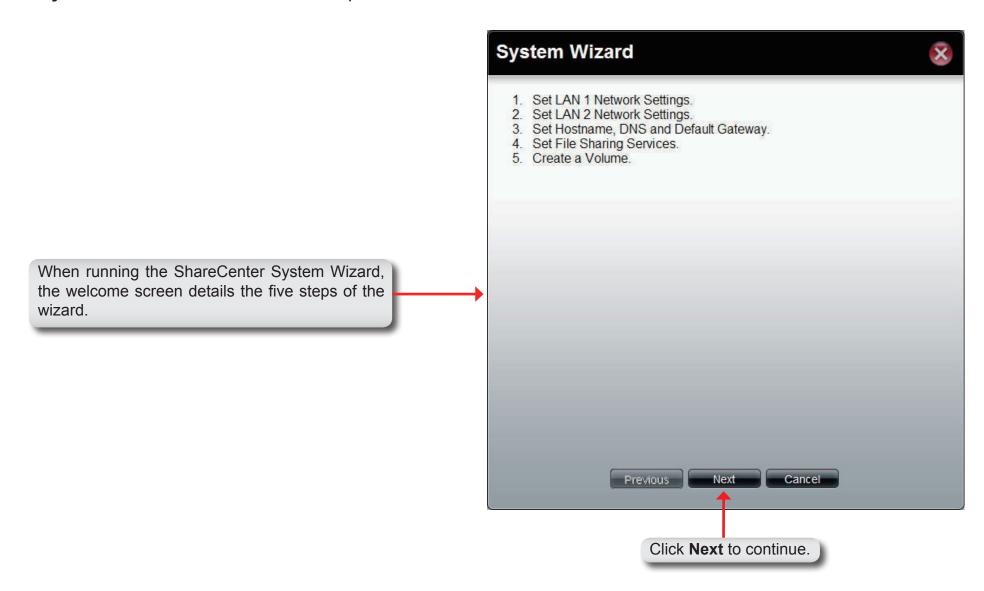
Homepage

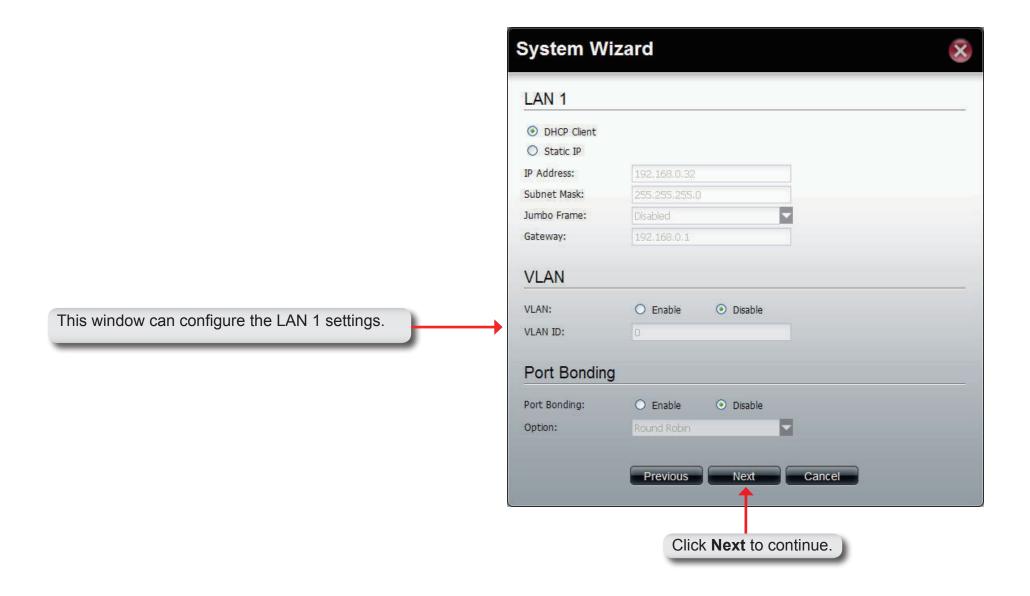
This page contains the System Wizard, Create User, Create Share Folder and My Favorite. Click the (Homepage) icon to see the subcategories. This window provides quick access to the Setup Wizard and the My Favorites section. Users can add the most frequently used functions to My Favorites and quickly access these functions by clicking the icon or selecting from the (My Favorites) drop-down list.

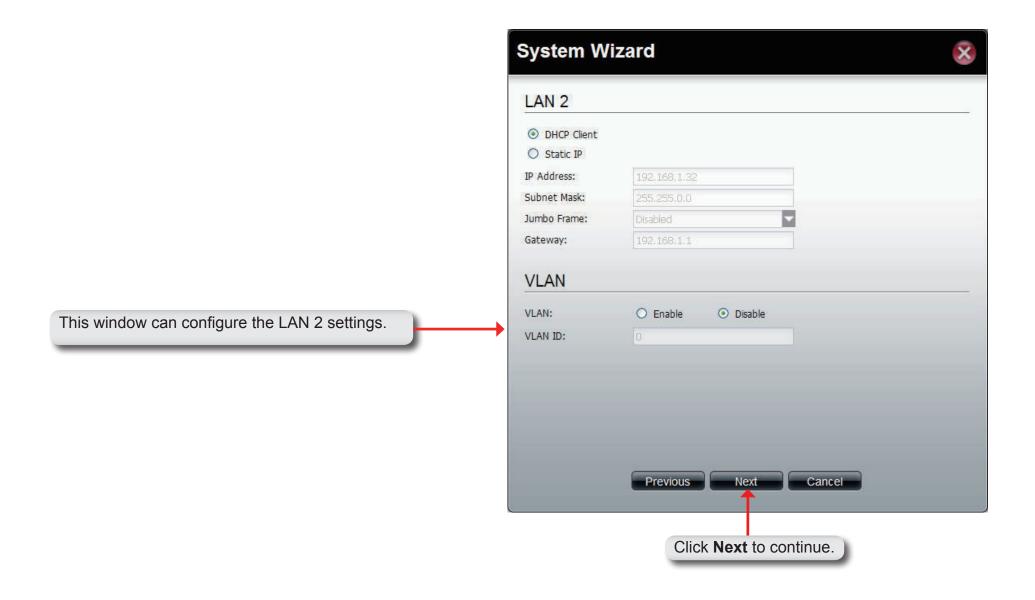


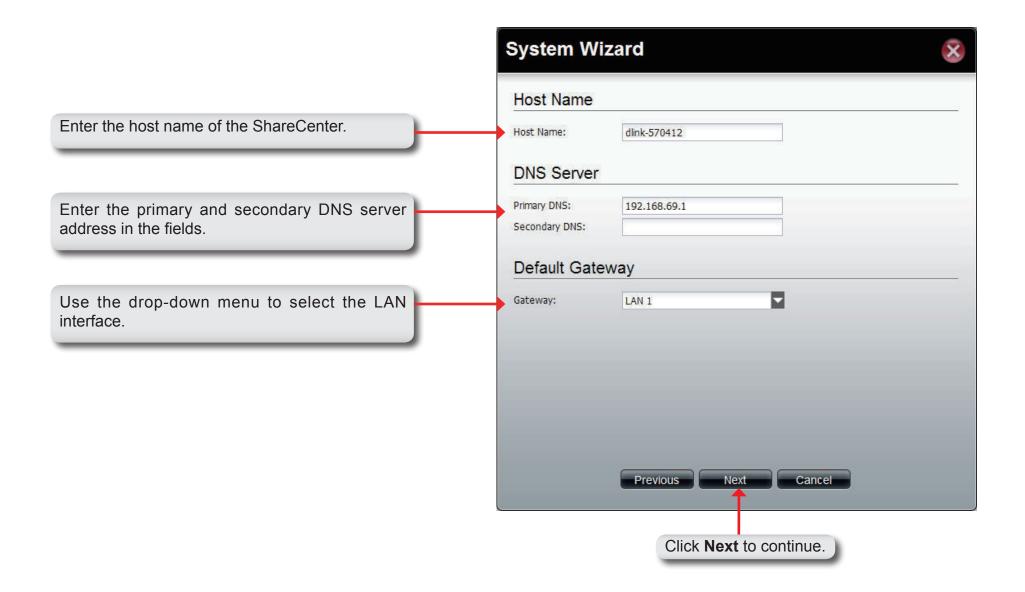
System Wizard

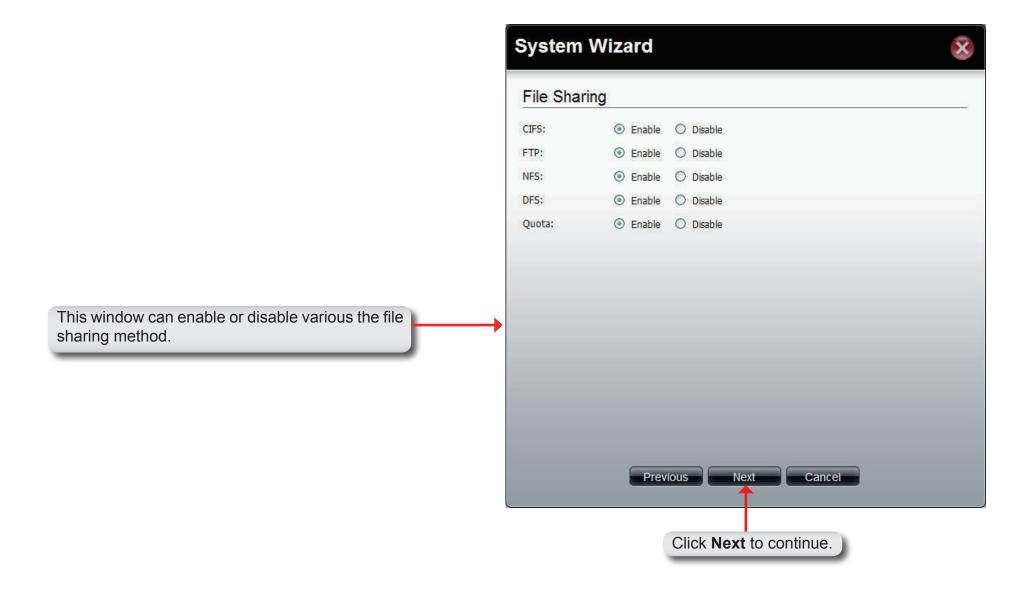
The ShareCenter has a System Wizard that allows you to quickly configure some of the basic device settings. Click the **System Wizard** icon to start the Setup Wizard.

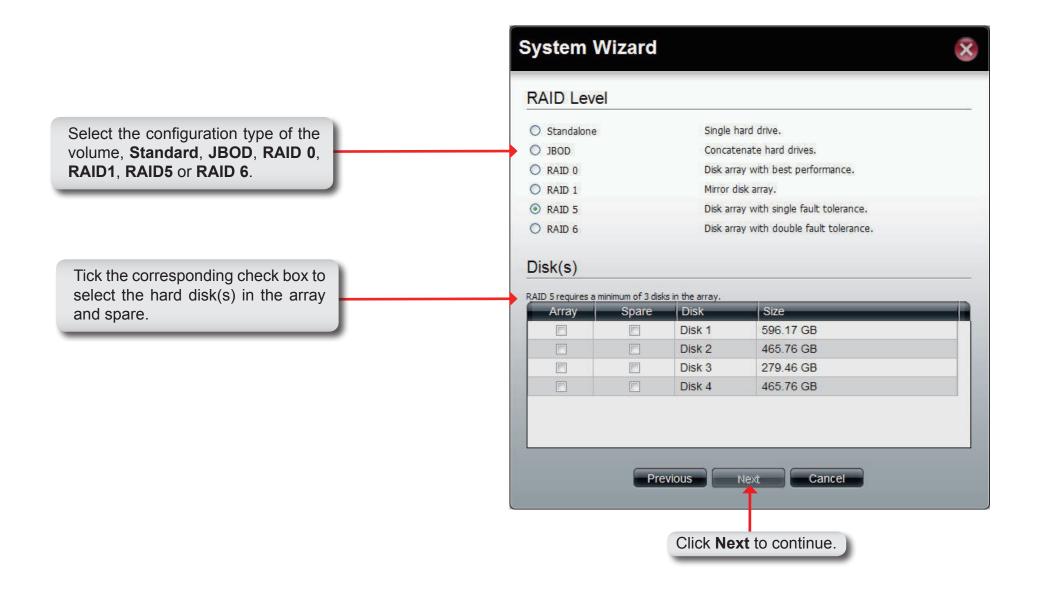


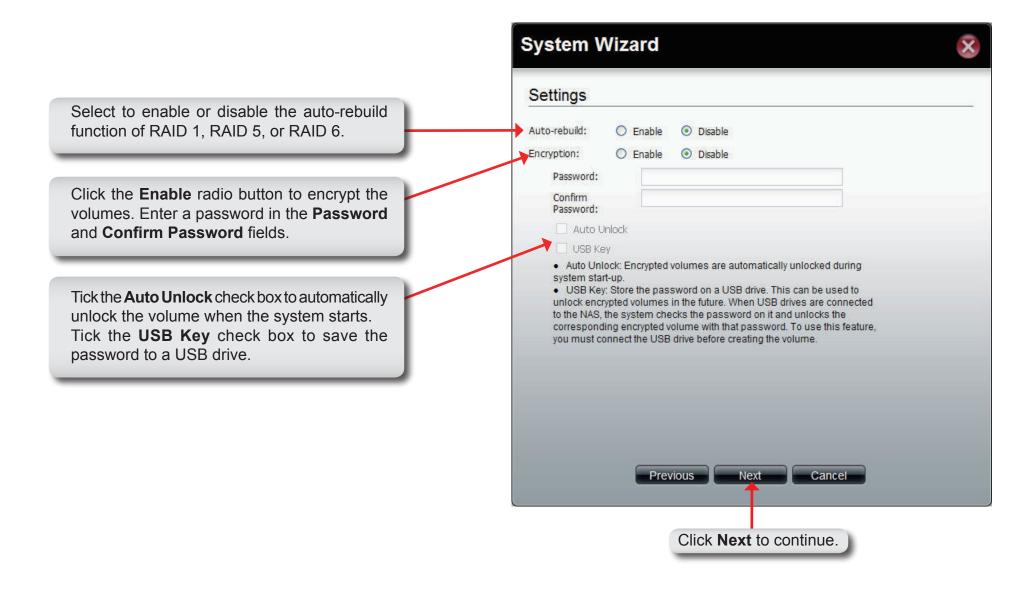


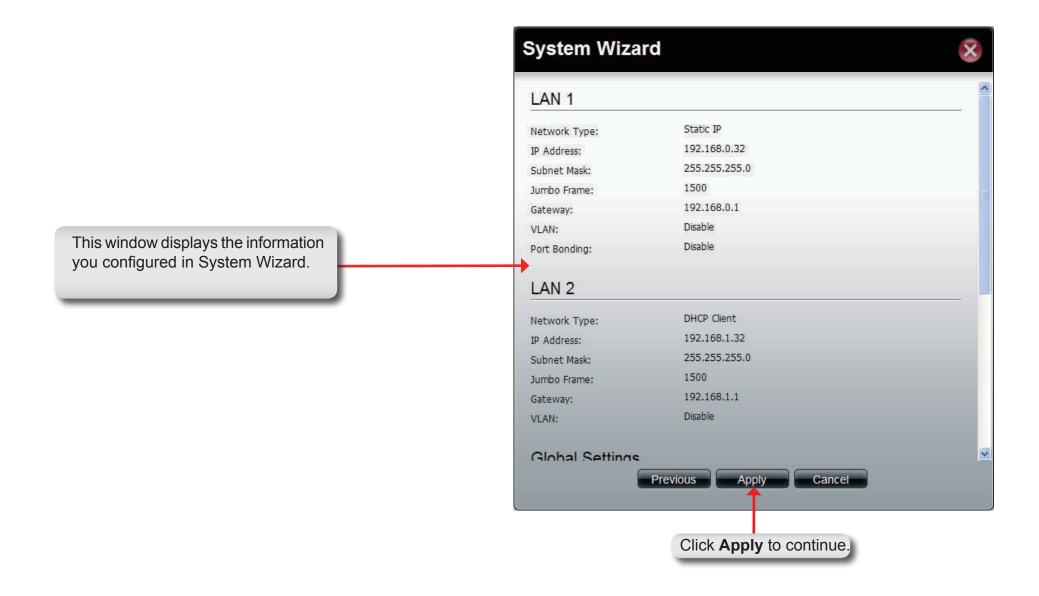


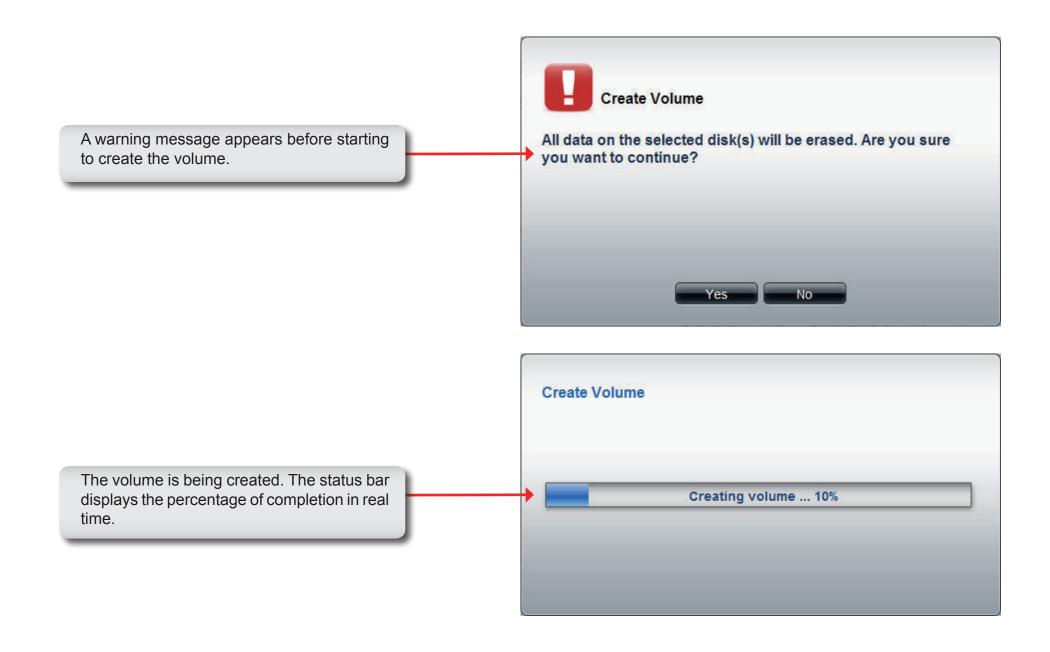


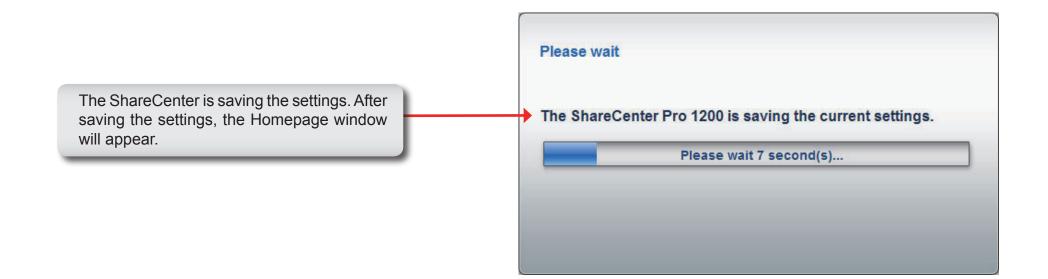






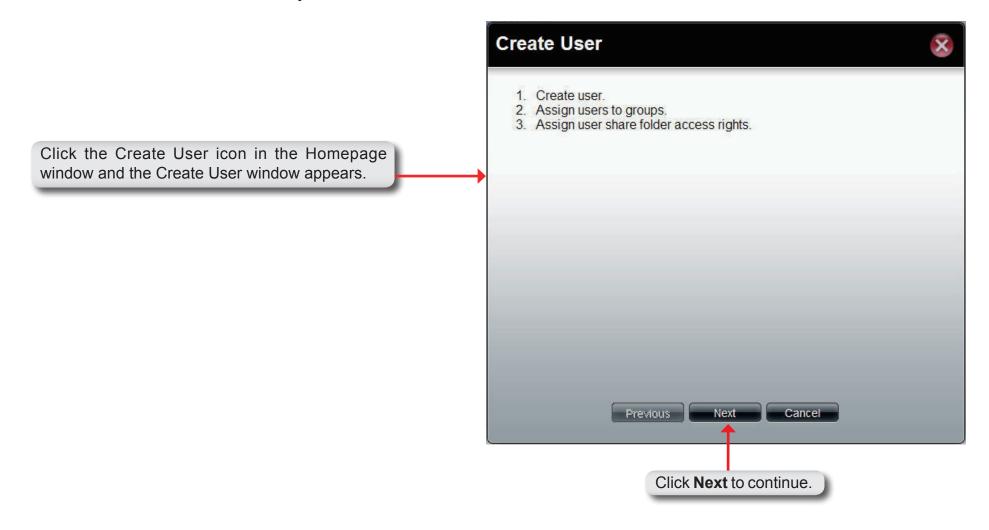


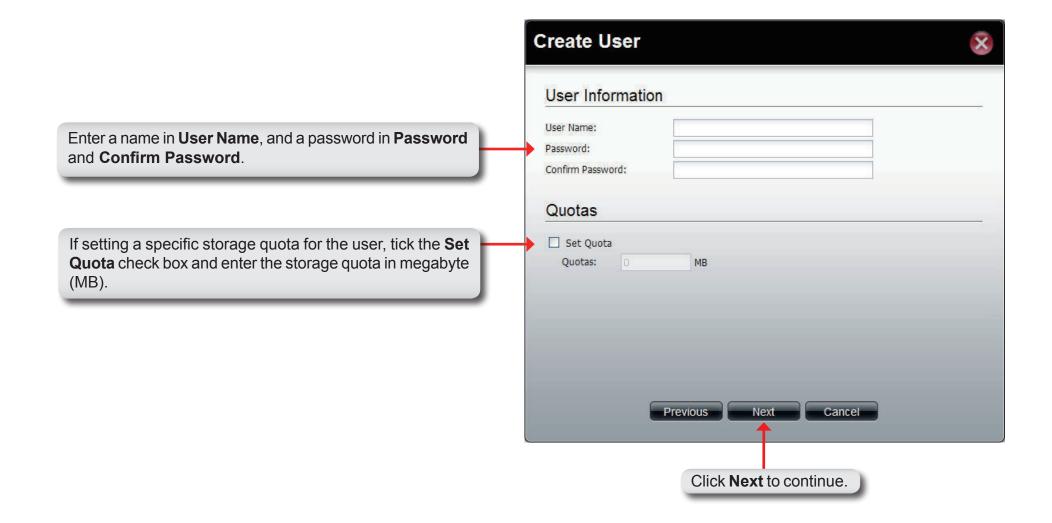


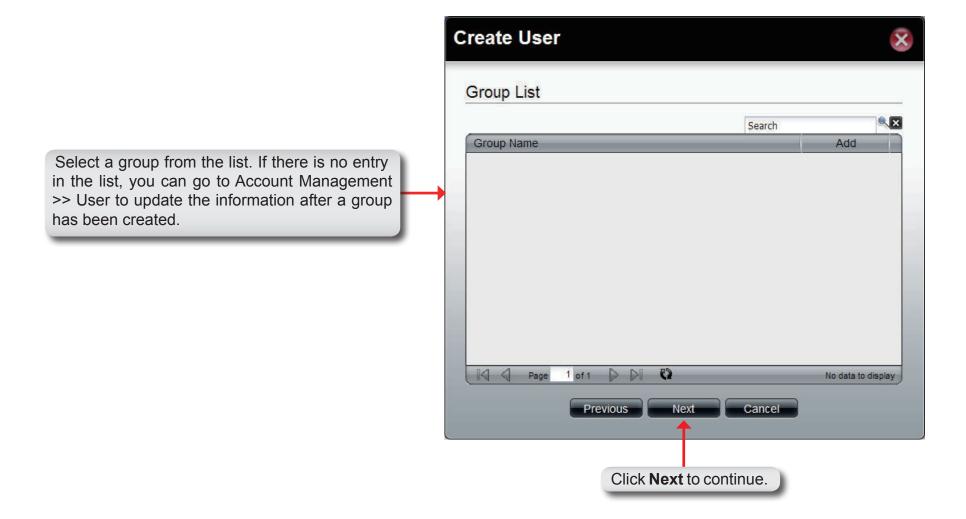


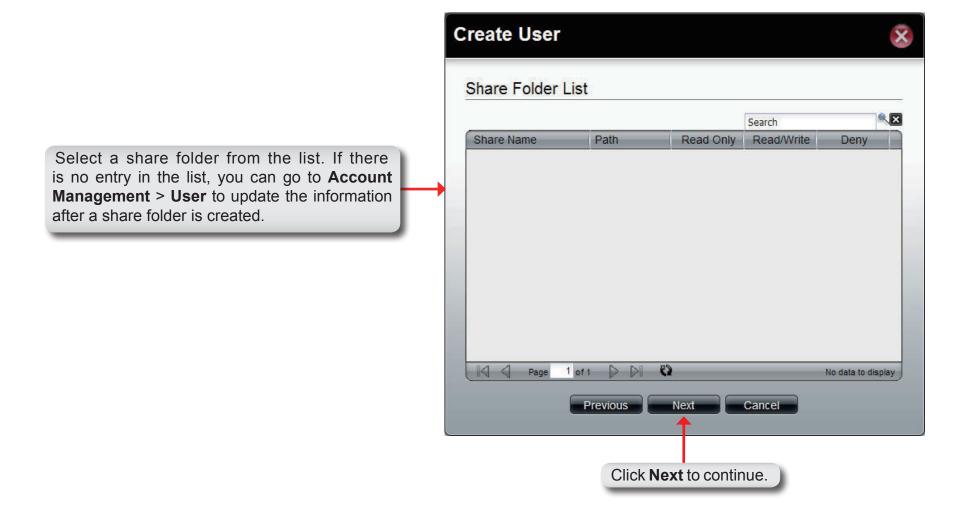
Create User

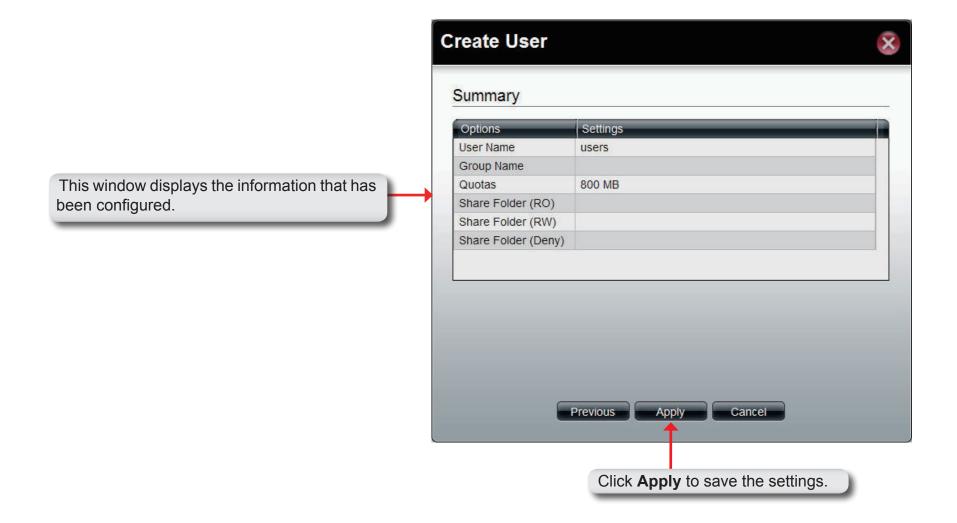
The Create User wizard icon directly links to the Create User function.





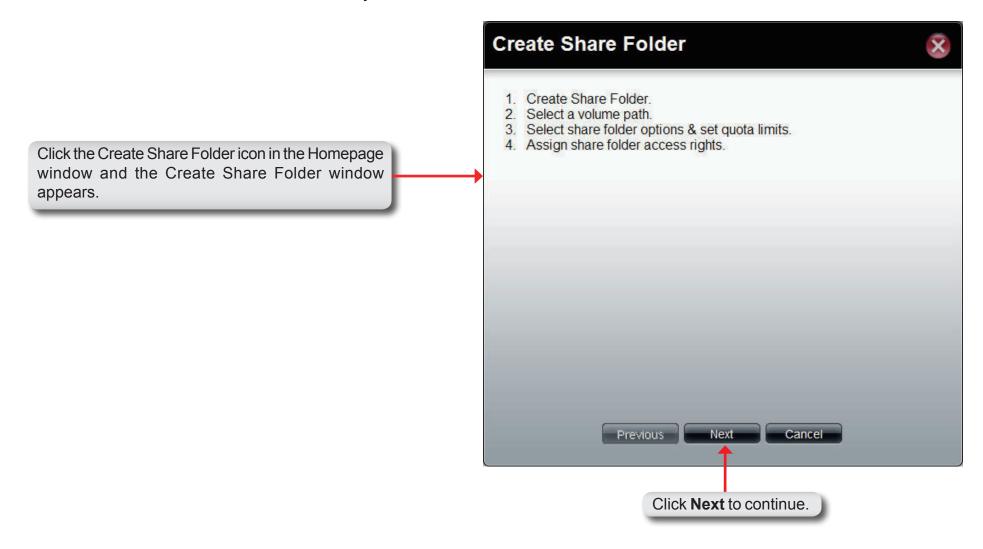


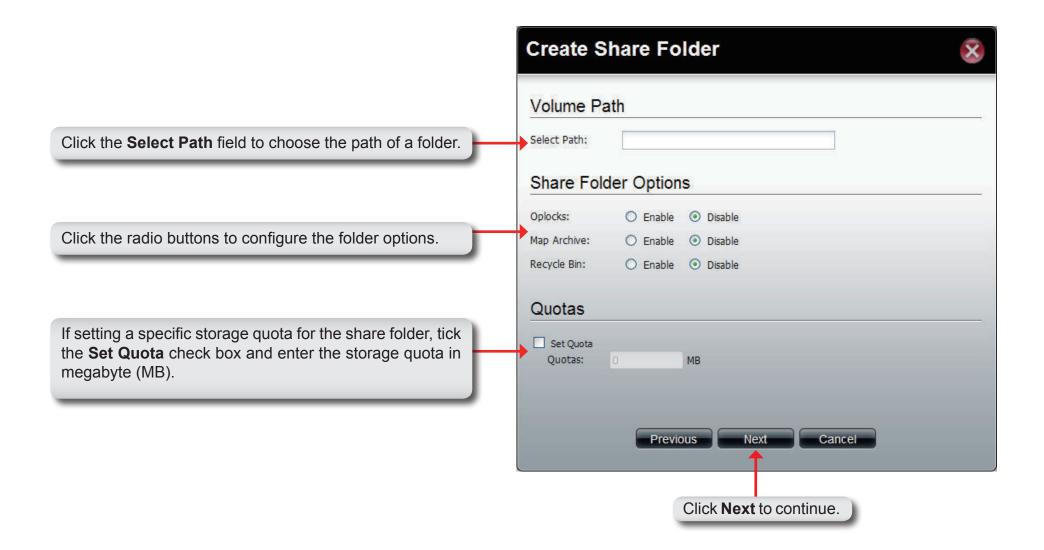




Create Share Folder

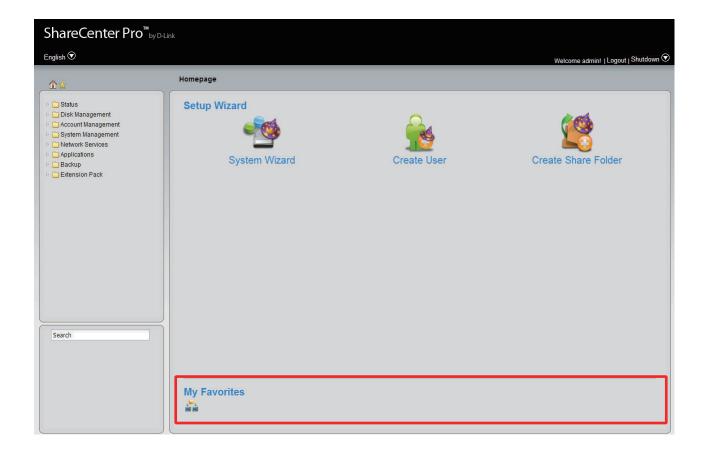
The Create Share Folder wizard icon directly links to the Create Share Folder function.





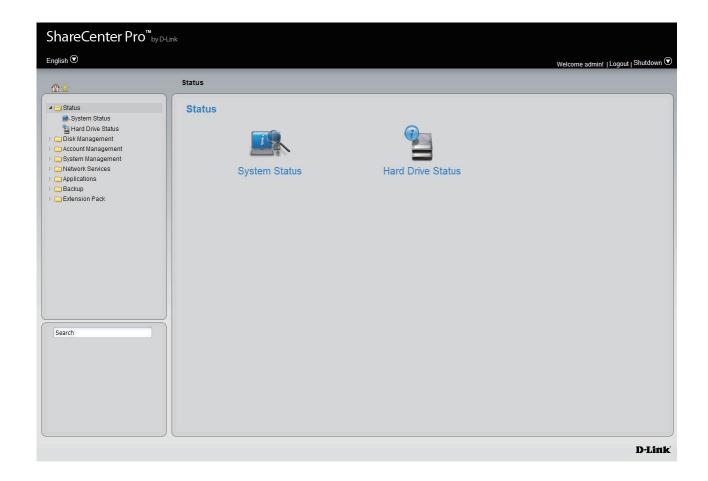
My Favorites

Click the (Homepage) icon to see the My Favorites field at the lower half of the window. To add a category in My Favorites, click an arrow key next to a folder icon to display all categories within the folder in the left window, and drag the category to the My Favorites field. To delete a category in My Favorites, drag the category in My Favorites field to the left window. Once the category is added to My Favorites, click the icon to see the category in the list. Click to directly link to the window of the category.



Status

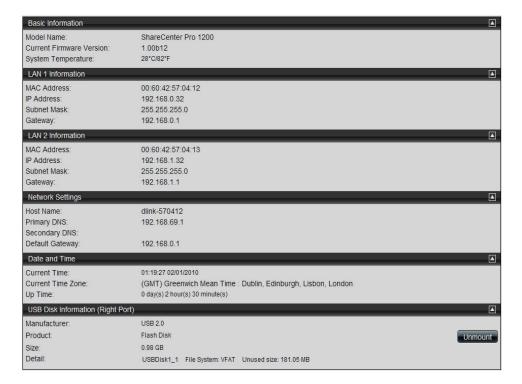
This folder contains the System Status and Hard Drive Status. Click the folder to see the subcategories.



System Status

Click the System Status icon in the Status window or the System Status link in the left window to view System Status.

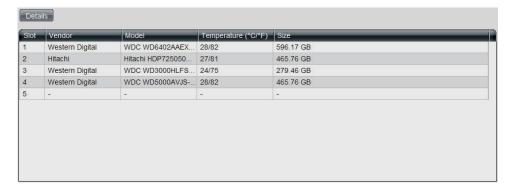
Basic Information	Displays the model name, current firmware version and current temperature of the ShareCenter.
LAN Info	Displays the local network settings of the ShareCenter
Network Settings	Displays the host name, and DNS information of the ShareCenter
Date and Time	Displays the current date and time settings of the ShareCenter.
USB Disk Information	Displays information for a connected USB printer, memory disk or UPS. Click the Unmount button to remove the device from the ShareCenter.



Hard Drive Status

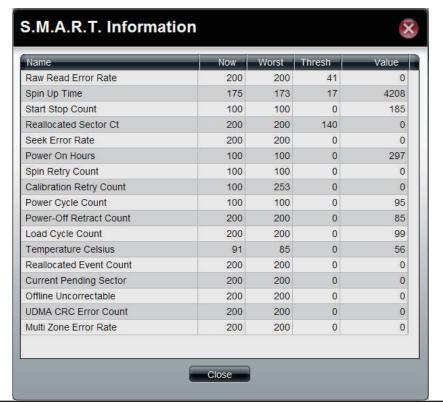
This window displays the Vendor, Model name, Temperature, and Size of the Hard Disks installed in the ShareCenter, along with the slot they are installed in. You can view the S.M.A.R.T. information for each hard disk installed in the ShareCenter (if the hard disk supports the S.M.A.R.T. feature).

Hard Drive To see the S.M.A.R.T. information of a hard disk, select a hard disk and click the **Details** button.

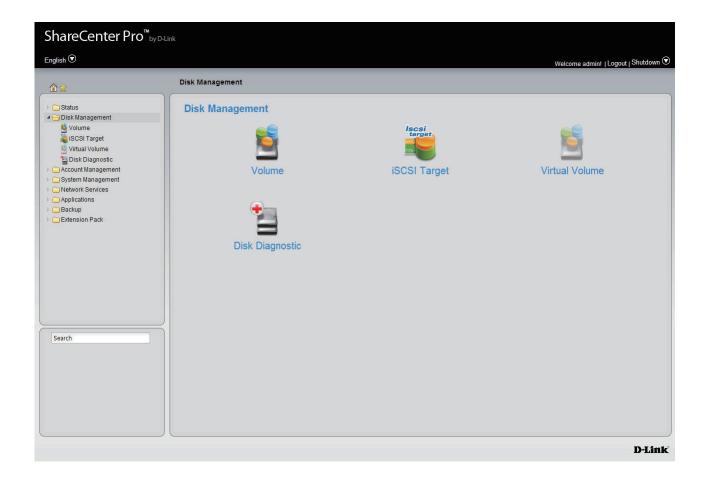


S.M.A.R.T. Information

The S.M.A.R.T. test results for the selected hard drive is displayed. Click the **Close** button to go back to the Hard Drive Status window.



Disk ManagementThis folder contains the Volume, iSCSI Target, Virtual Volume and Disk Diagnostic. Click the folder to see the subcategories.



Volume

Click the **Volume** icon in the Disk Management window or the Volume link in the left window to view and edit the volumes.

The ShareCenter supports six different volume configuration types: Standalone, JBOD, RAID 0, RAID 1, RAID 5 and RAID 6.

Create Click this button to create a new volume.

Delete Click this button to delete a volume.

Extend/Spare Click to enlarge a volume by replacing one of the

existing hard drives with a larger capacity hard

drive, or set a spare for a volume

Migrate Click to change the RAID level of a volume.

Expand Click to enlarge a volume by replacing one of the

existing hard drive with a larger capacity hard

drive.

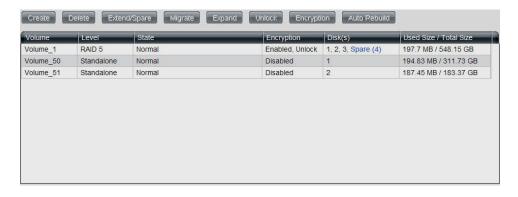
Unlock Click to unlock an encrypted volume

Encryption Click to configure the encryption

settings of the volume.

Auto Rebuild Click to enable or disable the auto-rebuild

function.



Create a new Volume

Click the **Create** button to see the following window.

Standalone Standalone requires only one hard drive in the array. Each hard drive is its own volume.

JBOD JBOD requires a minimum of two hard drives, concatenates the hard drives in a linear fashion, and creates one large volume geared towards maximum available space.

RAID 0 RAID requires a minimum of two hard drives. The data is stored in a striped fashion and geared towards maximum available space and performance.

CAUTION: RAID 0 does not provide data redundancy.

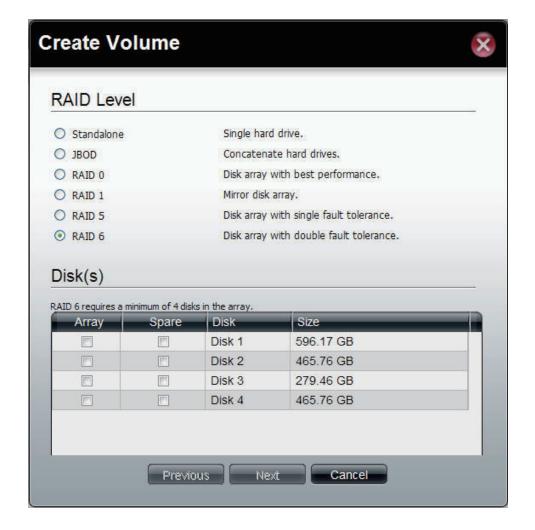
RAID 1 RAID 1 requires a minimum of two hard drives and mirrors the hard drives for data redundancy.

RAID 5 RAID 5 requires a minimum of three hard drives and provides data striping with distributed parity.

RAID 6 RAID 6 requires a minimum of four hard drives, and stripes data and double-parity information across all of the member drives.

Array Tick the check box to select the corresponding hard drive to be part of the volume.

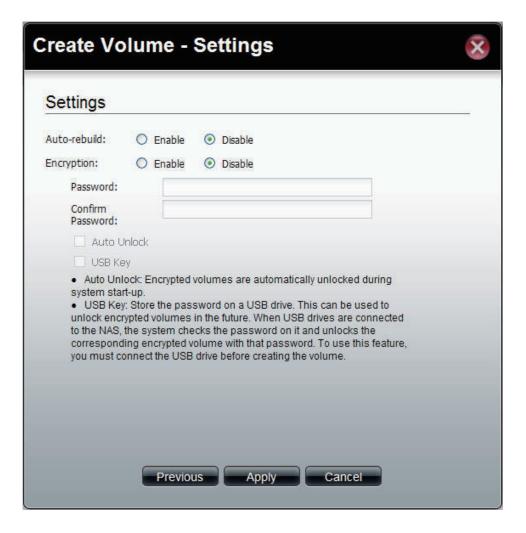
Spare Tick the check box to select the corresponding hard drive as a spare for the volume.



Click the radio buttons to enable or disable auto-Auto-rebuild rebuild setting. Only RAID 1, RAID 5 and RAID 6 can configure this setting. Click the radio buttons to enable or disable **Encryption** encryption settings. When encryption is enabled, enter a password in Password the field. A minimum of 5 digits is required. Retype the password in the field. Confirm **Password** Auto Unlock Tick the check box to automatically unlock the volume when the system starts. **USB** Kev Tick the check box to save the password to a

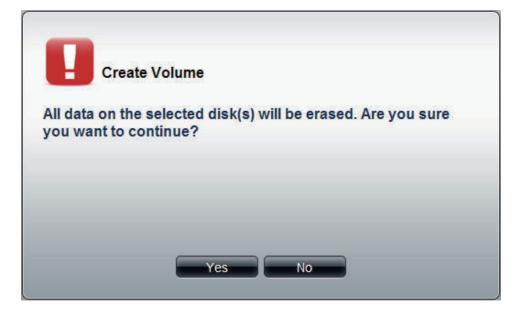
Click **Apply** to continue.

USB drive.

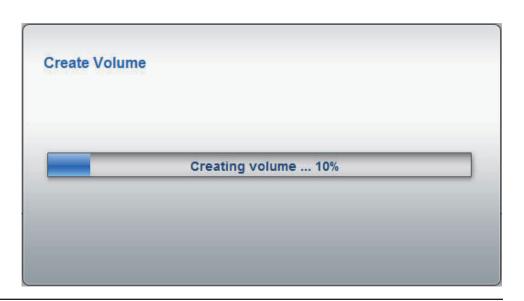


A warning message appears before starting to create the volume.

Click Yes to continue.



The volume is being created. The status bar displays the percentage of completion in real time. Once the volume is created successfully, the Volume window appears.



Extend/Spare a Volume

Click a volume and the **Extend/Spare** button to see the following window.

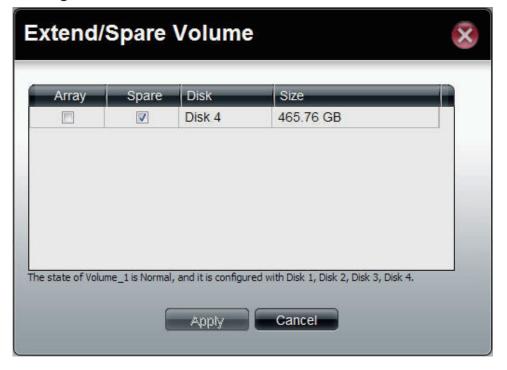
Array Tick the check box to extend the volume.

Spare Tick the check box to select the disk to be a spare

disk.

Disk Displays the configured disk number.

Size Displays the size of the hard disk.

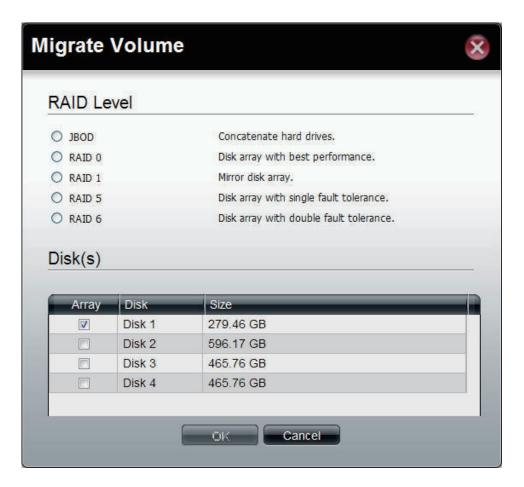


Migrate a Volume

Click a volume and the Migrate button to see the following window.

The windows allows you to change the RAID level of the volume. Choose a RAID level and select the hard disks to be used in the migration.

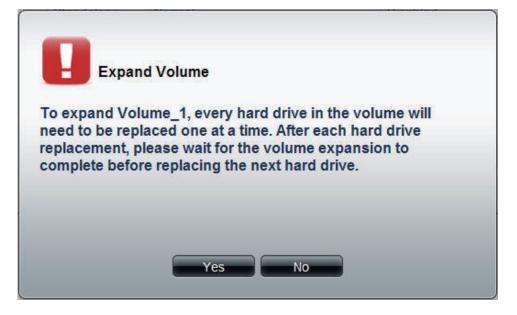
Click **OK** to save the settings.



Expand a Volume

Click the **Expand** button to see the following window.

Click Yes to continue.



Follow the instruction in the State column to expand the volume.



Change the Encryption Settings

Click the **Encryption** button to see the following window.

The Encryption window appears and there are four tabs in the window. This window displays the settings in the **Change** tab.

Change
Password
Passw



This window displays the setting in the **Save** tab.

Click **Save** to save the password to local.



This window displays the settings in the **Load** tab.

Load Click the Browse button to locate the path of the password that is saved to the local computer. **from local**

Click the **Load** button to get the password from local.



This window displays the setting in the **Mail** tab.

Click **Mail** to send the password to administrator.



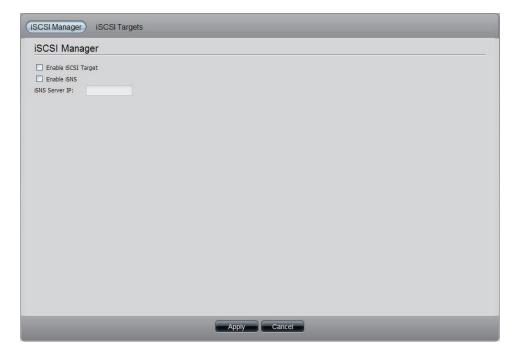
iSCSI Target

Click the **iSCSI Target** icon in the Disk Management window or the iSCSI Target link in the left window to configure the iSCSI target.

iSCSI Manager

Click the **iSCSI Manager** tab to see the following window.

Enable iSCSI	Tick the check box to enable the iSCSI function.
Target	
Enable iSNS	Tick the check box to enable the Internet Storage Name Service function.
iSNS Server IP	Enter the iSNS server IP address in the field.



iSCSI Targets

Click the **iSCSI Targets** tab to see the following window. An iSCSI target shares its storage capacity with the iSCSI initiator.

Create Click the button to add a new target.

Edit Select a target and click the button to change the settings.

Delete Select a target and click the button to remove the

target from the list.



Click the **Create** button to see this window.

Pre-allocate Click the Yes radio button to reserve a certain

amount of capacity on the target in advance. Click **No** that enables thin provisioning to provide just

enough storage space for immediate use.

Name Enter a name in the text box to identify the new

iSCSI Target.

Volume Use the drop-down list to select the volume for

the target.

Size Specify the size of the iSCSI target in gigabytes.



The CHAP Settings window appears.

Enable If the iSCSI initiator supports Challenge

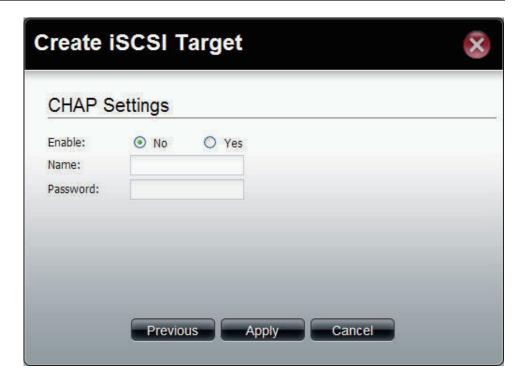
Handshake Authentication Protocol, click the **Yes** radio button. Click the **No** radio button to disable.

Name If enabling CHAP, enter the CHAP username in

the field.

Password If enabling CHAP, enter the CHAP password in

the field.



Virtual Volume

Click the Virtual Volume icon in the Disk Management window or the Virtual Volume link in the left window to configure the virtual volume. The Virtual Volume allows the ShareCenter to expand its iSCSI capacity. By utilizing the built-in iSCSI initiator, the ShareCenter will be able to connect to other iSCSI targets on the network and convert them into virtual volumes. These virtual volumes are seen as multiple single volumes on the ShareCenter. Up to 8 virtual volumes can be stacked. The ShareCenter Pro acts as the storage stack master server. Virtual Volumes can be used to store and

Delete Format Connect

backup data, just like a local volume.

Create Click the button to add a virtual volume. Edit Select a target and click the button to change the settings. Select a target and click the button to remove the Delete virtual volume from the list.

Format When using the virtual volume for the first time, the volume must be formatted before mounting to the ShareCenter.

Click Connect to link to a virtual volume. Click Connect/

Disconnect to terminate the connection. Disconnect

Create a Virtual Volume

Click the **Create** button to see this window.

Device IP Enter the IP address of the device.

Port Enter the port for the device.

Search Click the button to search for the iSCSI targets

on the network.

Targets Displays the available iSCSI targets.

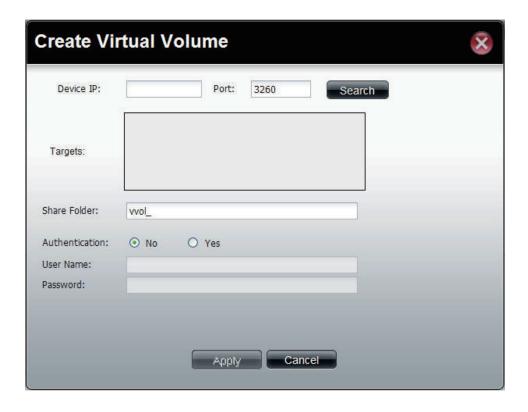
Share Folder Enter a name for the share folder to access.

Authentication Click the Yes radio button to enable

the authentication function.

User Name Enter the user name for authentication.

Password Enter the password for authentication



Disk Diagnostic

Click the **Disk Diagnostic** icon in the Disk Management window or the Disk Diagnostic link in the left window to configure the Disk Diagnostic. This window is used to run a SMART (Self-Monitoring Analysis, and Reporting Technology) or Scan test. The hard drive is grayed out if it does not support SMART.

the electrical mechanical, and read performance

of the hard drive.

longer time, but checks more thoroughly and

complete than the quick test.

Schedule Click to configure a scheduled test for the selected

hard drive.

Stop Click to stop a test

Scan Click to scan if there are any errors or if

there is any corruption on the file system.

Format Click to format a volume. All data

on the volume will be deleted.



Schedule Disk Diagnostic

Click the **Schedule** button to see this window.

Schedule Use the drop-down menu to select the frequency

of the self-test schedule.

Type Click the radio buttons to select the type of the

test.

Time Use the drop-down menu to select hour and

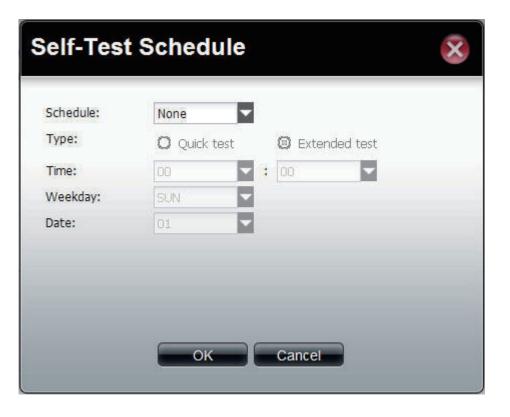
minute of the day.

Weekday Use the drop-down menu to select which day

of the week.

Date Use the drop-down menu to select a date.

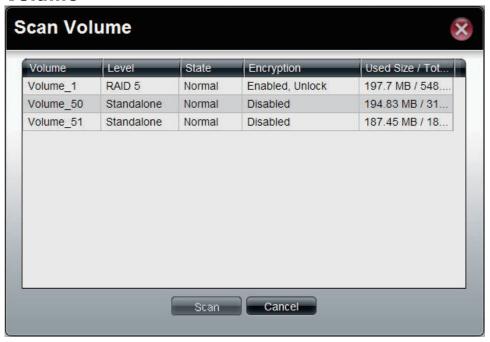
Click **OK** to save the settings.



Scan a Volume

Click the **Scan** button to see this window.

Select a volume and click **Scan** to start to check the file system.



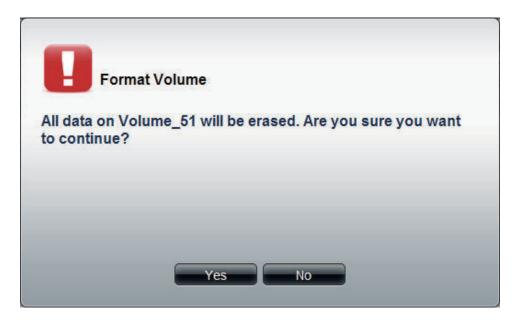
Format a Volume

Click the **Format** button to see this window.

Select a volume and click **Format** to format the volume.

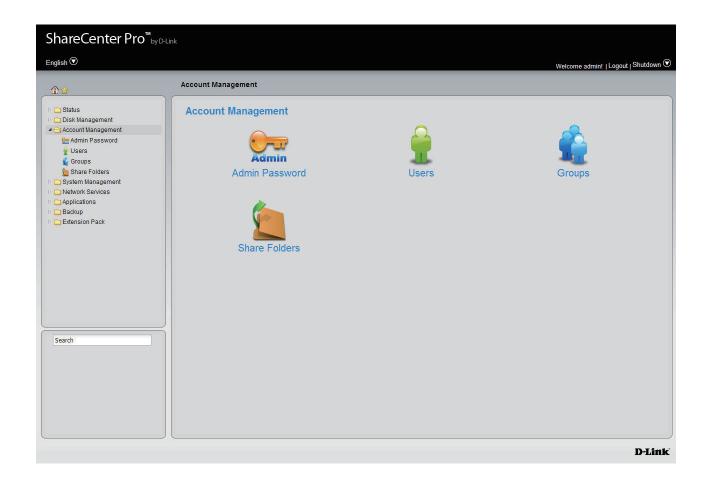


A warning message appears to double confirm if the formatting will proceed. Click **Yes** to proceed.



Account Management

This folder contains the Admin Password, Users, Groups and Share Folders. Click the folder to see the subcategories.



Admin Password

Click the **Admin Password** icon in the Account Management window or the Admin Password link in the left window to configure the Admin Password. This window is used to change the administrator's password.

User Name Displays administrator's user name.

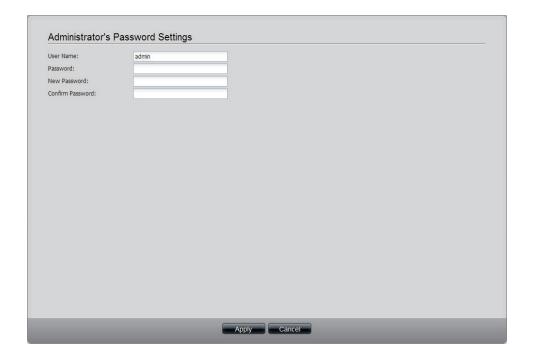
Password Enter the original password.

New Enter a new password.

Password

Confirm Retype the new password.

Password



Users

Click the **Users** icon in the Account Management window or the Users link in the left window to create, edit or delete users. This window also can assign users to various groups.

Click the button to create a new user. Create Edit Select a user and click the button to configure the user's information. Select a user and click the button to remove the Delete user from the list. **Import Users** Click the button to import a file with a list of users. **Create Batch** Click the button to create multiple users at one time. Search Enter the search keyword and click search for the user. Click to clear the search field and all users' information appears.



Create a User

Click the **Create** button to see the welcome window.



User Name Enter the name of a user.

Password Enter the password of the user.

Confirm Retype the password.

Password

Set Quota Tick the **Set Quota** check box to limit the storage

capacity in megabyte for the user. The value of 0

means an unlimited quota size.



This window is used to add the user to a group. If there is no entry in the list, you can go to **Account Management** > **Groups** to create a group.

Search
 Enter the search keyword and click to search for the group. Click to clear the search field and all groups' information appears.
Add Tick the corresponding check box to add the user to the group.
Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.
Refresh Click to update the group list.



This window is used to assign access rights to the user for the corresponding share folder(s). If there are no entries in the list, you can go to **Account Management > Share Folders** to create share folders.

Search Enter the search keyword and click search for the folder. Click to clear the search field and all folders appear. Tick the check box for read only access right. Read Only Read/Write Tick the check box for both read and write access rights. **Deny** Tick the check box for no access right. Displays number of pages. You can enter a page Page number in the field to jump to the specific page. Click First Page (▲), Previous Page (▲), Next Page () or Last page () to search for the group. Refresh Click to update the folder list.



This window displays a summary of the configured information.

Click **Previous** to modify the settings.



Import Users

Click the **Import Users** button to see the welcome window.



This window allows you to import a user list file.

Download Click this button to see the example for listing

the users in the file.

Overwrite Tick the check box to replace duplicate

duplicate accounts accounts.

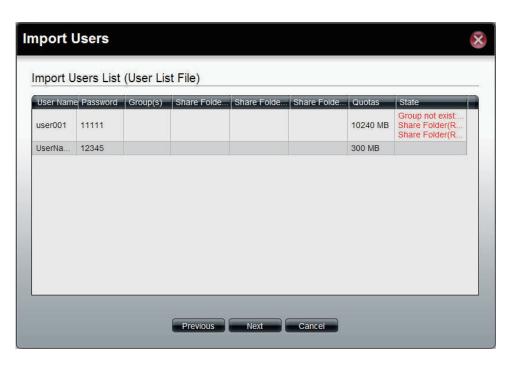
User List File Click the Browse button to locate the file.



This window displays all the users in the file. If there are any error warnings in the State field. The user will not be able to go to the next window.

Click **Next** to continue.

The window displays the final results of importing users to the ShareCenter.





Create Batch Users

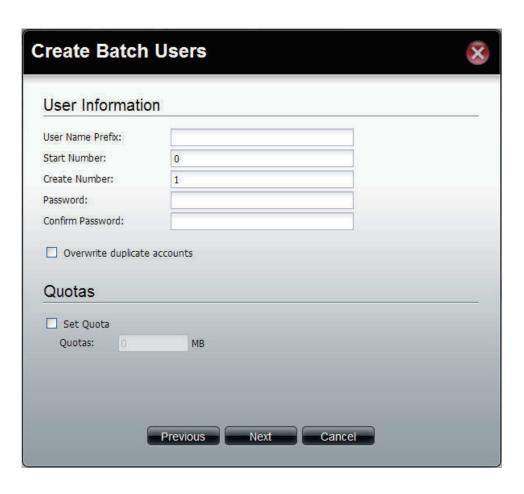
Click the **Create Batch** button to see the welcome window.



This window allows you to create multiple users.

Enter the prefix of the users **User Name Prefix Start Number** Enter the start number of the users. Enter the total number of the users. **Create Number Password** Enter the password of the users Retype the password **Confirm Password** Tick the check box to replace duplicate **Overwrite** duplicate Accounts accounts. Tick the Set Quota check box to limit the **Set Quota** storage capacity (in megabyte) for the user.

The value of 0 means an unlimited quota size.



This window is used to add the users to groups. If there is no entry in the list, you can go to **Account Management** > **Groups** to create groups.

Search
 Finter the search keyword and click to search for the group. Click to clear the search field and all groups' information appears.

 Add Tick the corresponding check box to add the users to the groups.
 Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.
 Refresh Click to update the group list.



This window is used to assign access rights to the users for the corresponding share folder(s) to the share folders. If there is no entry in the list, you can go to **Account Management > Share Folders** to create share folders.

Search

Enter the search keyword and click
to search for the folder. Click
to clear the search field and all folders appear.

Read Only

Tick the check box for read only access right.

Tick the check box for both read and write access rights.

Deny

Deny

Displays number of pages. You can enter a page number in the field to jump to the specific page.

Click First Page (▲), Previous Page (▲), Next

Page () or Last page () to search for the group.

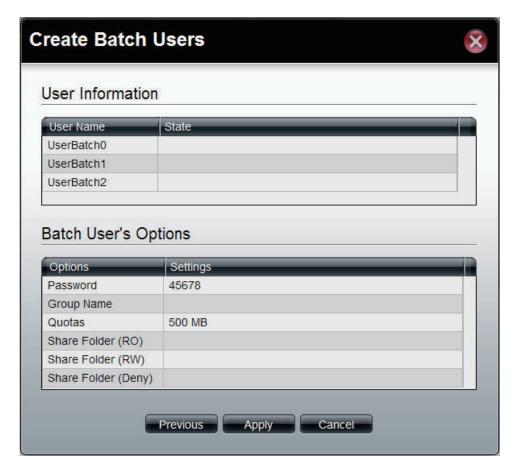
Refresh Click to update the folder list.



This window displays a summary of the configured information.

Click **Previous** to modify the settings.

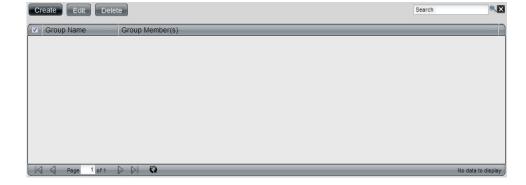
Click **Apply** to save the settings. Depending on the amount of users, the procedure may take a few hours.



Groups

Click the **Groups** icon in the Account Management window or the Groups link in the left window to create, edit or delete a group.

Create Click the button to create a new group.
 Edit Select a group and click the button to configure the group's information.
 Delete Select a group and click the button to remove the group from the list.
 Search Enter the search keyword and click to search for the group. Click to clear the search field and all groups' information appears.



Create a Group

Click the **Create** button to see the welcome window.

Group Name Enter a name of the group



This window is used to add the users to the group. If there is no entry in the list, you can go to **Account Management > Users** to create users.

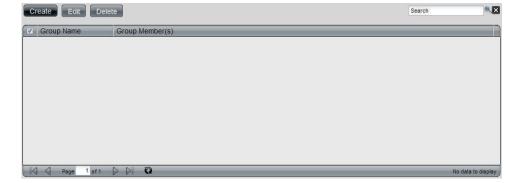
Search Enter the search keyword and click to search for the user. Click to clear the search field and all users' information appears.
 Add Tick the corresponding check box to add the user to the group.
 Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (★), Previous Page (★), Next Page (★) or Last page (★) to search for the group.
 Refresh Click to update the group list.



Share Folders

Click the **Share Folders** icon in the Account Management window or the Share Folders link in the left window to create, edit or delete a share folder.

Click the button to create a new folder. Create Edit Select a folder and click the button to configure the folder's information. Select a folder and click the button to remove the Delete folder from the list. Enter the search keyword and click search for the folder. Click to clear the search field and Search all folders' information appears. Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (M), Previous Page (N), Next Page (►) or Last page (►) to search for the group. Refresh Click to update the group list.



Create a Share Folder

Click the **Create** button to see the welcome window.



This window allows you to create multiple share folders.

Select Path Click the field to show the available folders.

Click the **Create** button to add a new folder.

Double-click a folder to select it.

Oplocks Click **Enable** to enable the Opportunistic lock

(oplock) mechanism.

Map Archive Click **Enable** to the map archive function.

Recycle Bin Click Enable to enable the recycle bin for

this share folder.

Set Quota Tick the Set Quota check box to limit the

storage capacity (in megabyte) for the share folder. The value of 0 means an unlimited

quota size.



This window assigns the access rights of this folder.

All Users Tick the radio button to grant all the users the

same access right to the folder.

Specific User Tick the check box to grant access rights to

the specific users.



If **All Users** is selected in the previous window, this window appears.

Read Only
Read/Write
Tick the check box for read only access right.
Tick the check box for both read and write access rights.

Deny
Tick the check box for no access right.



If **Specific User** is selected in the previous window, this window appears.

Local User / Local Use the drop-down menu to toggle between Group Local User and Local Group. Search Enter the search keyword and click sto search for the folder. Click sto clear the search field and all folders' information appears Tick the check box for read only access right. Read Only Tick the check box for both read and write Read/Write access rights. Tick the check box for no access right. Deny Displays number of pages. You can enter Page a page number in the field to jump to the specific page. Click First Page (M), Previous Page (♠), Next Page (♠) or Last page (▶) to search for the group. Refresh Click to update the group list.

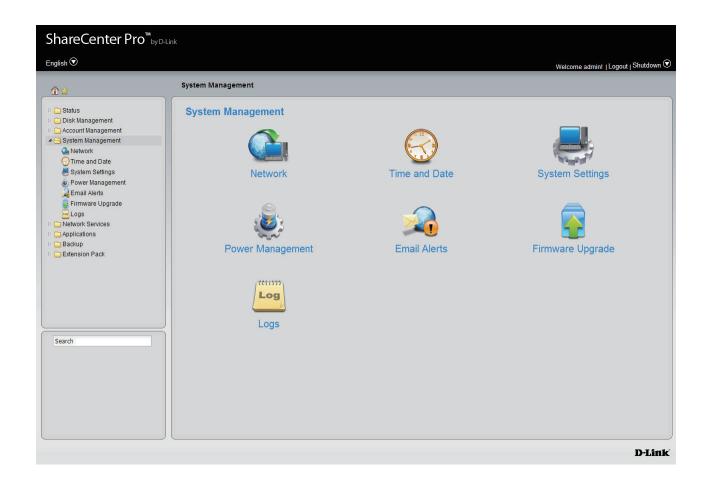


This window displays a summary of the configured information.

Click **Previous** to modify the settings.



System ManagementThis folder contains the Network, Time and Date, System Settings, Power Management, Email Alerts, Firmware Upgrade, and Logs. Click the folder to see the subcategories.



Network

Click the **Network** icon in the System Management window or the Network link in the left window to configure the Network.

LAN 1

Click the **LAN 1** tab to see the following window.

DHCP Client Click the radio button to obtain the IP address

from a DHCP server.

Static IP Click the radio button to assign a static IP address

to the ShareCenter.

Jumbo Frame Use the drop-down menu to select the larger

frame size than standard Ethernet frame size.

Gateway Enter the gateway IP address

for the ShareCenter.

VLAN Enable or disable the VLAN.

VLAN ID Enter a VLAN ID when VLAN is enabled.

Port Bonding Enable or disable port bonding which

is also known as port trunking.

Option Use the drop-down menu to select the

port bonding method. Available methods are Round Robin, Active Backup, XOR, Broadcast, 802.3ad, Adaptvie Transmit Load Balancing, and Adaptive Load Balancing.



LAN 2

Click the **LAN 2** tab to see the following window.

DHCP Client Click the radio button to obtain the IP address

from a DHCP server.

Static IP Click the radio button to assign a static IP address

to the ShareCenter.

IP Address Enter a static IP address.

Jumbo Frame Use the drop-down menu to select the larger

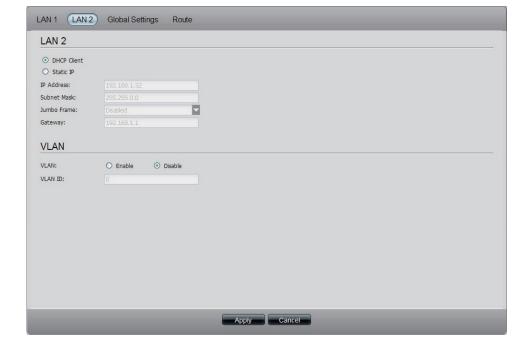
frame size than standard Ethernet frame size.

Gateway Enter the gateway IP address

for the ShareCenter.

VLAN Enable or disable the VLAN.

VLAN ID Enter a VLAN ID when VLAN is enabled.



Global Settings

Click the **Global Settings** tab to see the following window.

Host Name Enter the name of the ShareCenter.

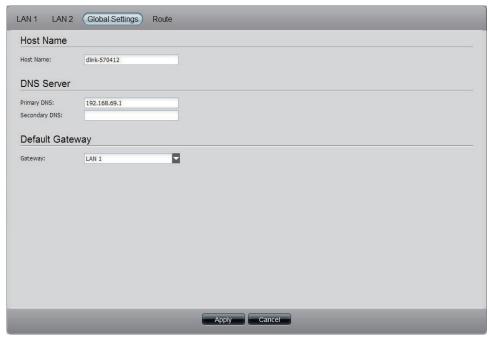
Primary DNS Enter the main DNS address for the ShareCenter.

Secondary Enter the secondary DNS address for the

DNS ShareCenter.

Gateway Use the drop-down menu to

select the LAN interface.



Route

Click the **Route** tab to see the following window.

Create Click to create a new routing path.

Edit Select a routing path and click the button to edit

the routing path.

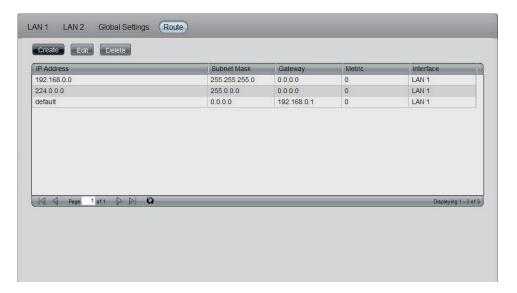
Delete Select a routing path and click the button to

remove the entry from the list.

Page Displays number of pages. You can enter a page

number in the field to jump to the specific page. Click First Page (M), Previous Page (M), Next Page (M) or Last page (M) to search for the group.

Refresh Click to update the group list.



Click the **Create** button under the Route tab to see the window.

Network Enter an IP address of the routing path.

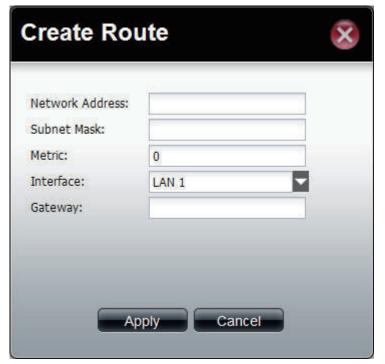
Address

Subnet Mask Enter the subnet mask for the IP address.

Metric Enter an integer cost metric for the route.

Interface Use the drop-down menu to select the interface.

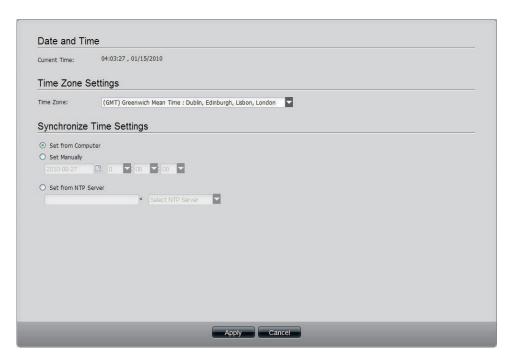
Gateway Enter the forwarding or next hop IP address.



Time and Date

Click the **Time and Date** icon in the System Management window or the Time and Date link in the left window to configure the time and date of the ShareCenter.

Current Time	Displays the current time of the ShareCenter.
Time Zone	Use the drop-down menu to select the time zone of your area.
Set from Computer	Click the radio button to synchronize the ShareCenter's time with your computer.
Set Manually	Click the radio button to set the time and date manually.
Set from NTP Server	Click the radio button and select a NTP server to synchronize the ShareCenter's time with the NTP server.



System Settings

Click the **System Settings** icon in the System Management window or the System Settings link in the left window to configure the system settings.

Save Configuration	Click the Save button to save the current settings to the selected location.
Load Configuration	Click the Browse button to locate the path for the configuration file and click Load to load the file.
Default Configuration	Click Restore to reset the ShareCenter back to the factory default settings.
Web Timeout	Enter a period of time. If the web is idle longer than the time, it will be automatically logged out.
System Overheat Temperature	Toggle between Celsius and Fahrenheit and enter a temperature. Once the system temperature is over the entered temperature;, the ShareCenter will automatically shut down.



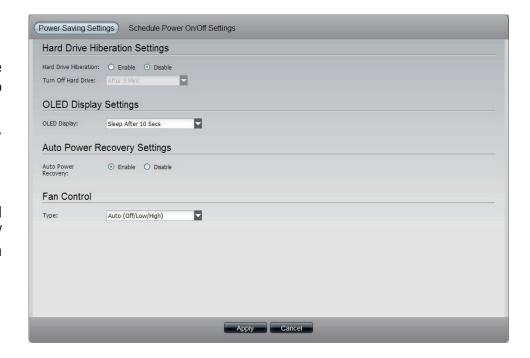
Power Management

Click the **Power Management** icon in the System Management window or the Power Management link in the left window to configure the system power settings.

Power Saving Settings

Click the **Power Saving Settings** tab to see the following window.

Hard Drive Hiberation	Click Enable to enable the function.
Turn Off Hard Drive	Use the drop-down menu to select an idle time, after which the hard drives will enter into hibernation mode.
OLED Display	Use the drop-down menu to select an idle time, after which the OLED will be turned off.
Auto Power Recovery	Click Enable to have the power restored when encountering a power failure.
Туре	Use the drop-down menu to select the fan speed modes. Available choices are Auto (Off/Low/ High), Auto (Low/High) and Manual (Always on High).



Schedule Power On/Off Settings

Click the **Schedule Power On/Off Settings** tab to see the following window. This function will be deactivated if the schedule is configured at the same time as the firmware update.

Schedule On & Click Enable to set a schedule for automatic system power on and off.

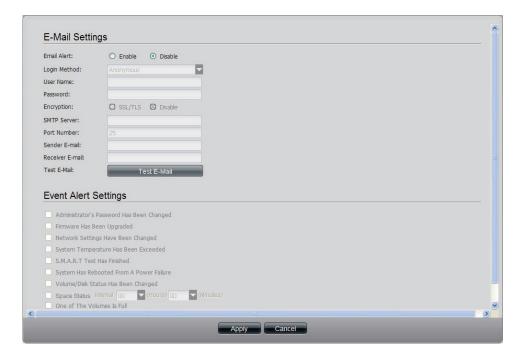
Schedule On & Use the drop-down menus to select the time of system power on and off.



Email Alerts

Click the **Email Alerts** icon in the System Management window or the Email Alerts link in the left window to configure the e-mail alert settings.

Email Alert	Click the radio buttons to enable or disable the e-mail alert function.
Login Method	Use the drop-down menu to select the login method. If the SMTP server requires authentication, select Login . If not, select Anonymous .
User Name	If Login is selected in Login Method , enter the user name of the e-mail account.
Password	If Login is selected in Login Method , enter the password of the e-mail account.
Encryption	Select SSL/TLS if the SMTP server requires authentication.
SMTP Server	Enter the IP address of the SMTP server.
Port Number	Enter the port number of the SMTP server.
Sender E-mail	Enter the sender's e-mail address.
Receiver E-mail	Enter the e-mail address that the e-mail alert sends to.
Test E-mail	Click the Test E-Mail button to send a test e-mail.
Event Alert Settings	Tick the check boxes to select the situation that will cause the e-mail alert to be sent out.



Firmware Upgrade

Click the **Firmware Upgrade** icon in the System Management window or the Firmware Upgrade link in the left window to update the firmware.

Current Firmware
Version

Firmware Date

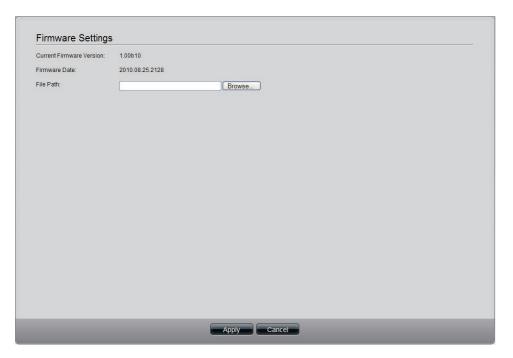
Displays the current firmware in the system.

Displays the date of the firmware.

Click the Browse button to locate the firmware. You must save the firmware to the local hard drive of your computer before

Click **Apply** to start updating the firmware.

upgrading the firmware.



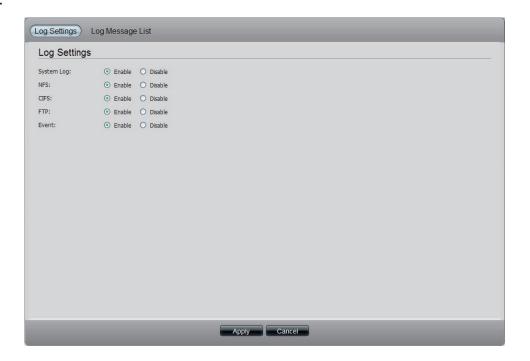
Log Settings

Click the **Log Settings** icon in the System Management window or the Log Settings link in the left window to configure the log settings.

Log Settings

Click the **Log Settings** tab to see the following window.

Log Settings Click the radio buttons to enable various situations which will be recorded in the logs.



Log Message List

Click the **Log Message List** tab to see the following window.

Refresh Log Click the button to update the log message list.

Clear Log Click the button to delete all the logs.

Save Log Click the button to save the logs to the local computer.

Severity The numbers below represent different levels of severity.

0: Emergency

1: Critical

2: Alert

3: Error

4: Warning

5: Notice

6: Info

7: Debug

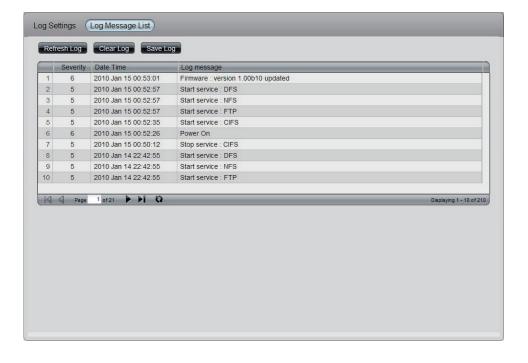
Date Time Displays the time and date for the log.

Log Message Displays detail information about the log.

Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (►), Previous Page (►), Next Page (►) or Last page (►) to search for

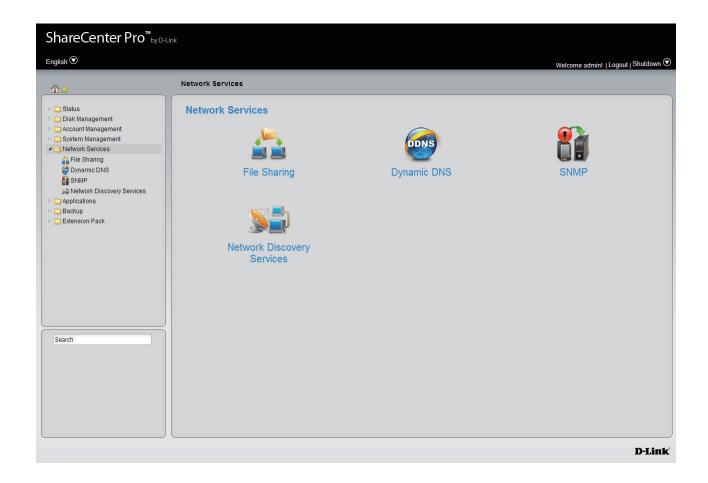
the group.

Refresh Click **t** to update the group list.



Network Services

This folder contains File Sharing, Dynamic DNS, SNMP and Network Discovery Services. Click the folder to see the subcategories.



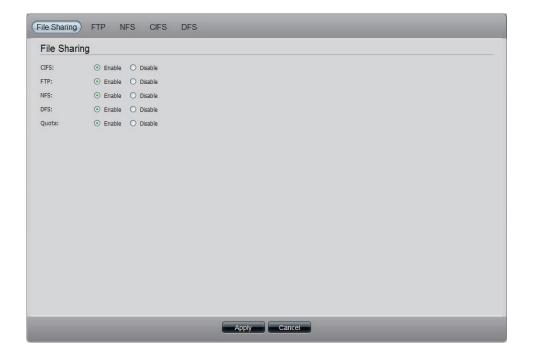
File Sharing

Click the **File Sharing** icon in the Network Services window or the File Sharing link in the left window to configure the network services.

File Sharing

Click the **File Sharing** tab to see the following window.

File Sharing Click the radio buttons to enable various network services.



FTP

Click the **FTP** tab to see the following window.

Control Port	The default port for FTP is 21. Enter a port number in the range of 1025 to 3688, 3690 to 49999, and 65501 to 65535.
Port Range of Passive FTP	The default port range for passive FTP is from 55536 to 55663. Click the Use the following port range radio button and manually enter the port range from 1025 to 65535.
Respond with external IP address for Passive mode	Click Enable to respond with external IP address for the passive FTP connection request.
Client Language	Use the drop-down menu to select the supported language for the FTP clients.
Max Connections	Use the drop-down menu to select the maximum number of concurrent FTP connection.
Max Connections per IP	Use the drop-down menu to select the maximum number of concurrent FTP per IP connection.
Connection Idle Time	Use the drop-down menu to select the time that the FTP server logs out the user after this period of idle time.
Bandwidth Restriction	Click Enable to restrict the bandwidth of each FTP connection. Enter the number in KB/s for the maximum speed of upload and download.
Anonymous Support	Click Enable to allow anonymous FTP to log in.
SSL/TLS Connection Only	Click Enable to only allow SSL or TLS connection requests from the FTP clients.



NFS

Click the **NFS** tab to see the following window.

Create Click to add a new NFS client.

Edit Select a mount path and click the button to edit the NFS client.

Delete Select amount path and click the button to remove the entry from the list.

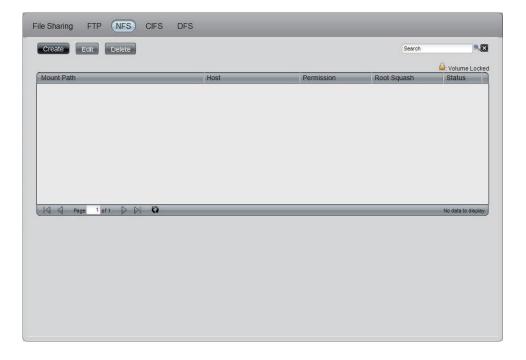
Search Enter the search keyword and click

to search for the specific entry. Click

to clear the search field and see all the entries.

Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.

Refresh Click to update the group list.

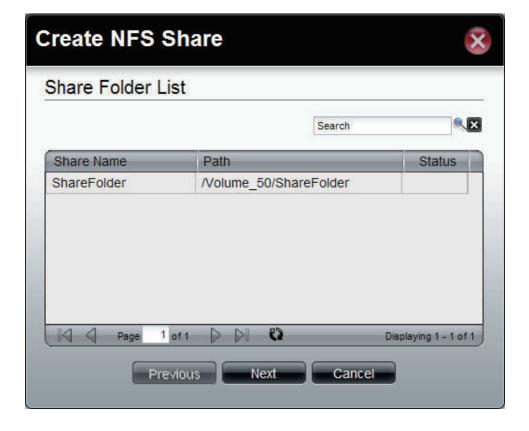


Refresh

Click the **Create** button to see this window to select a share folder.

Search
Enter the search keyword and click to search for the specific entry. Click to clear the search field and see all the entries.
Page
Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.

Click to update the group list.



This window is use to configure the permission of the NFS.

Permission Use the drop-down menu to assign NFS access

rights, Read or Read/Write.

Root Squash Select Root Squash and the system maps

requests from uid/gid 0 to the anonymous uid/gid.

Host Enter the host name.



CIFS

Click the **CIFS** tab to see the following window.

Description	Enter the description of your device.
Workgroup	Click the radio button to choose the system to be in a workgroup. Enter the name of the workgroup in the field.
Active Directory	Click the radio button to choose the system to be in an Active Directory (AD).
User Name	Enter the AD server account name.
Password	Enter the AD server account password.
DNS	Enter a DNS IP address to analyze the domain name of the AD server.
Workgroup	Etner the name of the workgroup which should be the same as the computers on the network.
Realm Name	Enter the AD server domain name.
AD Server Name	Enter the AD server hostname.



DFS

Click the **DFS** tab to see the following window.

Create Click to add a new DFS share.

Edit Select a local share name and click the button to edit the DFS share.

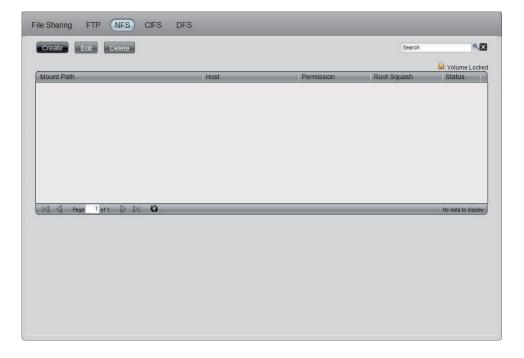
Delete Select a local share name and click the button to remove the entry from the list.

Search Enter the search keyword and click to search for the DFS share. Click to clear the search field and see all the entries.

Page Displays number of pages. You can enter a page number in the field to jump to the specific page.

Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.

Refresh Click to update the group list.



name

Click the **Create** button to see this window to add a new DFS share.

Host Enter an IP address, a host name or a URL in the field.

Remote Enter a remote share folder location manually, or click the Get Host Share Folder button to search for one.

Local share Enter the local share name in the field.



Dynamic DNS

Click the **Dynamic DNS** icon in the Network Services window or the Dynamic DNS link in the left window to configure the dynamic DNS.

Dynamic DNS Click the radio button to enable or disable the

dynamic DNS function.

Server Address Use the drop-down menu to select a dynamic

DNS service provider.

Host Name Enter the host name.

Username or Key Enter the username or key provided by the

dynamic DNS service provider.

Password or Key Enter the password or key provided by the

dynamic DNS service provider.

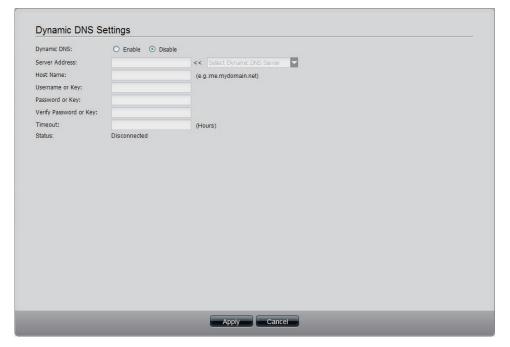
Verify Password Re-type the password or key.

or Key

Timeout Enter a time in hours for periodic updates

from the dynamic DNS provider.

Status Displays the current status to the server.



SNMP

Click the **SNMP** icon in the Network Services window or the SNMP link in the left window to configure the SNMP settings. Simple Network Management Protocol (SNMP) is used to monitor the conditions of the network-attached devices.

SNMP Enable or **Disable** SNMP.

SNMP Community Enter the name of the SNMP community.

Notification Enable or **Disable** trap support.

notification.



Network Discovery Services

Click the Network Discovery Services icon in the Network Services window or the Network Discovery Services link in the left window to configure the settings.

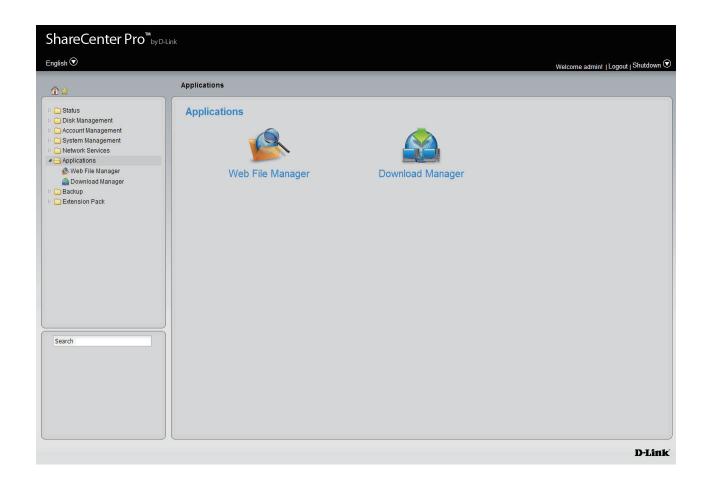
UPnP Discovery

Click **Enable** to allow the ShareCenter to be discovered on a network via the UPnP discovery protocol.

LLTD Click Enable to allow the ShareCenter to be discovered by the network map under Windows Vista or Windows 7.



ApplicationsThis folder contains the Web File Manager and Download Manager. Click the folder to see the subcategories.



Web File Manager

Click the **Web File Manager** icon in the Applications window or the Web File Manager link in the left window to configure the settings. This window is used to start a web server for users to upload and download files through the web browser.

Server Click the radio buttons to enable or disable

the server.

HTTP Port Enter the port number for the function. Port 80

cannot be used as it is used for administration

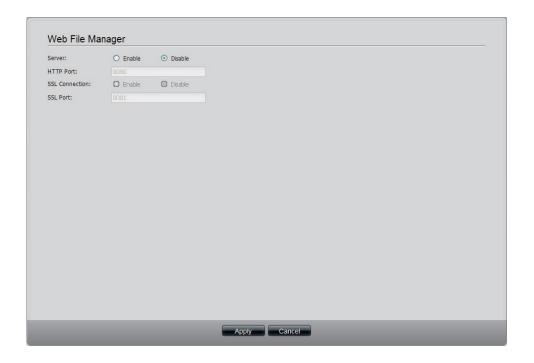
purposes.

SSL Connection Click the radio buttons to enable or disable

the HTTPS connection.

SSL Port Enter the port number for the HTTPS

connection.



Download Manager

Click the **Download Manager** icon in the Applications window or the Download Manager link in the left window to configure the settings. This window is used to schedule downloading files from FTP or HTTP sites.

Create Click to add a new download job.

Edit Select an entry and click the button to edit.

Delete Select an entry and click the button to remove the entry from the list.

Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.

Refresh Click to update the group list.



Create a Downloading Job

Click the **Create** button to see the window.

Download Type Toggle between the FTP or HTTP download

methods.

Login method Click the **Account** radio button when a password

is required for downloading files. Click the **Anonymous** where there is no password

required for downloading files.

User Name Enter a user name for downloading.

Password Enter a password for downloading.

Type Toggle between File or Folder to download the

specific file or all files in a specific folder.

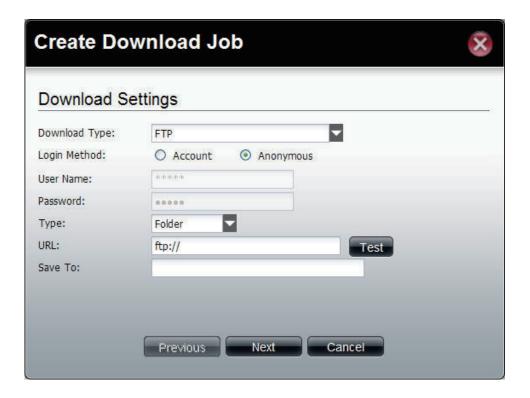
URL Enter the FTP, HTTP or local site address for the scheduled download. Click the **Test** button

to see if the URL can be connected.

Save To Click the field to show the available folders. Click

the **Create** button to add a new folder. Double-

click a folder to select it.



This window is used to set the schedule for downloading.

Download

Use the drop-down menu to have repeated scheduled download time every day, week or month. Select None to disable the recurring download.

When

Click to select year and date for downloading.

Time

Use the drop-down menu to select downloading time.

Weekly

Select a day of the week for recurring download.

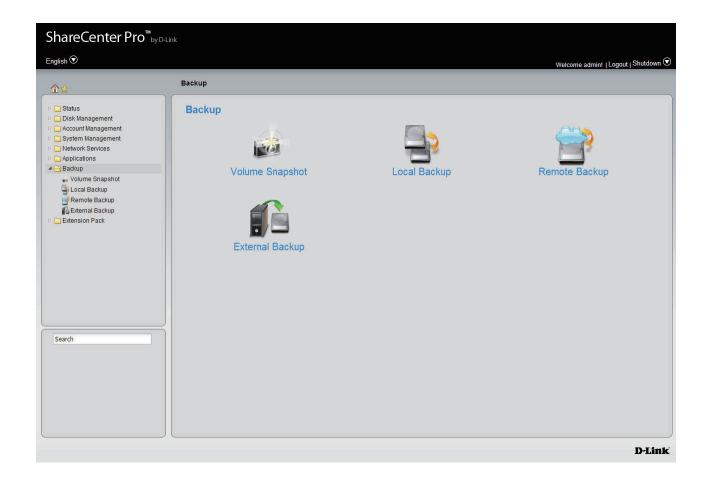
Monthly

Select the month for recurring download.



Backup

This folder contains the Volume Snapshot, Local Backup, Remote Backup, and External Backup. Click the folder to see the subcategories.



Volume Snapshot

Click the **Volume Snapshot** icon in the Backup window or the Volume Snapshot link in the left window to configure the settings. This window is used to create, edit or delete a snapshot job. It also allows you to take a snapshot of a volume. The ShareCenter supports up to 10 snapshot jobs and each job can have maximum 20 snapshots.

Create Click to add a new snapshot job.

Edit Select an entry and click the button to edit.

Delete Select an entry and click the button to remove the entry from the list.

Take Click the button to take a snapshot of a volume.

Show Click the button to show the calendar indicating on which dates a snapshot had been taken.



Create a Snapshot Job

Click the **Create** button to see the window.

Folder Click the field to show the available folders. Click a folder to see the sub-folders. Double-click a folder to select it.

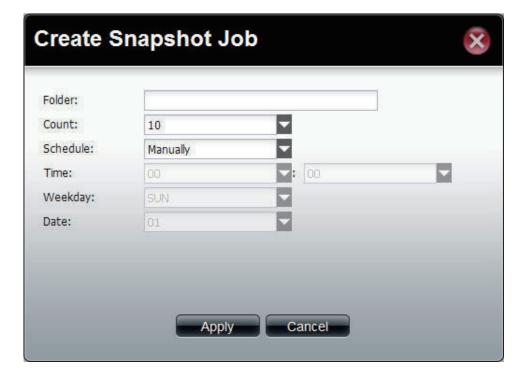
Count Use the drop-down menu to select the number of snapshots for this job.

Schedule Use the drop-down menu to select manually schedule the job, or schedule to take the snapshot on a daily, weekly or monthly basis.

Time Use the drop-down menus to select hour and minute of the day.

Weekday Use the drop-down menu to select the day of the week.

Date Use the drop-down menu to select the day of the month.



Show Snapshot

Click the **Show Snapshot** button to see the calendar.

Calendar

Find the year and month of the snapshot on that day. The date cell is highlighted when there are snapshots on that day. Click the cell to view details of the volume's snapshot(s).

Click **Close** to go back to the Volume Snapshot window.



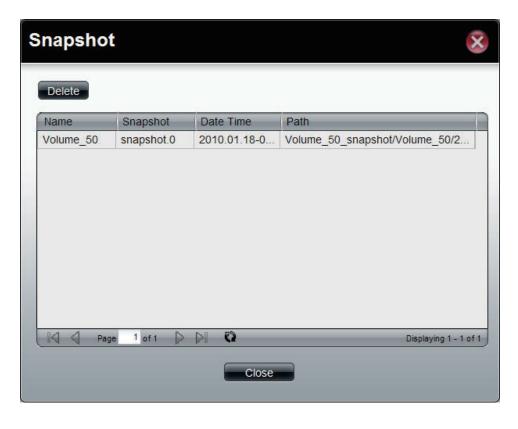
The window displays the volume's snapshot(s) information.

Delete Select an entry and click the button to remove the entry from the list.

Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.

Refresh Click to update the group list.

Click **Close** to go back to the previous window.



Local Backup

Click the **Local Backup** icon in the Backup window or the Local Backup link in the left window to configure the settings. This window allows files and folders to be backed up to local folders.

Create Click to add a new backup job.

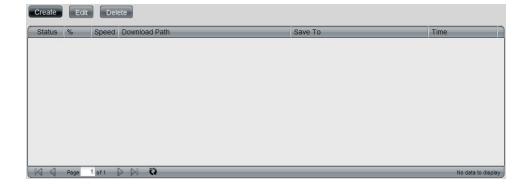
Edit Select an entry and click the button to edit.

Delete Select an entry and click the button to remove the entry from the list.

Page Displays number of pages. You can enter a page number in the field to jump to the specific page.

Click First Page (), Previous Page (), Next Page () or Last page () to search for the group.

Refresh Click to update the group list.



Create a Local Backup Job

Click the **Create** button to see the window.

Click the **Account** radio button when a **Login Method** password is required for the procedure. Click the Anonymous where there is no password required for the procedure. Enter a user name for backup. User Name Enter a password for backup. Password Toggle between File or Folder to download the Type specific file or all files in a specific folder. Path Enter the path manually, or click Local to locate the path. Click the **Test** button to see if the path can be connected to. Click the field to show the available folders. Click Save To the Create button to add a new folder. Doubleclick a folder to select it. Tick the check box to enable the incremental Incremental Backup backup method. All backups after the first full

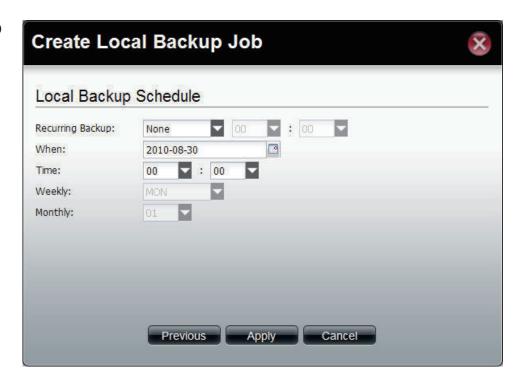
backup will be on an incremental basis. Only the changes since the last backup will be backed up.



This window is used to set the schedule for local backup jobs.

Recurring
 Backup
 Backup. This can be done on a daily, weekly or monthly basis. Select None to disable the recurring backup.

 When
 Click to select year and date for backup.
 Time Use the drop-down menu to select the time for backup.
 Weekly Select a day of the week for recurring backup.
 Monthly Select the month for recurring backup.



Remote Backup

Click the **Remote Backup** icon in the Backup window or the Remote Backup link in the left window to configure the remote backup.

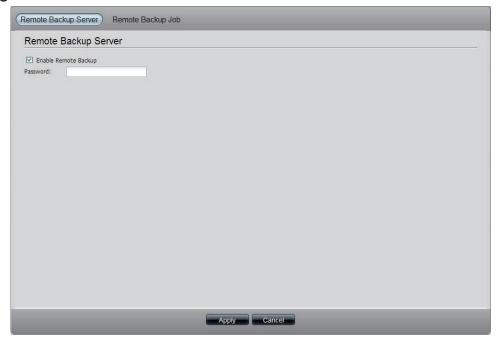
Remote Backup Server

Click the **Remote Backup Server** tab to see the following window.

Enable Remote Backup Tick the check box to enable the function.

Password

Enter the password for backing up files and folders from or to the ShareCenter. This is the remote backup password. The password for the remote NAS should be the same as the password of the ShareCenter.



Remote Backup Job

Click the **Remote Backup Job** tab to see the following window.

Create Click to add a new remote backup job.
 Edit Select an entry and click the button to edit.
 Delete Select an entry and click the button to remove

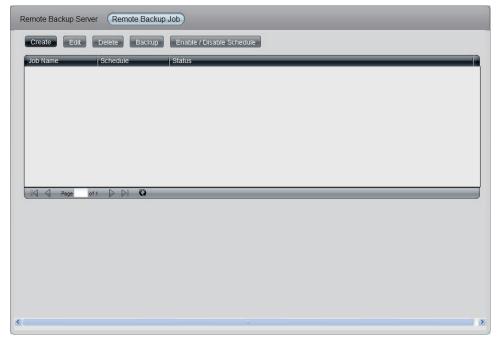
the entry from the list.

Backup Click the button to back up.

Enable/Disable Click the button to enable or disable the schedule **Schedule** remote backup function.

Page Displays number of pages. You can enter a page number in the field to jump to the specific page. Click First Page (♣), Previous Page (♣), Next Page (♣) or Last page (▶) to search for the group.

Refresh Click to update the group list.



Click Create to see the window.

Server Type Use the drop-down menu to select between D-Link NAS Server or Rsync Server.



This window allows you to configure the source settings.

Job Name Enter the name of the remote backup job.

Folder Path Click the field to select the source file/folder to be backed up remotely.



This window is used to configure the destination settings.

Password Enter the IP address of the server.

Password Encryption Support

Keep Existing File Tick the check box to keep the existing file the same (not overwrite) at the remote server and create another backup copy.



This window is used to configure the destination path.

Destination Path Click the field to select the destination path.



This window is used to schedule the remote backup job.

Recurring
Backup



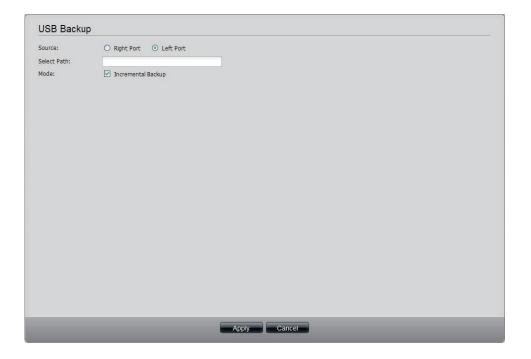
External Backup

Click the **External Backup** icon in the Backup window or the External Backup link in the left window to configure the settings. This window is used to back up data to external devices.

Source Click the USB port that is connected to an external USB storage device.

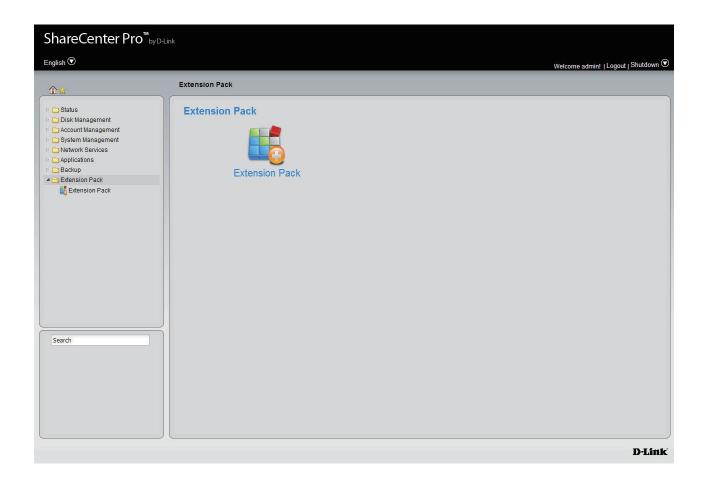
Select Path Click the field to show the available folders. Click the **Create** button to add a new folder. Double-click a folder to select it.

Mode Tick the Incremental Backup check box to enable the incremental backup method. All backups after first full backup will be on an incremental basis. Only the changes since the last backup will be backed up.



Extension Pack

This folder contains the Extension Pack. Click the folder to see the subcategories.



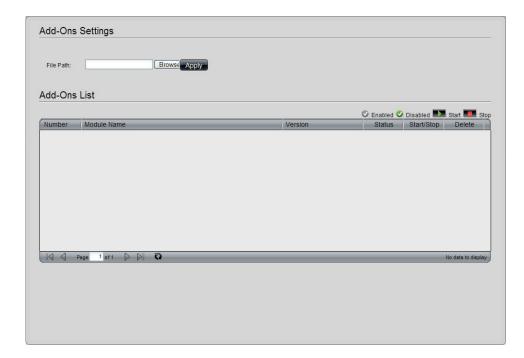
Extension Pack

Click the **Extension Pack** icon in the Extension Pack window or the Extension Pack link in the left window to configure the add-ons.

File Path Click the **Browse** button to locate the file. Click Apply to add the file to the Add-ons list. **Add-ons List** Displays a list of all add-ons modules. Displays if the module is currently activated Status (Enabled) or deactivated (Disabled). Activate/Deactivate the module. Start/Stop Remove the add-on module from the list. Delete Displays number of pages. You can enter a page Refresh number in the field to jump to the specific page. Click First Page (

■), Previous Page (

), Next Page () or Last page () to search for the group. Page Click to update the group list.

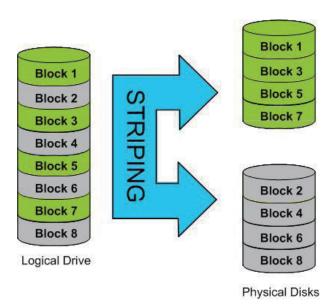


Knowledge BaseWhat is RAID?

RAID, short for Redundant Array of Independent Disks, is a combination of two or more disks with the aim of providing fault tolerance and improving performance. There are several different levels of RAID, with each one providing a different method of sharing or distributing data among the drives. The ShareCenter supports **JBOD**, **RAID 0**, **RAID 1**, **RAID 5**, **RAID 6** and **Standalone**.

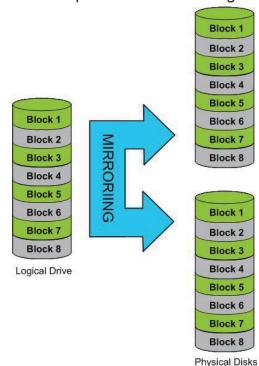
RAID 0 RAID 0 provides data striping, which spreads out blocks of data over all drives, but does not provide data redundancy.

Although performance is improved, the lack of fault tolerance means that if one drive fails, all data in the array will be lost.



RAID 1 Provides mirroring over multiple disks, with the same read/write speed of a single disk. A RAID 1 array can only be as large as it's smallest member disk.

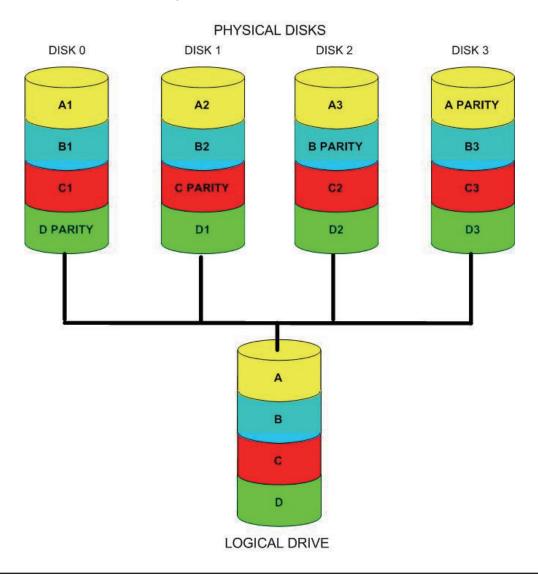
Because the data is stored on multiple disks, RAID 1 provides fault tolerance and protection, in addition to performance advantages.



RAID 5 provides data striping with distributed parity, which stores information that can be used to reconstruct data. A RAID 5 array will be the size of all the combined disks capacity less the capacity of one disk, e.g. If there are 4x 80GB disks in the array, the arrays capacity will be 240GB (3x80GB).

Implementing RAID 5 on the ShareCenter allows it to continue operating even if one of the disks fails.

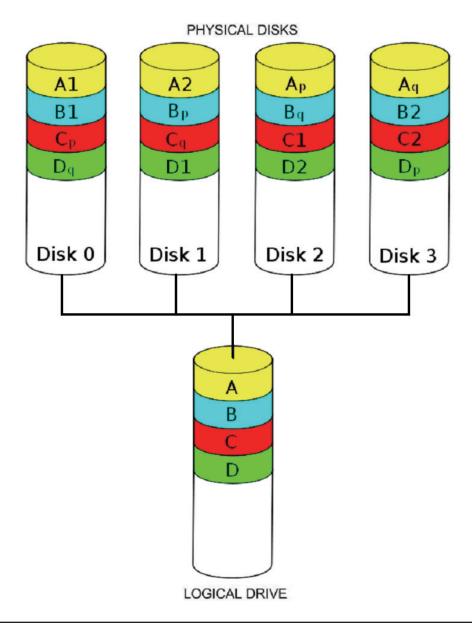
The diagram below indicates the operation of RAID 5:



RAID 6 is an extension of RAID 5. It adds an additional parity block by using block-level striping with two parity blocks distributed across all the member disks.

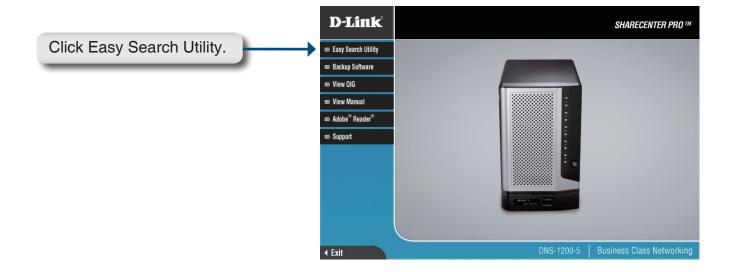
RAID 6 allows the array to continue operating even if two of the disks fail.

The diagram below indicates the operation of RAID 6:



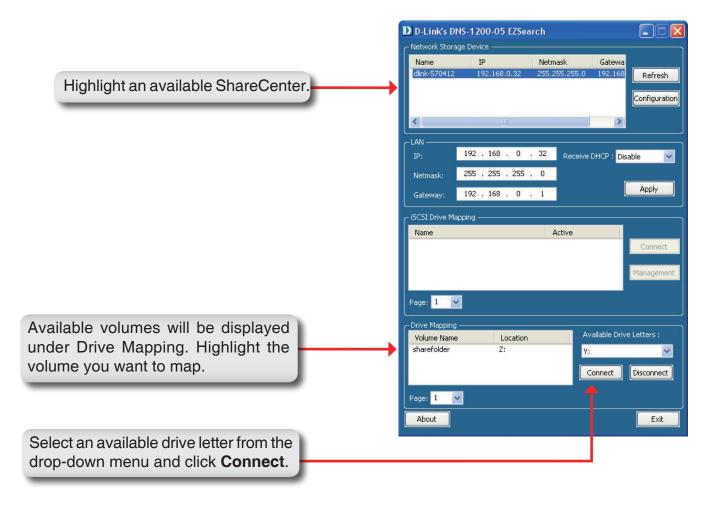
Mapping a Drive

You can use the D-Link Easy Search Utility to map drives to your computer. Insert the ShareCenter CD into your CD-ROM drive.

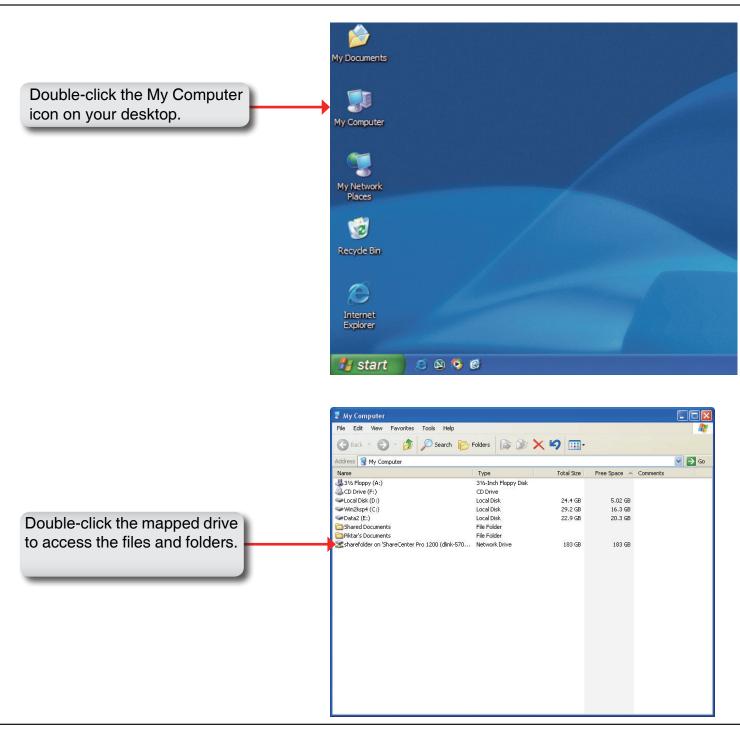


The Easy Search Utility will load and detect any ShareCenter devices that are on the local network.

If the ShareCenter you are working with does not show up in the device list, click Refresh.



Once connected, your mapped drive(s) will appear in My Computer.

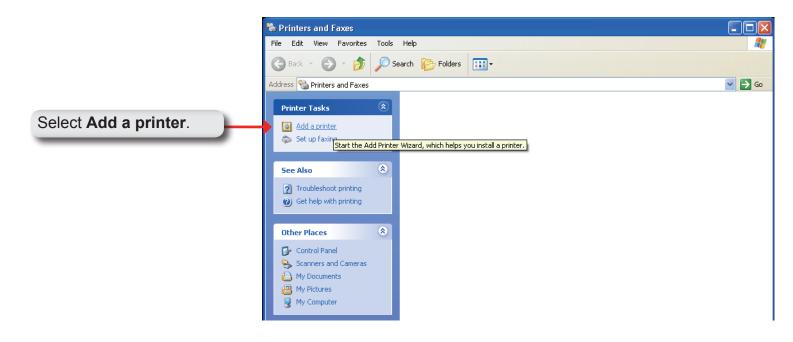


USB Print Server

The ShareCenter features a built-in USB print server, giving users the ability to share a printer on their local network. Connect a USB printer to the USB port on the back of the ShareCenter. It is important to ensure that any of the printer manufacturer's drivers are already installed on any computer you want to print from.

To add a printer:





The Windows® Add Printer Wizard will launch:

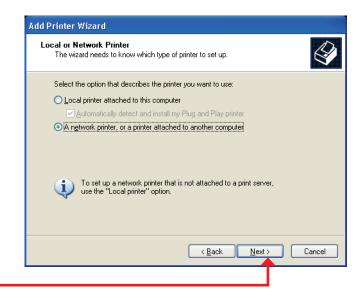
Click **Next** to continue.

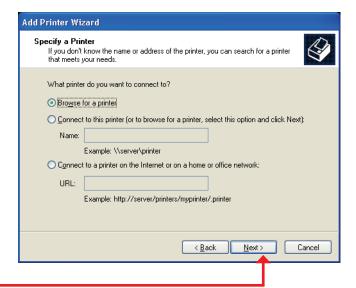


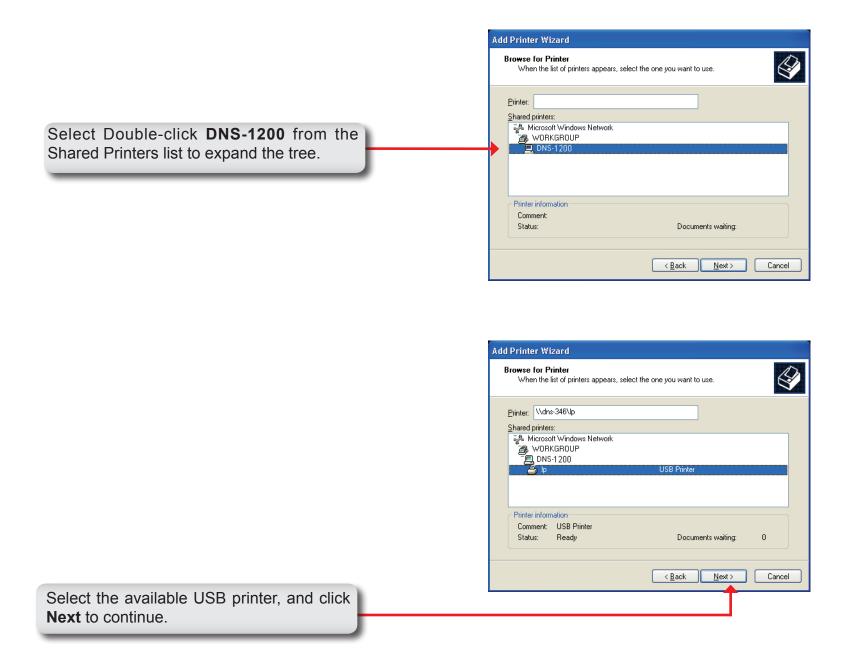
When prompted to choose a local, or network printer, select "A network printer, or a printer attached to another computer."

Click Next to continue.

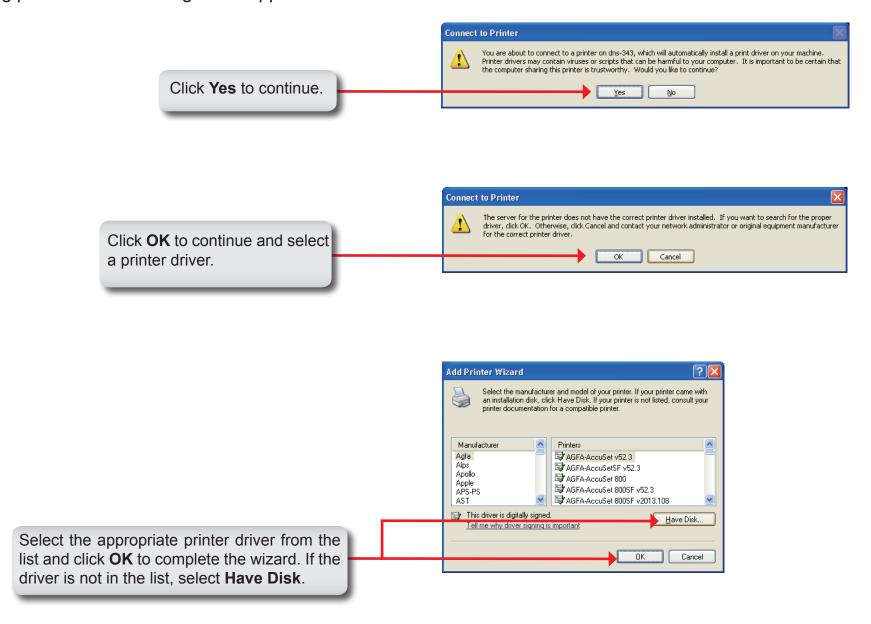
Select "Browse for a printer" and click Next to continue.

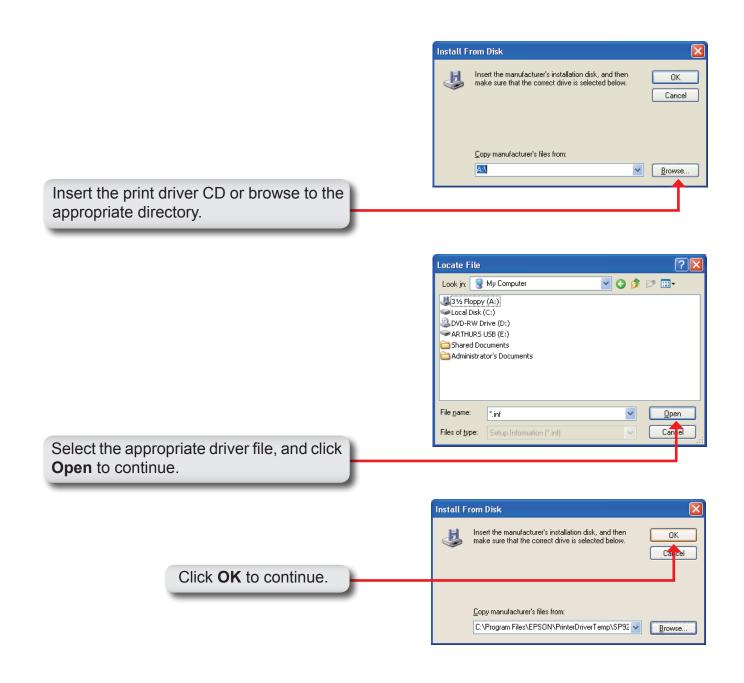


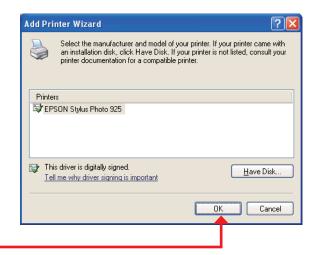




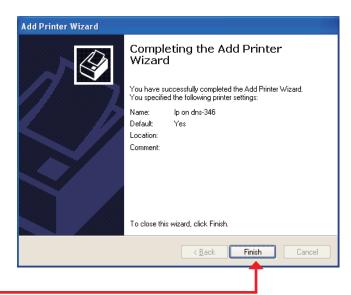
The following printer driver messages will appear:



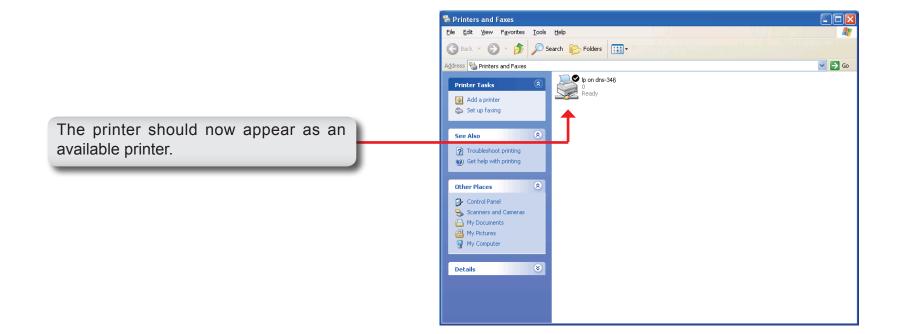




Verify the driver is correct, and click **OK** to continue.



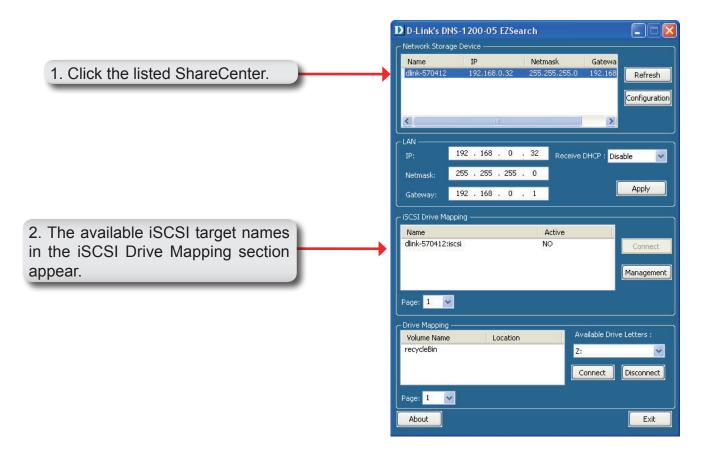
The wizard will install the printer drivers, and return a completion screen. Click **Finish**.



iSCSI Drive Mapping

The iSCSI Drive Mapping is used to manage the iSCSI settings on the ShareCenter.

Carry out the following to configure the iSCSI settings:



Note: If you cannot see the latest list, click the **Refresh** button to update the status.

Note: You will need to create iSCSI volume in the **Disk Management** -> **iSCSI Target**. Click the **iSCSI Targets** tab to see the iSCSI target name in this section.

The different parameters in the iSCSI Drive Mapping section are described below:

Name Displays the names of the available

iSCSI targets on the ShareCenter.

Active Displays *Yes* if the target is active. Displays *No* if the target is not active.

Connect/Disconnect Choose a target from the list and click

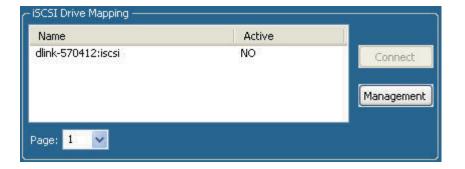
the **Connect/Disconnect** button to activate/deactivate the Target. If CHAP authentication has been enabled, then a username and password will be

required.

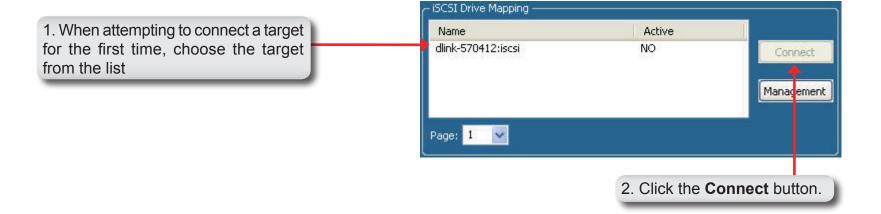
Management Click the button to see the Management window. The window allows you to

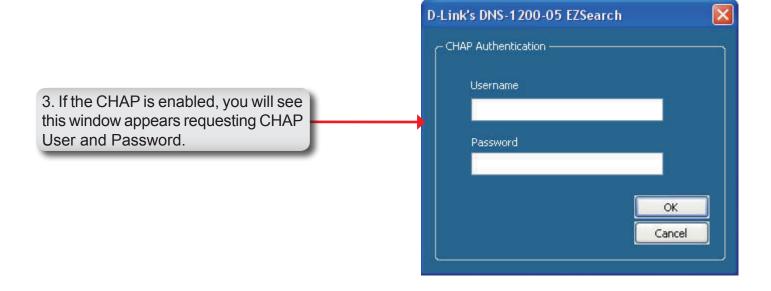
add, delete, mount and unmount the

partition.



Configuring Targets





You will see the Format window.

The different parameters in the Format window are described below:

Target Displays the iSCSI target name you chose.

Partition Size Tick the Use Maximum Available

Space checkbox to specify that the maximum available space on the disk will be used to create the new partition. To specify a size un-tick the checkbox and type in the capacity size of the partition (in megabytes) in the

Megabytes field.

Format Type Choose whether to format the new

partition with NTFS or FAT32 by ticking

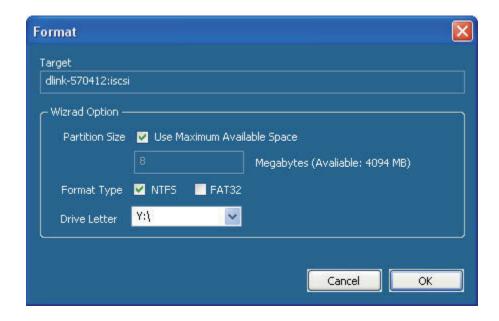
the appropriate checkbox.

Drive Letter Choose the drive letter that you want to

allocate to the iSCSI partition from the

drop-down menu.

When you have finished configuring the Target Settings, click the **Format** button to see the window below



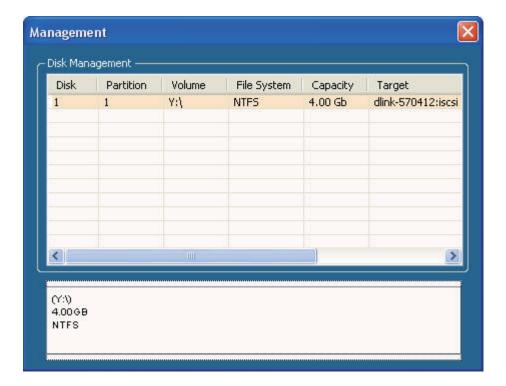
Configuring Disks

This window appears after clicking the **Format** button. Or, select a target in the iSCSI Drive Mapping list and click the **Management** button to see the window.

The Management window allows you to manage partition on the disks installed in the ShareCenter and Mount / Unmount the disks installed in the ShareCenter.

The Disk Management section displays the following parameters:

Disk Displays the ID number of the disk installed in the ShareCenter. **Partition** Displays the partition number of the disks partition. Displays the drive letter that the partition Volume is mapped to on the client machine. Displays the File System that the File System partition was formatted with. Displays the total capacity of the Capacity partition. Displays the iSCSI target name of the **Target** partition.



Adding a new partition



The Partition Manager window opens:

To add a partition, configure the parameters as explained below:

Partition Size Tick the Use Maximum Available

Space check box to specify that the maximum available space on the disk will be used to create the new partition. To specify a size, un-tick the check box and type in the capacity of size of the partition (in megabytes) in the **Megabytes** field.

wegabytes field

Format Type Choose whether to format the new

partition with NTFS or FAT32 by ticking

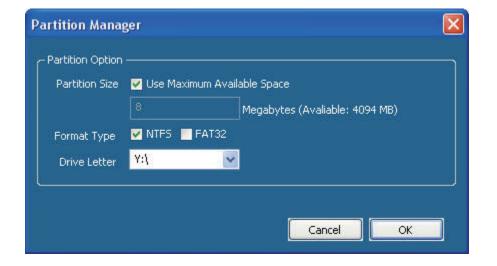
the appropriate checkbox.

Drive Letter Choose the drive letter that you want to

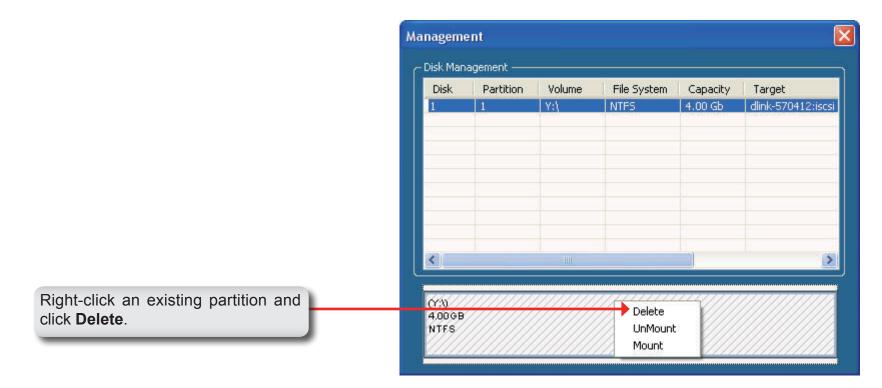
allocate to the iSCSI partition from the

drop-down menu.

When you have finished configuring the partition settings, click the **Format** button to add the new partition.

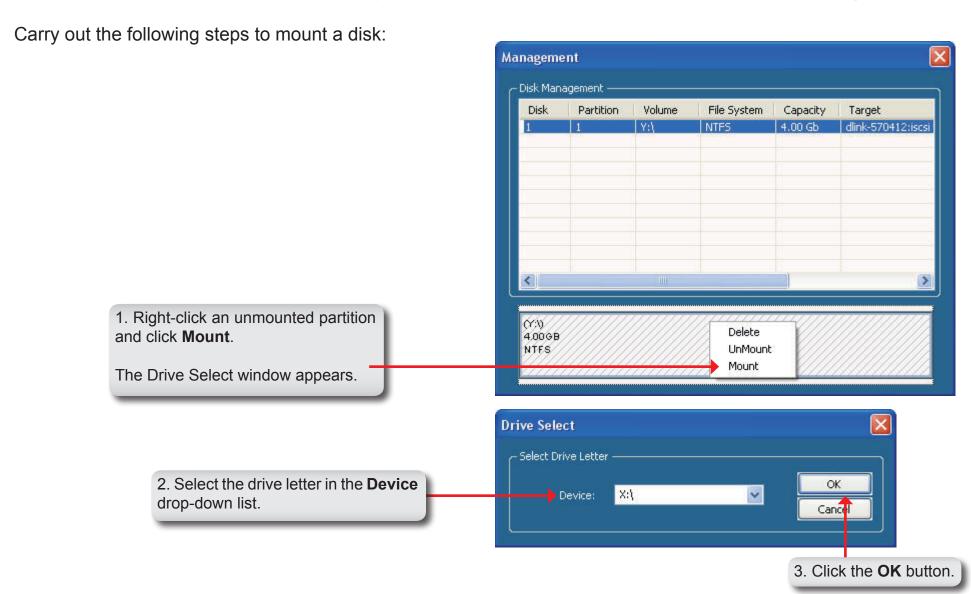


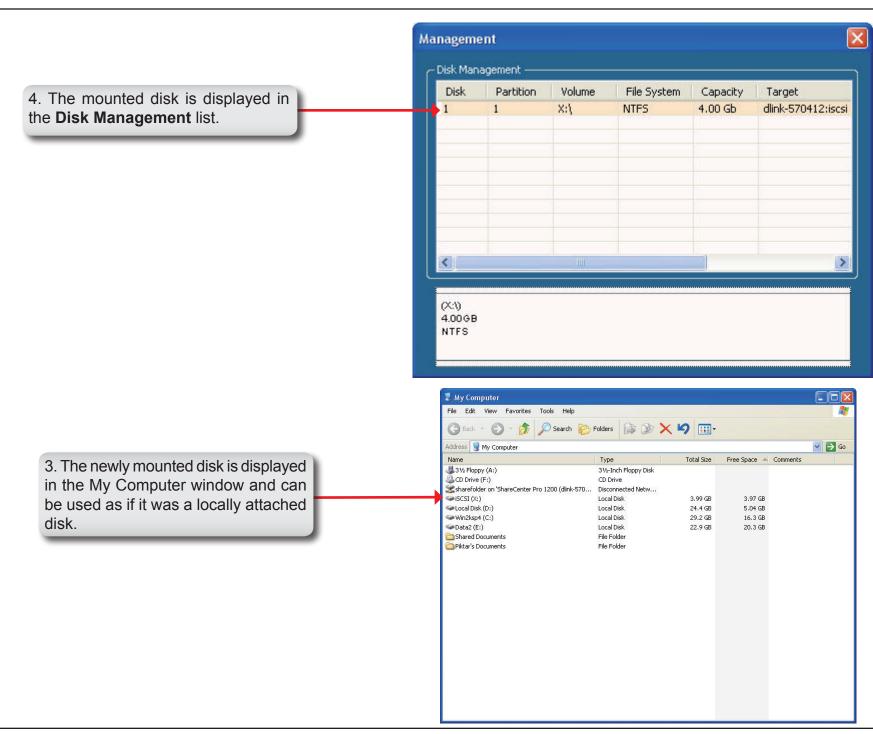
Deleting an existing partition



Mounting Disks

When a partition is not mounted, a * (star) symbol will appear in the Volume column in the **Disk Management** list.





Hot-swap Function

The ShareCenter supports hot-swap drive trays. You can eject or insert 3.5" SATA hard drive(s) when the ShareCenter is operating.

However, if the hard drives are created into various levels of RAID, you cannot hot swap all the hard drives at the same time. Hot swapping all the hard drives will cause a loss of data, and the RAID volume will need to be re-created again. Different levels of RAID required various numbers of hard drives remaining in the ShareCenter.

- **Standalone/JBOD/RAID O:** The data will be lost and the volume will crash, if any of the hard drives are hot swapped.
- **RAID 1:** You can hot swap the hard drives as long as one of the hard drives in the mirror is still in the ShareCenter. Removal of all hard drives will result in a loss of all data and volume will have crashed.
- **RAID 5:** In a RAID 5 volume, it is only possible to hot swap 1 hard drive at a time without losing all data. This is because a RAID 5 volume can only tolerate the loss of 1 hard drive and still continue to work. After hot swapping a hard drive, the volume must first be rebuilt before another hard drive can be hot swapped, otherwise this will also result in a loss of all data and the RAID volume will have crashed.
- **RAID 6:** In a RAID 6 volume, it is possible to hot swap 2 hard drives at a time without losing all data. This is because a RAID 6 volume can only tolerate the loss of 2 hard drives and still continue to work. After hot swapping 2 hard drives, the volume must first be rebuilt before another hard drive can be hot swapped, otherwise this will also result in a loss of all data and the RAID volume will have crashed.

You can check the RAID configuration from the **Disk Management** -> **Volume** page on the Web UI. When hot swapping hard drives, you will see the changes in the **Disk(s)** column. Hot swap one of the hard drives, make sure the Disk number has disappeared from the **Disk(s)** column, and then hot swap the next hard drive.

Storing non-English Character Files

By default the ShareCenter will support Unicode which is an industry standard allowing computers to consistently represent and manipulate text expressed in most of the world's writing formats.

CE Mark Warning:

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.