English

BUFFALO

TeraStation PRO WSS
User Manual

Buffalo Inc.
www.buffalotech.com

35012014 ver.02

Contents

Chapter 1
Opening Windows Storage Server

Opening Windows Storage Server

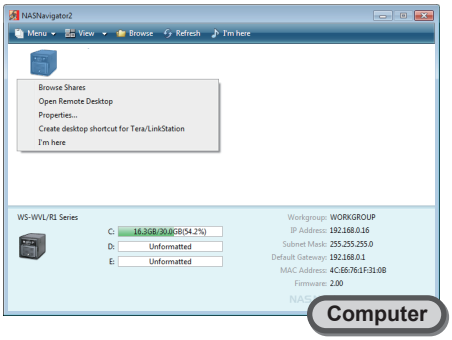
To open Windows Storage Server, perform the following procedure.

> If using Mac OS X , download and install "**Remote Desktop Connection Client for Mac 2**" from www.microsoft.com.
> If using Mac OS X 10.3.9, use version 1.0.3 instead.

1 Double-click the Buffalo NAS Navigator2 icon on your desktop.

In Mac OS, click the Buffalo NAS Navigator2 icon in the Dock.

2



In NAS Navigator2, right-click (for a Mac, click while holding down the Control key) the TeraStation icon and select [Open Remote Desktop].

Notes:

- When two or more LinkStations or TeraStations are connected on the same network, multiple icons will be displayed. Select the TeraStation for the remote desktop that you want to open.
- The IP address and other unique information for the TeraStation can be confirmed by selecting the TeraStation icon.
- If the message "The identity of the remote computer cannot be verified. Do you want to connect anyway?" is displayed, click [Yes] or [Continue].

3

Enter the username and the password, then click [OK].

By default, the username and password are as follows.

> Username：**Administrator**
>
> Password：**password**
>
> After logging in, changing of the password from the default is recommended for security reasons.

4 Windows Storage Server now opens in remote desktop.

Windows Storage Server is now open.

Chapter 2
Windows Update

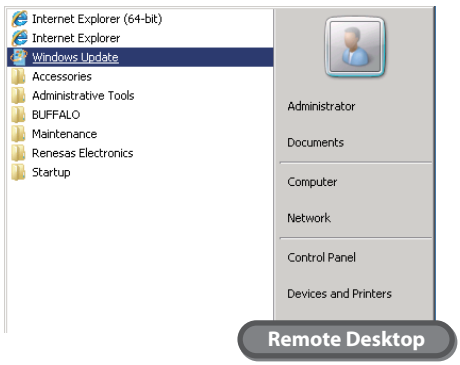
Windows Update

Note:

- To perform Windows Update, the TeraStation must be connected to the Internet.

For best results, Windows Storage Server should be updated regularly. Use Windows Update as described below.

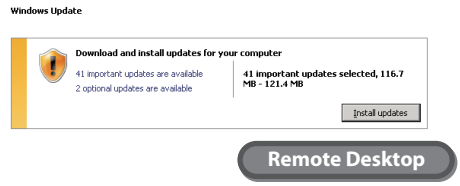
1



In Windows Storage Server, navigate to [Start] - [All Programs] - [Windows Update].

2 Click [Check for updates].

3



Click [Install updates].
The Internet Explorer plug-ins required for Windows Update are installed.

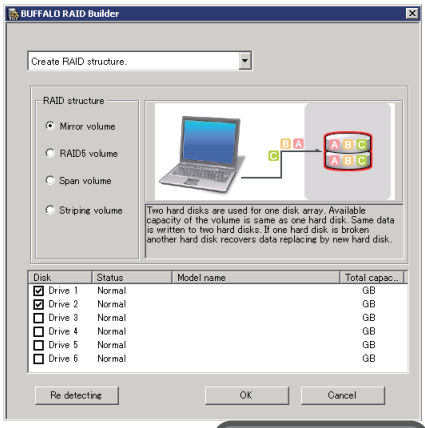
Follow the on-screen instructions to perform the update.

This completes the Windows Update process.

Note:
Installing antivirus software on the TeraStation is recommended.
Connect a USB CD/DVD drive to the TeraStation's USB port, load the anti-virus software CD into the CD-ROM drive, and install.

Chapter 3
Software

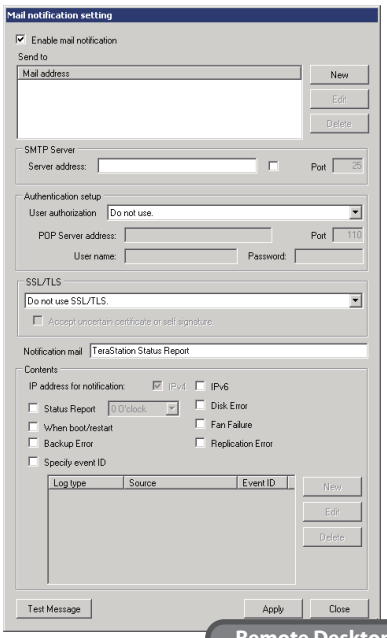
RAID Builder



Remote Desktop

RAID Builder is used when modifying the RAID array. Please refer to page 7 for details.

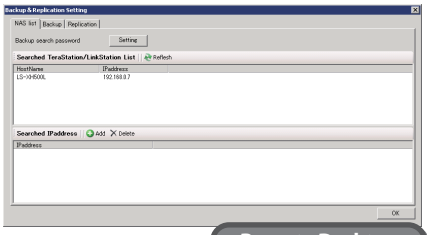
Mail Notification



Remote Desktop

With Mail Notification, you can configure the TeraStation to send you an email when settings are changed or an error occurs. Please refer to page 37 for details.

Backup & Replication Settings

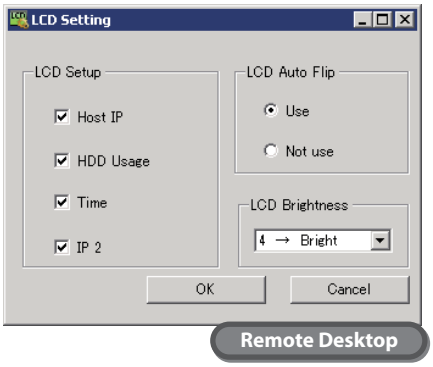


Use this to back up TeraStation data or configure replication.

For details, see pages 16 and 20.

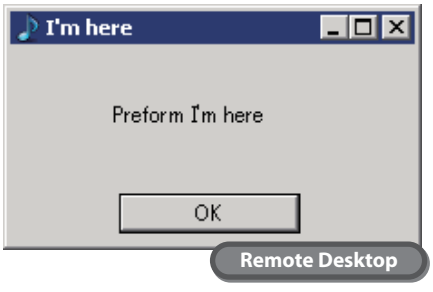
LCD Settings

This opens the settings for the LCD panel of the TeraStation.
The available settings are shown below.



LCD Setup	The item displayed on the LCD panel of the TeraStation can be selected from [Host IP], [HDD Usage], [Time], and [IP 2].
LCD Auto Flip	This sets whether the display of the item on the LCD panel of the TeraStation is automatically switched at fixed intervals.
LCD Brightness	The brightness of the LCD panel backlight can be adjusted to one of five levels.
OK	This saves the current settings.
Cancel	This cancels the settings changes and closes the screen.

I'm here



Click [OK] to play a short melody from the TeraStation. Use this to find out which TeraStation you are setting when managing multiple TeraStations.

Chapter 4
Creating Volumes

Volume Types

The features of each volume type are explained below.

Notes:

- When a volume type is changed, all data stored in that volume is erased. Before changing the volume type, be sure to always back up any important data.
- In this manual, "recover" refers to the process of returning the state within the TeraStation (including the data) to its original state before the failure occurred. This does not refer to the reading of data from a failed hard drive.
- When a volume type is changed, setting is possible for unallocated areas only. If there are no unallocated areas, delete a volume to make unallocated areas first.

RAID 5 volume

The unallocated areas of three or more hard drives are used as a single array. Because data is written to the volume while generating parity (error-correcting code), access speeds are slightly slower.

Even if one hard drive in the RAID array fails, data can be recovered if the failed hard drive is replaced (however, data cannot be recovered if two or more hard drives have failed). Also, note that file transfer speeds are slower during RAID resynchronization.

Mirrored volume

The unallocated areas of two drives are combined into a single RAID 1 array. Because the same data is written to both drives simultaneously, if one drive fails, data can be recovered from the other drive. If both drives in the array fail, data cannot be recovered. After replacing a failed drive, file transfer speeds will be slower than usual until RAID resynchronization is complete.

Striped volume

In a striped volume, the unallocated areas of two or more drives are combined into a single logical volume using RAID 0. Because data is written across multiple drives, access speeds are slightly faster. However, data cannot be recovered if even a single drive fails.

Spanned volume

In a spanned volume, the unallocated areas in multiple hard drives are joined to create a single logical volume. This enables more effective use of all the areas and drive letters in a system consisting of multiple hard drives. However, data cannot be recovered if even a single hard drive failure occurs.

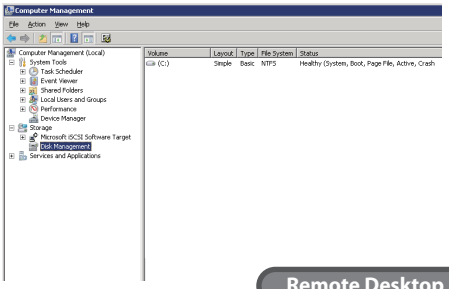
Simple volume

The internal hard drives of the TeraStation are each used as individual drives. If a hard drive fails, the data in the failed hard drive cannot be recovered.

Deleting Volumes

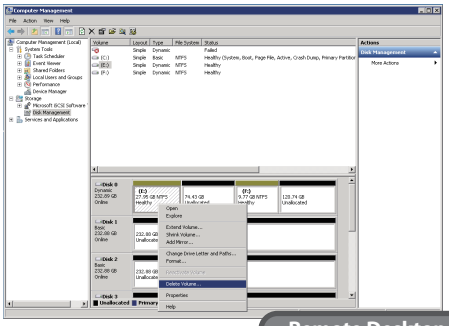
An unallocated area in a hard drive of the TeraStation is required to create a volume. If there are no unallocated areas, create one by deleting an existing volume.

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Computer Management].

2 

Click [Disk Management].

Remote Desktop

3 

Right-click the volume that you want to delete, then select [Delete Volume].

Note:
Changing the usage mode of a hard drive will erase all data stored in the hard drive. Be sure to always back up any important data on the hard drive before changing the usage mode.

Remote Desktop

4 Follow the instructions displayed on the screen.

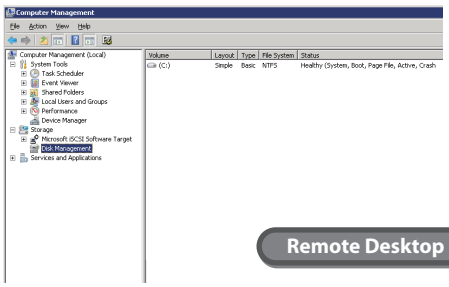
This completes the deletion of a volume.

Formatting Volumes

Follow the procedure below to format a volume.

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Computer Management].

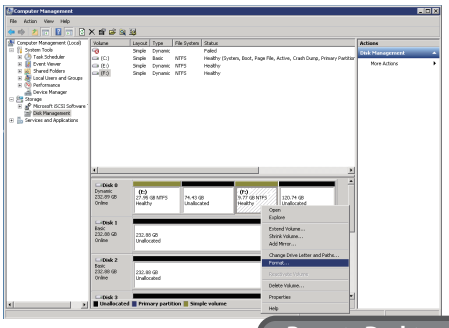
2



Remote Desktop

Click [Disk Management].

3



Remote Desktop

Right-click the volume that you want to format, then select [Format].

Note:
The formatting process will erase all data stored in the hard drive. Be sure to always back up any important data on the hard drive before formatting.

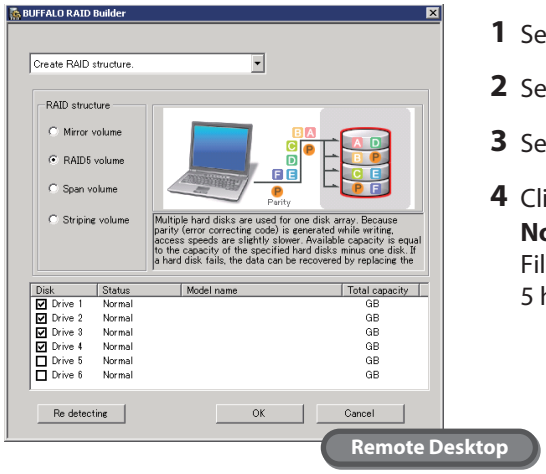
4 Follow the instructions displayed on the screen.

This completes for formatting process for the volume.

RAID 5 Volume

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [RAID Builder] - [Launch RAID Builder].

2



1 Select [Create RAID structure].

2 Select [RAID 5 volume] from [RAID structure].

3 Select three or more drives

4 Click [OK].

Note:
File transfer times are slower during RAID resynchronization (about 5 hours per 1 TB).

3 Follow the instructions displayed on the screen.

Note:
An example of the available space when using four drives is shown below.
Example:

- For a configuration with Drive 1 (50 GB), Drive 2 (80 GB), Drive 3 (58 GB), and Drive 4 (100 GB), the space that can be used in the RAID volume is (50 GB × 4 drives) × 3/4 = 150 GB.

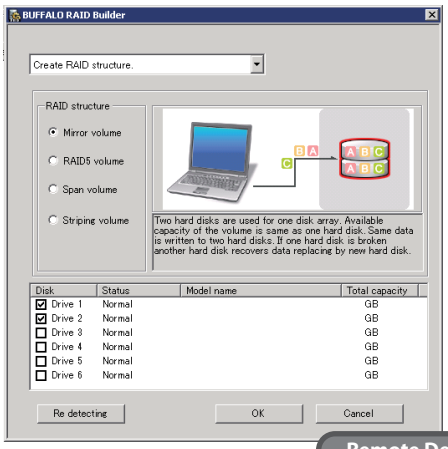
- For n identical hard drives in a RAID 5 array, the available space is (n-1)/n times the total drive space.

This completes the setting of the RAID 5 volume.
Next, create a shared folder by referring to the procedure on page 34.

Mirrored Volume

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [RAID Builder] - [Launch RAID Builder].

2



1 Select [Create RAID structure].

2 Select [Mirror volume] from [RAID structure].

3 Select two drives.

4 Click [OK].
Note:
File transfer times are slower during RAID resynchronization (about 5 hours per 1 TB).

3 Follow the instructions displayed on the screen.

Note:
An example of the available space is shown below.
Example:

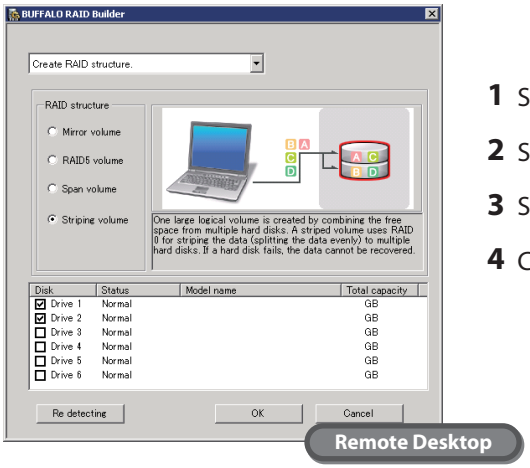
- For a configuration with Drive 3 (58 GB) and Drive 4 (100 GB), the space that can be used in the mirroring volume is 58 GB.

This completes the setting of the mirroring volume.
Next, create a shared folder by referring to the procedure on page 34.

Striped Volume

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [RAID Builder] - [Launch RAID Builder].

2



1 Select [Create RAID structure].

2 Select [Striping volume] from [RAID structure].

3 Select two or more drives.

4 Click [OK].

3 Follow the instructions displayed on the screen.

Note:
An example of the available space is shown below.
Example:

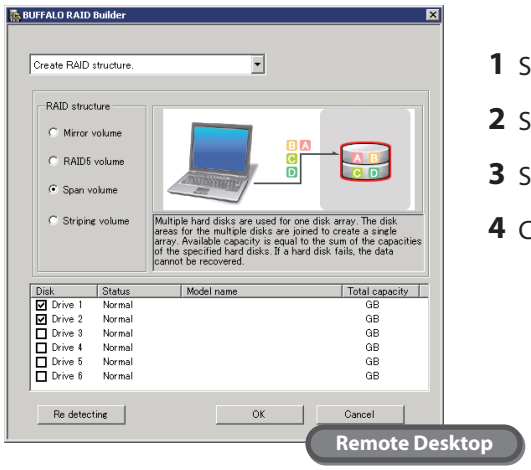
- For a configuration with Drive 1 (50 GB), Drive 2 (80 GB), Drive 3 (58 GB), and Drive 4 (100 GB), the space that can be used in the striped volume is 50 GB × 4 drives = 200 GB.

This completes the setting for the striped volume.
Next, create a shared folder by referring to the procedure on page 34.

Spanned Volume

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [RAID Builder] - [Launch RAID Builder].

2



1 Select [Create RAID structure].

2 Select [Span volume] from [RAID structure].

3 Select two or more drives

4 Click [OK].

3 Follow the instructions displayed on the screen.

Note:
An example of the available space is shown below.
Example:

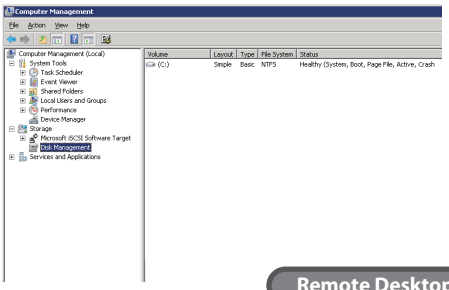
- For a configuration with Drive 1 (50 GB), Drive 2 (80 GB), Drive 3 (58 GB), and Drive 4 (100 GB), the space that can be used in the span volume is 50 GB + 80 GB + 58 GB + 100 GB = 288 GB.

This completes the setting of the spanned volume.
Next, create a shared folder by referring to the procedure on page 34.

Simple Volume

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Computer Management].

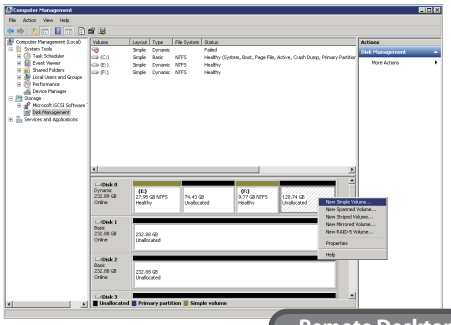
2



Click [Disk Management].

Remote Desktop

3

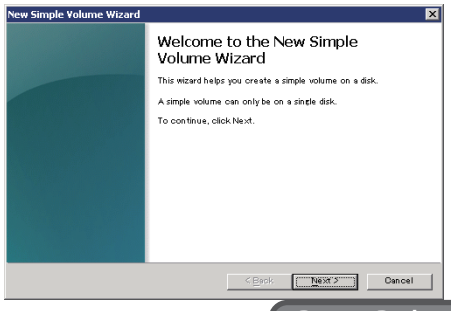


Right-click the unallocated area and select [New Simple Volume].

Note:
Changing the usage mode of a hard drive will erase all data stored on the drive. Back up your data before changing the usage mode.

Remote Desktop

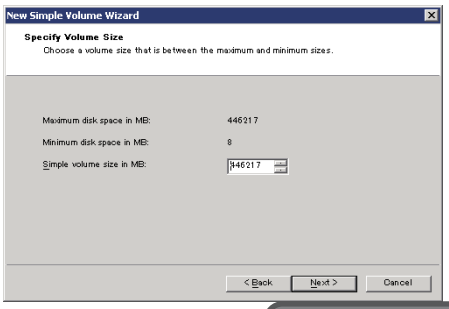
4



Click [Next].

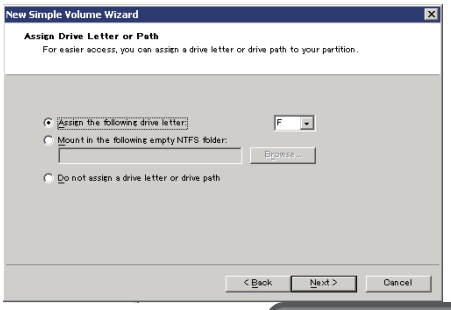
Remote Desktop

5



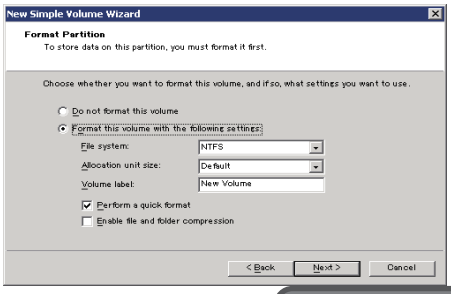
Enter the volume size that you want to create and click [Next].

6



Select [Assign the following drive letter] and click [Next].

7



Select [Format this volume with the following settings] and [Perform a quick format] and click [Next].

8 Follow the instructions displayed on the screen.

This completes the setting of a simple volume.
Next, create a shared folder by referring to the procedure on page 34.

Chapter 5
Backup

Back Up from your Windows PC

To back up data from your PC to the TeraStation, use the backup program, included with your TeraStation. The backup software can be installed from your included USB device.

Back Up from the TeraStation

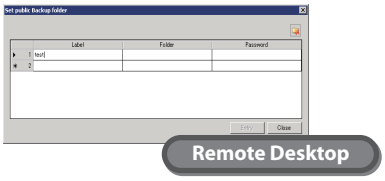
Backups can be set based on individual shared folders in the TeraStation.

Setting a Folder in This TeraStation as a Backup Folder

To set a folder in the TeraStation as the backup location, perform the setting procedure below. To set another TeraStation or LinkStation as the backup location, set the backup location by referring to the manual for the respective product.

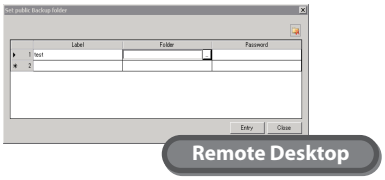
1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [Backup & Replication] - [Set Backup Folder].

2



Double-click the [Label] box and enter the label name.
The label name entered here is displayed when the backup location is specified.

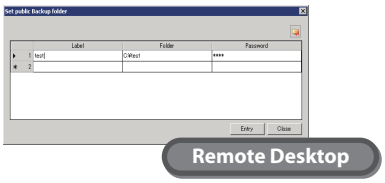
3



Click the [Folder] box and click the displayed [...].

4 Select the folder to be set as target backup folder and click [OK].

5



Click [Entry].

Note:
You may set a password for using this TeraStation as a backup target for another TeraStation on the network. If you don't want to set a password, leave the password field blank.

This completes the settings for the backup location.

The folder configured above can now be used as a target for backup jobs configured from this TeraStation as well as other TeraStations and LinkStations on the network.

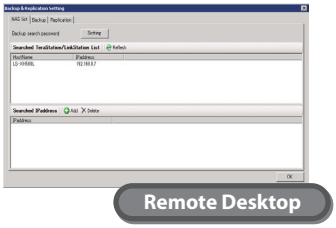
Setting a Shared Folder from Another TeraStation or LinkStation as the Backup Folder

When a backup password (for searching) is set

If a password is set for a shared folder at the backup location, the folder cannot be set as the backup target folder unless the password is entered. Use the procedure below to enter the password before performing the backup.

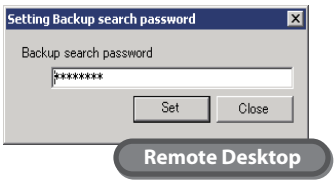
1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [Backup & Replication] - [Backup & Replication Setting].

2



Click [Setting].

3



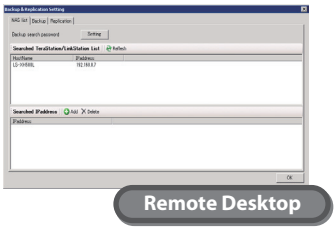
Enter the password that is set for the backup target folder and click [Set]. The folders at the backup location that are found during a search are the folders without a password and the folders that match the password.

To back up to a TeraStation connected by VPN from outside the local network

To back up to a TeraStation outside the router or a network TeraStation connected by VPN, use the procedure below to enter the TeraStation's IP address before performing the backup process.

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [Backup & Replication] - [Backup & Replication Setting].

2



1 Click [Add] in [Searched IP address].

2 Enter [Searched IP address], and click [Set].

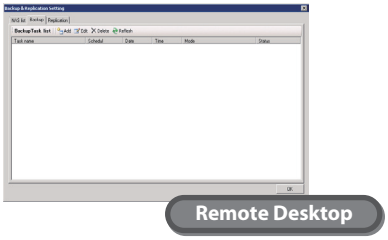
The above settings are not necessary in the cases below.

- When you are not using another TeraStation as a backup location.
- When a backup search password is not set at the TeraStation used as the backup location.
- When a TeraStation outside the router or a network TeraStation connected by VPN is not used as the backup location.

Setting the Backup

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [Backup & Replication] - [Backup & Replication Setting].

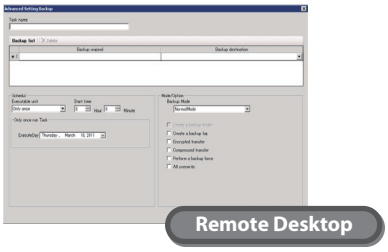
2



Click the [Backup] tab, then click [Add].

Note:
Click [Refresh] to update the displayed information.

3



1 Enter the task name.

2 Click the box for the backup source, and then click the displayed [...]. The backup source folder is set in the displayed screen.

3 Click [▼] in the backup target box, and select the backup target folder from the displayed list.

4 Select the backup schedule. The backup schedule can be selected from [Daily], [Weekly], [Monthly], [Only once], or [Run Now].

5 Select [Mode/Option].

6 Click [Set Task].

The following backup operation modes are available.

Backup Mode	Description
Normal Mode	All files from the backup source are backed up to the backup target.
Overwrite increment Mode	The first time that this is executed, a normal backup is performed for backing up all files. Starting from the second time, if a File A is added and a File B is deleted in the backup source, File A is added to the backup target, but File B is not deleted. The backup target size will be larger than the backup source by the amount of files deleted at the backup source.
Overwrite different Mode	The first time that this is executed, a normal backup is performed for backing up all files. Starting from the second time, if a File A is added and a File B is deleted in the backup source, File A is added to the backup target, and File B is deleted. The backup source and backup target are the same size.

Note:
While a backup job is running, a "taskeng.exe" window is open in Windows Storage Server. It will close automatically when the backup job finishes.
Never close the "taskeng.exe" window until the backup job is finished. The backup will fail if the window is closed.

Notes:

- The settings below are available in the options for the backup operation mode.

Backup Options	Description
Create a backup folder	This creates a folder that can be identified by the backup source. The operation varies widely depending on the item selected for backup operation mode.
Create a backup log	This creates a backup log file.
Encrypted transfer	This selects if data is encrypted when transferred during the backup process. Throughput is reduced when encryption is enabled.
Compressed transfer	This selects if data is compressed before transfer during the backup process. When performing a backup over a network, if the network band is narrow, a compressed transfer can improve the transfer speed (this does not mean that the data is backed up as a single archive). Do not select if backing up to a USB hard drive.
Perform a backup force	When selected, even if the backup process was ended by an error, the backup is still executed the next time.
All overwrite	Unmodified files are also overwritten.

- To delete the backup settings, select the backup task form the backup target list, and then click [Delete].

- Checking the backup results
  You can check that backup jobs run normally from the backup logs. To enable backup logging, check [Create a backup log] in the backup settings. When a backup is finished, a log file named "Task name""Execution date".log is created in the folder that was set as the backup source. Use a text editor to read the backup log. Note that it will not open with Windows Notepad.

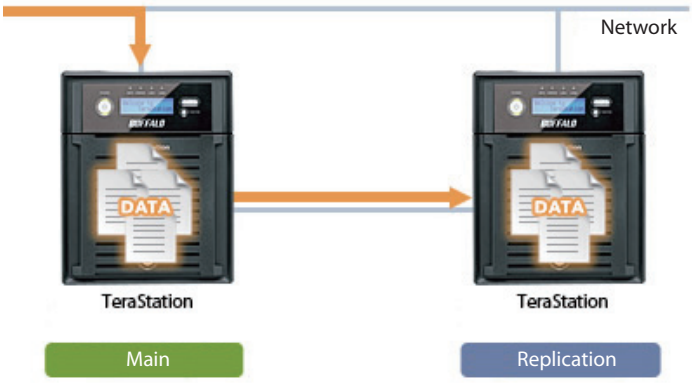
This completes the backup settings.

Replication

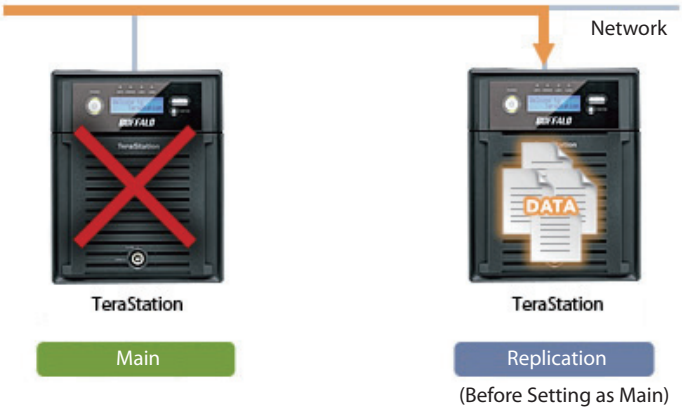
Replication copies all data from a TeraStation to another TeraStation. It provides an easy way to configure a reliable system that provides data protection in the event that your main TeraStation fails. To configure replication, connect a spare TeraStation to the main TeraStation using an Ethernet cable to connect LAN port of each TeraStation together.

Normal Operation (Replication State)
The TeraStation includes two LAN ports. One port is connected to the network and the other is connected to a second TeraStation for replication. Data that is written to the main TeraStation is mirrored to the replication TeraStation on a file-by-file basis. Files are updated whenever a save or delete operation is performed at the main TeraStation.

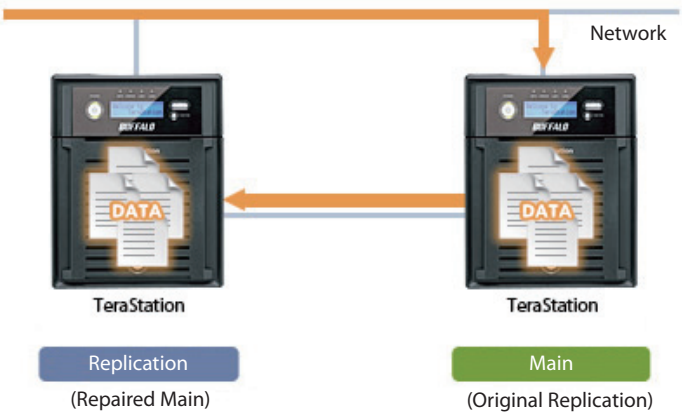
Note:
Replication can be specified for individual shared folders. A maximum of 64 shared folders can be specified.



If the Main TeraStation Fails
Open the Web Admin Interface of the replication TeraStation and change the settings to enable use as the main TeraStation.
Replication only copies data, not settings.

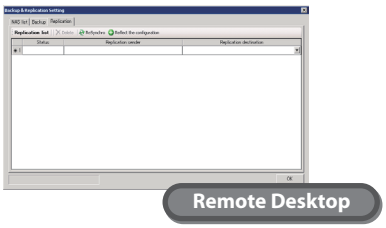


Rebuilding Replication
After repair, reconnect the original TeraStation to the LAN port of the main TeraStation and set up replication again with the original TeraStation as the new backup.



Configure replication as described below.

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [BUFFALO] - [Backup & Replication]-[Backup & Replication Setting].

2 

Click the [Replication] tab.

3 Click the [Replication sender] box, then click the displayed [...]. The replication source folder is set in the displayed screen.

Note:
If a shared folder on the TeraStation is set as a replication source folder, and NFS configured to use the same folder, replication may fail. To perform replication, execute the procedure below. During replication, performance may be reduced.

1. In Windows Storage Server, enter "regedit" from "Search programs and files" and press the [Enter] key.
2. Locate and then click "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\NfsServer\Parameters".
3. Create "FFCompat" for DWORD in "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\NfsServer\Parameters".
4. Set 1 for the value of "FCCompat".
5. Restart the TeraStation.

4 Click [▼] in the [Replication destination] box and select the replication target folder from the drop-down menu.

Notes:

- Only shared folders in TeraStations that support replication can be selected. For a list of supported devices, please refer to the Buffalo Technology website (www.buffalotech.com).
- Before setting as a replication target folder, use the procedure for "Setting a Folder in This TeraStation as a Backup Folder" on page 16 to set as a backup location first.
- Shared folders that are set with a backup password cannot be selected as the replication target.
- The data in the replication source is copied to the replication target folder using a differential overwrite. Please note that data not found in the replication source will be erased.

5 Click [Reflect the configuration]. When the password input screen is displayed, enter the password that was set for the backup target folder.

Notes:

- To delete the replication settings, select the replication settings and click [Delete].
- Clicking [ReSynchro] copies the data in the replication source to the folder in the replication target using a differential overwrite.

6 Click [OK].

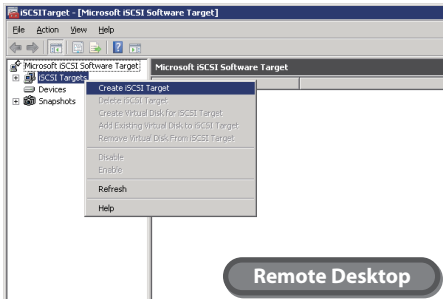
This completes the settings for replication.

Chapter 6
Creating an iSCSI Target

Creating an iSCSI Target

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Microsoft iSCSI Software Target].

2

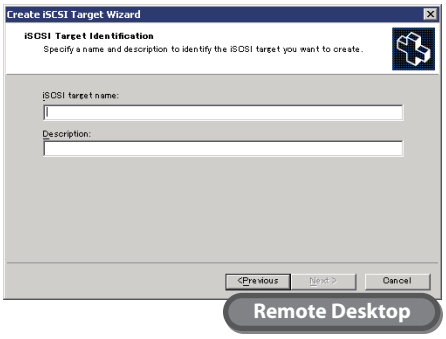


Right-click [iSCSI Target] and click [Create iSCSI Target].

3

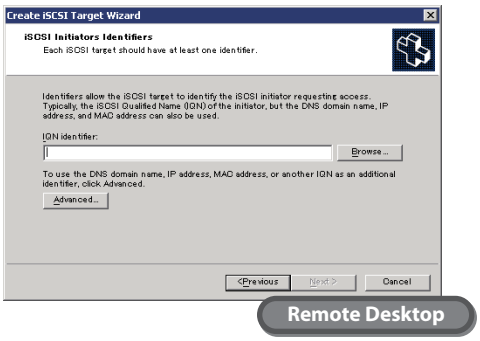
Click [Next].

4



Enter the desired name in [iSCSI target name] and click [Next].

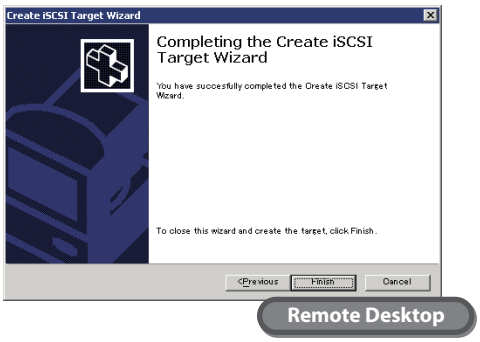
5



Specify the IQN of the iSCSI initiator, and click [Next].

Note:
The IQN of the iSCSI initiator is displayed on the client computer by navigating to [Start]-[All Programs]-[Administrative Tools]-[iSCSI Initiator]. The IQN appears under "Name" in the displayed screen.

6



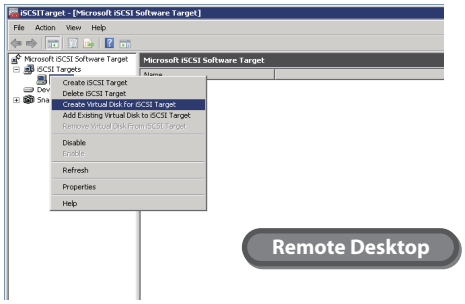
Click [Finish].

This completes the creation of the iSCSI target. Next, create a virtual disk.

Creating a Virtual Disk

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Microsoft iSCSI Software Target].

2



Remote Desktop

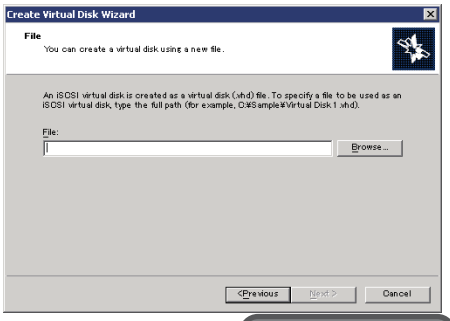
Right-click the created iSCSI target and click [Create Virtual Disk for iSCSI Target].

3

Remote Desktop

Click [Next].

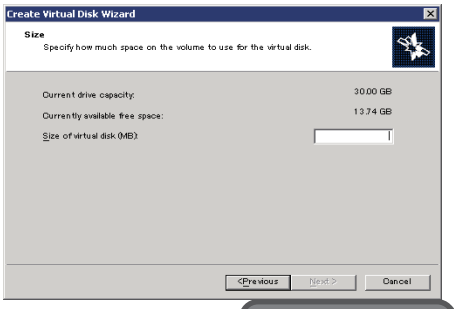
4



Remote Desktop

Enter the file (.vhd) to be created as the selected virtual disk and click [Next].

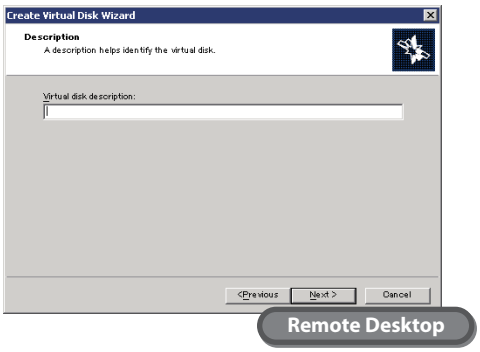
5



Remote Desktop

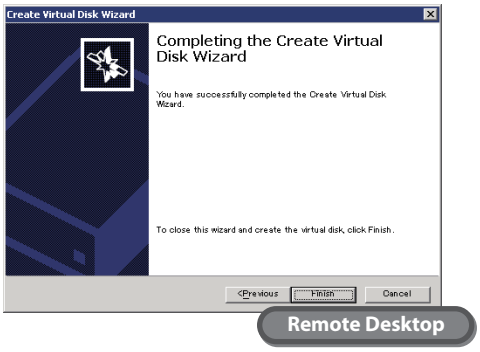
Enter the size of the virtual disk and click [Next].

6



Enter a description of the virtual disk, then click [Next].

7



Click [Finish].

8 Click [Devices], and then right-click the virtual device that was created in the right-side window.

9 Click [Disk Access] - [Mount Read/Write].

10 Click [OK].

11 At the client computer, from the client initiator, select the target and click [Connect].

12 Click [OK].

13 Format the disk in [Disk Management].

This completes the creation of a virtual disk for the iSCSI target.

The created iSCSI target can be connected from another server on the network using the iSCSI initiator. For the specific usage procedures for the iSCSI initiator, refer to the OS Help.

Chapter 7
Various Settings

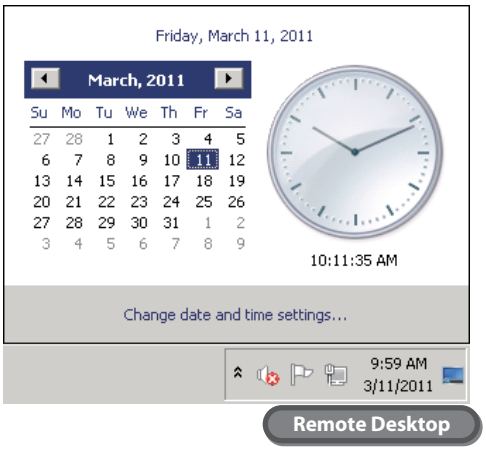
Date and Time Setting

This shows how to set the Windows Storage Server clock.

1

Click the time displayed in the task tray of Windows Storage Server.

2



Click [Change date and time settings] - [Date and Time], then select the current date and time in the displayed calendar and clock.

Note:
The date and time can be obtained automatically by clicking the [Internet Time] tab and selecting [Synchronize with an Internet time server].

This completes the setting of the date and time.

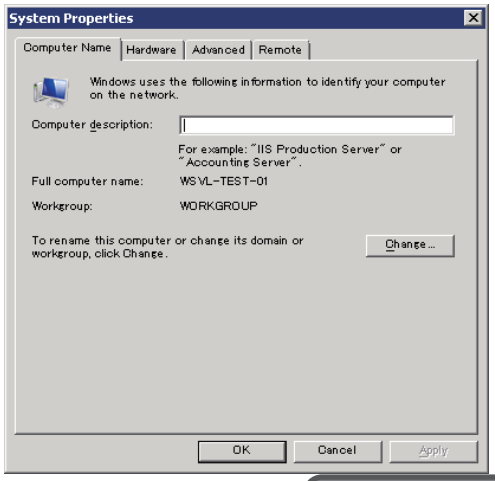
Changing the Server Name, Workgroup, and Domain Settings

The server name, workgroup, and domain for the TeraStation can be changed by following the procedure below.

1 Click [Start], right-click [Computer], and select [Properties].

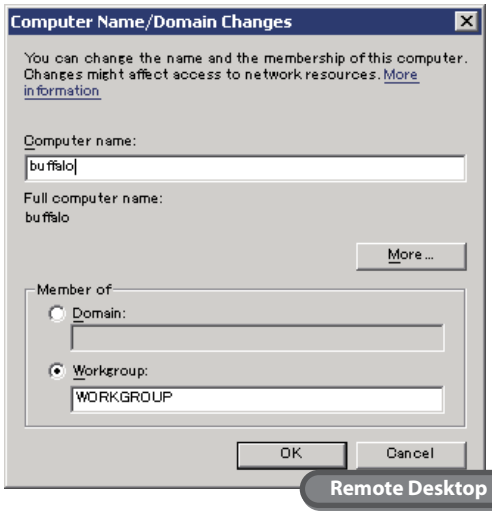
2 Under [Computer name, domain, and workgroup settings], click [Change settings].

3



Click [Computer Name] - [Change].

4



Enter the computer name, choose Domain or Workgroup, and click [OK].

Note:
The computer name should have 16 characters or less. If more then 16 characters are entered, all characters from the 17th character on are ignored.

This completes the changing of the server name, workgroup, and domain settings.

Changing the Password

Changing of the TeraStation administrator password from the default setting is recommended for security reasons.

Changing the password for the logon account

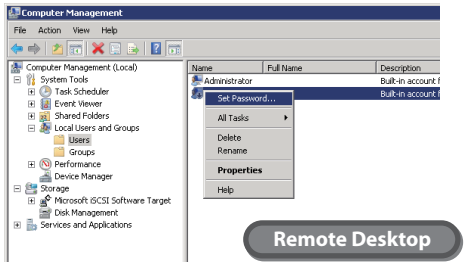
1. In Windows Storage Server, navigate to [Start] - [Control Panel] - [User Accounts].
2. Click [Change your password].
3. Enter “password” for current password and your desired password for new password and confirm new password.
4. Click [Change password].

This completes the changing of the password.

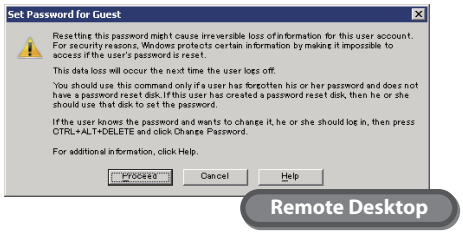
Changing the password for accounts besides the logon account

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Computer Management].

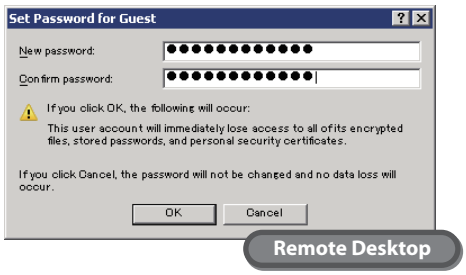
2 Click [Local Users and Groups].

3 

Right-click the user whose password will be changed and click [Set Password].

4 

Click [Proceed].

5 

Enter the password in [New password] and [Confirm password], then click [OK].

This completes the changing of the password.

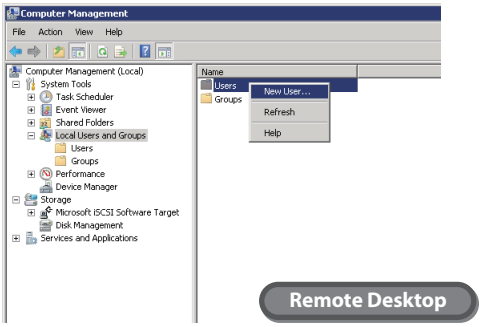
Adding a User

A user can be added by performing the procedure below.

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Computer Management].

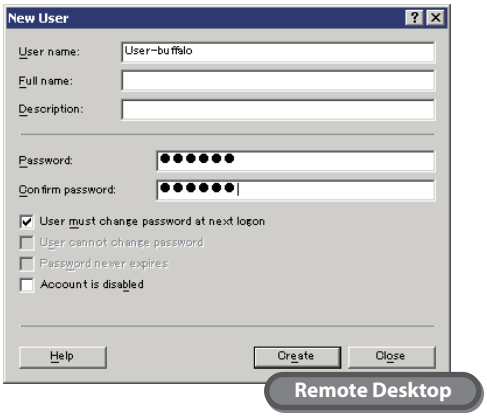
2 Click [Local Users and Groups].

3



Right-click [Users], and click [New User].
The New User screen is displayed.

4



Enter the user name, password, and other information, then click [Create].

This completes the adding of a new user.

Note:
Accounts not belonging to the Administrators group cannot be connected by the Remote Desktop.

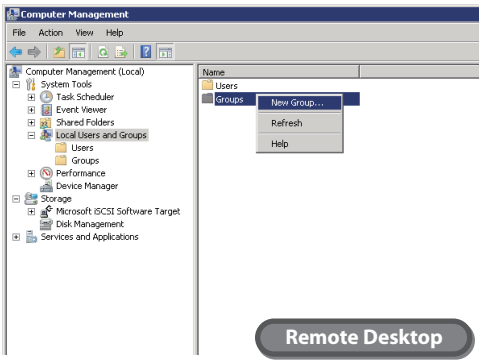
Adding a Group

A group can be added by performing the procedure below.

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Computer Management].

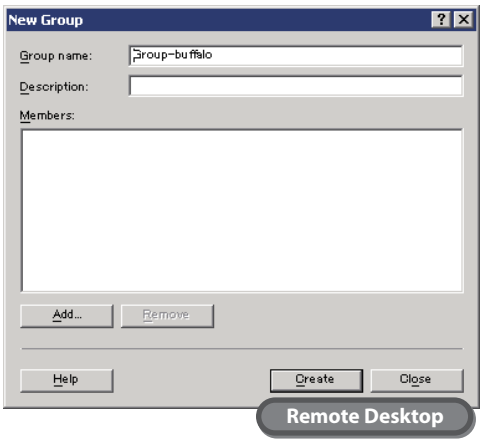
2 Click [Local Users and Groups].

3



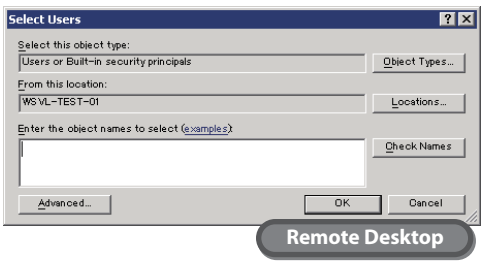
Right-click [Groups] and click [New Group].
The New Group screen is displayed.

4



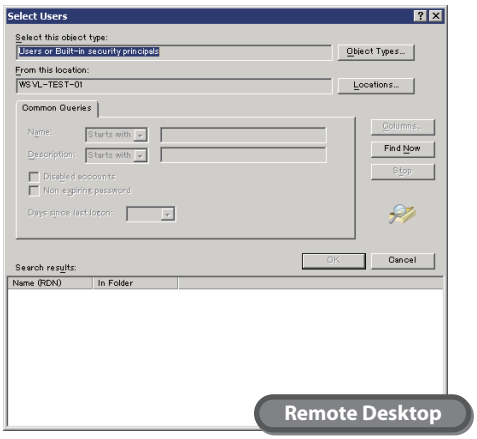
Enter the group name, a description, and click [Add].

5



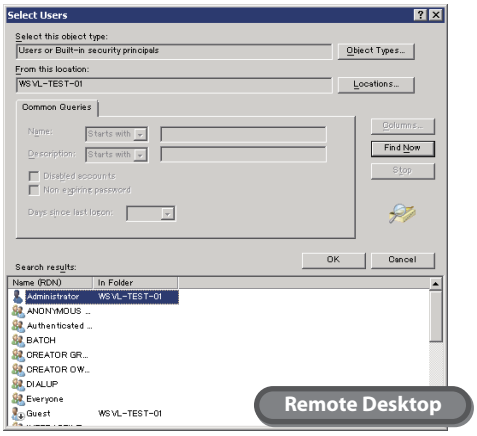
Click [Advanced].

6



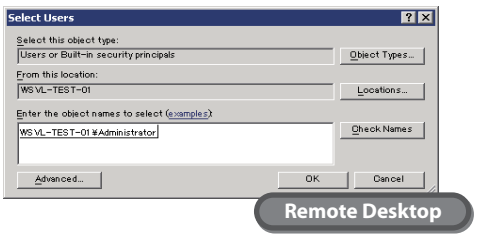
Click [Find Now].

7



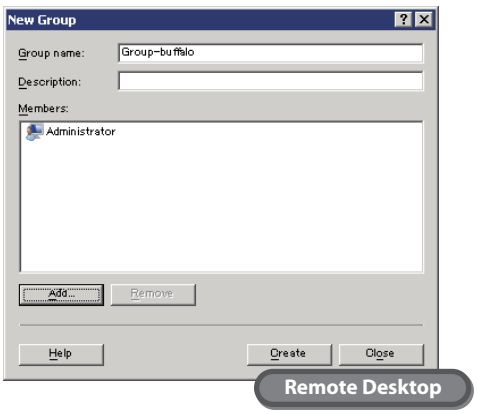
Select the users to be registered to the group, then click [OK].

8



Click [OK].

9



Click [Close].

This completes the adding of a new group.

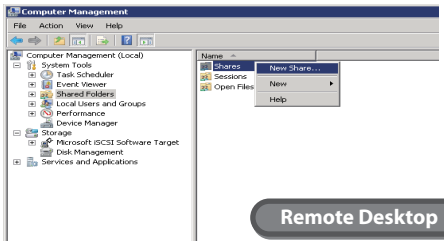
Creating a Shared Folder

No shared folders are set in the initial settings. Use the procedure below to create shared folders beforehand.

1 In Windows Storage Server, navigate to [Start] - [All Programs] - [Administrative Tools] - [Computer Management].

2 Click [Shared Folders].

3

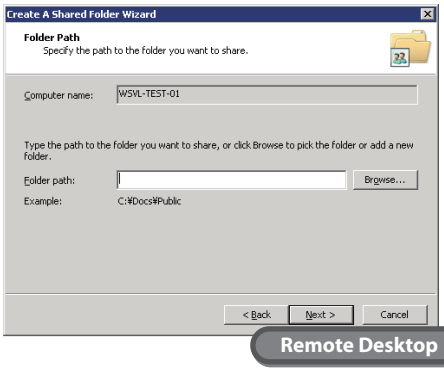


Right-click [Shares], then click [New Share].
The setup wizard should launch automatically.

4

Click [Next].

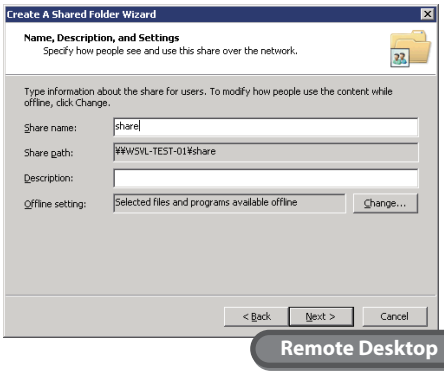
5



Enter the path of an existing folder or a new folder, and then click [Next].

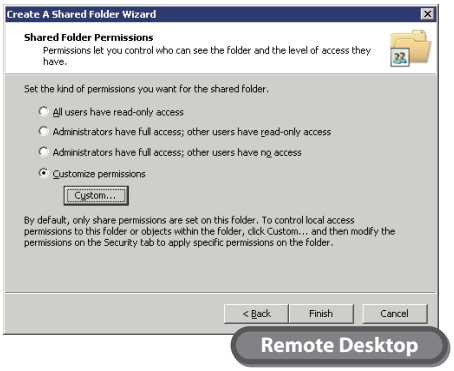
Note:
If the message "The system cannot find the specified path. Do you want to create it?" is displayed, click [Yes].

6



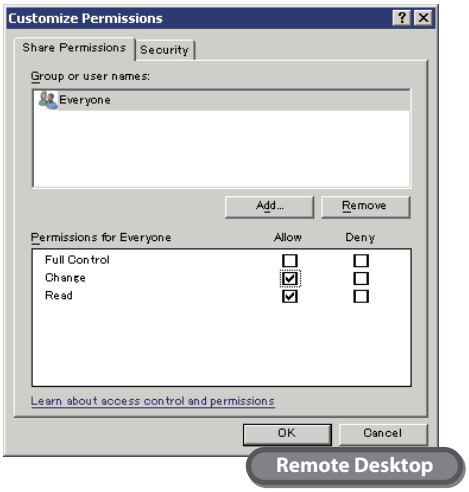
Enter the information for [Share name] and [Description], and click [Next].

7



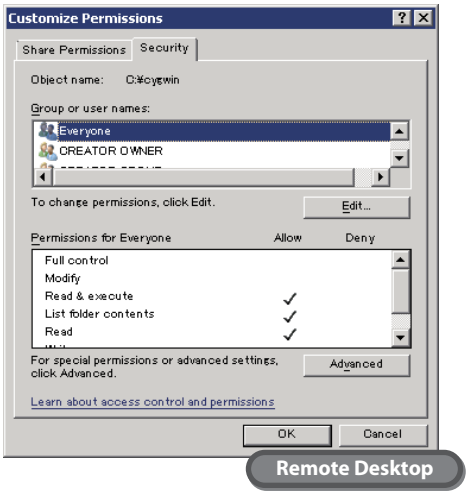
Check [Customize permissions], then click [Custom...].

8



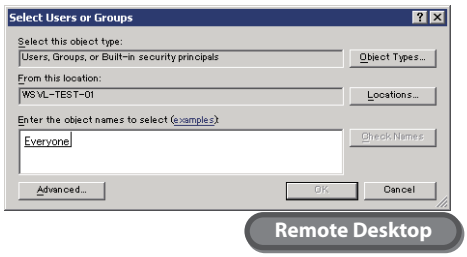
Choose [Everyone], then check [Allow] for [Change].

9



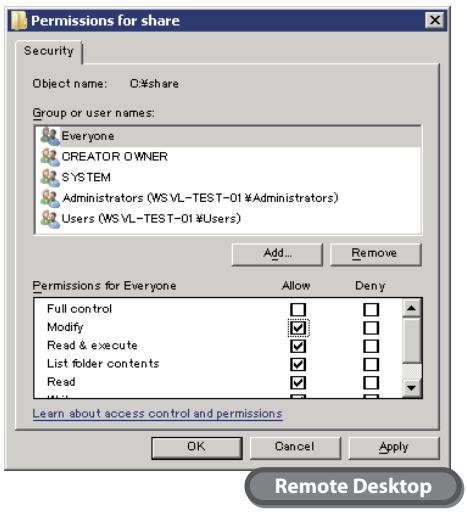
Under [Security] tab, click [Edit] - [Add].

10



Enter "Everyone" under "Enter the object names to select", then click [OK].

11



Choose [Everyone], then check [Allow] for [Modify].

12 Click [OK] - [OK] - [Finish].

Notes:

- To enable a guest account, perform the procedure below.

  1 Click [Local Users and Groups] in [Computer Management].

  2 Select [Local Users and Groups] - [Computer Management], then double-click [Guest] from [Name]. This displays Guest Properties.

  3 Go to the [General] tab, then click [Account is disabled] to remove the check mark from the check box.

  4 Click [OK].

- To enable access to the shared folder, the shared folder must be set to allow access.
  To allow access to the shared folder, right-click the shared folder, then select [Properties] - [Security].
  From the [Local Users and Groups] list, add the users or groups that will be allowed access (the groups and users must be created beforehand).To allow access by all users, add a Guest, and change "Administrators Access permision" to "Full Control".

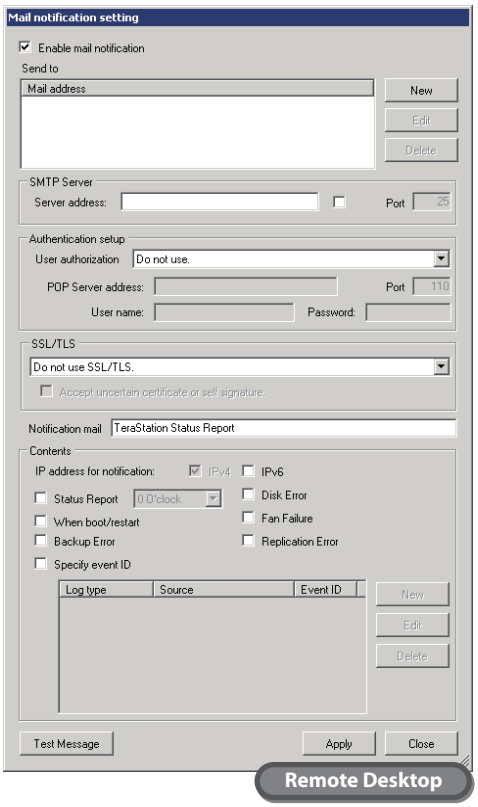
You have created a new shared folder.

Mail Notification Settings

In the Mail Notification Setting of Buffalo Tools, the TeraStation can be set to send a message to a specified email address when the TeraStation settings are changed or an error occurs.

1 Click [Start] - [All Programs] - [BUFFALO] - [Mail Notification Setting] - [Launch Mail Notification Setting].

2



1 Check the box next to [Enable mail notification].

2 Click [New] at the Mail Address section, then enter the recipient's email address. Notification can be sent to up to five addresses.

Note:
Be careful that you enter the correct email address.

3 Enter the SMTP server address and SMTP port number.

4 For [User authorization], select from [Do not use], [POP before SMTP], [LOGIN (SMTP-AUTH)], or [CRAM-MD5 (SMTP-AUTH)], then enter the username and password.

Notes:
- If [POP before SMTP] is used, enter the POP3 server address and POP3 port number.
- Do not use single quotation marks (') in the password.

5 If using a protected connection, select the system (SSL/TLS).

6 Enter the subject of the notification mail.

Note:
Enter the subject in single-byte alphanumeric characters. Other character types may appear as illegible text.

7 Select the notification events.

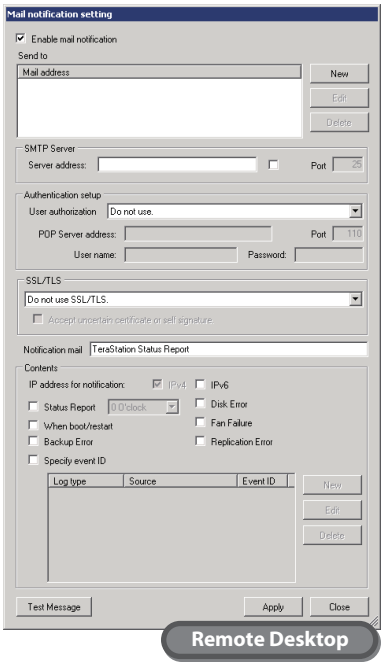
Status Report	The TeraStation's hostname and IP address are mailed at the selected time.
Disk Error	An email is sent if a hard drive error occurs.
When boot/restart	An email is sent whenever the system is booted or restarted.
Fan Failure	An email is sent when a fan error occurs.
Backup Error	An email is sent if an error occurs in the TeraStation backup process.
Replication Error	An email is sent if an error occurs in the TeraStation replication process.
Specify event ID	The desired event ID can be specified. An email will be sent when a specific event occurs.

Note:
Email notifications do not contain information about the target user.

8 Click [Apply].

This completes the settings for the Mail Notification.

The available settings in the Mail Notification Setting screen are shown below.



Enable mail notification	Check the box to use email notification.
Mail address	Click [New] to add a new email address. An existing address can be changed by selecting the address and clicking [Edit]. An address can be deleted by selecting the address and clicking [Delete]. A maximum of five addresses can be set for receiving notification.
SMTP Server	In [Server address], enter the SMTP server address (mail server address). In [Port], enter the SMTP port number. **Note:** Unless specified otherwise, the standard port (25) is used. Also, if Authentication setup is set to [Do not use] or [POP before SMTP], the standard port number (25) is used regardless of the number entered in this box.

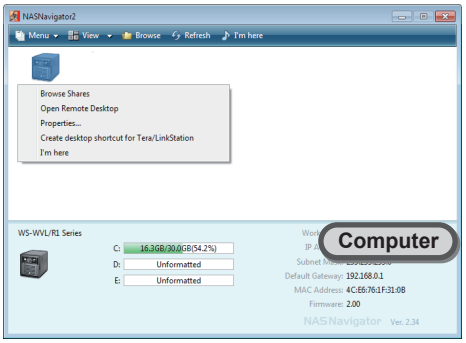
Authentication setup	The [User authorization] can be selected from [POP before SMTP], [LOGIN (SMTP-AUTH)], and [CRAM-MD5 (SMTP-AUTH/CRAM-MD5)]. If [POP before SMTP] is selected, enter the POP server address (mail server address) and port number. **Note:** Unless specified otherwise, the standard port (110) is used. In [User name], enter the user name used for authentication. In [Password], enter the password used for authentication.
SSL/TLS	If [LOGIN (SMTP-AUTH)] or [CRAM-MD5 (SMTP-AUTH/CRAM-MD5)] is selected in the Authentication setup, specify whether [SSL] or [TLS] is used.
Notification	This specifies the subject of the mail notification. **Note:** Enter in single-byte characters. If double-byte characters are entered, the characters may appear as illegible text.
IP address for notification	Check to add IPv6 to email notifications.
Contents	Select what events trigger an email notification. [Status Report]: The TeraStation's hostname and IP address are mailed at the selected time. [Disk Error]: This is sent when an error occurs in the TeraStation's hard drive. [When boot/restart]: This is sent when the system is booted or restarted. [Fan Failure]: This is sent when an error occurs in the TeraStation's fan. [Backup Error]: An email is sent if an error occurs in the TeraStation backup process. [Replication Error]: An email is sent if an error occurs in the TeraStation replication process. [Specify event ID]: The desired event ID can be specified.
Test Message	This sends a test mail using the current settings.
Apply	This applies the current settings.
Close	This closes the Mail Notification settings screen.

Changing the IP Address

The IP address can be changed using the procedure below.

Note:
If the TeraStation is being used in a domain environment, the IP address cannot be changed by NAS Navigator2. To change the IP address, the domain environment administrator must change it at the domain server.

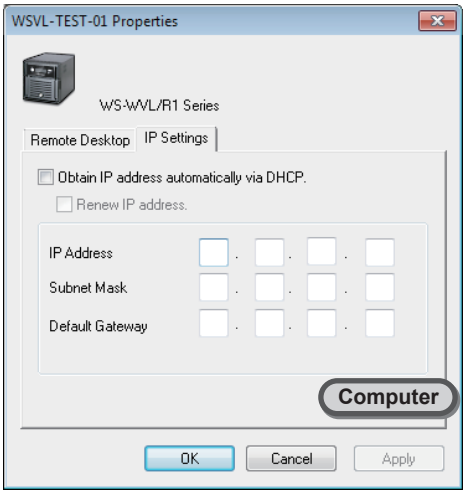
1



In NAS Navigator2, right-click the TeraStation icon and select [Properties].

Note:
For Mac OS, hold the Control key, click on the TeraStation icon, then click [Configure] - [IP Address].

2



1 Click the [IP Settings] tab.

2 Enter the desired IP address, subnet mask, and default gateway.
Note:
Or, check "Obtain IP address automatically via DHCP" to set these things automatically.

3 Click [OK].
Note:
Enter the TeraStation's username and password if required. By default, these are "Administrator" and "password" respectively.

This completes the changing of the IP address.

Chapter 8
NAS Navigator2

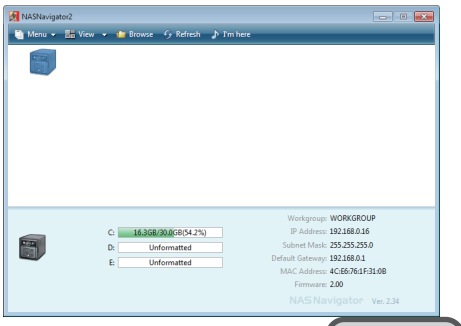
Menu Commands

NAS Navigator2 can be used to open the TeraStation screen (Windows Storage Server), change the IP address, and easily check the available space in Remote Desktop.
Perform setup with TeraNavigator to install NAS Navigator2.
NAS Navigator2 runs in the task tray when the OS is started.

Computer

Starting NAS Navigator2:

- Double-click the Buffalo NAS Navigator2 icon on the Desktop.
- Click [Start] - [All Programs] - [BUFFALO] - [BUFFALO NAS Navigator2] - [BUFFALO NAS Navigator2].

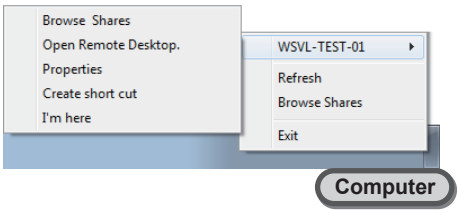


Computer

Name		Descriptions
Menu	Map remote default share to drive letter *	Not available in this product (grayed out).
	Disconnect mapped drive letter *	Not available in this product (grayed out).
	Map all remote shares to drive letters	All detected shared folders on the TeraStation are mapped to drive letters as network drives. This is available only when a shared folder has been created.
	Create desktop shortcut for Tera/LinkStation *	This creates a shortcut icon on the Desktop when a shared folder is created in the TeraStation.
	Launch NASNavigator2 on startup	Launches NAS Navigator2 when Windows is booted.
	Display the error information	Launches NAS Navigator2 when Windows is booted.
	Use default browser	This is not used in this product.
	Properties *	Opens the selected TeraStation's Properties window.
	Close	Closes NAS Navigator2 window.
View	View	[Icons]: Displays icon for ease. [Details]: Displays Host Name, Product Name, Workgroup, IP Address, Subnet Mask, and Default Gateway.
	Sort by	Selects the sort order from following to display when multiple TeraStations are found: Host Name, Product Name, Workgroup, IP Address, Subnet Mask, and Default Gateway
Browse *		Opens the displayed shared folder on the TeraStation.
Refresh		Searches the TeraStation again.
I'm here *		Click to sound a tone from the physical TeraStation. Not all TeraStations support this. This is not available if the TeraStation is being used in a domain environment.

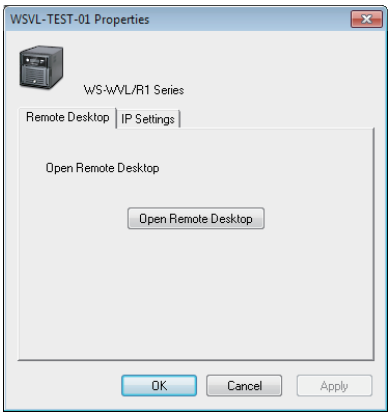
* Click on your TeraStation's icon to display these options.

When NAS Navigator2 is minimized, right-click on the NAS Navigator2 icon in the task tray for the following options.



Menu Item		Descriptions
TeraStation Name	Browse Shares	Opens a shared folder on the TeraStation.
	Open Remote Desktop	Opens the Windows Storage Server screen in Remote Desktop.
	Properties	Opens the selected TeraStation's Properties window.
	Create short cut	Assigns the searched TeraStation's shared folder as a network drive.
	I'm here	Rings a tone from the TeraStation (This option is disabled if the product does not support this feature).
Refresh		Refreshes list of NAS devices.
Browse Shares		Displays NAS Navigator2 window.
Exit		Exits NAS Navigator2.

The following tasks may be performed from the TeraStation's Properties window.



Computer

Menu Item	Description
Remote Desktop	Click [Open Remote Desktop] to open Windows Storage Server.
IP Settings	Check [Obtain IP address automatically via DHCP] to assign an IP address automatically. If no DHCP server is available, you may manually enter the IP address, subnet mask, and default gateway.

Appendix

Factory Defaults

The following settings are the factory defaults for the TeraStation.

Username	Administrator
Password	password
Shared Folders	This is not set.
DHCP Client	Normally, the TeraStation will get its IP address automatically from a DHCP server on the network. If no DHCP server is available, then an IP address will be assigned as follows: IP Address: 169.254.xxx.xxx (xxx is assigned randomly when booting the TeraStation). Subnet Mask: 255.255.0.0
Registered Group	This is not set.
Microsoft Network Group Setting	WORKGROUP
RAID Mode	Drive C: A mirrored array using drives 1 and 2 Drive D: A RAID 5 array using all drives* * WS-WVL: drive D is a mirrored array using drives 1 and 2.
Local Security Policy	[Password must meet complexity requirements] is disabled by default.

This product includes BitLocker Drive Encryption, Multipath I/O, Network Load Balancing, Remote Server Administration Tools, SMTP Server, Storage Manager for SANs, Windows Process Activation Service, Windows Server Backup Features, .NET Framework 3.5.1, and file services.

Note:

For more information, click [Start] – [All Programs] – [Administrative Tools] – [Server Manager] and check "Features" and "Roles".

LCD Message List

An LCD panel is provided on the front of the TeraStation. The displayed messages and their meanings are shown below.

Normal Display

The LCD can be cycled through different modes to the normal display by pressing (DISPLAY) on the front of the TeraStation. The display items can be set in “LCD Settings" on page 6.

LCD Message		Description
LINK SPEED When an Ethernet cable is connected to LAN Port 2, “LINK SPEED 2" is displayed.	LINK SPEED No LINK	Not connected to network.
	LINK SPEED 10Mbps	Connected at 10 Mbps.
	LINK SPEED 100Mbps	Connected at 100 Mbps.
	LINK SPEED 1000Mbps	Connected at 1000 Mbps full duplex.
Disk Space Used	HDD USED C_D■E^F^	Bar graphs are shown to indicate the used space for the C, D, E, and F internal drives of the TeraStation. When a hard drive is full, it is indicated by "^".
Host Name and IP Address	WS−VLxxx 192.168.11.150	Displays the host name and IP address.
Calendar/Clock	DATE TIME 2011／09／17 11：11	Displays the date and time set in the TeraStation.
Installed OS	Windows Storage Server 2008 R2	Displays the OS installed on the TeraStation.
IP Address 2	NETWORK2 192.168.11.151	DIsplays the IP address of LAN port 2 when an Ethernet cable is connected to LAN port 2.

Error Display, Warning Display

The LCD panel on the TeraStation displays the messages shown below when an error occurs in the fan speed, error occurs in the internal temperature of the TeraStation, or when a hard drive cannot be found.

LCD Message	Description
SYSTEM Error E11 Fan Failure	An error occurred in the fan speed. Check that no foreign objects or dust are clogging the fan. If any foreign objects or dust are found, use a pair of tweezers, air duster, or other tool to remove them. If the error is displayed again, contact Buffalo technical support for assistance.
SYSTEM Error E12 Cooling Failure	System temperature has exceeded the maximum safe value. Do not place objects in the area around the TeraStation. Also, move the TeraStation to a cooler location.
HDx Error E16 HDx Not Found	Unable to find hard drive X. Hard drive X may be disconnected or may have failed. Reinstall the hard drive.
Replication I33 ReplicationFailure	An error occurred in replication. Click [ReSynchro] in the [Backup & Replication Setting] screen to attempt replication again.

Compliance Information

FCC Warning

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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

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.

Environmental Information

- The equipment that you have purchased required the extraction and use of natural resources for its production.
- The equipment may contain hazardous substances that could impact health and the environment.
- In order to avoid the dissemination of those substances in our environment and to diminish the load on natural resources, we encourage you to use the appropriate take-back systems.
- The take-back systems will reuse or recycle most of the materials of your end of life equipment appropriately.
- The crossed-out wheeled bin symbol invites you to use those systems.
- If you need more information on the collection, reuse and recycling systems, please contact your local or regional waste administration.

KC

기종별	사 용 자 안 내 문
A 급 기기 (업무용 정보통신기기)	이 기기는 업무용 (A 급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 , 가정외의 지역에서 사용하는 것을 목적으로 합니다 .

BSMI

警告使用者 :

這是甲類的資訊產品 , 在居住的環境中使用時 , 可能會造成射頻

干擾 , 在這種情況下 , 使用者會被要求採取某些適當的對策。

CCC

声明 :

此为 A 级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对其干扰采取切实可行的措施。

电池警告语

1. **电池不得暴露。**
2. **使用型号不正确的电池可能导致爆炸。**