



WD Sentinel™ RX4100

Small Business Storage Server

Administrator and Maintenance Guide



WD® Service and Support

Should you encounter any problem, please give us an opportunity to address it before returning this product. Most technical support questions can be answered through our knowledge base or email support service at <http://support.wd.com>. If the answer is not available or if you prefer, please contact WD at the best telephone number shown below.

WD Guardian™ Services premium Technical Support and Extended Warranty services are also available for Small Business Customers. Contact WD Technical support at <http://support.wd.com> for information about this extra level of support and how to obtain it.

Your product includes 30 days of free telephone support during the 3-year standard limited warranty period. This 30-day period starts on the date of your first telephone contact with WD Technical Support. Email support is free for the entire warranty period and our extensive knowledge base is available 24/7. To help us keep you informed of new features and services, remember to register your product on the Registration page on the user interface or online at <http://register.wd.com>.

WD Guardian Services

When you need a little help from an expert, we'll take care of you! WD Guardian Services offers flexible, affordable and hassle-free technical support and extended warranty plans with a variety of benefits. Choose the plan that works best for your business. Visit www.wdguardian.com for details.

Accessing Online Support

Visit our product support website at <http://support.wd.com> and choose from these topics:

- **Downloads** - Download drivers, software, and updates for your WD product.
- **Registration** - Register your WD product to get the latest updates and special offers.
- **Warranty & RMA Services** - Get Warranty, Product Replacement (RMA), RMA Status, and Data Recovery Information.
- **Knowledge Base** - Enter keyword, phrase, answer ID, or PID.
- **Installation** - Get manuals, installation guides, and documentation for your WD product.
- **WD Community** - Share your thoughts and connect with other WD users.

Contacting WD Technical Support

When contacting WD for support, have your WD product serial number, system hardware, and system software versions available.

United States & Canada

United States	855.556.5117
Canada	855.556.5117

Mexico & South America

Argentina	00 80021102110
Brazil	0021 80021102110
Columbia	009 80021102110
Grenada	00 80021102110
Panama	00 80021102110
Peru	00 80021102110
Uruguay	00 80021102110

Africa

South Africa	09 80021102110
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Asia Pacific

Australia	0011 800.2110.2110
China	00 800.2110.2110
Hong Kong	001 800.2110.2110
Japan	010 800.2110.2110
Malaysia	00 800.2110.2110 (Telekom Malaysia IDD)
New Zealand	00 800.2110.2110
Philippines	00 800.2110.2110
Singapore	001 800.2110.2110 (Singtel IDD)
Taiwan	00 800.2110.2110 (Chunghwa IDD)
Thailand	001 800.2110.2110

Europe

Belgium	00 80021102110
Cyprus	00 80021102110
Czech Republic	00 80021102110
Denmark	009 80021102110
Estonia	00 80021102110
Finland	990 80021102110 999 80021102110
France	00 80021102110
Germany	00 80021102110
Greece	00 80021102110
Hungary	00 80021102110
Iceland	00 80021102110
Ireland	00 80021102110
Israel	014 80021102110
Italy	00 80021102110
Luxembourg	00 80021102110
Netherlands, The	00 80021102110
Norway	00 80021102110
Poland	00 80021102110
Portugal	00 80021102110
Sweden	00 80021102110
Swiss Confederation, The	00 80021102110
United Kingdom, The	00 80021102110

Registering Your WD Product

Register your WD product to get the latest updates and special offers. You can easily register your product on the user interface of the product software or online at <http://register.wd.com>.

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1

Important User Information

[Important Safety Instructions](#)
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Important Safety Instructions

This device is designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated into this unit will protect you if you observe the following procedures for installation, use, and servicing.

- Follow all warnings and instructions marked on the product.
- Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- Do not use this product near any liquids.
- Do not place this product on an unstable surface. The product may fall, causing serious damage to the product.
- Do not drop the product.
- Do not block the slots and openings on the back or bottom side of the chassis; to ensure proper ventilation and reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. Making sure the server is standing upright also helps prevent overheating.
- Operate this product only from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.
- Never push objects of any kind into this product through the chassis slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock.
- Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power cord or plug is damaged or frayed.
 - If liquid has been spilled on the product.
 - If the product has been exposed to rain or water.
 - If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment may result in damage and require extensive work by a qualified technician to return the product to normal condition.
 - If the product has been dropped or the chassis has been damaged.

- If the product exhibits a distinct change in performance, contact WD Customer Support at <http://support.wd.com>.

WARNING! The WD Sentinel™ Server uses a lithium battery, type CR2032. There is danger of an explosion if the battery is incorrectly replaced. Replace only with the same or equivalent battery type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Handling Precautions

WD products are precision instruments and must be handled with care during unpacking and installation. The WD Sentinel server may be damaged by rough handling, shock, or vibration. Be aware of the following precautions when unpacking and installing your external storage product:

- Do not drop or jolt the WD Sentinel server.
- Do not move the unit while it is powered on.
- Do not use this product as a portable drive.

Recording Your WD Product Information

Remember to write down the following WD product information, which is used for setup and technical support. Your WD product information is found on the label on the bottom of the device.

- Serial Number
- Model Number
- Purchase Date
- System and Software Notes

About This Guide

This Administrator and Maintenance Guide provides detailed instructions and information for WD-specific interface elements and functions. Unless otherwise noted, refer to *Microsoft® Online Help* for standard interface elements and functions. This guide uses the following conventions:

Convention	Used for ...
Bold font	Names of items on a page such as menus, buttons, option names, fields, and tabs that the user must click or complete and keys the user must press.
Note:	Extra, but not vital, information
Important:	Essential Information to know or to prevent problems when using the WD Sentinel server
WARNING!	Vital information for operating the WD Sentinel server or to prevent damage to the server or your computer.

2

Product Overview

- [Getting to Know Your WD Sentinel RX4100 Server](#)
- [Key Features](#)
- [System Requirements and Compatibility Information](#)
- [Technical Specifications](#)
- [Product Views](#)
- [Indicators](#)
- [Where to Find Help](#)

Getting to Know Your WD Sentinel RX4100 Server

Congratulations on your purchase of the WD Sentinel RX4100 Small Business Storage Server. Whether you're an IT expert or not, WD Sentinel RX4100 is easy to install and provides secure unified storage (NAS and iSCSI SAN), complete data protection for up to 25 computers, and remote file access for your employees and trusted vendors while in the office or from anywhere.

Key Features

Easy installation: The easy setup process allows you to integrate WD Sentinel RX4100 into your office network like a pro. The administration dashboard quickly guides you through the process including adding users, setting up data access, creating shared folders, and scheduling backups.

Easy administration: WD Sentinel RX4100 is the ideal storage server for small business in 1U rack mountable design. Its easy administration features include four drive bays with hot swappable design; redundant user-serviceable power supplies; user-serviceable fans and email alerts. In the event that an IT professional's assistance is needed, the WD Sentinel RX4100 allows them to manage the server remotely. Now that's easy!

Comprehensive data protection for your entire office has never been easier.

- **The drives inside:** Pre-configured with hard drives optimized for reliability, quality and performance.
- **RAID:** Pre-configured with RAID 5 for added data protection and drive redundancy.
- **Automatic backup and restore software for Windows® clients:** The included backup software saves time and space by performing a full Bare Metal Backup the first time and then automatically backing up only the data that has changed since the previous backup – using block-level deduplication technology. In the event of a data loss or a drive failure on a client computer, the WD Sentinel RX4100's fast and easy restore function finds your files or lets you restore an entire system to get you up and running again quickly.
- **Time Machine backup support for Mac OS® clients:** WD Sentinel RX4100 offers seamless support for backing up Mac OS clients to your WD Sentinel server using the Apple Time Machine backup utility.
- **Dual Ethernet ports:** Comes pre-configured in Adaptive Fault Tolerance, which keeps your network available by automatically switching to the second Ethernet port if the first one should fail.

- **Optional dual power supply:** WD Sentinel RX4100 offers the small business owner the option of adding a redundant external power supply that will take over should a power surge or other failure damage the internal power supply. With the optional external power supply you have the added peace of mind knowing that your system will remain operational and available.
- **Optional off-site disaster recovery protection:** Protect your business data against a disaster by creating an off-site copy to the cloud using KeepVault®*. Learn more at wdc.keepvault.com.

Secure remote access: WD Sentinel RX4100 is perfect for businesses with employees working remotely or in home offices. You have the security of knowing all your business files are safely stored on your WD Sentinel RX4100 small business storage server. With built-in secure remote access, remote employees, contractors, or clients with access permissions can securely access business data from any computer with an Internet connection.

Leading-edge performance: With dual Gigabit Ethernet connectivity, WD Sentinel RX4100 delivers read speeds up to 105 MB/s through the Gigabit Ethernet interface. That's three times faster than most network drives in this category today.

Note: As tested using a file transfer simulator using two sets of large files averaged over 10 runs.

Fully Compatible with Mac OS Clients: WD Sentinel RX4100 supports Apple® Filing Protocol (AFP), which provides complete compatibility for Mac OS-based client machines. Discover WD Sentinel RX4100 automatically using Bonjour®, seamlessly back up your Mac OS clients using Apple's Time Machine® backup utility, enjoy faster data transfer over Ethernet using AFP, and manage your WD Sentinel RX4100 server using the Administration Dashboard application for Mac.

Virtualize WD Sentinel storage using iSCSI Target: WD Sentinel RX4100 offers built-in iSCSI target functionality integrated within Dashboard to easily manage the setup, administration and deployment of iSCSI Storage. IT Pro's and advanced users have the ability to partition their WD Sentinel RX4100 for both NAS File-based storage as well as iSCSI-SAN with the iSCSI Target solution powered by StarWind®. This capability enables the Administrator to create and manage multiple iSCSI targets to meet the specific needs of their dynamic IT environments.

A total solution with industry-leading technology partners: We combined hardware and software from industry leaders to deliver a reliable, secure and easy-to-manage storage server designed specifically for small business environments. WD Sentinel RX4100 features:

- **Best-in-class hard drives** – Equipped with hard drives that feature high capacity storage, peak performance and best-in-class reliability.
- **Intel® Atom™ processor** – Built with Intel Atom dual core processor inside, WD Sentinel™ RX4100 can easily handle your small business's day-to-day computing and file storage demands.
- **Windows Storage Server 2008 R2 Essentials** – Microsoft Windows Storage Server 2008 R2 Essentials operating system provides the intuitive, reliable and scalable storage solution your small business needs to quickly and efficiently organize, protect and share your critical business data using the familiar Windows user experience. With enterprise-class, server-based, block-level de-dupe backup capability you can be confident that your data is well protected.

*Pre-installed in US-only models

Real-time system status through the administration dashboard: Receive critical system updates via the built-in email alerts functionality. Or view real-time updates for the system, RAID and network status through WD Sentinel's dashboard, which includes easy-to-use task wizards to help you set backup schedules, administer user accounts and manage public and private shares.

Compatible with multiple operating systems: WD Sentinel RX4100 includes the Connector software for Windows XP, Windows Vista®, Windows 7, Windows 8, Mac OS X Mountain Lion, Mac OS X Lion, Mac OS Snow Leopard and Mac OS X Leopard. Support for major network file-system protocols enables cross-platform compatibility and file sharing among Windows, Mac® and Linux®/UNIX® operating systems. Supports Time Machine backup for Mac OS clients. Compatibility may vary depending on user's hardware configuration and operating system.

Stream digital media anywhere in your network: With the built-in DLNA® server your employees can access any shared media libraries on the network rather than maintaining copies on their individual computers. You can also stream digital content like videos, music, or digital signage for employees, vendors or clients using remote web access.

Optional off-site disaster recovery service*: Every small business should have a plan to protect its data from an unforeseen disaster (fire, flood, earthquake, etc.). KeepVault is an off-site cloud-based data backup and disaster recovery solution that's integrated within WD Sentinel's administration dashboard. It's easy to use and cost-effective and provides built-in support for data encryption and compression for secure and faster data transfer.

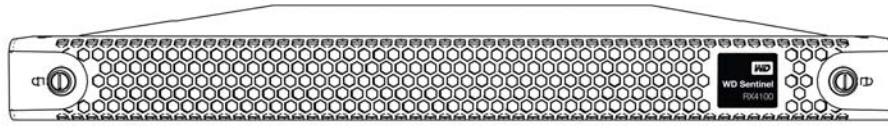
WD Guardian Services: When you need a little help from an expert, we'll take care of you! WD Guardian Services offers flexible, affordable and hassle-free technical support and extended warranty plans with a variety of benefits. Choose the plan that works best for your business. Visit www.wdguardian.com for details.

Why WD?: Western Digital has been making hard drives for over 40 years. We know how to build drives to store and protect your data because we understand that your company's data is paramount to your business success.

**Pre-installed in US-only models*

Package Contents

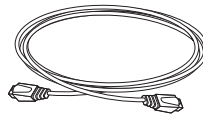
- Small Business Storage Server
- 1 RJ-45 Ethernet cable
- 1.8 meter power cord
- Basic Installation Guide



WD Sentinel RX4100



1.8 meter power cord



Ethernet cable



Basic Install Guide

For information on additional accessories, visit:

US	www.shopwd.com or www.wdstore.com
Europe	<ul style="list-style-type: none"> • Austria: www.wdstore.de • United Kingdom: www.wdstore.eu • France: www.wdstore.fr • Italy: www.wdstore.it • Germany: www.wdstore.de • Spain: www.wdstore.es • Netherlands: www.wdstore.nl • Rest of EU Countries: www.shopwd.eu or www.wdstore.eu
All others	Contact WD Technical Support in your region. For a list of Technical Support contacts, visit http://support.wd.com and see Knowledge Base Answer ID 1048.

System Requirements and Compatibility Information

Requirement	Description
Client Operating System Compatibility	<p>Windows 8</p> <ul style="list-style-type: none"> • Basic (x86 and x64) • Pro (x86 and x64) • Enterprise (x86 and x64) <p>Windows 7</p> <ul style="list-style-type: none"> • Home Basic (x86 and x64) • Home Premium (x86 and x64) • Professional (x86 and x64) • Ultimate (x86 and x64) • Enterprise (x86 and x64) • Starter (x86) <p>Windows Vista</p> <ul style="list-style-type: none"> • Home Basic with Service Pack 2 (SP2) (x86 x64) • Home Premium with SP2 (x86 and x64) • Business with SP2 (x86 and x64) • Ultimate with SP2 (x86 and x64) • Enterprise with SP2 (x86 and x64) • Starter with SP2 (x86) <p>Windows XP</p> <ul style="list-style-type: none"> • Home with Service Pack 3 (SP3) • Professional with SP3 • Media Center 2005 with SP3 <p>Mac OS X</p> <ul style="list-style-type: none"> • Leopard • Snow Leopard • Lion • Mountain Lion <p>File sharing support for Linux and UNIX</p>
Local Network	<ul style="list-style-type: none"> • Router/switch (Gigabit Ethernet recommended to maximize performance) • DHCP enabled
Broadband Access	Required for remote access outside the LAN
Display and Peripherals	<ul style="list-style-type: none"> • Super VGA (800 x 600) or higher-resolution monitor • USB Keyboard • USB Mouse or compatible pointing device

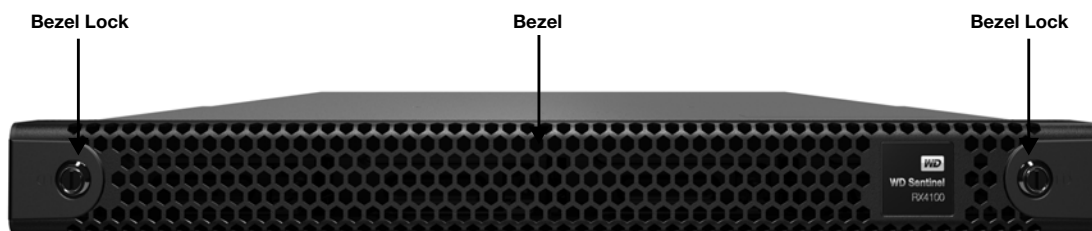
Technical Specifications

Specification	Description
Interfaces	<ul style="list-style-type: none"> • High performance (10/100/1000) Gigabit Ethernet connection • 2 ports of powered USB 3.0 • 1 port of powered USB 2.0
I/O ports	<ul style="list-style-type: none"> • 2 Ethernet (RJ-45 Ports) • 2 USB 3.0 Ports • 1 USB 2.0 Port • 1 VGA Port
Supported protocols	CIFS/SMB, NFS, HTTP, HTTPS, WebDAV, AFP
Internal hard drives	<p>4 WD 3.5-inch SATA Best in Class hard drives with RAID-specific time-limited error recovery (TLER) Pioneered by WD, this feature prevents drive fallout caused by the extended hard drive error-recovery processes common to desktop drives.</p> <p>Approved Drive Models For a complete list of approved drive models, search for Answer ID 9443 in the WD Knowledge Base at http://support.wd.com.</p>
CPU	Intel Atom Dual Core 1.80 Ghz
Memory	4 GBytes SODIMM DDR3-800
Drive bays	<ul style="list-style-type: none"> • 4 3.5 inch hard drive bays • Hot swap capable • Trayed design
RAID level	<ul style="list-style-type: none"> • RAID 5 with automatic rebuild functionality
Physical dimensions	<ul style="list-style-type: none"> • Length: 26 inches (660 mm) • Width: 19 inches (482.1 mm) • Height: 1.75 inches (44 mm)
Weight	<ul style="list-style-type: none"> • 8 TB and 12 TB: 26.627 lbs (12.078 kgs) • 16 TB: 27.112 lbs (12.298 kgs)
Capacities	<ul style="list-style-type: none"> • 8 TB (4 x 2 TB); 6 TB Usable • 12 TB (4 x 3 TB); 9 TB Usable • 16 TB (4 x 4 TB); 12 TB Usable
Power	<ul style="list-style-type: none"> • 1 internal power supply • 1 external power port for failover (optional)
Power supply	<ul style="list-style-type: none"> • Input voltage: 100 to 240 V AC • Input frequency: 50 to 60 Hz • Output voltage: 19V DC, up to 6.32A
Temperature	<ul style="list-style-type: none"> • Operating temperature: 0 to 35 °C (32 to 95 °F) • Non-operating temperature: -40 to 70°C (-40 to 158 °F)
Switches	<ul style="list-style-type: none"> • Power • Recovery

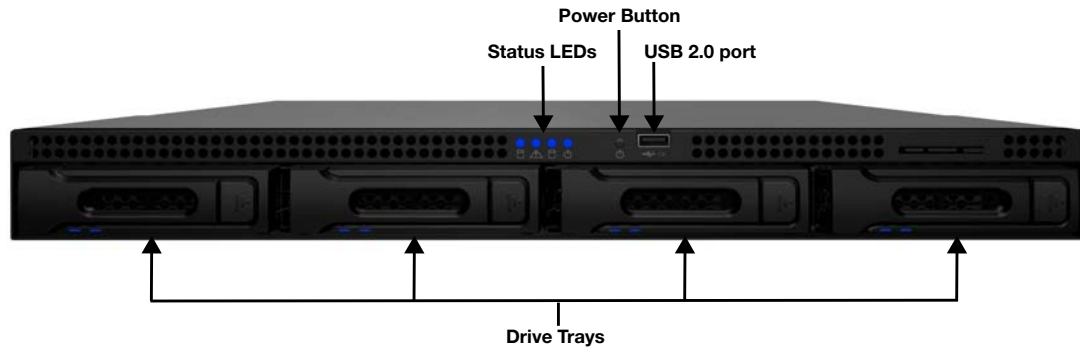
Specification	Description
LEDs	<p>1 Drive Activity LED</p> <ul style="list-style-type: none"> Flashing blue indicates data transfer to/from any drive Black indicates no drive activity <p>1 Drive Warning LED</p> <ul style="list-style-type: none"> Solid RED indicates fault on any drive. Black indicates no drive warnings <p>1 Drive Status LED</p> <ul style="list-style-type: none"> Flashing blue indicates data transfer to/from any drive Solid RED indicates a drive fault Black indicates no drive activity <p>1 Power LED</p> <ul style="list-style-type: none"> Flashing blue indicates boot status Flashings RED indicates a fault condition Solid blue once booted, and there are no pending fault conditions, indicates a good operational state Black indicates inactive state <p>2 Ethernet Port LEDs</p> <ul style="list-style-type: none"> Flashing green indicates activity Solid amber indicates that there is a link connection Black indicates inactive state <p>4 Drive Tray LEDs</p> <ul style="list-style-type: none"> Flashing blue or solid blue indicates drive activity Solid RED indicates drive fault (Drive must be replaced)
Operating System	Windows Storage Server 2008 R2 Essentials
Backups	25-client computer support for backup (Windows and Mac OS Client computers)
Restore	<ul style="list-style-type: none"> Bare metal restore for Windows clients File/folder level restore

Product Views

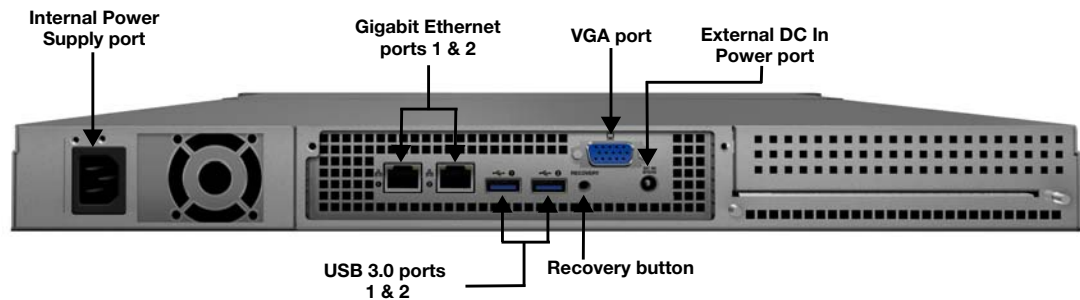
Front View (With Bezel)



Front View (Without Bezel)



Back View



Indicators

Component	Icon	Description
Ethernet ports		Connect the device to a local network.
Power port		Connects the device to an AC power cord and the power outlet.
Recovery button	RECOVERY	Button on the back of the server recovers the server (including the operating system) while using a USB drive in an event of an OS corruption.
USB ports		Connects with USB 2.0 and 3.0 devices such as a USB storage, USB mouse, USB keyboard, or a UPS.
VGA port		Connects to your VGA monitor
DC In connector		Connects the device to a DC power cord and the power outlet.


LEDs

The LEDs on the WD Sentinel identify the status of the unit.

LED	Color	State	Description
Power LED	Black	Off	WD Sentinel server is currently inactive.
	Blue	Flashing	WD Sentinel server is currently booting the software.
	Blue	Solid	WD Sentinel server has successfully booted the software and is operational.
	Red	Flashing	Indicates that a serious fault has occurred and needs immediate attention.
Drive Activity	Black	Off	Indicates no drive activity.
	Blue	Flashing	Indicates that data is transferring to/from the drives.
Drive Warning	Black	Off	Indicates no drive warning activity.
	Red	Solid	Indicates that a serious fault has occurred on the drives.
Drive Status	Black	Off	Indicates no drive status activity.
	Blue	Flashing	Indicates data transfer to/from drives.
	Red	Solid	Indicates a drive fault.
Drive LEDs	Black	Off	If the LED is off while other drive LEDs are on, no drive is installed in the bay.
	Blue	Flashing	Drive is currently active. Note that all lights in a RAID system are active at the same time by design.
	Red	Solid	Indicates drive failure. Replace this drive as soon as possible. The system is no longer RAID protected until the drive is replaced and the RAID structure is repaired.
Ethernet Port	Black	Off	Indicates an inactive state.
	Green	Flashing	Indicates link activity.
	Amber	Solid	Indicates that there is a link connection

Where to Find Help

This manual provides step-by-step instructions and other important information regarding your WD product. It is meant for the person serving as the administrator of the WD Sentinel RX4100. You can download translated versions and updates to this manual from <http://products.wd.com/updates>. For more information and news about this product, visit our website at <http://www.wd.com/>.

Additional Reference	Description
Basic Installation Guide	Included in the product box or available at http://products.wd.com/WDSentinel-RX4100 helps you install the WD Sentinel server.
WD Online Help	Specific descriptions and instructions accessed on WD-specific (Monitor) pages on the Dashboard.
Microsoft Online Help	<ul style="list-style-type: none"> • Access detailed explanations and instructions for a particular page by clicking the Help button  at the top right of the Dashboard. • Search for help on a specific topic or term by entering it in the Microsoft Online Help search field at the top right of the page. • Access the entire Microsoft Online Help system by clicking Microsoft Online Help.

Important: Not all Microsoft Online Help is applicable to the WD Sentinel RX4100. The WD Online Help and this Administrator's Guide take precedence over the [Microsoft Online Help](#).

3

Connecting the Server and Getting Started

[User Roles and Responsibilities](#)

[How the WD Sentinel RX4100 Fits into Your Office](#)

[Connecting the WD Sentinel RX4100 Server to Your Network \(Preferred Method\)](#)

[Connecting the WD Sentinel RX4100 Server from a Client Computer \(Optional Method\)](#)

[Setting up your WD Sentinel Server \(one time only\)](#)

[Connecting your Computers](#)

[Rebooting the WD Sentinel Server](#)

This chapter steps you through the process of connecting and setting up your WD Sentinel RX4100 server and connecting it to computers in your network.

User Roles and Responsibilities

Types of WD Sentinel RX4100 Users

At a high level there are two categories of users who need to access one or more features of your WD Sentinel server.

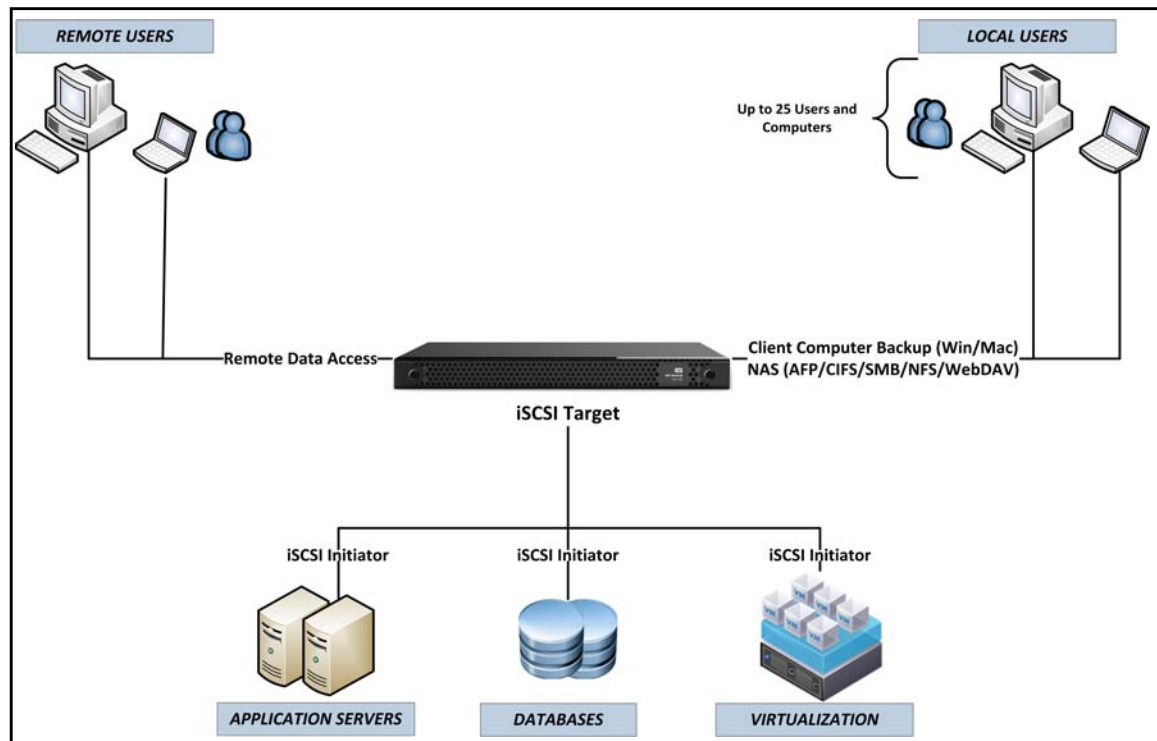
- **Administrator**—This is the person who performs the setup and routine management tasks on the WD Sentinel server. This person is also the holder of the Administrator password of your WD Sentinel server.
- **Users**—You can have up to 25 user accounts on your WD Sentinel server. These can be:
 - **Internal Users** – The internal users are typically the employees (including the Administrator) in your office, working locally or occasionally from a remote location (e.g. Sales Staff), who need to access business data and server resources.
 - **External Users** – The external users are the customers and business partners with whom you need to exchange business data.

The WD Sentinel server offers different paradigms for each type of user. The table below provides a view into the usage model and tasks for each category of users.

Administrator (e.g., Business Owner)	Internal Users (e.g., Employees)	External Users (e.g., Clients or Business Partners)
Primary Setup Tasks <ul style="list-style-type: none"> • Physically connects the WD Sentinel server to the network. • Configures the WD Sentinel server itself. This is a one-time procedure. • Connects a Mac or Windows PC to the WD Sentinel server by installing Connector software on it. 	Primary Setup Tasks <ul style="list-style-type: none"> • None 	Primary Setup Tasks <ul style="list-style-type: none"> • None

Administrator (e.g., Business Owner)	Internal Users (e.g., Employees)	External Users (e.g., Clients or Business Partners)
<p>Primary User Interface</p> <ul style="list-style-type: none"> Dashboard - Signs in using the Administrator password (no username required). 	<p>Primary Interface</p> <ul style="list-style-type: none"> Launchpad - Signs in using the assigned user name and password. <p>Secondary Interface</p> <ul style="list-style-type: none"> Remote Web Access - While accessing remotely, signs in using the assigned user name and password. 	<p>Primary Interface</p> <ul style="list-style-type: none"> Remote Web Access - Signs in using the assigned user name and password.
<p>Dashboard Task Examples</p> <ul style="list-style-type: none"> Sets up user accounts and assigns permissions. Manages shared folders. Sets up and manages automatic backup schedule. Manages WD Sentinel server settings, resolves any alerts, and monitors server performance. Sets up Remote Web Access. Manages updates. Creates and manages iSCSI targets. 	<p>Launchpad Task Examples</p> <ul style="list-style-type: none"> Accesses data on shared storage. Starts manual backups. Launches Remote Web Access. <p>Remote Web Access Task Examples</p> <ul style="list-style-type: none"> Accesses data on shared storage. Connects to the PCs in the office remotely. Accesses media library. 	<p>Remote Web Access Task Examples</p> <ul style="list-style-type: none"> Accesses data on shared storage. Accesses media library.
<p><i>Note:</i> For each user account, the WD Sentinel server enables the Administrator to set granular permissions for various shared folders as well as server resources, such as Remote Web Access. At all times, the users are only able to access the data on the server and other server resources for which they have permissions.</p>		

How the WD Sentinel RX4100 Fits into Your Office



Connecting the WD Sentinel RX4100 Server to Your Network (Preferred Method)

Use the following steps to physically connect your WD Sentinel RX4100 to your network.

1. Connect your monitor to the VGA port on the rear of your WD Sentinel server.
 2. Connect your USB keyboard and USB mouse to the USB ports on your WD Sentinel server.
 3. Using the provided ethernet cable, connect the WD Sentinel server (either ethernet port 1 or 2) to a DHCP-enabled LAN.
 4. Using the provided AC power cord, connect the WD Sentinel server to an electrical outlet or a UPS.
 5. Turn on your monitor.
 6. Press the power button on the front of your WD Sentinel unit.
- Once the WD Sentinel boot up process is complete, the Windows Storage Server 2008 R2 Language Selection screen displays. The Power LED on the front of the WD Sentinel server will display a solid blue light.

WARNING! This process takes a few minutes. Do not interrupt the process. Do not power off or disconnect the WD Sentinel server.

Connecting the WD Sentinel RX4100 Server from a Client Computer (Optional Method)

As an alternative, you can set up your WD Sentinel RX4100 using a client computer without connecting a monitor, keyboard, and mouse to your server. Use the following steps to connect your WD Sentinel RX4100 to your network from a client computer.

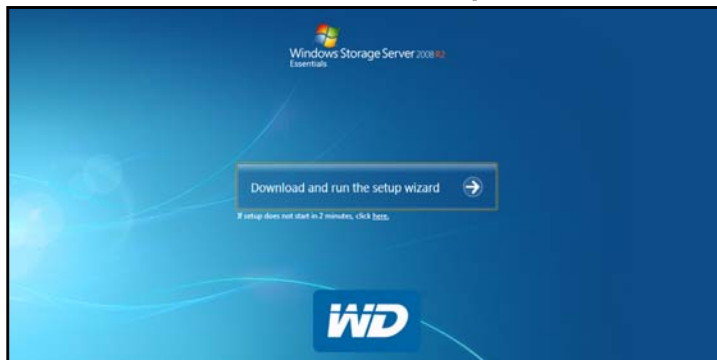
1. Using the provided ethernet cable, connect the WD Sentinel server (either ethernet port 1 or 2) to a DHCP-enabled LAN.
2. Using the provided AC power cord, connect the WD Sentinel server to an electrical outlet or a UPS.
3. Press the power button on the front of your WD Sentinel unit.
Once the WD Sentinel boot up process is complete, the LED on the front of the WD Sentinel server will display a solid blue light.

WARNING! This process takes a few minutes. Do not interrupt the process. Do not power off or disconnect the WD Sentinel server.

4. In the address field of an open browser window, type **http://WDSSENTINEL/Setup**.

Note: The default server name (i.e., WDSSENTINEL) is used to access the WD Sentinel setup screen in your browser. If other devices using the same name are located on your network, you will first have to either disconnect the device before setting up your new WD Sentinel server, or obtain the IP address of your new WD Server. Once the IP address is obtained, type `http://<IP address>/setup` in your browser window.

5. Select **Download and run the setup wizard** button.

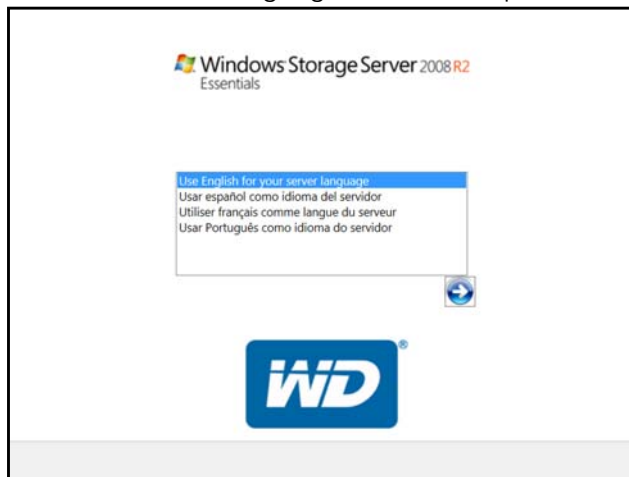


6. At the warning prompts, click **Run** and **Yes** as appropriate.

Setting up your WD Sentinel Server (one time only)

Your WD Sentinel RX4100 server is now ready to be configured. This section describes how to use the one time setup wizard to configure your server for first use.

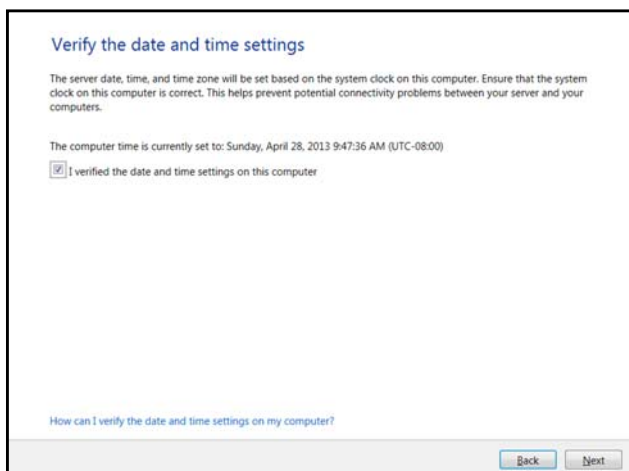
1. Select the server language from the list provided and click the arrow to continue.



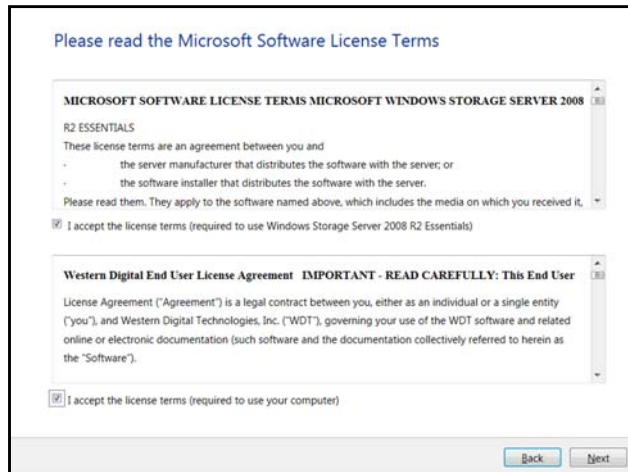
2. Verify the localization settings, or select the correct values from the drop-down lists, then click **Next**.



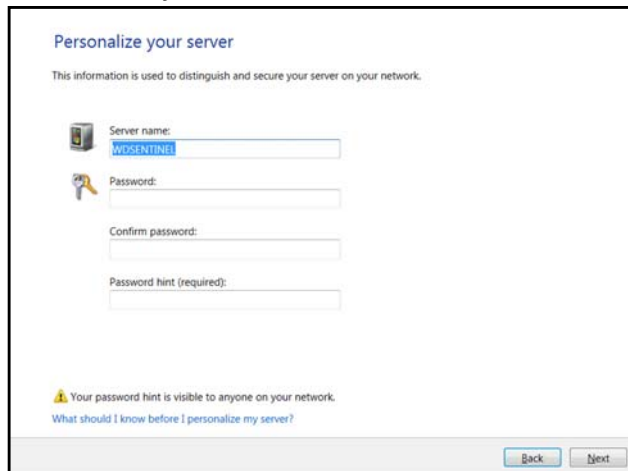
3. Review the date and time, and select the checkbox to verify the settings, then click **Next**.



4. Read the Microsoft and Western Digital license agreements, select both checkboxes to accept the license terms, then click **Next**.



5. Personalize your WD Sentinel server:



- a. The WD Sentinel server has a default name of WDSSENTINEL. Enter a unique name for your WD Sentinel server, for example, Company-Name (must contain 1-12 characters; may be upper case, lower case, numeric, or a combination; may include hyphens but no spaces or special characters).

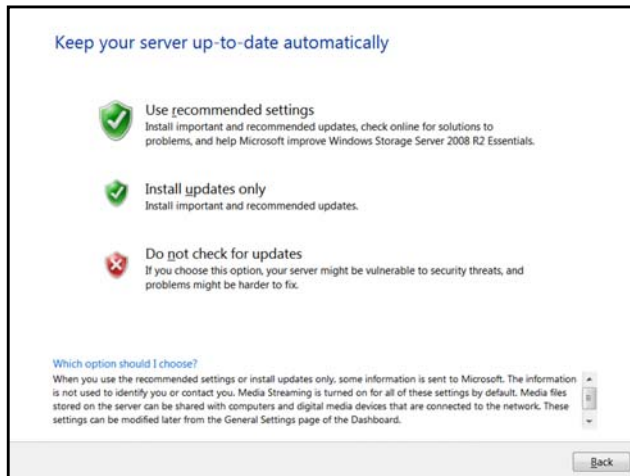
WARNING! THIS IS THE ONLY TIME YOU CAN NAME YOUR WD SENTINEL SERVER. You must assign it a unique name to avoid naming conflicts should you ever have more than one WD Sentinel server on the network.

- b. Enter and confirm a password (must be at least 8 characters long and contain at least three of the following categories: uppercase letters, lowercase letters, numbers, and symbols; spaces are allowed.) This is the Administrator password. You will use it later to connect the client computers to your WD Sentinel server and to access the Administration Dashboard.
- c. Enter a hint to remind you of the password.

WARNING! If you forget the Administrator password, it may not be possible to recover it, and you could potentially lose all of your data. Make sure to record the password and keep it in a safe location.

6. Click **Next** and specify how the server software updates should occur. Make a selection:

Note: If you choose the first or second option on this screen, the subsequent installation process may take longer, depending on Windows updates that may be available at this time.

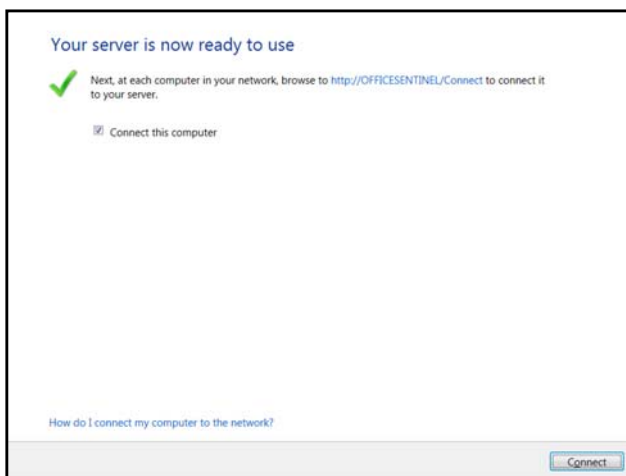


The installation begins. The progress bar on the screen informs you of the installation's progress.

Important: This process can take an hour or more and may restart more than once. Do not interrupt the process. Do not power off or disconnect the WD Sentinel server.

The completion screen appears:

Your WD Sentinel server configuration is complete and the server is ready for use!



7. Click **Connect** to connect the computer you're using to the server. To connect a computer, proceed to "Connecting your Computers" on page 20.

Connecting your Computers

Once you've set up your WD Sentinel server, you can connect up to 25 Windows PCs or Mac computers to your WD Sentinel server.

Installing the Connector software joins the client computer to your WD Sentinel Server and installs Launchpad and Dashboard.

- Users use **Launchpad** to access server resources they have rights to.
- The Administrator (you) accesses **Dashboard** for such tasks as managing the WD Sentinel server, setting up user accounts, and managing access to shared folders.

Important Steps

Before installing Connector software on a computer, ensure that:

- The computers have all the latest mandatory and optional operating system updates installed.
- There are no active backups in progress on the WD Sentinel server.

Note: Check for active backups on the Dashboard's **Computers and Backup** tab. The screen displays backups in progress.

Once the Connector software is installed, set up an automated scheduled backup (for after working hours) using the Dashboard. Running a manual backup during the initial connection process will impact overall system performance.

Connecting a Windows PC

Use the following procedure to connect a Windows PC to the WD Sentinel server.

For steps on connecting a Mac using the Connector software, see "Connecting a Mac" on page 23.

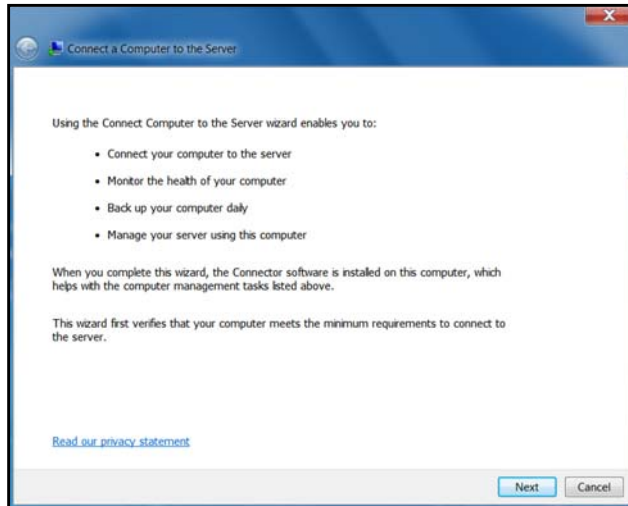
1. In the address field of an open browser window, enter **http://<servername>/connect**. Example: http://myserver/connect. <servername> is the name you gave your server in "Connecting the WD Sentinel RX4100 Server from a Client Computer (Optional Method)" on page 16.
 - If you clicked **Connect** in Step 7 on page 19, continue to Step 2.
2. Click **Download software for Windows**:



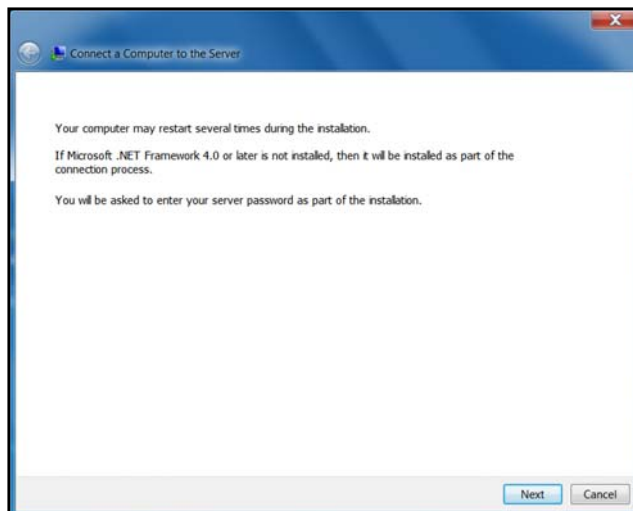
3. At the warning prompts, click **Run** and **Yes** as appropriate.

Note: If prompted to do so, type the user name and password of an account that has administrator permissions on this client computer.

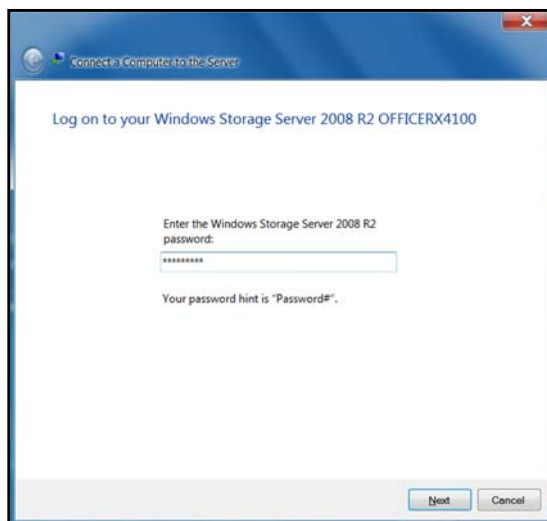
4. Review the overview of the Connect Computer to the Server wizard, then click **Next**.



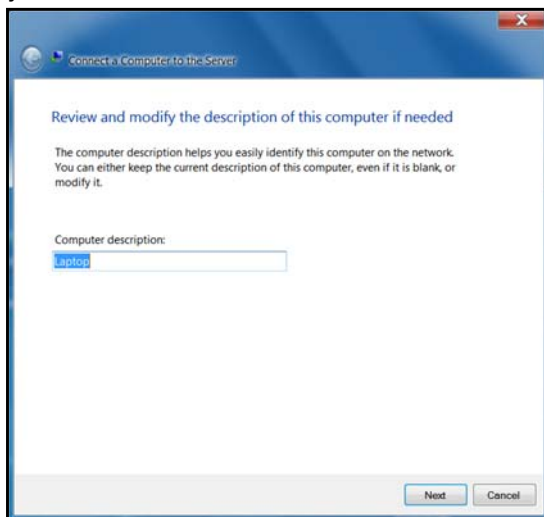
5. Read the information about events that may occur during the installation, then click **Next**.



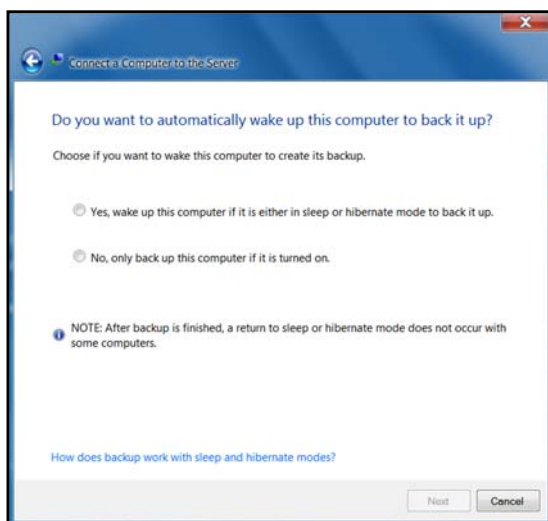
6. Installation begins. The progress bar identifies where you are in the installation process. The installation process may take 30 minutes or more to complete.
7. At the logon screen, enter the Administrator password for your WD Sentinel server, then click **Next**.



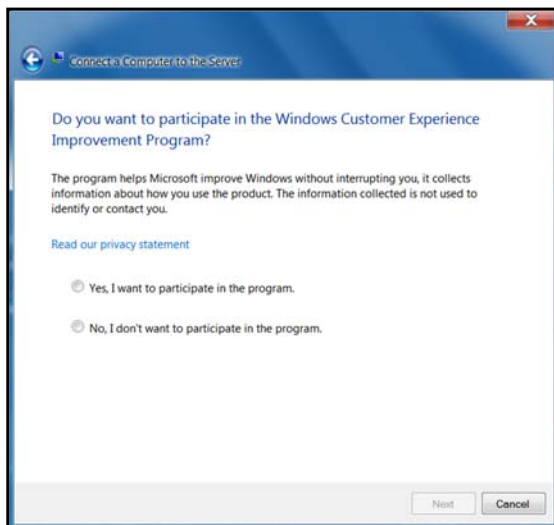
8. Enter a unique description for your computer so the server will be able to distinguish yours from others on the network, then click **Next**.



9. Review and select a wake-up option, then click **Next**.



10. Review the Microsoft program options, make a selection, then click **Next**.



11. The installation completes. Select the checkbox for opening the Dashboard to configure and monitor the WD Sentinel server. Click **Finish**:



Note: It is a best practice to select the Open Dashboard to administer your server option and launch the Dashboard after finishing the Connector software installation. To take advantage of shared storage capabilities of your WD Sentinel server, on the Dashboard, create a user account (and assign access privileges to the shared folders).

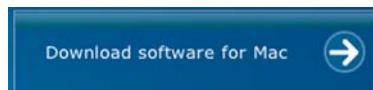
12. Close the browser. If you selected the checkbox, the Dashboard Sign in screen displays.

Connecting a Mac

Use the following procedure to connect your Mac computer to the WD Sentinel server.

For steps on connecting a Windows PC using the Connector software, see “Connecting a Windows PC” on page 20.

1. In the address field of an open browser window on the Mac you'd like to connect, enter **http://<servername>.local/connect**. Example: `http://myserver.local/connect`
<servername> is the name you gave your server in “Connecting the WD Sentinel RX4100 Server from a Client Computer (Optional Method)” on page 16.
2. Click **Download software for Mac**:

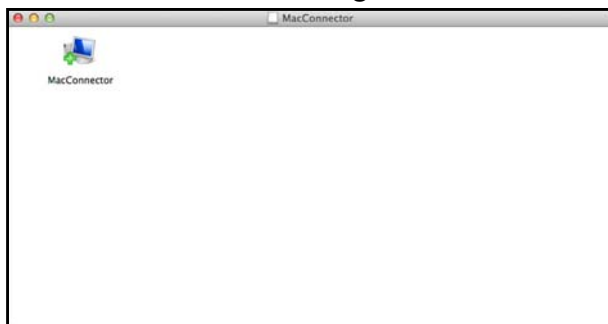


The Mac Connector software downloads to your Download directory.

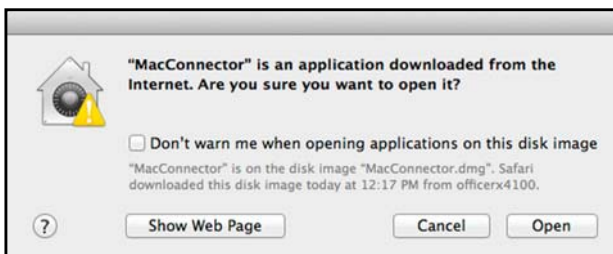
3. Click the **Download** icon on the Menu bar at the bottom of the screen:



4. Select **MacConnector.dmg**. The MacConnector window opens.



5. Double-click **MacConnector**.
6. Review the warning screen, then click **Open**.



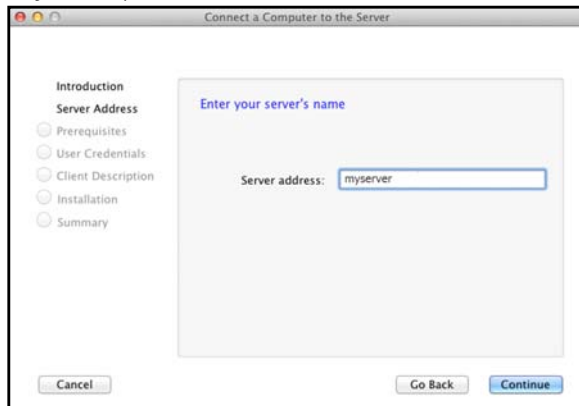
7. Enter the user name and password of an account that has administrator permissions on this client computer, then click **OK**.



8. Review the "Connect Computer to the Server" wizard, then click **Continue**.

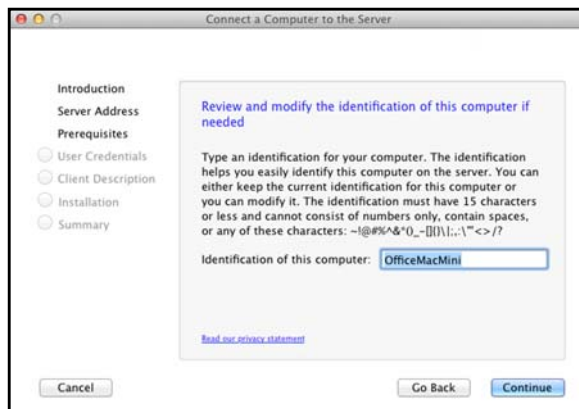


9. Enter the name you gave your server in “Connecting the WD Sentinel RX4100 Server from a Client Computer (Optional Method)” on page 16, then click **Continue**. (Example: myserver)



The software checks to ensure that your Mac meets the required prerequisites.

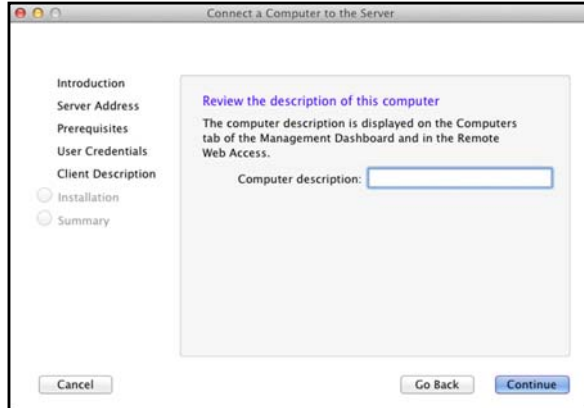
10. Once completed, enter an identifying name for your computer, then click **Continue**.



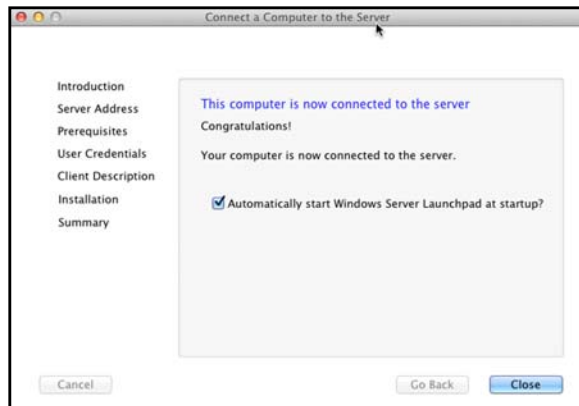
11. Enter the Administrator password for your WD Sentinel server, then click **Continue**.



12. Enter a unique description for your computer so the server will be able to distinguish yours from others on the network, then click **Continue**.



13. The installation completes. If not selected, select the checkbox for opening the Windows Server Launchpad at startup, then click **Close**.



Note: It is a best practice to select the Open Dashboard to administer your server option and launch the Dashboard after finishing the Connector software installation. To take advantage of shared storage capabilities of your WD Sentinel server, on the Dashboard, create a user account and assign access privileges to the shared folders.

Rebooting the WD Sentinel Server

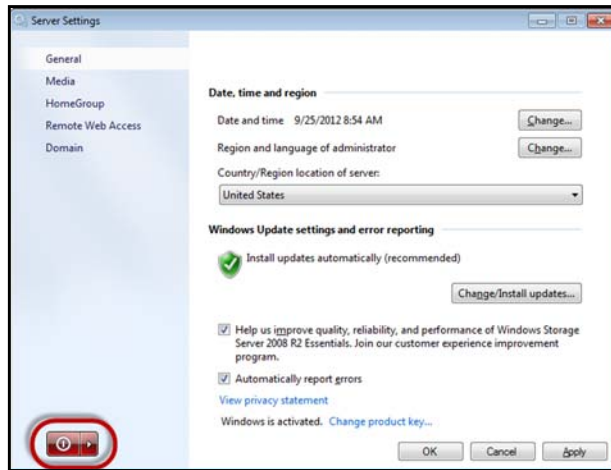
Following is the cleanest procedure for rebooting the WD Sentinel server.

Note: This procedure should only be used after you've logged into the Dashboard and created a user account.

1. On the Dashboard Home page, click the **Server Settings** link on the upper right of the window.



2. On the bottom left of the General screen, click the shutdown arrow and select **Restart**:



4

Managing the WD Sentinel Server (Dashboard)

[Setting up WD Sentinel Server & Connecting Computers](#)
[Accessing the Dashboard](#)
[Adding a User Account](#)
[Performing Dashboard Tasks](#)
[Using the Home Page](#)
[Managing User Accounts](#)
[Managing Computers and Backups](#)
[Managing Server Folders and Hard Drives](#)
[Monitoring Add-ins](#)
[Monitoring System Health and Alerts](#)
[Updating Software](#)
[Managing Server Settings](#)
[Shutting Down the Server](#)


Setting up WD Sentinel Server & Connecting Computers

This chapter assumes you have followed the Administrator's Basic Install Guide to initialize the WD Sentinel server and have connected at least one computer to the server. To review the setup steps see "Connecting the Server and Getting Started" on page 13 of this manual.

Important: As a best practice, perform the tasks outlined in this guide using a client computer on which you've installed the connector software, not directly from the WD Sentinel server.




Accessing the Dashboard

To access the Dashboard from the Server:

1. Click  > **All Programs > Windows Storage Server 2008 R2 > Windows Storage Server 2008 R2 Dashboard.**
2. On the Dashboard Sign in page, enter the Administrator password (created during setup) and click the **right arrow**:



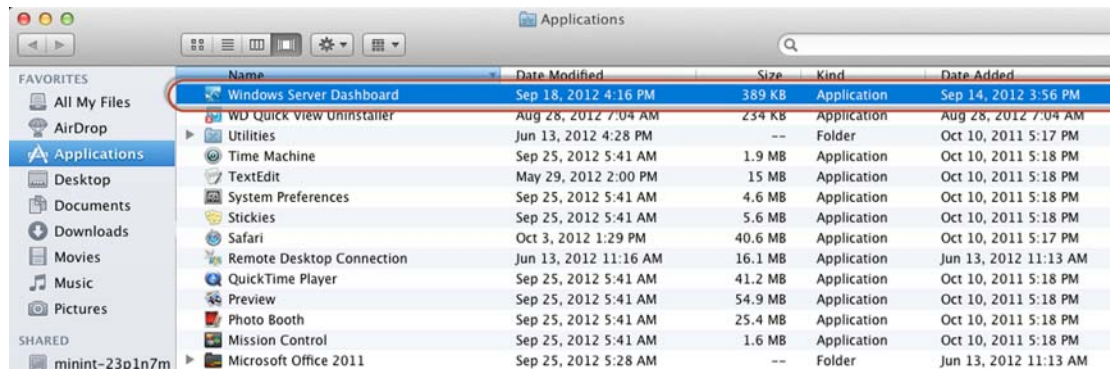
To access the Dashboard (Windows):

If you're operating systems is...	Then...
Windows 8	<ul style="list-style-type: none"> On your keyboard, click the Windows button . On the Metro Start page, right-click in a blank area of the screen. Select All apps . Under Windows Server Storage Server 2000 R2, click Windows Server 2008 R2 Dashboard.
Windows 7 Windows Vista	<ul style="list-style-type: none"> Click  > All Programs > Windows Storage Server 2008 R2 > Windows Storage Server 2008 R2 Dashboard.
Windows XP	<ul style="list-style-type: none"> Click Start > Programs > Windows Storage Server 2008 R2 > Windows Storage Server 2008 R2 Dashboard

- On the Dashboard Sign in page, enter the Administrator password (created during setup) and click the **right arrow**:

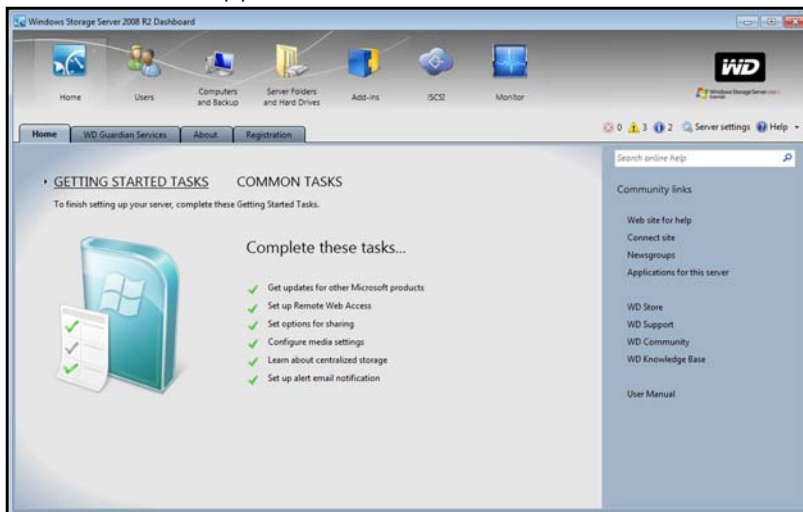
**To access the Dashboard (Mac):**

- In the Application folder, select **Windows Server Dashboard**.

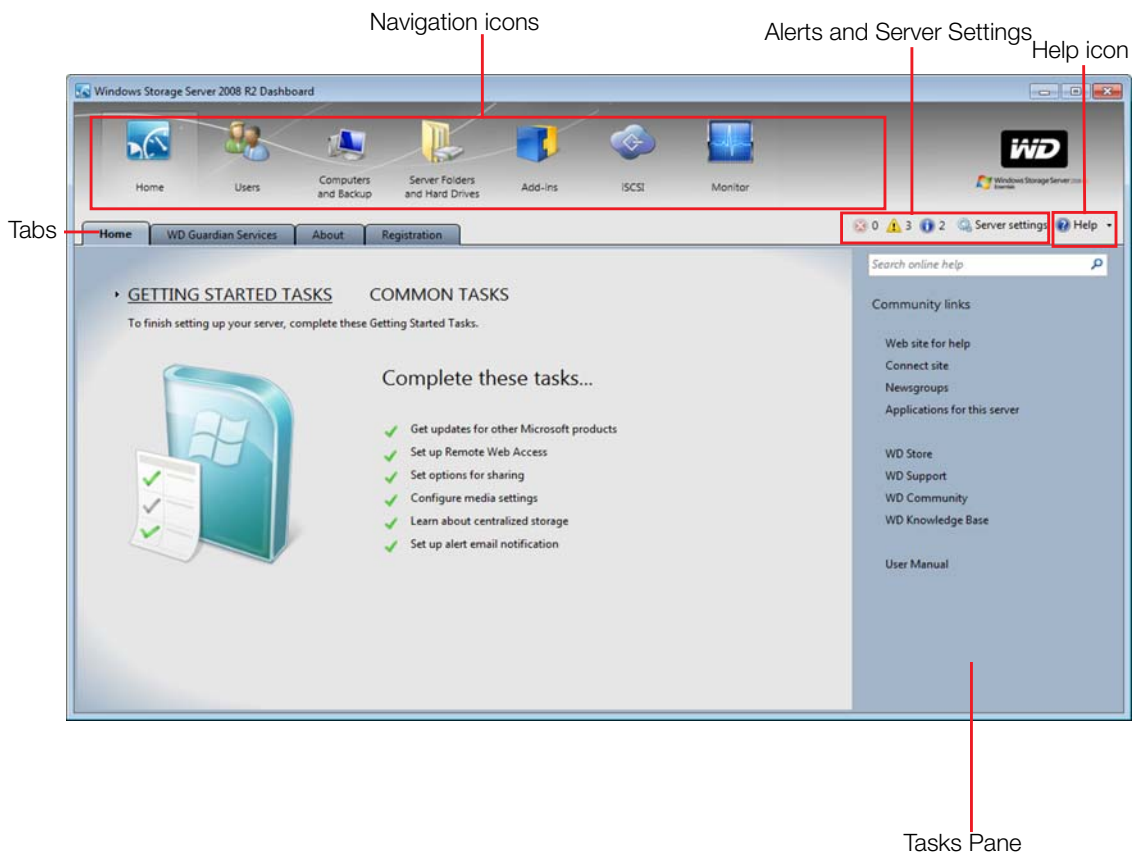


- For first time sign-in, enter the server name, (obtained in Step 5 of "Setting up your WD Sentinel Server (one time only)" on page 17) and the Administrator password (created during setup).
- Enter the following information on the Remote Desktop Connection screen:
 - User Name:** Enter **Administrator**.
 - Administrator Password:** The password you created during setup.
 - Computer Name:** The server name you created during setup.

The Dashboard appears:



The Dashboard Home page displays:



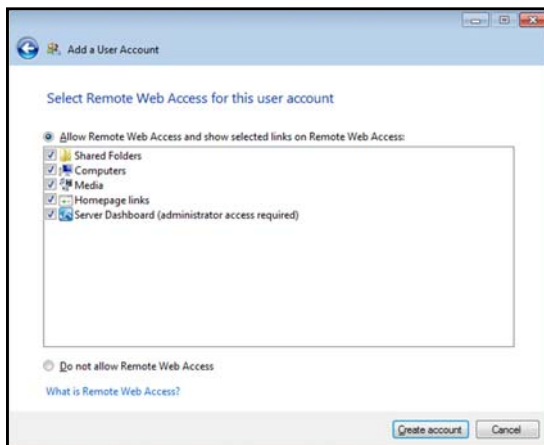
Adding a User Account

Use the following steps to add a user account to the WD Sentinel server.

1. Open the WD Sentinel Dashboard (see “Accessing the Dashboard” on page 28)
2. Click **Users** on the Navigation menu.
3. Select **Add a user account** in the Task Pane.

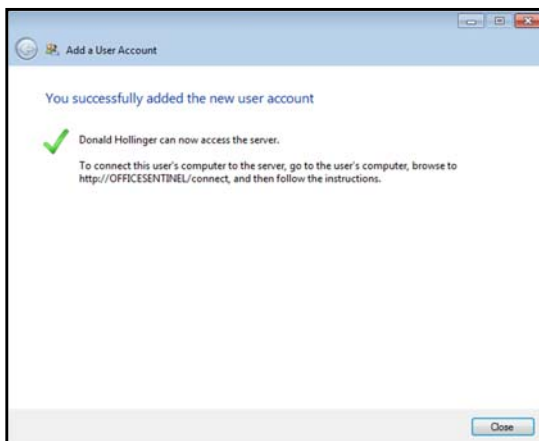
4. Enter the following information:
 - a. First Name, Last Name: Enter the user’s first and last name.
 - b. User account name: Enter a user account name. This is used to log into the Launchpad.
 - c. Password, Confirm Password: Enter your password for the assigned user, then enter the same password to confirm the password.
5. Click **Next**.

6. Select the access levels for the user account from the pull-down menu.
 - Read Only: Allows the user to only read the information in the associated files.
 - Read/Write: Allows the user to create, change, and delete the information in the to the associated files.
 - No Access: Choose this setting to deny access to a shared folder.

7. Click **Next**.

8. Place a check next to the information you'd like the user to access using the Remote Web Access feature.

- Select **Server Dashboard (administrator access required)** to view global alerts about your server.
- Select **Do not allow Remote Access** if you want to deny web access for this user.

9. Click **Create Account**.10. Click **Close**. Provide the user with their new user name and password.

Performing Dashboard Tasks

The Administrator uses the Dashboard to perform administrative tasks such as creating user accounts, setting up access privileges to shared folders and other server resources, managing shared folders, and monitoring the WD Sentinel server.

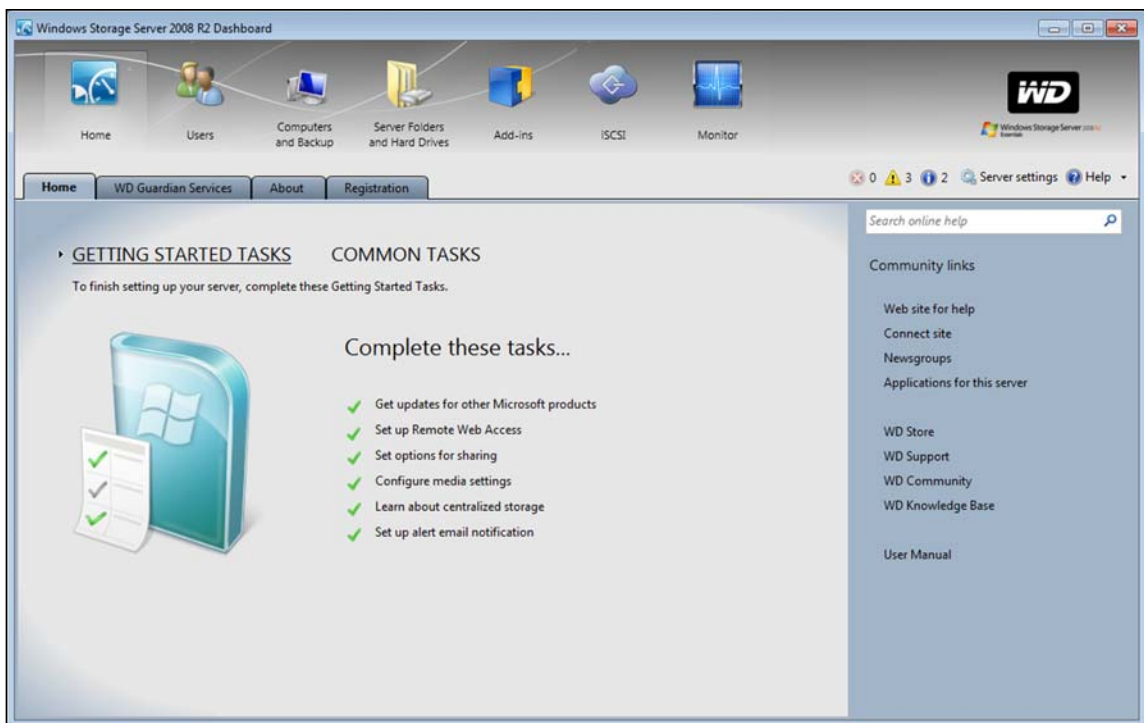
For information about an additional task, backing up a computer to the WD Sentinel server, see “Backing up (Windows PC)” on page 58.



Using the Home Page

The main part of the Home page lists some of the recommended tasks to perform the first time you sign in to the Dashboard. To perform these tasks from the Home page, just click the relevant links. The panel on the right offers easy access to the WD Sentinel RX4100 community and to WD resources. The rest of this chapter discusses the tasks the Administrator can perform on the Dashboard.

Important: Ensure that you perform the tasks outlined on the Home tab Getting Started Tasks prior to performing other tasks.



For a full description of the typical components of a page, including the Critical, Warning, and Informational Alert icons, see the [Microsoft Online Help](#).

Home Page Tabs

The Home page contains four tabs, summarized below:

Tab	Description
Home	<p>Complete basic tasks that will get you started with the WD Sentinel server. For information about these tasks, see the Microsoft Online Help.</p> <p>Best Practices:</p> <ul style="list-style-type: none"> • Complete the Getting Started tasks on the Home page of the Dashboard. • Create at least one active user account the first time you access the Dashboard.
WD Guardian Services	<p>Western Digital offers WD Guardian Services for Small Business customers. Choose from various technical support plans and extended warranty services that work best for your business. For more information, visit www.wdguardian.com.</p>
About	<p>Displays basic information such as product serial number, IP address, and software version.</p>
Registration	<p>Allows you to register your server with WD. Once registered you will receive notifications of product and firmware updates, newsletter, information about new product, and services as well as periodic special offers from WD. Enter the required information and click Register. Optionally, enter the Partner ID of the WD Partner who helped you purchase or install your WD Sentinel server.</p>

Home Page Tasks Panel

The panel on the right of the Home page displays links to useful WD websites and resources to make the best of your WD Sentinel server.



Managing User Accounts

On the navigation bar, click the **Users** icon. You can now:

- View, add, manage, delete, and activate/deactivate user accounts.
- Use the guest account.
- Manage domain user accounts (if joined to an Active Directory Domain).
- Manage passwords.
- Manage Remote Web Access.
- Assign user access privileges to shared folders and server resources.

For detailed instructions on performing any of these tasks, consult [Microsoft Online Help](#).



Managing Computers and Backups

After you've connect your computers to the Windows Storage Server 2008 R2 Essentials network, you can manage the computers from a central location in the Computers and Backup section of the Dashboard including:

- Viewing a list of computers connected to your server.
- Viewing computer properties and health alerts for each connected computer.
- Setting up and managing computer backups.
- Restoring files and folders to computers.
- Manage backup schedule for automatic Windows client backup.
- Manage Retention policy for the Windows client backup data.

For detailed instructions on performing any of these tasks, consult [Microsoft Online Help](#).



Managing Server Folders and Hard Drives

The Server Folders and Hard Drives section contains two tabs:

- The **Server** tab allows you to view and manage the properties of the shared folders on your server including:
 - Managing your company's shared folders.
 - Accessing shared folders locally or remotely.
 - Uploading or download files locally or remotely.
- The **Hard Drives** tab allows you to view and check the health of the drives that are attached to your server.

For detailed instructions on performing any of these tasks, consult [Microsoft Online Help](#).



Monitoring Add-ins

The Add-ins section of the Windows Storage Server 2008 R2 Essentials Dashboard includes tasks that help you view and manage the Add-ins that are installed on the server.

For detailed instructions on monitoring add-ins, consult [Microsoft Online Help](#).



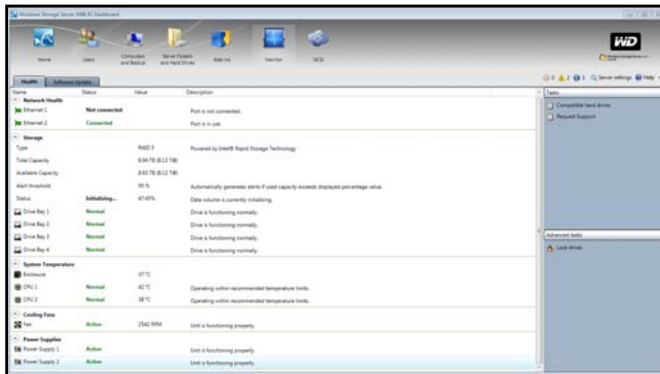
Monitoring System Health and Alerts

The Monitor module of the Dashboard includes tasks that help you view and manage the WD Sentinel server storage system. To open the Monitor module, click the **Monitor** icon on the navigation bar. The Monitor module includes two tabs, **Health** and **Software Update**, and related tasks in the panel on the right.

Health Tab

The **Health** tab and related tasks enable you to monitor the status of the storage drives, RAID configuration, power supplies, temperatures, fans, CPU, and network connections.

To open the **Health** tab, click the **Monitor** icon on the navigation bar:



Settings	Description
Network Health Ethernet 1 & 2	Displays the status (Connected or Not connected) of the server's network connection(s). If you use both Ethernet ports and one fails, the other takes over, allowing the WD Sentinel server to remain operational over the network.
Storage	<p>Displays storage information associated with the WD Sentinel server. The WD Sentinel server holds up to four of WD's hard drives optimized for quality, reliability and performance and features RAID 5 to enhance performance and data protection.</p> <p>RAID is an acronym for Redundant Array of Independent Disks. The server uses RAID 5, which offers fast performance by striping data across all drives. This arrangement protects data by dedicating a quarter of each drive to fault tolerance, leaving three quarters of the system capacity available for data storage.</p> <p>Type: RAID level</p> <p>Total Capacity: Maximum amount of storage space (TB) available.</p> <p>Available Capacity: Amount of storage (TB) left available for use.</p> <p>Alert Threshold: The percentage of storage capacity used above which you receive alert notifications that the storage is approaching maximum threshold.</p> <p>Status: The status of the server storage may be:</p> <ul style="list-style-type: none"> • Healthy—All drives are in the optimal state. • Degraded—A single drive failed; data is protected, but performance is degraded. (A failed drive must be replaced with a healthy drive as soon as possible to fully protect your server and data.) <p>Status of drives 1-4: The status of a drive may be:</p> <ul style="list-style-type: none"> • Normal • Failed!: Visit WD Store to replace. • CAUTION: Imminent failure detected. Please replace this hard drive immediately.

Settings	Description
System Temperature	<p>Enclosure: The temperature within the server enclosure.</p> <p>CPUs 1 & 2: The status, temperature, and status description for each CPU. (The server does not have two physical CPUs but instead uses a dual core CPU. CPU 1 and CPU 2 represent the details for each core.) The status may be:</p> <ul style="list-style-type: none"> • Normal • Warm • Hot
Cooling Fans	<p>The status of the server's cooling fan may be:</p> <ul style="list-style-type: none"> • Active • Inactive <p>Indicates the speed of revolutions in RPMs.</p>
Power Supplies 1 & 2	<p>The server has two power supplies. If you use both and one fails, the other takes over and the WD Sentinel server remains operational. The status may be:</p> <ul style="list-style-type: none"> • Active • Inactive

Health Tasks

Find compatible hard drives

To view a list of WD drives that can be used in the WD Sentinel server:

1. Click **Compatible Hard Drives** in the Task pane. A pop-up screen lists each drive with its model number, description, and maximum capacity.
2. If desired, click the **WD Store** button to view or buy additional drives.
3. To exit, click **OK**.

Request Support

The Request Support function collects information about your WD Sentinel and sends a diagnostic report to the WD Support server. It then opens the WD Support website, where you can enter a few details regarding the problem to route it to the appropriate support team.

Note: If you do not want to submit the diagnostic logs, use the regular WD Support page at <http://support.wd.com>.

To access WD Customer Support automatically:

1. Click **Request Support** in the Tasks pane. The Request Support window displays.
2. After reading the information on the screen, click the "I agree and would like to proceed." checkbox, then click Proceed. The WD Support Ask a Question page displays.

Note: The first time you do this, an Internet Explorer Security Screen displays. Clear the check box and click **Close**.

3. Complete the online form and click **Submit Question**. A diagnostic report of the WD Sentinel server is automatically attaches to the form. Your request is added to the WD Support queue and assigned a confirmation number. You will receive an email from WD Support regarding your question.

Important: For faster service/phone service, call WD Support. For the latest phone numbers and contact information in your region, see “Contacting WD Technical Support” on page iii or <http://support.wd.com>. Have your confirmation ready when you call.

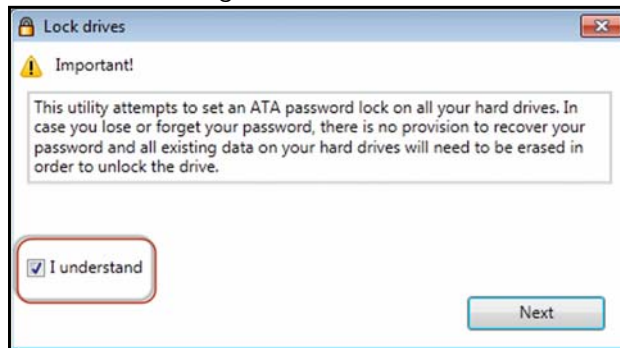
Lock/Unlock

For security reasons, you can lock or unlock the drives. You cannot lock or unlock an individual drive; you either lock them all or unlock them all, using a password you create here. This password may be but does not have to be the same as the WD Sentinel server Administrator password.

Important: Store your password in a secure place. If the password is lost, there is no way to get it back or unlock the drives, and all of its data may be lost.

To lock the drives:

1. In the Advanced tasks area, click **Lock drives**. The following screen displays:
2. Read the message, then click the checkbox.



3. Click **Next**.



4. In the Set Password field, enter your password.
5. In the Confirm Password field, confirm your password,
6. In the Password Hint field, enter a hint to remind you of the password.
7. Click **Next**.

To unlock drives:

1. Click **Unlock drives**.
2. In the Old Password field, enter your password.
3. Click **Unlock drives**.

To change the password:

1. Click **Unlock drives**.
2. In the Old Password field, enter the current password.
3. In the New Password field, enter your new Password.
4. In the Confirm Password field, confirm your new password
5. In the Password Hint field, enter a hint to remind you of the password.
6. Click **OK**.

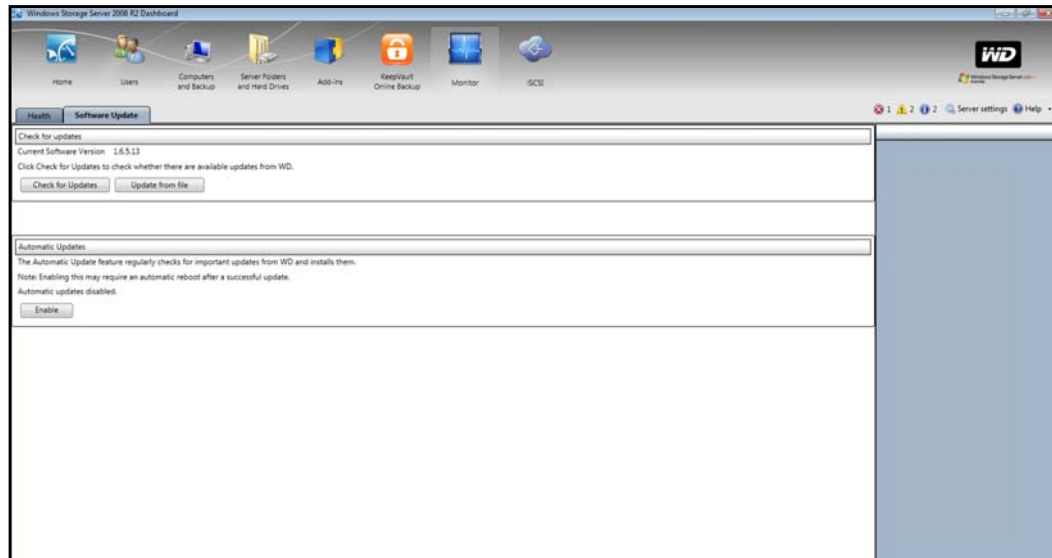
Updating Software

Periodically, WD issues software updates for your WD Sentinel RX4100 server. The Software Update tab within the Monitor module allows you to update WD Sentinel RX4100 software automatically or manually. Please note that this tab only allows you to apply software updates issued by WD. To manage or apply Microsoft software updates, go to **Server Settings** on the Dashboard.

A best practice to ensure that your system software stays current is to enable automatic updates on your WD Sentinel server (see “Automatic Updates of WD Software” on page 43)

Manual Updates of WD Software**To check for software updates and update the software:**

1. Click the **Software Updates** tab.



2. You have two options. You may check for updates online or update from a file:

To use the online update:

- a. Click **Check for Updates**.
- b. If an update is available, click **Download** and **Install** to update your WD Sentinel server.

To update from a file:

- a. The software update files can also be downloaded from the WD Support site at <http://support.wd.com>. Once you download the available firmware updates for the WD Sentinel RX4100 server, copy the file to a shared folder such as the Documents share on the server and select the file to update.
- b. Click **Update from file** and then locate and select the update file you copied to your server.
- c. Click **Open**. The system applies the software update. The system automatically restarts the server if a reboot is required to complete the software update.

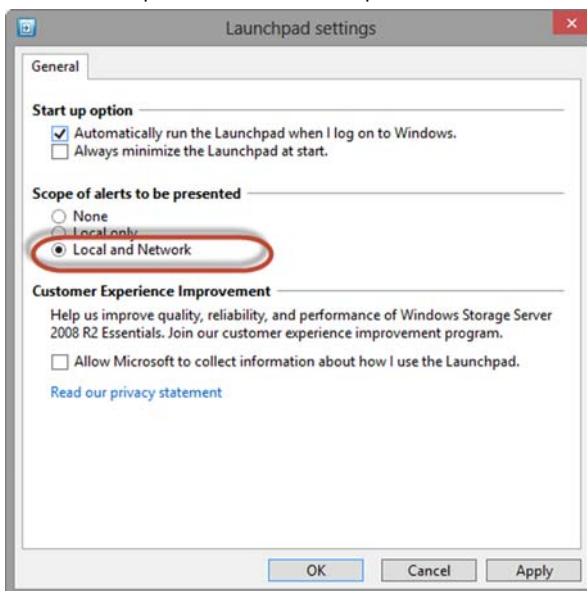
Setting Global Alerts

In order to receive alerts about your system and to be notified of software updates, it is necessary that you set up global alerts for your WD Sentinel server. Use the following steps to set up your global alerts.

1. Open the Launchpad (see “Accessing the Launchpad” on page 49).
2. Click the menu **arrow** on the top right and select **Settings** from the drop-down menu.



3. Under Scope of alerts to be presented, select **Local and Network**.

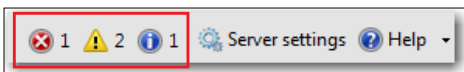


4. Click **Apply**, then click **OK**.

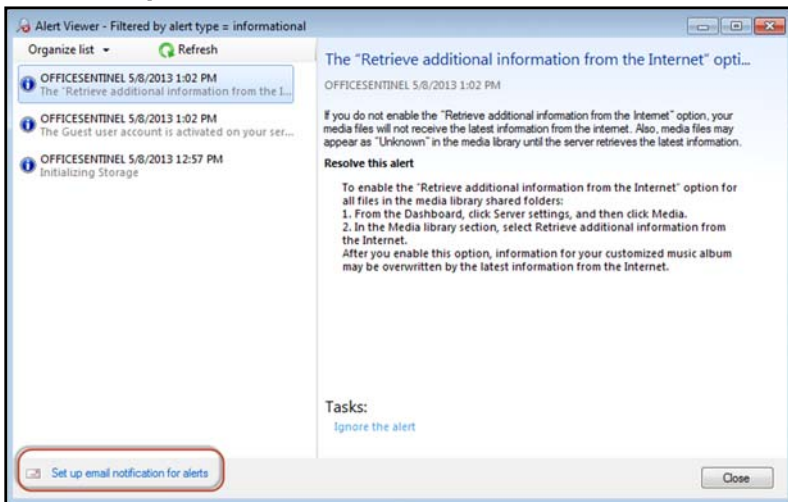
Setting Email Alerts

Receiving your alerts by email allows you to monitor certain server issues as they occur. Use the following steps to set up email alerts.

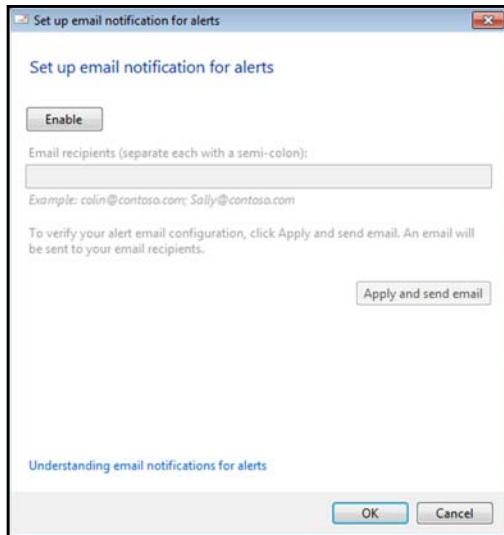
1. On the Dashboard Home Page, click the Alert Viewer.



2. Click **Set up email notification for alerts** at the bottom of the Alert Viewer.



3. Click **Enable**.



4. Review the settings, then click **OK**.

SMTP Settings

Simple Mail Transfer Protocol (SMTP) settings

From email address:
sentinel@wdc.com
Example: colin@contoso.com

SMTP server name: notify2.wd2go.com SMTP port: 58705
Example: smtp.contoso.com

This server requires a secure connection (SSL)

This server requires authentication

User name:
wdapc2ncmailv01

Password:
••••••••

Understanding and configuring SMTP

OK Cancel

5. Enter the email address where you'd like to receive the server alerts.

Set up email notification for alerts

Disable Change SMTP settings

Email recipients (separate each with a semi-colon):
Donald@hollinger.com
Example: colin@contoso.com; Sally@contoso.com

To verify your alert email configuration, click Apply and send email. An email will be sent to your email recipients.

Apply and send email

Understanding email notifications for alerts

OK Cancel

6. Click **Apply and send email** to ensure that email alert is working.

Send Test Email for Alerts

✓ The test email for alerts was sent successfully

The test email was successfully created and sent to the SMTP server.

Close

7. Click **Close**.
8. Click **OK**. Your email alert is now set up.

Automatic Updates of WD Software

Enabling **Automatic Updates** on your WD Sentinel server causes the server to check for available software updates from WD on a scheduled basis and apply the updates automatically.

To set a schedule for automatic updates:

1. In the **Automatic Updates** section, click **Enable**.

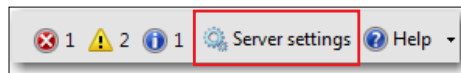


2. Click the **Change** link and select the day and time you want the WD Sentinel server to check for updates every week, and if an update is available, install it. (Example: every Sunday at 3:00 AM)
3. Click **Apply**.

Updating Microsoft Software

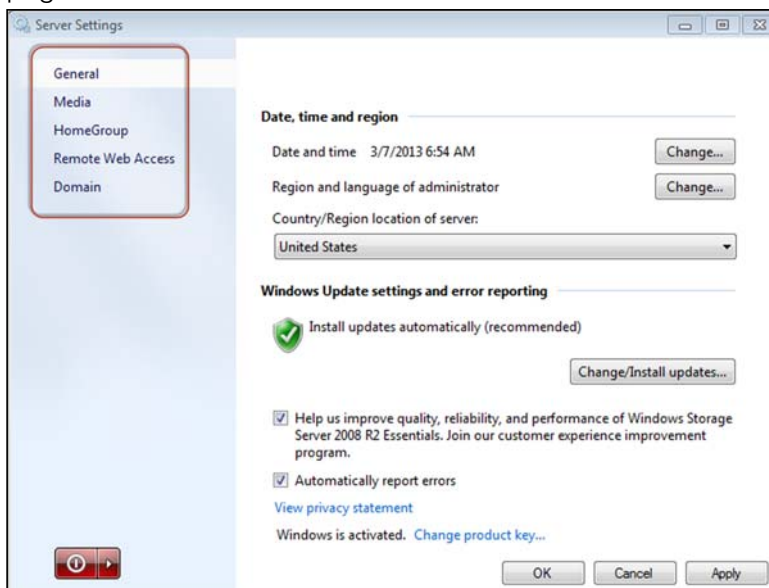
You can update the Microsoft software for the WD Sentinel RX4100 using the Server Settings page. See “Managing Server Settings,” below.

Managing Server Settings



Important: Unless otherwise noted, [Microsoft Online Help](#) provides complete instructions for using these pages.

1. Click **Server Settings** on the icon bar to enable, set up, and control WD Sentinel server settings.
2. The General page displays. The left panel contains links to the rest of the Server Settings pages.



Following is a summary of the purpose of each of the Server Settings pages.

General

- **Shutdown or restart the server**—This is the safest method to shut down or restart the server. It insures that the RAID system shuts down cleanly. See “Shutting Down the Server” on page 45 for instructions.
- **Change the date, time, and location of the server**—You can change the settings you established at initialization.
- **Change the behavior of the Windows update**—You can change the settings for updating the Microsoft software.

Media

Enable or disable media (DLNA) services, set the video streaming quality, and define the folders to be used for the media. By default, media service is enabled, and the default Picture, Music, and Video folders are set to distribute the media.

HomeGroup

When creating a HomeGroup, establish which folders are to be shared through the HomeGroup. Note that HomeGroup is only available for Windows 7 clients.

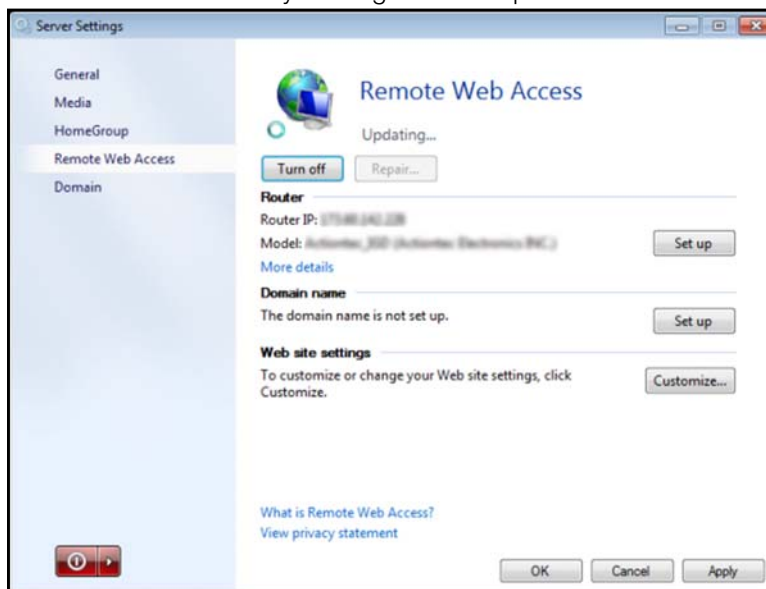
Remote Web Access

With Remote Web Access enabled, you can access the WD Sentinel server from any device using a web browser, such as Internet Explorer, from anywhere with Internet access. You can access shared folders and files (that you have permission for) on the server as well as on your networked computer.

Enabling Remote Web Access

Enable or disable Remote Web Access on the Server Settings page. Remote Web Access is turned off by default.

Note: The Home page provides a Getting Started task for enabling Remote Web Access by clicking link to the process.



1. Under **Server Settings**, click **Remote Web Access** in the panel on the left.
2. Click **Turn on** and complete the wizard to set up your router, set a domain name, and change Internet settings.
3. Grant Remote Web Access privileges if you want a user to access the WD Sentinel server, shared folders, computers, media, Home page links, and the Dashboard (administrators only) when you create or update a user account.

To view a user's current privileges, click the **Users** icon in the Navigation bar.

Note: The Guest account cannot have Remote Web Access.

Note: Refer to [Microsoft Online Help](#) for detailed information about setting up remote web access and for troubleshooting connection issues.

Domain

This option is available for networks that have an Active Domain server for user control. A domain is a group of computers under the control of a server known as the domain controller. In the case of the WD Sentinel RX4100, it enhances security by allowing only users with necessary permissions to access the server. Refer to [Microsoft Online Help](#) for detailed information. For information on acceptable domains, go to <http://support.wd.com> and search for Knowledge Base Answer ID 8549.

Shutting Down the Server

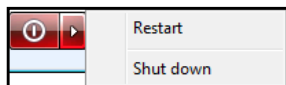
The WD Sentinel server is intended to be on at all times, providing shared data and backup services. A best practice is to avoid turning the unit off. However, if it does become necessary (for example, moving the server to a different location), then follow the procedures below.

It is very important that the WD Sentinel server be shut down or restarted in a clean and graceful manner through the **Server Settings** section in the Dashboard.

WARNING! To avoid a potentially unclean shutdown that could corrupt the RAID configuration, shut down the server through the Dashboard.

To shut down or restart using the Dashboard (Preferred method):

1. Click **Server Settings** in the icon bar.
2. To shut down, right-click the red button in the lower left corner of the page and select **Shut down**.



3. To restart, right-click the arrow and select **Restart**.
4. When the confirmation message appears, click **Yes**.

5

Managing Storage on the WD Sentinel Server

WD Sentinel Server RAID Storage
Using USB Storage

WD Sentinel Server RAID Storage

RAID is the acronym for Redundant Array of Independent Disks. The WD Sentinel server provides automatic RAID service to assure the integrity of the storage system. For redundancy, a minimum of two drives must be active. The operating system and all data are protected by the RAID structure. The server automates the management of the RAID.

Your WD Sentinel server uses RAID 5, which offers fast performance by striping data across all drives. This RAID level provides the system with both redundancy and optimum capacity.

	2 TB Drives	3 TB Drives	4 TB Drives
RAID Level 5 (4 Drives)	8 TB Capacity	12 TB Capacity	16 TB Capacity

If a drive in the array fails, the data and operating system are still intact, and the WD Sentinel server continues to provide service.

Important: If you have one bad drive, the server operates normally. However, if a second drive fails, the server will no longer operate. You will need to recover the server and/or replace the failed drive(s). A best practice is to have a replacement drive readily available.

The WD Sentinel server lets you know when a drive fails in the following ways:

- The LED below the bad drive is solid red.
- The Power LED on the WD Sentinel server flashes red, indicating a serious fault.
- An email Alert is posted if you have set it up to do so. (See “Monitoring System Health and Alerts” on page 35.)

To recover from a failed drive, simply replace the drive (the one with the red LED over the drive) with an approved drive for the WD Sentinel server (see “Find compatible hard drives” on page 37). The WD Sentinel server validates the replaced drive and automatically integrates it into the RAID array. This operation takes many hours to accomplish. Progress of this operation appears on the Dashboard. It is not necessary to power off or disengage the WD Sentinel server to perform this operation. While the server is verifying the RAID array, your data continues to be available although the performance may be impacted.

The WD Sentinel server RAID system has no downgrade options. Once available capacity has been increased, the Administrator cannot decide to subsequently reduce capacity by removing a drive. The removal of a drive degrades the RAID and makes it vulnerable to single drive failure.

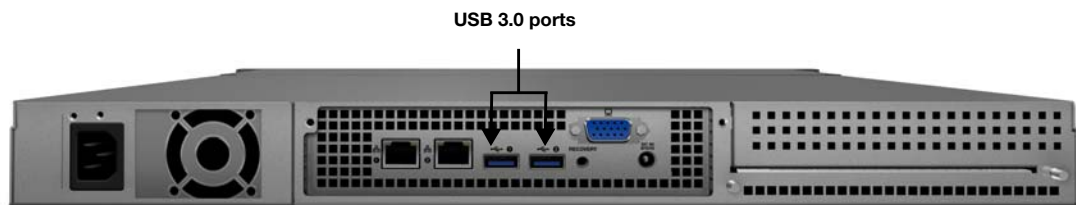
Using USB Storage

The WD Sentinel server has one USB 2.0 port on the front panel and two USB 3.0 ports on the back panel of the unit. The USB 3.0 ports can connect to external USB 2.0 or USB 3.0 storage devices or to a UPS device for power outage conditions. For example, WD My Passport or WD My Passport Essentials may be used to connect to the WD Sentinel server. You can share this data on your USB drive with other users connected to the server by using the Dashboard, which treats the USB drive as a share. You can set user privileges just as you do with shared folders on the WD Sentinel server's drives. The server manages UPS capability through a USB port for communication and to ensure an orderly shut down.

Front View

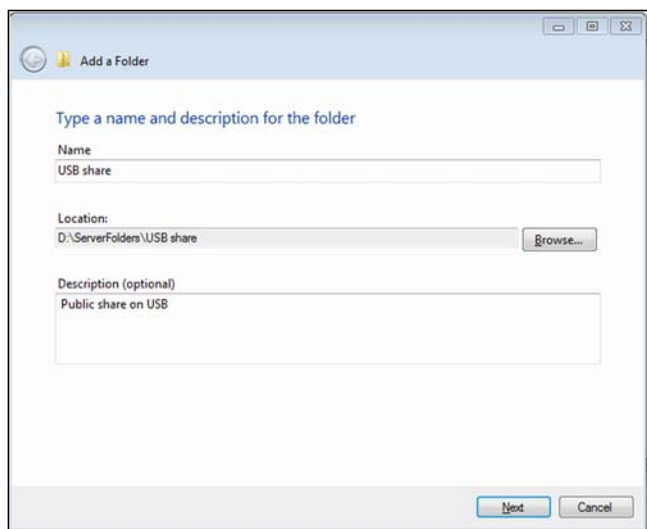


Back View

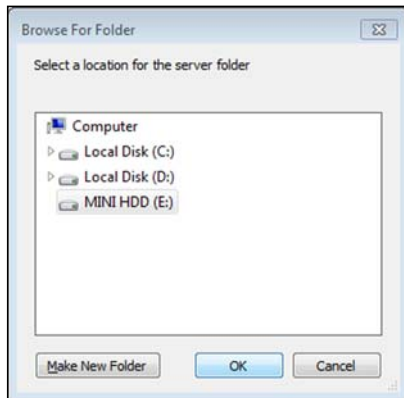


To share data on a USB drive:

1. Connect a USB drive to either of the three USB ports.
2. On the Dashboard, click the **Servers Folders and Hard Drives** icon.
3. Click the **Server Folders** tab.
4. In the Task bar, click **Add a folder**.



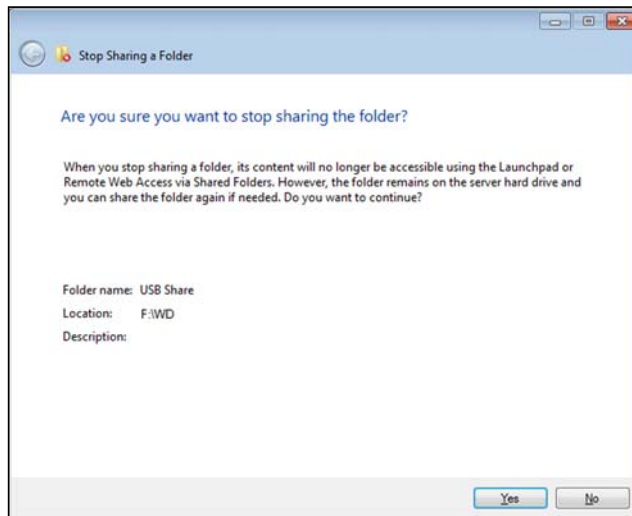
5. Enter a name for the folder.
6. Click **Browse** and select a folder on the USB drive. Note that a shared folder cannot be created at the root of the USB drive.



7. Click **OK** and follow the instructions on the screen.

To stop sharing data on a USB drive:

1. On the Dashboard, click the **Servers Folders and Hard Drives** icon.
2. Click the **Server Folders** tab, then select the folder you want to stop sharing.
3. On the Task bar, click **Stop sharing the folder**.



4. Click **Yes**, then click **Close**.

6

Using the WD Sentinel Server's Features

- Using the Launchpad (Internal Users)
- Accessing Shared Folders Over Your Network
- Accessing Computers and Shared Folders Remotely
- Backing up (Windows PC)
- Backing up with Time Machine (Mac)
- Recovering/Restoring (Windows PC)
- Recovering/Restoring (Mac)
- Backing up your WD Sentinel Server
- Recovering the WD Sentinel Server to Factory Defaults

This chapter describes the routine tasks that both the Administrator and permitted users perform on the WD Sentinel server.






Using the Launchpad (Internal Users)







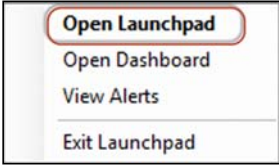
After you, the Administrator, use the Dashboard to set up users with a user name, password, and permissions, they can access the Launchpad Sign-in page using one of the following methods:

Best Practice: Ideally, you set up a user name and password for yourself and have given it all access privileges so you too can use the Launchpad shortcuts.

Accessing the Launchpad

To access the Launchpad (Windows):

If you're operating systems is...	Do one of the following...
Windows 8	<p>From Apps Page:</p> <ul style="list-style-type: none"> • On your keyboard, click the Windows button . • On the Metro Start page, right-click in a blank area of the screen. • Select All apps . • Under Windows Server Storage Server 2000 R2, click Windows Server 2008 R2 Launchpad. <p>From Desktop:</p> <ul style="list-style-type: none"> • Double-click the Launchpad icon . <p>From System Tray:</p> <ul style="list-style-type: none"> • Right-click the Launchpad icon  and select Open Launchpad. <div data-bbox="764 1591 1040 1753" style="border: 1px solid black; padding: 5px; margin-top: 10px;">  </div>

If you're operating systems is...	Do one of the following...
<p>Windows 7 Windows Vista</p>	<p>From Start Menu:</p> <ul style="list-style-type: none"> Click  > All Programs > Windows Storage Server 2008 R2 > Windows Storage Server 2008 R2 Launchpad. <p>From Desktop:</p> <ul style="list-style-type: none"> Double-click the Launchpad icon . <p>From System Tray:</p> <ul style="list-style-type: none"> Right-click the Launchpad icon  and select Open Launchpad. 
<p>Windows XP</p>	<p>From Start Menu:</p> <ul style="list-style-type: none"> Click Start > Programs > Windows Storage Server 2008 R2 > Windows Storage Server 2008 R2 Launchpad. <p>From Desktop:</p> <ul style="list-style-type: none"> Double-click the Launchpad icon . <p>From System Tray:</p> <ul style="list-style-type: none"> Right-click the Launchpad icon  and select Open Launchpad. 

1. Enter your user name and password.



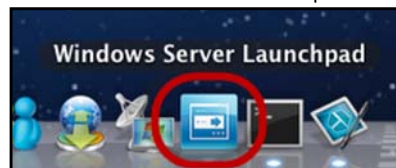
- Click the **right arrow** to display the Launchpad, which lists four tasks that authorized users can perform: **Backup**, **Remote Web Access**, **Shared Folders** and **Dashboard**.

Note: The **Dashboard** option is only useful to a user with Administrative privileges and knowledge of the Administrator password.

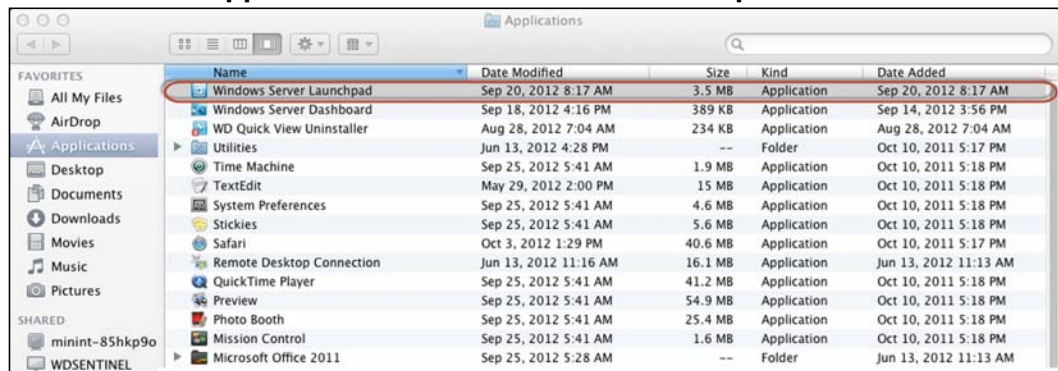


To access the Launchpad (Mac):

- Do one of the following:
 - Double-click the Launchpad icon on your Mac Toolbar.



- Select **Finder>Applications>Windows Server Launchpad**

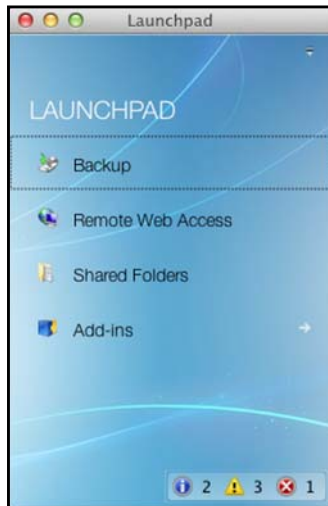


Once you've accessed the LaunchPad Sign In screen, use the following steps to sign in and use the Launchpad.

1. Enter your user name and password.



2. Click the arrow to display the Launchpad. It lists four tasks: **Backup**, **Remote Web Access**, **Shared Folders**, and **Add-ins**.



Selecting Launchpad Options (Windows PC or Mac Computer)

To select Launchpad options:

IF you want to . . .	THEN . . .	AND ...
Back up your Windows PC to the WD Sentinel server manually	Click Backup .	Continue to “Backing up (Windows PC)” on page 58.
Back up your Mac to the WD Sentinel Server using Time Machine	Click Backup .	Continue to “Backing up with Time Machine (Mac)” on page 61.

IF you want to . . .	THEN . . .	AND ...
Use Remote Web Access: <ul style="list-style-type: none"> • Enable remote web access for users with Remote Access Privileges • Access the server from a remote location (all users) • Change a user password (by the user) 	Click Remote Web Access .	Continue to “Remote Web Access” on page 44 and “Accessing Computers and Shared Folders Remotely” on page 57.
Access shared folders on the server	Click Shared Folders .	Continue to “Accessing Shared Folders Over Your Network” on page 56.
Manage the server (Windows PCs and Administrators only)	Click Dashboard .	Enter the Administrator password and continue to “Managing the WD Sentinel Server (Dashboard)” on page 28.
Manage the server (Mac and Administrators only)	Click Add In , then click Dashboard .	Enter User Name (Administrator) and Password (the password you created at setup), then continue to “Managing the WD Sentinel Server (Dashboard)” on page 28.

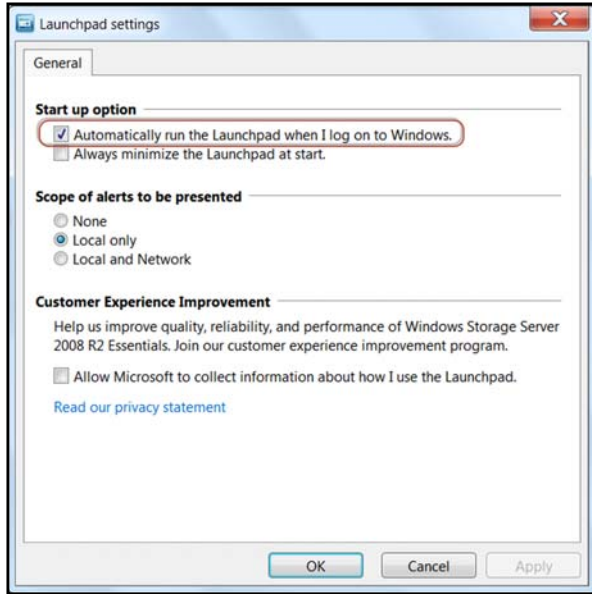
Managing the Launchpad

To disable the Launchpad after signing in (Windows):

1. Sign in to the Launchpad.
2. Click the menu **arrow** at the top right and select **Settings** from the drop-down menu.



3. Clear the **Automatically run the Launchpad when I log on to Windows** check box, and click **OK**.



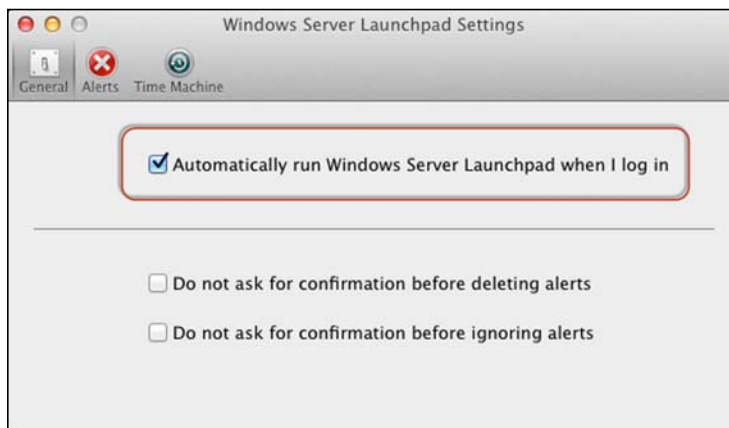
Note: You can also change the type of alerts that display on the Launchpad and select whether to allow Microsoft to send you information about it in this window.

To disable the Launchpad after signing in (Mac):

1. Sign in to the Launchpad.
2. Click the menu **arrow** at the top right and select **Settings** from the drop-down menu.







3. Clear the **Automatically run Windows Server Launchpad when I log in** check box, and click the Close button .



You can also change the type of alerts that display on the Launchpad selecting whether to allow Microsoft to send you information about it in this window, and setup your Time Machine backups.

To uninstall the Launchpad (Connector Software) on a Windows PC:

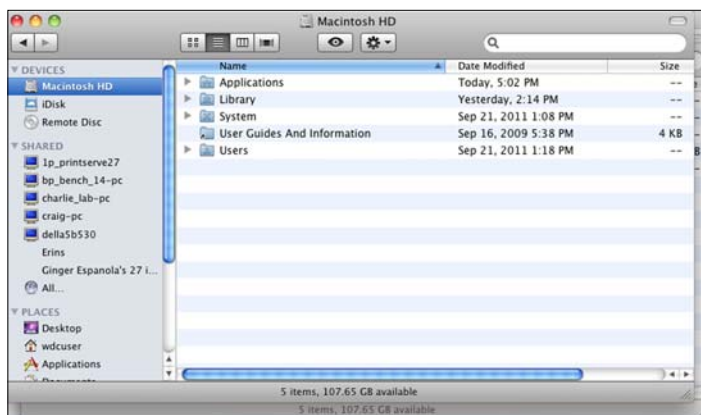
Note: When you uninstall Launchpad, you also uninstall Dashboard. They can not be uninstalled separately.

If you're operating systems is...	Then...
Windows 8	<ul style="list-style-type: none"> On your keyboard, click the Windows button . On the Metro Start page, right-click in a blank area of the screen. Select All apps . Under Windows Server Storage Server 2000 R2, right-click Windows Server 2008 R2 Launchpad. Select Uninstall .
Windows 7 Windows Vista Windows XP	<ul style="list-style-type: none"> Click  > Control Panel (Windows 7/Vista). Click Start > Control Panel (Windows XP). Click Uninstall a Program. From the list, select Windows Storage Server 2008 R2 Connector. Click Uninstall. <ul style="list-style-type: none"> If the User Account Control window displays, click Allow. If the Windows Storage Server 2008 R2 Essentials Connector page displays suggesting that you close the Launchpad, click OK. <p><i>Note:</i> You must reboot the computer before installing another Connector.</p>

To uninstall the Launchpad (Connector Software) on a Mac:

You must uninstall Launchpad from three Macintosh® HD folders: Users, Applications, and Library.

- Quit the Launchpad.
- In the Finder pane, click **Applications**. Drag and drop **Windows Server Launchpad** into the **Trash** icon. The Launchpad icon no longer appears in the dock.
- Click **Finder > Devices > Macintosh HD**.

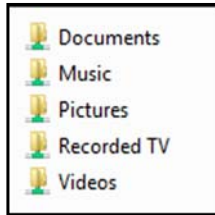


- Click **Library > Application Support > Microsoft**. Drag and drop **Launchpad** into the **Trash** icon.
- Click **Library > Preferences**. Drag and drop "**com.microsoft.launchpad.plist**" into the **Trash** icon.
- Right-click the Trash icon and select

Accessing Shared Folders Over Your Network

Launchpad (Windows)

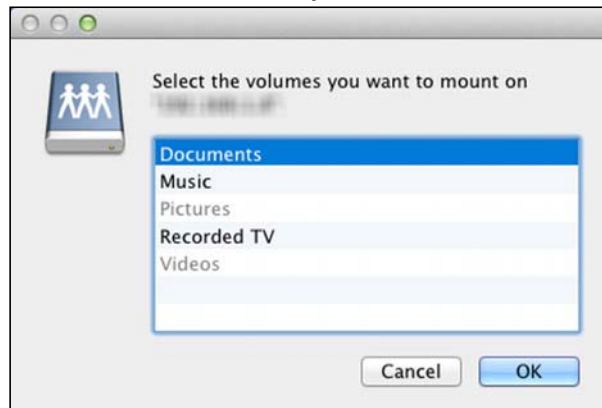
1. On the Launchpad, click **Shared Folders**. A set of folders similar to the one below displays:



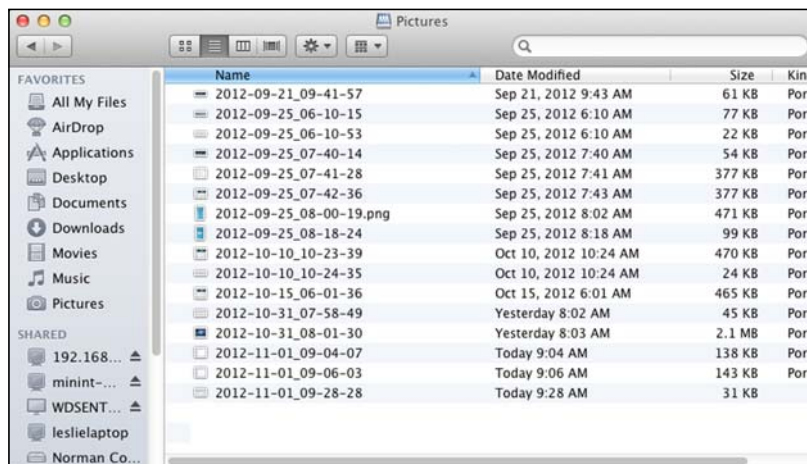
2. Double-click a folder to open it, then click the file you want to access. Your access (as a general user) depends on the permissions assigned to you by the Administrator.

Launchpad (Mac)

1. On the Launchpad, click **Shared Folders**.
2. Select the shared folder you'd like to mount on your Mac, then click **OK**.



- If all shared folders are mounted on your Mac, click **Cancel**, then open Finder. Click the IP Address of your WD Sentinel under Shared to display your Shared Folders.
3. The selected shared folder displays on your desktop.



Accessing Computers and Shared Folders Remotely

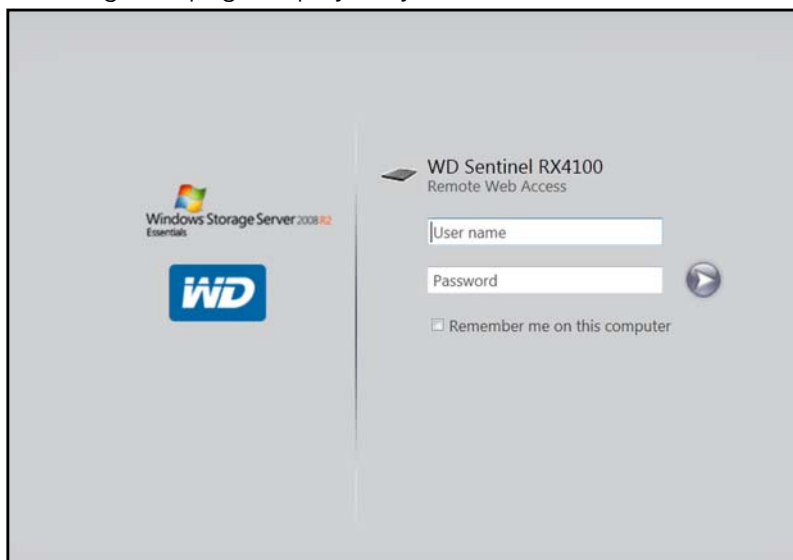
This section assumes that the Administrator has completed the setup and configuration for Remote Web Access through the Dashboard.

You can access files stored on the WD Sentinel RX4100 anywhere, as long as you have access to the Internet.

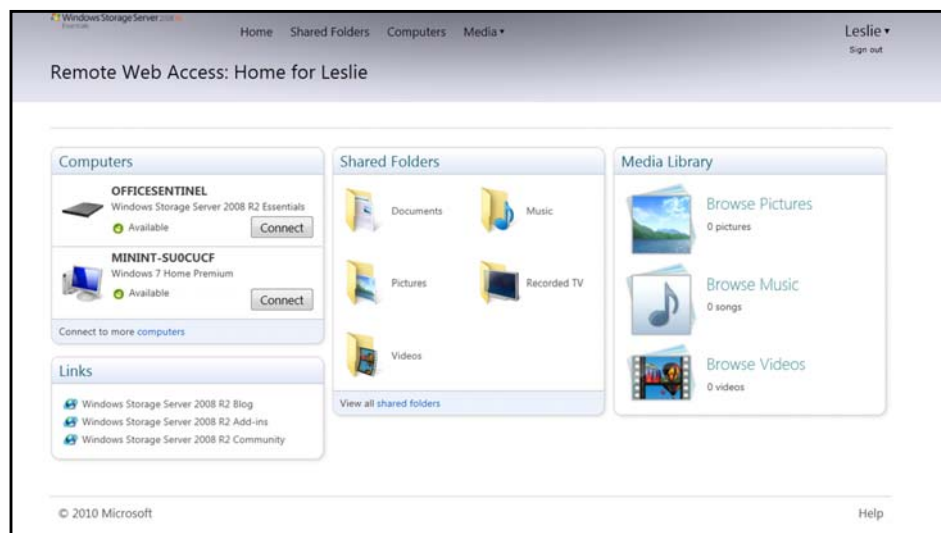
Note: You must use Internet Explorer 8 or 9 to access a PC using the Remote Web Access feature. See "Specific Problems and Corrective Actions" on page 83.

Logging In

1. On the Launchpad, click **Remote Web Access** or on a web browser, enter the domain address for your WD Sentinel server. This is the domain address the Administrator configured while setting up Remote Web Access on your WD Sentinel server. The following web page displays in your browser.



2. Enter your WD Sentinel server user name and password, then click the **arrow** to display the Remote Web Access: Home for User window:



Remote Web Access Home Page

The Remote window includes the following sections:

Note: You can also use the navigation links at the top of the window to view these sections.

Computers

Note: Connecting to computers or the WD Sentinel server using Remote Web Access requires the Internet Explorer browser.

- Click **Connect** to connect to your WD Sentinel server or to a computer on your network.
 - If the Internet Explorer you are using does not have Active X Client, click **OK** to install it, then complete the wizard.

Shared Folders

Access shared folders on the WD Sentinel server. The folders may include Documents, Pictures, Music, Video, Recorded TV, and any additional shared folders the Administrator may create using the Dashboard. A user with "Read & Write" access to a particular shared folder is able to modify the contents of the existing files, upload new files, or delete files from the folder.

Note: Only the folders for which the user has permissions are displayed under Shared Folders on Remote Web Access.

Media Library

Browse through your pictures, music, videos, and recorded videos. The WD Sentinel server automatically discovers the media files and adds them to your media library. The built-in media capabilities allow you to view your pictures in a slideshow, stream digital music, or stream videos over the web.

Backing up (Windows PC)

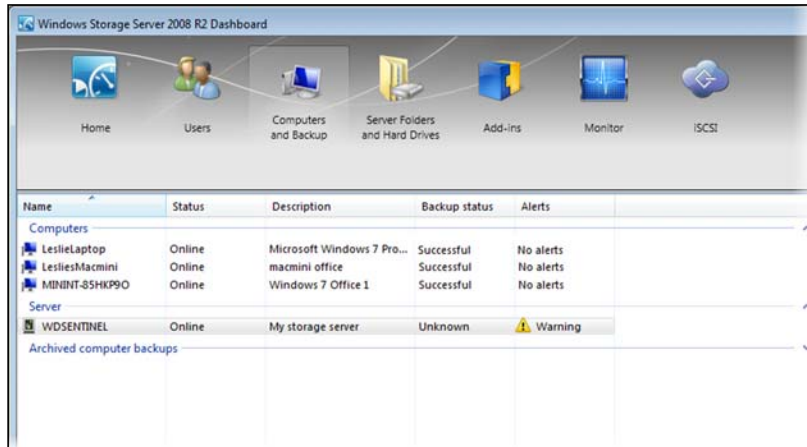
The WD Sentinel server backup is based upon block level de-duplication, a process that backs up data without unnecessarily backing up the same data more than once. This powerful process uses less network traffic for execution, provides a full back-up at each backup time (although it behaves as if it is incremental), and by executing de-duplication across all client computers, the storage capacity requirements are significantly reduced. Backup becomes an automatic process for a computer once you install Connector software on it. With Connector software installed, all volumes and all NTFS data on that computer are backed up.

Note: For information on backing up your Mac using Time Machine, See "Backing up with Time Machine (Mac)" on page 61.

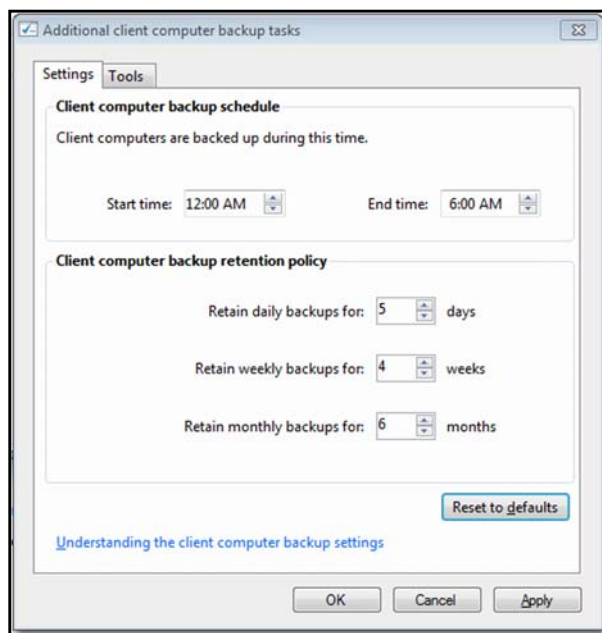
Scheduling Automatic Backups (Dashboard only)

To set a schedule for future backups:

1. Access the Dashboard.
2. Click the **Computers and Backups** icon on the navigation bar to display a list of computers and servers on your network:



3. Click **Additional client computer backup tasks** in the task panel.



4. Enter the **Start time** and **End time** for daily backups and click **OK**.



Initiating Backups

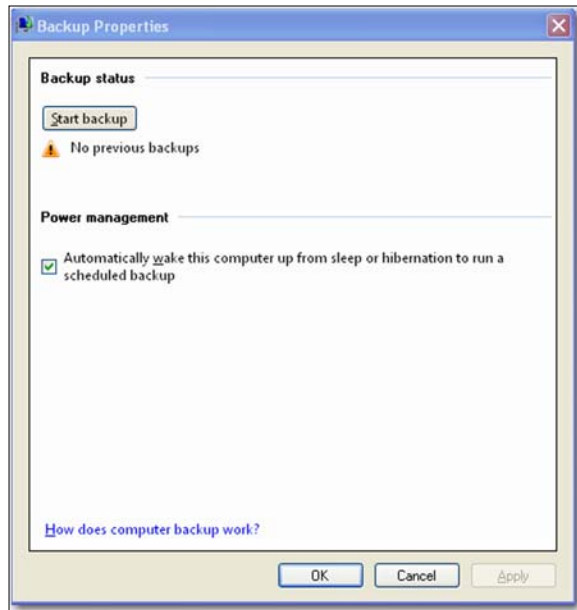
By default, backups are performed at night for up to 25 client computers in a sequential order. If the client computer is asleep or hibernating at that time, the backup software can be enabled to wake up the client computer, back it up, and put it back to sleep.

You may start a backup either through the **Launchpad** on the computer being backed up or through the Dashboard.

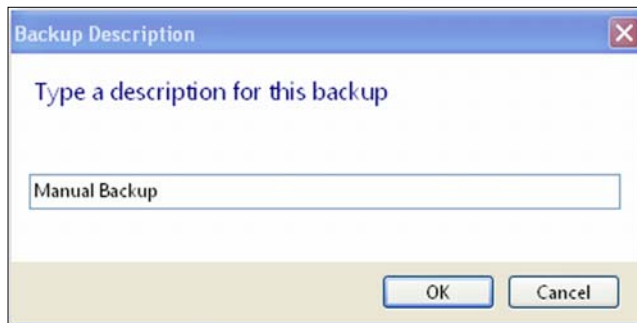
Backup Using the Launchpad

Note: For information on accessing the Launchpad, see “Using the Launchpad (Internal Users)” on page 49).

1. On the Launchpad, click **Backup**. The Backup Properties page displays:



2. Click **Start backup**.
3. Enter a name for the backup and click **OK**:



The Backup Properties page re-displays and tracks the progress of the backup.

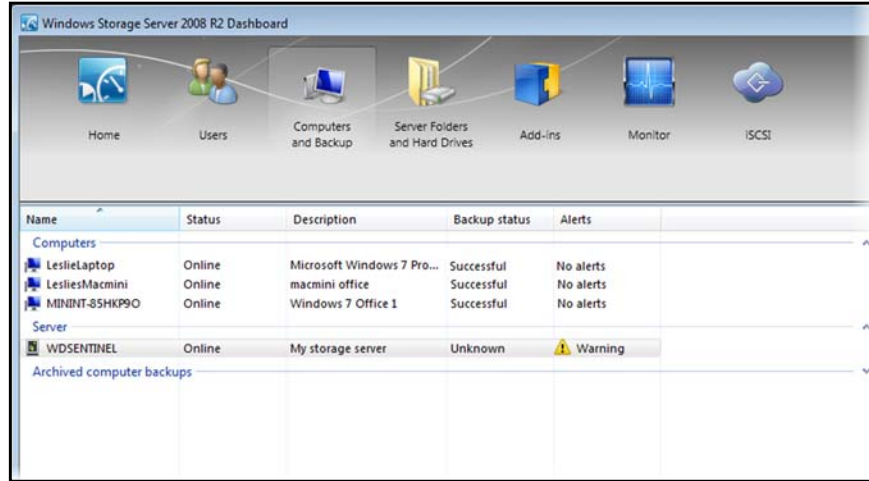
Note: If you want the computer to automatically wake up for scheduled backups, select the check box.

4. Click **OK** to apply the change, close the page, and return to the Launchpad while the backup continues.

The message that the backup was successful displays on the page and on the Dashboard. For more information about the backup process, see [Microsoft Online Help](#).

Backup Using the Dashboard

1. Click the **Computers and Backups** icon on the navigation bar to display a list of computers and servers on your network:



2. Select the computer you want to back up.
3. Click **Start a Backup for the Computer** in the Task pane. For further instructions, see [Microsoft Online Help](#).

Backing up with Time Machine (Mac)

For Mac users, Time Machine allows you to backup data to your WD Sentinel server. Time Machine automatically backs up your entire Mac, including system files, applications, accounts, preferences, email messages, music, photos, movies, and documents.

Note: Time Machine keeps hourly backups for the past 24 hours, daily backups for the past month, and weekly backups until your backup drive is full.

To take advantage of the Time Machine backup capabilities, you must install the server connector software on your Mac (see “Connecting a Mac” on page 23) and create a user account within the WD Sentinel server (see “Adding a User Account” on page 31).

Note: Your Mac must be connect to the same network as your WD Sentinel server.

For additional information on Time Machine, consult your Mac OS documentation.

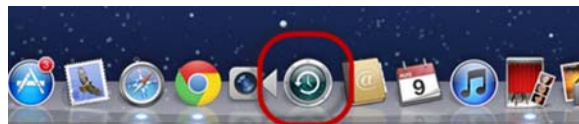
Note: For information on backing up your PC, See “Backing up (Windows PC)” on page 58.

Scheduling Automatic Backups (Time Machine)

To set up and schedule Time Machine to back up files to your WD Sentinel server:

1. Use one of the following methods to open Time Machine.

- Click the Time Machine icon in the Dock:



- Click the **Apple menu**  > **System Preferences** and select **Time Machine**.
- Click **Go > Applications** and select **Time Machine**.

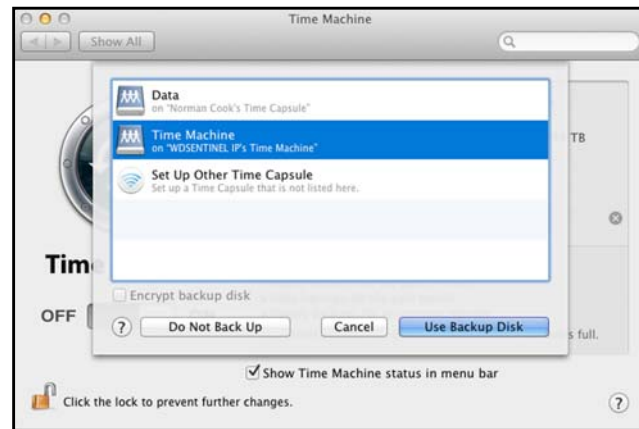
2. If this is your first time creating a backup, the following screen displays:



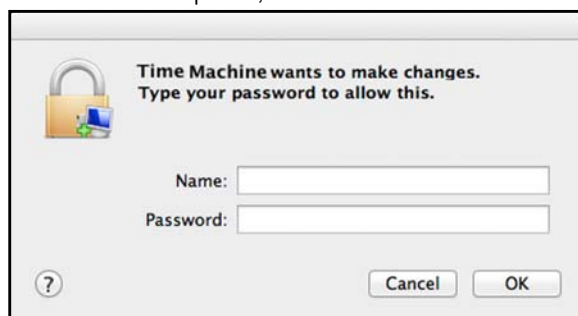
3. Click **Set Up Time Machine** to display the Time Machine Preferences screen:



4. Click **Select Disk** and select the WD Sentinel server for your backups.



5. Click **Use Backup Disk**. A screen prompts for your user name and password.
6. Enter the user name and password of an account that has administrator permissions on this client computer, then click **OK**.



7. Select **Registered User**.

8. Enter your assigned WD Sentinel User Name and Password in the Name and Password fields:



9. Click **Connect**. The Preferences screen returns.
10. To start automatic backups, move the slider to **ON**.

Time Machine begins backing up your files. The first backup may take some time, but subsequent backups are faster because Time Machine only backs up new or changed items.

Time Machine backs up your computer every hour and keeps the following backup sets:

- Every hour for 24 hours
- Every day for the past month
- Weekly until the WD Sentinel drive is full.

Note: If a backup is interrupted, for example, if the computer goes into sleep mode, it will resume automatically once the computer is available.

To see information such as available capacity and the date and time of the oldest, latest, and next backup, select **Open Time Machine Preferences** on the Time Machine drop-down menu:



Recovering/Restoring (Windows PC)

The WD Sentinel server provides two options for recovering lost or corrupted data:

- **Restore a Computer**—Restores all data and settings of a Windows PC computer or a storage device connected to the WD Sentinel server.
- **Recover File/Folders** —Recovers individual files or folders.


Note: For information on recovering/restoring data on your Mac using Time Machine, See “Recovering/Restoring (Mac)” on page 65.

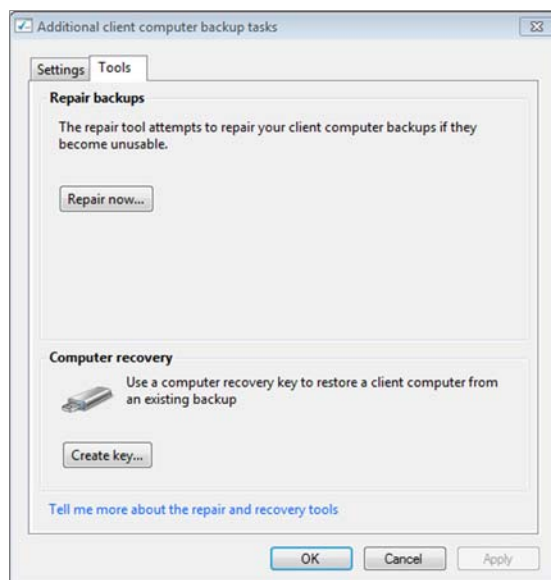
Restoring Windows PC Computers (Bare Metal Restore)

This feature restores a Windows PC connected to your WD Sentinel server. Should your computer experience an unfavorable event such as a hard drive crash, the Recovery feature reinstalls the operating system, software applications, and all the data. This type of recovery is known as a bare-metal restore; it recovers everything that was on the computer when it was backed up.

Best Practice: You may need some network drivers. Save them to a USB flash drive.

To restore a Windows PC that has been backed up:

1. Click **Computers and Backups**  on the navigation bar.
2. Select the computer that was backed up.
3. Insert a USB flash device into one of the WD Sentinel server's USB ports.
4. In the panel on the right, click **Additional Client Computer Backup Tasks** and then **Tools:**



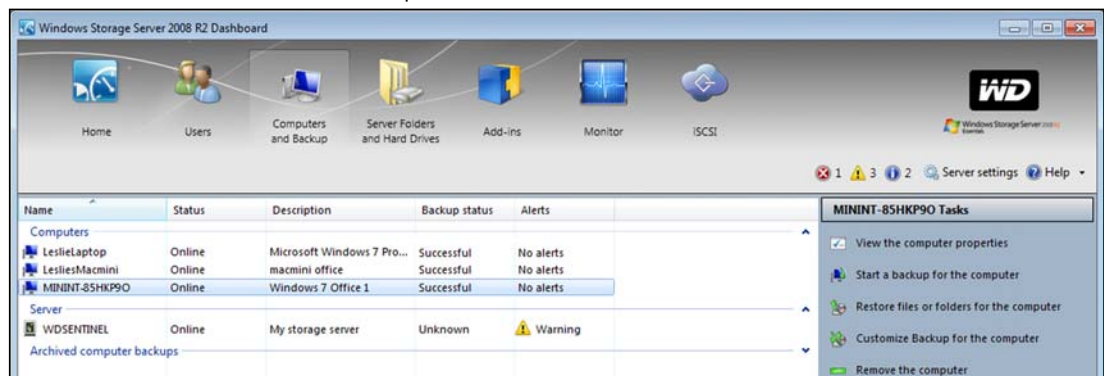
5. Click **Create key...** to generate a bootable USB flash key (configuration file) on the connected USB flash drive. You will use the key to boot the PC and download the backed-up system. Follow the wizard to complete the process.
6. Remove the USB flash drive from the WD Sentinel server and connect it to the computer you want to restore.

7. Boot the Windows PC from the USB flash drive:
 - a. Start the computer.
 - b. Depending on your computer, press **F12** or another key that displays boot options.
 - c. From the Boot menu, select **USB Device**.
 - d. On the Windows Boot Manager, select a Windows operating system for a full-system restore. The Full System Restore wizard Welcome screen displays.
 - If a message indicates that you do not have the correct network card driver, insert the USB flash drive with the driver into another USB port on the Windows PC, and follow the steps in the wizard to restore the computer.
 - If you do have the correct driver, click **Continue** and complete the steps in the wizard to restore the computer.

Note: Refer to [Microsoft Online Help](#) for additional information.

To recover individual files and folders:

1. Click the **Computers and Backups** icon and select the computer from which you would like to recover the backup files.



2. In the Task panel, click **Restore Files or Folders for the Computer**. The server displays a list of your backups.
3. Select the backup that has the files and folders you want to restore and click **Next**.
4. Follow the wizard to select the files and folders and recover them to your computer. See [Microsoft Online Help](#) for additional information.

Recovering/Restoring (Mac)

Time Machine allows you to restore files, versions of files, or your entire system. For additional information on recovering or restoring your system files, consult your Apple documentation.

Note: For information on recovering/restoring data on your PC, See "Recovering/Restoring (Windows PC)" on page 64.

1. On the Launchpad, click **Backup**. Your Time Machine backups display.



2. Select the date you'd like to restore to from the time line on the right of the screen.
3. Click **Restore** in the bottom right-hand side of your screen.

Backing up your WD Sentinel Server

Backing up your WD Sentinel server allows you to protect your operating system, system state, volumes, files, and application data. For information on how to back up your WD Sentinel server, see [Microsoft Online Help/Backing Up your Server](#).

Recovering the WD Sentinel Server to Factory Defaults

This feature recovers your WD Sentinel server, a process that may be necessary in case the server has a virus that cannot be deleted, bad or corrupted server configuration settings prevent you from starting the server, or the system drive(s) failed.

Best Practice: You may lose some of your data, depending on the type of recovery you perform.

Requirements

- Virtual DVD software

Note: Free virtual DVD software is available on the internet. See "Create a Virtual DVD" on page 67.

- 2.0 USB flash drive, 16 GB - 32 GB
- Windows PC
- DVD burner or DVD emulation software

Note: Free DVD emulation software is available on the Internet. For more information on emulation software, see Knowledge Base Answer ID 8561.

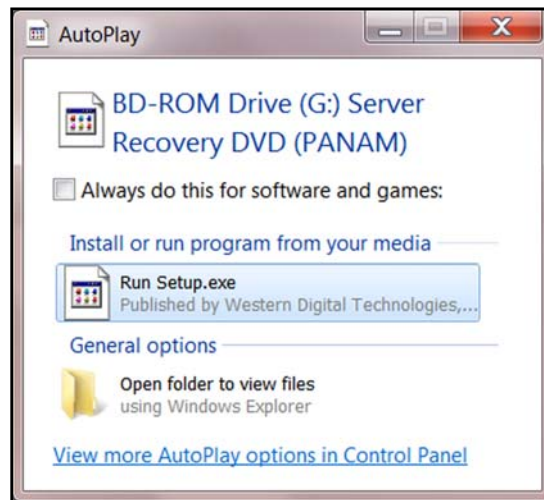
Create a Virtual DVD

WARNING! WD does not assist in the installation of third party programs such as a Virtual DVD. The information provided below is to assist customers with the creation of a recovery disk for a WD Sentinel RX4100. Western Digital is not responsible for any damage to your computer or data resulting from using third party software.

1. Download the [Server Recovery ISO](#) file and save it to a preferred location on your computer.
2. Download and install a virtual DVD software program. Available virtual DVD programs include:
 - PowerISO (<http://www.poweriso.com/>)
 - Virtual CloneDrive (<http://www.slysoft.com>)
3. Following your third-party software instructions, mount the Server Recovery ISO to a virtual DVD.

Run the Virtual DVD

1. Mount the Recovery DVD into your computer following the instructions for your virtual DVD software.
 - If you are running Windows 8, Windows 7, Windows Vista, click **Run Setup.exe** on the window that displays:



- If you are running on a Windows XP computer, by clicking **Setup.exe** under **My Computer**.
2. After the application runs, a Server Recovery Utility window appears with three options:
 - Unlock my drives
 - Recreate my storage
 - Perform a recovery

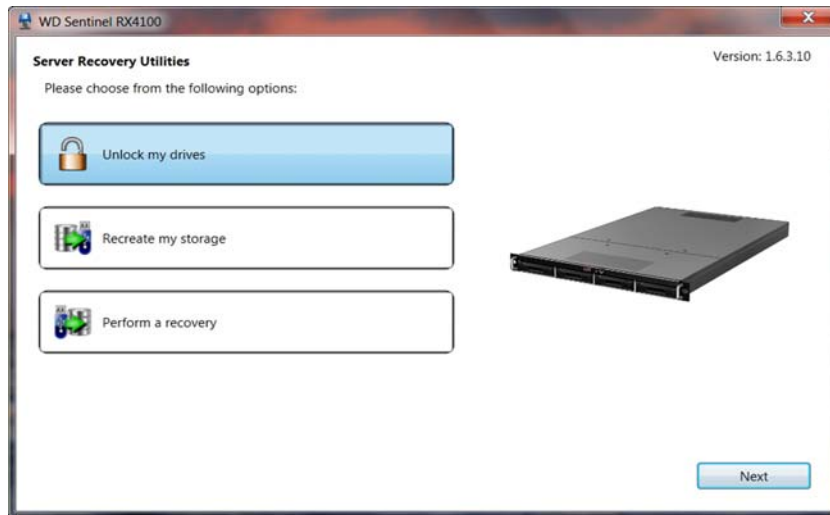
These options are explained below.

Unlock my drives

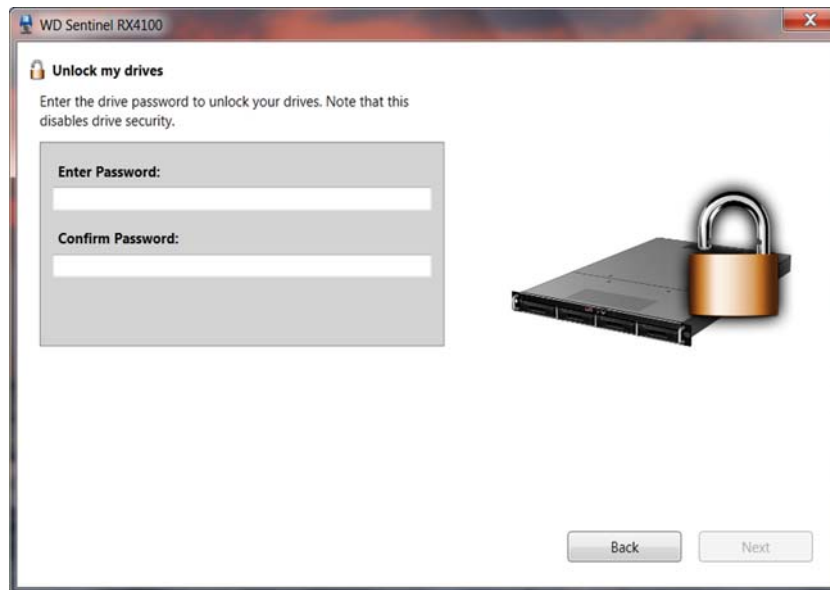
Unlock my drives unlocks the WD Sentinel server's drives if they are locked. (See "Lock/Unlock" on page 38.) Before starting any recovery process, unlock the drives with an unlock key.

To create an unlock key:

1. On the Server Recovery Utilities window, click **Unlock my drives**.



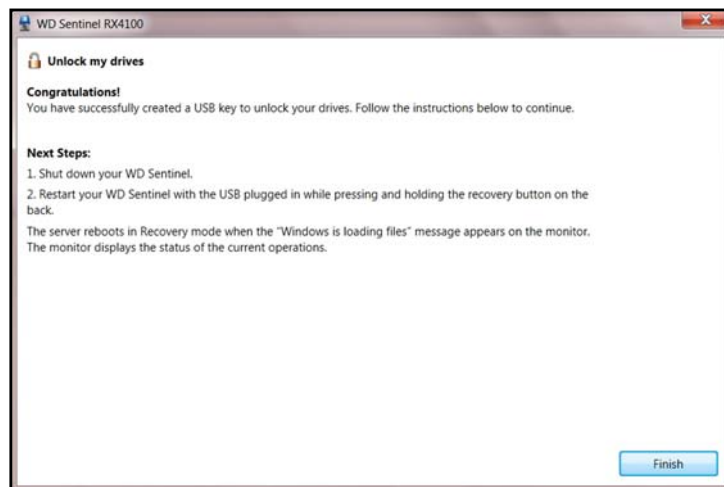
2. Click **Next** and enter the password previously set to lock the drives. Keep in mind that this password is not the WD Sentinel server's Administrator password. It is the locked drives password (see "Lock/Unlock" on page 38). If the Administrator password was used to lock the drives, enter it here. or123



3. Insert the USB flash drive into the Windows PC USB port. The USB flash drive should appear in the **Select USB flash drive** drop-down list.



4. If the USB flash drive is not on the list, click **Refresh** and search for it.
5. After locating the USB flash drive, click the **“I understand...”** check box to indicate that you know the process will delete all files and folders on your USB flash drive.
6. Click **Next** to display the “Congratulations and Next Steps” page.



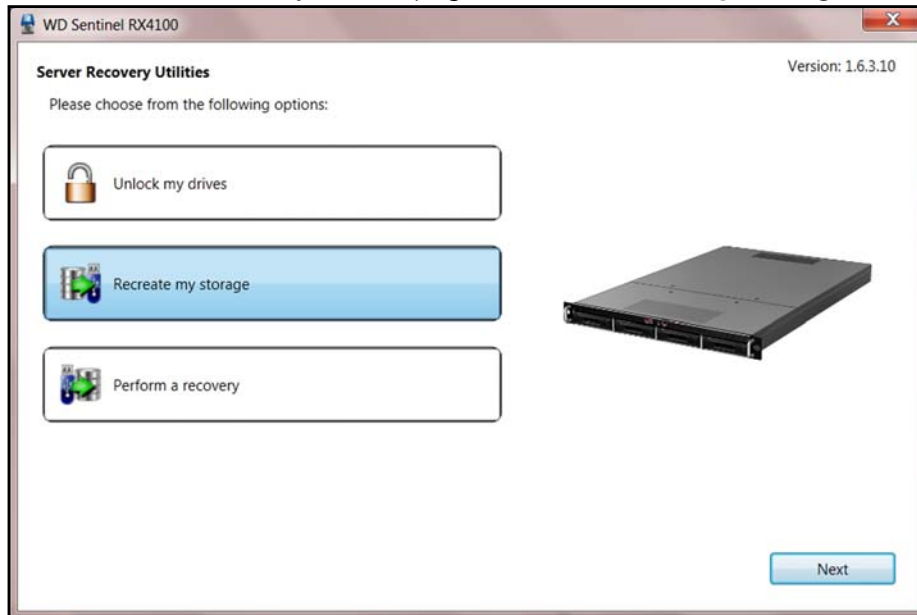
7. Follow the steps listed on this page:
- Shut down the WD Sentinel server.
 - Insert the USB flash drive into one of the server's USB ports.
 - Restart your server while holding the recovery button on the back of the unit.
Note: This may require 2 people to perform.
 - Allow the recovery process to complete.

Recreating the storage

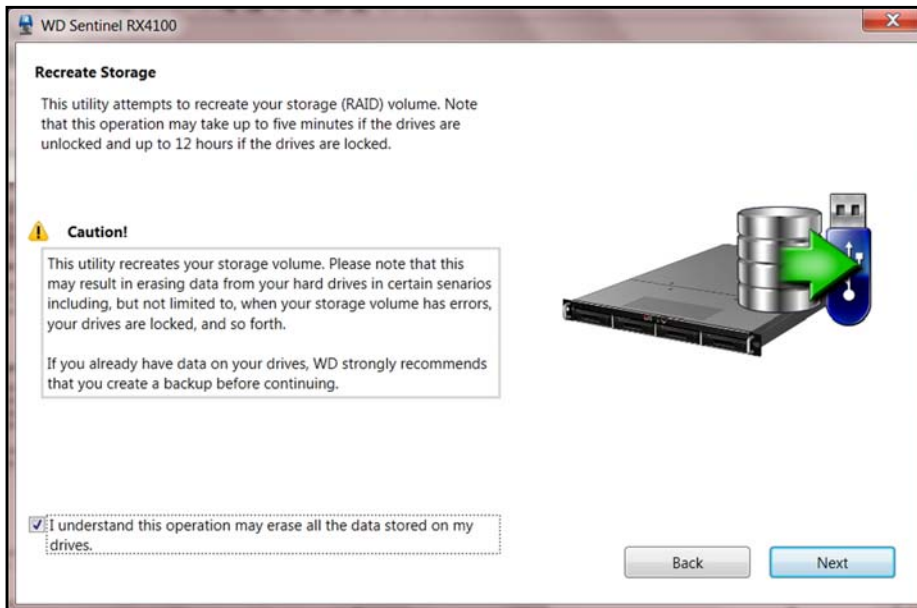
The “Recreate my storage” option recreates the storage partition and RAID for your WD Sentinel server.

WARNING! Only use this option if you are replacing all drives or if the partition or RAID is corrupted. This option may delete user data.

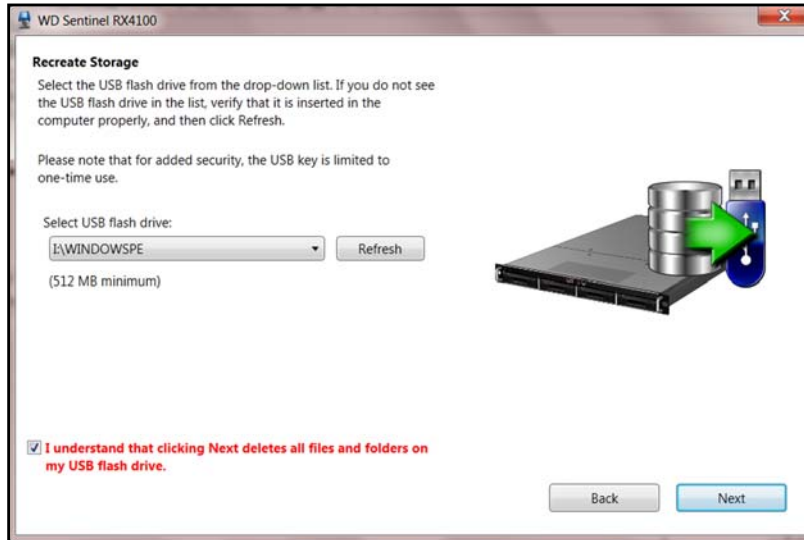
1. On the Server Recovery Utilities page, click **Recreate my storage**.



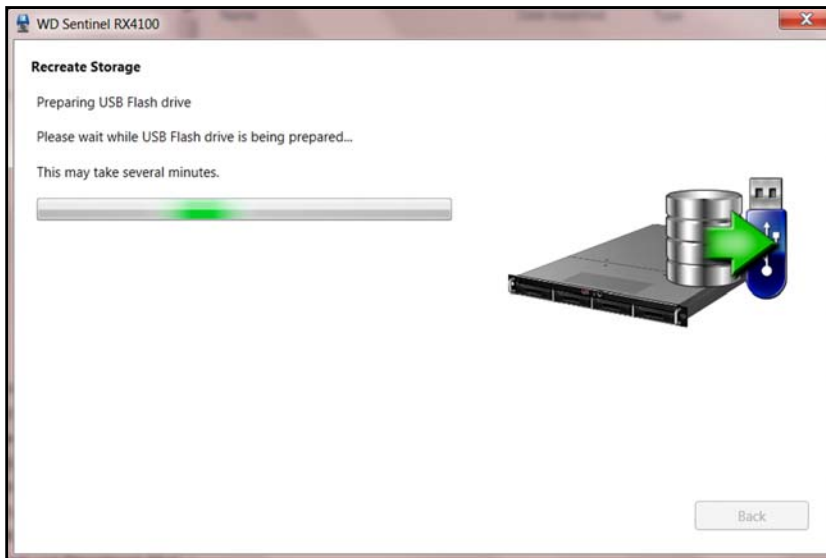
2. Read the caution, then click the **“I understand...”** check box to indicate you know the process may erase the data on the WD Sentinel server’s drives while it recreates the server’s configuration..



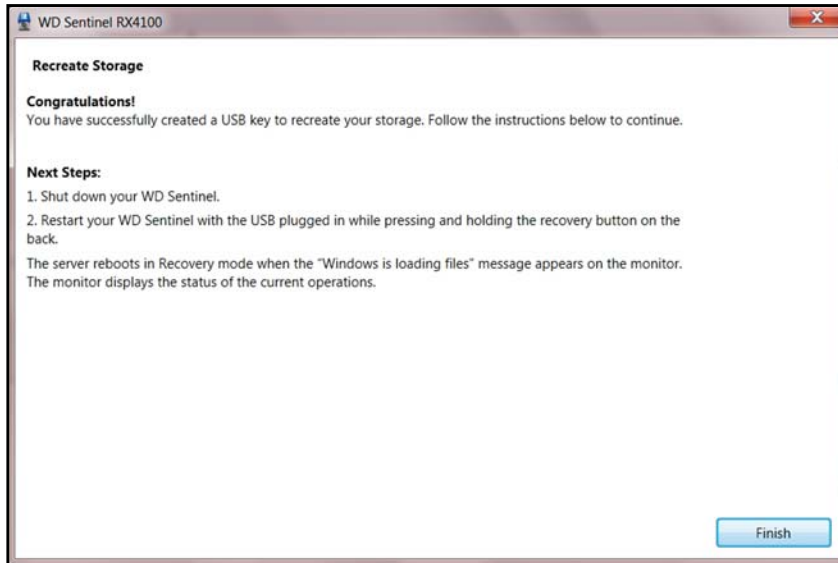
3. Insert the USB flash drive into the USB port of the Windows PC, and click **Next** to display the following page for using the USB key:



4. The USB flash drive should appear in the **Select USB flash drive** drop-down list. If the USB flash drive is not on the list, click **Refresh** and search for it.
5. After locating the USB flash drive, click the check box acknowledging that you know that when you click **Next**, all files and folders on the USB flash drive will be deleted.
6. Click **Next**. A progress bar displays while the USB flash drive is being prepared.



7. Upon completion of the process, the Recreate Storage page displays:

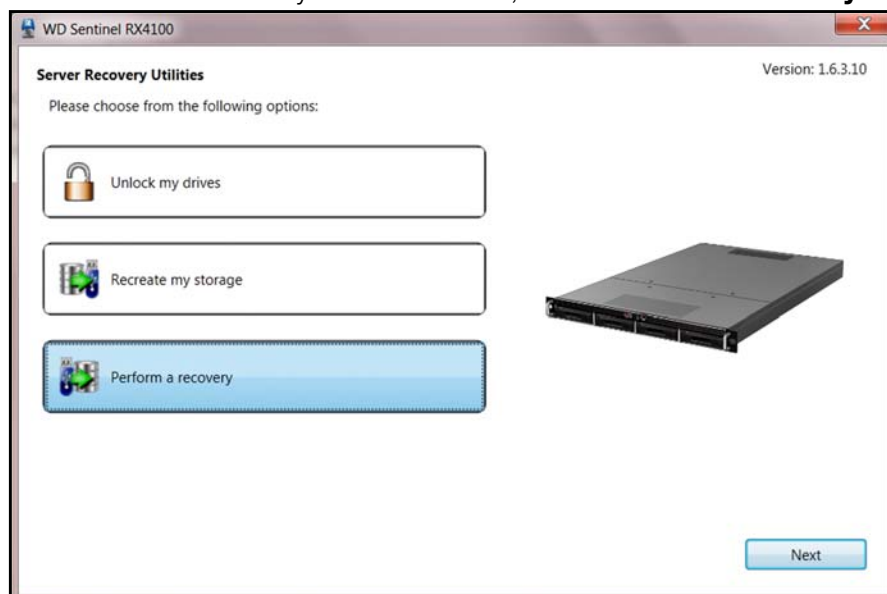


8. Follow the instructions under **Next Steps**:
- Shut down the WD Sentinel server.
 - Insert the USB flash drive into one of the server's USB ports.
 - Restart your server while pressing and holding the **Recovery** button on the back of the server.
Note: This may require 2 people to perform.
 - Continue to hold the **Recovery** button until the "Windows loading files" screen appears. Release the Recovery button.
 - Allow the recovery process to complete.

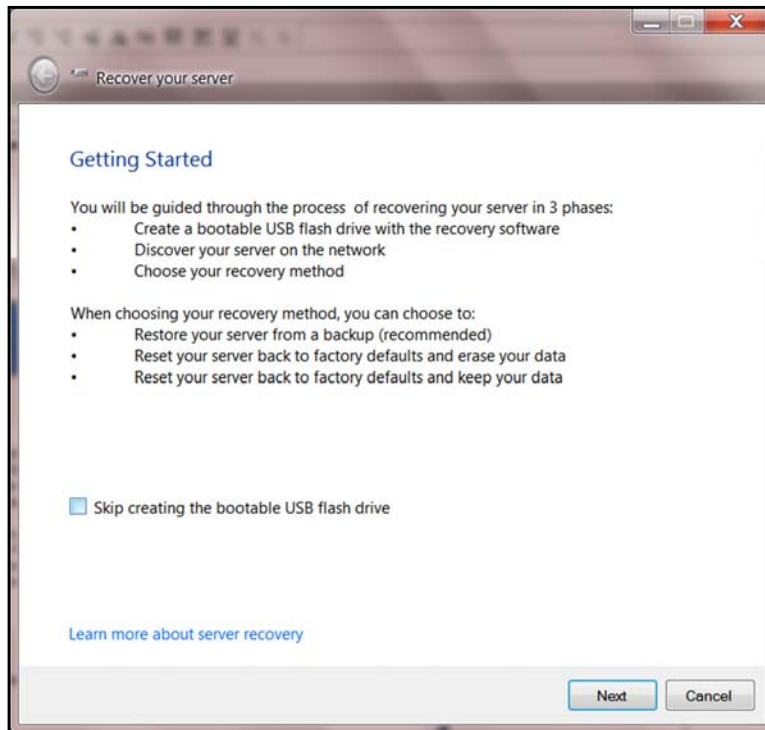
Performing a Recovery

This option enables the Administrator to restore the server to factory defaults with or without deleting all contents stored on the WD Sentinel server.

1. On the Server Recovery Utilities window, click **Perform a recovery**:



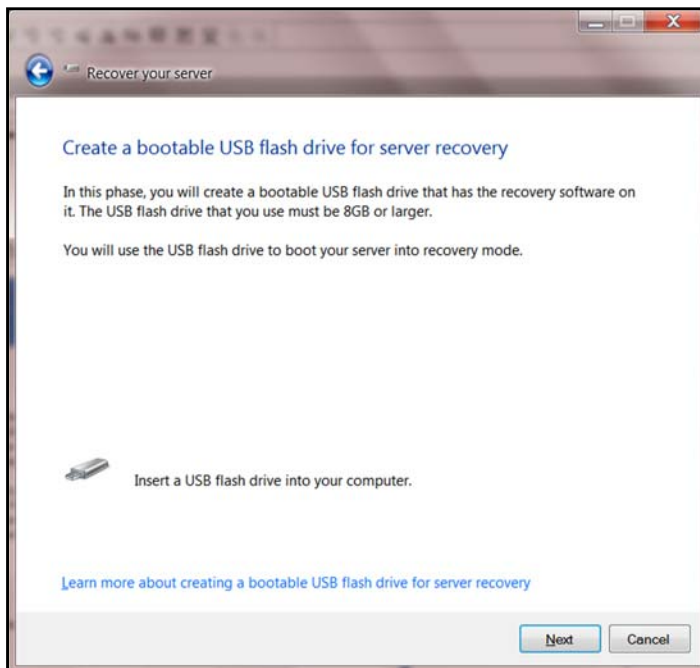
2. Click **Next**. The Getting Started page displays:



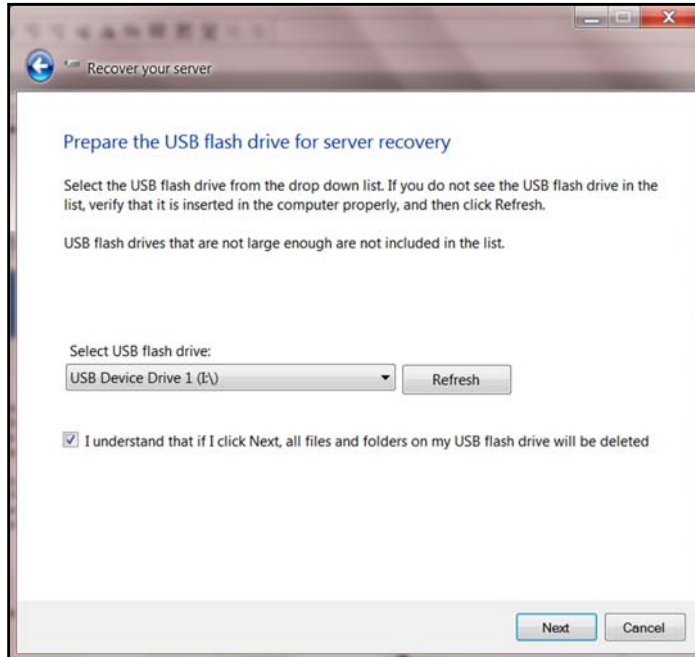
3. Read the information on the screen.

- If you have previously created a bootable recovery USB flash drive, click the **Skip creating the bootable USB flash drive** check box and continue to Step 9.

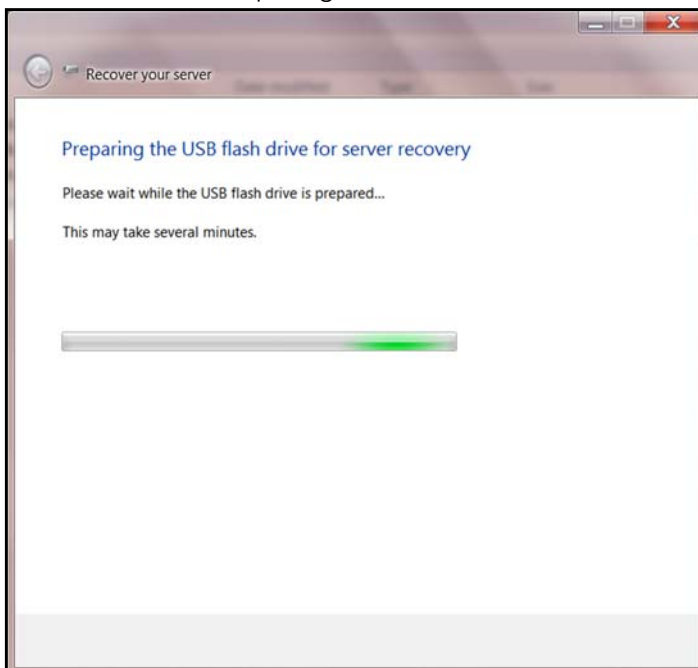
Click **Next**. The Create a bootable USB flash drive for server recovery screen displays:



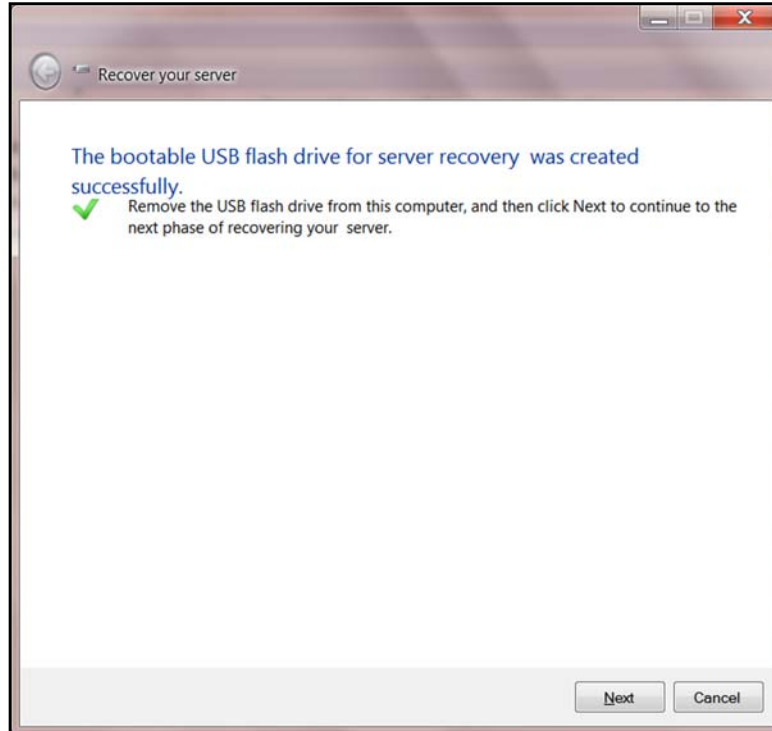
4. Insert the USB flash drive into the USB port of the Windows PC, and click **Next**. The Prepare the USB flash drive for server recovery screen displays.



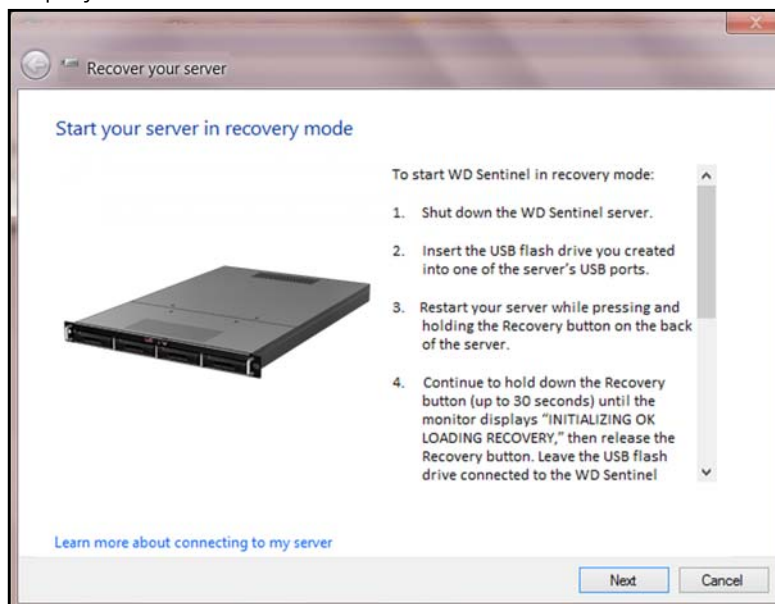
5. Your USB flash drive should appear in the Select USB flash drive drop-down list. If it is not on the list, click **Refresh** and search for it.
6. After locating the USB drive, click the check box to acknowledge that you know clicking **Next** will delete all files and folders on the USB flash drive.
7. Click **Next**. The Preparing the USB flash drive for server recovery screen displays.



8. The recovery application on the DVD prepares the USB drive. This process can take up to 15 minutes to complete.

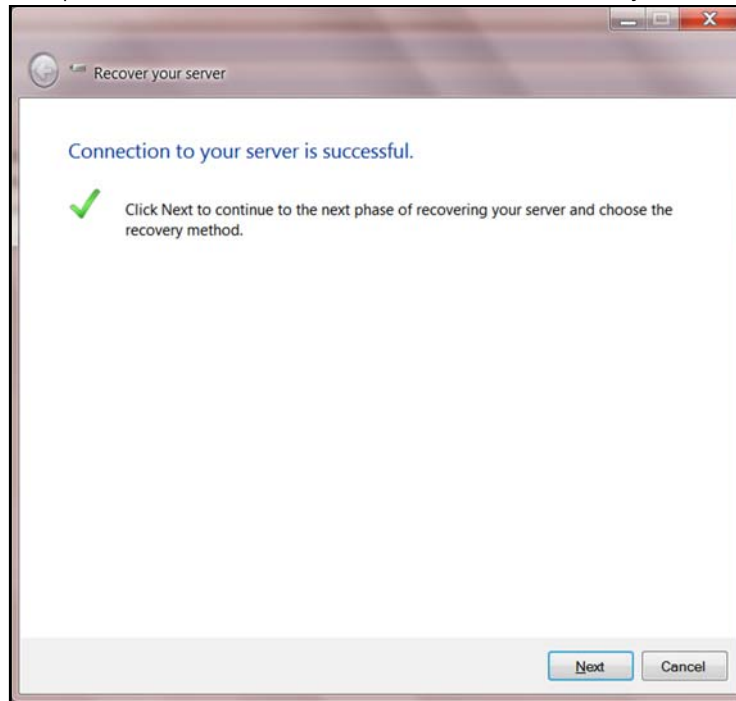


After the USB drive preparation is done, the Start your server in recovery mode screen displays.

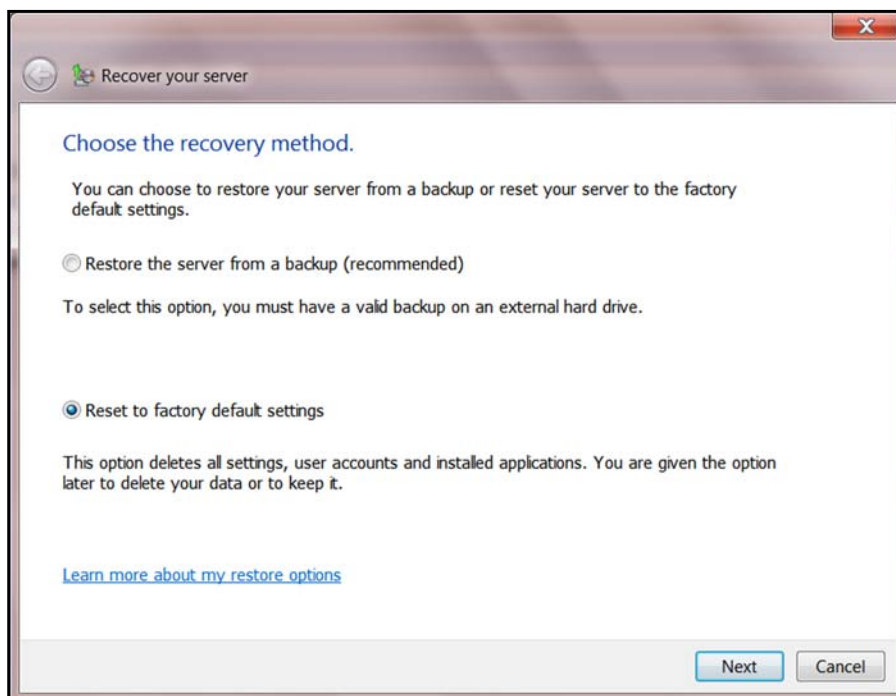


9. Follow the additional instructions that appear on the screen to guide you through the recovery process:
- a. Shut down the WD Sentinel server.
 - b. Connect a monitor to the server if one is not already connected.
 - c. Insert the USB flash drive into one of the server's USB ports.

- d. Restart your server while pressing and holding the **Recovery** button on the back of the server.
Note: This may require 2 people to perform.
- e. Continue to hold the Recovery button until “WINDOWS IS LOADING FILES,” then release the Recovery button, leaving the USB flash drive connected to the WD Sentinel server. The monitor displays “RECOVERY INITIALIZING.”
- f. When the monitor connected to your server displays “RECOVERY STARTED,” return to your computer and click **Next**. This connects the server to your computer.



10. Click **Next**.

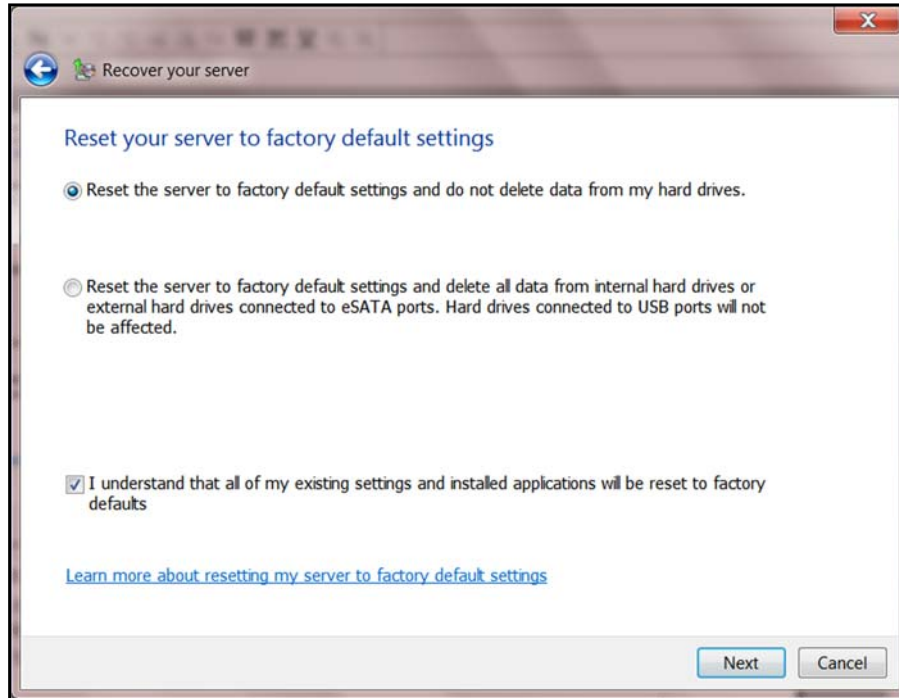


11. Select the option you'd like to use to restore your server.

- If you have a backup for the server, select the first bullet. This is the recommended method of recovery.
- If you want to restore the server to its factory default settings, select the second bullet.

Note: This option deletes all settings, user accounts and installed applications.

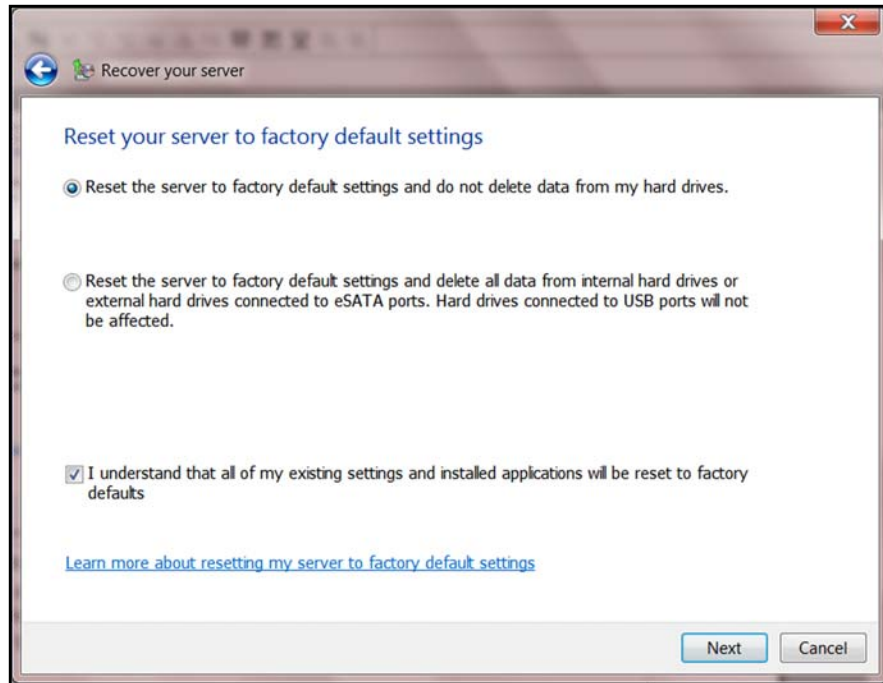
12. Click **Next**.



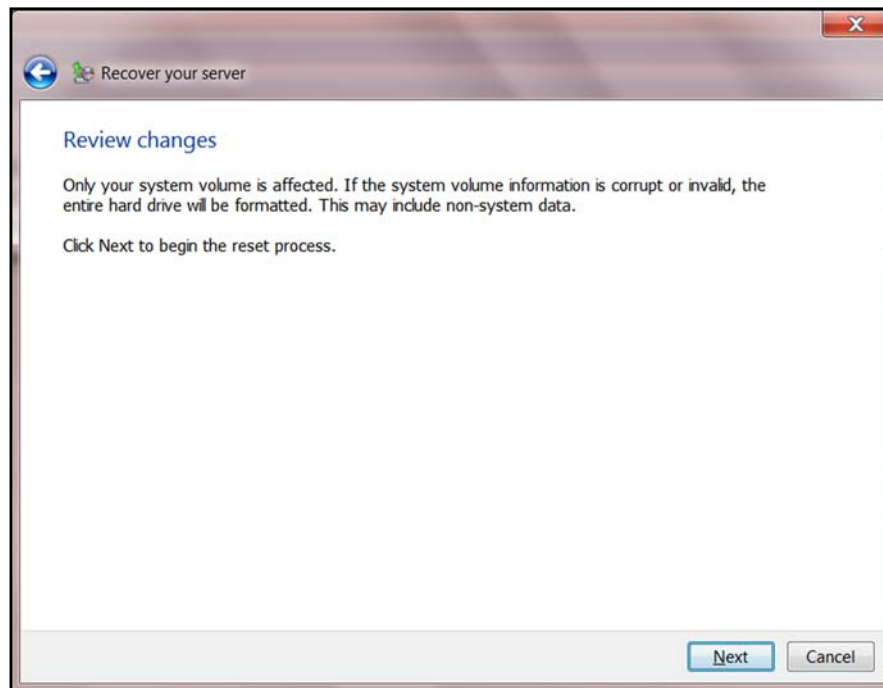
13. Select a restore option:.

- Select the first option to reset the server but keep the data on the hard drives.

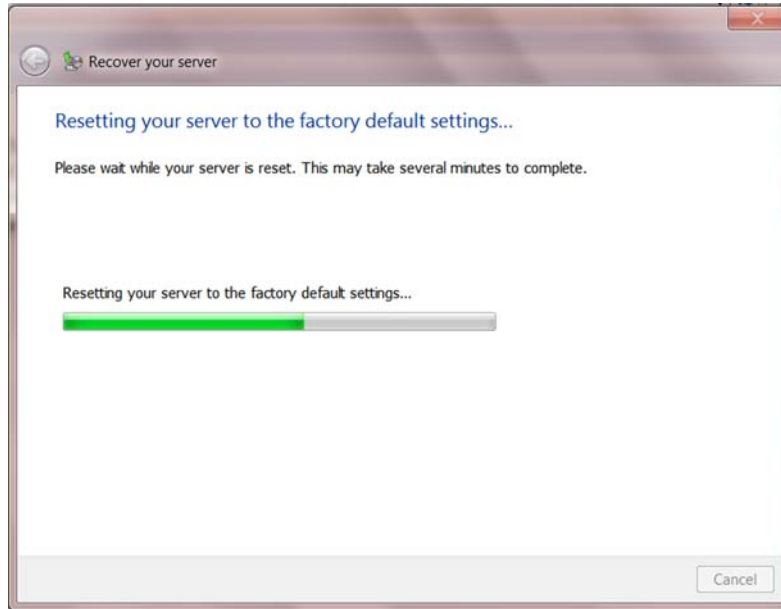
- Select the second option to reset the server and delete all data from the internal hard drives or external hard drives connected to the eSATA ports. This will not affect hard drives connected to the USB ports.



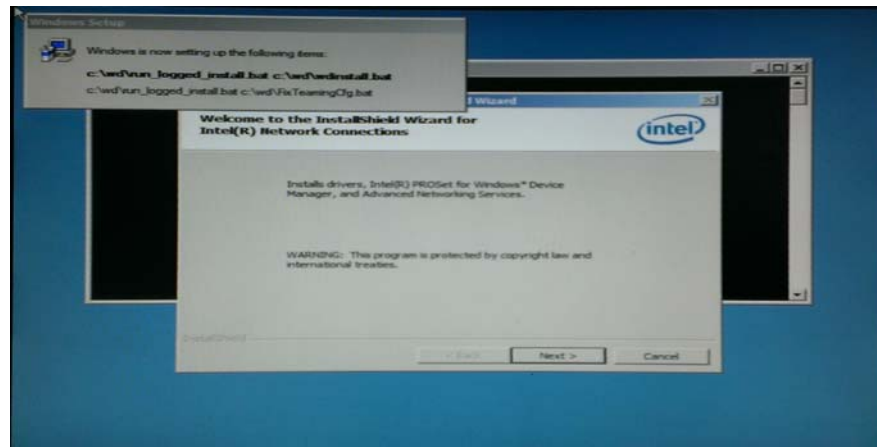
14. Click the check box at the bottom of the screen indicating that you understand that all of your existing settings and installed applications will be reset to factory defaults, then click **Next**.



- Review the information on the screen. If you agree, click **Next**. The server begins recovery.

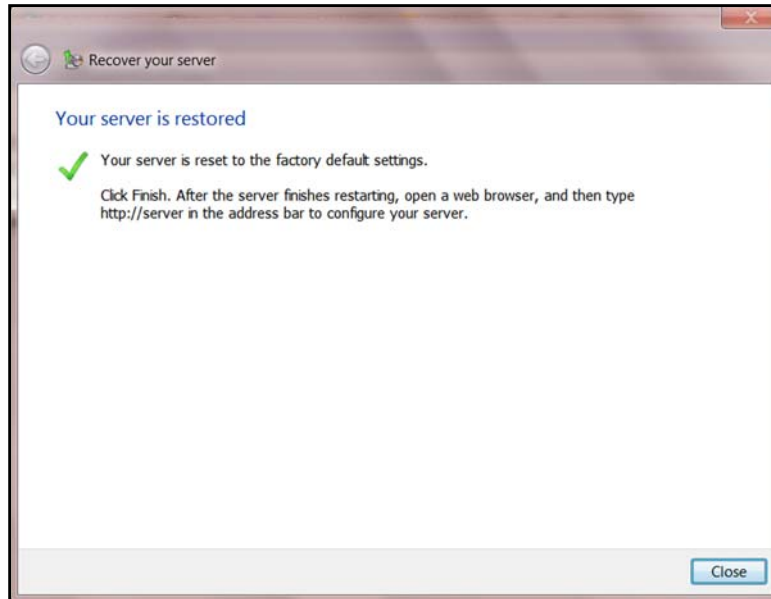


WARNING! Various device drivers are installed and will display on the server's monitor during the restoration process. Let the system recovery continue without responding to the information on the screen until the Set Up Windows Storage Server 2008 R2 Essentials server language screen displays.



Sample system recovery screen

Once the recover is complete the following screen displays on your client computer:



16. Click **Close**.
17. In the address field of an open browser window, enter <http://WDSSENTINEL>.
18. Set up your WD Sentinel RX4100 server using the steps outlined in “Setting up your WD Sentinel Server (one time only)” on page 17. For more information, see [Microsoft Online Help](#).

7

Best Practices

- Setting up the WD Sentinel RX4100
- Setting up Client Computers
- Using the WD Sentinel RX4100 Efficiently
- Replacing Drives
- Sharing Files with External Users
- Shutting Down

The following practices help you use the WD Sentinel RX4100 and protect your data efficiently and safely.

Setting up the WD Sentinel RX4100

- Change the default name of WD Sentinel to something unique. This avoids conflicts when another WD Sentinel server is added to your network in the future.
- Make sure Ethernet 1 and Ethernet 2 are on the same network subnet.
- Add the server to your domain. This allows users to use the same login and password for both the Launchpad and their computer.
- If you decide to lock the drives, make sure the password is stored in a safe place.
- Set user password policy to at least medium security.
- Enable Microsoft Automatic Updates to find and apply the latest Microsoft software update.
- Enable WD Automatic Updates to find and apply the latest WD software update.
- Set up Automatic Alert Notification for real-time notifications of any problems with the WD Sentinel server.
- Set up Remote Web Access using Ports 443 and Port 80. If your router or IP provider blocks these ports, you may need to consult with your IP provider for assistance.
- **Do not remove the Windows page file!** Some critical functions use the system's paging file. Removing the page file can potentially leave your system unusable with the possibility of data loss. To maintain the reliability of your system and its redundant resources, do not modify the paging file whatsoever.

Setting up Client Computers

- Before loading the Connector software to add a computer to the WD Sentinel server for backup, be sure that the computer's operating system is fully up-to-date.
- When adding client computers to the WD Sentinel server, it is best not to have any backups active.

Using the WD Sentinel RX4100 Efficiently

- The WD Sentinel server has many jobs to perform. Share data during business hours, and back up the computers during hours of inactivity. Keep the server powered on 24/7 to do its work.
- To avoid RAID issues, always use Sentinel with a UPS.
- Enable e-mail alerts. Receiving your alerts by email allows you to monitor certain server issues as they occur.

Replacing Drives

- The online removal of a drive forces a rebuild when the drive is replaced. Until the rebuild is complete, the RAID system is degraded and unrecoverable failure will occur should another drive be removed. Only remove one drive at a time between rebuilds.
- Avoid pulling a drive out unless there is a failure.
- When a drive needs replacement, the WD Sentinel server is still functional but subject to a second drive failure that would result in the loss of data. To minimize this vulnerable time, a good practice is to have another drive ready to replace the failed drive.

Sharing Files with External Users

- Create Employee-Specific Private Folders/Assign Permissions—Depending on the nature of your business and organizational structure, you may want to create a shared folder for each employee and give the respective employee Read/Write permissions for that folder.
- Create Shares for Vendors or Clients/Access Remotely—The built-in Remote Web Access feature enables collaboration on files and data not only among your employees but also with your clients and vendors.

As a best practice, create a unique user account for each client and vendor you want to exchange data with and create a dedicated Shared Folder for each such external user. To prevent giving external users access to your sensitive data, make sure that the user accounts you create have the appropriate permissions for only the folders you have created for them.

To start collaborating with your external users, just provide them with the domain address of your WD Sentinel server and their user name and password.

Shutting Down

- Unclean shutdowns are hard on RAIDed systems. The WD Sentinel server recognizes an unclean shut down and upon the reapplication of power, begins a long sequence of examining the RAID for errors and bringing the RAID configuration back into alignment. This sequence can take many hours. To avoid this situation and to assure that the unit always experiences clean shutdowns and the best data integrity, use an Uninterruptible Power Supply (UPS).

Note: Performance is affected during a RAID rebuild and verification.

- To avoid possible corruption, do not unplug the power from the unit while it is running.

8

Troubleshooting

First Steps Checklist Specific Problems and Corrective Actions

For any issue, first ensure that you are using the latest firmware for the WD Sentinel server. See “Updating Software” on page 39 for instructions.

First Steps Checklist

- Is the power supply plugged in to the wall outlet and the drive?
- Are all cables correctly connected and secured?
- Is the power on? If not, see “LEDs” on page 11.

Specific Problems and Corrective Actions

The following section contains specific problems that may arise during the use of the WD Sentinel server and provides possible solutions.

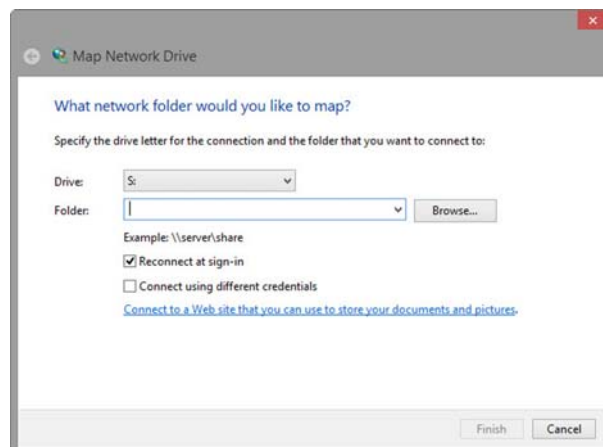
LEDs do not light up

1. Make sure the power cord is connected correctly.
2. Make sure that the wall outlet has power. Test it by plugging in another device.
3. Confirm the network cable is properly connected to the WD Sentinel server and the network switch or router.
4. Make sure the network switch or router has power.
5. Use a different network cable and port on the network switch or router. Temporarily swapping the WD Sentinel’s cable port with a working network device may identify any failing cables and ports.

Connecting to Shared Folders on a WD Sentinel server from a Windows PC on which Launchpad is not installed

Windows 8:

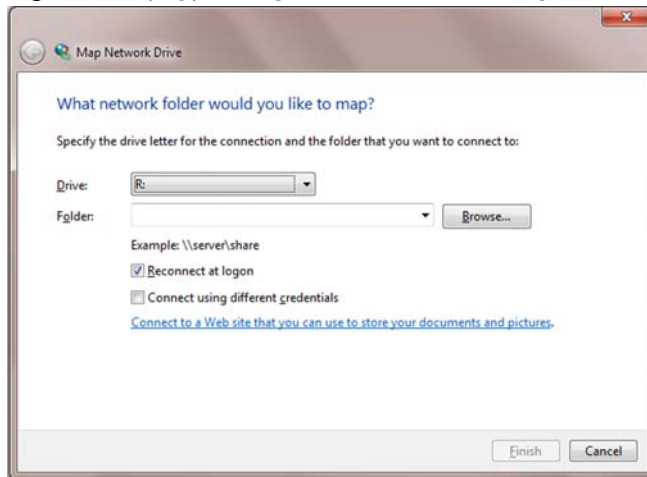
1. On your keyboard, click the Windows logo key **⊞** + **E**
2. On the Computer screen toolbar, select **Map Network Drive**, then select **Map Network Drive**.



3. From the **Drive** drop-down list, choose the letter that you want the WD Sentinel server to have in **Computer**.
4. Click **Browse** to find the folder that you want to map, or type the path to the server using the format \\ServerName\FolderName. For example, if the share is called Documents, and your server is called MyServer, you would enter \\MyServer\Documents.
5. If you want the drive to reconnect whenever the computer is rebooted, click the **Reconnect at logon** check box.
6. Click **Finish**.

Windows 7 / Vista / XP:

1. Right-click (**My**) **Computer** and select **Map Network Drive**.



2. From the **Drive** drop-down list, choose the letter that you want the WD Sentinel server to have in (**My**) **Computer**.
3. Click **Browse** to find the folder that you want to map, or type the path to the server using the format \\ServerName\FolderName. For example, if the share is called Documents, and your server is called MyServer, you would enter \\MyServer\Documents.
4. If you want the drive to reconnect whenever the computer is rebooted, click the **Reconnect at logon** check box.
5. Click **Finish**.

Cannot access Windows PCs via Remote Access

Internet Explorer 8 or greater is required to access a Windows PC using the Remote Web Access feature of the WD Sentinel server. There is an Active X Client requirement that comes standard with these browsers. For more information, see *Knowledge Base Answer ID 8578*.

9

Managing iSCSI Storage

[iSCSI Overview](#)
[iSCSI Roles](#)
[Managing iSCSI Targets](#)

iSCSI Overview

Internet SCSI (iSCSI) is an industry standard developed to enable transmission of SCSI block storage commands and data over an existing IP network by using the TCP/IP protocol. The encapsulated SCSI commands and data can be transmitted over a local area network (LAN) or a wide area network (WAN). As with traditional SCSI, an iSCSI storage solution requires at least one “initiator” residing on the client computer and at least one “target” residing on the storage server.

Once the connection is established between the iSCSI initiator and the iSCSI target, the operating system on the iSCSI initiator sees the storage as a local storage device that can be formatted, read and written in the usual manner.

Your WD Sentinel server allows you to create and manage iSCSI targets. The iSCSI target provides storage, similar to a local hard disk drive, but is accessed over a network rather than locally. The iSCSI target is protected by the underlying RAID structure of the WD Sentinel server.

iSCSI Roles

Initiator: A client computer that accesses storage devices using SCSI commands over an IP network.

Target: A network-attached storage device that provides access to logical disks (which can be created on the WD Sentinel server).

Managing iSCSI Targets

Click the **iSCSI** icon to open the iSCSI page:

Alias	Status	Security	Size
Target 1	0 initiator(s) connected	CHAP	100.0 MB
Target 2	0 initiator(s) connected	None	100.0 MB

Server Capacity
(2.8 TB)

- iSCSI (200.0 MB)
- Other Data (276.1 GB)
- Available (1.5 TB)

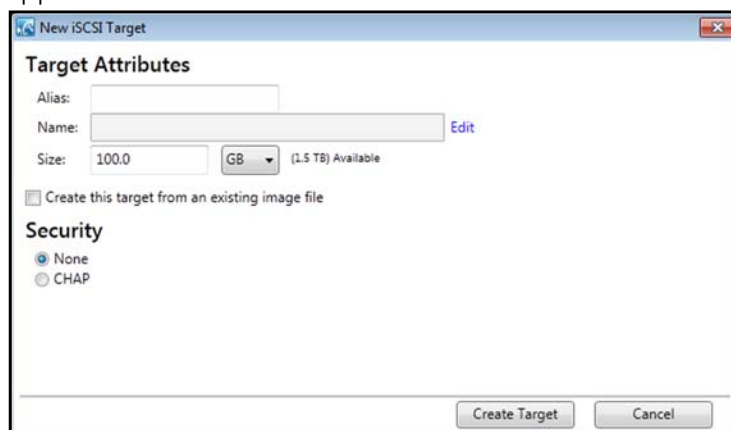
Powered by StarWind™

Setting	Description								
Alias	The user-friendly name used as an additional descriptive name for the target.								
Status	The status of your target. <ul style="list-style-type: none"> • xx initiators connected. • Disabled 								
Security	The assigned security for the target. <ul style="list-style-type: none"> • None: No security has been assigned to this target • CHAP: Challenge Handshake Authentication Protocol (CHAP) security has been assigned to the target. 								
Size	The size of the target (e.g., 4, GB, 1 TB)								
Server Capacity	Displays the total amount of space on your server and how it is distributed (i.e., available server space; used server space). <div data-bbox="938 699 1230 1058" data-label="Figure"> <table border="1"> <caption>Server Capacity (1.5 TB)</caption> <thead> <tr> <th>Category</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>Available</td> <td>1.5 TB</td> </tr> <tr> <td>Other Data</td> <td>276.1 GB</td> </tr> <tr> <td>iSCSI</td> <td>200.0 MB</td> </tr> </tbody> </table> <p>Powered by StarWind™</p> </div>	Category	Amount	Available	1.5 TB	Other Data	276.1 GB	iSCSI	200.0 MB
Category	Amount								
Available	1.5 TB								
Other Data	276.1 GB								
iSCSI	200.0 MB								

Create an iSCSI Target

To create an iSCSI Target that can be used in the WD Sentinel RX4100 server:

1. Click **Create an iSCSI Target** in the iSCSI Tasks pane. The New iSCSI Target window appears.

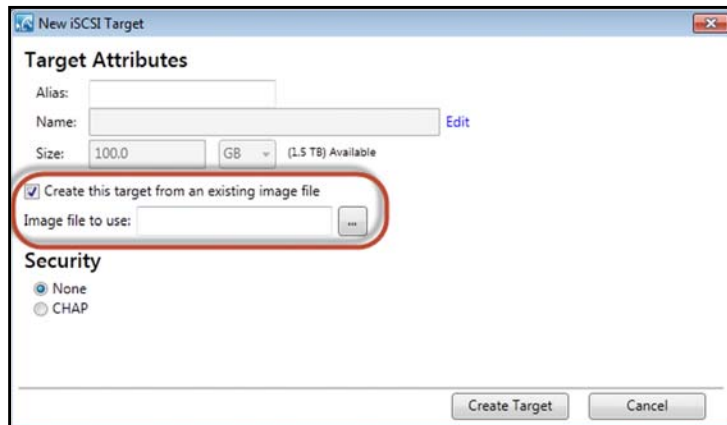


2. In the Alias field, enter an alias for your target. The alias should be a descriptive name for your target.
3. In the Size field, enter the size of your target, then select the unit of information (e.g. KB, MB, GB, TB) from the pull-down menu.

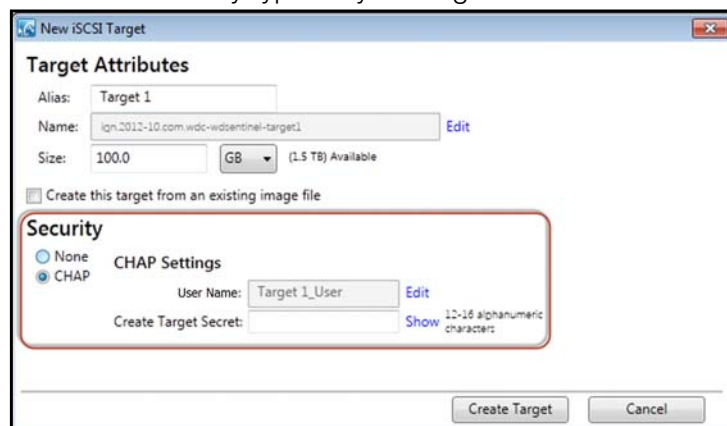
Note: Available space displays to the right of this field.

- Click **Create this target from an existing image file** to create a target from an existing image file.

Note: Use this step only if you have an existing iSCSI target image file.



- Select the ... button.
 - On the “Image file to use:” window, navigate to the location of your target image file, then click **Open**.
- Select the security type for your target.



- **None:** Does not assign security for your target.
 - **CHAP:** Assigns Challenge Handshake Authentication Protocol (CHAP) security to your target.
 - If you’d like to change your User Name, click **Edit**. Note that the name must match your initiator CHAP name.
 - Enter your Target Secret. The Target Secret is a security key that must be between 12 to 16 alphanumeric characters.
- Click **Create Target**.

Edit an iSCSI Target

- On the iSCSI Tasks pane, click **Edit Target Settings**.
- Modify the required and optional settings as desired.
- Click **Modify Target**.

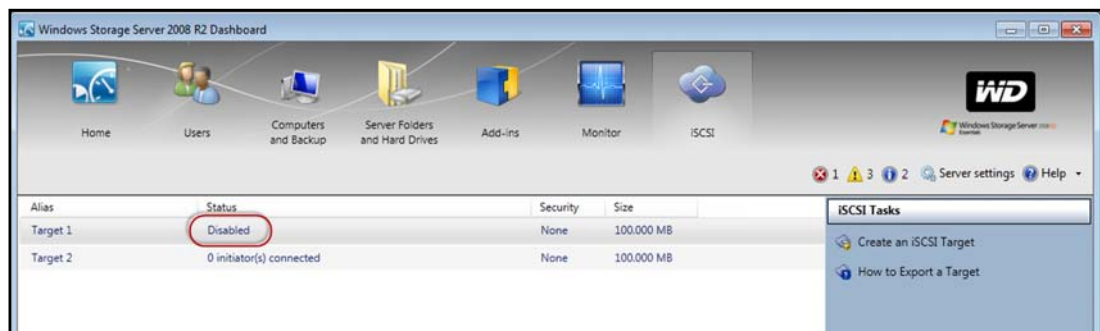
Disable an iSCSI Target

Note: Disabling your iSCSI Target temporarily suspends the target, but does not remove it. If you'd like to permanently remove the target, See "Deleting an iSCSI Target" on page 89.

1. In the iSCSI tab, select the target you'd like to disable.
2. In the iSCSI Tasks pane, click **Disable Target**. The Disable a Target message appears.



3. Click **Disable Target**. Disabled now displays in the Status column.



Enabling an iSCSI Target

1. In the iSCSI tab, select the disabled Target you'd like to enable.
2. In the iSCSI Task pane, click **Enable Target**. Your target is now enabled.

Deleting an iSCSI Target

WARNING! Deleting your iSCSI Target completely removes the target. If you'd like to temporarily disable the target, See "Disable an iSCSI Target" on page 88.

1. In the iSCSI tab, select the target you'd like to delete.
2. In the Task Pane, click **Delete Target**. The Delete a Target message displays.



3. Click **Delete Target**. Your Target is deleted and removed from the iSCSI target list.

Exporting an iSCSI Target

1. On your desktop, open Windows Explorer.
2. Under Network, select your WD Sentinel device.
3. Select the folder to which you've saved your iSCSI Target image files (usually the Server>TargetImageFiles folder).
4. Right-click the target you'd like to export and select **Copy** from the menu.
5. Navigate to a different folder.
6. Right-click in the folder and select **Paste**. Your iSCSI Target image file is now "exported" to a different folder.

Note: The target image files will have the same name as the iSCSI target you just copied and will have a ".img" file extension.

Importing an iSCSI Target

To import an iSCSI Target into your WD Sentinel, follow the steps outlined in "Create an iSCSI Target" on page 86, following step 4 (selecting the Create this target from an existing image file checkbox) to import your iSCSI target.

Regulatory and Warranty Information

Regulatory Compliance
 Limited Warranty
 GNU General Public License ("GPL")

Regulatory Compliance

FCC Class A Information

This device has been tested and found to comply with the limits of 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 unit 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 or television reception. However, there is no guarantee that interference will not occur in a particular installation. Any changes or modifications not expressly approved by WD could void the user's authority to operate this equipment.

The following booklet, prepared by the Federal Communications Commission, may be helpful: *How to Identify and Resolve Radio/TV Interference Problems*. This booklet is Stock No. 004-000-00345-4 available from the US Government Printing Office, Washington, DC 20402.

The provided Ethernet cable must be used between the unit and network connection to comply with FCC Part 15 Class A and EN-55022 Class A.

Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

(a) For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: 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.

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B 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 communications. 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.

ICES/NMB-003 Compliance

Cet appareil de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Canadian ICES-003 Class A.

Safety Compliance

Approved for US and Canada. CAN/CSA-C22.2 No. 60950-1, UL 60950-1-07: Safety of Information Technology Equipment.

Approuvé pour les Etats-Unis et le Canada. CAN/CSA-C22.2 No. 60950-1-07 : Sûreté d'équipement de technologie de l'information.

This product is intended to be supplied by a listed limited power source, double insulated, or direct plug-in power unit marked "Class 1."

- This equipment is to be deployed in restricted access location only.
- Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions:
 - Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
 - Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
 - Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
 - Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
 - Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

CAUTION! Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Dispose of used batteries according to manufacturer's instructions.

CE Compliance for Europe

Verified to comply with EN55022 for RF emission; EN-55024 for Generic Immunity, as applicable; and EN-60950-1 for Safety.

Environmental Compliance (China)

部件编号	铅 (Pb)	水银 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)
PCBA	X	o	o	o	o
适配器	X	o	o	o	o
RJ45 电缆	o	o	o	o	o
螺丝	o	o	o	o	o
橡胶垫	o	o	o	o	o
金属	o	o	o	o	o
塑料	o	o	o	o	o

o : 表示部件中不包含相应的物质, 或者含量没有超出 SJ/T 11363-2006 法规中规定的同类物质的最大允许水平。
X : 表示部件中相应物质的含量超出 SJ/T 11363-2006 法规中规定的限度

Obtaining Service

WD values your business and always attempts to provide you the very best of service. If this Product requires maintenance, either contact the dealer from whom you originally purchased the Product or visit our product support website at <http://support.wd.com> for information on how to obtain service or a Return Material Authorization (RMA). If it is determined that the Product may be defective, you will be given an RMA number and instructions for Product return. An unauthorized return (i.e., one for which an RMA number has not been issued) will be returned to you at your expense. Authorized returns must be shipped in an approved shipping container, prepaid and insured, to the address provided on your return paperwork. Your original box and packaging materials should be kept for storing or shipping your WD product. To conclusively establish the period of warranty, check the warranty expiration (serial number required) via <http://support.wd.com>. WD shall have no liability for lost data regardless of the cause, recovery of lost data, or data contained in any Product placed in its possession.

Limited Warranty

WD warrants that the Product, in the course of its normal use, will for the term defined below, be free from defects in material and workmanship and will conform to WD's specification therefor. The term of your limited warranty depends on the country in which your Product was purchased. The term of your limited warranty is for 3 years in the North, South and Central America region, 3 years in the Europe, the Middle East and Africa region, and 3 years in the Asia Pacific region, unless otherwise required by law. The term of your limited warranty period shall commence on the purchase date appearing on your purchase receipt. WD may at its discretion make extended warranties available for purchase. WD shall have no liability for any Product returned if WD determines that the Product was stolen from WD or that the asserted defect a) is not present, b) cannot reasonably be rectified because of damage occurring before WD receives the Product, or c) is attributable to misuse, improper installation, alteration (including removing or obliterating labels and opening or removing external enclosures, including the mounting frame, unless the product is on the list of limited user-serviceable products and the specific alteration is within the scope of the applicable instructions, as found at <http://support.wd.com>), accident or mishandling while in the possession of someone other than WD. Subject to the limitations specified above, your sole and exclusive warranty shall be, during the period of warranty specified above and at WD's option, the repair or replacement of the Product with an equivalent or better Product. The foregoing warranty of WD shall extend to repaired or replaced Products for the balance of the applicable period of the original warranty or ninety (90) days from the date of shipment of a repaired or replaced Product, whichever is longer. The foregoing limited warranty is WD's sole warranty and is applicable only to products sold as new. The remedies provided herein are in lieu of a) any and all other remedies and warranties, whether expressed, implied or statutory, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and b) any and all obligations and liabilities of WD for damages

including, but not limited to accidental, consequential, or special damages, or any financial loss, lost profits or expenses, or lost data arising out of or in connection with the purchase, use, or performance of the Product, even if WD has been advised of the possibility of such damages. In the United States, some states do not allow exclusion or limitations of incidental or consequential damages, so the limitations above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

GNU General Public License (“GPL”)

Firmware incorporated into this product may include third party copyrighted software licensed under the GPL or Lesser General Public License (“LGPL”) (collectively, “GPL Software”) and not Western Digital’s End User License Agreement. In accordance with the GPL, if applicable: 1) the source code for the GPL Software may be downloaded at no charge from <http://support.wd.com/download/gpl> or obtained on CD for a nominal charge from <http://support.wd.com/download/gpl> or by calling Customer Support within three years of the date of purchase; 2) you may re-use, re-distribute, and modify the GPL Software; 3) with respect solely to the GPL Software, no warranty is provided, to the extent permitted by applicable law; and 4) a copy of the GPL is included herewith, may be obtained at <http://www.gnu.org>, and may also be found at <http://support.wd.com/download/gpl>.

Modification of or tampering with the Software, including but not limited to any Open Source Software, is solely at your own risk. Western Digital is not responsible for any such modification or tampering. Western Digital will not support any product in which you have or have attempted to modify the Software supplied by Western Digital.

11

Appendix

Hardware Replacement Procedures
WD Sentinel RX4100 Administrator Reference Sheet

Hardware Replacement Procedures

Before You Begin
Installing the WD Sentinel Bezel
Replacing a Hard Drive
Removing the Unit Cover
Replacing the Internal Power Supply
Replacing a Server Fan
Replacing the Riser Card
Replacing the Mid-plane Card

This chapter provides the steps necessary to replace the following components designed for replacement for the WD Sentinel RX4100.

- Hard Drive
- Power Supply
- Fans
- Riser
- Midplane

The WD Sentinel is also designed to be easily mounted on a rack.

Before You Begin

- Ensure that you have the correct replacement unit.
- Review the procedures before beginning to replace a part.

Installing the WD Sentinel Bezel

The removable WD Sentinel bezel protects the unit's hard drive and power button from accidental use or removal. Use the following steps to install and remove the front bezel.

What you'll Need:

- WD Sentinel Bezel
- Bezel keys (2)

Installing the WD Sentinel Bezel

1. Insert the bezel keys into both locks on the front of the bezel, turning the keys clockwise to unlock the locks (Figure 1).

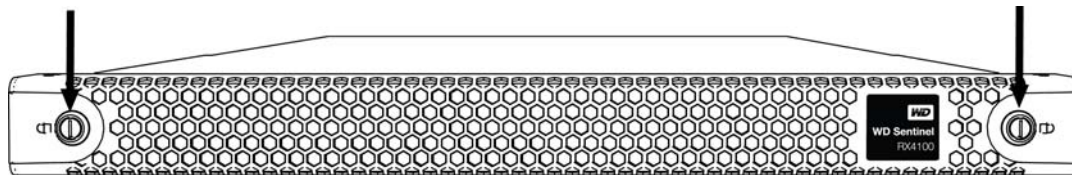


Figure 1. Bezel locks

2. Place the bezel over the bezel handles on the front of the unit.
3. Turn both keys counter clockwise to lock the bezel.
4. Remove both keys and place them in a safe location.

Replacing a Hard Drive

It is simple to replace a drive in your WD Sentinel server. First, make sure to go to the WD Store to purchase a compatible replacement drive. For a complete list of approved drive models, search for Answer ID 9443 in the WD Knowledge Base at <http://support.wd.com>.

The drives in the WD Sentinel server are “hot swappable.” This means that the WD Sentinel server can remain powered on while you replace the drive. Once you replace the drive, the WD Sentinel server automatically reconfigures the RAID. (See “Find compatible hard drives” on page 37.)

What you'll Need:

- Phillips screwdriver
- Replacement hard drive

Replacing a Hard Drive

Use the following steps to replace a drive in your WD Sentinel server.

1. Unlock and remove the front bezel, if installed.
2. For a failed drive, verify that the LED for the failed drive is solid red.
3. Push the drive button and unlatch the handle on the front of the hard drive ().

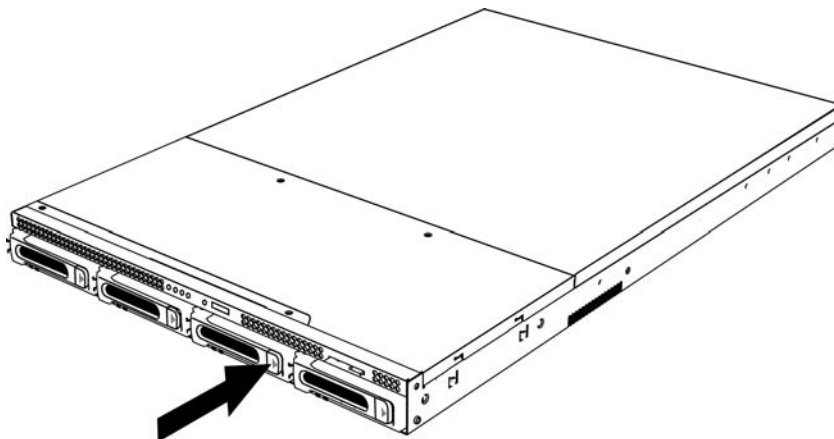


Figure 2. Drive tray button

4. Remove the drive tray (Figure 3).

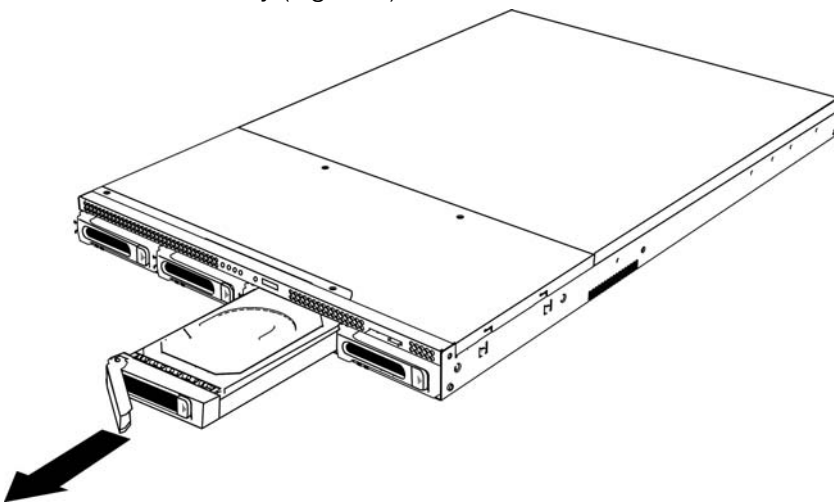


Figure 3. Remove drive tray

5. Remove the four (4) screws holding the drive to the drive tray.
6. Replace the failed drive with the approved replacement drive.
7. Replace the four (4) screws holding the drive to the drive tray.
8. Insert the drive tray into the server, snapping the drive tray handle shut.
9. The LED remains blue (static) until the rebuild is complete.

Removing the Unit Cover

Use the following steps to remove the cover on the WD Sentinel RX4100 device. These steps are necessary to replace certain internal parts.

Important: To avoid electrostatic discharge (ESD) problems, ground yourself by touching metal before handling the device.

To shut down your WD Sentinel server, follow the steps outlined in “Shutting Down the Server” on page 45.

What you'll Need:

- Phillips screwdriver

Removing the Unit Back Cover

1. Before getting started, shut down the server and disconnect all external connections.
2. Place the unit on a clean and stable surface, with the back of the unit facing you.
3. Release two (2) screws on the top of the unit and unscrew two (2) thumbscrews on the back of the unit.

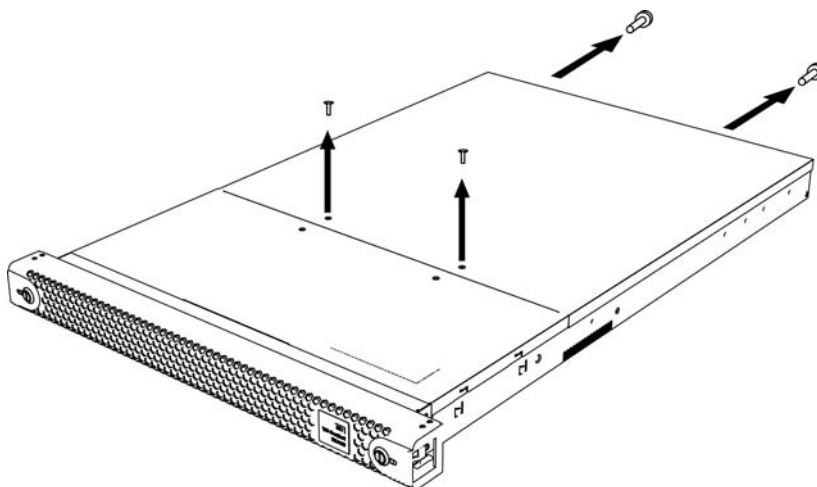


Figure 4. Remove and unscrew unit screws

4. Push the unit cover away from you to release the cover, then lift it away from the unit (Figure 5).

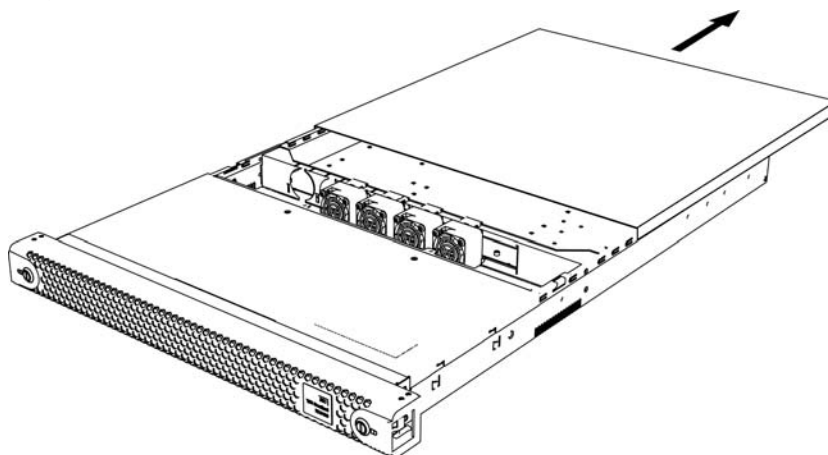


Figure 5. Remove unit cover

Removing the Unit Front Cover

1. Before getting started, shut down the server and disconnect all external connections.
2. Place the unit on a clean and stable surface, with the front of the unit facing you.
3. On the top of the unit, release the two (2) screws closest to you and two (2) screws toward the top middle of the unit (Figure 6).

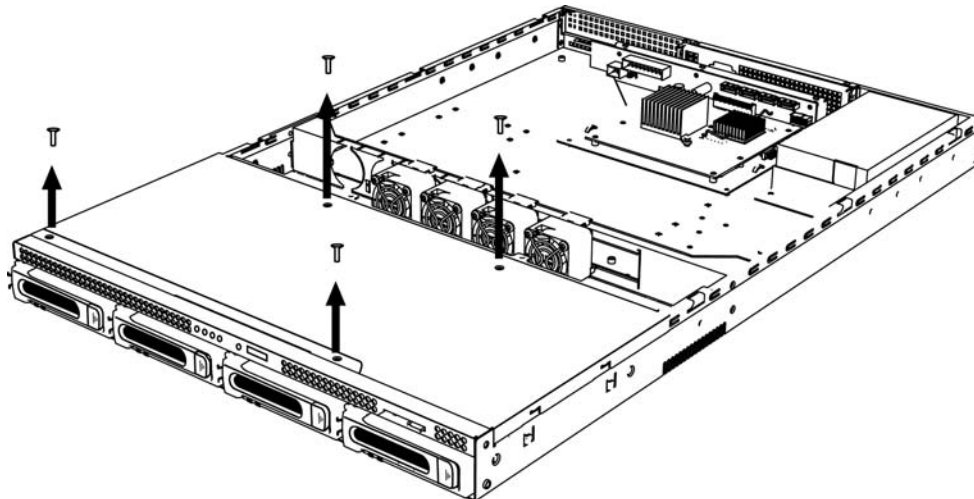


Figure 6. Remove unit front screws

4. Push the unit cover away from you to release the cover, then lift it away from the unit (Figure 7).

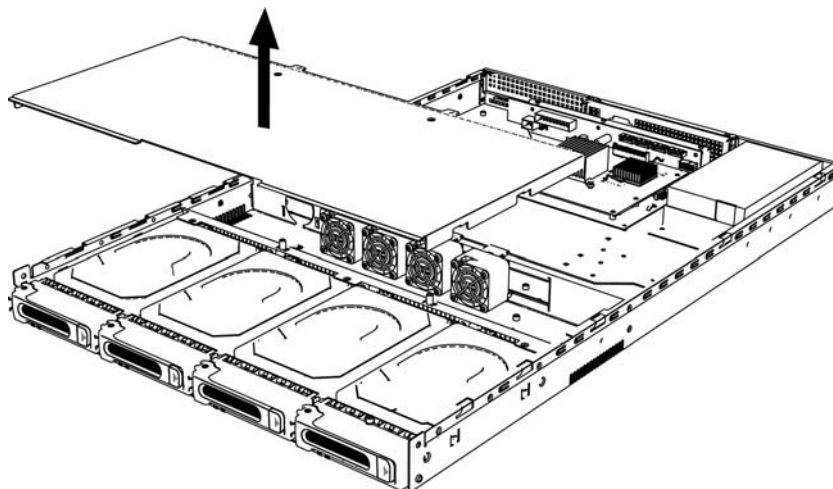


Figure 7. Remove unit front cover

Replacing the Internal Power Supply

When the internal power supply requires replacement, you will receive an e-mail Alert indicating that there is a problem.

The power supply in the WD Sentinel server is “cold swappable.” This means that the WD Sentinel server must be shut down prior to your power supply replacement. To shut down your WD Sentinel server, follow the steps outline in “Shutting Down the Server” on page 45.

What you’ll Need:

- Phillips screwdriver
- Replacement internal power supply

Replacing the Internal Power Supply

1. Shut down the server.
2. Disconnect all external connections, including the A/C power cord.
3. Follow the steps outlined in “Removing the Unit Cover” on page 98.
4. Locate the power supply in the right corner of the unit (Figure 8).

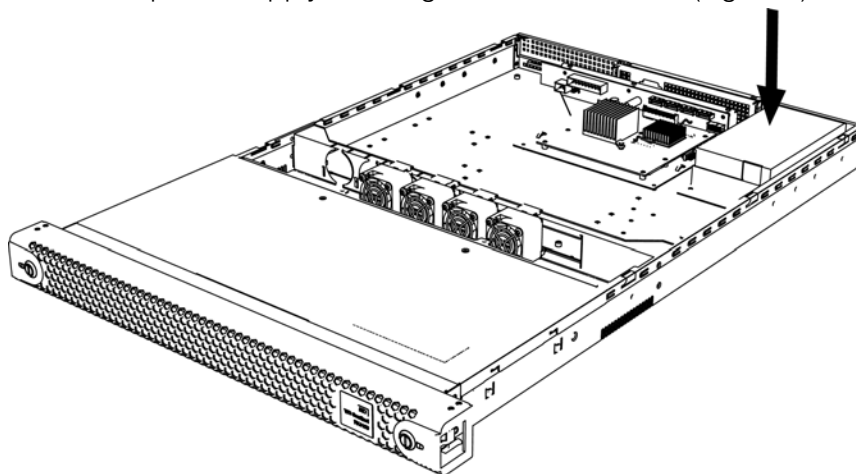


Figure 8. Locate power supply

5. Remove two (2) screws holding the power supply to the bottom of the unit (Figure 9).
6. On the back of the unit, remove two (2) screws holding the power supply in place (Figure 9).

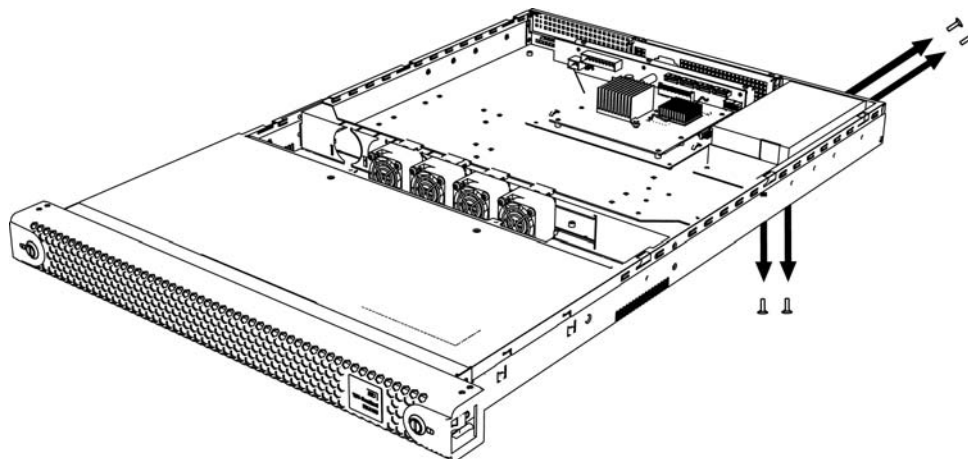


Figure 9. Remove bottom and back power supply screws

7. Gently lift the power supply out of the unit.
8. Insert the replacement power supply into the unit.
9. Insert and tighten the two (2) screws holding the power supply to the bottom of the unit.
10. On the back of the unit, insert and tighten the two (2) screws holding the power supply in place.
11. Reconnect the power cable to the server.
12. Replace the unit cover.
13. Connect the A/C power cord to the unit.
14. Restart the server.

Replacing a Server Fan

When a fan requires replacement, you will receive an e-mail Alert indicating that there is a problem with one of your WD Sentinel server fans.

The fans in the WD Sentinel server are “cold swappable.” This means that the WD Sentinel server must be shut down prior to your fan replacement. To shut down your WD Sentinel server, follow the steps outline in “Shutting Down the Server” on page 45.

What you’ll Need:

- Phillips screwdriver
- Replacement server fan

Replacing a Server Fan

1. Shut down the server.
2. Disconnect all external connections, keeping the power cord plugged in.
3. Follow the steps outlined in “Removing the Unit Cover” on page 98.
4. Locate the fan that needs to be replaced (Figure 10). An LED identifies the failed fan.

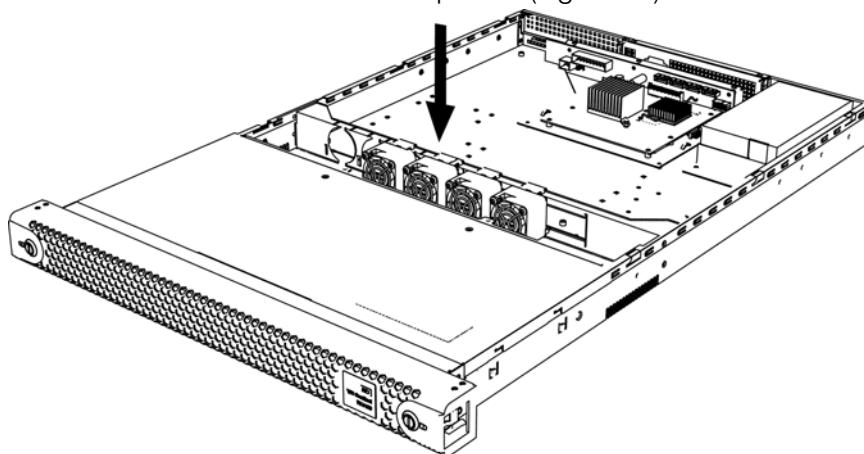


Figure 10. Locate fan

5. Carefully disconnect the fan interface connector and remove the fan from the unit (Figure 11).

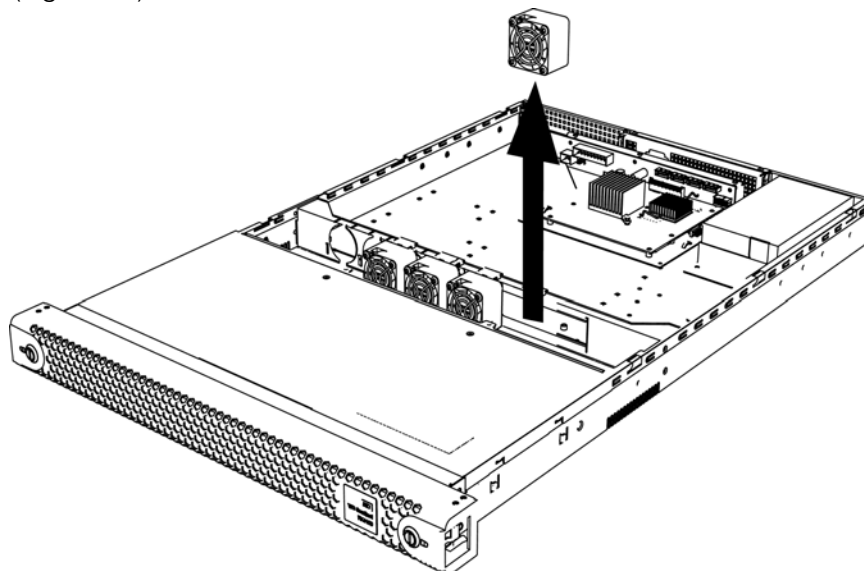


Figure 11. Remove fan

6. Gently place the replacement fan in the unit, ensuring that the orientation of the fan is correct.
7. Carefully connect the fan interface connector.
8. Replace the unit cover.
9. Connect all external connections.
10. Restart the server.

Replacing the Riser Card

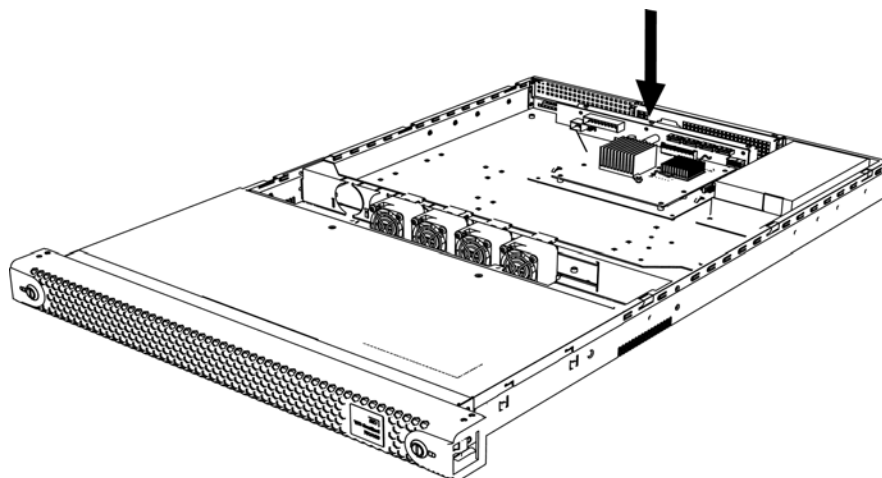
The riser card in the WD Sentinel server is “cold swappable.” This means that the WD Sentinel server must be shut down prior to your fan replacement. To shut down your WD Sentinel server, follow the steps outline in “Shutting Down the Server” on page 45.

What you'll Need:

- Phillips screwdriver
- Replacement riser card

Replacing a Riser Card

1. Shut down the server.
2. Disconnect all external connections.
3. Follow the steps outlined in “Removing the Unit Cover” on page 98.
4. Locate the riser card bracket within the unit and remove three (3) screws holding the bracket in place.



5. Carefully lift the riser card bracket up and away from the unit.
6. Remove three (3) screws holding the riser card bracket to the riser card.
7. Remove the riser card bracket and lay it aside.
8. With new riser card in hand, remove the connector cables from the old riser card and connect them to the same location on the new riser card.
9. Insert and tighten three (3) screws, attaching the riser card bracket to the new riser card.
10. Gently reattach the new riser card to the unit.
11. Insert and tighten three (3) screws attaching the riser card bracket to the unit.
12. Replace the unit cover.
13. Connect all external connections.
14. Restart the server.

Replacing the Mid-plane Card

The mid-plane in the WD Sentinel server is “cold swappable.” This means that the WD Sentinel server must be shut down prior to your fan replacement. To shut down your WD Sentinel server, follow the steps outline in “Shutting Down the Server” on page 45.

What you'll Need:

- Phillips screwdriver
- Replacement mid-plane card

Replacing a Mid-plane Card

1. Shut down the server.
2. Disconnect all external connections.
3. Remove all hard drives from the unit.
4. Follow the steps outlined in “Removing the Unit Front Cover” on page 99.
5. Locate the mid-plane within the unit (behind the drive trays) and remove two (2) screws holding the mid-plane to the base of the unit.
6. Remove the eight (8) screws holding the mid-plane to the mid-plane bracket.
7. Carefully pull the mid-plane away from the mid-plane bracket,

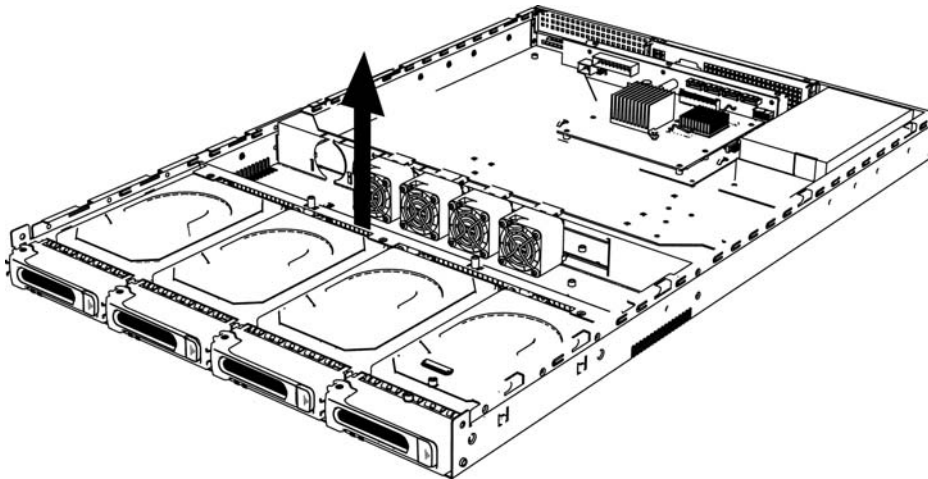


Figure 12.

8. With new mid-plane in hand, remove the connector cables from the old mid-plane and connect them to the same location on the new mid-plane.
9. Gently place the new mid-plane in place.
10. Insert and tighten eight (8) screws attaching the mid-plane bracket to the mid-plane.
11. Insert and tighten two (2) screws attaching the mid-plane to the unit.
12. Replace the unit cover.
13. Replace the hard drives.
14. Connect all external connections.
15. Restart the server.

WD Sentinel RX4100 Administrator Reference Sheet

Provided below is a reference sheet that allows you to keep all of the useful information associated with your WD Sentinel RX4100 server in one location. Enter the information identified below and keep this checklist in a safe location for future reference.

WD Sentinel RX4100 Server Name: _____

WD Sentinel RX4100 IP Address:

- Static IP Address: _____

- Dynamic IP Address: _____

WD Sentinel RX4100 Server Password: _____

User Name: _____

Domain Name: _____

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