Copyright Notice

Copyright © 2001, Quantum Corporation. All rights reserved. Information in this document is subject to change without notice and does not represent a commitment on the part of Quantum Corporation or any of its subsidiaries. The software described in this document is furnished under a license agreement. The software may be used only in accordance with the terms of the license agreement. It is against the law to copy the software on any medium. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose without the express written permission of Quantum Corporation.

Trademarks

Quantum and the Quantum logo are trademarks of Quantum Corporation, registered in the United States and other countries. Snap Server, Snap IP, Snap Assist and the Snap Server logo are trademarks of Snap Appliances, Inc., a wholly-owned subsidiary of Quantum Corporation. All other trademarks are the property of their respective owners.

All other trademarks are the property of their respective owners.

Revisions

Quantum and its subsidiaries reserve the right to revise this publication and to make changes in the content hereof without the obligation of Quantum Corporation or Snap Appliances, Inc. to notify any person of such revision or changes.
END USER LICENSE AGREEMENT (EULA) FOR USE OF SNAP SERVER AND RELATED INSTALLATION UTILITIES


USE OF THE SNAP SERVER OR THE INSTALLATION UTILITIES IMPLIES YOUR AGREEMENT TO THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT. BY USING THE INSTALLATION UTILITIES OR THE SNAP SERVER, YOU ARE ENTERING INTO A BINDING CONTRACT WITH QUANTUM CORPORATION. IF YOU DO NOT AGREE TO BE BOUND BY THESE TERMS AND CONDITIONS, YOU MAY NOT USE THE INSTALLATION UTILITIES, THE EMBEDDED SOFTWARE, OR THE SNAP SERVER AND SHOULD PROMPTLY RETURN THIS ENTIRE PACKAGE, INCLUDING THE INSTALLATION UTILITIES AND SNAP SERVER, TO THE PLACE WHERE YOU PURCHASED IT FOR A FULL REFUND.

1. Ownership and Copyright. The Snap Server Installation Utilities and Embedded Software are licensed, not sold, to you for use only as permitted by the terms and conditions of this Agreement. Quantum reserves any rights not expressly granted to you. Copying of the Software, unless specifically authorized in writing by Quantum, is prohibited by law. You may not use, copy, modify, sell, lease, sublease, or otherwise transfer the Installation Utilities or Embedded Software, or any copy or modification, in whole or in part, except as expressly provided in this Agreement.

2. License. You are given a non-exclusive license to use the Installation Utilities and Embedded Software in conjunction with a Snap Server, make one copy of the Installation Utilities for archival and backup purposes only, and/or transfer your Snap Server and copies of the Installation Utilities and the accompanying documentation to a third party provided that you provide Quantum written notice of the transfer within 30 days after the transfer date and you do not retain any copy of the transferred software. Any such transferee’s rights and obligations with respect to the transferred software and documentation are as set forth in this Agreement.

3. Reproduction of Proprietary Notices. Copies of the Installation Utilities must be labeled with the Quantum copyright notice and other proprietary legends found on the original media.

4. Protection of Trade Secrets. The Software contains trade secrets, and in order to protect them you may not decompile, reverse engineer, disassemble, or otherwise reduce the Installation Utilities or Embedded Software to a human perceivable form.

5. Termination. This license will automatically terminate without notice from Quantum if you fail to comply with any term or condition of this Agreement. You agree, upon termination, to return the Installation Utilities and the Snap Server, along with any backups or other copies in your possession.

6. Disclaimer of Warranties. THE INSTALLATION UTILITIES AND EMBEDDED SOFTWARE ARE LICENSED “AS IS” WITHOUT WARRANTY OF ANY KIND. QUANTUM HEREBY DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, RELATING TO THE INSTALLATION UTILITIES AND THE EMBEDDED SOFTWARE INCLUDING, WITHOUT LIMITATION, ANY IMPLIED
WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT.

7. Limitation of Liability. IN NO EVENT WILL QUANTUM’S LIABILITY UNDER THIS AGREEMENT EXCEED THE PRICE THAT YOU PAID FOR THE INSTALLATION UTILITIES AND EMBEDDED SOFTWARE. FURTHERMORE, IN NO EVENT WILL QUANTUM BE LIABLE FOR ANY LOST PROFITS, LOST DATA, COST OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, OR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, INDIRECT OR PUNITIVE DAMAGES ARISING OUT OF OR UNDER THIS AGREEMENT. The limitation of liability set forth in this paragraph will apply whether or not Quantum was advised of the possibility of the loss, liability or damages and notwithstanding any failure of essential purpose of any limited remedy. Since some states do not allow exclusions or limitations of liability for consequential or incidental damages, this provision may not apply to you.

8. Export Laws. The Installation Utilities and/or Embedded Software may require a license from the U.S. Government or other regulatory entities before it may be exported or reexported. You agree to ascertain necessary licensing procedures and obtain required licenses before exporting or reexporting either. You also agree to indemnify Quantum and assume all financial responsibility for any losses it may suffer if you do not comply with this paragraph.

9. Government End Users. The Installation Utilities, Embedded Software, and accompanying documentation are deemed to be “commercial computer software” and “commercial computer software documentation,” respectively, pursuant to DFAR Section 227.7202, Commercial Computer Software-Restricted Rights at 48 CFR 52.227-19, and FAR Section 12.212, and successor provisions thereof, as applicable. Any use modification, reproduction release, performance, display or disclosure of the Installation Utilities or Embedded Software and accompanying documentation by the U.S. Government shall be governed solely by the terms of this Agreement and shall be prohibited except as expressly permitted by the terms of this Agreement.

10. Waiver. No delay or failure of Quantum to exercise any right under this Agreement, nor any partial exercise thereof, shall be deemed to constitute a waiver of any rights granted hereunder or at law.

11. Unlawful Provision(s). If any provision of the Agreement is held to be unenforceable for any reason, all other provisions of this Agreement shall nevertheless be deemed valid and enforceable to the fullest extent possible.

12. Applicable Law. This Agreement will be governed by the laws of the State of California, without reference to its choice of law rules, and the United States, including U.S. Copyright laws.

13. Entire Agreement. This Agreement constitutes the sole and exclusive agreement between the parties concerning the subject matter hereof.

14. Contractor/Manufacturer. Quantum Corporation, 2001 Logic Drive, San Jose, CA 95124, USA.
Quantum Corporation’s Warranty for Snap Server

The Snap Server 1000, 2000, and 2200 are warranted against defects in material and workmanship for one year from the date of purchase by the original end user. The Snap Server 4100 and 12000 are warranted against defects in material and workmanship for three (3) years from the date of purchase by the original end user. Refurbished Snap Servers (1000, 2000, 2200, 4000, 4100, and 12000) are warranted for ninety (90) days from the date of purchase. If your Snap Server fails during the warranty period because of defects in materials or workmanship, Quantum Corporation will repair or replace it (at Quantum’s option) at no charge.

There are, of course, some limitations to this Warranty. First, you must be the original end user purchaser of the product and be able to provide proof of purchase showing the date and place of purchase if you submit a Warranty claim. Second, you must contact Quantum Corporation as indicated below, and upon request, ship the defective product to Quantum Corporation at your expense. Third, the product failure must not be the result of product abuse on your part, such as dropping the Snap Server, using incorrect electrical current, or getting the Snap Server wet. There are also some legal limitations to this Warranty:

EXCEPT AS SET FORTH ABOVE, WITH RESPECT TO THE SNAP SERVER AND THE ASSOCIATED SOFTWARE, QUANTUM CORPORATION AND SNAP APPLIANCES, INC. MAKE NO WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY AND DISCLAIMS ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL QUANTUM CORPORATION OR SNAP APPLIANCES, INC. BE LIABLE FOR THE COST OF PROCUREMENT OF SUBSTITUTE HARDWARE, SOFTWARE, OR SERVICES, LOST PROFITS, OR ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY ARISING IN ANY WAY OUT OF THIS AGREEMENT OR THE SNAP SERVER. THIS LIMITATION SHALL APPLY EVEN IF QUANTUM CORPORATION OR SNAP APPLIANCES, INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY PROVIDED HEREIN.

This Warranty will be governed in accordance with the laws of the State of California, without reference to its choice of law rules, and the United States of America.
FCC Notification

Authorized Service

Only an authorized service representative can service the Snap Server. Failure to comply with this requirement will void the warranty.

WARNING to Service Personnel

Danger of explosion if battery is incorrectly replaced on a Snap Server 2000, 2200, or 4100.

Replace with only the same or equivalent type recommended by the battery manufacturer. Dispose of used batteries according to the battery manufacturer’s instructions.

The Snap Server 2000 and 4100 have been tested and found to comply with the limits for a Class “A” digital device, pursuant to part 15 of the FCC Rules. The Snap Server 1000 and 2200 have 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 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 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 their own expense.

Changes or modifications not expressly approved by Quantum Corporation could void the user's authority to operate the equipment.
Obtaining Service for Your Snap Server

To obtain service or technical support for your Snap Server:

For service on your Snap Server, check our Web site at www.snapserver.com, email technical support at snapsupport@snapserver.com, or call 1.888.338.7627.
Table of Contents

Chapter 1  Introducing the Snap Server  - - - - - - - - - - - - 1
  How This Guide is Organized - - - - - - - - - - - - - - - - - 1
  Commands and Menus  - - - - - - - - - - - - - - - - - - - - - - - 2

Chapter 2  Installing the Snap Server on Your Network  3
  Connectors and Controls - - - - - - - - - - - - - - - - - - - - - - - 3
  Rack Installation (4100 Only) - - - - - - - - - - - - - - - - - - - - - 4
  Connecting Your Server to Your Network - - - - - - - - - - - - - - - - 4
  Turning On Your Snap Server - - - - - - - - - - - - - - - - - - - - - 4
  Turning Off Your Snap Server - - - - - - - - - - - - - - - - - - - - - 5
  Assigning a Network Address - - - - - - - - - - - - - - - - - - - - - 5
    Windows® Computers  - - - - - - - - - - - - - - - - - - - - - - - 5
    Macintosh® Computers - - - - - - - - - - - - - - - - - - - - - - - 6
  Technical Reference - - - - - - - - - - - - - - - - - - - - - - - - - 7

Chapter 3  Using Your Snap Server  - - - - - - - - - - - - - - 9
  Windows Users - - - - - - - - - - - - - - - - - - - - - - - - - - - - 10
    Windows 2000 or Me. - - - - - - - - - - - - - - - - - - - - - - - 10
    Windows 95, 98, or NT - - - - - - - - - - - - - - - - - - - - - - - 10
  Macintosh Users - - - - - - - - - - - - - - - - - - - - - - - - - - 11
  Connecting From the Web - - - - - - - - - - - - - - - - - - - - - 11
  Connecting From an NFS Mount (UNIX® systems only) - - - - - - - 12
  Connecting From an FTP Application - - - - - - - - - - - - - - - - 12

Chapter 4  Customizing Your Snap Server  - - - - - - - - - - - - 13
  Using Quick Configure - - - - - - - - - - - - - - - - - - - - - - - 13
  Changing the Disk Configuration - - - - - - - - - - - - - - - - - - - 13
  Setting Up Security - - - - - - - - - - - - - - - - - - - - - - - - - 15
Chapter 1

Introducing the Snap Server

The Snap Server can be customized to suit your needs. Use this administrator guide to make the most of your Snap Server.

How This Guide is Organized

This book is organized to provide a logical sequence of explanations where each chapter describes in detail the Snap Server’s capabilities.

- “Installing the Snap Server on Your Network” on page 3 shows you the basics of installing your Snap Server onto your network.
- “Using Your Snap Server” on page 9 explains how to connect to your network using all of the supported platforms.
- “Customizing Your Snap Server” on page 13 teaches you how to set up security and users, customizing your Snap Server.
- “Managing Your Snap Server” on page 23 further explains how to maintain and modify your Snap Server.
- “Troubleshooting Your Snap Server” on page 31 provides tips and tricks that do not appear in other chapters. These items will provide more information when things do not happen in the manner which you expect.

A complete index is available at the end of the guide to help you locate specific topics more quickly.

For more technical information, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.
**Commands and Menus**

Most of the commands and menus are the same for all Snap Servers. If a menu differs or if extra steps are required for a particular model, an icon appears, informing you to which Snap Server the information is relevant.

<table>
<thead>
<tr>
<th>If You See:</th>
<th>The Information Is Specific To:</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Snap Server 1000</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Snap Server 2200</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Snap Server 4100</td>
</tr>
</tbody>
</table>

Menu commands are shown in **bold** font, and text that you should type directly is shown in *non-proportional* font, usually shown on a separate line from other text. If something is a variable, for example, a server name where you should substitute the actual name of your server, it is shown in *italic*. 
Installing the Snap Server on Your Network

To install a Snap Server on your network, locate the connectors and controls, connect the Snap Server to your network, turn the server on, and assign the server an IP address.

Connectors and Controls

All Snap Servers have the following connectors and controls. These may be in different locations on the server, depending on the model.

1. Status lights  
2. Power button
3. Serial number label  
4. Network connector
5. Reset button  
6. Power connector

Note: The Snap Server 4100 also has rack mount ears for rack mount installation.

Snap Server 1000

Snap Server 2200

Snap Server 4100
Rack Installation (4100 Only)

You can install the Snap Server 4100 in a standard 19-inch rack.

1. Install the mounting brackets onto the server as shown using the black screws.

   It is important that you use the black screws, and double-check that the mounting brackets are securely connected to the unit. These brackets will hold the entire weight of the unit.

2. Carefully slide the server into a shelf space in the rack. Use the silver screws to secure the server in place on the rack.

If you choose not to install your server in a rack, you can place the Snap Server on a desktop or workstation.

1. Peel the five rubber feet off the backing sheet.

2. Attach the rubber feet onto the markings on the bottom of the unit.

   Warning: Do not put heavy objects on top of the mounted server.

Connecting Your Server to Your Network

You can connect your Snap Server to a 10BaseT or 100BaseTX network.

1. Connect the server to your network using the Ethernet cable provided.

2. Connect the provided AC power cord to your Snap Server, then connect the server to an AC wall outlet.

Turning On Your Snap Server

Snap Server 2200 - Press and hold down the power button until the System light turns on, then release the button and wait for the server to start up.

Other models - Press the power button until the System light blinks three times, then release the button and wait for the lights to turn on.

When the System light starts blinking at a steady rate (about once a second), the startup is complete.
**Turning Off Your Snap Server**

Press the power button until the System light blinks three times. Release the button and wait for the lights to turn off.

After you turn off the Snap Server, the lights remain lit while the server completes its shutdown. You must wait for all of the lights to turn off before you turn on the server again or disconnect it from the power source. The Snap Server should never take more than thirty seconds to shut down.

Snap Server 2200 Only - To avoid the possibility of data corruption, do not hold the power button down longer than three (3) seconds when powering the unit off.

**Note:** It is important to shut down your server properly to avoid the possibility of data corruption.

**Assigning a Network Address**

To configure the Snap Server and use it in some network environments, it must have an IP address. (An IP address is a network address and is required for TCP/IP.)

Your Snap Server can automatically obtain an IP address from a DHCP server. If your network assigns IP addresses automatically, skip to Chapter 3, “Using Your Snap Server” on page 9.

**Note:** Your Snap Server must be configured to use the same subnet as the NT domain controller if WINS is not in use on the network.

If your network does not assign IP addresses automatically, follow the procedure below for your computer type to assign one manually. You can also use these procedures to look up an automatically assigned address.

**Note:** To change the server’s IP address once it is assigned, use the Snap Server’s Web user interface.

Refer to the Technical Reference for additional information on TCP/IP topics. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.

**Windows® Computers**

To assign or look up an IP address on a Windows computer:

1. Load the Snap Server CD-ROM into your computer’s CD-ROM drive.

   On most computers **Assist** starts automatically when you load the CD-ROM. If it does not start, view the contents of the CD-ROM drive, then double-click the **Assist** program icon.
2. Select a server to install from the list of Snap Servers that Assist displays (it might take a few minutes for the server to appear on the list). To view an automatically assigned IP address, double-click the server name and read the address on the Details window. If no address is assigned, continue to step 3.

**Note:** Assist shows you the model type for each server found on the network. The icon for servers found mimics the outline of that model’s physical appearance.

3. Click Initial Setup or IP Address to begin the configuration. If these buttons are not visible, then the server you selected has already been configured with an IP address.

4. If the IP Address window is displayed, enter the desired IP address and click Apply. Otherwise, follow the instructions presented by the Initial Configuration Wizard: read the Welcome page, assign a server name and administrator password, set the date and time, and configure TCP/IP settings. For more information about any setting, click Help.

5. Finish the Initial Configuration Wizard by clicking Finish to apply your changes. This will also restart the Snap Server if necessary.

**Macintosh® Computers**

To assign or view an IP address on a Macintosh computer:

1. Load the Snap Server CD-ROM into the computer’s CD-ROM drive and double-click the Snap icon to display the Snap Server Selection window. A new window appears.

2. Double-click the SnapIP icon.

3. If you use zones with AppleTalk®, select the zone for the server you want to configure.

4. Select the Snap Server you want to configure, then click OK to display the TCP/IP Settings dialog box.

   If the TCP/IP settings are blank, you must assign the following settings appropriately for your network:
   
   - IP address of the Snap Server
   - Your network’s subnet mask
   - IP address of your network’s default gateway (router). If you do not want to assign a default gateway, enter 0 (a zero) in each field.

   If necessary, ask your Network Administrator for help in determining appropriate settings.

5. Click OK to assign the TCP/IP settings.
**Technical Reference**

You can always find more detailed information about your Snap Server in the Technical Reference. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.

You can also find more information in the online help. Both the main user interface and the Assist utility contain helpful information. To access the Web Administration online help, click the **Help** link. To access the Assist online help, click the **Documentation** button.
Once installed on your network, the Snap Server appears as a server with shared folder(s). You can use it to organize and store files in the same way that you use the folders on your local hard disk drive.

The default server name is **SNAP** followed by a series of digits based on your serial number. The actual number of digits depends on your server number; please check the serial number on your unit to confirm the default name.

This means that one server might have the default name **SNAP300020** while another might have the default name **SNAP30020**. For Novell® NetWare® users, the server name is **SNAPnnnNW**, where **nnn** is the serial number, regardless of the number of digits.

In general, you can use the following procedures to connect to the Snap Server. The remainder of this chapter describes these procedures in more detail.

<table>
<thead>
<tr>
<th><strong>To connect to the server using:</strong></th>
<th><strong>Do this:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft® Windows® 2000</td>
<td>Look for the server in <strong>My Network Places</strong>. If the default settings were not changed during installation, it will appear under <strong>WorkGroup</strong>.</td>
</tr>
<tr>
<td>Microsoft Windows Me™</td>
<td></td>
</tr>
<tr>
<td>Microsoft Windows 95/98/NT®</td>
<td>Look for the server in <strong>Network Neighborhood</strong>. If the default settings were not changed during installation, it will appear under <strong>WorkGroup</strong>.</td>
</tr>
<tr>
<td>Macintosh®</td>
<td>Connect to the server using the <strong>Chooser</strong>, <strong>Network Browser</strong>, or <strong>Connect to Server</strong>.</td>
</tr>
<tr>
<td>Web browser</td>
<td>Enter the server name or IP address in your Web browser’s location or address box.</td>
</tr>
<tr>
<td>NFS</td>
<td>Mount the desired share using the server name or IP address.</td>
</tr>
<tr>
<td>FTP</td>
<td>Enter the server name or IP address in your FTP client application.</td>
</tr>
</tbody>
</table>
Windows Users

Windows 2000 or Me

The Snap Server should automatically appear in **My Network Places** under **WorkGroup** if the default setup was accepted during installation. If it does not appear, follow the steps described here:

1. On the **Start** menu, click **Search** and then **For Files or Folders**.
2. In the **Search Results** window, select **Computers**.
3. In the **Search for Computers** dialog box, enter the server name and click **Search Now**.
4. Wait for the server to appear (you may need to try again after a few minutes if you have just turned on the server).
5. Double-click the Snap Server icon to see a folder that represents the network disk drive(s). (NetWare users also see a SYS volume.)

Windows 95, 98, or NT

The Snap Server should automatically appear in your Network Neighborhood under **WorkGroup** (if the default settings were used). If it does not, follow the steps described here:

1. On the **Start** menu, click **Find** and then **Computer**.
2. Enter the server name. (The default naming convention is described on page 9.)
3. Click **Find Now** and wait for the Snap Server to appear (you may need to try again after a few minutes if you just turned on the server).
4. Double-click the Snap Server icon to see a folder that represents the network disk drive(s). (NetWare users also see a SYS volume.)
Notes: If your Snap Server does not appear in the Browser, you should use the ping command to verify that the server is active. You can also use Assist to find the server.

Macintosh Users

To connect to the Snap Server:

1. Select the Network Browser, Chooser, or Connect to Server from the Apple menu. In the Chooser, click the AppleShare® icon.
2. If you use zones with AppleTalk®, select the default zone in the AppleTalk Zones® list.
3. Scroll through the list of servers in the Select a file server list and select your Snap Server, then click OK.
4. When asked for a user name or password, click GUEST, then click OK.
5. In the server dialog box, select SHARE1 on SNAPnnnnnn.
6. Click OK to mount the server on your desktop.

Connecting From the Web

By default, you can view folders and files on the Snap Server from the Web. To connect from a Web browser:

1. Type the server’s name or IP address in your browser’s Location or Address box.
2. Press Enter. This will connect you to the server’s Home page.

To browse the contents of the server, click the SHARE1 link. (Additional links appear if you add network shares, as described in “Defining Network Shares” on page 17.) If you restrict access to a network share, you must log in with the right privileges to browse the contents of the share.

Tip: If you plan to use your Snap Server as a Web server (hosting static Web content), you can customize the server’s Home page and change other Web-related settings. From the server’s Administration page, first click Network Settings and then click Web. The instructions are available through the Help link.
Connecting From an NFS Mount (UNIX® systems only)

To connect to the server using an NFS mount:

1. From a command line, type

   `mount server_name:/share_name/dir_path /local_mount`

   where `server_name` is the name or IP address of the server, `share_name` is the name of the share to which you want to mount, `dir_path` is the directory path, and `local_mount` is the name of the mount target directory.

   **Note:** There is a space inserted after the directory path.

2. Press Enter. You are now connected to the specified share on the server.

   For more details about working with UNIX NFS Networks, see “UNIX NFS Networks” on page 27.

Connecting From an FTP Application

To connect to the server using FTP:

1. Type the server’s name or IP address in your FTP program’s Location or Address box.

   To connect via a command line, type `ftp server_name`

   To connect via a Web browser, type `ftp://server_name`

   where `server_name` is the name or IP address of the server.

2. Press Enter. This connects you to the server’s FTP root directory. All shares and subdirectories will appear as links or folders.

   If you restrict access to a network share, you must log in with the right privileges to browse the contents of the share. You cannot manage files or folders in the FTP root directory.
Chapter 4

Customizing Your Snap Server

You can use your Snap Server in its default configuration, or you can customize its name, disk configuration, and other features.

By default, no security restrictions are in place for accessing the files and folders within a new Snap Server. Anyone who can connect to the Snap Server from your network or from the Internet can access any of the server’s files. If you are concerned about the security of your files, set up users and access restrictions.

Use a Web browser to enable security on your Snap Server and to perform other management functions. For detailed instructions, see the online Help.

You can always find more detailed information about your Snap Server in the Technical Reference. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.

Note: The first time you access the Snap Server from a Web browser, you are asked to select your preferred language.

Using Quick Configure

1. Start your browser and enter the server’s name or IP address in the Location or Address box. Press Enter to display the Snap Server Home page.

2. On the Home page, click Administration.

3. When asked to log in, enter Administrator as the user name and enter the Administrator password (leave the password blank if you have not changed it from its default).

4. On the Administration menu, click Quick Configure for the initial setup procedure.

5. Follow the Quick Configure’s instructions to customize the server. For more information about the settings on any page, click the Help link on that page.

6. When you complete the initial setup, click Finish to apply your changes, and if necessary, restart the server.

After you complete the Quick Configure process, you might want to return to the Administration menu to change the disk configuration or set up security. The remainder of this chapter describes how to do so.

Changing the Disk Configuration

Your Snap Server’s disk configuration was preset at the factory, and the default disk settings depend on the Snap Server. Make changes to the disk configuration before you
store any files on the server. Changing the configuration will erase all data stored on the disk drives.

**Snap Server 2200** - By default, the two disk drives on a Snap Server 2200 are combined into a single larger disk (or *disk array*). This configuration is called disk striping or RAID 0. When you connect to the server, you see a single disk. This configuration provides the best performance, but does not protect your data from disk failure.

You may want to configure your disks differently:

- You can configure each disk as an individual unit, which network users can access as an independent storage device.
- To protect your data from disk failure, you can use one disk to duplicate the data stored on the other disk. This configuration is called disk mirroring or RAID 1. In this configuration, if a disk fails, the remaining disk automatically takes over and the server continues operating without interruption or loss of data.

**Snap Server 4100** - By default, the four disk drives on a Snap Server 4100 are combined into one large, data-protected disk. This configuration is called RAID 5. The total capacity of the combined disks (known as a disk array) is equivalent to the capacity of three individual disks. The remaining disk space is used for data protection. If any single disk in the array fails, the array automatically recovers from the failure and the server continues operating without interruption or data loss.

According to your needs, you may want to configure your Snap Server disks differently:

- You can configure each disk as an individual unit, which network users can access as an independent storage device.
- You can combine any two to four disks to make a single larger disk that has no data protection. This configuration is called disk striping, or RAID 0. Disk striping is best suited for applications where maximum performance and highest capacity are more important than data protection.
- You can combine any two disks, using one disk to duplicate the data stored on the other. This configuration is called disk mirroring, or RAID 1. If either disk in the configuration fails, the other automatically takes over; the server continues operating without interruption or data loss. Disk mirroring sacrifices disk capacity, which is reduced by half, to provide a high level of data protection.
All models - To change disk settings, use the Disk Utilities menu from the Snap Server Administration menu.

Setting Up Security

Security restrictions control who can access the files and folders stored on the server.

The default configuration allows all users on your network full access to all disks on the server. If you have Web access enabled, this could include Internet users as well. If you intend to store sensitive data, define tighter security restrictions before putting it on the server.

If you want to enforce security, define users and user groups and identify which of these may access your Snap Server.

When planning how to enforce security at your location, consider the following Snap Server features:

- You do not need to define users and groups that are already known to a Microsoft network domain or to a Novell network bindery server. See “Defining Snap Server Users” on page 16.
- You can secure a share, an entire disk, selected folder, or individual files.
- You can control how much disk space a user can consume by assigning usage quotas.

To set up security on your server, use the settings on the Security menu. You access the Security menu from the Administration menu.

See the Technical Reference for additional information on security topics. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.
Defining Snap Server Users

Before you can give or deny access to a server, you need to identify the users. Your server allows you to define network users, Local Users, and User Groups.

Network Users

Network users are users whose information the server obtains from a Microsoft® domain or a Novell® network bindery server. These network services allow you to define users in a central location and use those definitions across your network. To access network user lists, click Security Guides on the Security menu, and then do one of the following:

- Click Using NT domain security to add Microsoft and Apple network users that are part of the domain. Read the initial screen, then click Next to continue. You are guided step-by-step to add desired users.
- Click Using the security from another Netware server to add Novell network users. Read the initial screen, then click Next to continue. You are guided step-by-step to add desired users.

You can find more information in the Technical Reference. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.

Local Users

Local Users are users whom you define on a specific server. All of their user information is stored on the server. If you must have other Snap Servers on your network, you must define a user on each server, or import users from one server to another using the Assist program on your Snap Server CD-ROM.

To define Local Users, click Users on the Security menu and then click New. You can use other buttons on this page to manage Local Users.

User Groups

You can define User Groups and you can also give or deny access to the entire group. If you have defined network users, any groups defined in the Microsoft domain service or Novell network bindery service are available for you to use on the server.

To define groups of Local Users, move to the Security menu, click Groups on the Users & Groups menu selection. Click New. You can use the other buttons on this page to manage local user groups.

Configuring Microsoft Domain Security

You can configure your server to take advantage of Microsoft NT domain security. In this configuration, you do not need to set up Microsoft (or Apple®) network users and groups that are already recognized by the domain.

For example, if user JohnD is a member of the domain, you do not need to create a Local User called JohnD in order to connect to the server using Microsoft (or Apple) networking.
When assigning access privileges, JohnD (along with all other domain users) appears in the list of available users.

You configure domain security from the Security menu by clicking Security Guides, then clicking Using NT domain security, and follow the instructions (click the Help link if you need more information).

You can configure the server to be part of a “resource” domain (which is where your server appears when browsing the network via Network Neighborhood or My Network Places) and a “security” domain (which is the domain that contains all your users and groups). These two domains could be one and the same (which is typically recommended for smaller networks) or separate (which may be better suited for larger networks).

If you configure your server to use separate domains, the “security” domain must be a domain “trusted” by the “resource” domain. In other words you will need to establish “trust relationships” between the two domains. (For information on configuring trust relationships, see the Windows NT Server or Windows 2000 Server documentation.)

As part of the configuration procedure, you must provide a user account (user name and password). This user account must belong to the security domain, but does not need any administration privileges. The account is used by the server to log in to the security domain and obtain information on users and groups.

After enabling domain security, domain users and groups show up when you assign access rights to network shares. However, domain users and groups do not appear in configuration pages which are used to manage local Snap Server users and groups.

If a user is already part of the domain, do not create a Snap Server local account with the same name and password. This can cause confusion when assigning access rights to network shares.

If you have a large domain (more than 2000 users or groups), the server cannot automatically download the entire list of users (or groups) from the Primary Domain Controller (PDC). You can work around this problem by checking Import user/group list from large security domain in the Large User/Group List tab in Assist’s Advanced window. This function downloads the full list of users/groups into the server. (The workstation running Assist must be part of the same resource domain as the Snap Server. If you are using separate “resource” and “security” domains, trust relationships need to be established between the two.)

Checking Import user/group list from large security domain prevents the Snap Server from downloading the list of domain users/groups automatically. As a result, if the list has changed since you last imported it, you need to “Refresh” it from the Large User/Group List tab in Assist.

**Assigning User Access to Network Shares**

Network shares are virtual folders that map to an actual directory on the server. They are equivalent to Apple networking shared folders, Novell networking volumes, and NFS exported file systems. Unlike standard NetWare or AppleShare servers, it is possible to share folders contained in a folder that is already shared.

Snap Servers are configured at the factory with one share for each disk drive or disk array. (For more information on disk configurations for models with multiple disks, see “Changing
the Disk Configuration” on page 13 and “Configuring Microsoft Domain Security” on page 16.) You can create additional shares that represent an entire disk or a folder within a disk.

You can also assign users or groups access permissions (full access, read only, or access denied) to shares. These access permissions apply to all files and folders accessible through the share.

To assign access permissions, click Security Guides on the Security menu and then click Give or deny users access to an entire disk or Give or deny users access to a folder on a disk. Follow the instructions to select (or create) a share and then give or deny access to that share.

When restricting access to a share, consider the following:

- If you leave a share configured with full access to EVERYONE, all users (except those who are denied access to the share) can still read and write files and folders accessible through the network share.
- Security changes made to Snap Server network shares may not take effect until users log off and back on. Restart the Snap Server if you absolutely need security changes to be effective immediately.
- Denying access to a share overrides any access granted to a user or group.
- If your network has over 1000 user and group names, the users may be displayed as a range, for example [USR_1000..USR_2000]. Select Expand Range to see all of the users within the selected range.

### Assigning Users Access to Files and Folders

If desired, you can assign the following access permissions to specific files and folders on your Snap Server:

<table>
<thead>
<tr>
<th>Access</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Access</td>
<td>User/group is denied access to the file/folder.</td>
</tr>
<tr>
<td>Read</td>
<td>User/group can only read the contents of the files or folders.</td>
</tr>
<tr>
<td>Add</td>
<td>User/group can create files and folders but not read or modify them.</td>
</tr>
<tr>
<td>Write</td>
<td>User/group can create files but not read them.</td>
</tr>
<tr>
<td>Add &amp; Read</td>
<td>User/group can create and read the files and folders but not modify them.</td>
</tr>
<tr>
<td>Read &amp; Write</td>
<td>User/group can read and write files but not delete them.</td>
</tr>
<tr>
<td>Change</td>
<td>User/group can create, read, modify and delete files and folders, but cannot change the access rights.</td>
</tr>
<tr>
<td>Full Control</td>
<td>User/group has full access privileges.</td>
</tr>
</tbody>
</table>
For example, you may have a network share open for full access by EVERYONE. You can prevent certain files (or folders) from being overwritten by changing their access rights from “Full Control” to “Read.” You can also control access to individual files (or folders) by adding users (or groups) with specific rights to the list of who can access the files (or folders).

To assign access permissions:

1. Click **File/Folder Security** on the **Security** menu. The server displays a list of network shares that you have defined.

2. Browse the contents of the shares to locate files or folders you want to secure.

3. To view and/or modify the security settings for a file or folder, click the corresponding security icon (it looks like a key).

4. Select users and groups you wish to add, pick the appropriate security level, and click **Add** to add them to the security list. To change the access permissions for a user (or group), remove the user (or group) from the list, then add it back with the correct settings.

5. When assigning access rights to a folder, you can click **Apply this folder’s security to all sub-files and folders** to propagate the access rights for the folder to all files and folders it contains.

If your network has over 1000 user and group names, the users may be displayed as a range, for example [USR_1000..USR_2000]. Select **Expand Range** to see all of the users within the selected range.

The access permissions you assign to specific files and folders work in conjunction to access permissions you assign to a network share. When share access rights for a user or group differ for a file or folder in the share, the most restrictive access right is enforced.

*For example, you may have a network share where you have denied access to GUEST. GUEST cannot access this share regardless of access permissions assigned to individual files. You may also have a network share where the group Sales has read only access. Members of Sales cannot modify files they access through this share even if these are configured for “Full Control” by EVERYONE.*
Assigning File Ownership

The person who creates a file owns that file. Owners always have full access to their own files, regardless of Access settings. File ownership information is also used to calculate disk space usage for disk quotas. For better file control you can change file ownership.

For example, a file may exist on the server that was created by one person or a third party, but afterwards the project for which the file was created is transferred to a new employee. You then want to transfer file ownership to the new person.

1. Click **File/Folder Security** on the **Security** menu. Select **Set File/Folder Security**. The server displays a list of network shares that you have defined.
2. Browse the contents of the shares to locate files or folders you want to secure.
3. To view and/or modify the security settings for a file or folder, click the corresponding ownership icon (it looks like a face).
4. Select the person to whom you want to assign ownership of the file, then click **Set Owner**. To apply ownership to an entire folder or subfolder, click **Apply this folder’s ownership to all files and subfolders**.

If your network has over 1000 user and group names, the users may be displayed as a range, for example [USR_1000..USR_2000]. Select **Expand Range** to see all of the users within the selected range.

Assigning Disk Usage Quotas

If desired, you can control how much disk storage space a user can consume on the Snap Server.

For example, you may want to prevent some of your users from consuming more than 100 MB of disk space each, while allowing other users to operate without any restrictions.

To assign disk usage quotas:

1. Click **Disk Quotas** on the **Security** menu and then click **Modify/View Disk Quotas**. The server displays a list of users along with their current disk space allocation and consumption. Disk Quotas must be enabled in order to set quotas for users.
2. Click on a user name to change the disk quotas for that user.

If you have enabled the Snap Server email notification feature, the server informs you whenever users fills up their available disk space.

If your network has over 1000 user and group names, the users may be displayed as a range, for example [USR_1000..USR_2000]. Select **Expand Range** to see all of the users within the selected range.

Quotas use file ownership to calculate disk space consumed per user. In some cases, it may be desirable to change file ownership in order to fairly distribute disk usage.
Accessing the Server With GUEST Privileges

By default, a Snap Server has a predefined local user named GUEST that allows anyone to use the Snap Server. If a user tries to access the Snap Server and is not recognized, then that user is identified as GUEST and has whatever access privileges that have been allowed to GUEST. This is equivalent to using an anonymous login to access those shares made available to GUEST. Depending on the level of security you require, you may want to restrict GUEST privileges when accessing some (or all) network shares.

How Users Can Auto-Connect with GUEST Privileges

When a user tries to connect with a name that is not recognized as a local user, the Snap Server checks to see if network users are enabled. If so, it lets the NT domain (or external NetWare server) decide what to do. If network users are not enabled, the Snap Server auto-connects the user as GUEST.

For example, assume that your Snap Server still has its default security settings. If user JaneD tries to connect to the server, she is allowed in with GUEST privileges. In other words, she is listed as JaneD in the server’s active user lists, but is treated as if she were GUEST when accessing information on the server. Since, by default, EVERYONE has full access to the server, JaneD has full access to all Snap Server files and folders.

If you configure JaneD as a local user (or use a pre-defined user account, such as Administrator), JaneD (or Administrator) is only allowed to connect to the server by supplying the correct password. However, once connected, JaneD and Administrator have their own user identity. As a result, these users may be allowed access to files or folders that are denied to GUEST.

If you now enable NT domain security (for both Microsoft and Apple network users), the server behaves differently depending on which network protocol is used to connect.

For example, user JohnD (who is not configured as a local user) tries to connect from a Macintosh, the Snap Server lets the domain decide if he is allowed access. However, if JohnD is using a Web browser, the Snap Server auto-connects him with GUEST privileges (because the Web is not enabled for domain security).

Security Tips For GUEST Users

If you are not comfortable with the “auto-connect” feature, simply delete the GUEST account or assign a password to it. If you decide to leave the GUEST account unchanged, consider the following:

- Change access restrictions for Share1. In most cases, you should only allow network administrators to access this share. (Delete “EVERYONE” from the access list and add the local group “Admin” instead.)
- For a small set of users, enter these as local users. When restricting access to a network share, allow full access to EVERYONE but deny access to GUEST. All local users, except GUEST, now have full access to the share.
Managing Your Snap Server

If you are the administrator of a Snap Server, you can use your Web browser to connect to the server and perform administrative tasks such as checking who is using the server, checking the disk status, and changing configuration options. This chapter gives you a brief introduction to these administrative tools. It also covers special concerns for backing up the data stored on your Snap Server and using the Snap Server in different network environments.

Language Support For File And Folder Names

Documents saved on a Snap Server may be written in any language that the client operating system supports. File and folder name support is provided only for languages that are compatible with one or both of Primary Code Pages 437 (US English, Indonesian) or 850 (Western Europe including Afrikaans, Basque, Catalan, Danish, Dutch, English, Finnish, French (excluding Canadian), German, Italian, Norwegian, Spanish and Swedish) and Secondary Code Page 865.

Use of file and folder names in languages not listed above may not be fully supported. Thus, files and folders may be impossible to open or delete if named using unique characters in unsupported code pages. Cyrillic characters are an example of characters not supported for use in file or folder names.

For details about language support and code pages, see the Technical Reference or visit www.snapserver.com.
Using the Home Page

To display the Snap Server Home page, start your Web browser, enter the server’s name or IP address in the Address or Location box, and press Enter or Return.

On the Home page, you can:

- Click a share icon to access the folders and files within that share.
- Click the Active Users link to see who is currently using the server.
- Click the Change Password link to change the password for a local user. (Local users are described in “Defining Snap Server Users” on page 16.)
- Click the Administration link to display the Administration menu where you can access additional server management features.

Using the Administration Menu

From the Administration menu you can:

- Click Quick Configure if you would like step-by-step instructions that help you customize your server by changing basic configuration settings from their factory defaults. (See “Using Quick Configure” on page 13.)
- Click Server Settings, Network Settings, Security, or Disk Utilities to review your server’s configuration settings, make configuration changes as needed, and monitor your server’s operation.

For example, you can use Disk Utilities to check a disk or change its description.

- View information about users (click Active Users), files (click Open Files), and the server log (click Server Log).

To learn more about the links and buttons on the Administration menu, click Help at the top of the page.
Backing Up the Snap Server

You should back up files stored on the Snap Server in the same manner that you back up any other file server. You can use any of several commercial backup programs to copy the data stored on your server to backup media such as tape, another disk drive, another Snap Server, or CD-ROM. Most backup programs store the data in a special format and include a restore function for retrieving files from backups.

Some special considerations for backing up from different operating systems are detailed in this section.

Windows® Systems

The Snap Server is compatible with all major backup software for Microsoft Windows NT and Microsoft Windows 2000 servers.

Macintosh® Systems

To back up data on your Snap Server from a Macintosh computer, you must first mount the appropriate network shares (volumes) on the desktop. Doing so allows Macintosh backup programs to operate without a remote agent running on the Snap Server.

Novell® Networking Systems

You can back up a Snap Server using applications that are compatible with the Novell SMS (Storage Management System) and TSA (Target Service Agent) protocols. Supported network backup programs include Computer Associates® ARCserveIT™ and Veritas Backup Exec™ for NetWare.

When using Novell-based networking backup applications with a Snap Server, you need to be aware of the following issues:

- If the Snap Server does not appear on the list of servers available for backup, you may need to reconfigure the backup software to recognize the server. With some software packages, the only way to do this is to reinstall the backup program.
- Some backup applications do not operate if your server supports more users than allowed by your backup software license. By default, the Snap Server is configured for 250 Novell networking users; you may need to reduce this number to match your license restrictions.

For example, if you purchased a 25-user version of Computer Associates ARCserveIT, you need to change the number of Novell networking users to 25 or fewer. (From the Novell Networking page, click Advanced, then change the Number of user licenses. This setting has no effect on other networking environments.)

- The Snap Server does not currently support data compression. Therefore, you cannot back up data from a NetWare 4.x or 5.x volume with data compression enabled and restore it to a Snap Server. (Compressed files are restored as zero length files to the Snap Server volume.) If you want to transfer your data to a Snap Server, you must decompress it on the NetWare server before you perform the backup.
For more detailed information about your Snap Server see the Technical Reference. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.

**UNIX® Systems**

You can back up your Snap Server using UNIX backup applications, such as `tar` and `cpio`. However, you must use backup software that supports remote volumes without requiring remote system agent support.

**Tips for Specific Network Environments**

This section contains additional tips for using your Snap Server in specific network environments. See the Technical Reference for additional information on this topic. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.

**Apple® Networks**

The server operates like an AppleShare® 6.0 file server. The interoperability with Windows clients is equivalent to that of a Windows NT 4.0 server with Services for Macintosh enabled.

If you use Microsoft networking, you can enable domain support for Apple networking users by configuring the Snap Server to use Microsoft domain security (see “Defining Snap Server Users” on page 16). In this configuration, you do not need to set up Apple networking users (and groups) as local Snap Server users.

Security settings for folders cannot be changed from a user computer using native Macintosh tools; any changes made will have no effect.

The Snap Server supports cross-platform access to application-specific files, thus allowing Macintosh-based and Windows-based applications to interoperate transparently. The Snap Server keeps the resource forks in a hidden folder. To maintain compatibility with Apple programs, it is best to copy, delete, or move these shared files using a Macintosh computer. (If working on a Windows computer, copy, delete, or move the entire folder containing the shared files.)

**Microsoft Networks**

The Snap Server operates like a Microsoft Windows NT 4.0 file server.

By default, the Snap Server is configured as part of WorkGroup. You can reconfigure the server for a different workgroup or domain through Quick Configure or Network Settings (see “Using the Administration Menu” on page 24).

If you configure your Snap Server to use Microsoft domain security (as described in “Configuring Microsoft Domain Security” on page 16), you do not need to set up all your network users as local Snap Server users.
**Novell Networks**

The Snap Server operates in a manner similar to a Novell NetWare 3.12 file server.

The Snap Server is preconfigured to operate with other NetWare servers on a Novell network. If you want to use the Snap Server as the only server for a network of Windows computers, use Microsoft networking instead.

You can link the Snap Server security to that of another NetWare server, meaning that all of the users (and groups) on the existing NetWare server are automatically accepted as remote users (or groups). (See “Defining Snap Server Users” on page 16.) The external NetWare server used for this purpose must be a 3.x server or have both bindery emulation and IPX support enabled. (NDS users can take advantage of this feature to connect to the Snap Server using bindery authentication.)

A network share on a Snap Server is equivalent to a volume on a NetWare server.

**UNIX NFS Networks**

The Snap Server supports version 2.0 and 3.0 of the NFS protocol. The Snap Server preserves the case of file names but is case insensitive when comparing file names. Therefore, the server cannot have two files with the same name.

For example, a file saved as “FOOD”, another saved as “Food”, and a third saved as “food” are considered the same file to the server.

A network share on a Snap Server is equivalent to an exported file system on an NFS server. NFS users can mount Snap Server shares and access their content directly or mount a subdirectory of a share. They can use dynamic mounting (with auto-mount) or static mounting (with automatic remount when the server restarts after being shut down). To perform a static mount, you must be logged into your UNIX system as root. Mount a Snap Server exported file system with the following commands:

```
mount snap_server:/share_name/mnt /local_dir
```

where `snap_server` is the Snap Server name or IP address, `share_name` is the name of the exported file system, `mnt` is a subdirectory of the share (not required), and `local_dir` is the local directory to which the file system is mounted. Note the space inserted after the mount name. Below are two examples of a mount:

```
mount snap30286:/share1/mnt /workdir
or
mount 192.168.1.1:/share1/mnt /workdir
```

The Snap Server uses mount points (network shares) to control access. Files and directories (folders) accessible through the mount point have the access rights of the network share combined with any file and folder security.

You can configure Snap Server users and grant them rights for selected network shares. (Snap Server user names, such as root and GUEST, are not case-sensitive.) You can then associate user accounts from one or more UNIX systems to a Snap Server user.

To configure NFS users first click **Users** on the **Security** menu and then click **New** to create a new, local user. (For more information about local users, see “Defining Snap Server Users”
Operating the Snap Server as a Web Server

In addition to providing administration functions through the Web, the Snap Server can also operate as a Web server, providing Web access to files and folders.

The Snap Server supports direct read-only Web access to its files using the HTTP 1.0 protocol. The Snap Server is not intended for use as a general-purpose Web server, as it does not support PERL or Java scripting, animations, streaming video, or anything that would require a special application or service running on the server.

To access a Snap Server share (see “Defining Snap Server Users” on page 16), enter the following address in a Web browser’s Address or Location box:

http://snap_server/share_name

where snap_server is the Snap Server’s name or IP address and share_name is the name of the share. Your share should look similar to the ones below.

http://snap30286/share1
or
http://192.168.1.1/share1

By default, when you connect to a share from the Web, you see a list of files and folders contained in that share. How your browser displays a file depends on the file type and browser settings. To set up a Web “home” page for a share, create an HTML file named index.html and store it in the root of the share.

You can enable or disable Web access to network shares. From the Administration menu, click Network Settings, Web, and then Enable or Disable Web. When Web access is disabled, only administrators can access shares from the Web. When Web access is enabled, access is based on the security settings you defined. See “Setting Up Security” on page 15.

Tip: You can use the Web settings to customize the server’s Home page.

Operating the Snap Server as an FTP Server

Your Snap Server can also be used as an FTP server, allowing users to access the server’s files and directories via FTP clients.

To access a Snap Server share (see “Defining Snap Server Users” on page 16), enter the following address in a Web browser’s or FTP program’s Address or Location box:

ftp://snap_server/share_name

where snap_server is the Snap Server’s name or IP address and share_name is the desired share. It should look similar to the examples below.
ftp://snap30123/share1
or
ftp://192.168.1.1/share1
You now have standard FTP access to all files and directories within the share.

You can enable or disable FTP access to network shares. From the Administration menu, click Network Settings, FTP, and then Enable FTP Server. When FTP access is enabled, access is based on the security settings you defined. See “Setting Up Security” on page 15.

**Managing the Snap Server with SNMP**

Your Snap Server can be managed using SNMP.

To disable SNMP access:

1. Go to the server’s Home page and open the Administration menu.

2. Select Network Settings and then select SNMP.

3. Disable the SNMP access.
Troubleshooting Your Snap Server

This chapter contains answers to several frequently asked questions. For more troubleshooting tips, visit the Snap Server Web site at www.snapserver.com or refer to the Technical Reference. To access this document, use your Web browser to open the ReadMeFirst.html file on the Snap Server CD-ROM.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can I use standard UNIX® file security on my Snap Server?</td>
<td>Yes. The 3.0 release supports standard UNIX-type file security. For details, check the Technical Reference.</td>
</tr>
<tr>
<td>Do Snap Servers support Novell® NetWare® 5 TCP/IP-only clients?</td>
<td>Your Snap Server only supports Novell networking clients that use IPX. There are two possible workarounds for this limitation:</td>
</tr>
<tr>
<td></td>
<td>• Install the Microsoft Networking Client and its version of TCP⁄ IP.</td>
</tr>
<tr>
<td></td>
<td>• Install a NetWare client that supports IPX communications.</td>
</tr>
<tr>
<td>Can I use a third-party utility to defragment Snap Server hard disks?</td>
<td>Snap Servers use a variation of the Fast File System (FFS) which is highly efficient in preventing file fragmentation when hard disks are not filled to greater than 90% of their capacity. We recommend that you leave 10% of the disk capacity as free space so the file system can handle defragmenting in the most efficient way possible.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| How can I back up a Snap Server?             | The Snap Server can be backed up over the network from a workstation or remote server with a backup device such as a tape drive or hard drive connected to the workstation or remote server. Quantum has tested the most popular server backup applications. Products that are known to work include:  
  - Windows NT, Windows 95, Windows 98, or Windows 2000 Native Backup  
  - Computer Associates ARCserve® IT™ (Windows NT and NetWare versions)  
  - Veritas Backup Exec™ (Windows NT, Windows 95, and NetWare versions)  
  - Dantz™ Retrospect™ (Macintosh)  
  See “Backing Up the Snap Server” on page 25 for details. |
<p>| How can I back up my system settings?        | On the Save Configuration page, accessible from Setup Settings, you can enable saving your system settings to a file in the OS_Private folder in the root of the file system. You can perform this operation manually or set up automatic periodic saves. Select the frequency of saves. Make sure that your backup process includes the OS_Private folder. |
| How do I grant complete access to a few users on my network, but not others? | The simplest way is to use the browser-based security setup screen to enter the user names of the people you want to allow access to the Snap Server. Then either remove or password-protect the GUEST user account. Users defined in the Snap Server’s security automatically become members of the EVERYONE group, which is granted complete access to all shares in the default configuration. By disabling or password protecting the GUEST account, you prevent connection by any user not defined to the Snap Server’s security. |</p>
<table>
<thead>
<tr>
<th>Question: Why do I get “Access Denied” messages after configuring Microsoft Domain Security?</th>
<th>Answer: The Snap Server authenticates the users as local Snap Server users first, before authenticating through the NT Domain. However, the NT Domain users/groups are typically the ones who have been granted access to the shares. Decide whether to use the Microsoft Domain security (recommended) or the native Snap Server security, but do not combine the two. It is acceptable to leave the default local users (GUEST, root, Supervisor, and Administrator) and the default local groups: (EVERYONE and Admin), but do not add duplicate users and groups of those that are found on the domain controller.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question: How do I reset my server to factory defaults?</td>
<td>Answer: Connect to your server and select Administration, then Server Settings. Click Factory Defaults. Select Reset IP Address only, Reset IP Address and Network Settings, Reset IP Address, Network Settings, and Shares, or Reset IP Address, Network Settings, Shares, and File/Folder Security. Select the desired settings and click OK to restore default settings.</td>
</tr>
</tbody>
</table>
How do I reset Snap Server settings if I cannot connect to it?

Resetting the Snap Server to its factory default settings does not change the existing disk configuration or erase any data stored on your disks.

To reset the server:

1. Turn the Snap Server off (as described on 5) and wait for all of the lights to turn off.
2. Press and hold down the Reset button. While you are still pressing Reset, turn the Snap Server back on; wait until both the System and Disk lights start flashing in sync. (To press the Reset button, push a pencil point or similar object into the reset button.)
3. Release the Reset button.
4. To select the settings you want to clear and reset, briefly press the Reset button:
   - Once to clear the server’s IP address.
   - Twice to clear the Administrator password.
   - Three times to clear the server’s network settings.
   - Four times to clear all system settings.
5. Watch the Disk light and verify that the number of times it flashes corresponds to the number of times you pressed the Reset button. For example, if you pressed Reset three times to clear the network settings, the Disk light should flash three times repeatedly to confirm the reset. If the number of flashes exceeds the number you intended, repeat steps 4 and 5 of this procedure.
6. When the light confirms the level of reset you intended, press and hold down the Reset button until both the System and Disk lights turn off, and then release the Reset button. The server then restarts, and resets the settings you cleared to the factory defaults.

Why does Windows sometimes inaccurately report free space?

Some Windows clients are unable to recognize free disk space in excess of 2GB. This problem only affects the display, it does not affect the available space or your ability to use it. Use a Web browser to determine how much free space is actually available. See “Using the Administration Menu” on page 24.
Question: Why do I get “File is in use” errors in my AutoCAD users report?

Answer: AutoCAD users on Microsoft networks sometimes get an inaccurate error message indicating that a file is in use when this is not the case. This is due to the Microsoft Network client, and is not specific to the Snap Server. A patch to correct this problem is available.

**Snap Server Web Resources**

For more information on your Snap Server, visit our Web site at www.snapserver.com.
**Numerics**

100Base-TX 4
10Base-T 4

**A**

Access Denied 33
access levels 18
Active Users 24
Administration menu 13, 24
animations 28
Apple
  Apple menu 11
  Apple network tips 17
  AppleShare 26
  AppleShare server compatibility 17
  AppleTalk 6
AppleShare icon 11
AppleTalk Zones 11
ARCserveIT 25, 32
array 14
assigning a network address 5-6
assigning permissions 19
Assist 5, 6
AutoCAD 35
auto-mount 27

**B**

backing up the server 25
backup applications 32
backup, UNIX 26
bindery authentication 27
brackets, mounting 4

**C**

change access 18
change password 24
Chooser (Macintosh) 9
code pages 23
compatibility
  Windows and Macintosh programs 26
configuration, disk 13

**D**

Dantz Retrospect 32
default server name 9
default share connection 28
defragment 31
desktop installation 4
disk
  array 14
  mirroring 14
  striping 14
disk configuration changing 13
disk quotas, see Quotas
Disk Utilities 15
  settings 24
domain security 26
dynamic mounting 27

**E**

Ethernet cable 4
Expand Range 18, 19, 20

**F**

factory defaults 33, 34
FFS 31
file ownership 20
file-level access 18
FTP
  connecting from 12
  connecting using 9
  support 28
  full access 18
disk 14
mount IP address 12
mounting
  dynamic, static, auto-mount 27
mounting brackets 4
My Network Places 10

G

gateway 6
GUEST 32
Guest (Macintosh) 11

N

NDS 27
NetWare 31, 32
NetWare servers, compatibility with 17
  network
    address 5
    connection 4
    hub 4
    settings 24
  Network Browser (Macintosh) 9
  Network Neighborhood (Windows) 9
  Network Settings 11
  NFS 27
    connecting using 9, 12
    UNIX 27
  no access 18
  Novell 16, 31
    NetWare 3.12 27
    network tips 17
    SMS 25
  NT domain security 16

O

obtaining service for Snap Server vii
OS_Private folder 32
ownership of files 20

P

password protect 32
password, changing 24
PERL 28
permissions, assigning 19
power off 5
power on 4
privileges needed for access 12
protocol 5

Q

Quick Configure 13, 24
quotas 15, 20

R

RAID
  RAID 0 14
  RAID 1 14
  RAID 5 (4100 only) 14
read-only access 18
reset 34
restore 25
restoring factory defaults 33
root 12, 27
router 6
rubber feet 4

S

security 27, 31
  security menu 16
  setting up 15
serial number 3
server
  default name 9
  log 24
  settings 24
settings
  disk utilities 24
  network 24
  server 24
share connection 28
SHARE1 11
shared folders 17
shut down time 5
SMS 25
Snap IP 6
Snap Server icon 10
Snap Server Web site 31
Snap Server, Web site vii
SNMP 29

static mounting 27
status lights 3
Storage Management System see SMS
streaming video 28
striping 14
SYS volume 10
system light
  power off 4, 5
  power on 4

tar 26
Target Service Agent 25
TCP/IP 5, 6
Technical Reference 7, 13, 16, 26

UNIX
  backup 26
  network tips 17
  NFS 27
usage quotas 15, 20
Use NT domain security 17
user groups, defining 16
user information 24
users, defining 16
using SNMP server 29

Veritas Backup Exec 25, 32
volumes 17

Web browser, connecting with 9
Web connection 11
Web server
  FTP 28
  using server as 11, 28
Windows
  Windows 2000 servers 25
  Windows NT 4.0 file server 26