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Important Safeguards

For your protection, please read all these instructions regarding your Cobalt Qube and retain for future reference.

1. Read Instructions

All the safety and operating instructions should be read and understood before the appliance is operated.

2. Ventilation

The bottom vents and fan opening on the Cobalt Qube are provided for ventilation and reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. This product should not be placed in a built-in installation unless proper ventilation is provided.

3. Lithium Battery

The lithium battery on the system board provides power for the real-time clock and CMOS RAM. The battery has an estimated useful life expectancy of 5 to 10 years. If your system no longer keeps accurate time and date settings, it may be time to change the battery. Contact Cobalt for service information. No operator serviceable parts inside.



Caution: There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

4. Electrical Shock

To reduce the risk of electrical shock, do not disassemble this product. Instead take it to a qualified service person when service or repair work is required. Opening or removing covers may expose you to dangerous voltage or other risks. Incorrect reassembly can cause electric shock when this product is subsequently used.

Browsers

Both Netscape Navigator® and Microsoft® Internet Explorer have bugs that can cause intermittent, unexplained failures. When using a web browser to interact with your Cobalt Qube, you may occasionally experience a browser failure. Released product versions of the browsers are usually more reliable than beta versions and later versions seem to work the most reliably. A browser program failure, although annoying, will not adversely affect your Cobalt Qube's data.

Regulations and Information

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 in a commercial environment. 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. 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/her expense.

This equipment is in compliance with Underwriters Laboratories (UL) and is UL listed.

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Introduction

Thank you for purchasing the Cobalt Qube Microserver. The Cobalt Qube will provide you with many powerful communication and collaboration services. Here is a sample of what you will be able to do:

- **Web Publishing.** Allows you to access a broad range of Web publishing capabilities, for users and groups.
- **E-mail.** Enables you to communicate internally and externally to individuals and groups.
- **Threaded discussions.** Allows you to develop and document information related to a particular topic.
- **File Sharing.** By displaying the Cobalt Qube on the desktop as a shared network device, you can easily move files to and from the Cobalt Qube, using standard file-sharing capabilities.
- **Text Search.** Allows you to locate information on the Cobalt Qube by searching for words or phrases stored in text and HTML files.
- **Document Archival and Retrieval.** The InfoPlace Document Manager facilitates the storage, location, and retrieval of any kind of document.

These services can be used within an extranet, an intranet or across the Internet.

Product Overview

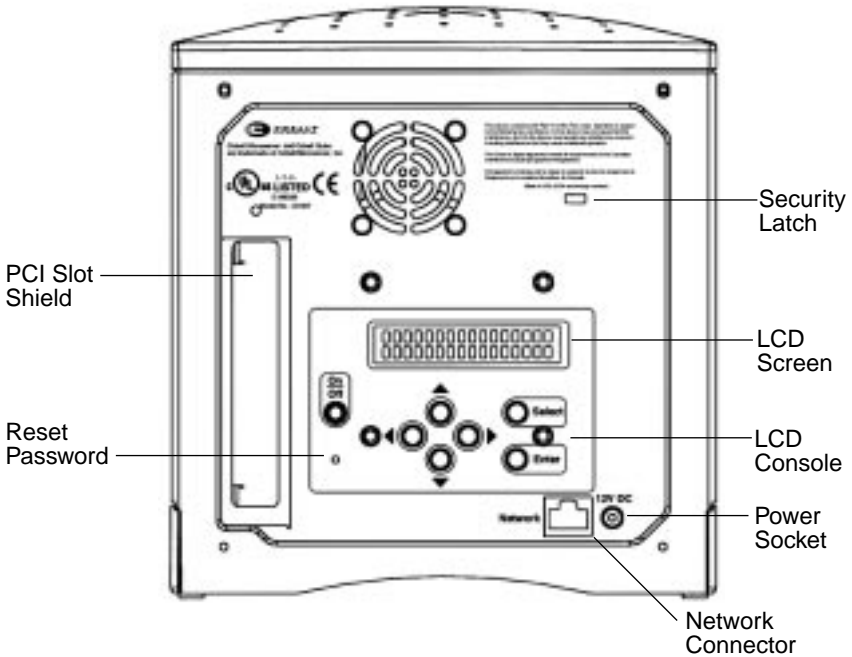
Front View



Power On
Indicator

The indicator light bar glows green when the Cobalt Qube is powered on.

Back View



- The **PCI Slot Shield** covers the Cobalt Qube's PCI expansion bay. This shield is removed when a PCI expansion card is plugged in.
- The **Reset Password** port is used if you forget the Cobalt Qube administrator password. (See "Resetting the Admin Password" on page 43.)
- The **Security Latch** is used to secure your Cobalt Qube with a standard computer-locking security cable (e.g., Kensington Microsaver Security System or compatible).
- The **LCD Screen** displays status and network information, including messages that require user response.
- The **LCD Console** is used to enter network configuration information and perform maintenance operations such as shutting down the Cobalt Qube.
- The **Power Socket** accepts the power connector from the power adaptor.
- The **Network Connector** accepts a 10BASE-T network cable.

How to Use This Guide

This guide is intended for anyone who will be in charge of setting up the Cobalt Qube microserver for a group of users. You should be familiar with Microsoft® Windows™ or Macintosh® operating systems and Netscape Navigator® or Microsoft® Internet Explorer web browsers.

Organization of This Guide

Chapter 1, “Introduction,” includes an overview of the Cobalt Qube’s features and directs you to the information in other chapters of this guide.

Chapter 2, “Initial Cobalt Qube Setup,” describes the hardware setup of the Cobalt Qube and the network integration process.

Chapter 3, “Cobalt Qube Services,” contains information on services, including e-mail, web page development, threaded discussions, file and data transfer, online help (Active Assist), document management, and the search engine.

Chapter 4, “Management and Administration,” contains information on browser services, including user, group, and file management.

Appendix A, “Using the LCD Console,” documents the LCD console functions, including powering down, rebooting, and changing the IP address.

Appendix B, “Product Specifications,” contains the product specifications and functional information.

Appendix C, “Advanced Information,” describes more advanced information on backup URLs, resetting the administration password, telnet, DNS and CGI.

Appendix D, “Glossary,” defines various Internet and intranet terms.

Requirements

You will need the following to use the Cobalt Qube.

1. A 10BaseT, TCP/IP-based local area network
2. A web browser (Netscape Navigator or Microsoft Internet Explorer, versions 3.0 or later)

3. **Network Parameters:** Contact your system or network administrator to obtain this information as documented in the Quick Start Guide.

Frequently Asked Questions

If you have any unanswered questions, visit the Cobalt web site at <http://www.cobaltmicro.com/>. There, you can view a list of Frequently Asked Questions. Or, you can send e-mail to support@cobaltmicro.com.

Cobalt Microserver will provide telephone technical support at no charge for the first 30 days. Call (888) 70-COBALT.

Initial Cobalt Qube Setup

This chapter guides you through the process of connecting and configuring the Cobalt Qube for your network and user community. A typical setup process takes less than 15 minutes. You will then be able to use all of the Cobalt Qube services.

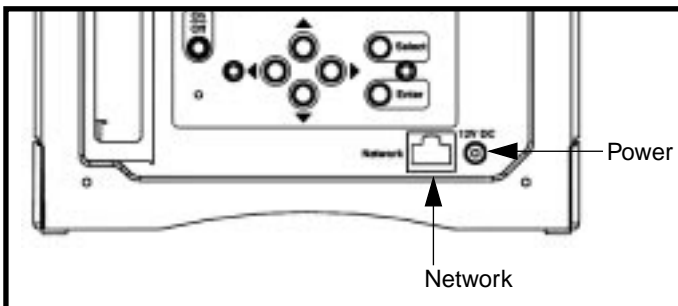
If the Cobalt Qube has been previously configured for a different network, refer to “Changing Network Configuration,” in Appendix A.

The setup process occurs in two phases.

- Phase 1, “Make the Connection,” covers the physical connection of the Cobalt Qube to a power source and the network.
- Phase 2, “Setting Up the Browser,” covers the network integration process and allows the administrator to select services, create users and groups using any browser-enabled computer.

Phase 1: Make the Connection

Connect one end of an Ethernet cable to the 10BaseT Network connector on the back of the Cobalt Qube. Connect the other end to an existing network socket.



Connecting the Power Supply

Connect the small round end of the power supply cord into the **12V DC** power socket. Connect the other end of the power supply cord to an electrical outlet.

Configuring Network Settings

Now that you have made the network and power connections, you are ready to configure the network settings.

The Cobalt Qube requires specific network information to function properly. Depending on the network environment, the Cobalt Qube may be able to obtain all of the necessary information from a DHCP server on the network. If so, it will attempt an automatic configuration. If not, you will be requested to enter the necessary information manually, using the LCD console on the back of the Cobalt Qube.

Powering On the Cobalt Qube

Turn the power on by depressing the **On/Off** switch on the back of the Cobalt Qube.

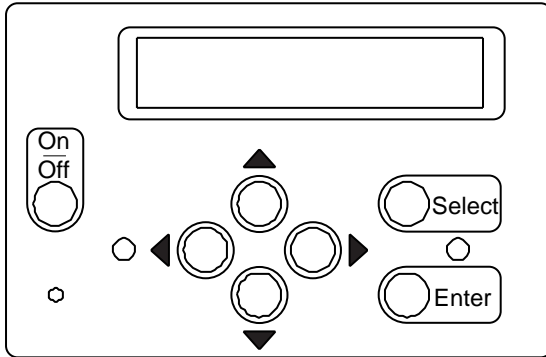
You will hear the hard disk inside the Cobalt Qube “spin up” and the fan turn on. The light bar on the front of the Cobalt Qube will blink a few times and then glow steadily.

Status messages will be displayed on the LCD screen as the Cobalt Qube completes its boot process.



Caution: It is important to follow the proper power-down procedure before turning off the Cobalt Qube. Refer to “Powering Down” in Appendix A.

Using the LCD Console During Setup



During startup, the LCD console displays status information relating to the boot process itself. During setup, it is used to enter network configuration information for the Cobalt Qube. After setup, the LCD console is used to change network configuration information, reboot, and power down the system.

The LCD screen on the back of the Cobalt Qube displays two lines. The top line of the LCD presents instructions on data to enter, and the bottom line displays the data already entered. The keypad immediately below the LCD is used to manually enter the required network information.

The control buttons work as follows:

- ◀○ The **Left** button moves the cursor left between the digits displayed in the LCD screen.
- ▶ The **Right** button moves the cursor right between the digits displayed in the LCD screen.
- ▲○ The **Up** button increments the digit located at the cursor position.
- ▼ The **Down** button decrements the digit located at the cursor position.
- Select The **Select** button selects the next option.
- Enter The **Enter** button accepts the information entered.

Refer to Appendix A, “Using the LCD Console,” for more information.

Configuring with a DHCP Server

The Cobalt Qube first checks if a DHCP server is present on the network. If there is a functioning DHCP server that is set up to serve leased IP addresses, the Cobalt Qube configures itself automatically. If the network information can be configured automatically, the LCD displays “IP Address:” on the top line and, upon completion of the boot process, displays the actual IP address that has been assigned to the Cobalt Qube.

IMPORTANT: To function properly over long periods of time, the Cobalt Qube's IP address must remain fixed, i.e., the DHCP server must not assign it to a different machine at a later date. Unfortunately, some DHCP servers do not honor requests for permanent IP addresses. As a result, the system or network administrator may need to assign a different (and permanent) IP address to the Cobalt Qube. If so, you will need to change the network configuration information. Please coordinate any changes to the IP address, subnet mask, or gateway address with your system administrator.

Manually Configuring for the Network

If the Cobalt Qube is unable to find a DHCP server on the network, the top line of the LCD display will read:

```
ENTER IP ADDR:  
000.000.000.000
```

“ENTER IP ADDR:” A blinking cursor will be displayed on the second line of the LCD. Enter the required network information at the prompt by using the cursor control buttons on the LCD console.

IMPORTANT: To complete this phase you must know the following information:

- The Cobalt Qube's assigned IP Address.
 - The Subnet Mask of your network.
 - The Gateway/Router Address (This is necessary only if communicating with other networks).
-

An IP address consists of four sets of numbers separated by periods, ranging from 0 to 255. For example, 192.168.25.77.

Using the keypad on the LCD console, enter the IP address assigned to the Cobalt Qube. Press **Enter** to accept the IP address.

If the IP address is valid, the LCD displays:

```
ENTER NETMASK:
```

Enter the netmask of your network. Press **Enter** to accept the entry.

If the netmask is valid, the LCD displays:

```
ENTER GATEWAY:
```

Enter the IP address of the gateway for your network. If your network does not have a gateway, press **Enter** to accept the default value of “000.000.000.000.”

Saving the Configuration Settings

After all of the required information is entered, you must save the settings before the Cobalt Qube network functions are turned on. The LCD displays:

```
[S]AVE [C]ANCEL
```

The left and right buttons toggle between [S] and [C]. Selecting [S]ave displays:

```
VERIFYING AND SAVING
```

Note: Selecting [C]ancel cancels the configuration and the LCD screen displays: ENTER IP ADDR: The Cobalt Qube goes through the entry process again.

After verifying and saving is complete, the Cobalt Qube then completes the boot process, and the LCD screen will show several messages before displaying the IP address assigned to the Cobalt Qube.

A successful configuration is reached when the LCD screen displays “IP Address:” on the first line and the actual IP address of the Cobalt Qube on the second line.

```
IP Address:  
192.168.25.77
```

Phase 2: Setting Up The Browser

The remainder of the setup process is performed through a Web-based interface on any computer on your network. Use one of the standard browsers available (e.g., Netscape Navigator or Microsoft Internet Explorer, versions 3.0 or later) to do this. Once

the setup process is complete, the Cobalt Qube can be managed from any browser-enabled computer on the network. From the browser, you can begin configuring the Cobalt Qube.

1. Start any standard Web browser on any computer connected to the network.
2. To access the Cobalt Qube, enter the IP address, found on the LCD screen on the back of the Cobalt Qube, in the URL field of your browser, for example:

Location:

then press the **Return** key on your keyboard.

You have successfully configured the Cobalt Qube when the Cobalt Setup Wizard introduction page is displayed.




Click the **Start** button to proceed using the Setup Wizard.

Configuring Cobalt Qube with the Setup Wizard

The step-by-step configuration process for the Cobalt Qube is performed by means of the Setup Wizard.

The Setup Wizard is a series of seven screens that guide you through the setup process. After completing each step, click on the **Next** button to apply the changes and move on to the next step. The Cobalt Qube performs automatic checks on the information entered and alerts you when an illegal value or a problem is encountered. When the information is entered

correctly at each stage, the Cobalt Qube enters the changes in its configuration files before proceeding to the next step. Changes may take several seconds to complete.

Note: To obtain additional help, click on the Active Assist  icon adjacent to the topic.

1. Network Integration

The Network Integration screen allows you to assign a hostname (for example, Qube1) to the Cobalt Qube, to enter your domain name (the official name that is registered with InterNIC, for example, cobaltmicro.com) and the IP address of your domain name server. The IP address of your Domain Name Server is necessary for the Cobalt Qube to be able to convert between IP addresses and names. This conversion is essential if you intend to send and receive e-mail external to the Cobalt Qube. The hostname and domain name must be coordinated with your network administrator in order for you to access the Cobalt Qube by its name and not just its IP address.



Caution: Each time the Cobalt Qube boots, it will verify the existence of the DNS servers entered in the network integration step. If the DNS server does not respond, the Cobalt Qube will erase its DNS entries. The Cobalt Qube administrator must then reenter the DNS information.

Click the **NEXT** button to move to the next screen.

2. Administrator Setup

Administrator Setup is the second screen displayed. The Cobalt Qube's administrator has two primary responsibilities: 1) setting up the users, groups, and services on the Cobalt Qube and 2) responding to e-mail alerts from the microserver in order to forestall potential problems.

To complete Administrator setup you must fill in the fields for:

- Full name

Name of the person serving as administrator.

- Password

A value must be entered into this field to proceed. You must also remember this password to access the administration features of the Cobalt Qube in the future.

- Existing e-mail address

This address receives a copy of any e-mail sent to the admin account. This feature becomes important if the administrator will not be using the Cobalt Qube as their primary e-mail server.

If you forget or want to reset the password, refer to “Resetting the Admin Password” on page 43.

If you want to change the new password, refer to “Changing the Admin Password from the Browser” on page 44.

Click the **NEXT** button to move to the next screen.

3. Services Setup

Services Setup is the third screen displayed. Choose which services you would like to be active on the Cobalt Qube.

For an explanation of services, refer to Chapter 3, “Cobalt Qube Services.”

Click the **NEXT** button to move to the next screen.

4. Time Setup

Time Setup is the fourth screen displayed. Enter the current date, time, and time zone on the Cobalt Qube.

Click the **NEXT** button to move to the next screen.

5. Access Rights

Access Rights is the fifth screen displayed. The *open* option allows any individual to self-register as a user. The *restricted* option allows only the administrator to add users.

Click the **NEXT** button to move to the next screen.

6. Users Setup

Users Setup is the sixth screen displayed. From this screen, you can add users to the Cobalt Qube and allocate the user disk space limits. The administrator can modify how the Cobalt Qube selects the user name, password, and the default disk usage limits by clicking the Set User Defaults button.

Although the Cobalt Qube administrator can manage the services on the Microserver, the administrator is not a “user.” i.e., he or she cannot belong to groups, participate in threaded discussions, or store files. The person who is acting as the administrator should also be registered as a user.

If your network is running Windows 95™, it is advisable that the usernames for the Windows network be the same as the usernames for the Cobalt Qube account. See “Correcting Windows 95 Login Error” on page 44 for more information.

Note: You can also register additional users through the browser interface after the Cobalt Qube is set up by clicking on the **Administrator Site** button on the Cobalt Qube Home page.

Click the **NEXT** button to move to the next screen.

7. Groups Setup

Groups Setup is the seventh screen displayed. Through Groups Setup the administrator can create different groups of users. Each group has its own mailing list, web site, file storage, and private discussion area. “Set Group Defaults” establishes the basic disk usage limits that groups can use.

Note: You can also add groups through the browser interface after the Cobalt Qube is set up by clicking on the **Administrator Site** button on the Cobalt Qube Home page.

Registering the Cobalt Qube

Once you have completed all the setup steps, you may want to consider registering the Cobalt Qube. By so doing, you will be able to receive notifications of system upgrades and new product information.

Cobalt Qube Services


The Cobalt Qube is a versatile network server that easily fits within the existing network infrastructure and enhances workgroup activities by providing a complete solution for Web publishing, e-mail, threaded discussions, and file sharing functions.

Cobalt Qube Home Page

Once you have completed the setup wizard, your browser will display the Cobalt Qube's Home page. This will give you access to all the Cobalt Qube services.



Active Assist – Online Help

Active Assist provides real-time context-sensitive help that you can access at any time by clicking on the  icon beside a given item. A description of the item appears at the bottom of the browser page.

Services Description

The Cobalt Qube will provide you with a suite of powerful communication and collaboration services. These services can be used within an extranet, an intranet, or across the Internet.

E-mail

The Cobalt Qube supports e-mail both for individuals and groups. By default, each registered user has an e-mail account created on the Cobalt Qube. Mail sent to a group address will automatically go to the e-mail address of each individual who belongs to that group.

IMPORTANT: For e-mail to be received, the Cobalt Qube's hostname (as specified in the Setup Wizard) must be entered into the organization's Domain Name Server (DNS) by the network or system administrator. SMTP will not work unless the DNS server's IP address has been entered in the network settings.

Using Cobalt Qube E-mail

To fully utilize the Cobalt Qube's e-mail capabilities, individual users must configure their computer's e-mail applications to send and retrieve e-mail from the Cobalt Qube.

Enter the following information into the e-mail program used on each registered user's computer:

1. **E-mail address.** The format is *username@hostname.domainname*, (e.g., *admin@qube1.cobaltmicro.com*) where:
 - *username* is the user ID assigned to the registered user (for example, "admin")
 - *hostname* is the name assigned to the Cobalt Qube (for example, "qube1")
 - *domainname* is the "official" domain name, that is, registered with InterNIC (for example, "cobaltmicro.com")

Note: "Domain Name" is either the "official" domain name that is registered with InterNIC (e.g, cobaltmicro.com) or an intranet domain name specific to your network. Obtain this information from your system administrator.

2. **SMTP Server.** The format is *hostname.domainname* (e.g., “qube1.cobaltmicro.com”).
3. **POP3 Server.** The format is *hostname.domainname* (e.g., “qube1.cobaltmicro.com”).

Note: Occasionally, an e-mail application may ask for an “incoming” mail server. The incoming mail server would be the POP3 server.

Advanced E-mail Features

Individual users can elect to have their Cobalt Qube e-mail forwarded to another e-mail account. Users can also create a vacation-reply message that is automatically sent to each person who has sent the user an e-mail. This feature is useful when users know that they will not be reading or responding to incoming e-mail messages for a period of time. As a registered user, click on the **Personal Profile** button located on the Cobalt Qube’s Home page and then go to the **E-mail** section to enable both of these features.

Note: A vacation-reply e-mail is sent only once per day to each sender.

Web Page Development

The Cobalt Qube supports a broad range of web publishing capabilities, suitable for both novice and expert users.

Using the Page Builder

You can use the Cobalt Qube’s publishing tools to create an instant Web site without having to learn about HTML. The Cobalt Qube automatically creates a Home page for each individual user and each group. From the default web page, each registered user can select the **Edit This Page** button at the bottom of the page to enter the Web Page Builder. Click on the **Instructions** button in the Web Page Builder for details on how to use this feature. The Web Page Builder can also be accessed from the **Personal Profiles** section by clicking on the **Page Builder** button.

Note: An individual user's Home page may also be accessed directly by entering the URL. For example, `http://[hostname]/users/[username]/`

Using an HTML Editor

Advanced users can take advantage of any of the standard HTML editors and the HTML publishing capabilities of many popular desktop productivity applications to create more complex web pages. The pages themselves are created and linked on the user's desktop machine and then moved to the appropriate subdirectory in the Cobalt Qube either by "Drag and Drop" file sharing or by an FTP (File Transfer Protocol) application.

Finally, advanced users can develop highly interactive web-based applications by building server-side CGI scripts that generate web pages in response to specific user inputs. This capability enables users to create powerful web-based applications. These applications range from simple scheduling and conferencing applications to sophisticated electronic commerce solutions.

Note: See Appendix C for advanced user information on web publishing.

Threaded Discussions


Threaded discussions allow groups of individuals to develop and document a body of information related to a particular topic. The discussion feature lets users collaborate without having to meet face-to-face. This feature is especially beneficial for individuals who are geographically dispersed or who otherwise find it difficult to meet. Another key feature is the self-documenting nature of a threaded discussion. Users can review postings to understand the "Who," "What," and "Why" relevant to a particular topic.

Rules of Threaded Discussions


Threaded discussions are group based and are automatically created for each group. Only members of a particular group are allowed to participate in discussions belonging to that group. These discussions are private; individuals outside the group are not allowed to access the group's discussions.

Creating a New Threaded Discussion Topic

Anyone who belongs to a specific group can begin a discussion topic within that group.

1. Go to your Cobalt Qube Home page and click the **View Groups** button.
2. Click on the Discussion Icon  for the group to which you belong and for which you would like to begin a discussion.
3. Click on the **New Topic** button in the message list screen.

Joining a Threaded Discussion

1. Go to your Cobalt Qube Home page and click the **View Groups** button.
2. Click on the Discussion Icon  for the group to which you belong.
3. Upon entering a discussion group, you will see a listing of the current messages in that discussion. To view a particular message, click on the subject of that message. To reply to a message, click on the **Reply** button in the View Message screen.

Information Searches on the Cobalt Qube

Searches can be done by word or by phrase to locate information in any text file, including the web pages on your Cobalt Qube. The results are presented as a list that includes the file name and a one-line description of the files that meet the criteria.

An index entry for every stored text file is created on the Cobalt Qube every day at 1:00 a.m. This index is a database of all of the key words used in a particular file, their location within that file, and their relation to other words used in that file.

Note: Documents added to the Cobalt Qube will not be indexed until 1:00 a.m. the next morning and therefore will not show up in a search until then.

Performing a Search

1. Go to the Cobalt Qube's Home page.
2. Click on the **SEARCH** button along the left side of the page. A "Search" screen is displayed. The top of the screen will list the search criteria.

3. The search criteria can take the form of:
 - A single word — The Cobalt Qube will attempt to identify all files that include a particular word.
 - A phrase — The Cobalt Qube will attempt to find all occurrences of that precise phrase.

Using the Search Options

The user also has two search options:

Option 1: Public Directories

The first option allows any user (registered or unregistered) to search all text files, including HTML files stored on all of the public directories on the Cobalt Qube. This search includes all of the user and group public directories but does not include any discussion groups.

Option 2: Public and Private Directories

The second option allows an authenticated user (a registered user who has an authenticated password) to search for text files in all of the public directories and in all of the private user and group directories to which that user has access privileges, including all discussion groups to which the user belongs.

Select either option by clicking on the button beside it.

Click on Start Search to begin the search process. If Option 2 is selected and the user has not been authenticated, a dialog box prompts the user for a user name and password.

Interpreting Search Results

The Cobalt Qube will take a moment to return the results of the search. The results are presented as a list of files that meet the search criteria.

If the file is a standard text file, then the file name, path name, and the first occurrence of the line within the file that matches the search criteria are displayed. To display the contents of the file in a standard browser window, click on the file name.

If the file is an HTML file, then the title of the page, its URL, and the first occurrence of the line within the file are listed. To view the formatted HTML page in the browser window, click on the file.

File Sharing and Data Transfer

You can access or connect to the Cobalt Qube on your desktop computer like any other shared network drive. Once the Cobalt Qube is mounted, individual files and entire subdirectories can be copied and moved to and from the Cobalt Qube by dragging and dropping. The Cobalt Qube can be mounted from any Windows or Macintosh computer. The Cobalt Qube appears as a mounted volume on the user's computer.

The method of connecting to the Cobalt Qube differs depending on the computer's operating system. (Refer to your computer's documentation for instructions.)

The Cobalt Qube offers several methods for transferring data. Use the following guidelines to decide which method is appropriate:

- SMB for Windows 95 and Windows NT.
- AppleShare for Macintosh
- FTP (File Transfer Protocol) on all platforms. It is used by the advanced user to transfer files.

Note: File sharing protocol is selected in the Setup Wizard or the control panel.

Using SMB to Share Files

Windows-based machines use a file sharing protocol called SMB (Server Message Block) or CIFS (Common Internet File System). Once SMB is set up, the Cobalt Qube in the Setup Wizard will appear in your Network Neighborhood as a machine named Hostname. The "Hostname" is the name that the administrator assigned to the Cobalt Qube in the Setup Wizard or the control panel. Clicking on the Hostname icon opens a window that provides an overview of the files and subdirectories to which the user has access.

Before You Begin: Windows 95 Users

The user name on the Cobalt Qube must be identical to the user name on your computer before you can access your subdirectory on the Cobalt Qube. Restart your computer and log in as a new user, using the user name and password that are stored on the Cobalt Qube itself. If your Windows 95 password does not match

the Cobalt Qube password, you will be prompted for the Cobalt password when you first connect to your Cobalt Qube through Network Neighborhood on your Windows 95 desktop.

Note: If you experience problems assigning a user name and password on your computer, refer to “Correcting Windows 95 Login Error” on page 44.

Setting Up SMB for Windows 95

1. If the user name is the same on both your computer and the Cobalt Qube, go to step 5.
2. If the user name on your computer is different from the user name on the Cobalt Qube, Click on the **Windows Start** button in the bottom left-hand corner of the screen, and select Shut Down.
3. Within the Shut Down screen, select “Close all programs and log on as a different user,” and then click Yes. Your computer will reboot and prompt you with an Enter Network Password menu.
4. Enter the same user name and password that are stored on the Cobalt Qube. Your computer will then complete the boot process. If your Windows 95 password does not match the Cobalt Qube password, you will be prompted for the Cobalt password when you first connect to your Cobalt Qube through Network Neighborhood on your Windows 95 desktop.
5. Double-click on the Network Neighborhood icon. The Cobalt Qube (listed as the hostname assigned to the Cobalt Qube) should be included in the listing. If not, double-click on the Entire Network line to force your computer to scan the entire network for sharable devices, then select WORKGROUP. The default workgroup for the Cobalt Qube is WORKGROUP.

Note: It may take up to 15 minutes for a Windows PC to update its network information so that the Cobalt Qube is visible in the Network Neighborhood.

6. Once the Cobalt Qube shows up in the Network Neighborhood listing, double-click on it to access it on your desktop. The password is case sensitive. If you are using a workgroup name other than WORKGROUP, the Cobalt Qube

may not appear in Network Neighborhood immediately. To view your current workgroup name, click your **Start** button, select “settings,” then open your Control Panel, select Network and choose the Identification tab. The Cobalt administrator can use his/her browser to change the server workgroup name to match your Windows 95 workgroup in the Administrator’s site, **Control Panel, Services**, section.

Setting Up SMB for Windows NT

1. Double-click on the Network Neighborhood icon. If you are using the WORKGROUP domain or workgroup name, the Cobalt Qube (listed as “Hostname”) should be included in the listing. If it is not listed, double-click on the Entire Network icon to have your computer scan the entire network for sharable devices, then select WORKGROUP.

Note: Windows NT with Service Pack 3 requires a registry entry before the Cobalt Qube can appear in the Network Neighborhood; refer to Appendix C for details.

2. Once the Workgroup server list is visible, double-click on the Cobalt Qube you want to access. You may log into the Cobalt Qube as the Admin user or as any one of the registered users.
3. “Enter Network Password” may be displayed in the dialog box (depending on how your computer has been configured). If so, enter the user name and password used on the Cobalt Qube, then click OK. The Cobalt Qube will show up on the desktop. Please note that the password is case sensitive.
4. Any time you want to log in to the Cobalt Qube as a different user, you must first exit your Windows NT session. You do this by selecting “Shut down the computer” from the Start menu. Then, select “Close all programs and log on as a different user.”

Using AppleShare to Share Files

The Macintosh file sharing protocol is called AppleShare. If AppleShare is enabled during the Setup Wizard on the Cobalt Qube, the Cobalt Qube will appear as an AppleShare volume in the Chooser of the Macintosh computer.

1. Select Chooser from the Apple menu.

2. Within the Chooser window, select AppleShare and double-click on the Cobalt Qube you wish to access (listed as “Hostname”).
3. “Connect to file server” will be displayed in the dialog box. Select Registered User and enter the user name and password used on the Cobalt Qube. You will be presented with two volumes:

GroupHome — provides access to group directories
[userID]— provides access to user directories
4. The Cobalt Qube will show up as a mounted volume on your desktop. The password is case sensitive.

Using FTP to Share Files

File Transfer Protocol (FTP) is typically available on platforms that support TCP/IP, the underlying protocols used by the Cobalt Qube. It is designed to transfer individual files.

1. In your FTP application, enter the Cobalt Qube’s IP address or Cobalt Qube hostname. Enter the user name and password. You are logged into the user main directory. Refer to your FTP program’s documentation for instructions on transferring files.

Note: The user root directory is not the same as the Cobalt Qube’s root directory. Many HTML publishing programs that use FTP require full path names to transfer files. For example, User Doug West’s home directory is accessed via the following FTP URL: *ftp://qubename/home/http/html/users/dwest/* The “sales” group directory is accessed via the following FTP URL: *ftp://qubename/home/http/html/groups/sales/*

Domain Name Server (DNS)

The Domain Name Service allows you to refer to machines by name instead of having to remember the numbers that computers understand internally. The Domain Name Service (DNS) allows you to type “www.cobaltmicro.com” into your web browser instead of “192.168.25.77.” A DNS server is used to convert names into numeric addresses. Running your own DNS server will allow computers on your network to quickly resolve names of other computers on the Internet or in your office and will allow you to serve your own domains.

Only the administrator can enable and configure DNS service on the Cobalt Qube. To enable DNS service, enter the Administrator Site, open the Control Panel, and select the Services header. Check the box adjacent to the DNS icon, then click Save Changes. Now your office computers can use the Cobalt Qube as their DNS server. See Appendix C, Configuring the DNS Server, for advanced configuration.

Document Management

The **InfoPlace Document Organizer** is a simple way for you to store information, such as documents, images, graphics, multimedia files, and URLs, on the Cobalt Qube in such a way that other users can quickly and easily find that information. The Document Organizer is entirely web based; you never need to leave your browser to take advantage of its services.

The Document Organizer maintains a database of information about the documents it stores on the Cobalt Qube. This database is called an **Infobase**. Each Cobalt Qube group can have multiple Infobases, which can be accessed and used only by the group's members.

Designating Easy-to-Find Documents

Whenever a user asks Document Organizer to place a new document on the Cobalt Qube, it asks for pertinent document information—the document's author, its creation date, modification date, title, type, key words, and document summary. This information is captured in a record that describes the properties of a given document. By capturing this information, other members of the group can easily search for a document based on the properties stored in the Infobase records.

Finding Specific Documents

You can find documents based on specific criteria by using the Document Organizer. For example, you could ask the Document Organizer to find all of the documents that were authored by "Doug West" labeled "Competitive Analysis." The Document Organizer would find all of the documents within its Infobase that meet these criteria and present these to the user as a series of URLs. From the browser, you have the option of checking the properties of each of these URLs.


You can also click on one of the URLs, download the file to your computer, and open the file by using the file's underlying application.

Using Infoplace Document Organizer

Log in to a particular InfoBase.

Note: When first logging in to the Document Organizer, you may wish to select the Infobase labeled "Demo" in order to try moving files to the Cobalt Qube and finding documents that have already been stored using the Document Organizer.

The administrator of the Cobalt Qube can create additional Infobases for any group.

Online help is available from two sources. From the Log In screen, select **Overview** to obtain a summary of the application's capabilities. Once you select an Infobase, you can access online help describing the specific menu items by clicking on the  icon at the top of the page.

Management and Administration

As the administrator, you can manage the Cobalt Qube by using any standard browser. Click on the **Administrator Site** button to access the site. Note that the “Administrator Site” is password protected. You will be required to provide the password for the administrator. The server’s “Active Monitor” software works in the background to help you maintain critical subsystems and services.

Users

The User section enables you to manage user settings and your personal administrator settings.

A **User List** provides the full name of each Cobalt Qube user (for example, Jessica Smith) and the name he or she uses to log in to the Qube (for example, jsmith). This is called the “user identity” or “userID.” From this page you are able to add or remove users, modify the password for each user, and adjust the total disk space allowed for web pages and other files on a user-by-user basis. To simplify the process of adding multiple users to the Cobalt Qube, you can also allocate a default disk space limit and a new user naming convention that apply to every new user added thereafter.

The **Administrator Settings** can also be modified here, including name and password. Please proceed carefully, so you will not lock yourself out with a quickly forgotten password. It is also possible to denote an alternate e-mail address so that you will receive messages on two different e-mail accounts. The second e-mail account is useful in case the Administrator receives e-mail on other e-mail accounts or in case the Administrator wishes to take advantage of one of the e-mail based paging services.

Groups

The Groups section enables you to manage group settings.

You can add groups to the Cobalt Qube and allocate disk space to each group. New users can easily be added, or existing users can easily be removed from a group's membership. Only members can join in the threaded discussion of that group and post web content to the group site.

Control Panel

Server settings like network, time, and services can be configured through the control panel. Most of these services are documented with the "Active Assist" online help facility.

Network

Using Network management, you can enter or change network configuration information to make the Cobalt Qube visible to other computers.

Time

Use Time setup to enter the correct time on the Cobalt Qube.

Services

You can choose which services to use on the Cobalt Qube. For a description of the services, see Chapter 3, "Cobalt Qube Services."

Access Rights

You can select one of two access modes for the Cobalt Qube. In "open" mode, any individual can register new users and all users can delete themselves. In the "restricted" mode, the admin is the only person allowed to add, delete, or modify users.

Additionally, you can determine whether everyone has access to the Cobalt Qube Home page (and the public user and group sites) or whether just registered users can access the Home page.

You can also allow advanced users to generate CGI-based dynamic web content on the Cobalt Qube. CGI allows users and groups to have web sites which run programs that dynamically generate HTML pages in response to specific user inputs. CGI scripts can be created on a user's desktop computer and then transferred to the Cobalt Qube with an FTP application. See "Running CGI Scripts" on page 46.



Caution: Be aware that poorly written CGI scripts may cause performance problems on the server.

Maintenance

The Cobalt Qube has several web-based utilities that facilitate the day-to-day operations of the microserver.

Backup

Users can back up only their own directories. To access this feature, users should return to the Home page of the web site, select their Personal Profile, and then select the Backup function.

The users are then prompted to save a file containing all of their backup data.



Caution: Once a file transfer begins, they must NOT interrupt or cancel the backup process. If they do or if the file transfer fails for any other reason, they will need to delete the partial backup file stored on their personal computer and try again. If they attempt to use a partial file to restore data to the Cobalt Qube, they risk corrupting the data already stored on the server.

As the administrator, you are able to back up data residing on the Cobalt Qube to a disk attached to your computer. There are different types of backups that you can perform.

To back up data stored on the Cobalt Qube, perform the following steps:

1. Select the type of Backup.
 - All e-mail on the Cobalt Qube.
 - All server configurations, e-mail, group, and user files.
 - A single user's home directory. (Use the drop-down box to select a user.)
 - A single group's home directory. (Use the drop-down box to select a group.)

2. Click **START BACKUP**.
3. Assign a path and a file name where backup data is to be stored on your computer and click **SAVE**.

As with user backups, the file transfer will take several seconds to minutes. Do not interrupt or cancel the file transfer. If the file transfer fails, delete the partial backup file on your computer. Otherwise, an attempt to restore such a file could corrupt the data.



Caution: Internet Explorer 3.0 allows backup but will not allow a restore. Either upgrade your browser or back up by using a more recent browser on a different machine.

Restore

Data previously backed up onto a desktop computer can be restored to the Cobalt Qube with the **Restore** function.

Users, and the administrator, can restore data only from the same machine on which the data was backed up. Users can only restore their own personal directory.

To restore:

1. Enter the path where the file is stored or click on the **Browse** button.
2. Select the file. If the file does not appear in the list and you are using Netscape 4.x or Internet Explorer 4.x, you may need to change “File Type” in the desktop to “All Files.”
3. Click “Restore a.qub Backup Now.”

Archive restores are not possible with Microsoft Internet Explorer version 3. If you experience problems uploading an archive, use a newer browser. Do not interrupt an archive restore because data could be corrupted. If the restore process is interrupted, the user can try to restore again.

To restore a user home directory or a group home directory, make sure the user or group already exists.

When data is restored, the Cobalt Qube and its corresponding parts (group, user, e-mail) are returned to the exact state they were in prior to backup.



Caution: The system does not merge the current and backed up data. When data is restored, any changes made to files on the Cobalt Qube since the last backup will be lost.

Install Software

New software can be added to the Cobalt Qube from the browser. The following procedure describes how to install new software from Cobalt Microserver's web site or from a CD supplied by Cobalt Microserver, Inc.

To install or upgrade software from Cobalt Microserver's web site:

1. Download the new software to your desktop computer. See <http://www.cobaltmicro.com/support>.
2. In the Maintenance section of the Cobalt Qube Admin Site, go to the "Install Software" page.
3. Click on **BROWSE** to select the package previously downloaded onto your desktop computer.
4. Click on "Install a .pkg package" to automatically install or upgrade the new software on the Cobalt Qube.

To install software from a CD:

1. Insert the CD into a computer on the same network as the Cobalt Qube.
2. From this computer, go to the "Install Software" page in the Maintenance section of the Cobalt Qube Admin Site.
3. Click on **BROWSE** to select the package from the CD.
4. Click on "Install a .pkg package" to automatically install the new software on the Cobalt Qube.

Reboot

The Cobalt Qube can be rebooted from your browser. Alternatively, you can reboot using the LCD console; refer to “Rebooting” in Appendix A. Rebooting may take a few minutes.

Important: Rebooting the Cobalt Qube will sometimes cure problems with certain services. The “Active Monitor” software will provide a recommendation when a reboot is necessary.

Shutdown

The Cobalt Qube can only be shut down from the LCD console located on the back of the unit. Refer to “Powering Down” in Appendix A. Shutting down may take a few minutes.



Caution: Turning the Power switch off before the Cobalt Qube informs you to do so may result in lost user data.

System Status

The System Status section of the Cobalt Qube’s Administrator interface allows you to monitor CPU, memory, disk, and network status. In all cases, the Cobalt Qube monitors the health of each of the subsystems and displays a green, amber, or red LED beside each item. “Green” means that the subsystem is performing well. “Amber” indicates a potential problem. “Red” indicates that a problem does exist. Clicking on the LED provides an explanation of the problem.

Memory

The Memory Status chart tells you if memory swapping is high, in which case you may want to add additional memory to the Cobalt Qube.

CPU

The CPU Usage chart provides a real-time update of CPU load. It is the number of tasks waiting to be executed. This chart helps you evaluate whether the Cobalt Qube’s CPU is being heavily or lightly used.

Disk

A Disk Usage Summary describes the total disk space occupied by system files, by users, and by groups, the amount of free disk space left, and the total size of the disk.

Network

The Network Status chart displays the rate of network collision since the Qube was started and the current network collision rate.

The Network Usage chart displays the number of network packets successfully sent/received, the total number of errors when sending/receiving network packets, the number of network packets dropped after failure in sending/receiving, and the number of attempts to send several network packets at the same time (i.e., collisions).

Service Status

The Service Status section allows you to monitor Web, e-mail, and discussion services. It follows the same LED conventions as “System Status.”

Web

The Web Server Status chart displays the status of the web server (green, amber, or red).

The Usage Summary chart provides you with a comprehensive analysis of the Cobalt Qube’s usage. It outlines web usage, based on number and types of requests.

Other Web Usage Statistics

- web content
- cumulative hits
- hits per day
- average hits per hour
- access by domain

E-mail

The E-mail Status chart displays the status of the Simple Mail Transfer Protocol (SMTP) service, the Post Office Protocol 3 (POP3) service, and the Internet Message Access Protocol (IMAP).

File Services

The File Services chart displays the status of the File Transfer Protocol (FTP) service, the Windows File Sharing (SMB/CIFS) service, and the AppleShare service.

Domain Name Service

The Domain Name Service (DNS) Status chart denotes whether or not DNS is active and whether it is operating properly.

Active Monitor

The Cobalt Qube has “Active Monitor” software constantly evaluating your system and services in the background. The Active Monitor reports on potential problems. If you see a blinking red light, the Active Monitor is signaling that a warning condition exists on the server. Click on the light to examine which service is producing the error.

Using the LCD Console

During startup, the LCD screen displays status information relating to the boot process itself.

During setup, the LCD console is used to enter network configuration information for the Cobalt Qube.

Once the Qube is running, the LCD console also serves multiple purposes as follows:

- Change network configuration information — useful if the Qube's location is changed.
- Reboot the system — used to restart the entire system.
- Power down — allows the Qube to close all open files and minimizes startup time the next time the Qube is powered on.

IMPORTANT: Follow proper power down procedure before turning off the Cobalt Qube.

You access each of these functions by holding the **Select** button for approximately two seconds. This action causes the LCD screen to enter its function mode. Press the **Select** button until the desired function appears on the LCD screen. To cancel the LCD's function mode, select the EXIT function, then the **Enter** button, followed by YES.

Changing Network Configuration

To reset the IP address or change the network configurations:

1. From the LCD console, hold the **Select** button down for approximately 2 seconds.

The LCD screen will display:

```
SELECT:  
  SETUP NETWORK
```

2. Press the **Enter** button.
3. Enter the IP address and press the **Enter** button to move to the next display.
4. Enter the netmask and press the **Enter** button to move to the next display.
5. Enter the Gateway and press the **Enter** button to move to the next display.
6. Toggle the cursor to [S]ave or [C]ancel and press the **Enter** button.

If you select the Save option, the Cobalt Qube will restart, using the new network configuration. If you select Cancel, you will return to “Step 1”.

Rebooting

To select the reboot application:

1. From the LCD console, hold the **Select** button down for approximately 2 seconds.

The LCD screen will display:

```
SELECT:  
  SETUP NETWORK
```

2. Press the **Select** button once until reboot appears in the LCD display:

```
SELECT:  
  REBOOT
```

3. Press the **Enter** button to accept the reboot application.
4. Use the cursor control keys to toggle the cursor between [Y] and [N]. Select [Y] to reboot the system.

Powering Down



Caution: To prevent the potential loss of data, it is important to follow the proper power-down procedure before turning off the Cobalt Qube.

To select the power-down application:

1. From the LCD console, hold the **Select** button down for approximately 2 seconds.

The LCD screen will display:

```
SELECT:
  SETUP NETWORK
```

2. Press the **Select** button twice until power down appears in the LCD display:

```
SELECT:
  POWER DOWN
```

3. Press the **Enter** button to accept the power-down application.
4. Use the cursor control keys to toggle the cursor between [Y] and [N]. Select [Y] to power down the system.
5. After the Qube has powered down, the LCD displays:

```
PLEASE SWITCH
POWER OFF NOW
```

6. Press the **On/Off** button to turn off the Cobalt Qube.

Reset Network Configuration

The “Reset Network” function resets the Hostname, IP Address, Netmask, Gateway, and DNS information to that of a new, unconfigured Cobalt Qube. This function may be useful if you are moving the Cobalt Qube to a new network.

To reset the Cobalt Qube to a factory-fresh network state, perform the following steps:

1. From the LCD console, hold the **Select** button down for approximately 2 seconds.

The LCD screen will display:

```
SELECT:  
  SETUP NETWORK
```

2. Press the **Select** button three times until reset network appears in the LCD display:

```
SELECT:  
  RESET NETWORK
```

3. Press the **Enter** button to accept.
4. Use the cursor control keys to toggle the cursor between [Y] and [N]. Select [Y] to reset the network configuration.
5. After resetting the Qube will power down and the LCD displays:

```
PLEASE SWITCH  
POWER OFF NOW
```

Product Specifications

Technical Data

Hardware

Product Model - Qube 2700
150 MHz superscalar RISC controller
16-MB to 64-MB DRAM, packaged in Single In-Line Memory Modules (SIMMS)
Ultra ATA Hard Drive
10Base-T Ethernet network interface
PCI slot for expansion
LCD console

Software

Technical Details:

Linux 2.0 multitasking operating system
Apache 1.2 web server, HTTP /1.1 compliant
CGI support
Perl 5.0 scripting
SMTP, IMAP4, POP3 e-mail protocol support
FTP support
SMB / CIFS
AppleShare
The Glimpse search engine
Domain Name Server (BIND)

Services:

- Browser-based setup
- Browser-based administration
- ActiveMonitor maintenance agents
- Text and HTML indexing and searching
- Private discussion groups
- Browser-based HTML editor
- Browser-based backup utility
- Remote software upgrade service

Requirements:

- 10Base-T or 10/100Base-T Ethernet Network
- TCP/IP
- Netscape Navigator or Microsoft Internet Explorer, Version 3.0 or later

Physical Data

Dimensions: 7.25 in. x 7.25 in. x 7.75 in. (18.4 cm x 18.4 cm x 19.7 cm)

Weight: 6.25 lbs. (2.8 kg)

Power requirements: Input rating 110-240V, 50/60 Hz

Maximum power consumption: 25 W

Operating environment: 39° to 108°F (5° to 40°C), 10% to 80% humidity (non-condensing)

LEDs: Power, Network Activity, Link

Regulatory approval: FCC Class A, VCCI-A, C-UL, UL, CE, TUV

Advanced Information

Backup Cobalt Qube Home Page URLs

Once the Cobalt microserver has been configured, the default Cobalt Qube Home page (index.html), see “Cobalt Qube Home Page” on page 17, is accessed from the /home/httpd/html/groups/home directory. This page appears when a user goes to the URL, `http://hostname/`.

When the Administrator changes the index.html file to create a new microserver Home page, the default Cobalt Qube Home page is replaced. Any user can continue to access the Cobalt Qube Home page by going to `http://hostname/cobalt/`.

Resetting the Admin Password

If you forget the Cobalt Qube password, you can clear the administrator password with this procedure:

1. Push a paper clip in the Reset Admin Password port directly under the On/Off switch on the back of the Cobalt Qube and hold for approximately 2 seconds. The LCD screen will display “RESETTING ADMIN PASSWORD.”
2. Use your web browser to assign a new administrator password to the Cobalt Qube. Access `http://qube.hostname/cobalt` and navigate to the user section of the Administrator site. You may still be prompted for a username or password. Enter “admin” as the username. Any name or word can be used as the password. You should do this as soon as possible to enhance the security of the Cobalt Qube. Otherwise, anyone on the network can assign the administrator password at this point.

When the administrator password is cleared, the root password is also cleared. This disables telnet access to the Cobalt Qube. Telnet access is enabled once a new administrator password is assigned.

Changing the Admin Password from the Browser

1. Go to the Administrator Site.
2. Click on the Users section.
3. Click on the Administrator button.
4. Enter the new password.
5. Click "Save Changes."

Correcting Windows 95 Login Error

A problem can arise when a user logs in to a computer that runs the Microsoft Windows 95 operating system and the password for a particular username has already been assigned on the machine. To erase the previously assigned password and create a new one:

1. Locate the .pwl file of the user (username.pwl). This file can be found in the main Window 95 directory (c:\windows).
2. Delete the username.pwl file.
3. Restart the computer and log in as the user. You will be prompted to select a new password.

Sharing Files, Windows NT and Service Pack 3

Windows NT machines (both server and workstation) with Service Pack 3 (SP3) using DOMAIN or WORKGROUP authentication cannot see Cobalt Qubes on the Network Neighborhood.

Windows NT Service Pack 3 contains a registry change that removed plain text password authentication. Since the Windows file-sharing software on the Cobalt Qube does not support authentication via NT encrypted passwords, Cobalt Qubes will not appear in the Network Neighborhood.

To enable your Windows NT machine to see a Cobalt Qube in the Network Neighborhood, you must make an NT registry change to support unencrypted passwords. This change allows NT machines to authenticate the Cobalt Qube. It does not disable encrypted authentication. (MS Reference — <http://support.microsoft.com/support/kb/articles/Q166/7/30.asp>) Use the following procedure:

1. Run regedt32.exe.
2. Locate the key entry:
HKEY_LOCAL_MACHINE\system\CurrentControlSet\Services\Rdr\Parameters\
ISet\
3. Go to the Edit menu and select Add Value.
4. In the Value Name entry, type
EnablePlainTextPassword
5. Select REG_DWORD for the Data Type.
6. Double-click on the newly created value and enter 1.
7. Exit regedt32 and reboot your computer.

Do not use SMB file sharing if you are on an open network where plain text passwords are an issue, e.g., a hacker can install a packet sniffer on your local Ethernet segment. While this scenario is unlikely, ask your network administrator if there is a problem with using clear text passwords. It is likely that clear text passwords are currently widely used with Windows 95 or other Unix computers on your network.

Telnet Access

Telnet access is available and should be used by advanced users only. An advanced user is someone who is proficient in the internal workings of the UNIX operating system. It is possible to adversely affect the performance of your Cobalt Qube if you modify system configuration file.

The Access Rights section under the control panel gives you three options for controlling telnet access. The first option allows you to turn telnet access off totally. This is

the most secure and safest option for the Cobalt Qube. The second option limits telnet access to the UNIX “root” user, and the third allows telnet access for all users. These two options pose security risks, but allow the user to configure options supported by the Linux operating system that are not configurable through the web-based administration interface.

Running CGI Scripts

The Cobalt Qube supports CGI scripts written in Perl version 5.0 or Unix shell scripts. CGI scripts can be developed on desktop machines and then transferred to the Cobalt Qube by means of any FTP-based application that allows permission bits to be set to “Executable”. Alternatively, you can use the telnet command: *chmod 755 filename.cgi* to make the script executable.

General

The path to perl is /usr/bin/perl. In order for users (other than admin) to add CGI files, the Cobalt Qube must be set up from the Access Rights section of the Control Panel in the Administrator site. Both users and the administrator can be selected to install CGI scripts on the Cobalt Qube from the Control Panel. CGI scripts must use .pl or .cgi filename extensions in order to be executed by the Web server.

Windows and AppleShare

Do not use AppleShare or Windows file sharing to upload CGI scripts to the Cobalt Qube. Files that are uploaded will be scrambled in the transfer because Macintosh and Windows both use incompatible text file formats. This is a cross-platform compatibility issue between the Unix, Macintosh, and Windows file systems.

Recommended method: Use FTP (File Transfer Protocol) to upload .cgi and .pl files. You should use ASCII mode to upload CGI files. Once the file is on the Cobalt Qube, use your ftp program (or use the telnet command: *chmod 755 filename.cgi*) to make the script executable.

Web Publishing (ftp addressing a user directory)

If you are using Netscape® Composer or another HTML design program (Symantec® Visual Page™, Adobe® Pagemill™, etc.), follow these steps to publish your web pages on the Cobalt Qube.

Have the following information available:

- The hostname of your Cobalt Qube
 - Your username and password
 - A filename of your choice to save as your main page (the default is index.html)
1. When you are finished designing your pages, select Publish. Some programs may say “Open FTP site” or something similar.
 2. Enter your server ftp URL followed by the full directory path, for example, ftp://myqube/home/httpd/html/users/dougw. Your full directory path uses the format—
ftp://hostname/home/httpd/html/users/
username
—where “hostname” is the Cobalt Qube hostname and “username” is your username.
 3. Enter your username and password.
 4. Select OK.

Netscape Composer (or your web design software) will then establish an FTP link to the Cobalt Qube and upload your HTML files.

Configuring the DNS Server

Domains: A domain name space is a computer name suffix shared by computers in the same organization. Domain names are organized in a hierarchy, including your company or server name and a country code or generic identification such as “.com” or “.edu”. Cobalt Microserver has registered the domain name “cobaltmicro.com” for use by our servers “dns.cobaltmicro.com,” “www.cobaltmicro.com,” and others. “dns” and “www” are different machines registered in the same domain. If you would like to run

your own Internet servers, talk to your Internet Service provider to determine a suitable domain name for your business.

Primary Domain Naming Service: A primary domain naming service maintains a list of computer names and their IP addresses. This list is made available to other DNS servers if the domain is registered with your country-specific domain naming organization. Your Internet Service provider may help you register your Internet server.

To configure a primary domain naming service on your Cobalt Qube, open the Control Panel in the Administrator Site. Select the Services heading and click DNS Parameters. Click the button labeled **Add Primary**.

Enter the domain name that you wish to serve and click Add Service. You may now build a list of IP addresses and the corresponding computer names. Click Update after typing in each new IP and hostname pair. After you have completed entering the list of hosts to be served, click Save Changes to update the DNS server.

To stop a primary domain naming service, click the trash can icon adjacent to the domain you wish to delete in the DNS Parameters menu. This will stop forward-lookup DNS service for that domain.

Secondary Domain Naming Service: A secondary DNS service may be configured to provide redundant DNS service to your computers. If the primary DNS server is turned off, then computers may use the secondary DNS server with no loss of performance.

To configure a secondary domain naming service on your Cobalt Qube, open the Control Panel in the Administrator Site. Select the Services heading and click DNS Parameters. Click the button labeled Add Secondary. Enter the domain name that you wish to serve and the IP address of the primary DNS server for that domain. Click Start Service to update the DNS server.

To stop a secondary domain naming service, click the trash can icon adjacent to the domain you wish to delete in the DNS Parameters menu. The list of hostnames and their IP addresses can be modified only on the primary DNS server for that domain.

Reverse Lookup: A DNS server can resolve a computer name to an IP address as well as resolve an IP address to a computer name. When a primary domain name service is started, the DNS server will automatically be configured as the primary DNS server for reverse lookups. If your Internet Service provider is providing primary reverse lookup service for your domain, then you will want to configure the reverse lookup to act as a secondary Naming service.

To change reverse lookup configuration, click the button labeled Edit Reverse Lookup in the DNS Parameters menu.

To change reverse lookup service for a network to secondary, the IP address of the primary server must be provided.

To stop reverse lookup for a network, select the radio button adjacent to that network under the heading Disabled. Click Save Changes to update the DNS server. If DNS service for a primary domain is stopped, reverse lookup for networks served in the domain may be manually disabled in the Edit Reverse Lookup menu.

Glossary

10Base-T

Refers to running Ethernet on twisted pair cables, with a throughput of 10 Mbps.

AppleShare

File-sharing protocol used on Macintosh computers.

CGI

The common gateway interface (CGI) is a standard way for a web server to pass control to an application program and receive data back when the application program is done.

Collision (Network)

In Ethernet networks, a collision is the result of two devices on the same Ethernet network transmitting packets at the same time. The collision packets are discarded and retrieved later. Collisions are a natural occurrence on Ethernets.

DHCP

The Dynamic Host Configuration Protocol (DHCP) is a protocol that lets network administrators manage centrally and automate the assignment of Internet Protocol (IP) addresses in an organization's network.

Domain name

The location of an organization or other entity on the Internet. For example:

www.totalbaseball.com

locates an Internet address for “totalbaseball.com” at a particular IP address and a particular host server named “www.”

Domain Name Service

The Internet service responsible for translating human-readable hostnames (e.g., cobaltmicro.com) into numeric IP addresses for TCP/IP communications.

Ethernet

The most widely used local area technology. Standard Ethernet

Appendix D

runs at 10 million bits per second (10 Mbps) and balances speed, price, ease of installation, and availability.

File sharing

The public or private sharing of computer data or space in a network with various levels of access privilege.

FTP

The File Transfer Protocol (FTP) is a way to send or receive files to or from a server. Using FTP, you can also update (delete, rename, move, and copy) files at a server.

Gateway

A network device that acts as an entrance to another network. A gateway may also be any device that passes packets from one network to another network in their trip across the Internet.

HTML

HyperText Markup Language (HTML) is the set of “markup” symbols or codes inserted in a file intended for display on a World Wide Web browser. The markup tells the web browser how to display a web page's words and images.

HTTP

The HyperText Transfer Protocol (HTTP) is a set of rules for exchanging files (text, graphic images, sound, video, and other multimedia files) on the World Wide Web.

IMAP4

The Internet Message Access Protocol (IMAP4) is a standard protocol for sending and receiving e-mail from a local server.

InterNIC

The organization responsible for registering and maintaining the com, edu, gov, net, and org domain names on the World Wide Web.

IP address

A 32-bit number that identifies each sender or receiver of information that is sent in packets across the Internet.

Leased IP addresses

IP addresses assigned by DHCP to unrecognized computing devices. This method involves setting up a leased pool of IP addresses that are allocated when new devices are booted and recognized on the network.

MAC address

The media access control (MAC) address is your computer's unique hardware number. When your computer is connected to the Internet, a correspondence table relates your IP address to your computer's physical (MAC) address on the network.

Packet

The unit of data that is routed between an origin and a destination on the Internet or any other packet-switched network.

PCI

Peripheral Component Interconnect (PCI) is an interconnection system between a microprocessor and attached devices.

POP3

Post Office Protocol 3 (POP3) is a standard protocol for sending and receiving e-mail.

Server

A program that awaits and fulfills requests from client programs in the same or other computers.

SMB

The Server Message Block (SMB) protocol enables client applications in a computer to read and write to files on a computer network and to request services from server programs in a computer network.

Subnet mask (netmask)

A number that, in conjunction with an IP address, defines the set of IP addresses that are considered "local." For example, if your IP address is 192.168.25.77 and your subnet mask is 255.255.255.0, then addresses between 192.168.25.1 and 192.168.25.255 are considered local.

Swap file

A space on a hard disk used as the virtual memory extension of a computer's real memory (RAM). Having a swap file allows your computer's operating system to pretend that you have more RAM than you actually do. The least recently used files in RAM can be "swapped out" to your hard disk until they are needed later so that new files can be "swapped in" to RAM.

TCP/IP

The Transmission Control Protocol/Internet Protocol (TCP/IP) is software that enables computers and networks to connect to an intranet or internet.

Virtual (or logical) memory

A concept that, when implemented by a computer and its operating system, allows programmers to use a very large range of memory or storage addresses for stored data.

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