

Su n C ba t
Qub ™ 3 App a n c e

User Manual



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Part Number / Numéro de pièce : **816-4576-11**

Date : **03-2002**

Important Safeguards

For your protection, please read all these instructions regarding your Sun Cobalt Qube™ 3 appliance and retain for future reference.

1. Read Instructions

Read and understand all the safety and operating instructions before operating the appliance.

2. Ventilation

The Sun Cobalt Qube 3 appliance's vents and fan opening 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

4. Power Cord

5. Electrical Shock

To reduce the risk of electrical shock, do not disassemble this product. 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.

6. 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 Sun Cobalt Qube 3 appliance, you may occasionally experience a

Regulations and Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can dwevifnd us, whe inur Ma equncourag to

Important Safeguards

Preface

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Introduction

The Sun Cobalt Qube™ 3 appliance is a powerful and versatile network appliance. It fits easily within an existing network, and it enhances workgroup activities by providing many communication and collaboration services.

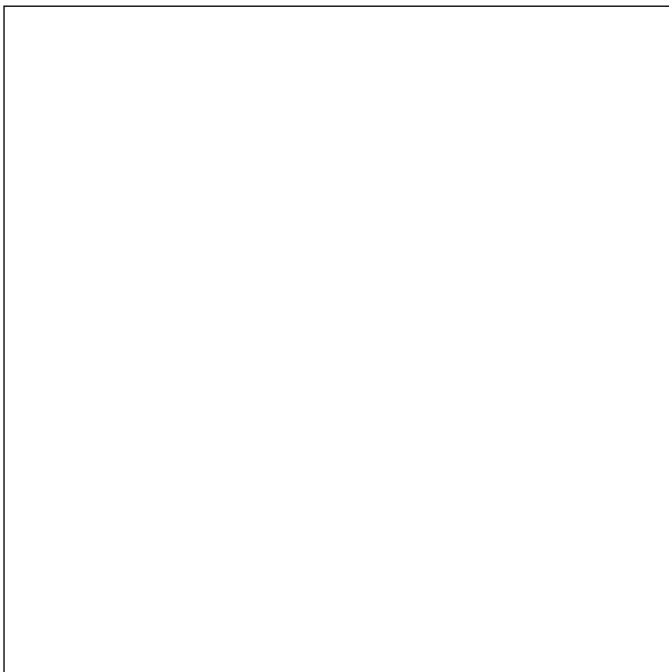
Sun Cobalt Qube 3 appliance services

Here is a sample of what you can do with the Sun Cobalt Qube 3 appliance:

- **Web publishing.** You can access a broad range of Web publishing capabilities for users and groups.
- **Email.** The appliance's email service allows you to communicate internally and externally to individuals and groups. It includes auto-forward and auto-response capabilities. You can even create mailing lists that include external users. To access your email on the Sun Cobalt Qube 3 appliance, you can use any standard email client software or the appliance's integrated email client called WebMail.
- **Shared access to the Internet.** You can use the high-speed serial port to connect through an external analog modem or an Integrated Services Digital Network (ISDN) terminal adapter, or the second ethernet port to connect through a local area network (LAN), a cable modem, a ds50s7ss-45.baptmaieta

Sratea netwodan eyou cm provo

Figure 1. S_u C_b - u_be 3 e e v e



User Interface

Personal Profile screen

The Cobalt Qube 3 User Manual

Before contacting Technical Support

First, make an effort to resolve the problem on your own. Take note of all actions you perform and any error messages so that, if necessary, you can describe them to a member of the Technical Support team.

Refer to the user manual and to the Web-based resources, such as the Knowledge Base, the support forum and the Solutions Directory (see “Further resources and information” on page 10).

To speed up your support call

When contacting Technical Support, the more knowledge better the help , the

Support forum

Users can share information through a number of support fora. To view the current list of Sun Cobalt support fora, go to the URL

<http://www.sun.com/service/suncobalt> and click on the link in Step 2. In the new

Powering on the appliance

Turn on the power by pressing the **On/Off** switch on the back of the appliance;

Using the LCD console to configure the network

Figure 7 shows the LCD console for the Sun Cobalt Qube 3 appliance.

The LCD screen on the back of the appliance displays two lines of text. The top line of the LCD presents instructions on data to enter; the bottom line displays the data already entered. Use the arrow buttons below the LCD screen to enter the required network information manually.

Configuring the Sun Cobalt Qube 3 appliance with the auto-configuration feature

- The appliance assigns itself “10.6.18.1” as the primary IP address and

Phasej0 Setting up with the Web Browser

The remainder of the setup process is performed through a Web browser on a computer on your network. Use one of the standard Web browsers such as Netscape Navigator™ (version 4.7 or later) or Microsoft Internet Explorer (version 5.0 or later) to do this. Once the setup process is complete, the Sun Cobalt Qube 3 appliance can be managed from any computer on the network with a valid Web browser.

To use the browser to set up the appliance, follow these steps:

1. Launch a standard Web browser on a computer connected to the network.
2. Enter the IP address of the Sun Cobalt Qube 3 appliance (displayed on the LCD screen on the back of the appliance) in the URL field of your browser, for example:

Location:

3. Press **Return** (or **Enter**) on your keyboard.

If you configured the appliance's network settings successfully, the Sun Cobalt Welcome screen appears; see Figure 8.

Figure 8. e e ee



Active Assist — Online Help

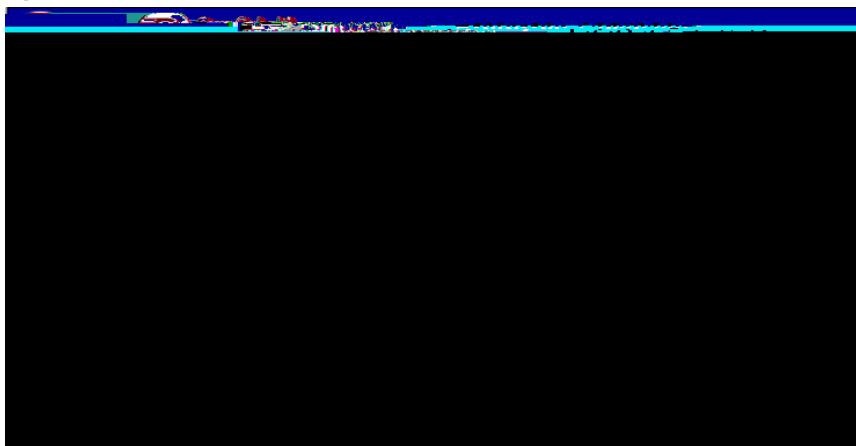
Active Assist provides real-time context-sensitive help on the user interface. When you move the mouse pointer over a context-sensitive area of the screen, a description of the item appears at the bottom of the browser page.

Language Selection

The first screen of the Setup Wizard is shown in Figure 9.

Figure 9.

ee



You can select a different language for the user interface. Select a language from the pull-down menu.



Note: The language chosen in this step applies only to the user *admin*. When a new user accesses the Sun Cobalt Qube 3 appliance, the appliance synchronizes with the language preference configured in settings of the user's Web browser and displays the Welcome screen in that language.

If the language selected in the browser preferences is not available on the appliance, the appliance defaults to the Administrator's choice of language.

The selected language applies to the user interface, the messages and commands on the LCD screen and the alert messages that Active Monitor sends to the Administrator.

Once the appliance has been set up, an individual user can change the language displayed on the Sun Cobalt Qube 3 appliance. For more information, see “Personal profile” on page 91.

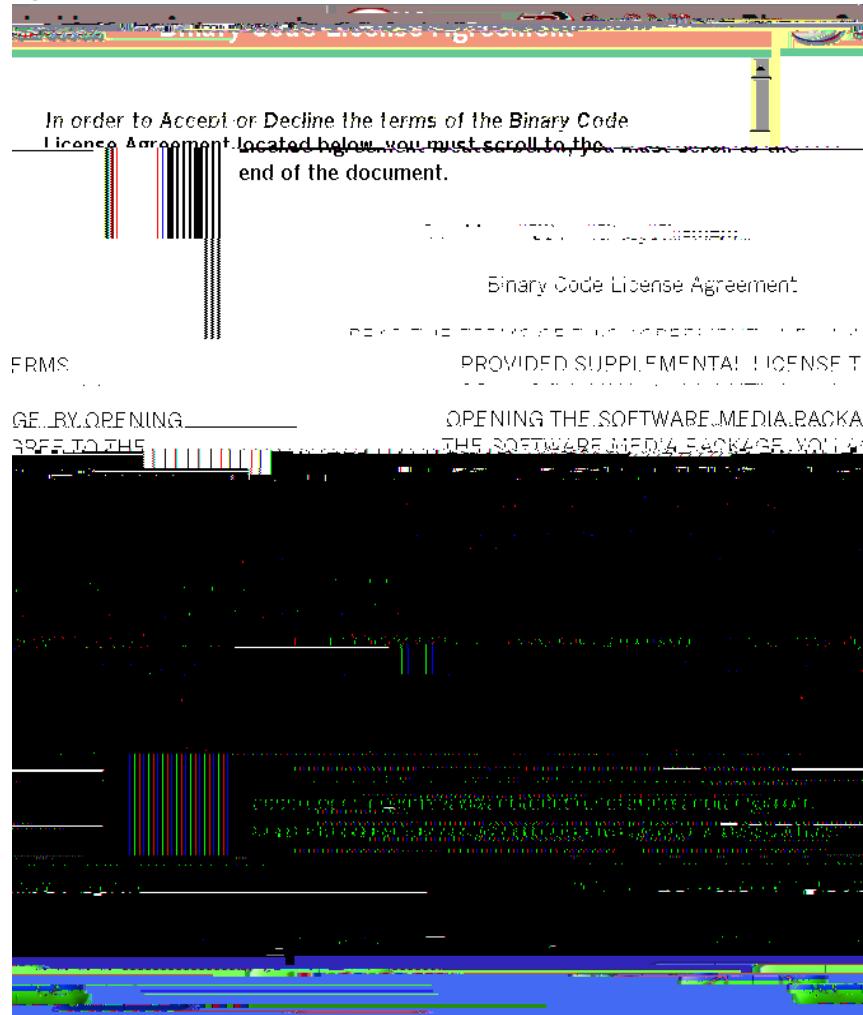
When you are finished selecting the language, click the right arrow.

Licenc Agreement

The next screen the Setup Wizard presents is the Binary Code **Licenc Agreement** screen. A portion of this screen is shown in Figure 10.

You must accept the terms of the Licenc Agreement to urc the Sun Cobalt Qube 3 appliance. Click **Accept** at the bottom of the screen to indicate you have read and agreed to the terms of the agreement. If you do not agree to the terms of the Licenc Agreement, the appliance cannot be set up.

Figure 10. e A ee e

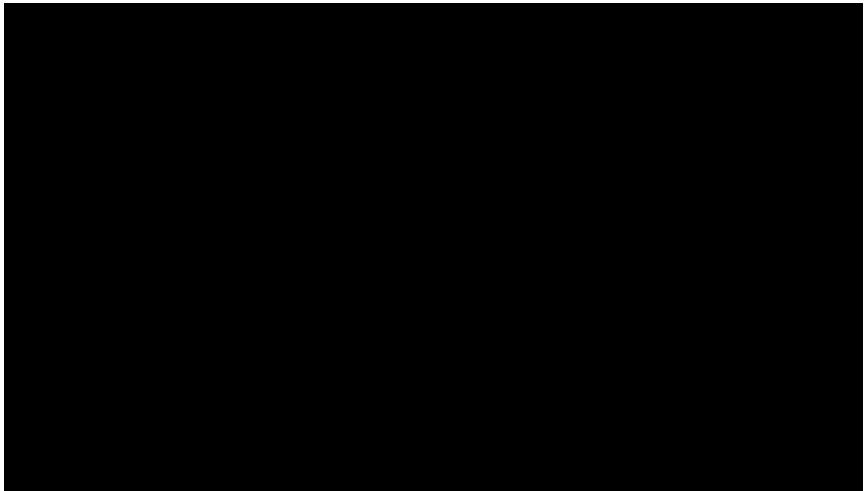


Time Settings

The **Time Settings** screen appears; see Figure 12. Using the pull-down menus,

User Settings

The **User Settings** screen appears as shown in Figure 13. On this screen, you can add users to the Sun Cobalt Qube 3 appliance and allocate the user disk space



Services on the Sun Cobalt Qube 3 appliance

This chapter offers a brief overview of the services available on the Sun Cobalt

- Installing software (Chapter 5, “BlueLinQ,” on page 223)
 - Simple Network Management Protocol (SNMP) (see “Simple Network Management Protocol (SNMP)” on page 64 and Chapter 5, “SNMP,” on page 179)
 - Secure sockets layer (SSL) (see “Secure sockets layer (SSL)” on page 63)
-

Setting up your email client

Ensure that the following information is entered into your email client on your computer.

1. Email address

Email aliases

Each registered user on the Sun Cobalt Qube 3 appliance must have a unique user name (for example, mary or john.smith or khoward). This user name is used to send or retrieve email.

The Email Alias feature allows you to create an arbitrary email address without creating a user account on the appliance. An email message addressed to the alias is forwarded to an existing email address.

If you add more than one alias for a user, enter one alias per line. You can only use lowercase alphanumeric characters, periods (.), hyphens (-) and underscores (_). For example, if the XYZ Company has a Sun Cobalt Qube 3 appliance and that the company's domain name is xyz.com. The email addresses for the users of the appliance would be vandre@xyz.com, ame@xyz.com, and t.c@xyz.com. If you want to add values to the user names, you can do so by using the <user> placeholder.

Email relaying

Use FTP to upload .cgi and .pl files; use ASCII mode to upload CGI files. Once

Sharing files and transferring data

You can access or connect to the Sun Cobalt Qube 3 appliance through your desktop computer as you would any other shared network volume. The appliance can be mounted from a Windows or Macintosh computer—it appears as a mounted volume5 w m37.s ed fro 5.2(.rough your 8]TJ0 -1.15)]TJme. method of access r

Using AppleShare

The Macintosh file-sharing protocol is called AppleShare. If AppleShare is enabled in the Setup Wizard or in the Administration section on the Server Desktop UI, the Sun Cobalt Qube 3 appliance appears as an AppleShare volume in the Macintosh's Chooser.

1. From the Apple menu in the top left corner, select **Chooser**. The Chooser dialog appears.
2. In the window on the left, select **AppleShare**.
3. In the list in the scrolling window on the right, double-click the appliance you want to access (listed as <hostname>).
“Connect to the file server...” appears in the dialog box.
4. Select **Registered User**. Enter the user name and password used on the appliance; the password is case-sensitive.
5. Click **OK**. A dialog displays the volumes on the appliance; if a volume is not appliance

Using FTP

File Transfer Protocol (FTP) is typically available on platforms that support Transmission Control Protocol/Internet Protocol (TCP/IP), which are the underlying protocols used by the Sun Cobalt Qube 3 appliance. FTP is designed for transferring individual files.

1. If your FTP application, enter the IP address or the host name of the appliance.
2. Enter your user name and password.

You are logged into the user interface. Refer to the documentation for your FTP program for instructions on transferring files.

What is DHCP and what are the benefits?

DHCP is a way for a computer on a network to obtain its TCP/IP settings when it boots up. With DHCP configured and enabled, a network administrator does not need to configure workstations manually, or modify networking settings when computers move or the network changes. This saves time and expense.

What is a configuration?

The DHCP configuration from the appliance includes the default gateway, DNS servers, WINS server, subnet mask and IP address from an address pool.

What are leases?

When the DHCP server sends a configuration to a requesting DHCP client, one of the DHCP options returned to the clienture the lease times. The lease time tells the client when it can use the IP address. Below is the lease time.

The DHCP client sends a lease renewal request to the DHCP server. The server responds with a new lease.

For outgoing packets, IP Masquerading translates a private IP address (an IP address that is not globally unique) on the internal network into the legal address of the secondary interface; packets are then forwarded onto the Internet.

For incoming packets, IP Masquerading does the opposite. IP Masquerading

Rules and chains

A packet-filtering rule consists of a set of criteria, and a list of actions which are taken if the criteria are met.

The lifecycle of a packet withihe Sun Cobalt Qub Qube 3 appliance

When a packet enters the Sun Cobalt Qube 3 appliance through a networkb interface, the firewall system applies the input chaiheagaihst the packet before iub is allowed to proceed any further into the system.b

If the input chaiherejects or denies the packet, the appliance discards the packet.

If the input chaiheaccepts the packet, the appliance then makes a routing decision about the packet: either to pass the packet to a local process (such as the Webb server on the appliance) or to schedule the packet to be forwarded to another computer.b

If the packet is scheduled to be forwarded, the firewall system applies the forward chaiheagaihst the packet. If the forward chaiherejects or denies the packet, the appliance discards the packet. If the forward chaiheaccepts the packet, the firewall system applies the output chaiheagaihst the packet.b

If a packet attempts to leave the Sun Cobalt Qube 3 appliance through a networkb interface, the firewall system applies the output chaiheagaihst the packet.bIf the output chaiherejects or denies the packet, the appliance discards the packet

allows the appliance to transmit the packet.b

The output chaihetests both existing packets thai have just passed the forward chaiheas well as new packets created by local services on your appliance (for example, the Webbserver responding to a requs b for a Webbpage).b

Web Caching

Web Caching is available on the Business Edition and Professional Edition of the Sun Cobalt Qube 3 appliance only.

The appliance offers a caching feature. When the caching feature is enabled, the appliance acts as a caching proxy server for Web clients.

Web cache servers are network servers that store frequently used content, such as Web pages and graphics, closer to the requesting clients so that subsequent accesses are served from the local server. It works as follows: when the browser

Install software

You can add new software to the Sun Cobalt Qube 3 appliance through the

Overview of users site

When a user other than the Administrator logs into the Sun Cobalt Qube 3 appliance, the user interface consists of the **P** and **P** screens which are selected with tabs at the top of the screen.

The **P** screen is where users will spend most of their time.

This field is optional. Enter the email addresses of the recipients whom you want to send a blind copy of the message. Separate multiple addresses with commas.

The recipients entered in the To: and CC: fields do not see the recipients listed in the BCC field; a recipient in the BCC field does not see any of the other recipients in the BCC field.

You can choose to attach a file to your message. For more information, see "To add an attachment".

Adding an attachment to a message

• 'c' •

Users

The Users section of the Address Book lists the registered users on the Sun Cobalt Qube 3 appliance. As the Administrator adds new users, the new users appear in the Address Book.

For each user, you can view the user's contact information, send an email to the user or view the user's personal Web page.

Viewing the users on the appliance

To view the registered users on the appliance:

1.us51Dn5Sk in the sub-menu. The Users Address Book appears; see

Figure 27. The table comprises four columns:

- **F** displays the full name of the registered user.
- **N** displays the user name of the registered user.
- **.** provides additional information about the user.
- **A** displays icons for sending email to a user, viewing the user's Web page and viewing the user's contact information.

The number of registered users on the appliance is displayed above the Actions column.

Viewing the contact information for a user

To view a user's contact information:

1.us51Dn5Sk in the sub-menu. The Users Address Book appears.

2.us51Dn5Sk the magnifying-glass next the user whose contact information you want to see. The new Contact Information table appears.

3.us51Dn5Sk .x to return to the Users Address Book.

Groups

The Groups section of the Address Book lists the registered groups on the Sun Cobalt Qube 3 appliance. As the Administrator adds new groups, the new groups appear in the Address Book.

For each group, you can send an email to the group or view the group's Web page.

Viewing the groups on the appliance

To view the groups on the appliance:

1. Click **G**

Sending an email to a group

To send an email to a group:

1. Click **G** in the sub-menu. The Groups Listing table appears.
2. Click the yellow *email* icon next the group to whom you want to send an email. The Compose table appears.

Modifying a personal contact

To modify a personal contact in the Personal Address Book:

1. Click **P** 

Deleting a personal contact

To delete a personal contact from the Personal Address Book:

1. Click  in the sub-menu. The Personal Address Book appears.
2. Click the red *trash can* icon next to the entry that you want to delete. A confirmation dialog verifies the deletion.
3. Click **OK**. The Personal Address Book table refreshes, minus the deleted entry.

Personal profile

The Personal Profile section allows you to view your user account information.

On the user interface, click  at the top. The menu items for your account appear on the left.

- Account
- Email
- Disk Usage
- Personal Information
- Remote Access (if enabled for a user)

Account

In the Account section, you can change the name on your account, select a language and change your password

Email

There are two options available in the Email section: Email Forwarding and Vacation Message.

Forwarding

The Forwarding feature allows you to forward incoming messages to another

Enabling email Forwarding

To enable email Forwarding:

1. Click **P** at the top.
2. Click **E** on the left. The Email Settings - <username> table appears; see

orwarding sectio oft the tabl[e(P Tfchee(box E0(en.ing:)]TJ TD3130127 T4[32.)-1050In
(T)40u can sons aoa d p(orwytyp oft T*(eling messaghTD(ws F)1forw)10.ing:)Tj-1.8 -1.8
Toles,o

Disk Usage

Personal Information

In the Personal Information section, you can enter and manage your personal contact information.

1. Click **P**ersonal **I**nformation at the top.
2. Click **P**ersonal **I**nformation on the left. The Personal Information table appears; see Figure 36.
3. Fill in the following fields (all of the fields are optional)

Administration Site

Administration site

Administration screen

The following bullet items represent the fully expanded Administration menu on the left side of the screen. These are the functions and services that the Administrator can manage from the Administration screen. They are explained in this chapter.

- Users & Groups (see page 108)
 - User List
 - Group List

Resetting the Administrator password

When the Administrator password is cleared, the root account is not accessible until a new Administrator password is assigned.

Figure 42. User List table

Remarks	Action	Full Name	User Name
omail	omail		
kfranklin	kfranklin		
Berry Clarke	berry		

Configuring the default user settings

To configure the default user settings:

1. Select > **System** - (/ .)
... () / . -/3. : . () .

&

&

Figure 46. Modify User Account Settings table

Modifying a user's email settings

When users have a given capability, they will be able to see all menu items associated with their given capabilities when they log in. They can then administer all values associated with the displayed pages.

A user with the Manage Users capability is allowed to manipulate the capabilities of other users. For example:

User A has the following boxes checked:

- Manage Users
- Manage Email Servers

User B has the following box checked:

- Manage DNS

If user A were to go to user B's screen, he would see only the Manage Users and Manage Email Servers capabilities, both of which would be unchecked. This implies that User A cannot remove User B's Manage DNS capability, and can only grant User B the Manage User and Manage Email Servers capabilities.

Deleting a user

To delete a user:

>  > . The User List table 144 (app)



Caution:

If you remove a user, you delete the user account and all of the associated files.

Configuring th0 default group settings

Adding a group

To add a group:

1. Select > . The Group List table appears.
2. Click . The Add New Group table appears; see Figure 51.

&

0 &

8. Click . . .
9. For Check Email Addresses, you can select Yes or No. Click . . .

File Import

The Import feature allows you to upload a tab-delimited file containing user

F

I

3. Fill in the fields in the Advanced Email Settings table.

- **Delivery Frequency** This setting specifies how frequently email is delivered by the email server on the Sun Cobalt Qube 3 appliance. The appliance queues the messages, sending them at the specified frequency.

2. Click  . The Add Mailing List table appears in the Basic section; see Figure 60.

Figure 61. Add Mailing List - Advanced tab

8. Fill in the fields.

- / . Enter a properly formatted email address or the user

F

Modifying a mailing list

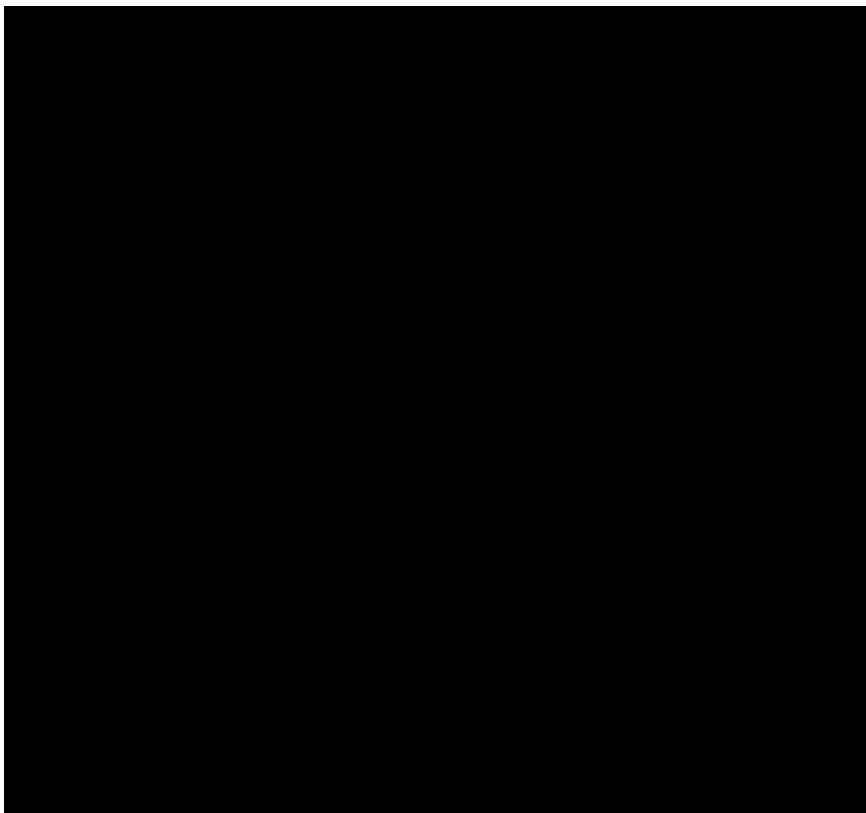
To modify a mailing list:

1. Select > > . The Mailing Lists table appears.
2. Click the green icon next to the group whose mailing list you want to modify.
3. The Modify Mailing List table appears. There are basic and advanced tabs. Except for the screen titles and the Group Members portion of the screen, these tables are contain the same fields as the Add New Mailing List tables. See Figure 62 and Figure 63.

For details on how to enter data in these tables, refer to “Adding a mailing list” on page 138.

4. Click .

Figure 62. Modify Mailing List - Basic tab



2. Configure the fields in the Remote Retrieval table.

- . Click the check box to enable remote retrieval.
- . Enter the network address or fully qualified domain name of the remote email server from which to retrieve your entire domain's email messages. Enter a properly formatted network address or fully qualified domain name for the Remote Email Server. For example, 192.168.1.100 and mail.sun.com are valid entries.
- . Enter the user name of the account on the remote email server from which to retrieve your entire domain's email messages.
- . Enter the password of the account on the remote email server from which to retrieve your entire domain's email messages.
- . Select a method of retrieving incoming email messages from the remote email server. The ETRN method should only be used if your remote email server is ESMTP-compliant. The default setting, POP3, should work for most users. (for an explanation of the various email protocols, see Appendix H, "Glossary".)
- . Enter, in minutes, a value for how frequently incoming email messages are retrieved from the remote email server.

Note:

3. Click .

File & Print

See “Sharing files and transferring data” on page 46 for further information on file sharing on the Sun Cobalt Qube 3 appliance. This section describes how to configure the file-sharing settings on the appliance.

Figure 66. Windows File Sharing Settings - Advanced tab

2. Configure the following settings:

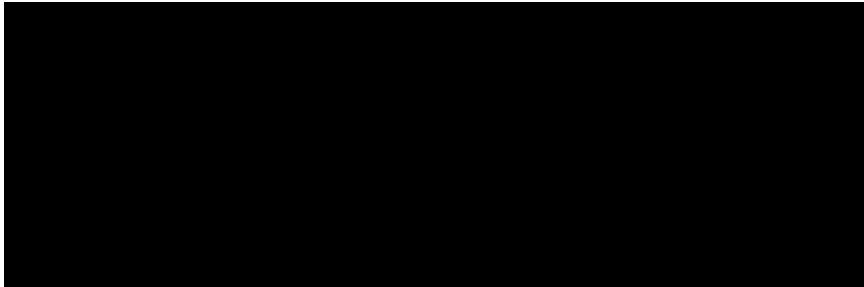
- **Enable sharing**. Check this box to enable Windows File Sharing.
- **Maximum number of users**. The default value is 25 users but you can change this value.
- **Workgroup**. Enter a workgroup or NT domain to which you want the appliance to belong. This entry determines how the appliance appears in the Network Neighborhood on a Windows client machine.
- **File sharing password**. () . 3 . () . 3 . () .

F &

Print Server

The Sun Cobalt Qube 3 appliance supports both remote printer spooling and print spooling through ports 0 0 0 sc/GS2 0vSB connected and .7695 -print

Figure 72. Advanced print server settings



4. Check the box that corresponds to the type of network printing you desire (by default, both are enabled).
5. Click to show the list of currently defined printers; see Figure 73.

As shown in the figure, when you are first configuring the appliance, no printers are available because none have been added.

Figure 73. Currently defined printers



6. Click to add a printer. The screen shown in Figure 74 appears.

Figure 74. Adding a printer



7. Add a printer

- Enter a i Ifor thisa printe that uUses will specify on their PC t

Setting up clients

After you have defined a printer on the Qube 3, the printer can be accessed from any client PC or Macintosh on the same local area network. The details of setting up client computers to print via the Qube 3 depend on the operating system in use. Follow the directions below appropriate for your computer.

Windows clients

On a Windows client, choose to add a network printer, choose the printer from the list presented (includes the printer just defined on the Qube), and load the appropriate driver. This is also done through the Control Panel.

FTP

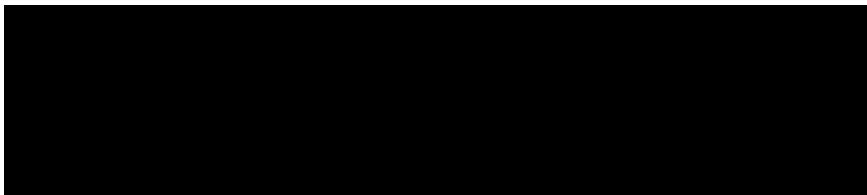
As the Administrator, you can enable the File Transfer Protocol (FTP) server and specify the number of simultaneous users.

Note: To enable anonymous FTP access, see “Guest Share” on page 150.

To set the FTP settings for your appliance:

1. Select > > . The File Transfer Protocol (FTP) Settings table appears; Figure 78.

Figure 78. File Transfer Protocol (FTP) Settings table



2. Click the Enable Server check box.
3. Specify the maximum number of simultaneous users.
4. Click .

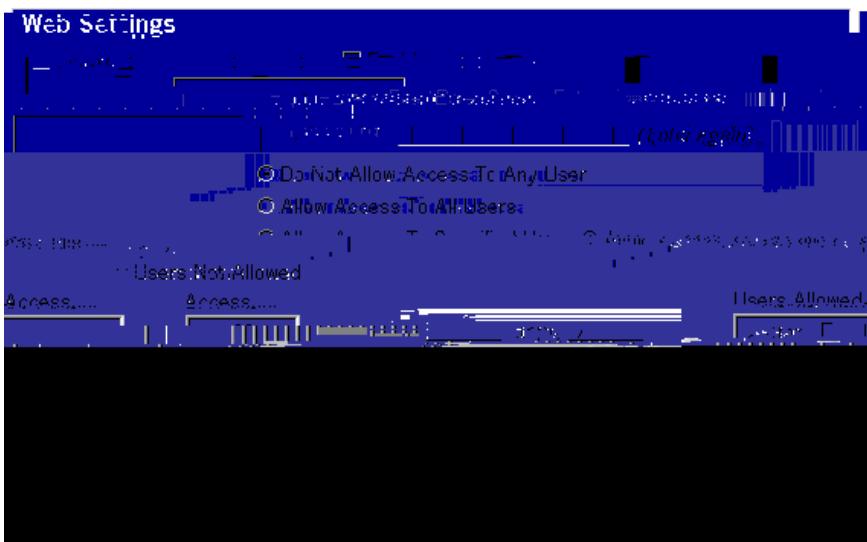
Web

Web Server settings

To set the Web Server settings:

1. Select > > . The Web Settings table appears; see Figure 79.
2. To enable the FrontPage Extensions, click the Enable check box and enter a webmaster password.

Figure 79. Web Settings table



To enable the Web caching feature:

1. Select > 

TCP/IP

To configure the Transmission Control Protocol/Internet Protocol (TCP/IP) settings for the Sun Cobalt Qube 3 appliance:

1. Select > > / . The TCP/IP Settings table appears; see Figure 81.

Figure 81. TCP/IP Settings table

2. Configure the following fields as appropriate for your situation.

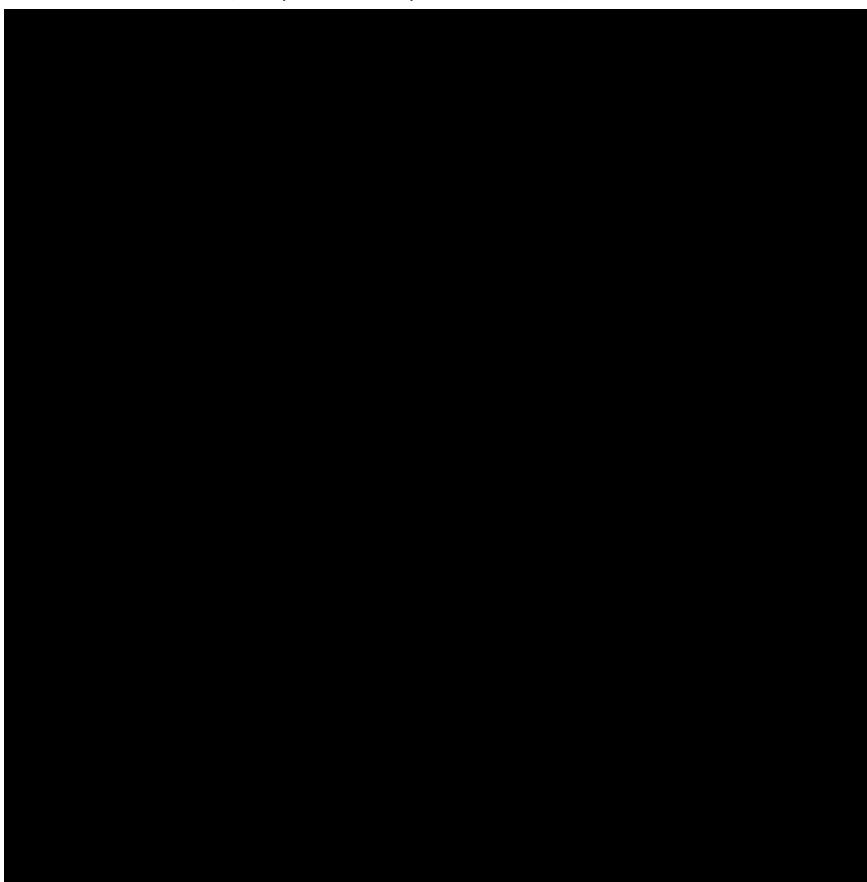
- . Enter the host name of this appliance. The host name and the domain name combined together should uniquely identify this

Configuration for cable modem or DSL

Complete this section only if you intend to connect the appliance to the Internet with a cable modem or digital subscriber line (DSL) modem. You need a cable modem or DSL modem, and an account with an ISP.

Ensure that you connect the modem to the secondary network interface on the

Figure 88. Administration Site



3. Configure the following settings:

- **Connection Status.** Connection status indicates whether the modem is currently connected to your ISP.
- **Connection Mode.** From the pull-down menu, select the Connection Mode: Always On, Always Off or On Demand only. On Demand means the appliance establishes a connection to the Internet only when prompted to by the system (for example, when checking email)

- **Connection Period.** You can select certain hours of the day during which the modem cannot connect to the Internet. By default, the modem is allowed to dial out at any time of the day.

In the scrolling window Connect Times, click on a particular hour or hours, and then click the green arrow to move that time period into the scrolling window Do Not Connect.

The hours are displayed according to a 24-hour clock. For example, the period “00:00 - 00:59” represents 12:00 a.m. to 12:59 a.m.; the period “16:00 - 16.59” represents 4:00 p.m. to 4:59 p.m. See Figure 88.

- **Phone Number.** Enter the dial-up telephone number of your ISP.
- **Dial-Up Account User Name.** Enter the user name of the dial-up account used to log in to your ISP.
- **Dial-Up Account Password.** Enter the password of the dial-up account used to log in to your ISP.
- **Modem Initialization String.** If your modem requires a specific initialization string, enter the string. Otherwise, leave the default value of ATZ. Refer to the user manual for your modem if you are having difficulty establishing a connection using the default string.
- **Local IP Address.** Enter the local IP address at this end of the modem connection only if your ISP has assigned a static IP address.
- **Server Hostname.** The dial-up server hostname is necessary for CHAP dial-up authentication. Consult your service provider for the server hostname if CHAP authentication is used.
- **Modem Speed (Baud).** Select the speed of the serial line connection to the modem. The default value is 115 200.

- **Enable Pulse Dialing.** A telephone uses either pulse dialing or tone dialing. If your telephone uses pulse dialing, click the check box to enable the Pulse Dialing feature. Enabling this feature causes the system to use pulse dialing when connecting. By default, pulse dialing is OFF.
- **IP Masquerading.** IP masquerading enables network address translation functionality that allows your organization to share Internet access by translating all network traffic between your one publicly accessible IP address and your many privately accessible IP addresses through this appliance.



Note: If you configured the Su8 Cobalt Qube 3 appliance manually and want to use the appliance as the Internet connection up your

IP(address of the appliance as thirty two)10(a

- (aul g)25.1(nte)25.1(w)10(a)0y.a

4. Click **Save**.

If you click **Save and Test**, the system saves the current settings and attempts a test connection to your Internet service provider to verify the settings.

DNS server

The Domain Name System (DNS) is a vital and integral part of the Internet. Setting up DNS correctly on your Su8 Cobalt Qube 3 appliance is very important. For this reason, we have created an appendix solely for explaining DNS. See Appendix D, “Domain Name System,” on page 251.

The appendix covers the following items:

- basic DNS issues
- advanced DNS issues
- a quick start guide detailing a sample setup of DNS for an appliance
- a brief history of the DNS service

7. Click **Add** for the Static Address Assignments List to open the table shown in Figure 92.

SNMP

You can specify the Simple Network Management Protocol (SNMP) communities that can have read-only and read-and-write access to this SNMP agent.

The default read-only access community is “public.”

The default read-and-write access community is “private.”

To specify the SNMP communities:

1. Select **Administration > Network > SNMP**. The SNMP Settings table appears; see Figure 93.
2. Configure the following settings:
 - **Enable Server.** Turns the Simple Network Management Protocol (SNMP) server on or off.

Telnet

To specify the access settings for telnet:

1. Select **Administration > Network > Telnet**. The Telnet Settings table appears; see Figure 94.

Security

Basic Firewall

A firewall provides network security through a set of rules that restrict the flow of information between your appliance and your network. It is als

Policy definitions

In the Add and Modify Firewall Rule tables, the Administrator selects an action in the Policy pull-down menu. The policy determines the action taken if a packet

Viewing a chain of rules

To view a chain of rules:

1. Select **Administration** from the **Firewall** table appears; see Figure 99.
2. From the Select Section pull-down menu, select Inbound Rule Chain, Forward

Adding a firewall rule

To add a firewall rule:

1. Select **Administration > Network > Basic Firewall**. The Firewall Settings table appears.
2. From the Select Section pull-down menu, select Input Rule Chain, Forward Rule Chain or Output Rule Chain. The rules table for that chain appears.
3. Click **Add**. The Add New Firewall Rule table appears; see Figure 100.

Figure 100. A screenshot of the Add New Firewall Rule table.

4. Configure the following settings:

- **Source IP Address (Low)**. Enter the first or lowest source IP address in the

- **Source Port Number(s).** Enter the first and last source port number in the range of source IP addresses to be matched by this rule. To match any source port number, leave the Source Port Number fields empty.
- **Destination IP Address (Low).** Enter the first or lowest destination IP address in the range of IP addresses to be matched by this rule.
- **Destination IP Address (High).** Enter the last or highest destination IP address in the range of IP addresses to be matched by this rule.



Note:

- **Destination Port Number(s).** Enter the first and last destination port number in the range of destination IP addresses to be matched by this rule. To match any destination port number, leave the Destination Port Number fields empty.
- **Network Protocol.** Enter the network protocol of the packets to be matched by this rule. The options are: Any Network Protocol, TCP, UDP, ICMP, IPIP and Encap.
- **Network Interface.** Enter the network interface of the packets to be matched by this rule. The options are: Any Network Interface, Primary Network Interface, Secondary Network Interface or PPP Dialup Interface.
- **Policy.** Select the policy for this rule chain. The policy determines the action applied to a packet that meets the criteria of this firewall rule. For definitions of the policies, see “Policy definitions” on page 186.
- **Redirect to Local Port Number.** If the REDIRECT policy has been selected, enter a local port number to which packets that meet the criteria of this firewall rule are redirected.

If the REDIRECT policy has not been selected, this field is ignored.

5. Click **Save**.

4. Modify one or all of the following fields. For a description of each field, see

4. Click **Save**. The rules within this chain are sorted according to the values you entered into the Order column and the table refreshes with the re-numbered rules.

Using the same example, the rule at position 4 now occupies position 2; the rule at position 2 shifts down to position 3 and the rule at position 3 shifts down to position 4. The rule at position 5 does not shift.

5. If you have finished changing the order of the rules and your firewall is currently enabled, click **Apply Changes Now** so that your changes take effect in the firewall currently functioning.

Deleting a firewall rule

To delete a firewall rule:

1. Select **Administration > Network > Basic Firewall**. The Firewall Settings table appears.
2. From the Select Section pull-down menu, select Inpu1 Rule Chain, Forward Rule Chain, or Outpu1 Rule Chain. The rules table for that chain appears.
3. Click the red *trash can* icon next to the rule you want to delete. A confirmation dialog verifies the deletion.
4. Click **OK**.

A Point-to-Point virtual private network (VPN) adds industry-standard virtual private networking to the Sun Cobalt Qube 3 appliance. It is complementary to the Remote Access VPN (see Appendix E, “Remote Access VPN,” on page 275).

**Server appliance as Point-to-Point VPN Gateway and
IP Masquerading server**

Table 2 lists the options and configurations for the “Add a Tunnel” table.

Table 2. A

Option	Description
Connection	Determine what to do with the connection. The options are: Disable the tunnel We start the connection The other end starts the connection
Name	Provide a name for the tunnel; for example, Miami-to-San Francisco
Connection Profile	Select the connection profile for the VPN server on the other end of the connection. You can configure your own profiles to work with other IPsec-compatible devices. The preconfigured profile for the Sun Cobalt Qube 3 appliance is the only profile supported by Sun Cobalt.
Remote Point-to-Point VPN Host	Enter the IP address for the interface that is connected to the unsecured network or the Internet at the other end of this VPN tunnel.
Remote Host’s Gateway	Enter the gateway IP address or the fully qualified domain name

Local Host Information

To view the network information for the Sun Cobalt Qube 3 appliance configured on the other end of the tunnel, you can log in to the remote appliance and retrieve

To use the Shared Secret option:

1. For the Sun Cobalt Qube 3 appliances on each end of the Point-to-Point VPN connection, enter the exact same string of text in the Shared Secret field of the “Add a Tunnel” table.

Figure 108. L , SAK , , ,



Manual Key Management

Caution: Manual Keying Types have no expiration limit and, over time, they can become insecure.



If you choose the Manual Keying option, you must manually create and delete the keys on the Sun Cobalt Qube 3 appliance at each end of the Point-to-Point VPN.

For the Manual Keying option, you need three pieces of information:

- the Authentication Key
- the Encryption Key
- a Security Parameters Index (SPI)

System

This section describes how to use the following system administration screens:

- **Power.** Reboot the appliance.
- **System Status.** Shows system status information.
- **Power.** Shows power consumption information.

Time

To specify the time, date, and time zone settings for the Sun Cobalt Qube 3 appliance:

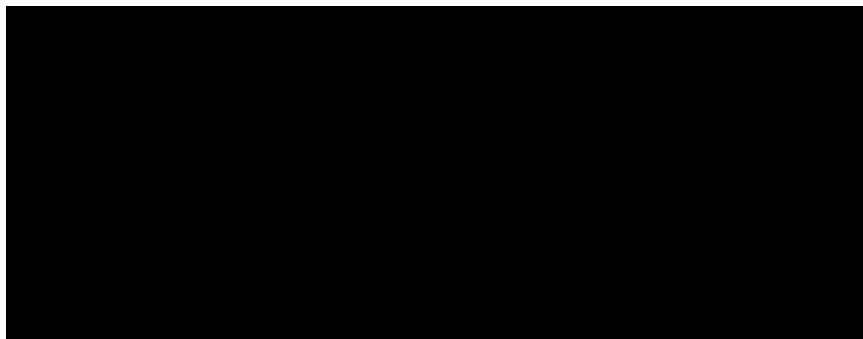
1. Select **Administration > System > Time**. The Time Settings table opens; see Figure 112.
2. Use the pull-down menus to set the time, date, and time zone.
3. You may optionally enter the host name or IP address of a Network Time Protocol (NTP) server if you want the appliance to automatically synchronize its internal clock every night.

You can find a list of publicly available NTP servers at:

<http://www.eecis.udel.edu/~mills/ntp/servers.html>.

4. Click **Save**.

Figure 112.



Information Reg. /SC Now Infion Sy68.9367.[(wolre)1 19

Figure 114.

3. From the Location to Restore Files pull-down menu, choose a location for the restored files: restore to “restore” fileshare or replace existing files.

Replacing existing files overwrites files on your hard disk drive if there is a file with the same name and location as the file being restored. This option should only be used for disaster recovery, as it irreversibly alters the state of the system.

The restore fileshare is the directory

/home/groups/restore/<BACKUPTIME>

where <BACKUPTIME> is the directory name used for the backup (for example, 20000903040200). You cannot select or change this location, and there must be enough space in the /home/ partition for the files.

This allows you to manually copy only those files you wish to restore.

4. Click **Cancel** to discard any changes you have made or click **Restore** to restore the files. The restore job begins and proceeds in the background. Administering the appliance while a restore is underway is not

ViewinS details of a history item

To view the details for a history item:

1. Select **Administration > Maintenance > Restore**.

Restoring a backup file manually

~~Maintaining data (Restoring) manually, you must make the desired data set available toired a Tf -1.2~~

~~Re~~sticky

~~Dsircstoy tbleappear;a se Figuoe 17. e~~

6. Click **Cancel** to discard any changes you have made or click **Restore** to restore the files. The restore job begins and proceeds in the background. Administering the appliance while a restore is underway is not recommended.

Disaster recovery

To restore your Sun Cobalt Qube 3 appliance to a known state after a disaster:

1. Restore the appliance to a factory-fresh state with the Sun Cobalt OS Restore CS m r was shipped with the appliance.
2. Locate the most recent history file from your backups (use the directory name to identify the most recent backup).
3. Transfer this history file to the directory /home/users/admin/.cbackup/
4. Select **Administration > Maintenance > Restore**. The Backup File List table appears.
5. Restore (use the using from the history item. See “Restoring with the e the history” on pafc 6 9. JTJj/F1 0 0 10 19(T) 5.0036mosfq0 10 19(T) 5.0036mosV

Network usage

To view statistics about the network interfaces on your appliance, select **Administration > Usage Information > Network**. The Network Usage table appears; see Figure 120.

Figure 120.



Active Monitor

The Sun Cobalt Qube 3 appliance uses Active Monitor software, a Sun Cobalt utility that runs on a appliance and updates key system and service status every 15 minutes. This section describes how to use the Active Monitor.

Active Monitor icon



The Active Monitor icon in the top right corner of the user interface allows you to view status information. The icon turns red if any of the components monitored by Active Monitor have severe problems.

Active Monitor Status

To view the Active Monitor Status of a system component or a service:

1. Select **Administration > Active Monitor > Status**. The Active Monitor Status table appears; see Figure 121.
2. You can click the **Check Status Now** button to begin updating system and service status information immediately. This may take as long as several minutes and proceeds in the background.

3. To view detailed status information for a particular system component or

BlueLinQ

When you log into the Sun Cobalt Qube 3 appliance as *admin*, the BlueLinQ tab appears in the top menu bar of the ServManDesktop UI. When you select BlueLinQ, the left menu bar presents commands that allow you to update the

4. Click **Install Manually**. The Install Manually table appears; see Figure 127.

Figure 127. |

4.5nstill

Figure 128. I - S - L

Using the LCD Console

During startup, the LCD screen on the back of the Sun Cobalt Qube™ 3 appliance displays status information about the boot process itself.

When setting up the appliance, you use the LCD console to enter network configuration information for the appliance.

Once the appliance is running, the LCD console serves several purposes. Through the LCD console, you can:

- select the language

Set up network

To reset the IP address or change the network configuration of the primary network interface:

1. On the LCD console, hold down the  button for approximately two

Advanced network

There are six further options under the Advanced Network option:

Set up primary

To set up the primary network interface on the appliance:

1. On the LCD console, hold down the button for approximately two seconds. The LCD screen displays:

SELECT:
SETUP NETWORK

2. Press the button until **ADVANCED NETWORK** seconds. The LCD screen displays:

Set up secondary

To configure the secondary network interface on the appliance:

Product Specifications

Hardware

The Sun Cobalt Qube™ 3 appliance has the following hardware components. See <http://www.sun.com/cobalt> for the most up-to-date information on the hardware specifications.

The appliance has the following hardware components:

- x86-compatible superscalar processor
- 512 KB of L2 cache
- 32-MB to 128-MB PC-100 SDRAM DIMMs (2 slots); can support up to 512 MB
(3.3 v, 168-pin, non-parity, unbuffered)
- PC-100 SDRAM

Advanced Information

High-speed serial port

For information on using the high-speed serial port, see “Configuration for an analog modem or ISDN” on page 171.

High-speed serial port as a serial console port

You can use the high-speed serial port to establish a terminal connection to the Sun Cobalt Qube™ 3 appliance.

To use the high-speed serial port as a serial console port, you must change the current state of the console function to on or off. To do this, you must reboot the appliance while holding in the recessed Reset Password button on the back panel of the appliance; see Figure 1 on page 3.

To reboot the appliance from the LCD panel, see “Reboot” on page 236.

When you reboot the appliance in this manner, the LCD screen displays either:

CONSOLE ON

or

CONSOLE OFF

Appendix C: Advanced Information

The first message indicates that the serial port can function as a serial console port. If this message is displayed, allow the bootup process to continue.

The second message indicates that the serial port cannot function as a serial console port. If this message is displayed, allow the bootup process to continue.

Directory structure

The hard disk drive on the Sun Cobalt Qube 3 appliance is partitioned into four segments. Most of the available disk space is on the partition mounted from /home/. It is recommended to do most of your work under this partition. By default, quotas are turned on in this partition and are used extensively by the system software.

Default home page for the appliance

Once the Sun Cobalt Qube 3 appliance has been configured, you can access the default home page from the following directory

User home page

When the Administrator creates a user through the user interface, the home

Advanced DNS

Configuring SOA default values

You can fine tune the primary domain and network authority settings—known as the Start of Authority (SOA) settings—indpendently of each other.

To modify the SOA settings, see “Modifying the SOA record” on page 259.

To configure the default values for the SOA settings:

1. On the user interface, select **Administration > Network > DNS**

Zone Format

You can create and select a zone file format for delegating subnets on non-octet boundaries that is compatible with your local reverse-delegation method.

To configure the Zone Format settings:

1. On the user interface, select **Administration > Network > DNS**

Appendix D: Domain Name System

Deleting all DNS records

You can delete all the DNS records for a particular network or domain name from

Configuring a Forward Address (A) record

A Forward Address (A) record translates a fully qualified domain name into an IP address.

To configure a Forward Address (A) record for your appliance:

1. Select **Administration > Network > DNS**.

The DNS Settings table appears.

2. Click **Edit Primary Services** above the table. The Primary Service List table appears.
3. Select Forward Address (A) Record from the **Add Record...** pull-down menu. The Add New Forward Address (A) Record table appears.
4. Enter the host name (optional) and domain name you want to serve (for example, www and mydomain.com).
5. Enter the IP address (for example, 192.168.10.10) that is used by the host and domain names entered in the first two fields.
6. Click **Save**. The Primary Service List table reappears with the new entry.
7. To add another record, select a record type from the pull-down menu again.

To apply the changes to the DNS settings, click **Apply Changes Now**. The DNS Settings table appears.

Configuring a Mail Server (MX) record

To receive mail for your domain name (for example, mydomain.com), you need

Appendix D: Domain Name System

Figure 136. A

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Secondary service for a network

To add a secondary name-server authority for a network:

1. Select **Administration > Network > DNS**.

The DNS Settings table appears.

2. Click **Edit Secondary Services** above the table. The Secondary Service List table appears.
3. Select Network Secondary Service from the **Add Secondary Service...** pull-down menu. The Add Secondary Service table appears; see Figure 137.
4. In the first field, enter the IP address of a member on the network (for example, 192.168.1.1) whose DNS information is served by the IP address in the third field.
5. In the second field, enter the subnet mask corresponding to the IP address for the specified network authority.
6. In the third field, enter the IP address of the primary DNS server for the specified network.
7. Click **Save**. The Secondary Service List table reappears with the new entry.
8. To add another secondary service, select a service from the pull-down menu again.

To apply the changes to the DNS settings, click

Reverse Address (PTR) record

First, create a Reverse Address (PTR) record.

1. Select **Administration > Network > DNS**. The DNS Settings table appears.
2. Click **Edit Primary Services** above the table. The Primary Service List table appears.
3. Select Reverse Address (PTR) Record from the **Add Record...** pull-down menu. The Add New Reverse Address (PTR) Record table appears; see Figure 138.
 - In the IP Address field, enter 192.168.10.10.
 - 2. (PTche50(box Genert, cF25.1(vor > Nea) R(erse)55.2(AddrA (PTR) Reo genert,

Forward Address (A) record

Mail Server (MX) record

Finally, create a Mail Server (MX) record.

1. Select **Administration > Network > DNS**. The DNS Settings table appears.
2. Click **Edit Primary Services**

What is a DNS record?

To determine which primary name server contains your domain name:

1. The local name server (the DNS resolver/browser machine) contacts the root domain name server maintained by the several Internet root server authorities.
2. The root domain name server returns the IP address of the primary name in name serv authorities.

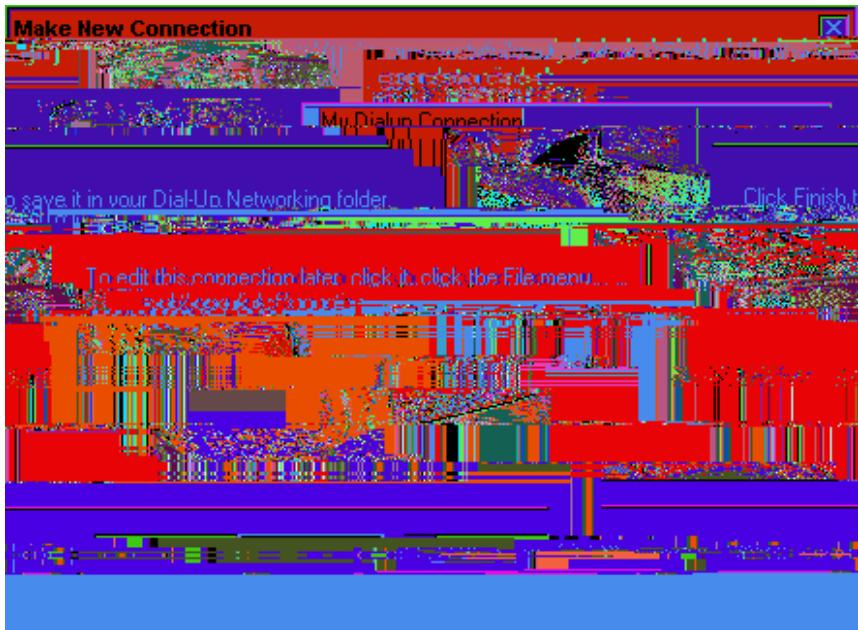
in nainformation fore serss of tir

T15.1(er02(the DN5 resolv)le serv)15 7oot doma0 -1.8 TD-0.is una

Appendix E: Remote Access VPN



Make New Connection screen (3 of 3)



10. Click **Finish** to complete the creation of the dialup connection to your ISP.

The new connection now appears in the Dial-Up Networking folder. You may create a shortcut, if you wish, to place the dialup icon on the desktop.

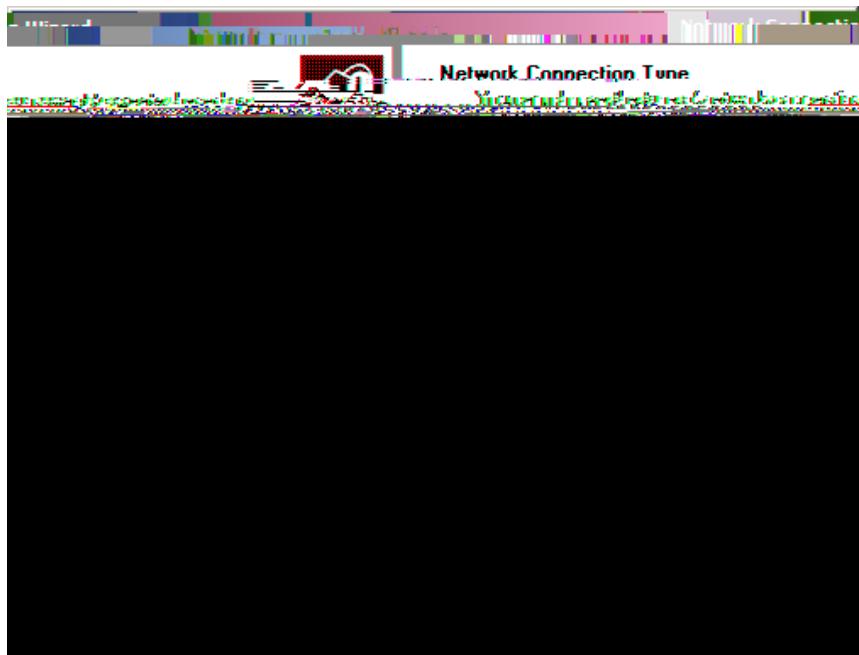
Make New Connection screen (3 of 3)

9. Click **Finish** to complete the creation of the VPN connection.

The new connection now appears in the Dial-Up Networking folder. You

Appendix E: Remote Access VPN

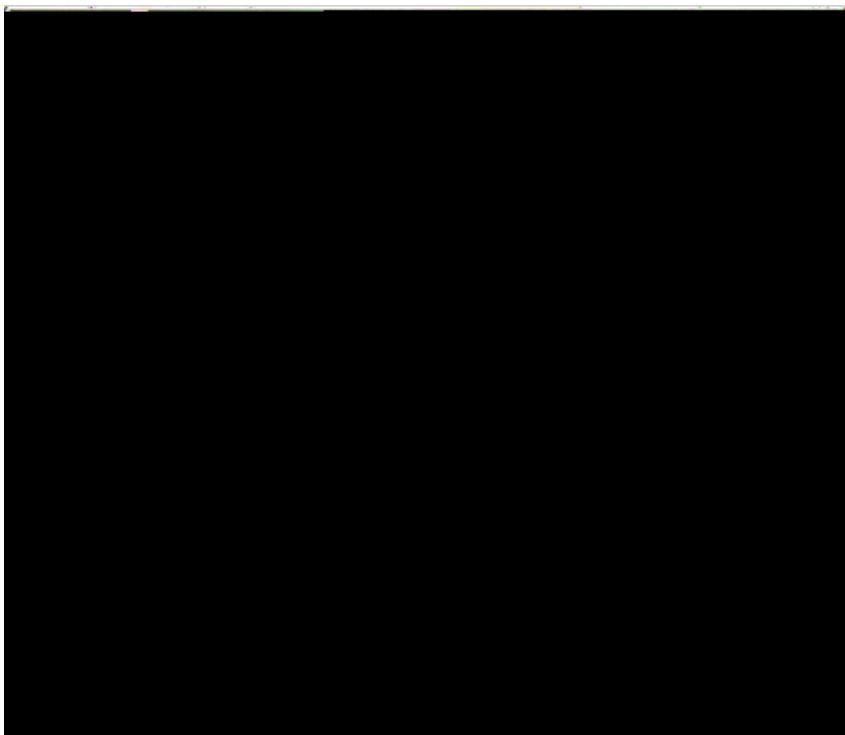
Network Connection Wizard screen for Dialup (2 of 10)



5. Activate the radio button **Dial-up to the Internet**.
6. Click **Next**.

The dialog box shown in Figure 1u7 appears.

Network Connection Wizard screen for Dialup (5 of 10)



11. Choose your modem from the drop down list.
12. Click **Next**.

The dialog box shown in Figure 160 appears.

Network Connection Wizard screen for Dialup (6 of 10)

13. Enter the area code and telephone number of your ISP.
14. Enter the country or region code.
15. Click **Next**.

The dialog box shown in Figure 161 appears.

Network Connection Wizard screen for Dialup (9 of 10)

20. Activate the **No** radio button.

21. Click **Next**.

The dialog box shown in Figure 164 appears.

Appendix E: Remote Access VPN

Network Connection Wizard screen (6 of 8)

12. Enter a name fo4 6s.(22t r)-1 cnnection .N13 EClick

Network Dialog Box

5. Click the

Protocols Tab Dialog Box

6. Click **Add**.

The dialog box shown in Figure 176 appears.

Appendix E: Remote Access VPN310

Folders in My Computer



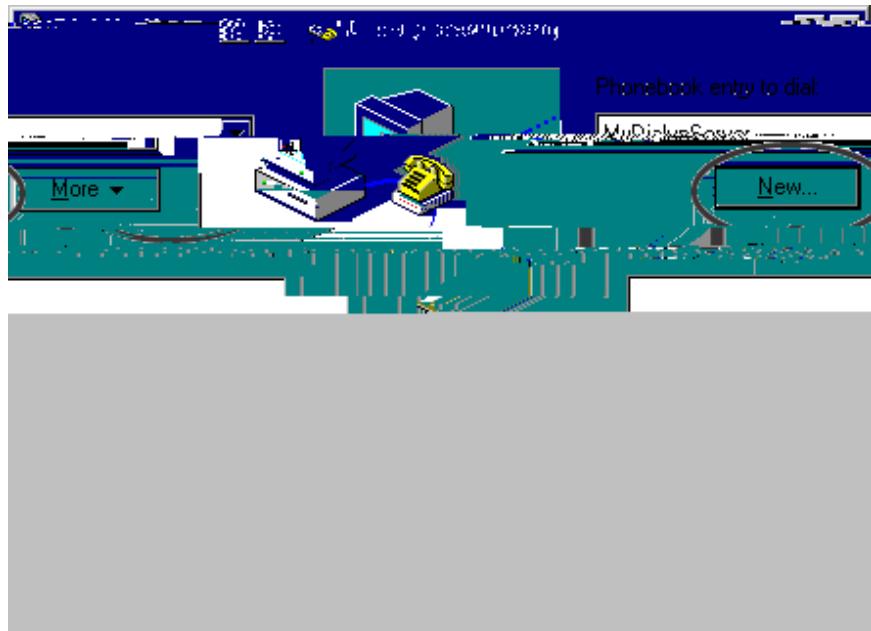
2. Double-click the **Dial-Up Networking** icon.

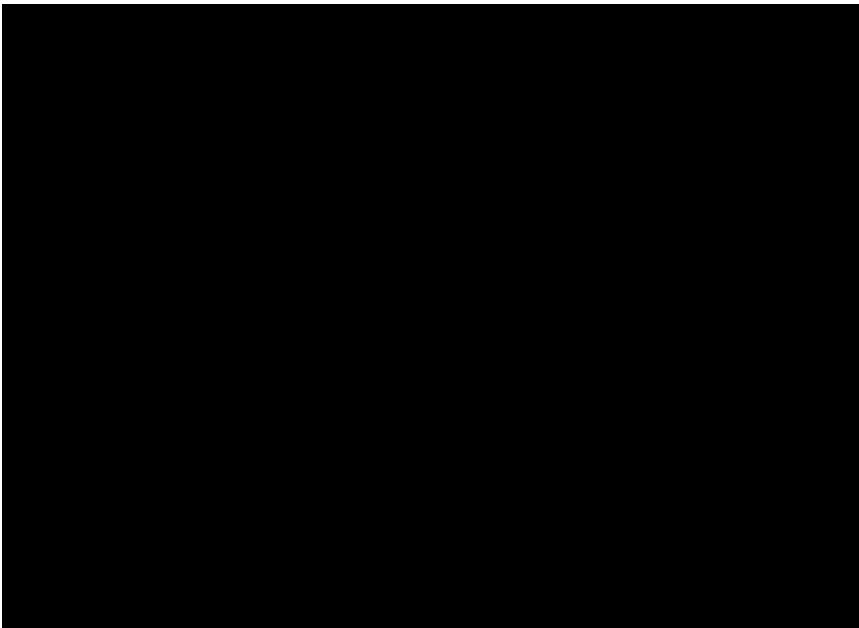
The dialog box shown in Figure 182 appears.

3. Click **New**.

The **New Phonebook Entry Wizard** dialog box appears; see Figure 183.

Dial-Up Networking Dialog Box





Modem or Adaptor Dialog Box



10. Select **RASPPRPM (VPN)**.

er dialog box appears; see Figure 186.

There are two ways to connect to the VPN server:

- Dialup connection
- LAN connection

To connect to the VPN server using a dialup connection, follow these steps:

5. Enter the Domain information (optional)
6. Click **OK**.

You may see some brief connection messages. When they disappear, the VPN connection is established.

Login Box



The hard disk drive is the only customer-replaceable component in your Sun

GNU General Public License

Version 3, 29 June 2007
Copyright © 2007 Free Software Foundation, Inc.
<http://fsf.org/licensing/gpl>

2.



Appendix G: Licenses

Glossar

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10BA S E-T

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100BA S E-T

100- b/ b/ b/ b/ () , , - () , , .

Digital Subscriber Line (DSL)

DSL is a technology that allows you to receive high-speed data over your telephone line. It uses a special device called a DSL modem to separate the telephone signal from the data signal. This allows you to use your telephone and computer at the same time without interfering with each other. The speed of your DSL connection depends on the distance between your home and the nearest telephone exchange. The closer you are to the exchange, the faster your connection will be.

Ethernet

(Ethernet) A local area network (LAN) standard for physically connecting computer systems together. It defines the physical layer and media access control (MAC) layer of the OSI model. Ethernet can connect two or more computers together, or it can connect a large number of computers together over a wide area. The standard specifies three physical layers: 10 bps, 100 bps, and 1000 bps. The MAC layer uses CSMA/CD (Carrier Sense Multiple Access/Collision Detection) to handle traffic. The IEEE 802.3 standard defines the physical layer and MAC layer of Ethernet.

ETRN

(ETRN) A command used to request that a mail server send all messages in the user's inbox to another mail server. This is typically used to move messages between different mail systems.

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Event

An event is a specific occurrence or action that triggers a response. In computing, an event is often used to describe a user action, such as clicking a button or moving a mouse, or a system action, such as a file being created or deleted.

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Integrated Services Digital Network (ISDN)

The Integrated Services Digital Network (ISDN) is a digital network that provides a standard way to connect telephone equipment to a telephone company's network. ISDN offers faster data transmission rates than traditional analog telephone lines. It also allows for multiple services to be provided over a single physical connection, such as voice, data, and video. ISDN is often used for business communications, such as connecting a computer to a telephone system or connecting a computer to a telephone company's network for Internet access.

Internet Message Access Protocol (IMAP)

Internet Message Access Protocol (IMAP) is a protocol for retrieving messages from a mail server. It is designed to be used over TCP port 143 or SSL port 993. IMAP allows users to access their email from multiple devices simultaneously without losing track of messages. It also provides features such as search, filtering, and synchronization.

Peripheral Component Interconnect (PCI)

Secure Sockets Layer (SSL)

The Sun Cobalt Qube 3 supports the Secure Sockets Layer (SSL) protocol. SSL is a standard security protocol used to establish encrypted links between web servers and clients. It is used to protect sensitive information such as credit card numbers, login details, and other personal information.

SSL is supported on all major web browsers and can be enabled on the Sun Cobalt Qube 3 by configuring the server software. Once SSL is enabled, the server will automatically encrypt all data sent between the client and the server, ensuring that the information is secure and cannot be intercepted by unauthorized parties.

SSL is a widely used security protocol and is considered to be one of the most effective ways to protect sensitive information over the internet. By enabling SSL on the Sun Cobalt Qube 3, you can ensure that your website is secure and that your users' information is protected.

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Server Message Block (SMB)

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Simple Mail Transfer Protocol (SMTP)

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MB

Server Message Block (SMB).

S MTP

Simple Mail Transfer Protocol (SMTP).

SIMP

Simple Network Management Protocol (SNMP).

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Securket Layer (SSL).

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Tel Protocol (TCP)

Tel Protocol/Internet Protocol (TCP/IP)

