

COBALT Qube™ 3

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Important Safeguards

Preface

This user manual is for anyone who will set up the Qube 3 network server appliance for a group of users. You should be familiar with Microsoft® Windows™, Macintosh® or other operating systems, and N Hscape Navigator®, Microsoft® Internet Explorer or other Web browsers.

This manual consists of the following chapters and appendices:

Chapter 1 — “Introduction” on page 1 includes an overview of the Qube 3’s features.

Chapter 2 — “Setting up the Qube 3” on page 11 describes the hardware setup of the Qube 3 and the process to integrate the Qube 3 into the network.

Chapter 3 — “Qube 3 Services” on page 37 explains the features available on the Qube 3.

Chapter 4 — “Users Site” on page 63 explains the Qube 3 Web Mail and Address Book features.

Chapter 5

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Documentation

Figure 3. BlueLinQ screen



Programs screen

The **Programs** screen (Figure 4) is where you access the WebMail feature and manage the address book. The **Programs** screen is where Qube 3 users will spend most of their time when using the Qube 3.

Figure 4. Programs screen

Personal Profile screen

The **Personal Profile** screen (Figure 5) is where users access and configure the personal settings on the Qube 3.

Figure 5. Personal Profile screen



Qube 3 usage requirements

To use the Qube 3, you need:

- A 10/100BaseTX Transmission Control Protocol/Internet Protocol (TCP/IP)-based loCal area network (LAN).
- A personal computer (attached to the network) that uses a Web browser (for example, Netscape Navigator, version 4.7 or later, or Microsoft Internet Explorer, version 5.0 or later).

To manage the Qube 3 from the Server Desktop, you must enable cookies, cascading style sheets and Javascript on your browser (these features are normally enabled by default).

- Network parameters, which you can obtain from your system or network administrator; these include the Qube 3's assigned IP address, the subnet mask of your network and, if communicating with other networks, a gateway or router address.
- An Internet service provider (ISP), if you plan to connect to the Internet.

Customer Service and Technical Support

For Cobalt product information, visit the support section of the Cobalt Web site at <http://www.cobalt.com/support/>. The site includes a Knowledge Base that contains many Frequently Asked Questions (FAQs). You can search the Knowledge Base or browse by category.

Further resources and information

The Knowledge Base

Cobalt offers access to its online database of common installation and configuration problems and solutions. You can access the site at <http://www.cobalt.com/support/kb/>.

Online technical papers

For customers looking for more in-depth technical information, there are a number of technical papers available on Cobalt Networks' Web site at <http://www.cobalt.com/support/>.

Education

For those who desire a premium level of technical expertise with Cobalt Networks products, we offer a number of training courses. The intended audience includes end users, Cobalt resellers, system and network administrators, systems engineers, product developers, supportU6L2MofSF1LIPFhease3You c\Z+3ZD3_Mhan acc
<http://www>

Setting up the Qube 3

Figure 7. LCD console

During startup, the LCD screen on the back of the Qube 3 displays status information about the boot process itself. When setting up the Qube 3, you use the LCD console to enter network configuration information. Once the Qube 3 is running, the LCD console is used to change network configuration information, reboot the unit and power down the unit.

The arrow buttons function as follows:

The **Left**

Configuring the Qube 3 with the

- If the Qube 3 auto-configures successfully, it acts as a DHCP server and assigns to the clients IP addresses in the range 10.6.18.30 through 10.6.18.249, a subnet mask of “255.255.255.0”, a primary DNS server address of “10.6.18.1” and a gateway or router address of “10.6.18.1”.
- Once you have completed the browser-based setup of the Qube 3, change the TCP/IP settings for the clients on your network to “Use a DHCP server” (Apple) or “Obtain an IP address automatically” (Windows).

Continue the setup process with “Phase 2: Setting up with the Web browser” on page 20.

Configuring the Qube 3 manually



Important: In this phase, you configure only the primary network interface. To complete this phase, you must know:

- the IP address assigned to the Qube 3
- the subnet mask of your network



Note: A gateway or router address is not required for a Qube 3 that is only connected to a local area network (LAN). If you connect to another network through the Qube 3, you require a gateway

If the Qube 3 is unable to find a DHCP server on the network and you do not choose the auto-configuration option, the LCD display reads:

PRIMARY IP ADDR:
000.000.000.000

A blinking cursor appears on the second line of the LCD display. The following steps explain how to enter the required network information for the primary network interface. The secondary network interface is configured through the Web browser as described in the next section.

An IP address consists of four numbers, ranging from 0 to 255, separated by periods (for example, 192.168.25.77); this is often referred to as “dot-quad notation”.

To enter the IP address for the Qube 3:

1. Use the arrow buttons on the LCD console to enter the IP address assigned to the Qube 3.
2. Press the **Enter** button to accept the IP address.

If the IP address is valid, the following prompt appears:

PRIMARY NETMASK:
000.000.000.000

Figure 8. Qube 3 Welcome screen

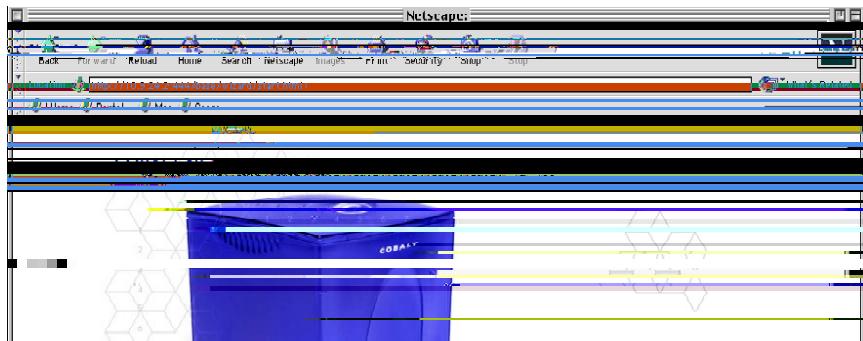
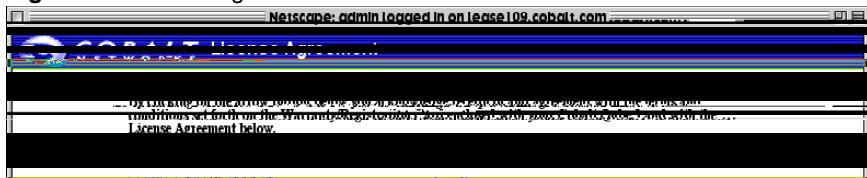


Figure 9. License Agreement



Administrator Settings

The **Administrator Settings** screen appears; see Figure 10. The Qube 3 Administrator is responsible for the following:

- Setting up and maintaining the users, groups and services on the Qube 3
- Responding to email alerts from the Qube 3 in order to forestall potential problems

Figure 10. Administrator Settings

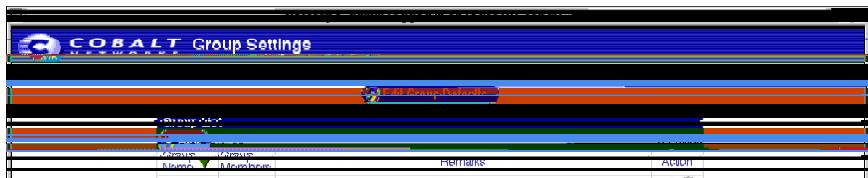
User Settings

The **User Settings** screen appears as shown in Figure F2. On this screen, you can add users to the Qube 3 and allocate the user disk space limits. The Qube 3 Administrator can select how the Qube 3 generates the user name and set the default disk usage limits by clicking **Edit User Defaults**.

Figure 12. User Settings

The Qube 3 Administrator, with the user name *admin*, has full control of the

Figure 13. Group Settings



Network Integration

Figure 14 shows the **Network Integration** screen; on this screen, you can do the following:

- Assign a host name (for example, qube3) to the Qube 3.

Figure 14. Network Integration

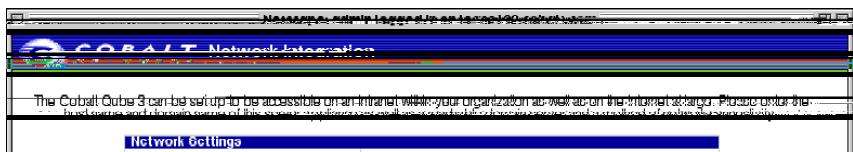


Figure 15. Online Registration



Qube 3 Services

This chapter offers a brief overview of the services available on the Cobalt Qube 3. These services are described in detail in Chapter 4 and Chapter 5.

These services include:

- Email and mailing lists
- Web publishing
- File sharing through Windows file sharing, AppleShare, and file transfer protocol (FTP)
- Dynamic Host Configuration Protocol (DHCP) server
- Domain Name System (DNS) server
- IP Masquerading (also known as Network Address Translation [NAT])
- Redundant array of independent disks Level 1 (RAID-1) (available on the Qube 3 Professional Edition only)
- Internet access through a high-speed serial port
- Basic Firewall
- Web Caching (available on the Qube 3 Business Edition and Professional Edition only)
- Archived mailing lists
- Lightweight Directory Access Protocol (LDAP) import and export
- Backup and restore data
- Installing software
- Simple Network Management Protocol (SNMP)
- Secure sockets layer (SSL)

Managing your personal profile

Setting up your email client

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

1. **Email address.** The format is either

<username>@domainname (see the note below) or

<username>@hostname.domainname

(for example, myname@qube3.cobalt.com) where:

- <username> is the user name assigned to you (for example, myname)
- <cM•S”6LsP;1BMA;1BM<cM•S”forfi3ser name assign(for eSP)e3.cobalt.comZ

If you do not enter a password after you enable FrontPage Server Extensions and then try to save changes, the Server Desktop does not accept the changes. An error message appears at the bottom of the screen, informing you that you must enter a password for the *webmaster* account.

Once the webmaster has authenticated through the FrontPage client, he or she can:

- modify Web content
- create and manage FrontPage subwebs
- add, modify or remove additional FrontPage user accounts
- change the *webmaster* password

Using an HTML editor

You can create Web pages using any of the standard HTML editors and the HTML publishing capabilities of many popular desktop productivity applications. You can create and link the Web pages themselves on your desktop computer, and then move them to the appropriate subdirectory in the Qube 3 through an FTP application; see “Publishing Web pages using FTP” on page 45.

CGI scripts

The Qube 3 supports common gateway interface (CGI) scripts, such as those written in Perl or C, as well as Unix shell scripts.

CGI scripts allow you to develop highly interactive, powerful Web-based applications by build FTPserver-side CGI scripts that generate Web pages in response to specific user inputs. These applications range from simple scheduling and conferencing applications to sophisticated electronic commerce solutions.

You can develop CGI scripts on your desktop machine and then transfer them to the Qube 3 through an FTP-based application that allows the permissions to be set to “Executable”.

Sharing files and transferring data

Setting up Windows file sharing for Windows 95 and 98

1. If the user name is the same on both your computer and the Qube 3, go to Step 6
2. If the user name on your computer is different from the user name on the Qube 3, click the **Start** button in the bottom left corner of your screen.
3. Select **Shut Down**. The Shut Down Windows dialog appears.
4. Within the Shut Down Windows dialog, select “Close all programs and log on as a different user”. Click **Yes**.

prompts you with an Enter Network Password menu.

5. Enter the same user name and password that are stored on the Qube 3. Your computer logs you in. If your Windows password does not match the Qube 3 password, you are prompted for the Qube 3 password when you first connect to your Qube 3 through Network Neighborhood on your Windows desktop.
6. Double-click on the Network Neighborhood icon. The Qube 3 (listed as the <hostname> assigned to the Qube 3) should be included in the listing.
7. If the Qube 3 is not listed, double-click on the Entire Network icon to cause your computer to scan the entire network for devices that can be shared. Select the name of the workgroup/domain of which the Qube 3 is a member. The default workgroup for the Qube 3 is WORKGROUP.

You can also use the Find feature in Windows to locate the Qube 3.

- Click **Start** in the bottom left corner of the Windows screen.
- Select **Find** and then **Computer**. The Find:Computer dialog appears.
- Enter the hostname of the Qube 3 in the field and click **Find Now**. The .aQf

8. Once the Qube 3 shows up in the Network Neighborhood list, double-click it to open it on your desktop computer. A password prompt appears. Enter the

4. Click **OK**.
5. You may want to log in to the Qube 3 as a different user. If you see a password prompt in Step 3, you can do so.

However, if your Windows NT account uses the same user name and password as the Qube 3, account, the password prompt in Step 3 will not

For incoming packets, IP Masquerading does the opposite. IP Masquerading receives a packet from the Internet and translates the legal address of the secondary interface into the private IP address on the internal network.

RAID-1 support

RAID-1 is available on the Qube 3 Professional Edition only.

A redundant array of independent disks (RAID) is a way of storing the operating system to be a single logical hard disk.

Hardware failure

If one of the hard drives fails, the Qube 3 can function with one hard drive, but the server can no longer provide disk mirroring. To restore RAID service, you must shut down the Qube 3 and replace the failed hard drive. For more information on replacing a hard drive, see Appendix C, “Upgrading the Qube 3”.

For a failed drive, Active Monitor indicates that the Drive A or Drive B has failed. Drive A is the drive next to the side wall of the chassis; Drive B is on the inside.

Basic Firewall

For more information on configuring the firewall, see “Basic Firewall” on page 149.

For the definitions of the policies, see “Policy definitions” on page 153.

Rules and chains

A packet-filtering rule consists of a set of criteria, and an action to take if a packet matches the criteria (this action is called the rule's policy). Criteria for a rule can consist of items such as the machine from which the packet originated, the destination of the packet and the network interface through which the packet is moving. Typically, a rule's policy accepts or rejects the packet; if rejected, the packet is discarded from the system.

Rules are organized 3ZD3Bm; ordered lists *called*s. When a chain of rules is applied, the firewall system tests the packet against each rule in sequence. If a packet meets the criteria of a rule, the action specified by the policy is taken; the

Web Caching

Web Caching is available on the Qube 3 Business Edition and Professional Edition only.

The Qube 3 offers a caching feature. When the caching feature is enabled, the Qube 3 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 requests a Web page from the network, the Web cache s are intercepts the

Support for Lightweight Directory Access Protocol (LDAP)

Lightweight Directory Access Protocol (LDAP) is a client-server protocol for accessing a directory service.

The Qube 3 supports looking up user and group information through an LDAP client. For example, using a standard email client such as Netscape, Eudora or Outlook, you can use the address book feature of the email client to access the Qube 3's directory service.

At the network level, the first time the browser connects to a server, the browser stores the server's certificate. This is the encryption part of the secure connection. Each time the browser "thinks" that it is communicating with this same server, it verifies that this same certificate is used to assure the secure connection.

At a higher level, a server's certificate is "signed" by a trusted external authority that the browser knows about, such as VeriSign. This is the authentication part of the secure connection. The server information (country, state, city, organization) is encoded into the certificate and certificate request. The external authority signs your request and guarantees that your server information is legitimate.

For example, if a Web site sends a signed certificate saying that it comes from

2.4 **SS** **2.4**

Adding an attachment to a message

► Sa., SS , 12., SS ,
a., a., 11., a., 1 ► SS ,

a., a., a., 11., 1 12., SS
1 " ► SS ► 1' " 11. 1 11., 1S 1

Folder List

Moving a message

3. **ss**
t a, , t x Alt t ss ss stat
m a, tt v
t " v t " m - m t tt a, s tt t
m a, tt v t ss ss v a, ss a, s m
s tt
a, a, a, s, w t v ss

Replying to a message

a, ss
, t s w j a, t Alt) t ss

Manage Folders

Figure 22. Folder List table

Adding a folder

t s a a)□ □))□

l ▶ **St. l a.s t s.s a.s** St. S a.s a.s l

Chapter 4: Users Site

Replying to a message in the archive

ta_s ss t a_s v

Personal

S 2, S 1 t ss a, t a, t a, t
S b, d, w, 2, s, w, 1 2, s, s 2, , 2, 2, ss,
t 2, 2, s, w, s, 2, 2, 2, 2, 2, ss,
2, s, w, w, t t 1 s s 2, 2, t s,
t 2,



Note: w 1 2, v t 1 2, 2, 2, ss 2, s, s w
a, s t t v a, t v a, t v t t s
t w, 2, 2, 2, 2, ss, w 1 2, 1 s 2, t

Viewing the entries in the Personal Address Book

v t t s t s 2, ss
Personal t s - w s 2, ss a, 2, 2, s s
w 9 a, s s 2, 2, w s

- Full Name s 2, s 1 t s 2, a, t
- Email Address s 2, s 2, 2, ss a, t s
- Phone Number s 2, s 1 t w a, t s
- Actions s 2, s s 2, t t v s , t
t t t t t s 2, ss
w t s t s 2, ss s s 2, 2, v t
t s w

Figure 29. Personal Address Book

Vacation message

a,a,t ss a,t=a,s s >t t a,a,t - ss b,t

Personal Information

l S a.s a.s l S l , M a.s l a.s a.a.s m S a.s
a b t a s t

Personal Profile, [Edit](#)

Personal Information

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

- Users and Groups (see page 104)
 - User List
 - Group List

There are four icons in the top right corner of the Server Desktop:

- Help
- Software Notification
- Active Monitor
- Logout



You can access the user manual in PDF format from the Server Desktop. If you have installed third-party software on the Qube 3, the relevant documentation is available on this screen.

To access the PDF file for the user manual, click on the help icon in the top right corner. A separate browser window opens displaying a list of PDF files in the languages available. Click the link for the PDF in your preferred language. If e



The Users and Groups section is where you administer user and group settings for all Qube 3 users including the Qube 3 Administrator.

3 . User List table

The screenshot shows a user management interface titled "User List". The table has columns for "Full Name", "User", "Domain", and "Actions". The "Actions" column contains icons for edit, delete, and other user management functions.

Full Name	User	Domain	Action
John Doe	jdoe	sales.silicon.com	
Eric Wilcox	ewilcox		
Grace Ecklund-Cookson	gecklund	Marketing.BIGsilicon.com	
John Britton	jbritton		
Eric Wilcox	ewilcox		
James Britton	jbritton		
Eric Wilcox	ewilcox		
Tim Hockin	thockin		

To configure the default user settings:

1. Select **Administration > Users and Groups > User List**

to open The User

To add a user:

1. Select **Administration > Users and Groups > User List** to open The User List

~~List~~ Click ~~User~~ ~~Add~~ ~~New~~ ~~User~~ ~~Group~~

3. Fill in the fields:

- **Full name.** Enter the first and last names of the user, separated by a space (for example, Alan Williams).
- **User name.** The user name is generated automatically from the user's settings.

If the automatically generated user name is already taken by another user, you cannot save the information that you entered in the Add New User table and you have to enter a different user name manually.

- **Password.** Enter the password twice to ensure that you have entered it as

To modify the information for a user's account:

1. Select **Administration > Users and Groups > User List**. The User List table appears.
2. Click the green pencil icon next to the user whose account you want to modify. The Modify User table appears (see Figure 42).
3. Modify one or all of the following fields. You cannot modify the user name.
 - **Full name.** Enter the first and last names of the user, separated by a space (for example, Grace Ecklund Gustavson).
 - **New password.** Enter the new password twice to ensure that you have entered it as intended. For guidelines on choosing a password, see “Password guidelines” on page 26.
 - **Maximum allowed disk space (MB).** This value is the amount of disk space available to a user for file storage and Web pages. The value entered must be a whole number greater than zero (you cannot enter zero).

If you leave this field blank, the user has unlimited disk space.

- **Group Membership.** You can edit the groups to which the user belongs. Select one or more group names and click on the arrows to move the

- 42. Modify User Account Settings table



To add a group:

1. Select **Administration > Users and Groups > Group List**. The Group List table appears.

2. Configure the settings in the LDAP Import table.

- **Enable.** Click the check box to enable the Qube 3 as an LDAP server.
- **Base Distinctive Name.** The base distinctive name (Dn) of your user directory. For example, o=My Organization, c=US.
- **Email Domain Name.** (*optional*) This option allows you to alter the

2. In the pull-down menu, select Lightweight Directory Access Protocol (LDAP) Import to open the following table.
 - **50. LDAP Import table**

3. Configure the settings in the LDAP Import table.
 - **Server Network Address.** The IP or hostname of the server from which you wish to import.
 - **ER>rsa GproI/Hif**



The Import feature allows you to upload a tab-delimited file containing user information to the Qube 3, saving you the time and effort of adding a large list of users individually through the Add New User function.

The tab-delimited file must have the following information for each user; this

This section describes how the Qube 3 email client connects to the Qube 3 email settings. For additional information about setting up your email client to access email on the Qube 3

54. Add Mailing List - Advanced table

Add Mailing List

8. Fill in the fields.

- **Owner/Moderator.** Enter a properly formatted email address or the user name of the Qube 3 user performing all the administrative duties for the mailing list. For example, user@cobalt.com is a valid entry.
The default value is *admin*.
- **Password.** This password is used when performing certain list administration tasks through email, such as approving subscriptions or messages. If you do not plan to use these features, leave this field blank.
- **Posting Policy.** Use the pull-down menu to select a policy for sending messages to the mailing list.
 - **Only Subscribers Can Post Messages.** Only members of the mailing can post messages to the mailing list.
 - **All Users Can Post Messages.** This means that anyone with access to email can post messages if they know name of the mailing list.
 - **Moderator Confirms All Messages.** the first field must approve the messages sent to the mailing list before they are posted.

- **Subscription Policy.** Use the pull-down menu to select a policy for subscribing to the mailing list.
 - **Open: any user may subscribe.** Anyone with an email address can subscribe herself or himself to the mailing list; that person is automatically subscribed. This is not restricted to registered Qube 3 users.
 - **Confirm: Email confirmation is required for subscription.** The system sends a confirmation message to the user's email address.
 - **WgOgXHdnot**

w

To modify a mailing list:

1. Select **Administration > Email Services > Mailing Lists**. The Mailing Lists table appears.
2. Click the green pencil icon next to the group whose mailing list you want to modify.
3. The Modify Mailing List table appears. There are basic and advanced tables. Except for the screen titles, these tables are contain the same fields as the Add New Mailing List tables. See Figure 55 and Figure 56.
For details on how to enter data in these tables, refer to “Adding a mailing list” on page 123.
4. Click **Save**.

55. Modify Mailing List - Basic table

Modify Mailing List		Basic	Advanced
List Name	chemistry	Users Subscribed	Users Not Subscribed
Local Subscribers	jkamradt lwilliams mwaychison pvalenz	jkamradt lwilliams mwaychison pvalenz	lwilliams mwaychison pvalenz
Remote Subscribers			

• **56.**

The Qube 3 supports email for entire domains such as www.mydomain.com. By default, each registered user has an email account created on the Qube 3.

The Qube 3 supports multiple client and server email protocols but does not implement virtual email users. This means that for the entire Qube 3, each user must have a unique username.

The Qube 3 can act as a Server for an entire domain.

To configure the Email settings:

1. Select **Administration > Email Services > Email Servers**. The Email Settings table opens in the Basic mode.
2. Click **Advanced**
 - 5 . Email Servers Settings - Advanced table

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

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

If you connect to the Internet through a dedicated phone line or by ethernet (through the secondary network interface), then you can choose to have your email delivered and retrieved more often. If you connect to the Internet through a modem that shares a phone line with other functions, or if your Internet access is charged by the minute, then you should specify less-frequent mail delivery and pickup.

- **Maximum Email Message Size.** This sets the maximum size of email messages this server will send or receive. The default value is to leave this field empty to allow this server to send and receive email messages of any size. You may optionally enter an integer greater than zero.
- **Force Senders Domain.**

sOOO4gXwhich thwanonnWconnl(., or the uency.

- **OP Autiventi mUrted eHa Sfy/ing:ge Size.**

- **Relay Email from Hosts/Domains/IP Addresses.** Enter the IP addresses, host names, or domain names that are allowed to relay email through this Cobalt Qube 3 server. For more information, see “Email relaying” on page 41.

A user cannot send outgoing email through this server unless the IP address, host name or domain name of the machine from which they are connecting is entered in this field. Networks may be specified in



ISPs often arrange for all messages to an organization to be retrieved from a single mailbox. This mailbox is usually referred to as a “multidrop mailbox”

2. Configure the fields in the Remote Retrieval table.
 - **Enable Remote Retrieval.** Click the check box to enable remote retrieval.
 - **Remote Email Server.** 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

2. Configure the following settings:

- **Enable Server.** Check this box to enable Windows File Sharing.
- **Maximum Simultaneous Users.** The default value is 25 users but you can change this value.
- **Workgroup**

()

AppleShare is the Macintosh file-sharing protocol. This option allows you to share files between the Qu4g44ghe wren bB4ODoBODrk.en BI(en th to XLU(g(äUYDQu

64. Guest Share Settings table

To set the Web settings:

1. Select **Administration > Web Services > Web**. The Web Settings table appears; see Figure 65.
2. To enable the FrontPage Extensions, click the Enable check box and enter a webmaster password.

65. Web Settings table

3. (*optional*) Enter the host name(s) or domain name(s) to which you want to apply the policy chosen in the pull-down menu. Blanket domain names may be used by including a leading period character before a domain name.

For example, if you enter “www.sun.com”, the restriction policy applies to this host only. However, if you enter “.sun.com”, the policy applies to “www.sun.com”, “cobalt.sun.com” and all other Web sites sharing the “sun.com” domain.

4. (*optional*) Enter the list of IP addresses to which you want to apply the policy chosen in the pull-down menu.
5. Click **Save**. The new configuration settings are saved and the Restricted Web Access table refreshes.

• 68.

Network Services

In the Network section, you can enter the network configuration settings for the Qube 3. The network settings make the Qube 3 visible to other computers.

There are three ways to set up the Qube 3 network access:

- Both intranet and Internet communication is provided through the primary network interface.
- Intranet access is provided through the primary network interface; Internet access is provided through the secondary network interface. The xFxAfprot H“is CIS”

s

s

2. Specify the settings in the DHCP Settings table:

- **Enable Server.** This check box enables or disables the feature of DHCP server. If you enable this feature, the Qube 3 automatically provides the network configuration information to a client machine when you power up the client machine.
- **Client Domain Name.** Enter the domain name that the Qube 3 will automatically serve to A. Olhine.

7 1 Tf 0 g -6.5 17.70 26.9

4. Click **Add** for the Dynamic Address Assignments List to open the table shown Figure 69.

Figure 69.



Figure 73.

Figure 74.

Viewing a chain of rules

To view a chain of rules:

1. Select

Adding a firewall rule

To add a firewall rule:

1. Select **Administration > Network Services > 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 76.

- **Source Port Number(s).** Enter nqe first and last source port number in nqe

3. Click the green pencil icon next to the rule you want to modify. The Edit

Changing the order of rules in a cngiin

To thhDvde thhfirewall, stis in accNifiv CF*HSCREX, FFP*F1.C9xF2CW(WSeleky

s

s

Telnet

To specify the access settings for telnet:

1. Select

2. Select one of the following telnet access options to specify who has telnet access to the Qube 3.

- **Off - Do Not Allow Logins.** No telnet access is available. This is the

- **IP Address** (Primary Interface). Enter the IP address of the primary interface. If you are using only one network interface connection to the server appliance, use the primary interface and leave the secondary interface empty. Enter a series of four numbers between 0 and 255 separated by periods. For example, 192.168.1.1 is a valid entry.

3. Configure the following settings:

- **Server Gateway.** Enter the IP address of your local network gateway. A network gateway allows you to connect to the world outside of your LAN. Enter a series of four numbers between 0 and 255 separated by periods. For example, 192.168.1.254 is a valid entry. Leaving this field empty prevents this machine from communicating with other networks.
- **IP Forwarding and Masquerading.** Select the method of forwarding packets through the server appliance. Choosing packet forwarding with masquerading enables network address translation (NAT) functionality. This allows your organization to share Internet access by translating all network traffic between your single publicly accessible IP address and your many privately accessible IP addresses through this server. Choosing only packet forwarding with no masquerading only allows traffic between one network interface and the other without providing NAT. Choosing no packet forwarding does not allow any traffic between one network interface and the other.
- **IP Address.** Enter the IP address of the secondary interface. If you are using only one network interface connection to the server appliance, use the primary interface and leave the secondary interface empty. Enter a series of four numbers between 0 and 255 separated by periods. For example, 209.43.21.5 is a valid entry.
- **IP Network Mask.** Enter the network mask of the secondary interface. If you are using only one network interface connection to the server, use the primary interface and leave the secondary interface empty. Enter a series of four numbers between 0 and 255 separated by periods. For example, 255.255.255.0 is a valid entry.
- **MAC Address.**

Configuration for cable modem or DSL

Complete this section only if you intend to connect the Qube 3 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 back of the Qube 3; see Figure 6 on page 12.

To configure the Qube 3 Internet settings for a cable modem or for DSL service:

1. Select **Administration > System > Internet** to open the Internet Settings table.
2. If it does not open in the desired mode, click on the **Change Internet Connection** ~~Cable Modem or DSL~~ The Cable

SL table appears; see Figure 84.

To configure the Qube 3 Internet settings for an analog modem or for ISDN:

1. Select **Administration > System > Internet** to open the Internet Settings table.
2. If it does not open in the desired mode, click

- **Connection Period.** You can select certain hours of the day during



Time

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

1. Select **Administration > System > Time**. The Time Settings table opens; see Figure 86.
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 Qube 3 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 86.



Information

To view information about your Qube 3, select **Administration > System > Information**. The System Information table appears; see Figure 87. You can see

Maintenance

The Maintenance menu provides access to utilities for backing up and restoring the Qube 3 system. **kupC**

Viewing details of a scheduled backup

s^t

Viewing details of a history item

To view the details for a history item:

1.

Restoring a backup file manually

To restore a data set manually, you must make the desired data set available to the Qube 3 either by mounting the network share or by transferring the files to the Qube 3.

1. Mount the network share or transfer the data set to the Qube 3.
2. Select **Administration > Maintenance > Restore**. The Backup File List table appears.
3. Click **Restore Manually** above the table. The Manual Restore From Directory table appears; see Figure 92.

Figure 92.  A screenshot of a software interface showing a table titled "Manual Restore From Directory". The table has one row with the following columns: "File Name" (containing "/home/restoredata/20000903040200"), "Location to Restore Files" (set to "restore"), and "Restore" (a blue button). There are also "Edit" and "Delete" buttons at the top of the table.

4. In the Directory field, enter the name of the directory on the Qube 3 to which the data has been transferred or mounted, and within which the data set is found (for example, /home/restoredata/20000903040200).
5. From the Location to Restore Files pull-down menu, choose a location for the restored files: restore to “restore” fileshare or replace existing files.

6. Click **Cancel** to discard any changes you have made or click **Restore** to

Disk usage

To view information about the current state of your Qube 3 disk:

1. Select

Active Monitor

The Qube 3 uses Active Monitor software, a Cobalt Networks utility that runs on

Figure 96. V _____ as a

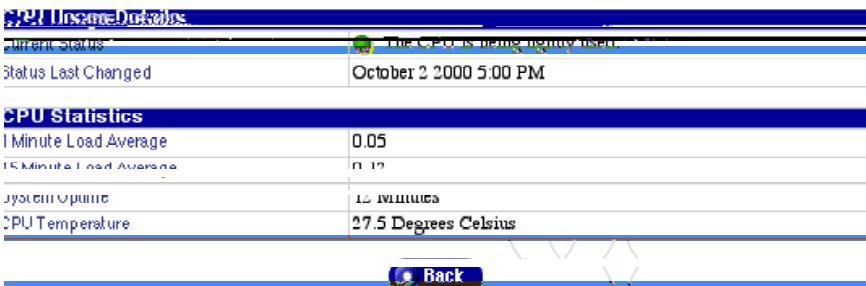


3. To view detailed status information for a particular system component or service, click the colored circle to the left of the item's name in the table or click the magnifying glass in the Action column that corresponds to the name of the item. See Figure 97.

The status of each of the above items is indicated by a green, yellow, red or grey circle beside each item. The colors have the following significance:

- **Grey.** No information is available or monitoring is not enabled
- **Green.** Normal functioning
- **Yellow.** A problem exists that should be investigated by the Qube 3 Administrator (for example, low disk space)
- **Red.** A severe problem exists that needs immediate attention by the Qube 3 Administrator

Figure 97. A screenshot of the Qube 3 interface showing CPU usage details.



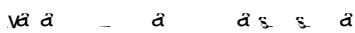
BlueLinQ

When you log into the Qube 3 as  , the BlueLinQ tab appears in the top menu bar of the Qube 3 interface. When you select BlueLinQ, the left menu bar presents commands that allow you to update the Qube 3 software, adqeledate th presenare, adqelete al vi

Aq(

Updates

1. Select **BlueLinQ > Updates**. The Available Software Updates List table appears; see Figure 100.

Figure 100.  A screenshot of a software interface titled "Available Software Updates List". It displays two rows of information, each consisting of a checkmark icon, a software name, and a "Status" column. The first row shows "Windows 7 Pro SP1" with a status of "Up to date". The second row shows "Windows 10 Pro" with a status of "Up to date".

2. Click **Check Availability Now** to update the list of available software or click **Install Manually** if you already know the location of new software that

s^t

2. Configure the fields in the BlueLinQ Settings tables.

•

Set up network

Advanced network

DHCP primary

To configure the primary network interface on the Qube 3 using a DHCP server:

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

Set up secondary

Power down

To power down the Qube 3:

Appendix A: Using the LCD Console

Software

The Qube 3 has the following software features.

Features

- Linux 2.2 multitasking operating system

Upgrading the Qube 3

Components

Your Qube 3 comes equipped with two Dual Inline Memory Module (DIMM) slots, one of which is used for existing memory, one available PCI slot, and one or two hard disk driveYou can add components to enhance your Qube 3.

The Qube 3 automatically detects a newCI card or hard disk drive

Before you purcrd disk 5e a component to add to the Qube 3, ensure trd disk t the component is of the right type and trd disk t it will fit in the allocated space.

- The DIMM modules must be PC100 SDRAM. They must be less trd disk n 2.5 incrd des (63.5 mm) trd 1ll and less trd disk n 0.4 incrd des (10.1 mm) trd 5ick.
- PCI cards must be less trd disk n 5.5 incrd des (139 mm) long.
- Hard disks must be IDE or ATA``3oOoz#`3-oz OI#o<fC;fi• a7 dpfiCCbr'h#fC R, #ff

Hard disk drives

The Qube 3 and Qube 3 Business Edition ship with one hard drive disk; the Qube 3 Professional Edition ships with two hard disk drives and offers RAID-1 Properly Y7“5Pw&Pi shY7“5PmoderwYG“te5Y7“5Pef1rd 1Ofort,5Y7“5Pcs eck5Y7“5P

Figure 106. Exploded view of the Qube 3

▲

Figure 107. Qube 3 I/O board

Opening the Qube 3

To open the Qube 3:

1. Power down the Qube 3. See “Power down” on page 203.
2. Unplug the Qube 3.
3. Remove the power cord from the rear panel of the Qube 3. The power connector is located at the bottom right corner. See Figure 1 on page 2. To remove the cord, simply hold the Qube 3 in place and gently pull the cord.
4. Remove the top cover. See “Opening the Qube 3” on page 15.

Adding a PCI expansion card

1. With the CPU riser board out of the system chassis, remove the screw holding the PCI slot cover in place and remove the PCI slot cover. See Figure 1 on page 2.
2. Install the PCI card into the PCI slot on the I/O board. Match the PCI card alignment marks with the alignment guides on the slot. See Figure 107.
3. Fasten the PCI card in place with the screw that was holding the PCI slot cover. Save the PCI slot cover, in case you want to remove the PCI card later.

Replacing thpd

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 169.

High-speed serial port as a serial console port

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

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 Qube 3 while holding in the recessed Reset Password button on the back panel of the Qube 3. See Figure 1 on page 2.

To reboot the Qube 3 from the LCD panel, see “Reboot” on page 202.

When you reboot the Qube 3 in this manner, the LCD screen displays either:

CONSOLE ON

or

CONSOLE OFF

Directory structure

User home page

When Qube 3 Administrator creates a user through the Server Desktop, the home directory for that user is created in:

/home/users/username/

User must upload files for their Web pages to:

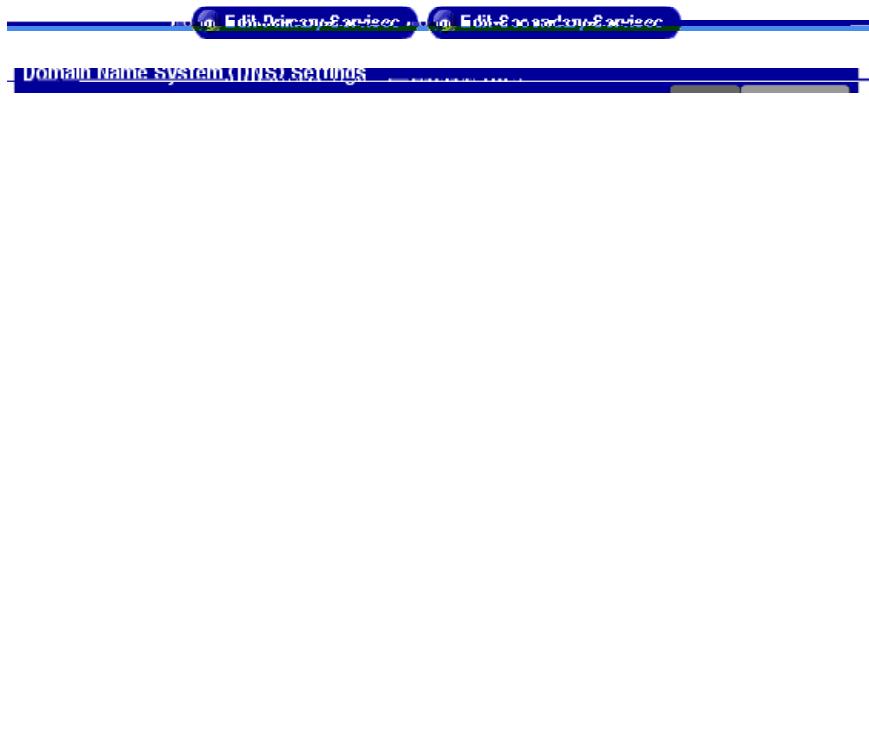
/home/users/username/web/

Users can view their Web pages at:

http://<IP address>/users/<username>/ or http://<IP address>/~ <username>/

CGI scripts

Figure 110. Advanced DNS table



Domain administrator email address

1. r ss v ts fo t us r
r ss s pu l l v l l s t s p t v o t u or t o or
tw. s rv .

Refresh interval

ou o gur t r rs t rv l tw up t s ro s o r s
s rv r.

I s r or g so ur r u fl , r s t ul v lu .

I s r or g so ur o t , r s t ul v lu .

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M ls rv r(M)s rv r

I t r r or or s , t r r o ut or t s l t o opt o s

Configuring a Forward Address (A) record

Appendix E: Domain Name System

Configuring an Alias (CNAME) record

l s(-ME)r or prov s{ tr sl t o ro o ull u l
 o {o r v l l u l o .
 sour o s w s{ l s t t rs t o s
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Important: To alias l s(-ME)r or to us
 o for solv to os t .

For x pl , o of r t l s(-ME)r or or
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 Forw r r ss()r or or o . o t t I r ss
 us www. o . o .

S o gur g Forw r r ss()r or o p g p .

o o gur l s(-ME)r or or our u

1. **S l t Administration > Network Services > DNS.**

→ **SS tt gs t l pp rs.**

2. **l Edit Primary Services ov t t l . r r S rv L st t l pp rs.**
3. **S l t l s(-ME)r or ro t cfl Record... pull-ow u .
 w l s(-ME)r or t l pp rs.**
4. **E t r t os t (opt o l) o (or x pl , ws
 o . o)o t l s.**
5. **E t r t os t (opt o l) o (or x pl , ws
 o t rpl . o)o t r l o .**
6. **l Save. r r S rv L st t l r pp rs w t t w t .**
7. **o of rr or ,s l t r or t p ro t pull-ow u g .
 o ppl t g s t o t → SS tt gs t , l Apply Changes Now.**
8. **SS tt gs t l pp rs.**

Secondary services

Figure 113. Add Secondary Domain table

Add Secondary Service	
Domain Name	<input type="text" value="otherplace.com"/>

Secondary service for a network

o s o r -s rv r ut or t or twor

1. **S l { Administration > Network Services > DNS.**

→ SS ff gss t l pp rs.

2. **l Edit Secondary Services ov t t l . s o r S rv L st t l pp rs.**
 3. **S l { twor s o r S rv ro t Add Secondary Service... pull-ow u. s o r S rv t l pp rs s Figur 114.**
 4. **I t rst l , t rt I r ss o ro t twor (or x pl ,1 p.1 .1) w os → S or t o ss rv t I r ss t t r l .**
 5. **I t s o l , t rt su t sorr spo gto t I r ss or t sp twor ut or t .**
 6. **I t t r l , t rt I r ss o t pr r → S s rv r or t sp twor .**
 7. **l Save. s o r S rv L st t l r pp rs w t t w fr .**
 8. **o of rs o r s rv ,s l { s rv ro t pull-ow u g .**
 9. **o ppl t gsto t → SS ff gss t l pp rs.**
- o ppl t gsto t → SS ff gss t l Apply Changes Now.**

Figure 114. Add Secondary Network table

Reverse Address (PTR) record

First, right click on the IP address (192.168.10.10) and select Add Record.

1. Select Administration > Network Services > DNS. Right click on the IP address (192.168.10.10).
2. Edit Primary Services over tab. Right click on the IP address (192.168.10.10).
3. Select IP address (192.168.10.10) and click on the Add Record... pull-down menu. Right click on the IP address (192.168.10.10) and select Add Record.

Figure 111.

Input IP address (192.168.10.10).

Leave Sub Type as SSSA-A-A.

Host Name (Optional): www.

Domain Name: mydomain.com.

4. Click on the Forward IP address (192.168.10.10) and click on the Forward IP address (192.168.10.10).
5. Click Save. Right click on the IP address (192.168.10.10) and select Add Record.

Right click on the IP address (192.168.10.10) and select Add Record.

Figure 115. Add New Reverse Address (PTR) Record tableD

IP Address	192.168.10.10.
Sub Type	A
Host Name (Optional)	www
Domain Name	mydomain.com
Generate Forward Address (A) Record	<input checked="" type="checkbox"/>

Licenses

The BSD Copyright

op r g t 1 1,1 ,1 4 . K s ts o t v rs t o l or .
ll r g ts r s rv .

- K str ufo us sour r or s,w t or w t ouf o fo ,
r p r ft prov t tt follow g o fo s r t
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l st o o fo s t follow g s l r.
 2. K str ufo s r or us tr pro u t ov op r g t of ,
t s l st o o fo s t follow g s l r t ou t fo /
or of r t r ls prov t str ufo .
 3. ll v rt s g t r ls fo g pur s or us o t s so fw r us t
spl t follow g owl g t s pro u t lu s so fw r
v lop t v rs t o l or R r l ts o fr ufo s .
 4. r t o t v rs t or t s o fo s o fr ufo s
us fo ors orpro of pro u fo s r v ro t s so fw r w t ouf
sp pr or wr ff p r ss o .

GNU General Public License

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t r p rt, or rg o or t our ost o p s ll
p r or g sour str ut o ,t o str ut u rt t r so
s fo s1 g ov o u ust r l us or so tw r
t r g or,
- . o p tw t t or fo our v s fo t o r fo
str ut orr spo g sour o .(s lt r t v s llow o l
or o o r l str ut o l our v t progr
o t o or x ut l or w t su o r, or w t
su s fo ov .)
- sour o or wor s t pr rr or o t wor or g
o fo s fo t. For x ut l wor , o pl t sour o s ll t
sour o or ll ou l s t o t s, plus sso t t r fo

5. ou r otr ur fo pt - 0 F - 0 F,

8. I t spt ut o /or us o t rogr s r spt t rt ou t p s
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NO WARRANTY

11 E SE E ↵ ↵ M Is LI E SE ↵ E EE F ↵ E, E ↵ E
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Appendix F: Licenses

Digital Subscriber Line (DSL)

Gateway

two r v t t ts s fr fo of r two . g t w
Iso v t tp ss sp ts ro o two fo of r two
ross t I t r t.

HTML

S *HyperText Markup Language (HTML).*

HTTP

S *HyperText Transfer Protocol (HTTP).*

HyperText Markup Language (HTML)

s t o r up s ols or t gs s rt t xt l t or spl
o orl rows r r up t gs t ll t rows r o w fo
spl p g s o t wor s, R x o - F u s, ML1 o rx

RS aI7Qdef 451DO G6rA.6wfSb7TM 3l3t 6d)f7Aubr 95TfgwFb1c 95Tc 95T 95TQd

Integrated Services Digital Network (ISDN)

s s{ o g { l { l p o o t o s. s s s{ llows t fo

ISDN

S

Name server

progr t t o stut s t s rv r l o t s l t-s rv r
s . s rv r o t s or t o out s g t o t
s t s s t v l l fo l t ll r solv r. r solv r
so t ust l r r rout t t r t s u r s s s t ross
twar fo s rv r.

NAT

Network Address Translation (NAT).

Netmask

Subnet mask.

Network Address Translation (NAT)

s or r u g t or glo ll u u I r ss s.
s o u rL - fr u l o o L s s. F o ll u r

Redundant Array of Independent Disks (RAID)

s p l s r ss u l o r s out o u to ov r
t I t r t of r /I twor s

SSLs rv r ut t fo llows us r fo o r t tt o
s rv r. SSL- l l tsotw r us st r t uso
pul - r plogr p fo t t s rv r s rt t pul k
r v l v ssu rt t ut or t ()l st t
l ts l st o trust s. s o r fo port t , or
x pl ,t us r ss g r t r u r ov r t twor
w ts fo t r v g s rv r s tt .

Subnet mask

Swap file

r o ss or (k M). v g sw p l llows t o put r s
op r t g s st to pr t t t s or k M t t u ll o s.
l st-r pl -as ls k M r sw pp out to our r s u t l
t r l t r t rpl , w progr s g ts or t

