

# *Cobalt ManageRaQ*

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## *User Manual*



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# Important Safeguards

For your protection, please read all these instructions regarding your Cobalt ManageRaQ™ 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 Cobalt ManageRaQ's vents (on the front) and the fan opening(s) (on the back panel) are provided for ventilation and reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. This product should not be placed in a built-in installation unless proper ventilation is provided.

## 3. Lithium Battery

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



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

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**Attention:** Il y a danger d'explosion s'il y a remplacement incorrect de la pile. Remplacer uniquement avec une pile du même type ou d'un type équivalent recommandé par le fabricant. Mettre au rebut les piles usagées conformément aux instructions du fabricant.

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**Achtung:** Explosionsgefahr wenn die Battery in umgekehrter Polarität eingesetzt wird. Nur mit einem gleichen oder ähnlichen, vom Hersteller empfohlenen Typ, ersetzen. Verbrauchte Batterien müssen per den Instructionen des Herstellers verwertet werden.

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#### 4. Power Cord



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**Caution:** The power-supply cord is used as the main disconnect device. Ensure that the socket outlet is located or installed near the equipment and is easily accessible.

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**Attention:** Le cordon d'alimentation sert d'interrupteur général. La prise de courant doit être située or installée à proximité du matériel et offrir un accès facile.

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**Achtung:** Zur sicheren Trennung des Gerätes vom Netz ist der Netzstecker zu ziehen. Vergewissern Sie sich, daß die Steckdose leicht zugänglich ist.

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#### 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. Operating the unit in an equipment rack

If you plan to install the Cobalt ManageRaQ in an equipment rack, take the following precautions:

- (a) Ensure the ambient temperature around the Cobalt ManageRaQ (which may be higher than the room temperature) is within the limits specified in Appendix B. See "Physical data" on page 86.
- (b) Ensure there is sufficient air flow around the unit.
- (c) Ensure electrical circuits are not overloaded; consider the nameplate ratings of all the connected equipment and ensure you have over-current protection.
- (d) Ensure the equipment is properly grounded, particularly any equipment connected to a power strip.
- (e) Do not place any objects on top of the Cobalt ManageRaQ.

## 7. Browsers

Both Netscape Navigator® and Microsoft® Internet Explorer have bugs that can cause intermittent, unexplained failures. When using a Web browser to interact with your Cobalt ManageRaQ you may occasionally experience a browser failure. Released product versions of the browsers are usually more reliable than beta versions, and later versions work the most reliably. A browser program failure, although annoying, does not adversely affect your Cobalt ManageRaQ's data. The Cobalt ManageRaQ has been tested with both Netscape Navigator and Microsoft Internet Explorer, versions 4 or higher.

## 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 be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer can void the user's authority to operate this equipment.

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



# Contents

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Important Safeguards	iii
<b>1 Introduction</b>	<b>1</b>
Overview of the ManageRaQ	1
Benefits of the ManageRaQ	2
Features of the ManageRaQ	2
Configuration functions	2
Monitoring functions	2
General	3
Front view of the ManageRaQ	3
Rear view of the ManageRaQ	4
Requirements for the ManageRaQ	5
Target audience for the user manual	5
List of chapters and appendices	5
Customer Service and Technical Support	6
General Cobalt Networks information	6
Cobalt Networks Technical Support and Service	6
Further information	7
Before contacting Cobalt Networks Technical Support	8
To speed up your support call	8
To send comments or report a software bug	9
Cobalt logo badge	10
<b>2 Setup and operation</b>	<b>11</b>
Phase 1: Making the connection	11
Installing the ManageRaQ	11
Connecting to the network	13
Connecting the power cord	13
Powering on the ManageRaQ	13
Configuring the ManageRaQ for the network	14
Using the LCD console to configure the network	14
Setting the configuration	15

Phase 2: Setting up with the Web browser	16
Configuring the ManageRaQ with the Setup Wizard	18
Entering the network settings	19
Entering the administrator settings	19
Entering the time settings	21
Completing configuration with the Setup Wizard	21
Registering the ManageRaQ online	21
Registering the ManageRaQ	23
ManageRaQ Administrator	24
Changing the ManageRaQ Administrator password	25
Resetting the ManageRaQ Administrator password	25
Operational Overview	27
Active Monitor	28

### **3 Features of the software** **31**

Features of the ManageRaQ	31
Configuration functions	31
Monitoring functions	31
Commands	32
View All RaQs	33
Report Virtual Sites	35
Report Selected RaQs	36
Report Details	36
Report Services	38
Add New RaQ	40
Remove RaQs	42
Configure Services	44
Configure Network	47
Change Password	49
Install Package	52
Configure Notification	54
Execute Script	57
Reboot RaQs	61
Back up Configuration	63
Restore Configuration	65
Documentation	66
To send comments or report a software bug	66
ManageRaQ Admin	68



<b>4 Error Messages</b>	<b>71</b>
The ManageRaQ is Busy screen	71
Error Tables	72
<b>A Using the LCD Console</b>	<b>81</b>
Changing network configuration	82
Rebooting	83
Powering down	84
<b>B Product Specifications</b>	<b>85</b>
Technical data for the ManageRaQ	85
Hardware	85
Software	85
Features	85
System management	85
Physical data	86
Regulatory approvals	86
Upgrading the memory in the ManageRaQ	87
Opening the ManageRaQ	87
Printed circuit board	89
<b>C Licenses</b>	<b>91</b>
The BSD Copyright	91
GNU General Public License	92
SSL License	96
<b>D Glossary</b>	<b>97</b>
<b>E Index</b>	<b>101</b>



# Introduction

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## Overview of the ManageRaQ

Cobalt Networks' ManageRaQ enables administrators to manage, troubleshoot and monitor a farm of server appliances from a central server. The ManageRaQ is a hardware solution based on the RaQ 3 hardware platform and can manage up to 100 RaQs (all versions of the RaQ product family except the RaQ 1 J).

The ManageRaQ does not manage the Qube family of products.

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**Note:** Due to the ManageRaQ agent software, a managed RaQ must have at least 32 MB of memory. If a RaQ server that you want to manage through ManageRaQ has less than 32 Mb of memory, you will have to upgrade your memory.

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The system administrator can manage multiple RaQs through a browser-based interface that connects to the ManageRaQ. With the ManageRaQ, the administrator can manage only the RaQ units; the administrator can view virtual sites but cannot manage them.

Communication between the browser and ManageRaQ is encrypted with Secure Sockets Layer (SSL).



SSL provides a secure Web connection to the end user. The implementation of SSL for the ManageRaQ is based on mod\_ssl and BSAFE cryptographic software from RSA Security.

This product includes software developed by Ralf S. Engelschall for use in the mod\_ssl project. For more information, see "SSL License" on page 96.

## Benefits of the ManageRaQ

The ManageRaQ increases the productivity of Internet service provider (ISP) system administrators by requiring less manual monitoring of the RaQ server farms. Improving the administrator efficiency lowers costs, improves the quality and speed of service before problems affect end customers, and helps the ISP as a whole become more competitive. Using the ManageRaQ, the administrator is able to manage a substantially higher number of RaQs.

## Features of the ManageRaQ

Through the ManageRaQ, the system administrator can perform configuration and monitoring functions.

### Configuration functions

- *Upgrade Software* With a single operation, the administrator can install or apply a .pkg software upgrade to a list of selected RaQs.
- *Configure Services* For a designated set of RaQs, the administrator can simultaneously configure various services to on or off — email, file transfer protocol (FTP), telnet access, Simple Network Management Protocol (SNMP) and Domain Name Service (DNS).
- *Change Passwords* The administrator can change the password for a RaQ. Each managed RaQ should have its own administrator password. The ManageRaQ can remember the password of individual RaQs.
- *Configure Network* The administrator can change the gateway and the primary and secondary DNS settings for a list of RaQs.
- *Run Scripts* Site administrators use written scripts to manage their unique environment. Through the ManageRaQ, the administrator can run a script on a list of RaQs.
- *Reboot RaQs* The administrator can reboot multiple RaQs remotely.

### Monitoring functions

The ManageRaQ monitors Active Monitor constantly. For more information, see “Active Monitor” on page 28.

- *View Active Monitor* The administrator can quickly retrieve and present Active Monitor for an individual RaQ or a group of RaQs. The administrator can zero in on the individual RaQ or RaQs that have software or hardware faults.

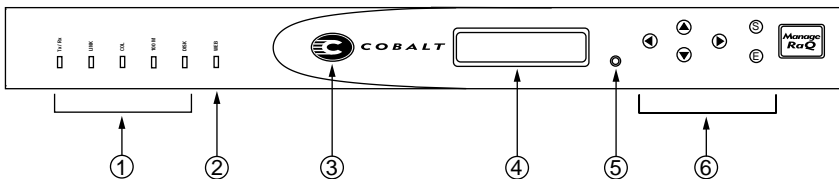
- *View Configurations* The administrator can view information for the configuration of the hardware and software (for example, the amount of memory installed and the amount of hard disk space available).
- *Email Notification* The administrator can specify a list of email addresses for the people to be notified in case of a service failure. The notification is sent by the ManageRaQ, not by the individual client RaQs.

## General

Figure 1 and Figure 2 show all the ManageRaQ controls, indicators and connectors.

### Front view of the ManageRaQ

Figure 1 ManageRaQ front view

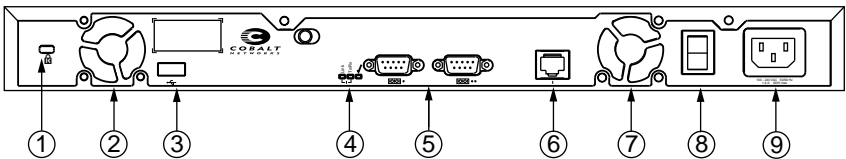


1. The **Status Indicators** signal Ethernet and hard drive activity:
  - Tx/Rx** (Transmit/Receive) blinks when there is network traffic on the primary interface.
  - Link** indicates an active network connection on the primary interface.
  - Col** blinks when a collision is detected on the primary interface.
  - 100 M** indicates that 100 BaseT ethernet is being used on the primary interface.
  - Disk** indicates hard disk activity on the primary hard disk drive.
2. The **Web** indicator blinks to indicate Web activity.
3. The **Logo Badge** glows when the ManageRaQ is powered on.

4. The **LCD screen** displays messages and values entered. Use the arrow buttons to toggle between choices or to enter values. (See “Using the LCD console to configure the network” on page 14.)
5. You can use the recessed **Reset Password** button if you forget the ManageRaQ Administrator password. (See “Resetting the ManageRaQ Administrator password” on page 25.)
6. The **LCD arrow buttons** allow you to enter network configuration information, configure a UPS unit, reboot the ManageRaQ and power down the ManageRaQ.

## Rear view of the ManageRaQ

Figure 2 ManageRaQ rear view



1. The **Security lock hole** is used to lock the unit to a secure location.
2. The **Cooling fans** maintain proper operating temperature. Ensure that the ventilation holes are not blocked.
3. The **USB port** provides a Universal Serial Bus connection
4. The **Network status indicators/OK to Power Off** signal network activity and information. The **OK to Power Off** light flashes when it is safe to turn the power off.
5. The **Serial console port** allows you to connect serial devices; the **Serial connector** allows you to connect a UPS to the serial port for Smart UPS support.
6. The **Network connector** enables an ethernet network connection and accepts the 10/100 BaseT network cable.
7. **Cooling fan.**
8. The **Power switch** toggles the power on or off.
9. The **Power socket** receives the AC cord that is provided.

## Requirements for the ManageRaQ

To use the ManageRaQ, you need:

- a ManageRaQ
- a personal computer (attached to the network) that uses a Web browser (Netscape Navigator or Microsoft Internet Explorer, versions 4.0 or later). To manage the RaQs from the user interface (UI), your browser must have Javascript enabled.
- at least 32 Mb of memory on the RaQ server to be managed. Due to the ManageRaQ agent software, a managed RaQ must have at least 32 MB of memory. If a RaQ server that you want to manage through ManageRaQ has less than 32 Mb of memory, you will have to upgrade your memory.

## Target audience for the user manual

The user manual is for a system administrator who uses the ManageRaQ to manage large numbers of RaQs. The administrator should be familiar with Netscape Navigator®, Microsoft® Internet Explorer or other Web browsers, as well as Linux system administration.

## List of chapters and appendices

The manual has the following chapters and appendices.

- |            |   |
|------------|---|
| Chapter 1  | “Introduction” on page 1 summarizes the functions of the ManageRaQ.   |
| Chapter 2  | “Setup and operation” on page 11 explains the hardware setup and the network integration information for the ManageRaQ. |
| Chapter 3  | “Features of the software” on page 31 discusses the features on the ManageRaQ.  |
| Chapter 4  | “Error Messages” on page 71 discusses the error message which may appear on the ManageRaQ user interface (UI).          |
| Appendix A | “Using the LCD Console” on page 81 explains the licenses used in the ManageRaQ.   |

- Appendix B “Product Specifications” on page 85 lists the RaQ 3 technical specifications.
- Appendix C “Licenses” on page 91 lists licensing information.
- Appendix D “Glossary” on page 97 provides a glossary of terms used in the manual for the ManageRaQ.

## 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 customers can query; a list of Frequently Asked Questions (FAQs) that provide additional information is also available through the Knowledge Base.

### General Cobalt Networks information

**In the U.S.A.**, call (888) 70-COBALT or (888) 702-6225, or send email to [info@cobalt.com](mailto:info@cobalt.com).

**Outside the U.S.A.**, call +1 650 623-2500, or send email to [info@cobalt.com](mailto:info@cobalt.com).

**In Europe**, call +31 70 517 6375, or send email to [info-europe@cobalt.com](mailto:info-europe@cobalt.com).

**In Japan**, send email to [info-japan@cobalt.com](mailto:info-japan@cobalt.com).

### Cobalt Networks Technical Support and Service

**In the U.S.A.**, call (888) 70-COBALT or (888) 702-6225, or send email to [support@cobalt.com](mailto:support@cobalt.com).

**Outside the U.S.A.**, call +1 650 623-2679, or send email to [support@cobalt.com](mailto:support@cobalt.com).

**In Europe**, send email to [support-europe@cobalt.com](mailto:support-europe@cobalt.com).

**In Japan**, send email to [support-japan@cobalt.com](mailto:support-japan@cobalt.com).



## Further information

Cobalt also offers other information resources.

**Discussion Groups** Cobalt has made available a number of discussion groups through which users can share information.

To view the current list of Cobalt discussion groups, type the URL <http://www.cobalt.com/support/resources/usergroups.html> . The names of the discussion groups show up as hypertext links.

To subscribe to or unsubscribe from a discussion group, or to view previous postings to a group, click on the group name. A new browser window opens, displaying information about the discussion group.

New discussion groups are added periodically. The current groups include:

- an announcement list concerning Cobalt products
- an information list for developers working on Cobalt products
- a users list for sharing information between users of Cobalt products
- a security list for users to address network security issues on Cobalt products

**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/> . The technical papers cover, among others, such topics as:

- a quick start guide for Domain Name System (DNS)
- a FAQ for email relay
- how to create a package (.pkg) file

**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, system and network administrators, systems engineers, product developers, support technicians, consultants and trainers. You can access the site at <http://www.cobalt.com/support/education/index.html/> .

**Solutions** For customers looking for business-case information concerning Cobalt products, there are also a number of white papers available on Cobalt's Web site at <http://www.cobalt.com/solutions/> .

**Developers** If you are a software or hardware developer, look for information at <http://www.cobalt.com/partners/> .

## Before contacting Cobalt Networks 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 Cobalt's Knowledge Base, the online technical papers and the Solutions page, as described above.

### To speed up your support call

When contacting Cobalt Networks Technical Support, the more information you can provide, the better. Before you call or email, have the following information ready.

- the serial number, located on the back panel, or the MAC address of the Primary network Interface, accessible through the user interface, of your ManageRaQ
- any additional software installed on your system
- any peripherals connected to your system
- a hard copy of any error messages you have received and the time when they occurred
- the process you were running or what changes you had made when the error occurred, so that Technical Support can try to reproduce the error
- the steps you have taken to resolve the problem

## To send comments or report a software bug

There is an email link within the ManageRaQ for sending comments or reporting bugs in the software to Cobalt Networks.

To send comments or report a software bug:

1. Click on the pull-down menu in the command frame of the ManageRaQ and select “Documentation”. The **About Cobalt ManageRaQ** screen appears; see Figure 3.
2. In the “Documentation” section of the table, click on the link for “mgmt-support@cobalt.com”.
3. If you are reporting a problem, please be specific in your description. Attach a copy of any error output you may have received.

To provide further information on your problem, see also “To speed up your support call” on page 8.

This screen also displays the following information:

- the version of the ManageRaQ software (version number and build number)
- a link to the ManageRaQ user manual (a PDF file)
- a link to the RaQ user manual (a PDF file)
- a link to the RaQ 2 user manual (a PDF file)
- a link to the RaQ 3 user manual (a PDF file)
- a link to the ManageRaQ support page on Cobalt’s web site
- an email link to Technical Support (mgmt-support@cobalt.com)
- copyright information for the Management Console and trademark information

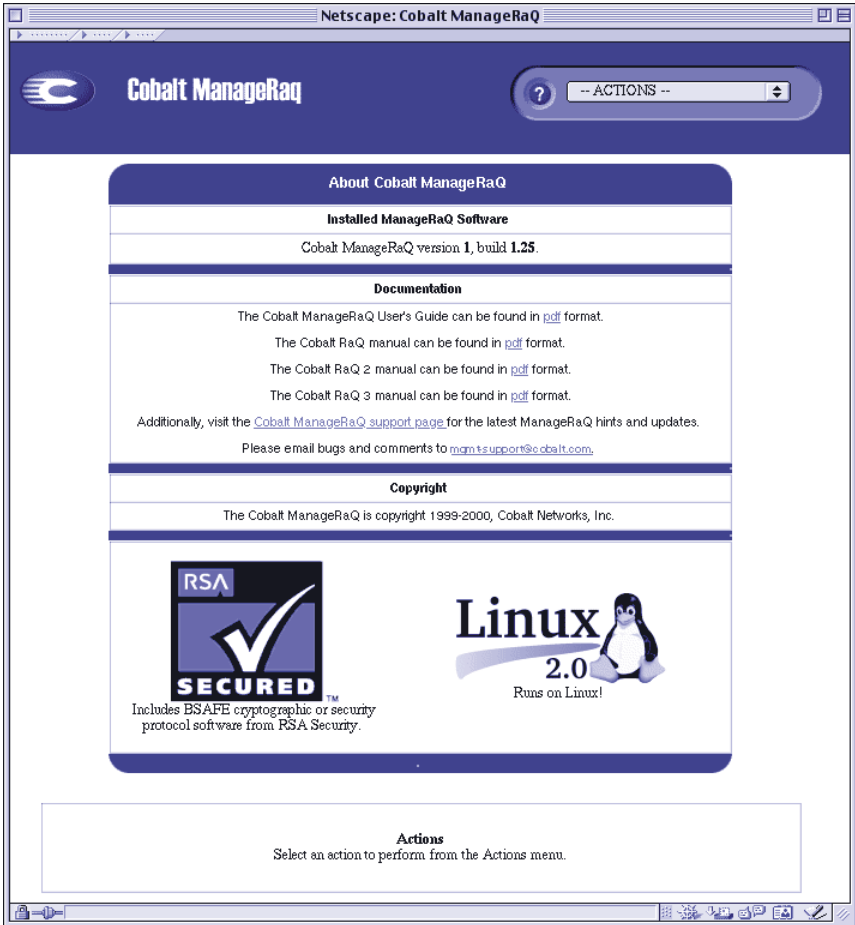
# Cobalt logo badge



If you click on the Cobalt Networks logo badge in the top left corner, the **About Cobalt ManageRaQ** screen appears. See Figure 3.

Figure 3 shows the **About Cobalt ManageRaQ** screen.

**Figure 3 About Cobalt ManageRaQ screen**



# Setup and operation

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This chapter guides you through the process of connecting and configuring the ManageRaQ for your network. A typical setup process takes less than 15 minutes, after which you can begin using the ManageRaQ to manage your RaQ servers.

If the ManageRaQ has been previously configured for a different network, refer to “Changing network configuration” on page 82 in Appendix A.

The setup process consists of two phases.

- “Phase 1: Making the connection” covers the physical setup and connection of the ManageRaQ to a power source and the network.
- “Phase 2: Setting up with the Web browser” covers the network integration process, using any browser-enabled computer.

## Phase 1: Making the connection

### Installing the ManageRaQ

The ManageRaQ can either be placed on a flat surface — for example, a desk, shelf or table top — or it can be connected to a standard 19-inch equipment rack.

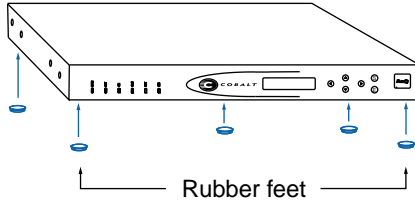
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**Note:** If you operate the ManageRaQ in an equipment rack, see the precautions described in “6. Operating the unit in an equipment rack” on page iv.

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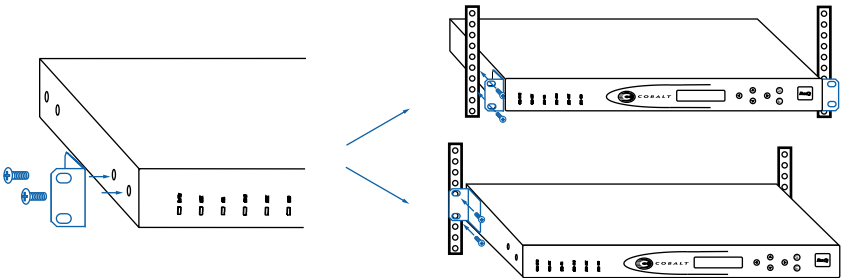
If you plan to use the ManageRaQ on a flat surface, attach the rubber feet to the five indentations in the bottom of the case; see Figure 4.

**Figure 4 Rubber feet for the ManageRaQ**



If you plan to operate the ManageRaQ in an equipment rack, first connect the mounting ears to the sides of the ManageRaQ (see Figure 5), near either the front or the rear of the case. Attach the ears to the equipment rack.

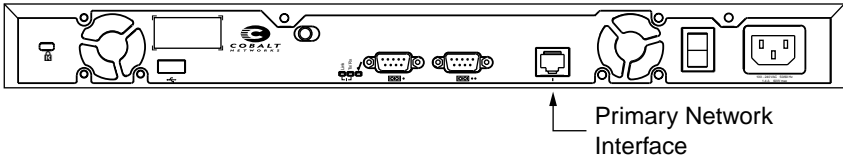
**Figure 5 Mounting ears for the ManageRaQ**



## Connecting to the network

Connect one end of a Category 5 ethernet cable to the 10/100 BaseTX Network 1 connector (the primary network interface) on the ManageRaQ; see Figure 6. Connect the other end of the cable to an existing network socket.

Figure 6 Network connectors



## Connecting the power cord

Connect the power supply cord to the ManageRaQ and to an electrical outlet (100-240 volts AC, 50/60 Hz, as listed in “Product Specifications” on page 85).

## Powering on the ManageRaQ

Turn on the power by pressing the **On/Off** switch on the back of the ManageRaQ.

The hard disk spins up, the fan turns on, and the LCD screen lights up. The Cobalt logo and the Cobalt Networks name scroll across the screen.

A number of status messages are displayed on the LCD screen as the ManageRaQ completes its boot process.




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**Caution:** It is important to follow the proper power-down procedure before turning off the ManageRaQ. Refer to Appendix A, “Powering down”, on page 84.

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## Configuring the ManageRaQ for the network

Now that you have made the network and power connections, you can configure the network settings.

The ManageRaQ requires specific network information to function properly. You must enter the necessary information using the LCD console on the front panel.

Before you proceed, make sure you have the following information:

- the IP address assigned to the ManageRaQ
- the subnet mask of your network
- the gateway/router address (necessary only if communicating with other networks)

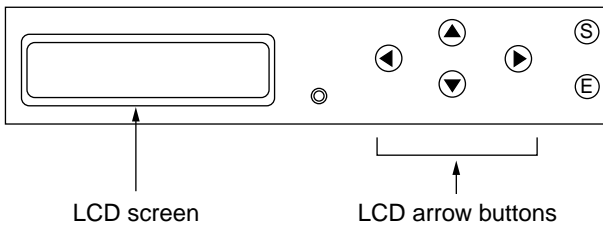
### Using the LCD console to configure the network

Figure 7 shows the LCD console for the ManageRaQ.

The LCD screen on the front of the ManageRaQ 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 to the right of the LCD screen to enter the required network information manually







Appendix A, “Using the LCD Console” on page 81, provides more information about the LCD console.

Figure 7 LCD console





The arrow buttons function as follows:

-  The **Left** arrow button moves the cursor to the left.
-  The **Right** arrow button moves the cursor to the right.
-  The **Up** arrow button increases the digit located at the cursor position.
-  The **Down** arrow button decreases the digit located at the cursor position.
-  The **S** button (“select”) displays the next option.
-  The **E** button (“enter”) accepts the information entered or the option displayed.

## Setting the configuration

During setup, the LCD console is used to enter network configuration information on the ManageRaQ.

Follow these steps to configure the network manually:

1. When you see the prompt


```
ENTER IP ADDR:
000.000.000.000
```

enter the IP address assigned to the ManageRaQ using the arrow buttons on the LCD console.

2. Press .

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

```
ENTER NETMASK:
255.000.000.000
```

3. Enter the netmask of your network.
4. Press .

If the netmask is valid, the following prompt appears:

```
ENTER GATEWAY:
000.000.000.000
```

5. Enter the IP address of the gateway for your network.

If your network does not have a gateway, do not enter a number — leave the default value, “000.000.000.000.”

6. Press **(E)**.

The LCD displays:

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

7. To save the configuration information, use the left and right arrow buttons to select [S]ave, and then press **(E)**. You will see:

```
VERIFYING AND SAVING
```

---

**Note:** Selecting [C]ancel cancels the configuration and the LCD screen displays ENTER IP ADDR: again. You must go through the entry process again.

---

After verifying and saving, the ManageRaQ completes the boot process. The LCD screen shows several messages before displaying the IP address assigned to the ManageRaQ.

Configuration is complete when the LCD screen displays the IP address assigned to the ManageRaQ, for example:

```
IP ADDRESS:  
192.168.25.77
```

## Phase 2: Setting up with the Web browser

The remainder of the setup process is performed through a Web browser on any computer on your network. Use one of the standard browsers available (for example, Netscape Navigator or Microsoft Internet Explorer, versions 4.0 or later) to do this. Once the setup process is complete, the ManageRaQ can be managed from any computer on the network that has a browser.

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

1. Launch a standard Web browser on any computer connected to the network.
2. Enter the IP address of the ManageRaQ (shown on the LCD screen on the front panel) into the URL field of your browser — for example:

Location:

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

If the ManageRaQ's network settings were configured successfully, then the Cobalt welcome screen appears; see Figure 8.

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


**Figure 8** The ManageRaQ Welcome screen



## Configuring the ManageRaQ with the Setup Wizard


To configure the ManageRaQ, enter information into the fields on the **Setup Wizard** screen (see Figure 9). These fields are described in the sections that follow.

---

**Note:** For help with a particular field in the Setup Wizard, move the pointer over the Active Assist  icon adjacent to the field and help text is displayed at the bottom of the screen.

---

Figure 9 Setup Wizard



**Netscape: Setup Wizard**

### Setup Wizard

**Network Settings**

?	Host Name	<input type="text"/>
?	Domain Name	<input type="text"/>
?	Primary DNS Server Address	<input type="text"/>
?	Secondary DNS Server Address (optional)	<input type="text"/>
?	IP Address	10.9.31.96
?	Subnet Mask	255.255.0.0
?	Default Gateway	10.9.25.254
?	MAC Address	00:10:E0:01:0F:0C

**Administrator Settings**

?	Administrator User Name	admin
?	Administrator Password	<input type="password"/>
?	Administrator Password (again)	<input type="password"/>

**Time Settings**

?	Time	Apr	11	2000	10 am	'09	
?	Time Zone	Region	Europe Indian Ocean North America	Country	Turks and Caicos Islands Trinidad and Tobago United States	Locale/Zone	Hawaii Alaskan Time Pacific Time

**Save Changes**

Obtain your domain name from your system administrator. It will appear in the web and email addresses -- for example, username@host.name.domainname.com. Check with your system administrator to be certain that your Cobalt server is registered in this domain.

## Entering the network settings

**Cobalt server name (host name)** This is a name you assign to the ManageRaQ — for example, `manageraq1`.

**Domain name** This is the official name that is registered with InterNIC — for example, `yourdomain.com`. The host name and domain name must be coordinated by the network administrator in order for you to access the ManageRaQ by its name and not just by its IP address.

**Primary DNS Server Address** This is the IP address of your primary domain name system (DNS) server. A primary DNS server maintains a list of computer names and their IP addresses. The ManageRaQ needs access to this list on the primary DNS server in order to convert between IP addresses and names. This conversion is essential for sending and receiving email external to the ManageRaQ.

**Secondary DNS Server Address** This is the IP address of your secondary DNS server. A secondary DNS server can provide redundant DNS service to your computers. If the primary DNS server is turned off, then your ManageRaQ can use the secondary DNS server with no loss of performance.

For informational purposes, this table also displays the IP address of the ManageRaQ, the subnet mask of your network, your configured gateway and the Media Access Control (MAC) address that uniquely identifies this ManageRaQ. These settings, with the exception of the MAC address, can be changed later (through the browser) from the Control Panel section of the **ManageRaQ Admin** screen.

To access this screen, choose ManageRaQ Admin from the pull-down menu. For more information, see “ManageRaQ Admin” on page 68.

## Entering the administrator settings

In the Administrator Settings table, enter the information about the administrator of the ManageRaQ. The administrator has several responsibilities:

1. Setting up and maintaining the ManageRaQ
2. Responding to email alerts from the ManageRaQ to prevent potential problems

To set up the administrator for the ManageRaQ, you must enter a password in the Administrator Password field and then enter the same value again in the second Administrator Password field.

If you need to change these settings, see “ManageRaQ Administrator” on page 24.

### **Password guidelines**

Use the following guidelines when choosing a password:

1. Use between five and ten alphanumeric characters; ten is the maximum number of characters allowed. The valid characters include: a-z A-Z 0-9 % ! @ \$ ^ & \* - \_ = + \ | . , / ? ; :
2. Use both upper- and lower-case letters.

---

**Note:** A password is case-sensitive.

---

3. Do not use a proper name.
4. Do not use a word found in a dictionary.
5. Do not use a date.
6. Do not use a command word.
7. Do not use a string of consecutive keys on a keyboard (for example, “qwerty”).

Be sure to remember this password to access the ManageRaQ administration features in the future. If you forget or want to reset the password, see “Resetting the ManageRaQ Administrator password” on page 25.

## Entering the time settings

In the Time Settings table, select the time and date with the pull-down menus.

Select the correct time zone by clicking in the Region, Country and Locale/Zone fields.

---

**IMPORTANT:** Many features of the ManageRaQ depend on the internal clock. Ensure that the time settings on the ManageRaQ are accurate or that the unit is synchronized to a Network Time Protocol (NTP) server (with which the unit will synchronize its internal clock each night.)

For a list of publicly available NTP servers, see:  
<http://www.eecis.udel.edu/~mills/ntp/servers.html> .

---

## Completing configuration with the Setup Wizard

When you have entered the information in the Setup Wizard, click **Save Changes**.

The ManageRaQ performs automatic checks on the information entered and alerts you if an illegal value or a problem is encountered. If the information is correct, the ManageRaQ enters the information in its configuration files.

## Registering the ManageRaQ online

The ManageRaQ displays an online product registration page; see Figure 10.

---

**Note:** If you are not connected to the Internet, you cannot register online.

---

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**IMPORTANT:** If you leave blank either the DNS or the Gateway fields in the Setup Wizard, you cannot register the ManageRaQ online because you will not be able to send email. In this case, if you attempt to register the ManageRaQ online, you receive an error message, stating that you cannot register online because you did not fill in the DNS and Gateway fields.

---

Figure 10 Online registration page

If you wish to register this product, please complete the form below and click on the "Register Through Email" button to email the information to us. Cobalt will maintain the privacy of this information, and only use it to notify you about system updates, new product information, and product promotions.

\*Fields with an asterisk are required. Either a fax number or an email address is required.

Registration	
Full Name*	<input type="text"/>
Title	<input type="text"/>
Company Name	<input type="text"/>
Full Address	<input type="text"/>
Country	<input type="text"/>
Phone	<input type="text"/>
Fax*	<input type="text"/>
Email*	<input type="text"/>

Register Through Email   Register Later

To register the ManageRaQ online:

1. Enter your **Full Name**. This field must be filled in.
2. As an option, you can enter your title, the company name, the company address, the country and the phone number.
3. Enter either a **Fax** number or **Email** address. One of these two fields must be filled in. If you choose email, enter your complete email address in the form xxx@yyyy.zzz .
4. Click **Register Through Email** to submit the information.

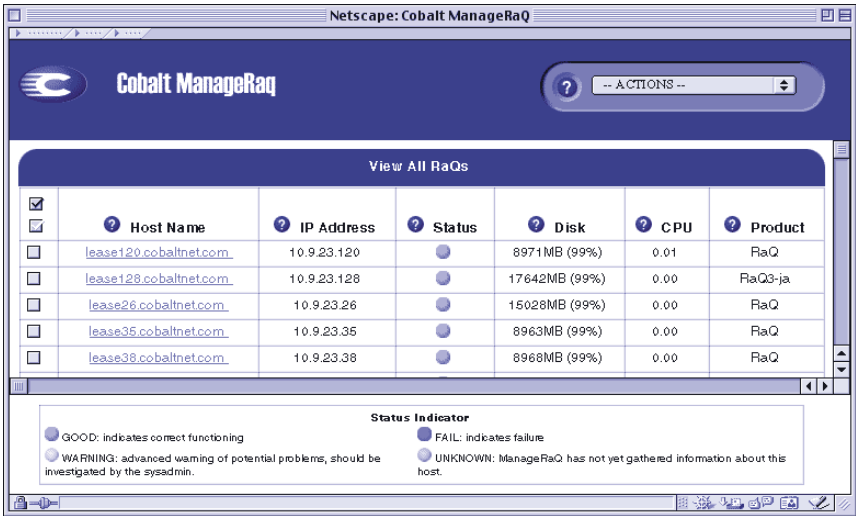
If you do not want to register online, click **Register Later** to proceed to the ManageRaQ default home page.

Once you have registered the ManageRaQ online, you cannot register again. If you attempt to do so, you receive an error window stating that the ManageRaQ has already been registered.



The default home page for the ManageRaQ (the **View All RaQs** screen) appears now; see Figure 11.

**Figure 11** Default ManageRaQ home page



## Registering the ManageRaQ

If you did not register the ManageRaQ online, fill out the registration card included in the packaging materials and return it to Cobalt Networks, Inc. By doing so, you will receive notifications of system and security upgrades and new product information.

# ManageRaQ Administrator



---

**Caution:** Be sure to remember the password you enter for the ManageRaQ Administrator — otherwise, you will need to reset it (See “Resetting the ManageRaQ Administrator password” on page 25).

---

In the Administrator section of the **Server Management** screen, you enter information about the ManageRaQ Administrator — including user name, password and, optionally, an email address where system alerts for failed services are sent.

To enter the information for the ManageRaQ Administrator:

1. Select ManageRaQ Admin from the pull-down menu. A separate browser window opens, displaying the **Server Management** screen of the ManageRaQ.
2. Click **Administrator** on the left. The Administrator Settings table appears.
3. Enter the first name and last name of the administrator.
4. Enter the password twice to ensure that you have entered it as intended. For guidelines on choosing a password, see “Password guidelines” on page 20.
5. As an option, enter an email address that will receive system alerts for failed services.
6. Click **Save Changes**.
7. Close the browser window for the **Management Server** screen. The ManageRaQ screen is still open.

## Changing the ManageRaQ Administrator password

To change the password for the ManageRaQ Administrator:

1. Choose **ManageRaQ Admin** from the pull-down menu. A separate browser window opens, displaying the **Server Management** screen of the ManageRaQ.
2. Click **Administrator** on the left. The Administrator Settings table appears.
3. 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 20.
4. Click **Save Changes**.
5. Close the browser window for the **Management Server** screen. The ManageRaQ screen is still open.

## Resetting the ManageRaQ Administrator password

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




---

**Caution:** After you clear the password, enter a new one as soon as possible to protect the security of the ManageRaQ. At this point, anyone on the network can assign the ManageRaQ Administrator password until you assign a new one.

---

If you forget the ManageRaQ Administrator password, you can clear it by following these steps.

1. Push and hold the end of a paper clip in the recessed Reset Password button (located between the LCD screen and the LCD arrow buttons, on the front of the ManageRaQ). Hold the button in for approximately 2 seconds.

The LCD screen displays

```
Resetting admin
password...
```

2. Release the button.
3. In your Web browser, enter the URL `http://<IP Address>/` or `http://<host name>/` to access the **Server Management** screen of the ManageRaQ. The ManageRaQ screen appears.
4. Select ManageRaQ Admin from the pull-down menu. A separate browser window opens, displaying the **Server Management** screen of the ManageRaQ.

If a prompt appears asking for a username or password, enter “admin” as the username. DO NOT enter a password. Click **OK**.

5. Click **Administrator** on the left. The Administrator Settings table appears.
6. 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 20.
7. Click **Save Changes**.
8. Close the browser window for the **Management Server** screen. The ManageRaQ screen is still open.

# Operational Overview

**IMPORTANT:** Many features of ManageRaQ depend on the internal clock. Ensure that the time settings on the ManageRaQ are accurate or that the unit is synchronized to a Network Time Protocol (NTP) server (with which the unit will synchronize its internal clock each night.)

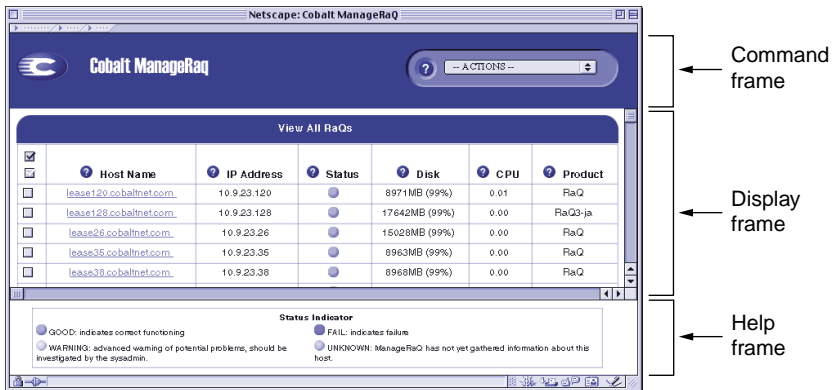
For a list of publicly available NTP servers, see:  
<http://www.eecis.udel.edu/~mills/ntp/servers.html> .

A screen on the **ManageRaQ** consists of three frames: the command frame at the top, the display frame in the middle and the help frame at the bottom. The commands available through the ManageRaQ are located in a pull-down menu on the right side of the command frame. If you click the question mark icon beside the pull-down menu, the **About Cobalt ManageRaQ** screen appears.

When a command is chosen, the new information appears in the display frame. When you position the mouse pointer over a question mark icon, text from the Active Assist help feature appears in the help frame.

Figure 12 shows the three frames of a **ManageRaQ** screen.

Figure 12 Frames of a ManageRaQ screen



## Active Monitor

Active Monitor is a Cobalt Networks utility that runs on the managed RaQs and updates key system information every 15 minutes. The ManageRaQ also runs Active Monitor, which pulls in the updated information from Active Monitor on each client RaQ and updates the UI.

Active Monitor on the ManageRaQ checks:

- the status of each client RaQ
- the status of the services on each client RaQ

The status of the RaQ or of a service is indicated with colored circles. See Table 1 on page 29 for an explanation.

Changes in the status of the RaQ or to the services configured on the RaQ show up on the ManageRaQ UI only when Active Monitor completes its next update.

To verify immediately that the requested changes to the configuration of services have been made:

1. Click on the RaQ's host name (shown as a hypertext link) in the **View all RaQs** screen.

This opens the **Server Management** screen for a particular RaQ in a separate window from Management Console.

2. Click **Control Panel** on the left side and the Service settings are displayed.

For more information concerning the **Server Management** screen, refer to the documentation for the RaQ.

If another RaQ unit is added, if another virtual site is created, or if email addresses or passwords are changed, this information is updated on the ManageRaQ UI immediately. This information is gathered once a minute, independently of Active Monitor.

Table 1 explains the colored circles in Active Monitor.

Table 1 Colors and status indicators

<b>Color</b>	<b>Status</b>
Green	Correct functioning
Yellow	Advance warning of potential problems that should be investigated by the administrator of the client RaQ (for example, low disk space)
Red	Failure (requiring action by the administrator of the client RaQ)
Grey	Inactive or information is not yet available





# Features of the software

---

## Features of the ManageRaQ

Through the ManageRaQ, the system administrator can perform configuration and monitoring functions.

### Configuration functions

- *Upgrade Software* With a single operation, the administrator can install or apply a .pkg software upgrade to a list of selected RaQs.
- *Configure Services* For a designated set of RaQs, the administrator can simultaneously configure various services to on or off — email, file transfer protocol (FTP), telnet access, Simple Network Management Protocol (SNMP) and Domain Name Service (DNS).
- *Change Passwords* The administrator can change the password for a RaQ. Each managed RaQ should have its own administrator password. The ManageRaQ can remember the password of individual RaQs.
- *Configure Network* The administrator can change the gateway and the primary and secondary DNS settings for a list of RaQs.
- *Run Scripts* Site administrators use written scripts to manage their unique environment. Through the ManageRaQ, the administrator can run a script on a list of RaQs.
- *Reboot RaQs* The administrator can reboot multiple RaQs remotely.

### Monitoring functions

The ManageRaQ monitors Active Monitor constantly. For more information, see “Active Monitor” on page 28.

- *View Active Monitor* The administrator can quickly retrieve and present Active Monitor for an individual RaQ or a group of RaQs. The administrator can zero in on the individual RaQ or RaQs that have software or hardware faults.

- *View Configurations* The administrator can view information for the configuration of the hardware and software (for example, the amount of memory installed and the amount of hard disk space available).
- *Email Notification* The administrator can specify a list of email addresses for people to be notified in case of a service failure. The notification is sent by the ManageRaQ, not by the individual client RaQs.

## Commands

The main screen for the ManageRaQ is the **View All RaQs** screen.

To choose a command, click on the pull-down menu in the command frame of the ManageRaQ.

For some of the commands, you must select at least one RaQ from the list; otherwise, a red error table appears, stating that no RaQs have been selected. Choose **View All RaQs** from the pull-down menu to return to the View All RaQs screen.

The following commands are available.

- View all RaQs
- Report virtual sites
- Report selected RaQs
- Report details
- Report services
- Add new RaQ
- Remove RaQs
- Configure services
- Configure network
- Change password
- Install package
- Configure notification
- Execute script
- Reboot RaQs

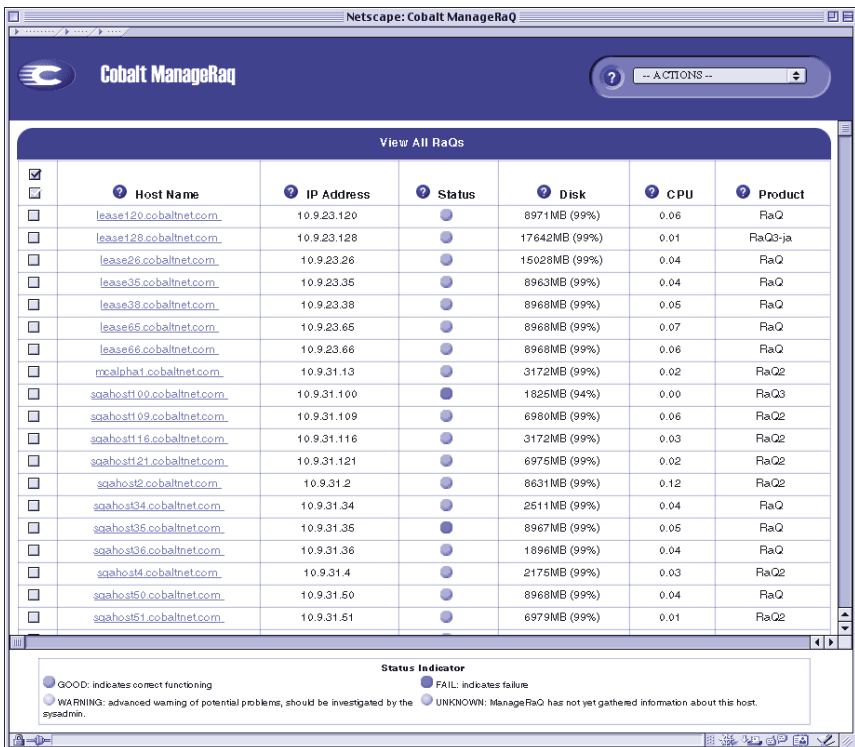
- Back up configuration
- Restore configuration
- Documentation
- ManageRaQ Admin

## View All RaQs

The View All RaQs command allows the administrator to view a list of all of the RaQ units that are managed by the ManageRaQ.

Figure 13 shows the **View All RaQs** screen which is the main screen for the ManageRaQ.

**Figure 13** View All RaQs screen



<input type="checkbox"/>	Host Name	IP Address	Status	Disk	CPU	Product
<input type="checkbox"/>	<a href="#">lease120.coballnet.com</a>	10.9.23.120		8971MB (99%)	0.06	RaQ
<input type="checkbox"/>	<a href="#">lease128.coballnet.com</a>	10.9.23.128		17642MB (99%)	0.01	RaQ3-ja
<input type="checkbox"/>	<a href="#">lease26.coballnet.com</a>	10.9.23.26		15028MB (99%)	0.04	RaQ
<input type="checkbox"/>	<a href="#">lease35.coballnet.com</a>	10.9.23.35		8963MB (99%)	0.04	RaQ
<input type="checkbox"/>	<a href="#">lease38.coballnet.com</a>	10.9.23.38		8968MB (99%)	0.05	RaQ
<input type="checkbox"/>	<a href="#">lease65.coballnet.com</a>	10.9.23.65		8968MB (99%)	0.07	RaQ
<input type="checkbox"/>	<a href="#">lease66.coballnet.com</a>	10.9.23.66		8968MB (99%)	0.06	RaQ
<input type="checkbox"/>	<a href="#">malphat1.coballnet.com</a>	10.9.31.13		3172MB (99%)	0.02	RaQ2
<input type="checkbox"/>	<a href="#">sqahost100.coballnet.com</a>	10.9.31.100		1825MB (94%)	0.00	RaQ3
<input type="checkbox"/>	<a href="#">sqahost109.coballnet.com</a>	10.9.31.109		6980MB (99%)	0.06	RaQ2
<input type="checkbox"/>	<a href="#">sqahost116.coballnet.com</a>	10.9.31.116		3172MB (99%)	0.03	RaQ2
<input type="checkbox"/>	<a href="#">sqahost121.coballnet.com</a>	10.9.31.121		6975MB (99%)	0.02	RaQ2
<input type="checkbox"/>	<a href="#">sqahost12.coballnet.com</a>	10.9.31.2		8631MB (99%)	0.12	RaQ2
<input type="checkbox"/>	<a href="#">sqahost34.coballnet.com</a>	10.9.31.34		2511MB (99%)	0.04	RaQ
<input type="checkbox"/>	<a href="#">sqahost35.coballnet.com</a>	10.9.31.35		8967MB (99%)	0.05	RaQ
<input type="checkbox"/>	<a href="#">sqahost36.coballnet.com</a>	10.9.31.36		1896MB (99%)	0.04	RaQ
<input type="checkbox"/>	<a href="#">sqahost4.coballnet.com</a>	10.9.31.4		2175MB (99%)	0.03	RaQ2
<input type="checkbox"/>	<a href="#">sqahost50.coballnet.com</a>	10.9.31.50		8968MB (99%)	0.04	RaQ
<input type="checkbox"/>	<a href="#">sqahost51.coballnet.com</a>	10.9.31.51		6979MB (99%)	0.01	RaQ2

**Status Indicator**

- GOOD: indicates correct functioning
- WARNING: advanced warning of potential problems, should be investigated by the sysadmin.
- FAIL: indicates failure
- UNKNOWN: ManageRaQ has not yet gathered information about this host.

For each RaQ, the browser displays the following information:

- the host name of the RaQ, which is the fully qualified domain name of the RaQ
- the IP address of the RaQ
- the overall status of the system components and services (functioning, warning of failure, failed or inactive) on the RaQ
- the amount of free disk space (as a percentage) in the /home partition of the RaQ
- the five-minute load average on the CPU of the RaQ; this number indicates the average number of processes running at any given instant
- the model of RaQ being managed (RaQ 1, RaQ 2 or RaQ 3)

By clicking on the host name of the RaQ (shown as a hypertext link), the administrator can view the **Server Management** screen for that RaQ; the browser opens a separate window from the ManageRaQ and requests the normal login authentication before displaying the **Server Management** screen. For more information concerning the **Server Management** screen, refer to the documentation for the RaQ.

---

**Note:** For a link to the user manual for the RaQ 3, see “Documentation” on page 66.

---

The status of the system components and services is indicated with a colored circle: green for correct functioning; yellow for an advance warning of potential problems that should be investigated by the system administrator (for example, low disk space); red for failure (requiring action by the administrator of the client RaQ); and grey for inactive or if information is not yet available. For more information, see “Active Monitor” on page 28.

If you click the colored circle for an individual RaQ, a separate browser window opens. You are prompted for a username and password as part of the normal authentication procedure. The new browser window takes you directly to the Active Monitor of the client RaQ; the screen displays the status of the various system components and services provided by the RaQ. A legend at the bottom of this screen explains what the colors in this window represent.

From the **View All RaQs** screen, the administrator can select individual RaQs on which to perform subsequent actions. The administrator selects a RaQ by clicking the check box to the left of the RaQ's host name. At the top of the check box column, there are two check boxes: one with a black check mark and one with a white check mark.

- To select all RaQs, click the check box with the black check mark.
- To de-select all selected RaQs, click the check box with the white check mark.

Once you have selected the individual RaQs, you can execute actions on the selected RaQs through the command pull-down menu.

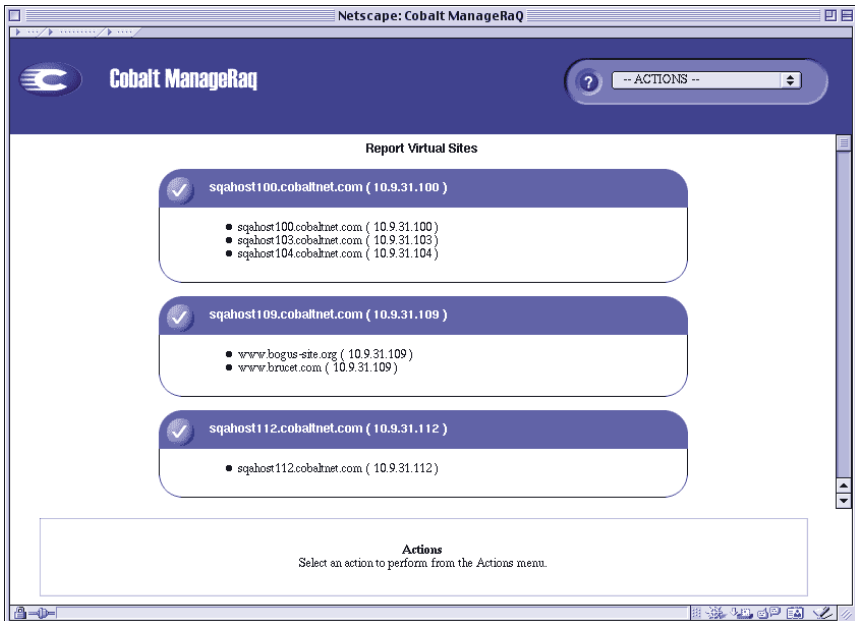
## Report Virtual Sites

The Report Virtual Sites command allows an administrator to view all the virtual sites associated with each RaQ. You cannot change the details for a virtual site from the ManageRaQ.

The **Report Virtual Sites** screen displays the name and IP address of the selected RaQ in the title bar of a table. The virtual sites of the RaQ are listed in the table. The table displays the name of each virtual site, with the IP address of the virtual site in parentheses.

Figure 14 shows the **Report Virtual Sites** screen.

**Figure 14** Report Virtual Sites screen



## Report Selected RaQs

The Report Selected RaQs command allows the administrator to view, for selected RaQs, the same information that is available on the **View all RaQs** screen.

This command is useful if an administrator is managing a large number of RaQs through the ManageRaQ and wants to restrict the display to the selected RaQs.

## Report Details

The Report Details command displays the following information for selected RaQs:

- the status of the system components (CPU, disk and memory)
- the status of the services (ManageRaQ agent, FTP, email, telnet, SNMP and DNS)
- the network settings (primary DNS server, gateway and netmask)
- statistics on disk space utilization for the root, /var and /home partitions
- time stamps (the most recent update of ManageRaQ's Active Monitor and the clock skew)
- the email addresses of the people who receive notification in case of a problem or failure on the RaQ

This information is updated by Active Monitor on ManageRaQ every 15 minutes.

The status of the system components and services is indicated with a colored circle: green for correct functioning; yellow for an advance warning of potential problems that should be investigated by the system administrator (for example, low disk space); red for failure (requiring action by the administrator of the client RaQ); and grey for inactive or if information is not yet available. For more information, see “Active Monitor” on page 28.

The agent is a software component that runs on a managed RaQ to execute commands from the ManageRaQ. When a RaQ is added to the ManageRaQ, the ManageRaQ installs the agent on the RaQ as part of this process.

For the time stamps, Most Recent Status Gathered indicates when the ManageRaQ last communicated with the managed RaQ to gather status information.

Clock Skew reports discrepancies between the clock of the ManageRaQ and the clock of the managed RaQ. The ManageRaQ automatically compensates for this discrepancy.

Figure 15 displays the **Report Details** screen.

**Figure 15 Report Details screen**

The screenshot shows the 'Report Details' screen for host 'sqahost100.cobaltnet.com (10.9.31.100)'. The interface is organized into several sections:

- System Status:** Includes CPU, Disk, and Memory status indicators.
- Services:** Lists Agent, FTP, Email, Telnet, SNMP, and DNS services.
- Network Settings:** Shows DNS Server (10.9.25.1), Gateway (10.9.25.254), and Netmask (255.255.0.0).
- Disk Space Utilization:** Provides usage and availability for /root, /var, and /home.
- Time Stamps:** Shows 'Most Recent Status Gathered' at 9:24 a.m. and a 'Clock Skew' of +7 hours.
- Problem Notification Reports sent to:** Lists email addresses: b.mula@cobalt.com, martinw@cobalt.com, and jeffb@cobalt.com.

A note at the bottom states: **Product:** Indicates the model of Cobalt RaQ being managed.

## Report Services

The Report Services command displays a table indicating the status of the services on the selected RaQs:

- agent
- DNS
- email
- FTP
- SNMP
- telnet

The last column of the table (Last Update) indicates when Active Monitor on the ManageRaQ last updated this information. The status information is updated by Active Monitor on the ManageRaQ every 15 minutes.

By clicking on the host name of the RaQ (shown as a hypertext link), the administrator can view the **Server Management** screen for that RaQ; the browser opens a separate window from the ManageRaQ and requests the normal login authentication before displaying the **Server Management** screen. For more information concerning the **Server Management** screen, refer to the documentation for the RaQ.

---

**Note:** For a link to the user manual for the RaQ 3, see “Documentation” on page 66.

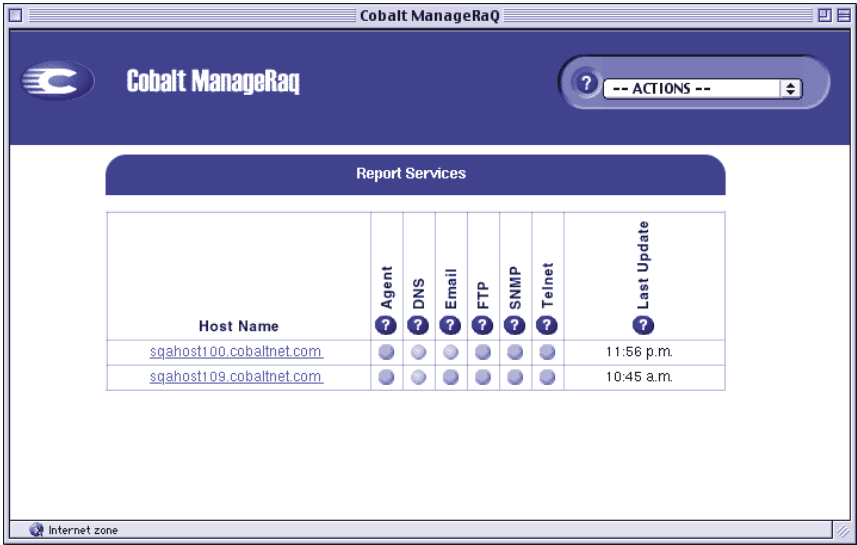
---

The status of the system components and services is indicated with a colored circle: green for correct functioning; yellow for an advance warning of potential problems that should be investigated by the system administrator (for example, low disk space); red for failure (requiring action by the administrator of the client RaQ); and grey for inactive or if information is not yet available. For more information, see “Active Monitor” on page 28.



Figure 16 displays the **Report Services** screen.

**Figure 16 Report Services screen**



## Add New RaQ

The Add New RaQ command allows the administrator to add a new RaQ to the list of RaQs managed through the ManageRaQ.

---

**Note:** When you add a new RaQ, the new RaQ must have a DNS entry.

---

---

**Note:** Due to the ManageRaQ agent software, a managed RaQ must have at least 32 MB of memory. If a RaQ server that you want to manage through ManageRaQ has less than 32 Mb of memory, you will have to upgrade your memory.

---

The administrator enters one of the following and a password for the new RaQ:

- the fully qualified domain name of the RaQ; for example, `www.mydomain.com`
- just the host name of the RaQ; for example, `machine_name`
- the IP address of the RaQ; for example, `192.168.25.77`

For tips on choosing a password, see “Password guidelines” on page 20.

The agent is a software component that runs on a managed RaQ to execute commands from the ManageRaQ. When a RaQ is added to the ManageRaQ, the ManageRaQ installs the agent on the RaQ as part of this process.

---

**IMPORTANT:** Many features of the ManageRaQ depend on the internal clock. Ensure that the time settings on the ManageRaQ are accurate or that the unit is synchronized to a Network Time Protocol (NTP) server (with which the unit will synchronize its internal clock each night.)

For a list of publicly available NTP servers, see:  
<http://www.eecis.udel.edu/~mills/ntp/servers.html> .

---

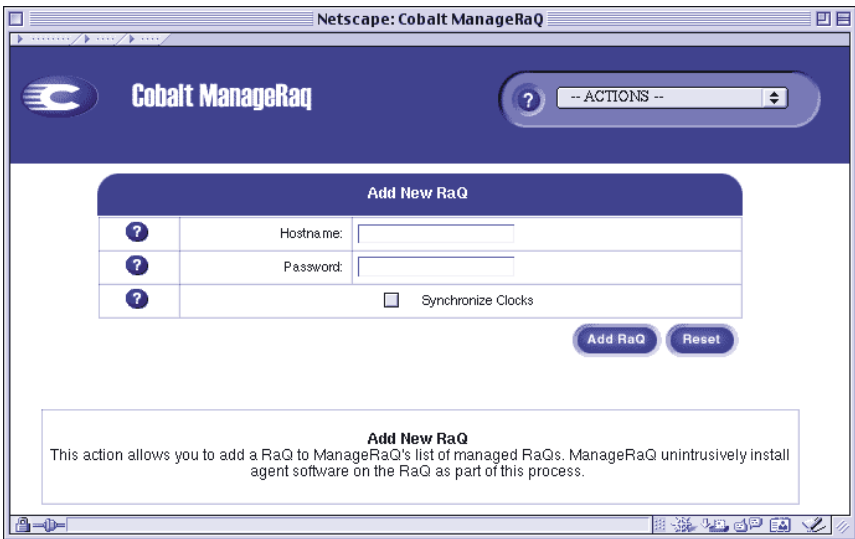
The administrator can also synchronize the clocks. If this option is enabled, the ManageRaQ synchronizes the clock of the RaQ that has been added with the clock on the ManageRaQ.

To enable this option, click the check box beside Synchronize Clocks. The ManageRaQ synchronizes the managed RaQ once every 24 hours.

To complete the action, click **Add RaQ**; to clear the information from the fields, click **Reset**.

Figure 17 shows the **Add New RaQ** screen.

**Figure 17 Add New RaQ screen**



## Remove RaQs

The Remove RaQs command allows the administrator to remove selected RaQs from the list of RaQs managed through the ManageRaQ.

To remove a RaQ, you must first select the RaQ on the **View All RaQs** screen. Select Remove RaQs from the pull-down menu. The **Remove RaQs** screen appears.

- The first row in the table displays asks whether you are sure you want to remove the RaQs.
- A text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

You can also choose to have the ManageRaQ uninstall the agent software from the RaQs when you remove them from the list of managed RaQs.

To uninstall the agent software, click the check box beside Uninstall agent software. The ManageRaQ attempts to uninstall the agent software specific to the ManageRaQ from the RaQs targeted for removal.

---

**Note:** For whatever reason, if the ManageRaQ cannot uninstall the agent software from a selected RaQ, the RaQ is not removed from the list of managed RaQs.

In this case, you can remove the check mark from the box beside Uninstall agent software and click **Remove RaQs** again. This removes the RaQ from the list of managed RaQs but leaves the ManageRaQ agent software on that RaQ.

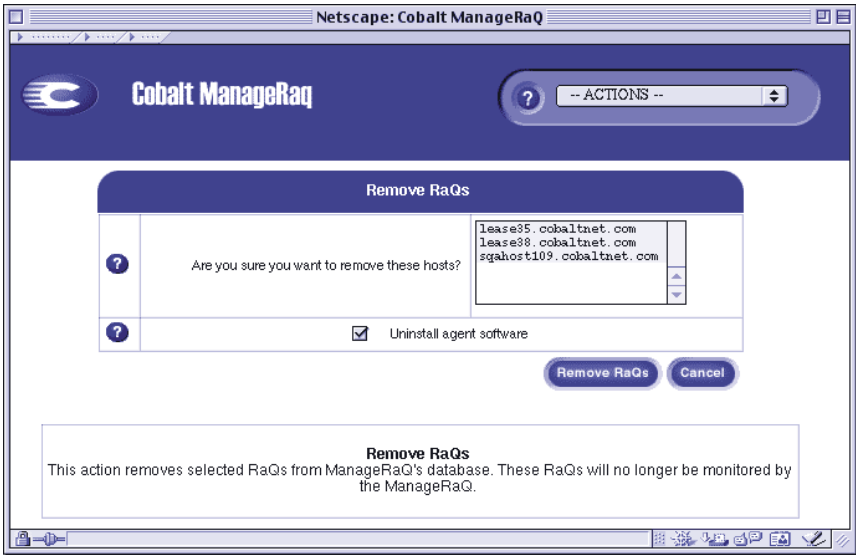
---

To return to the **View All RaQs** screen without removing the selected RaQs, click **Cancel**.

To complete the action, click **Remove RaQs**.

Figure 18 shows the **Remove RaQs** screen.

**Figure 18 Remove RaQs screen**



## Configure Services

The Configure Services command allows the administrator to activate or deactivate services on one or more RaQs at a time. The administrator can turn on or off email, FTP, telnet, SNMP and DNS services.

To configure services, you must first select the RaQ on the **View All RaQs** screen. Select Configure Services from the pull-down menu. The **Configure Services** screen appears.

- The table displays the services that the administrator can configure. The default setting for each service is “As is”, meaning that the service remains as it is currently configured on the RaQ client. The other options are Turn ON and Turn OFF. The administrator chooses the settings for each service.
- At the bottom of the table, a text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

If you click **Reset**, the screen reverts to what was displayed when you selected the Configure Services command from the pull-down menu.

To complete the action, click **Configure RaQs**.

For more information on these services, refer to the documentation for your RaQ unit.

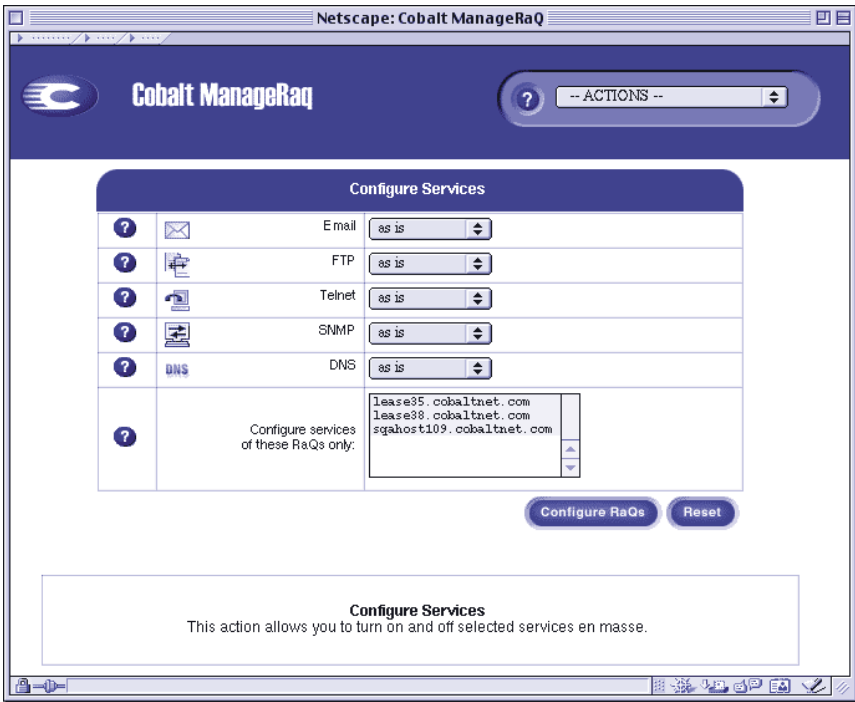
---

**Note:** For a link to the user manual for the RaQ 3, see “Documentation” on page 66.

---

Figure 19 shows the **Configure Services** screen.

**Figure 19** Configure Services screen



For example, if you want to activate SNMP on a group of RaQs, perform the following steps:

1. From the **View all RaQs** screen, select the RaQs on which you want to activate SNMP.
2. From the command pull-down menu, choose **Configure Services**.
3. From the pull-down menu next to the SNMP service, choose “turn ON”.
4. If you want to change the RaQs for which you want to configure the SNMP service, select or de-select the RaQs in the text-edit window at the bottom.
5. To complete the action, click **Configure RaQs**.

The SNMP service is now active on the selected RaQs. The **Report Details** screen does not show the updated information until Active Monitor performs its next update.

To verify immediately that the requested change to the services configuration has been made, access the **Server Management** screen for a particular RaQ.

1. From the **View all RaQs** screen on the ManageRaQ, click on the host name (a hypertext link) of the RaQ. The **Server Management** screen for that RaQ appears.
2. Click **Control Panel** on the left. The Service Settings table appears.

A check mark indicates that the service is activated.



## Configure Network

The Configure Network command allows the administrator to configure the network settings for one or more RaQs at a time. The settings include the IP addresses of the RaQ's primary DNS server and secondary DNS server, and the name or IP address of the RaQ's Internet gateway.

---

**Note:** If you leave a field blank on this screen, no change is made to that setting; you do not blank out the previous setting for that field. For example, if you want to change the primary DNS server, you do not have to re-enter the gateway address as well.

---

To configure the network settings, you must first select the RaQ on the **View All RaQs** screen. Select Configure Network from the pull-down menu. The **Configure Network** screen appears.

- The table displays the network settings that the administrator can configure. If you leave a field blank on this screen, no change is made to that setting; you do not blank out the previous setting for that field. For example, if you want to change the primary DNS server, you do not have to re-enter the gateway address as well.
- At the bottom of the table, a text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

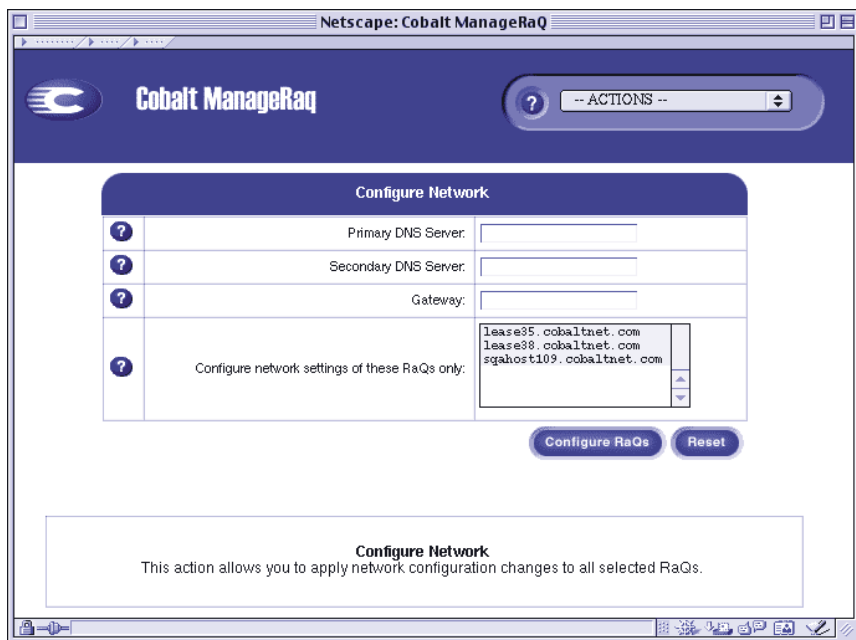
In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

If you click **Reset**, the screen reverts to what was displayed when you selected the Configure Network command from the pull-down menu.

To complete the action, click **Configure RaQs**.

Figure 20 shows the **Configure Network** screen.

**Figure 20** Configure Network screen



For example, if you want to change the gateway IP address on selected RaQs, perform the following steps:

1. From the **View all RaQs** screen, select the RaQs for which you want to change the gateway IP address.
2. From the command pull-down menu, choose **Configure Network**.
3. In the Gateway address field, enter the new IP address.
4. If you want to change the RaQs for which you want to configure the gateway IP address, select or de-select the RaQs in the text-edit window at the bottom.
5. To complete the action, click **Configure RaQs**.

The gateway IP address has now been changed for the selected RaQs. The **Report Details** screen shows the updated information once an update cycle has been completed.

## Change Password

The Change Password command allows the administrator to change the administrator password for one or more RaQs at a time.

The administrator can also update the ManageRaQ if the password for a RaQ has been changed through the **Server Management** screen on that RaQ.

To change the password, you must first select the RaQ on the **View All RaQs** screen. Select Change Password from the pull-down menu. The **Change Password** screen appears.

- To change the password, enter the new password in the first field. Enter the new password again in the second field for confirmation. For tips on choosing a password, see “Password guidelines” on page 20.
- At the bottom of the table, a text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

If you click **Reset**, the screen reverts to what was displayed when you selected the Change Password command from the pull-down menu.

To complete the action, click **Change Password**.

---

**Note:** A password change takes effect immediately. If the password is changed while a user is logged in to a client RaQ through the Server Management screen for that RaQ or through the ManageRaQ, the user must go through the authentication procedure again for the session, using the new password.

This also applies to ManageRaQ itself; if the password is changed on the ManageRaQ, the user must go through the authentication procedure again for the ManageRaQ, using the new password.

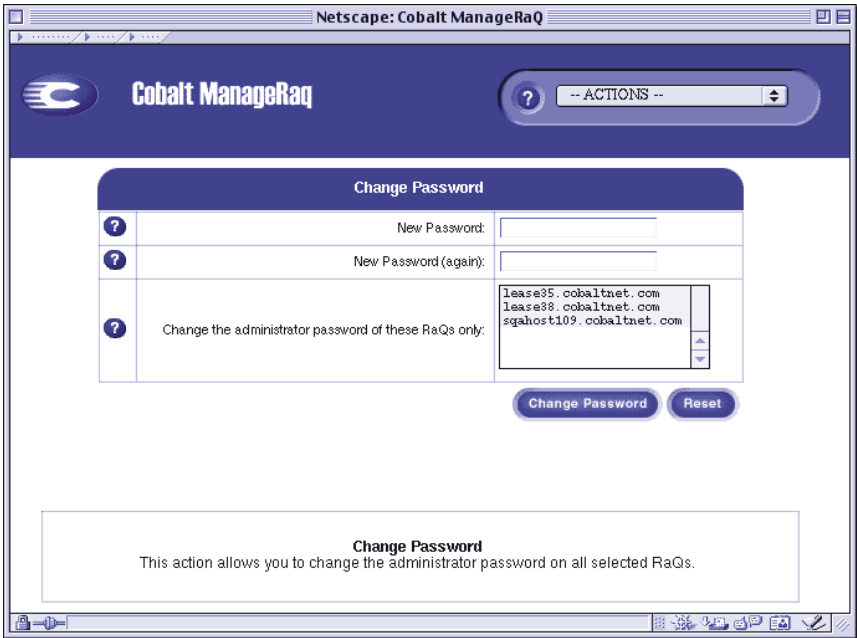
---

If the password has been changed directly on a RaQ client and not through the ManageRaQ UI, the ManageRaQ cannot discover the new password for that RaQ. Active Monitor for the ManageRaQ displays a red circle for that RaQ client.

If a RaQ Administrator changes the password outside of the ManageRaQ (either from the **Server Management** screen on the individual RaQ or from the LCD console of the RaQ), he or she has to update the ManageRaQ manually. To do so, use the Change Password command.

Figure 21 shows the **Change Password** screen.

**Figure 21** Change Password screen



## Install Package

The Install Package command allows the administrator to install a package file on one or more RaQs at a time.

To install a package, you must first select the RaQ on the **View All RaQs** screen. Select Install Package from the pull-down menu. The **Install Package** screen appears.

- Enter the pathway and filename in the field and click **Install**.  
If you do not know where the package file is located, click **Browse** to find the file. When you find the package file, highlight it and click **Open** in the File Upload window. The pathway and filename now appear in the field on the **Install Package** screen.
- At the bottom of the table, a text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

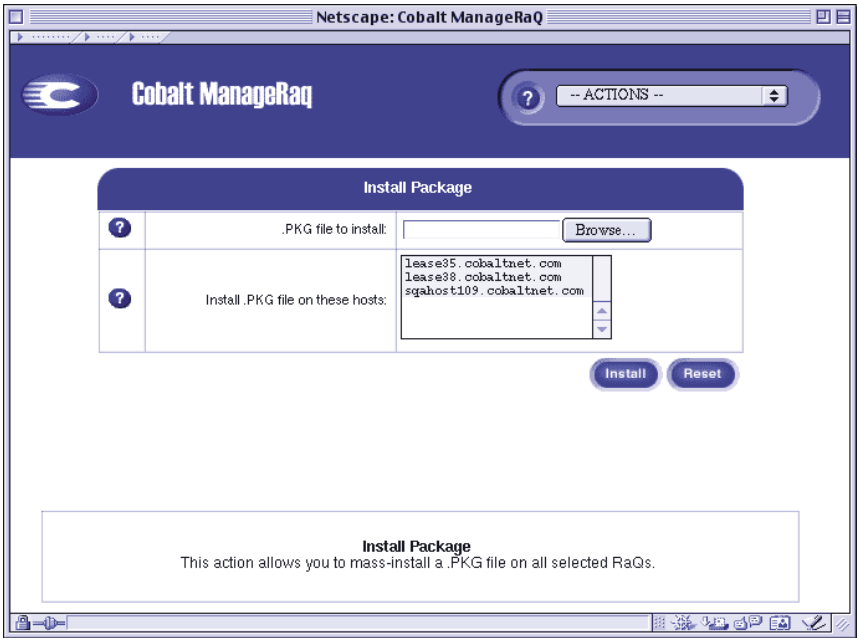
If you click **Reset**, the screen reverts to what was displayed when you selected the Install Package command from the pull-down menu.

To complete the action, click **Install**.

A window appears with a percentage bar showing the progression of the installation and the name of the RaQ on which the software is being installed. The bar shows the progress of the installation for the entire group of selected RaQs. A window below the bar displays a scrolling list of errors, if any. When finished, a window indicates that the installation is complete.

Figure 22 shows the **Install Package** screen.

**Figure 22** Install Package screen



## Configure Notification

The Configure Notification command allows the administrator to enter the email addresses of the people to be contacted in case of a problem or failure on a managed RaQ or RaQs.

If you do not want send a notification to anyone or if you would like to turn off this feature, simply clear this field and click **Set Notification**.

---

**Note:** The email address field does not display the current settings for notification; the address field is empty. To view the current settings for email notification, use the Report Details command. The email recipients are listed at the bottom of the Report Details table.

---

---

**IMPORTANT:** If you add a new email address in this field, the new address overrides any previously saved addresses; the new address is not simply added to the list of current email addresses. To retain the current email addresses for notification, you must re-enter all of the current email addresses as well as the new address.

---

If you invoke this command without specifying an email recipient, the email notification is cleared for the selected RaQs.

---

To configure a RaQ for email notification, you must first select the RaQ on the **View All RaQs** screen, but you do not need to. Select Configure Notification from the pull-down menu. The **Configure Notification** screen appears.

- Enter the email addresses, separated by commas, in the Email address field. More than one address can be entered in the address field.

If you add a new email address in this field, the new address overrides any previously saved addresses; the new address is not simply added to the list of current email addresses. To retain the current email addresses for notification, you must re-enter all of the current email addresses as well as the new address.

If you invoke this command without specifying an email recipient, the email notification is cleared for the selected RaQs.



- At the bottom of the table, a text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

If you click **Reset**, the screen reverts to what was displayed when you selected the Configure Notification command from the pull-down menu.

To complete the action, click **Set Notification**.

Figure 23 shows the **Configure Notification** screen.

**Figure 23** Configure Notification screen

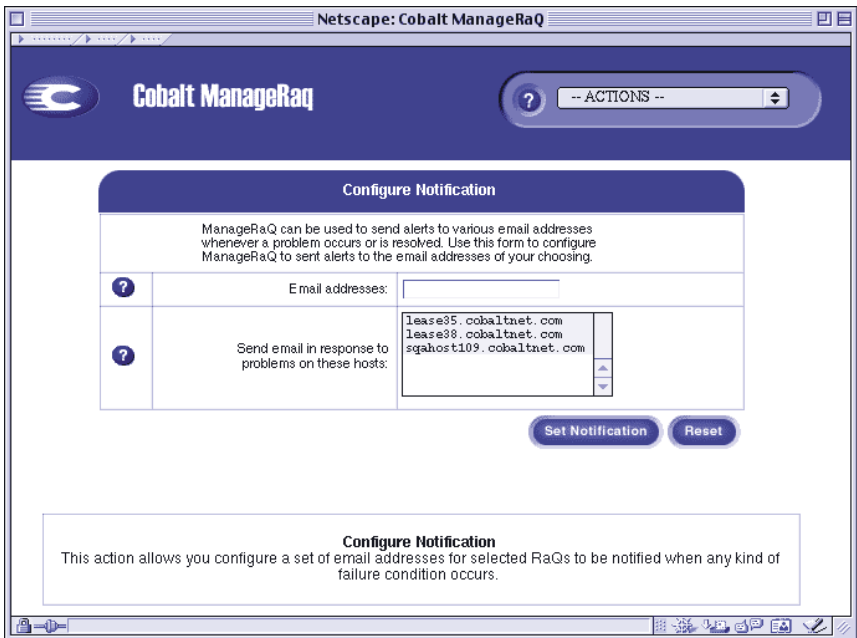


Figure 24 shows an example of an email notification generated by the ManageRaQ.

**Figure 24** Sample email notification from the ManageRaQ

From: ManageRaQ User [mailto:mgmtcons@brenda.cobaltnet.com]  
 Sent: Wednesday, March 15, 2000 10:18 AM  
 To: [bmula@cobalt.com](mailto:bmula@cobalt.com)  
 Subject: coryell.cobaltnet.com - Returned to normal functioning.

On host coryell.cobaltnet.com:  
 Returned to normal functioning.

---

SYSTEM STATUS (last known information)

---

Hostname: coryell.cobaltnet.com  
 IP Address: 10.9.150.3  
 Cobalt system software: build 1.4 for a 2800RS in English

---

MC AGENT

Agent status: good  
 Agent handlers version: 1.11

---

ACTIVE MONITOR INFORMATION, last updated

CPU usage: good  
 Memory usage: good  
 Disk usage: good

---

Email service: inactive  
 FTP server: inactive  
 Telnet service: good  
 SNMP server: good  
 DNS server: good

---

NETWORK CONFIGURATION

Primary DNS Server: 10.9.25.1 Secondary DNS Server:  
 Netmask: 255.255.0.0  
 Gateway: 10.9.25.254

---

DISK SPACE UTILIZATION

/ 218M used, 265M available.  
 /var 4M used, 189M available.  
 /home 22M used, 2154M available.

---

CPU Load: 0.07 0.07 0.07

---

## Execute Script

### WARNING




---

**Warning to Root User:** Use extreme caution when using this feature! The script executes as root. Changes to system files can affect your warranty. Please consult your warranty card for details.

---

The Execute Script command allows the administrator to execute arbitrary Bourne shell scripts on one or more RaQs.

To execute a script, you must first select the RaQ on the **View All RaQs** screen. Select Execute Script from the pull-down menu. The **Execute Script** screen appears.

- Enter the script in the window.
- You can indicate a time-out limit for the script to run; the limit is specified as a number of seconds. The limit applies to each selected RaQ.

If the script does not finish within the time-out period, the script is halted and the output generated up to that point is returned to the UI screen.

To specify a time-out limit in seconds, enter a whole number in the time-out field.

- At the bottom of the table, a text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

If you click **Reset**, the screen reverts to what was displayed when you selected the Execute Script command from the pull-down menu.

To complete the action, click **Execute Scripts**.

Figure 25 shows the **Execute Script** screen.

**Figure 25** Execute Script screen

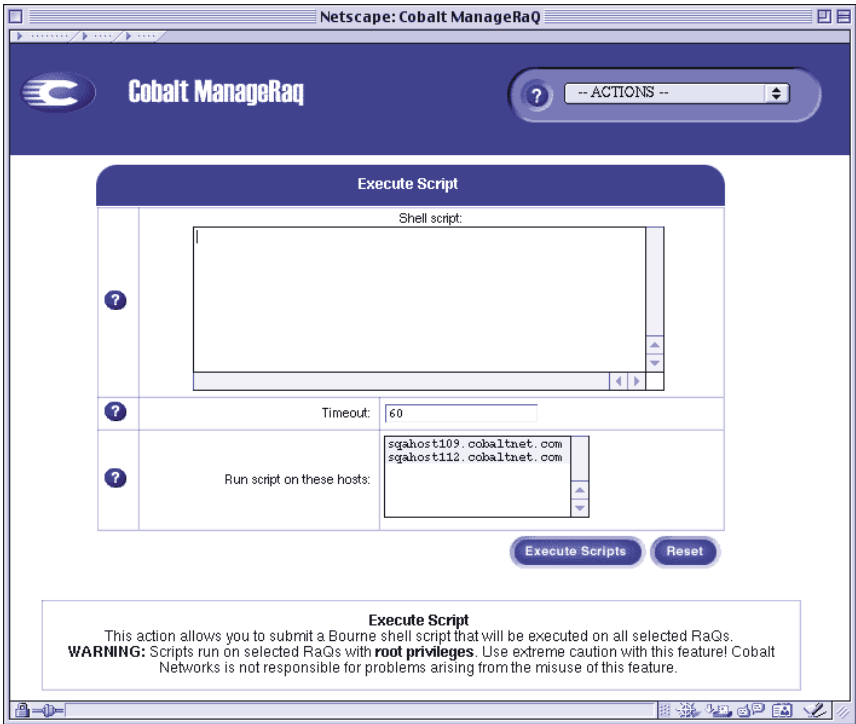
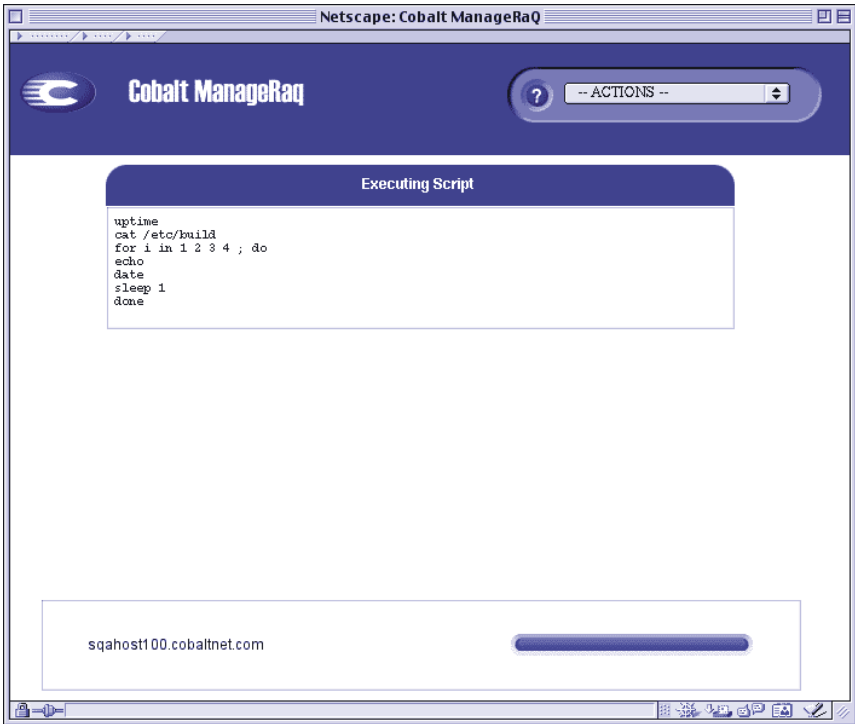


Figure 26 shows a sample script in the Execute Script window.

**Figure 26** Sample script

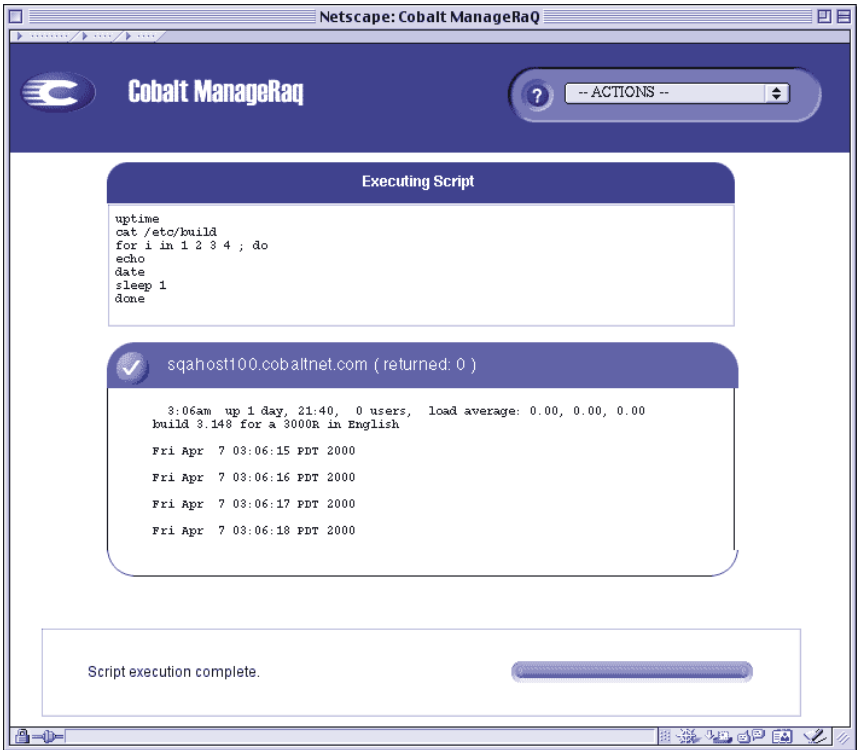


When you execute the script, a percentage bar appears in the help frame at the bottom. The bar shows the progression of the script execution and the name of the RaQ on which the script is being executed. The bar shows the progress of the script execution on each selected RaQ.

When finished, the help frame indicates that the script execution is complete. See Figure 27.

Figure 27 shows a the screen after a script has been executed.

**Figure 27** Completed script execution



## Reboot RaQs

The Reboot RaQs command allows the administrator to reboot one or more RaQs at a time.

To reboot a RaQ, you must first select the RaQ on the **View All RaQs** screen. Select Reboot RaQs from the pull-down menu. The **Reboot RaQs** screen appears.

- The first row in the table displays asks whether you are sure you want to reboot the RaQs.
- A text-edit window displays the names of the RaQs that you selected on the **View All RaQs** screen; if there are more RaQs than can be displayed, the text-edit window becomes a scrolling window.

All of the RaQs are highlighted in the text-edit window.

In this window, you can further restrict the RaQs on which you want to perform the action. To de-select a RaQ, click on that RaQ so that it is no longer highlighted; to de-select more than one RaQ, hold the down the Control key (Windows) or the Apple key (Macintosh) and click on the names of the RaQs.

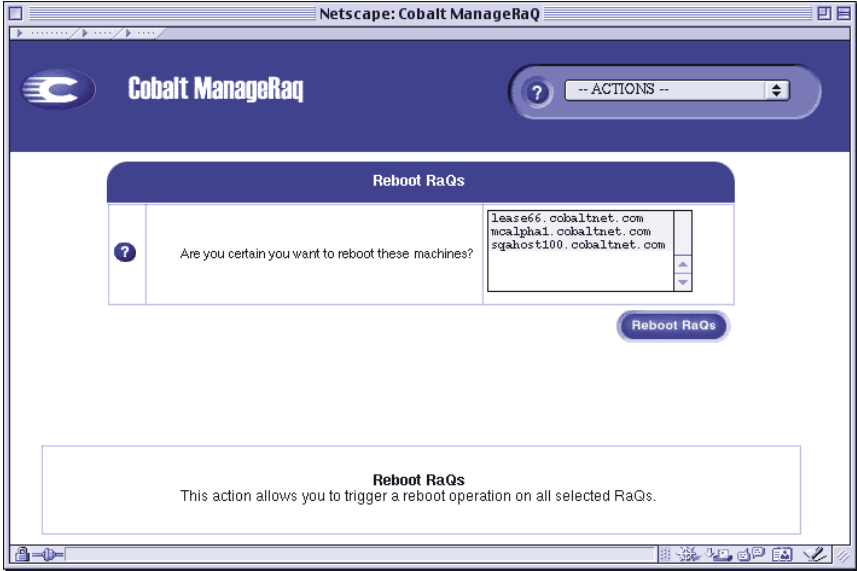
To complete the action, click **Reboot RaQs**.

Once you confirm that you want to reboot a RaQ, the RaQ reboots and takes about one minute to come back online.

From the **Report Services** screen, the status of the RaQ shows as a red circle while the RaQ is unavailable; the circle changes to green when the reboot process is complete.

Figure 28 shows the **Reboot RaQs** screen.

**Figure 28** Reboot RaQs screen





## Back up Configuration

The Back up Configuration command allows the administrator to back up the configuration information entered for each of the managed RaQs.

---

**Note:** This feature does NOT allow an administrator to back up the data on an individual RaQ. For information on how to back up the data on a RaQ, see the user manual for your RaQ server.

---

This feature will save an administrator time and effort if it becomes necessary to re-enter the configuration information for the managed RaQs—for example, if the administrator wants to transfer the management functions to a new ManageRaQ server.

The Backup feature is also useful if the administrator has a large number of RaQs to add to the ManageRaQ. For example, it would be a good idea to create a backup file after adding five or six RaQ servers.

The backup feature is a manual function; you cannot schedule a regular automatic backup.

For each RaQ that is managed by the ManageRaQ, the following information is saved:

- the fully qualified domain name (hostname.domainname)
- the IP address of the RaQ
- the administrator password for the RaQ
- the option of whether the ManageRaQ synchronizes the managed RaQ's internal clock each day.




---

**Caution:** Once a file transfer begins, do not interrupt or cancel the backup process. If you do, or if the file transfer fails for any other reason, you will need to delete the partial backup file stored on your personal computer and try again. If you attempt to use a partial file to restore data to your ManageRaQ, you risk corrupting the data already stored on the server.

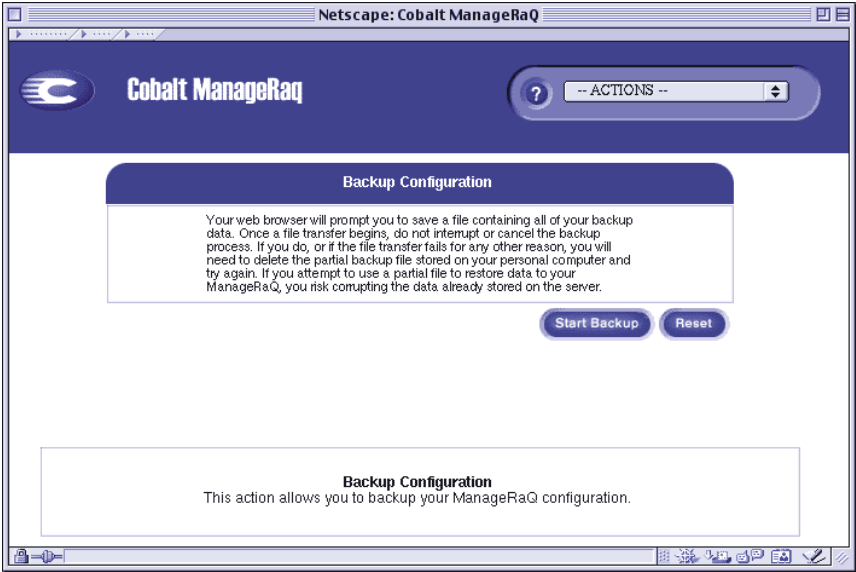
---

Select Back up Configuration from the pull-down menu. The **Backup Configuration** screen appears. To back up the configuration data on the ManageRaQ, click **Back Up**.

The browser prompts you to save a file containing all of your backup data. The data is saved in a file with the extension .cmc .

Figure 29 shows the **Backup Configuration** screen.

**Figure 29 Backup Configuration screen**



## Restore Configuration

The Restore Configuration command allows the administrator to restore a backup file with the extension .cmc that the administrator created previously. See “Back up Configuration” on page 63.




---

**Caution:** The system does not merge the current data and backed-up data. The data contained in the \*.cmc backup file replaces whatever data is currently on the ManageRaQ. If you have added a RaQ to the ManageRaQ since your last backup, you will have to add these new RaQs again.

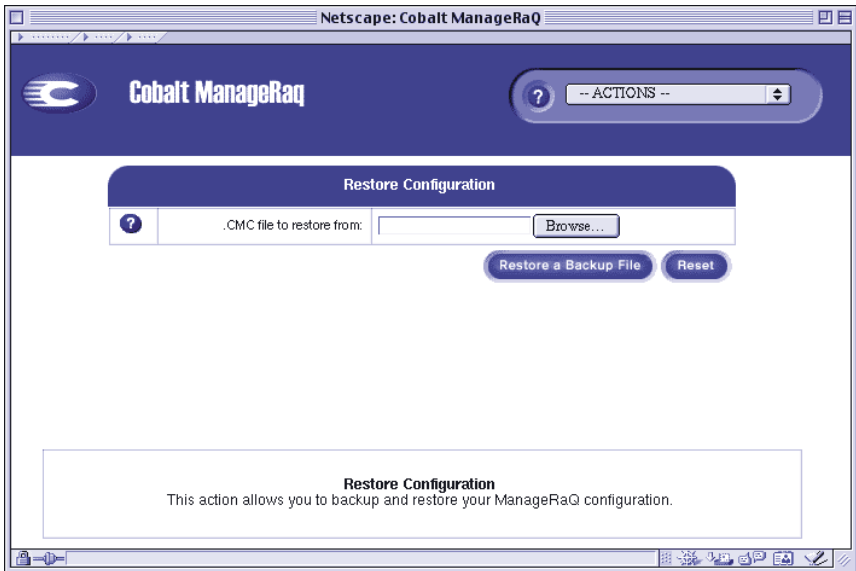
---

Select Restore Configuration from the pull-down menu. The **Restore Configuration** screen appears. The browser prompts you for the path and filename of the backup file; you can also click **Browse** to locate the file.

To complete the action, click **Restore**.

Figure 30 shows the **Restore Configuration** screen.

**Figure 30** Restore Configuration screen



## Documentation

The Documentation command provides a link to the ManageRaQ user manual in PDF format, which provides a description of the ManageRaQ and the features. There is also a link to the RaQ 3 user manual in PDF format.

If you select the Documentation command from the pull-down menu, the **About Cobalt ManageRaQ** screen appears. This screen displays the following information:

- the version of the ManageRaQ software (version number and build number)
- a link to the ManageRaQ user manual (a PDF file)
- a link to the RaQ user manual (a PDF file)
- a link to the RaQ 2 user manual (a PDF file)
- a link to the RaQ 3 user manual (a PDF file)
- a link to the ManageRaQ support page on Cobalt's web site
- an email link to Technical Support (mgmt-support@cobalt.com)
- copyright information for the Management Console and trademark information

To access the ManageRaQ user manual or the RaQ 3 user manual, click on the PDF links in the Documentation section of the table.

### To send comments or report a software bug

There is an email link within the ManageRaQ for sending comments or reporting bugs in the software to Technical Support at Cobalt Networks.

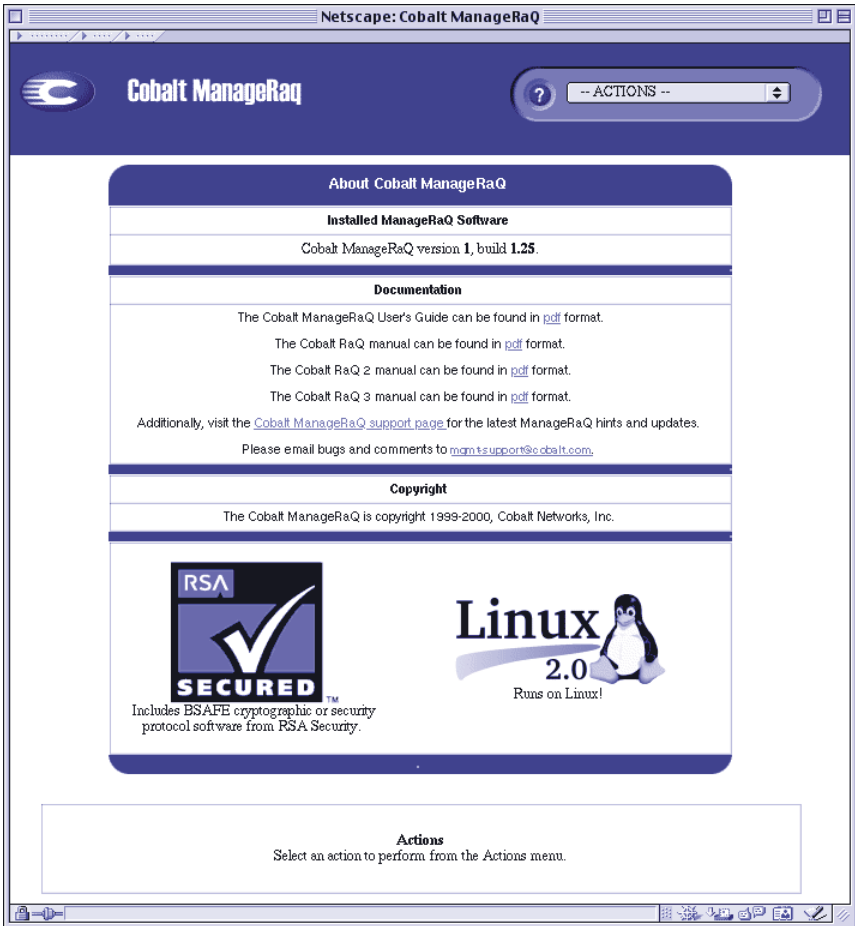
To send comments or report a software bug:

1. Click on the pull-down menu in the command frame of the ManageRaQ and select "Documentation". The **About Cobalt ManageRaQ** screen appears.
2. In the "Documentation" section of the table, click on the link for "mgmt-support@cobalt.com".
3. If you are reporting a problem, please be specific in your description. Attach a copy of any error output you may have received.

To provide further information on your problem, see also "To speed up your support call" on page 8.

Figure 31 shows the **About Cobalt ManageRaQ** screen for the ManageRaQ.

**Figure 31 About Cobalt ManageRaQ screen**



## ManageRaQ Admin

The ManageRaQ Admin command provides a link to the **Server Management** screen of the ManageRaQ.

From this screen, you can enable services such as web hosting, email, File Transfer Protocol (FTP) server and FrontPage extensions.

For a complete description of the features available from the **Server Management** screen, see Chapter 3 in the RaQ 3 user manual.

---

**IMPORTANT:** We recommend against using the ManageRaQ for hosting web sites.

While it is possible to enable on the ManageRaQ the various services mentioned above, this will have a noticeable impact on the performance of the management functions.

---

To access the settings for the services, the network or the time:

1. Choose **ManageRaQ Admin** from the pull-down menu. The Server Management screen appears in a separate browser window.
2. Click **Control Panel** on the left. The Service Settings table appears. To enable or disable services, click the check box beside to service; a check mark indicates the service is enabled.

Click **Save Changes** when finished.



---

**Caution:** Do not use the Bandwidth Management feature on the primary IP address of the ManageRaQ. This will greatly degrade the performance of the ManageRaQ since the ManageRaQ uses as much bandwidth as available when functioning.

---

3. To change the network settings, click **Network** at the top. The Network Settings tables appear, in which you can change a number of network settings.

Click **Save Changes** when finished.

4. To change the time settings, click **Time** at the top. The Time Settings table appears.  
Click **Save Changes** when finished.
5. To return to the ManageRaQ features page, click **ManageRaQ** on the left. The **View All RaQs** screen appears.

To access the RaQ 3 user manual in PDF format that is stored on the ManageRaQ:

1. Select the Documentation command from the pull-down menu.  
The **About Cobalt ManageRaQ** screen appears.
2. Click on the PDF link in the Documentation section.





# Error Messages

---

This chapter provides a number of tables that explain the error messages in the ManageRaQ software.

## The ManageRaQ is Busy screen

More than one person can access the ManageRaQ at the same time. However, the ManageRaQ can only execute one command at a time.

If the ManageRaQ is already executing a command when you try to perform an action, a red table appears, stating that the ManageRaQ is busy.

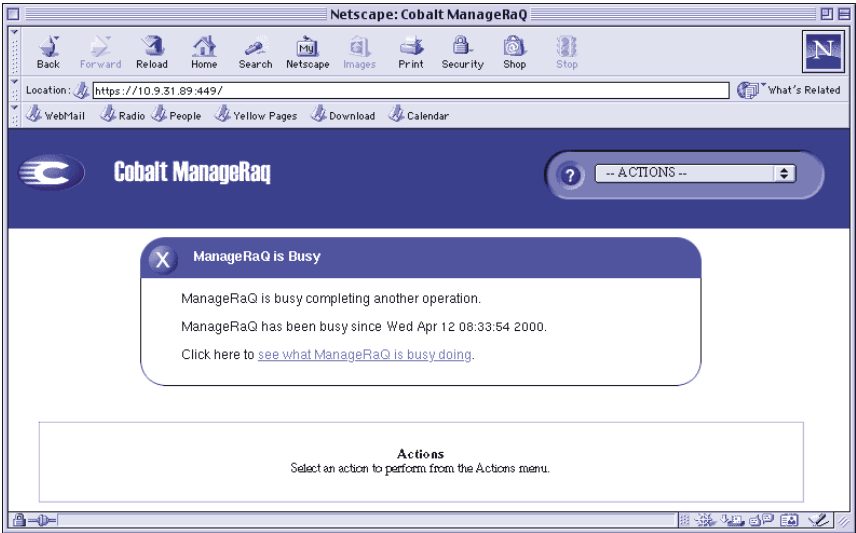
The table also provides the following information:

- The ManageRaQ has been busy since (date and time)
- a link for you to see what the ManageRaQ is busy doing

Wait a few moments and try to perform your action again.

Figure 32 shows the **ManageRaQ is Busy** screen for the ManageRaQ.

**Figure 32** ManageRaQ is Busy screen



## Error Tables

The following tables explain the errors that can appear in your browser window.

Table 2 provides an explanation of the error messages for the **Report Virtual Sites** command.

Table 2 Error messages for the Report Virtual Sites command

Error message	Explanation
Could not connect to agent on this host.	The RaQ may be inaccessible. Someone may have removed from the RaQ from the network or changed the password.
There are no virtual sites on this host.	There are no virtual sites set up on the RaQ.
No RaQs presently selected.	You have not selected a RaQ in the list of managed RaQs.

Table 3 provides an explanation of the error messages for the **Report Selected RaQs** command.

Table 3 Error messages for the Report Selected RaQs command

Error message	Explanation
No RaQs presently selected.	You have not selected a RaQ in the list of managed RaQs.

Table 4 provides an explanation of the error messages for the **Report Services** command.

Table 4 Error messages for the Report Services command

Error message	Explanation
No RaQs presently selected.	You have not selected a RaQ in the list of managed RaQs.
Could not open mc-servicetable.html.	Internal ManageRaQ error.

Table 5 provides an explanation of the error messages for the **Add a RaQ** command.

Table 5 Error messages for the Add new RaQ command

<b>Error message</b>	<b>Explanation</b>
(host) has already been added.	The RaQ is already in the ManageRaQ database.
(host) does not have a DNS entry. Attempting to continue anyway...	This message is just a warning.
Installation of agent software failed.	The password you entered is incorrect.  The host is unsupported.
Agent was installed but failed to start.  Please report this problem to Cobalt Networks.	Internal ManageRaQ error.
Failed to extract network data.	Internal ManageRaQ error.
Host (<host name>) is actually (<real host name>), and could not be added a second time.	This RaQ has already been added under a different name and cannot be added again.
(real host name) does not have a DNS entry. Continuing anyway...	This message is just a warning.
Failed to extract service data.	Internal ManageRaQ error.
Failed to extract virtual sites.	Internal ManageRaQ error.
Failed to synchronize system clocks.	Internal ManageRaQ error.
Failed to add host.	This message appears when a fatal error occurs while adding a RaQ.

Table 6 provides an explanation of the error messages for the **Remove RaQs** command.

Table 6 Error messages for the Remove RaQs command

Error message	Explanation
No RaQs removed.	Due to other errors, no RaQs were removed. See additional error messages for the specific errors.
(host): could not connect to remove agent.	The ManageRaQ could not connect to the agent on the RaQ and was unable to uninstall agent. As a result, this RaQ was not removed.  <b>Note:</b> If you wish to remove the RaQ without uninstalling the agent software, uncheck the 'uninstall agent' check box.
(host): could not remove RaQ.	Another failure has occurred. Someone may have removed the RaQ from the ManageRaQ or from the network.

Table 7 provides an explanation of the error messages for the **Configure Services** command.

Table 7 Error messages for the Configure Services command

Error message	Explanation
(host): host not found.	The RaQ may no longer be under the control of the ManageRaQ. Someone may have removed the RaQ from the ManageRaQ.
(host): could not apply new settings.	This message appears if, for any reason, the ManageRaQ cannot make the changes to the service settings.  The RaQ may be inaccessible.

Table 8 provides an explanation of the error messages for the **Configure Network** command.

**Table 8** Error messages for the Configure Network command

<b>Error message</b>	<b>Explanation</b>
Primary DNS address "... " is not a valid IP address.	<p>The IP address you entered is not valid. The address must be written as four octets separated by periods (for example, 192.168.10.10); each octet must be a number between 0-255.</p> <p>The entry is not an IP address.</p>
Secondary DNS address "... " is not a valid IP address.	<p>The IP address you entered is not valid. The address must be written as four octets separated by periods (for example, 192.168.10.10); each octet must be a number between 0-255.</p> <p>The entry is not an IP address.</p>
Gateway address "... " is not a valid IP address.	<p>The IP address you entered is not valid. The address must be written as four octets separated by periods (for example, 192.168.10.10); each octet must be a number between 0-255.</p> <p>The entry is not an IP address.</p>
No RaQs presently selected.	You have not selected a RaQ in the list of managed RaQs.
No changes to make.	You have not filled in the network settings.
(host): host not found.	The RaQ may no longer be under the control of the ManageRaQ. Someone may have removed the RaQ from the ManageRaQ.
(host): could not apply new settings.	<p>This message appears if, for any reason, the ManageRaQ cannot make the changes to the network settings.</p> <p>The RaQ may be inaccessible.</p>

Table 9 provides an explanation of the error messages for the **Change Password** command.

**Table 9** Error messages for the Change Password command

<b>Error message</b>	<b>Explanation</b>
Blank passwords not allowed. (Error from Java script)	The password cannot be blank.
Passwords do not match. (Error from Java script)	You must enter the exact same password as in the first field.
(host): host not found.	The RaQ may no longer be under the control of the ManageRaQ. Someone may have removed the RaQ from the ManageRaQ or from the network.
(host): could not change password.	The ManageRaQ could not connect to agent on remote machine.  The password for the RaQ agent was incorrect.  The new password is an illegal string.

Table 10 provides an explanation of the error messages for the **Install Package** command.

Table 10 Error messages for the Install Package command

<b>Error message</b>	<b>Explanation</b>
Package file not specified.	You have not specified a package file.
(file): File not found.	The browser could not locate the package file on your computer.
(file): Not a package file.	The file your specified is not a package file (.pkg).
(host): package installation failed.	This message appears if, for any reason, the ManageRaQ could not install the package file.  See additional error messages for the specific errors.

Table 11 provides an explanation of the error messages for the **Configure Notification** command.

Table 11 Error messages for the Configure Notification command

<b>Error message</b>	<b>Explanation</b>
(host): host not found.	The RaQ may no longer be under the control of the ManageRaQ. Someone may have removed the RaQ from the ManageRaQ.
(host): could not change notification.	Internal ManageRaQ error.



Table 12 provides an explanation of the error messages for the **Execute Script** command.

Table 12 Error messages for the Execute Script command

<b>Error message</b>	<b>Explanation</b>
(host): host not found.	The RaQ may no longer be under the control of the ManageRaQ. Someone may have removed the RaQ from the ManageRaQ or from the network.
script execution failure	The script could not start, or the script could not complete. See the text inside the error message for the specific error.
Shell script field was empty.	You have not entered anything in the Execute Script field.
Timeout must be an integer	The value entered in the Time Out field must be an integer.

Table 13 provides an explanation of the error messages for the **Reboot RaQs** command.

Table 13 Error messages for the Reboot command

<b>Error message</b>	<b>Explanation</b>
No RaQs presently selected.	You have not selected a RaQ in the list of managed RaQs.
(host): host not found.	The RaQ may no longer be under the control of the ManageRaQ. Someone may have removed the RaQ from the ManageRaQ or from the network.
(host): could not trigger reboot.	The ManageRaQ could not connect to agent on remote machine, or the password was incorrect.

Table 14 provides an explanation of the error messages for a ManageRaQ server error.

Table 14 Error messages for a ManageRaQ server error

<b>Error message</b>	<b>Explanation</b>
Could not connect to the MC Server.  The server is either busy or restarting.	Internal ManageRaQ error. Try again in a few minutes, as the ManageRaQ may be re-launching itself.

# Using the LCD Console

---

During startup, the LCD screen on the front panel of the ManageRaQ displays status information about the boot process itself.

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

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

- change the network configuration information, which is useful if the location of the ManageRaQ is changed.
- reboot, which restarts the entire ManageRaQ.
- power down in a way that allows the ManageRaQ to close all open files, and minimizes startup time the next time the ManageRaQ is powered on.
- exit from the LCD console without making any changes

---

**IMPORTANT:** Before turning off the ManageRaQ, follow the proper power-down procedure, as described in “Powering down” on page 84.

---

You access each of these functions by holding down the **(S)** (select) button on the LCD console for approximately two seconds. This action causes the LCD screen to enter its function mode. Press the **(S)** button until the function you want appears on the LCD screen. To cancel the LCD function mode, select the **EXIT** function when it appears on the screen. Press the **(E)** (enter) button and select **YES**.

## Changing network configuration

To reset the IP address or change the network configuration of the Primary Network Interface:

1. On the LCD console, hold down the **(S)** button for approximately 2 seconds.

The LCD screen displays:

```
SELECT :  
  SETUP NETWORK
```

2. Press the **(E)** button.
3. Enter the IP address using the arrow buttons. The left and right arrow buttons move the cursor position to the left or right. The up and down arrow buttons increase or decrease the digit at the cursor position.
4. Press the **(E)** button.
5. Enter the Netmask using the arrow buttons.
6. Press the **(E)** button.
7. Enter the Gateway using the arrow buttons.
8. Press the **(E)** button.
9. Use the arrow buttons to toggle the cursor between [S]ave and [C]ancel.
10. Press the **(E)** button.

If you select the Save option, the ManageRaQ reboots using the new network configuration. If you select Cancel, you return to step 1 of this procedure.

## Rebooting

To reboot the ManageRaQ through the LCD console:

1. On the LCD console, hold down the **(S)** button for approximately 2 seconds.

The LCD screen displays:

```
SELECT :  
  SETUP NETWORK
```

2. Press the **(S)** button until **Reboot** appears in the LCD screen:

```
SELECT :  
  REBOOT
```

3. Press the **(E)** button.
4. Use the arrow buttons to toggle the cursor between [Y] and [N]. Select [Y] to reboot the system.
5. Press the **(E)** button.

## Powering down



---

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

---

To power down the ManageRaQ:

1. On the LCD console, hold down the **(S)** button for approximately 2 seconds.

The LCD screen displays:

```
SELECT :  
SETUP NETWORK
```

2. Press the **(S)** button until **Power down** appears in the LCD screen:

```
SELECT :  
POWER DOWN
```

3. Press the **(E)** button.
4. Use the arrow buttons to toggle the cursor between [Y] and [N]. Select [Y] to power down the system.

The **OK to Power Off** light on the back panel blinks. The LCD screen displays:

```
PLEASE SWITCH  
POWER OFF NOW
```

5. Toggle the **On/Off** switch on the back panel to the **Off** position.

# Product Specifications

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## Technical data for the ManageRaQ

### Hardware

The ManageRaQ has the following hardware components. See <http://www.cobalt.com> for the most up-to-date information on the hardware specifications.

- x86-compatible superscalar processor
- Up to 512 Kb of L2 cache
- PC-100 SDRAM DIMMs (2 slots)  
(3.3 v, 168-pin, non-parity, unbuffered)
- Up to two internal Ultra ATA hard drives
- Single 10/100 BaseT ethernet network interface
- Dual serial console interface
- LCD console for easy set-up and administration
- Support for uninterruptible power supply (UPS)

### Software

The ManageRaQ has the following software features.

#### Features

- Linux 2.2 multitasking operating system
- Apache 1.3.6 Web server, HTTP/1.1 compliant
- Secure Sockets Layer (SSL)
- NTP client support
- Security: PAM/shadowed passwords

#### System management

- SSL support for secure administration
- Simple Network Management Protocol (SNMP) management support

- Browser-based Setup Wizard
- Online ActiveAssist real-time help
- ActiveMonitor maintenance agents
- Browser-based backup and restore utility
- Browser-based software upgrade

## Physical data

The RaQ 3 has the following physical characteristics.

- Dimensions: 17.00 in. x 12.50 in. x 1.75 in. (43.2 cm x 31.8 cm x 4.5 cm; fits in a standard single-unit, 19-in. equipment rack)
- Weight: 9 lbs. 3 oz. (4.2 kg)
- Power requirements: Input rating 100-240 V, 50/60 Hz
- Power consumption: 45 watts
- Operating environment:
  - 32° to 108°F (0° to 40°C)
  - 10% to 90% humidity (non-condensing)
- Non-operating environment:
  - 14° to 122°F (-10° to 50°C)
  - 5% to 93% humidity (non-condensing)
- Light-emitting diodes (LEDs): Power, Transmit/Receive, Link, Collision, 100 Mbit Operation, Disk Activity, Web Activity

## Regulatory approvals

- CISPR 22B
- VCCI-B
- UL
- C-UL
- TUV
- CE
- Austel
- BSMI/BCIQ
- RRL



## Upgrading the memory in the ManageRaQ

The ManageRaQ unit is a single rack-unit (1RU) enclosure. Before you purchase a memory module to add to the ManageRaQ, ensure that the module fits into the allocated space:

- The DIMM modules must be less than 1.5 inches (38.1 mm) tall and less than 0.158 inches (4.0 mm) thick.

To add memory to the ManageRaQ:

### Opening the ManageRaQ




---

**Warning:** You MUST power down the ManageRaQ before opening the unit.

---

1. Power down the ManageRaQ. See “Powering down” on page 84.
2. Unplug the ManageRaQ.
3. Remove the power cord from the rear of the ManageRaQ. The cable is located beside the power switch. See Figure 4 on page 12.

---

**Note:** If the ManageRaQ is mounted on an equipment rack, remove the ManageRaQ from the rack and take it to a service area. Do not attempt this upgrade while the ManageRaQ is still in the equipment rack.

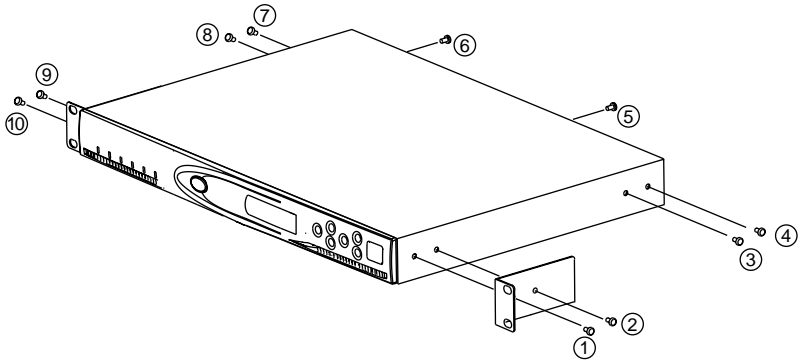
---

4. Unscrew the top cover. Ten screws hold the top cover in place. The screws are labeled 1 through 10 in Figure 33.
5. You can install a DIMM module in either Memory Slot 1 or Slot 2. See Figure 34.
6. Replace the top cover

Secure the top cover properly and replace the ten screws that hold the top cover in place. See Figure 33.

Figure 33 shows how to remove the top cover of the ManageRaQ.

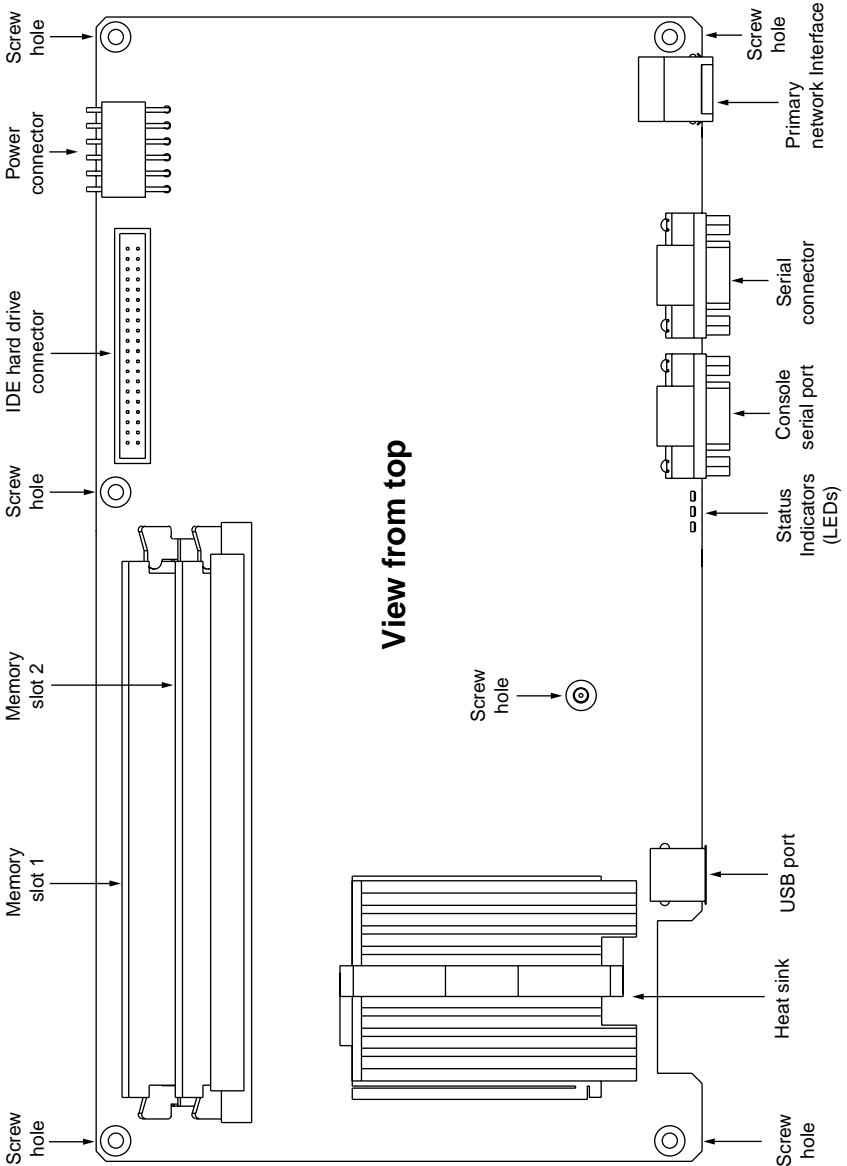
Figure 33 Top cover on the ManageRaQ



# Printed circuit board

Figure 34 shows the layout of the printed circuit board in the ManageRaQ.

Figure 34 Layout of the printed circuit board





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# Glossary

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**Agent**

A software component that runs on a managed client RaQ to execute commands from the ManageRaQ. When a RaQ is added to the ManageRaQ, the ManageRaQ installs the agent on the RaQ. See also *ManageRaQ*.

**DHCP**

see *Dynamic Host Configuration Protocol (DHCP)*

**DNS**

see *Domain Name System (DNS)*

**Domain name**

The location of an organization or other entity on the Internet. For example, `www.cobalt.com` locates an Internet address for “cobalt.com” at a particular IP address and a particular host server named “www.”

**Domain Name System (DNS)**

The Internet service responsible for translating between a human-readable domain name and a numeric IP address (111.123.45.67) for TCP/IP communications.

**Dynamic Host Configuration Protocol (DHCP)**

A protocol that provides a mechanism for allocating IP addresses dynamically so that an address can be reused when a host no longer needs it.

**Gateway**

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

**HTML**

see *HyperText Markup Language (HTML)*

### **Internet domain**

An Internet domain is a host naming convention used to ensure that no two individual hosts on the global Internet have the same host name. An Internet domain should not be confused with an NT Domain. See *NT Domain*.

### **Internet Protocol (IP)**

A network-layer protocol in the TCP/IP stack offering a connectionless internetwork service. IP provides features for addressing, type-of-service specification, fragmentation and reassembly, and security. IP is defined in RFC 791.

### **IP address**

A 32-bit address assigned to hosts using Transmission Control Protocol/Internet Protocol (TCP/IP). An IP address belongs to one of five classes (A, B, C, D or E) and is written as four octets separated by periods (for example, 192.168.10.10), also called the dotted decimal format. Each address consists of a network number, an optional subnetwork number and a host number. The network and subnetwork numbers together are used for routing, while the host number is used to address an individual host within the network or subnetwork. A subnet mask is used to extract network and subnetwork information from the IP address. Also called an Internet address.

### **LAN**

see *local area network (LAN)*

### **Leased IP addresses**

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

### **Local area network (LAN)**

A high-speed, low-error data network covering a relatively small geographic area (up to a few thousand meters). A LAN connects workstations, peripherals, terminals and other devices in a single building or other geographically limited area. LAN standards specify cabling and signaling at the physical and data link layers of the Open Systems Interconnection (OSI) model. Widely used LAN technologies include Ethernet, fiber distributed data interface (FDDI) and token ring. See also *Wide area network (WAN)*.

**ManageRaQ**

The ManageRaQ is a hardware solution based on the RaQ 3 hardware platform and can manage up to 100 RaQs (all versions of the RaQ product family). The ManageRaQ enables administrators to manage, troubleshoot and monitor a farm of server appliances from a central server.

**ManageRaQ agent**

See *Agent*.

**Name server**

Programs called name servers constitute the server half of the DNS client-server mechanism. A name server contains information about a segment of the DNS database and makes it available to a client called a resolver. A resolver is often just a library routine that creates queries and sends them across a network to a name server.

**Secure Socket Layer (SSL)**

Encryption technology for the Web used to provide secure transactions (for example, the transmission of credit card numbers for e-commerce).

**Server**

A system program that awaits requests from client programs across a network, and services those requests. A server can be dedicated, in which case this is its sole function, or non-dedicated, where the system can be used in other ways, such as a workstation.

**Simple Mail Transfer Protocol (SMTP)**

The TCP/IP standard protocol for transferring electronic mail messages from one machine to another. SMTP specifies how two mail systems interact and the format of control messages they exchange to transfer mail.

**Simple Network Management Protocol (SNMP)**

A network management protocol used almost exclusively in TCP/IP networks. SNMP provides a means to monitor and control network devices, and to manage configurations, statistics collection, performance and security on a network.

**SMTP**

see *Simple Mail Transfer Protocol (SMTP)*

**SNMP**

see *Simple Network Management Protocol (SNMP)*

**SSL**

see *Secure Socket Layer (SSL)*

**Subnet mask**

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

**Transmission Control Protocol/Internet Protocol (TCP/IP)**

A common name for the suite of protocols developed in the 1970s to support the construction of worldwide internetworks. TCP and IP are the two best-known protocols in the suite.

**Virtual host**

See *Virtual site*.

**Virtual site**

Whereas industry uses the term *virtual host*, Cobalt Networks uses the term *virtual site*.

In Cobalt's definition, a virtual site consists of a Domain Name System (DNS) domain with web, ftp and email services. Each virtual site contains its own list of site user accounts. Each site user account has its own web, email spool and any number of email aliases. The fully qualified domain name of a virtual site is unique to that site, while its IP address can be shared by many sites.

**Wide Area Network (WAN)**

A data communications network that serves users across a broad geographic area and often uses transmission devices provided by common carriers. Asynchronous transfer mode (ATM), frame relay, Switched Multimegabit Data Service (SMDS) and X.25 are examples of WANs.

## A

- Active Assist help 27
- Active Monitor 28
  - colors and status indicators 29
- Add new RaQ
  - command 40
  - error table 74
  - memory requirements 40
  - remove software agent 42
  - screen 41
  - software agent 36, 40
- Agent, software 36, 40
  - memory requirements 40
  - to remove 42
- Arrow buttons 4, 15

## B

- Back up configuration
  - command 63
- Battery iii
- Benefits of ManageRaQ 2
- Bourne shell scripts 57
- Browser
  - requirements v, 5
  - setting up the ManageRaQ 16
  - Setup Wizard 18
- BSAFE cryptography 1
- Busy screen 71

## C

- Change password
  - command 49
  - error table 77
  - screen 51

- Changing network configuration 82
- Clock skew 37
- Clock synchronization 41
- Commands 32
  - Add new RaQ 40
    - remove software agent 42
    - software agent 36, 40
  - Back up configuration 63
  - Change password 49
  - Configure network 47
    - example 49
  - Configure notification 54
    - sample email 56
  - Configure services 44
    - example 46
  - Documentation 66
  - Execute script 57
    - Bourne shell 57
    - time-out limit 57
  - Install package 52
  - ManageRaQ Admin 68
  - Reboot RaQs 61
  - Remove RaQs 42
  - Report details 36
    - clock skew 37
    - time stamp 36
  - Report selected RaQs 36
  - Report services 38
  - Report virtual sites 35
  - Restore configuration 65
  - View all RaQs 33
- Configure network
  - command 47
  - error table 76
  - example 49
  - screen 48

## *Index*

### Configure notification

- command 54
- error table 78
- sample email 56
- screen 55

### Configure services

- command 44
- error table 75
- example 46
- screen 45

### Configuring

- ManageRaQ for the network 14
- ManageRaQ with LCD console 15

### Connecting

- power cord 13

### Connecting to the network 13

### Connector

- network 4
- serial 4

### Cooling fan 4

### Customer service 6

- general information 6

## **D**

### De-select all RaQs 35

### Developers 8

### Discussion groups 7

### Documentation

- command 66

### Domain name 19

## **E**

### Education 7

### Electric shock iv

### Email notification 54

- sample 56

### Encryption

- BSAFE software 1

### Encryption, 56-bit 1

### Equipment rack iv

### Error tables

- Add new RaQ 74
- Change password 77
- Configure network 76
- Configure notification 78
- Configure services 75
- Execute script 79
- Install package 78
- ManageRaQ server error 80
- Reboot RaQs 79
- Remove RaQs 75
- Report selected RaQs 73
- Report services 73
- Report virtual sites 72

### Execute script

- Bourne shell 57
- command 57
- error table 79
- screen 58
- time-out limit 57

## **F**

### Features of ManageRaQ

- configuration functions 2, 31
- monitoring functions 2, 31

### Front view

- LCD arrow buttons 4
- LCD screen 4
- logo badge 3
- reset password 4
- status indicators 3

### Front view of ManageRaQ 3

## **G**

### Glossary 97

### GNU General Public License 92



**H**

Hardware

upgrading memory 87

Hardware, ManageRaQ 85

printed circuit board 89

Help, Active Assist 27

Host name 19

**I**

Install package

command 52

error table 78

screen 53

Installing the ManageRaQ 11

configuring for network 14

connecting power cord 13

mounting ears 12

powering on 13

rubber feet 12

**J**

Javascript 5

**K**

Knowledge Base 7

**L**

LCD arrow buttons 4, 15

LCD console 81

arrow buttons 15

changing network configuration

82

configuring for network 15

LCD screen 4

powering down the ManageRaQ

84

rebooting the ManageRaQ 83

LCD screen 4

Licenses

GNU General Public License 92

SSL License 96

Lithium battery iii

Logo badge 3

**M**

Main screen, ManageRaQ 32

ManageRaQ

administrator

changing password 25

resetting password 25

changing network configuration

82

front view 3

powering down 84

product specifications 85

rear view 4

rebooting 83

setting up

configuring for network 14

connecting power cord 13

connecting to the network 13

installation 11

making the connection 11

mounting ears 12

powering on 13

rubber feet 12

setting up with browser 16

network settings 19

registration, card 23

registration, online 21

Setup Wizard 18

time settings 21

technical data 85

hardware 85

physical data 86

printed circuit board 89

regulatory approvals 86

software features 85

software, system

management 85

ManageRaQ Admin

command 68

ManageRaQ screen 27

Memory

requirements 5, 40

upgrading 87

Mounting ears 12

## **N**

### Network

- connectors 4
- status indicators 4

### Network settings 19

- domain name 19
- host name 19
- primary DNS server address 19
- secondary DNS server address 19

NTP server 21, 27, 40

## **O**

OK to power off 4

Online registration of the ManageRaQ  
21

Online technical papers 7

Operational overview 27

Overview of ManageRaQ 1

## **P**

### Password

- ManageRaQ administrator
  - changing password 25
  - resetting password 25
- resetting, ManageRaQ 4

Physical data, ManageRaQ 86

Power cord iv, 13

Power socket 4

Power switch 4

Powering down the ManageRaQ 84

Powering on the ManageRaQ 13

Primary DNS server address 19

Printed circuit board 89

Product specifications 85

- hardware 85
- physical data 86
- printed circuit board 89
- regulatory approvals 86
- software
  - features 85
  - system management 85

## **R**

### RaQ

- de-select all 35
- select all 35

### Rear view

- cooling fan 4
- network connector 4
- network status indicators 4
- OK to power off 4
- power socket 4
- power switch 4
- security lock hole 4
- serial connector 4
- serial console port 4

Rear view of ManageRaQ 4

### Reboot RaQs

- command 61
- error table 79
- screen 62, 64, 65

Rebooting the ManageRaQ 83

### Registration of ManageRaQ

- card 23
- online 21

Regulations, Class B v

Regulatory approvals 86

### Remove RaQs

- command 42
- error table 75
- screen 43

### Report details

- clock skew 37
- command 36
- screen 37
- time stamp 36

### Report selected RaQs

- command 36
- error table 73

### Report services

- command 38
- error table 73
- screen 39

- Report virtual sites
    - command 35
    - error table 72
    - screen 35
  - Reporting a software bug 9, 66
  - Requirements 5
    - browsers v, 5
    - equipment rack iv
    - Javascript 5
    - memory 5, 40
    - NTP server 21, 27, 40
  - Restore configuration
    - command 65
  - RSA Data Security ii, 1
  - Rubber feet 12
- S**
- Safety
    - battery, lithium iii
    - electric shock iv
    - equipment rack iv
    - ventilation iii
  - Screen, ManageRaQ
    - command frame 27
    - display frame 27
    - help frame 27
    - pull-down menu 27
  - Screens
    - About Cobalt ManageRaQ 67
    - Add new RaQ 41
    - Change password 51
    - Configure network 48
    - Configure notification 55
    - Configure services 45
    - Execute script 58
      - completed sample script 60
      - sample script 59
    - Frames of ManageRaQ screen 27
    - Install package 53
    - ManageRaQ is Busy 72
    - Reboot RaQs 62, 64, 65
    - Remove RaQs 43
    - Report details 37
    - Report services 39
    - Report virtual sites 35
    - View all RaQs 33
  - Secondary DNS server address 19
  - Secure Sockets Layer. *See* SSL
  - Security lock hole 4
  - Select all RaQs 35
  - Sending comments 9, 66
  - Serial connector 4
  - Serial console port 4
  - Setup Wizard 18
    - network settings 19
    - registration, online 21
    - time settings 21
  - Software
    - features 85
    - system management 85
  - Software agent 36, 40
    - to remove 42
  - Software bug, to report 9, 66
  - Solutions 8
  - SSL
    - description 1
    - license 96
    - mod\_ssl 1
  - SSL License 96
  - Status indicator
    - 100 M 3
    - Col 3
    - Disk 3
    - Link 3
    - Transmit/Receive 3
    - Web 3
  - Support calls 8

## **T**

- Target audience, user manual 5
- Technical data 85
- Technical Support 6
  - contact information 6
  - developers 8
  - discussion groups 7
  - education 7
  - Knowledge Base 7
  - online technical papers 7
  - solutions 8
  - support calls 8
- Time settings 21
- Time stamp 36
- Time-out limit 57

## **U**

- Upgrading memory module 87

## **V**

- Ventilation iii
- View all RaQs
  - command 33
  - screen 33

## **W**

- Web browser
  - requirements v, 5
  - setting up the ManageRaQ 16
  - Setup Wizard 18