RedRak™
Professional
User
Manual

cover by Bob Marzewski

NETmachines™
http://www.NETmachines.net

Disclaimer and Limitation of Liability

NETmachines Incorporated (NETmachines) and its subsidiaries assumes no responsibility for any damage or loss resulting from the use of this Netmachines this product.

NETmachines and its subsidiaries assume no responsibility for any loss or claim by third parties which may arise through the use of or inability to use NETmachines this product.

NETmachines and its subsidiaries assume no responsibility for any damage or loss caused by the deletion of data as a result of any and all malfunctions, operator errors, instructions, customer or third party modifications. It is the users sole responsibility to protect against any loss by producing backup copies of all data on to other media.

Limited Warranty

NO IMPLIED WARRANTY, INCLUDING ANY WARRANTY OF SUITABILITY FOR A SPECIFIC APPLICATION OR PURPOSE, APPLIES TO THIS NETMACHINES PRODUCT AFTER THE EXPRESS LIMITED WARRANTY PERIOD OF 90 DAYS. NO OTHER WARRANTY OR GUARANTY EXCEPT AS MENTIONED HEREIN PROVIDED OR GIVEN BY ANY THIRD PARTY ENTITY SHALL BIND NETMACHINES IN ANY WAY. NETMACHINES SHALL NOT BE LIABLE FOR ANY LOSS OF REVENUES OR PROFITS, INCONVENIENCE , EXPENSE FOR SUBSTITUTE EQUIPMENT, SERVICE CHARGES, STORAGE CHARGES, LOSS OR CORRUPTION OF DATA, OR ANY OTHER DAMAGES CAUSED BY USE OR MISUSE, OR INABILITY TO USE THIS NETMACHINES PRODUCT, REGARDLESS OF ANY LEGAL THEORY A CLAIM MAY BE BASED. IN NO EVENT SHALL THE RECOVERY OF ANY KIND AGAINST NETMACHINES BE GREATER THAN THE NETMACHINES RECOMMENDED RETAIL PURCHASE PRICE OR THE ACTUAL PURCHASE AMOUNT, WHICHEVER IS THE LESSOR AMOUNT. YOU ASSUME ALL RISK AND LIABILITY FOR LOSS, DAMAGE, INJURY OR OTHER EXPENSE BY YOU AND TO OTHERS. THIS WARRANTY SHALL NOT EXTEND TO ANYONE OTHER THAN THE ORIGINAL PURCHASER OR THE ENTITY FOR WHOM IT WAS PURCHASED.

YOU MAY OBTAIN TECHNICAL SUPPORT, SUPPORT DETAILS, ASSISSTANCE PHONE NUMBERS AND FURTHER INFORMATION 24 HOURS A DAY VIA THE WEB SITE AT **http://www.NETmachines.net/support** .

To register online, go to: **http://www.NETmachines.net/support/register.cgi**

Don't Forget to

Register your RedRak.!

Go to:

http://www.NETmachines.net/support

to register and find tons of other useful information.

May we suggest that when you register your RedRak, that you print out the form and tuck the sheet in the handy pouch in the cover of this manual.

For your convenience, you may also want to

Record Your RedRak Serial Number

_____

Have fun!

RedRak™ Professional

User Manual

http://www.NETmachines.net

RedRak Manual Syntax

The following syntactical conventions are used in this manual:

Typeface	Use
Bold San Serif	Text that appears on the screen, including field names and button names. For example: **Path to Store Catalogs**
Bold San Serif shaded	Indicates that the user should click on the given button For example: **Path to Store Catalogs**
`regular Courier`	Text the user would type directly, usually used in examples. For example: `http://NETmachines.net`
`italic Courier`	A variable to be replaced with appropriate information by the user. For example: `arp -s RedRakIP 1-2-3-4-5-6`
`Bold Courier`	Console display screen shot. For example: `If this configuration is correct and you would like to record it, type 'y' to this question.`

RedRak Professional User Manual

Table of Contents

NETmachines™

NETmachines™

I
Overview of RedRak Professional Features

A. General Information

Here is an overview of several of the most popular and useful RedRak Professional features. For detailed step-by-step instructions, simply click the [?] button for online help and search for key words.

- **Complete set-up and configuration without a monitor or keyboard.**

  Fully configure and control RedRak on hardware which has a network connection but no monitor or keyboard. This can be done through any client station which has an HTML browser running (any PC, Mac, or Network Computer already up on your network).

- **Console support without a network (direct attachment of monitor and keyboard.**

  Configure RedRak on a stand-alone machine without a network. The console option works with any monitor or keyboard attached to your server hardware.

- **Load over existing Red Hat Linux 6.0 or 6.1 systems**

  For already installed Red Hat® systems with the same operating system kernel version as RedRak, your user and machine configurations can be migrated to RedRak.

- **Enabling features in pre-installed Red Hat® Linux 6.0 or 6.1 systems**

  After loading over already installed Linux systems, the network administrator can determine which RedRak features they want to enable. Network administrators may have some "subtle" tweak that they would like to preserve and this feature allows for that possibility. The RedRak Web configuration interface allows for direct editing of all system configuration files as well as updates through the higher level RedRak administration GUIs.

- **Online help**

  When you need help, click on the [?] button in the top-right corner of the RedRak interface. You can locate needed information many ways, including using a powerful search engine.

- **Online tutorial**

  This is a brief overview of the RedRak interface designed to get you started on the software.

- **Command line interface for experienced users**

  Experienced Unix users can always access the command line. The command line option allows you to add new software and applications to your system.

- **User override via command line of any GUI operation**

  Since experienced Unix users may have certain preferences for their configurations, RedRak allows any GUI operation to be overridden through the command line. The user has the ability to directly manipulate the files that RedRak normally manages.

- **Heterogeneous clients**

  RedRak supports heterogeneous systems consisting of Macintosh, Windows 95/ 98, Windows NT, and Unix clients, making it a valuable tool in all normal business environments.

B. Firewall, Routing, and Interfaces

Firewall

- **Built-in packet filter firewall**

  The RedRak firewall restricts access between your internal network and external networks (such as the Internet).

- **Simplified firewall configuration with common rules and exceptions**

  Firewalls are configured with specific access rules. RedRak has pre-configured common rules and common exceptions to those rules that help you select the type of traffic to block. Experienced users can create a custom firewall or modify the common rules and exceptions.

- **Network Address Translation (NAT)**

  Network address translation hides your internal IP addresses from the outside world. All external traffic appears to be coming from the IP address of the machine with NAT, making it much harder for hackers to get to your internal machines

- **Firewalls on all interface connections**

  Firewalls can be defined for each individual interface for optimum network security. Although usually applied to Ethernet devices, RedRak allows firewalls to be applied to modems and HDLC devices. The firewalls can all be indepentdent of each other with distinctly separate rules.

Routing

- **Set up your RedRak for Internet routing**

  This function allows you to customize the routing of network traffic through RedRak. A router "knows" the structure of your network and is able to direct traffic between machines.

Interfaces

- **Support for multiple network interfaces**

    Network interfaces allow you to connect RedRak to a network. Supported interfaces include Ethernet, routers, serial devices such as modems, and highspeed connections such as T1, T3, ADSL, HDLC, and cable modems.

- **Ability to dial-out on demand from network**

    Set up a dial-up connection to connect your RedRak server to another network with a modem or serial connection.

- **Ability to connect to Internet using any external device**

    RedRak allows you to use any external device such as analog modems, cable modems, and DSL modems, as well as CSU/DSU driver for the T1 interface to access the Internet.

- **Ability to accept dial-in connections**

    In addition to dialing out, you can use a dial-in connection to allow an outside network or individual to connect to your network.

C. Network Servers

World Wide Web (WWW) HTTP Server

- **Internet Web server**

    Internet Web servers are accessible globally.

- **Intranet Web server**

    Intranet Web servers are only accessible to people inside domains served by RedRak.

- **Perl and CGI support**

    The Web server delivers Perl and CGI scripts.

- **Allow users to create their own Web pages**

    All user Web page URLs begin with the same information and end with user name.

- **Create/Edit/Delete Web site configurations**

    Configure and manage multiple Web sites from one RedRak server.

- **Control access to a Web site**

    Allow or deny access to Web sites on RedRak to a group of users, domains, IP addresses, or a RedRak machine group.

- **Create/Edit/Delete MIME Types**

    A MIME type associates a data file with a program application that can view that file. RedRak helps you easily create, edit, or delete MIME types.

- **Optional SSL security**

    In the U. S you can install a Secure Sockets Layer (SSL) software package onto RedRak if you upgrade to a secure Web server.

- **Front Page extension support for Web publishing**

  RedRak supports Front Page extensions.

Mail Server

- **IMAP mail server**

  Allows a user to read and download only messages of interest, and leave the rest on the server until later.

- **POP mail server**

  Requires that users who are reading their mail download all of their messages to their local computer.

- **Add or delete email aliases**

  Easily add or delete email aliases. An alias allows you to redirect email from a unique alias to one or more email accounts. For example, mail sent to "administrator" alias could be redirected to your email alias.

- **Block unwanted mail (spam)**

  Block the reception of unwanted mail from specified domains, host names, or email addresses.

FTP Server

- **Supports authenticated FTP**

  Authenticated FTP requires the user to have an account and a password on RedRak in order to make the connection. The user can access only those parts of the file system they have permission to read.

- **Use anonymous FTP**

  Allows an anonymous user to access only what you want them to access.

- **Supports FTP site message**

  The message option provides two messages. Either a "Welcome" message appears when FTP users connect to your server to welcome them, or a "Too Many Users" message appears when the number of users currently trying to connect exceeds the specified limit.

News / Discussion Group Server

- **Internal news server**

  An internal news server only receives and transmits news within domains served by RedRak.

- **External news server**

  An external news server receives and transmits news from external news feed servers.

- **Add/Delete news groups**

  Specify which news groups you would like to make available on RedRak.

NETmachines™

- **Control access to news groups**

  Allow or deny specified domains or IP addresses access to the RedRak news server.

- **Send Mail to/from a news group**

  Send news group postings to or from an email address or local alias.

- **Public (external) discussion groups**

  Similar to a bulletin board, using HTML and a web browser rather than the newsreader to view entries. It is part of the Front Page Extensions package.

- **Authenticated discussion groups (private and public)**

  Members-only discussion groups. User must be a member in order to participate.

File Server

- **Heterogeneous client environment**

  The RedRak FileServer allows you to share files, disks and CD-ROMs across Unix, Windows and Macintosh clients.

- **Volume management**

  A volume is a finite-sized, named storage area existing on one or more hard disks. Volumes can be one of several types normal, Raid 0 (mirror), Raid 1 (stripe), RAID-5, and noncontiguous. A normal volume uses one contiguous area on one disk. A stripe is a way of storing files across more than one disk. A mirror duplicates the same information on two or more disks. A RAID-5 array duplicates data on "n" disks over "n+1" disks . The redundancy in mirrors and RAID-5 arrays allows reconstruction of the data on a failed disk in the array without any data loss. A noncontiguous volume contains two or more noncontiguous areas across one or more disks. RedRak volume management allows you to create, modify and reconfigure volumes.

- **Quota management**

  RedRak allows you to set up quotas on volumes. For example, you can create a volume of 1 GB (gigabyte) with 100 MB (megabyte) quota, so that no one user takes up more than 100 MB of space on that volume. Quotas can be assigned on a user or group bases, or by service, such as email or Web. You can send users warnings when quota limits are reached, or even set "soft limits" to warn users that they have seven days to delete files or to have their quotas increased.

- **RAID is supported**

  Users have the option of choosing Linear (no RAID), Striping (RAID 0), Mirroring (RAID 1) or RAID 5.

- **Selectable file sharing**

  Allows you to share Windows files only to Windows clients, Macintosh files to only Macintosh clients and/or Unix files to only Unix clients.

- **Access rules**

  The point and click interface helps you quickly define the access rules for the owner, the group users and the general users of any file. You have the option to restrict access to the file only to certain machines in the network.

RedRak Professional User Manual

- **Sharing removable media**

  RedRak allows you to share removable media such as floppy disks, CD-ROM disks, and Zip and Jazz disks.

Print Server

- **Supports local printer**

  This means the printer is physically plugged into either the serial or parallel port on the back of the server machine. If the printer does not have an Ethernet interface you must connect it locally.

- **Supports remote printer**

  This refers to any printer on your Local Area Network (LAN) not directly connected to RedRak.

- **Cross platform printing**

  The print server allows sharing of the printer across Unix, Windows and Macintosh clients.

DNS (Domain Name Server)

A domain name server is a computer program that maintains a table for translating host names (such as frontdesk.localdomain.com) to IP addresses (such as 133.25.25.71) and IP address to host names. Anytime you send an email or surf the Web, this translation is used. DNS server features include:

- **Server option**

  This refers to the online help the server provides for any computer making a DNS request. The computer making the request is known as client.

- **Client option**

  This is what RedRak does to look up names that it needs. In this case RedRak is the client, the originator of the request.

- **Specifying DNS names and IP addresses**

  RedRak allows you to specify the host names/domain names by which your server is known on the Internet, on an AppleTalk network, and within a Windows work group.

- **Managing DNS domains**

  You can set up and maintain DNS domains that your RedRak serves. The first domain is created at initial set up. Other domains and subdomains can be added at any time.

DHCP (Dynamic Host Control Protocol) server

The Dynamic Host Control Protocol (DHCP) centralizes the process of setting up and identifying network clients in the RedRak server itself. As the DHCP server, RedRak holds the identity (i. e. TCP/IP address) of all machines on your network. DHCP server features include:

- **Static IP address assignment**

  You provide the IP address for a machine. It is only for this machine and cannot be

assigned to any other machines.

- **Dynamic IP address assignment**

    DHCP server leases an IP address to the machine from an assigned range of IP addresses. These addresses cannot be the same as static assignments.

- **RedRak as a DHCP Client**

    RedRak can be configured to act as a DHCP client on a network which assigns IP addresses dynamically. This is typically how you connect to a cable modem network.

LDAP Server

RedRak can function as an LDAP server. This means that people can search for users and the personal information that you make available, such as name, address, email address, etc.

- **Security**

    You can control access to the LDAP server by specifying who can search the LDAP server.

Network Time Protocol (NTP) server

You can set the RedRak clock to synchronize with other RedRak, Unix, or Windows machines on the network. This RedRak is then called the Network Time Protocol (NTP) server. The NTP server helps improve accuracy. You can allow or disallow other machines to use this RedRak as a time synchronization source.

Remote X-application server

RedRak can function as a remote X-application server that allows you to run an application on the RedRak host but have it display on a remote computer. This requires that the remote computer be capable of displaying an X window application and that the remote computer allows the RedRak to display the application.

D. Backups

Backup Options

- **Backup and restore server**

    You can backup data from and restore data to the RedRak server.

- **Backup and restore client machines**

    You can backup data from and restore data to client machines in the domains maintained by the RedRak server. The client machines must support TAR (Unix), CIFS (Windows), or FTP (all client types) access.

- **Restore to any machine on the Network**

    You can restore data to the machine from which it was backed up, to the RedRak server, or to a new machine that did not originally hold the data.

RedRak Professional User Manual

Backup Features

- **Scheduled backups**
  There are two ways to perform backups: immediate one time backups or scheduled backups. Scheduled backups can be used to back up on a regular cycle or at a future date and time.

- **Support for full and differential backups**

  A full backup will back up all the specified directories. A differential backup will back up any data that changed in the specified directories since the last full backup.

- **Levels of software compression**

  Software compression compresses the data being backed up so that it takes up less space on the backup media. A higher compression has the advantage of taking up less space on the backup media, but has the disadvantage of requiring more time to run or restore the backup. RedRak allows you to choose the level of software compression best suited to your needs.

E. System Administration

User Account Management

- **Configure and manage users**

  RedRak allows you to assign defaults and privileges for all users on your network. A user is someone who needs to access the resources controlled by RedRak. Users and their options can be easily added, edited or deleted.

- **Configure and manage user groups**

  A group is a convenient way for one name to refer to a list of users. Users can become members of up to 16 groups.

- **User defaults allow for easy creation of new users**

  Create default settings to apply to new users. Default settings include: enabling the account, setting administrator access, providing space on the file system, letting users log on to the Unix shell, enabling dial-in (if supported), allowing the posting of Web pages, and enabling email.

- **User groups for file sharing and mailing lists**

  For a set of users who should need to read a particular set of files (e. g. , financial records), you can put them into a group called "finance," and give that group special privileges to read files which pertain to financial records.

- **Email options for forwarding and aliasing per user**

  RedRak allows you to forward the email of any user. Account aliasing lets you specify additional names for each user other than their logon name. This is especially handy if you have more than one domain in your network.

- **Enable/disable user functions**

  Several functions such as dial-in, mail, etc. , can be enabled or disabled on a per user

NETmachines™

basis. This allows you more control over network resources.

- **Password policies to force users to choose better passwords**

  A password can be required to access mail, news, Web pages, or a Unix shell. You can specify the criteria for legal user passwords, such as password length and character content, in order to implement good security policies. A special "crack" dictionary, listing commonly guessed passwords is available to validate the acceptability of individual passwords.

- **Intelligent "user deletion page" transfers files/email**

  When a user is removed from your network, you can specify where the files on their personal directories and their (incoming and stored) email should be transferred.

Interfaces

- **Support for multiple network interfaces**

  Network interfaces allow you to connect RedRak to a network. Supported interfaces include Ethernet, routers, serial devices such as modems, and highspeed connections such as T1, T3, ADSL, HDLC, and cable modems.

- **Ability to dial-out on demand from network**

  You can set up a dial-up connection to allow you to connect your RedRak server to another network with a modem or serial connection.

- **Ability to connect to Internet using any external device**

  RedRak allows you to use any external device such as analog modems, cable modems, and DSL modems, as well as CSU/DSU driver for the T1 interface to access the Internet.

- **Ability to accept dial-in connections**

  In addition to dialing out, you can use a dial-in connection to allow an outside network or individual to connect to your network.

System Administration Services

- **Browser-based server management for administrators and users**

  All RedRak functions and features are accessible through a Web browser.

- **Access control and authentication of Telnet and dial-in users**

  Control Telnet and dial-in permissions on a per user basis.

- **Access control of volumes at user, group, and machine level**

  Control file and volume access permissions at the user, group, and machine level.

- **Multiple administrator levels**

  There are three levels of users in RedRak: network administrators, local administrators, and regular users. The network administrator has more system permissions than other users.

- **Secure server login through Web page (with optional SSL)**

  Only authenticated users of the network can access the RedRak pages.

- **Automatic maintenance software**

  When System Check is run it determines how your system is functioning: if problems are found RedRak suggests solutions. The online help lists all possible system check messages. System Check should be run before a commit is performed to ensure that you will not loose anything. If you are experiencing systems problems, the system check will diagnose, suggest fixes and take you to the pages where you can make the appropriate fixes.

- **Migration tools (move user and machine information from an old network)**

  If you select the "install over" option, the migration tools will be used after RedRak Install is complete to configure most user and machine information saved from your prior installation. NOTE: because of encryption, it is not possible to migrate passwords.

F. Monitoring and Reports

Alerts

- **Choose conditions which will cause an alert**

  RedRak comes with a predefined set of alert conditions from which you can choose those that apply to your situation.

- **Specify who receives alert notifications**

  Specify who is to be notified in case of a particular alert condition.

- **Choose how the alert notifications will be sent**

  Choose to send the alert notification in any or all of three ways: email, a Windows message pop-up (Windows machine only), or a red bar appearing at the top of the RedRak interface. Through the email alerts interface, alerts can be sent to many PCS phone and pager systems so you are always notified of problems.

System Check

The System Check is a tool that can be run in two ways: on a pre-committed system, or on a committed system when there is a problem as a result of a commit. Running the System Check on a committed system is a more thorough check than the one performed on a pre-committed system. The following information is displayed in the System Check Report:

- **Severity**

  Three severity levels can be displayed, and the report prioritized by severity. They are Fatal (subsystem will not function), Error (subsystem performance will be affected) or Warning (for your information)

- **System**

  Describes the subsystem in which the error has occurred.

- **Message**

  Description of the error

NETmachines™

- **Fix**

  What to do to fix the problem.

- **Actions**

  Allows you to fix each problem shown in the problem report by clicking the "action" icon

Traffic Monitor

The traffic monitor tracks incoming traffic to your site and outgoing traffic (user visits) to external Internet sites including Web sites, FTP, Telnet, Mail, etc. The traffic monitor features include:

- **Ability to monitor network traffic by user, destination and machine**

  Monitor the traffic in two ways: who hits which sites or which sites are hit by whom. The first option reports the user name, machine from which the sites were hit, how often, and when. The second option reports each site/URL visited, which machines hit the site, how often and when.

- **Graphical representation of network traffic**

  Obtain a graphic view of the hit distribution which tells you when the hits occurred.

- **Ability to connect to destination URLs during traffic monitoring**

  While traffic monitoring is in progress you can connect to destination URLs.

- **Ability to exclude sites from the report**

  You have the option to exclude sites from the report. For example, you can exclude sites required to do the job.

Reports

- **Current Users Report**

  This report shows who is currently logged into RedRak.

- **Users Report**

  Gives an overview of user characteristics such as full name, primary group, email aliases, whether dial-in enabled, etc.

- **Machines Report**

  Gives an overview of information listed for all machines such as machine name, domain name, IP address, etc.

- **System Log Reports**

  These reports categorize and log RedRak messages on various subjects, including security/authorization, backup, and mail.

- **Web Server Access (Usage) Report**

  This report measures which Web sites on the RedRak have been visited by outside resources.

RedRak Professional User Manual

- **Mail Log Report**

  This report shows the number of emails that a person has sent or received. Also use this report to determine other email information, such as who a user is sending email to or receiving email from, the size of the email, when it was sent or received, and if a piece of email has been sent to more than one person. This report can not only be used in checking mail traffic but also controlling spam (unwanted mass email).

- **Backups Report**

  This report summarizes the information contained in the backup log such as the machine that was backed up, directories and subdirectories backed up, the size of the data backed up etc.

- **Volumes Report**

  The volumes report summarizes information about the volumes attached to your RedRak such as Name, Size (MB), Capacity, and Description.

- **Network Report**

  The Network report summarizes information about your network, and is organized in four tabs: General, DNS, Router, and Interfaces

- **News Report**

  This report shows News group usage and Unwanted News group data for the previous day.

G. Repair Functions

- **Check your system configurations, binaries, and applications against the RedRak standard configuration**

  The repair system allows you to interactively reinstall parts or all of your installation and configuration quickly to get back up after any system upset because of hardware, software, or virus failure.

- **Check your RedRak disk for errors**

  Use this if your RedRak will not boot or reboot. Disks are automatically repaired if needed.

- **Reboot**

  Use this to conveniently reboot your machine.

- **Restore a backup of an old RedRak configuration**

  Use this to restore an old RedRak configuration.

- **Reset system password**

  Use this if the administrator has lost the system password.

- **Reconstruct**

  Use this to repair a damaged mirror of the System Volume.

H. Additional Features

User Personal Functions

- **Personal page for each user**

  The Personal page of the RedRak Software provides a way for both system administrators and users to quickly locate personal information, such as their personal Web pages.

- **Personal hotlinks**

  All users can create and edit their own personal "hotlinks", customizable bookmarks, which can include your favorite Web links as well as your most-often used RedRak functions (mail addresses, applications to be launched, URLs). Each user only sees the base level of hotlinks in their own personal directory.

- **Global hotlinks**

  System administrators create and edit these hotlinks for all users to view and use.

- **Files management**

  This list takes you to each of the file paths available to you through the interface. System administrators can access root, which gives access to the entire file system. The file manager can view and launch applications on clients through the client 's browser based on file MIME type (this is the extension on the Windows operating system). The files manager supports direct editing of text files and upload of files from the client browser to the RedRak file system.

RedRak Machines

- **Supports concept of "machines"**

  The concept of machines is used to manage devices on your network. Machines have properties such as IP and MAC addresses, who is responsible for them, aliases, groups, and domains.

- **Machines can be grouped together**

  You can create and edit groups of machines. Groups are a convenient way to have one name refer to a list of machines. For example, if there are machines that are important to back up, you might want to put them into a group called "backup", and give that group special privileges or you might want to group together machines that have Internet access, or those belonging to a particular department.

- **Server transfers setup information to other servers (master/slave mode)**

  Each network has one master, but it can have many slaves. Slaves can be set up to handle specific processing functions such as file sharing or back ups. Configuration information, such as password policies, can be passed from master to slaves. Other set up information can be passed from slaves to the master.

RedRak Professional User Manual

Package Management

- **New packages or Red Hat® Package Managers (RPMs) can be added to your server**

  RedRak can organize and make packages available to users. A package is a set of files that either comprise a Unix application or provide support for an application (e. g. , "libraries")

- **Set up a default FTP location for package downloads**

  RedRak allows you to choose your favorite location into which to pull down new packages

II
Introduction to the RedRak Interface

Here is a brief overview of the RedRak interface to get you started using your RedRak.

A. The RedRak Tutorial

You can experience an interactive demonstration of the RedRak interface through the RedRak Tutorial. Select Tutorial on the RedRak Personal Hotlinks page, or click the RedRak logo in the upper left corner of the Command Panel (green upper section of your RedRak screen) on almost any RedRak interface page and then click on Tutorial. Although some of the examples presented in the tutorial are for demonstration purposes only and will not function exactly as they would in an active RedRak session, the Tutorial is an excellent way to get started.

B. The RedRak Interface

Here is a brief overview of the RedRak interface to get you started using your RedRak. The RedRak Interface

![Command panel icon] **Command panel** -Controls in this area affect the entire "page" in the Input Panel

![Tabs icon] **Tabs** -Use these to switch back and forth between a series of pages. The current tab in use is white. Other available tabs are darker. Some tabs are required and others are optional; an error message will let you know if you must enter information in a tab before you can move on.

![Buttons icon] **Buttons** -Use these to complete a task and move from page to page.

- **COMMIT** -None of your changes are actually made until you commit them. For more on the commit process, see "Committing Changes" under "Overview" in the online help. The COMMIT button is not always available and may appear grayed out if it is not possible to perform a commit on the current page. This button only appears when a user logs on with administrator privileges.

    These buttons are located below the COMMIT button. Only one may appear at any

time. Which button is made available depends upon the context of the current page.

- **SELECT** -Tells RedRak that you would like to accept your selection and return to a previous page. (To have RedRak ignore your selection and return to a previous page, click the previous page in the Navpath [item {4}in this chapter]). Do not use the back button in your browser.)

- **RETURN** -The RETURN button has a similar function to the SELECT button. The SELECT and RETURN buttons point left because they return you to a previous page.

- **STORE** -On some pages, the SELECT or RETURN buttons will be replaced by STORE. STORE means: (1) you are saving the changes on the current page temporarily, and (2) the changes are in the commit queue and will become permanent after you click the COMMIT button. This button only appears when a user logs on with adminis-trator privileges. (To have RedRak ignore your selecttion and return to a previous page, click the previous page in the Navpath, described in the next item, below. Do not use the back button in your browser.)

- **OK!** - This performs an immediate system change, such as setting the clock, or changing a password. These changes do not require a commit. (To have RedRak ignore your selection and return to a previous page, click the previous page in the Navpath, described in the next item, below. Do not use the back button in your browser.)

- **CONTINUE (green)** -Continue to the next page

- **CONTINUE (yellow)** -Continue to the next page with caution because a significant system change will occur. For example, this will be seen when deleting files.

- ❓ View context-sensitive online help.

Navpath -Use the Navpath to navigate around RedRak software, rather than using your browser 's back button. This is because the back button and Navpath do not work the same way.

The Navpath (short for Navigation Path) has three main functions:

- It shows you where you are and how you got there.
- It allows you to return to previous pages.
- It lets you cancel any changes you made on the current page.

Facts about navpath:

- The Navpath is oriented from left-to-right in the same sequence you used to get from page to page. The left is the start of the path and the right is the end.

- Any steps in the path which are underlined indicate that they are links and you may return to them from the current page. (Note: Internet Explorer (4. x) and Netscape Navigator (4. x) offer the user the option of disabling underlining to dis-tinguish text links. If you have this feature switched on, you will not see the under-lining.

- The current page is at the end of the path. The current page is not under-lined.

- The first step in the path will always be home. The remaining steps will

RedRak Professional User Manual

always be the three most recent pages. An ellipsis (…) indicates there are more pages in your path to return to the home page.

- Returning to the previous page in a Navpath accomplishes two things: it returns you to the previous page, and it cancels any changes you made or editing you did to the information on the current page. As you move your cursor over the arrows, they will change from black to red to indicate a Cancel

- If you want to return to an earlier page but it is not available from the navpath, you must first click either **SELECT**, **OK**, or **STORE**, or go to a previous page, which will cancel what you have entered on the current page.

Input Panel -New and edited information is displayed here in various forms, such as:

  textboxes

  checkboxes

  a choice of a textbox or select button

A table. Features include:

  Table Header -These buttons, such as ACTIONS or CREATE pertain to the entire list

and are context-sensitive.

Paging Control -Use the Paging Control to modify the number of table rows displayed at once. All Shown All Shown All Shown All Shown All Shown tells you that all rows are displayed. Select from the following options:

- **Shorter** : Makes a long list shorter five rows at a time.
- **Longer**: Makes a short list longer five rows at a time.
- **Resets**: to the default length of ten rows per page.

Column Control -Use the Column Control to show or hide table columns. This works similar to Paging Control.

Sort -This button sorts the rows. The column heading with the sort button indicates the column by which the information in the list is sorted. Clicking on the name of any other column will switch the list to sort by that column. Clicking on the sort button switches between ascending and descending order for the list:

Indicates rows are in ascending order (ABC or 123); click to switch order to descending.

Indicates rows are in descending order (ZYX or 321); click to switch order to ascending

Actions -Click on the icons in this column to perform an action. Each table contains a subset of these following actions:

Edit the item on this row

Delete the item on this row

Edit LDAP information

Move item to top of list

Move item up one row in list

Move item down one row in list

Add Item to list

RedRak Professional User Manual

Cancel this entry

Show more information about the row 's item

Confirm changes to a row 's inputs during edit

Fix item. Appears only in Home|Reports|System Check

Icons before a table item -These items represent different types of information. Run the mouse over an icon to display a description of what will happen if you click on

the icon. For example,   indicates a device is being shared. Running your mouse over the Device icon would display **Browse this device** in the status bar of your browser.

If the device is currently inactive or disabled, the description icon will have an X through it

Other icon definitions are listed below:

Shared Path, Hotlinks Folder, Folder within Files Manager

Inactive Shared Path (This path has been stored but not yet committed.)
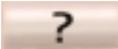
III
Initial Setup Procedure

This process gathers information to start up the RedRak.

When your RedRak has been installed, after a brief RedRak logo page, you will see the **Welcome to the RedRak** page:

This page summarizes the setup process detailed below.

Note that online help is now available from the in the upper-right corner.

Click **CONTINUE**

A. Setting up the LAN

A Local Area Network (LAN) typically spans a small area such as a building or campus. RedRak's LAN setup consists of entering a Host Name, Domain Name, DNS Server, Default Router, and Netmask, and selecting a default AppleTalk zone (if available) and Windows Workgroup.

The information entered in this section should be entered into the "RedRak Installation Worksheet" you used during the installation process

1. Type the Host Name if none is shown. In this case, the host name identifies the RedRak computer. In general, a distinct host name identifies each computer, printer and router on a network. In simplistic terms, think of the host name as your machine 's first name. Some suggestions for selecting a host name:

   • The host name is a case-insensitive text string containing only letters (a-z , numbers (0-9 and dashes (-. It must begin with a letter.

   • You can change the name at any time in Home|Network|Naming

2. Type the Domain Name if none is shown. The domain name gives the machine its identity to the outside world - the world outside your own network. Think of the domain name as your machine 's last name. (The host name followed by a dot and the domain name are called the fully-qualified domain name.)You should have already received a domain name from your ISP or InterNIC. For more on the domain name, including the relationship of the domain name to your IP address, see the glossary entry for "domain name". When selecting a domain name, keep in mind the following information:

   • Can be up to 26 characters, including the four character extension (for example, .com, .net, .org, or a country code such as .ca or .uk).

   • The only valid characters for a domain name are letters, numbers and a hyphen. Specifically, a domain name can contain `a-z A-Z , 0-9` or `-` (hyphen). Special characters like the underscore (_)or an exclamation mark (`!`) are NOT permitted. Domain names cannot contain spaces or begin or end with a hyphen.

   • `example.com, my-donation.org and canada.ca` are valid domain names, `http://www.example.com` and `www.example.com` are not valid domain names

3. Type the Primary DNS Server if none is shown. A domain name server is a computer that maintains a table for translating host or domain names (such as in `Redrak.example.com`) to IP addresses (such as `133.25.25.71`) and also translates IP addresses to domain names. Every host or domain name can be translated to an IP address and vice versa. This is needed because computers identify other computers by their IP addresses, but it is easier for people to identify computers by their host and domain names. A sample DNS server address is `192.168.1.1`

   Additional information on DNS can be found in the online help. See "Domain Name Servers (Home|Network|DNS)" under "Installing the RedRak Software".

   If you have an existing network, you should already have a DNS and it should be displayed on the screen as the default. However, it is possible that the default is not the correct DNS; please verify that the default is correct.

   If you are creating a new network that will connect to the Internet, your ISP should have given you the name of a Primary DNS.

If you are creating a new network that will not be connected to the Internet, and RedRak will be your DNS Server, leave this field blank at this point. You will enter the IP address of the RedRak at a later time.

4. Type the Default Router in the form of an IP address. The computer assigned as the router links you to networks other than your own. The difference between routers and typical hosts is that hosts know very little about the structure of the Internet and which way to connect. Routers provide routing tables necessary to send information from the local network to the Internet.

   • If the RedRak will not be used to connect your computers to the Internet, or your network will not be connected to the Internet (or any other network), leave this field blank. If another computer on your LAN is used to connect you to the Internet, specify the IP Address of that computer.

   • If you have an existing network, RedRak tries to detect a router on your network and then fill in this educated guess as your default router. If possible, verify that this default is correct.

   • A sample default router address is `192.168.1.1`

5. Type the Netmask if none is shown. The Netmask is a numerical way of specifying the range of IP addresses on your network. For example, all Class C networks have a range of 254 IP addresses and use the Netmask `255.255.255.0`

6. The **AppleTalk Zone** should display automatically if you have AppleTalk (EtherTalk) connected. Select your default zone.

7. Type the **Windows Workgroup/Domain**

   • If your network has an existing Windows NT server, use the name of that domain. This will allow Windows clients connecting to the RedRak to start off in the same workgroup as the RedRak. The workgroup you specify for the RedRak will show up in the Network Neighborhood.

   • If you do not have an NT Domain Server, you can use any name you wish. If you do not have Windows machines on your network, leave the default name of "workgroup". Workgroup names cannot contain any of the following characters:

     * | [ ] / \ ? < > , ; : " = +

     It is recommended that you use alphanumeric characters only.

8. Click the **Administrator** tab and continue to the next section, "Setting Up the Network Administrator"

B. Setting Up the Network Administrator

On a RedRak, the network administrator is a special category of user with more system permissions than other users. There are three levels of users on the RedRak:

   • Network administrators have full access to the RedRak and can see the full home menu.

   • Local administrators have full access to all non-network controls (they will not see the Network heading on the home menu, for example). They also will not be able to create or edit user information for network administrators.

RedRak Professional User Manual

- **Other users** will see only the **Personal** menu heading

In the RedRak system, the network administrator 's duties can easily be performed by more than one person. This is because the network administrator can access and administer the RedRak from any computer on the network. Some tasks a network administrator performs are:

- Setting up the network
- Adding and removing users
- Configuring services such as FTP, email, etc.
- Performing backups
- Monitoring the system (receiving alert messages)
- File management

1. To set up the Network Administrator, type the **Network Administrator 's Logon Name**.

- A common way to generate logon names is to take the first letter of the first name and up to the first seven letters of the last name.
- The name can have lowercase letters (a-z) and numbers (0-9). Spaces and punctuation are not allowed. The name can be no longer than eight characters.

2. Type the **password**. It is important that a password be selected that cannot be easily guessed or discovered.

Passwords are case sensitive - they must always be entered exactly as specified, including uppercase and lowercase letters.

Here are some hints for choosing a secure password.

- Choose a password that is easy to remember.
- The password should be at least six characters in length with mixed case and include numbers and symbol characters (such as $or #).
- First letters of a favorite phrase with a missed letter is a good example.

3. Confirm the **password** by typing it a second time.

4. Click the **Clock** tab to continue with the next section.

C. Setting the RedRak Clock

The RedRak keeps time and date current for many applications. Use this option to set the RedRak time directly by typing in the time and date. For a second, optional method of setting the RedRak time, see "Setting up the Clock (Home|Services|Time)" under "Initial Setup for Networking" in the online help.

1. Select the **Clock** tab.

2. Press **SELECT** to select the timezone nearest you if the timezone shown is not correct. See "Selecting the RedRak Timezone" under "Initial Setup for Networking" in the online help. .

3. Type the **Current Date** in the format of MM/DD/YYYY. For example, enter January 10, 1998 as 01/10/1998 . (Note that RedRak will continue to work correctly with dates beginning on January 01, 2000.)

4. Type the **Current Time** in the format HH: MM (HH for the hour, MM for the minute).

NETmachines™

5. Select **AM** or **PM**.

6. Click **SET NOW**.

7. Click **CONTINUE**.

D. Starting to Use Your RedRak

Once your RedRak software is installed, you can access the RedRak at any time by entering this URL in your browser:

```
http://yourRedRakhostname.domainname:5150/
```

or

```
http://yourREDRAKIP:5150/
```

For example:

```
http://redrak.localdomain.com:5150/
```

```
http://192.168.33.5:515
```

E. Bookmarking Your RedRak in Your Browser

The RedRak logon screen sends a cookie which can get caught in a bookmarked URL and cause errors. The easiest way to avoid this problem is not to bookmark the RedRak logon screen. Instead, wait until after you have logged in, and bookmark the Home screen. This is the screen that displays Personal, Users, Services, etc. along the left-hand side. Clicking on a bookmark for this page will take you to a valid logon page.

F. Logging Out of Your RedRak

Log out of RedRak when you walk away from your computer or if someone else is going to use your computer.

1. To log out, select Home|Personal|Log Off.

2. You are now logged off of RedRak.

3. Type your User Name and Password to log on again.

Note: Closing the browser window does not necessarily log you out of RedRak.
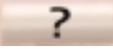
RedRak Professional User Manual

IV
Getting Started

Get started setting up major RedRak Professional features

This chapter is an overview of and a quick look at the set-up process for several of the most popular and useful RedRak Professional features. For additional information about these features or for features not covered in this chapter, simply click the [?] button for online help.

A. Creating a Shared Path

Shared paths are common areas for document and application storage. Shared paths may be used in a stand-alone fashion, allowing you to create a space which allows only a single access or a space which is shared among several users.

Shared paths are used throughout the RedRak interface to provide storage areas for items such as email, web sites, news and ftp.

1. Select Home|Sharing|File Sharing and click the Volumes tab.

2. Click **CREATE** to create a new volume.
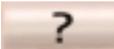
3. Click [?] and follow the detailed instructions displayed. If you wish, select the Quotas tab to limit the amount of space available to a user or group of users within a volume.

4. Click **STORE** and then click **COMMIT** to begin committing the volume.

5. After the commit has completed, Select Home|Sharing|File Sharing.

6. Click **CREATE** to create a path to share.

7. Select the appropriate export method(s). For example, if only Windows machines will be accessing this shared item, check only **Windows (CIFS)** as an export method. Optionally, select the Security tab to set user level and/or machine level permissions.

B. Setting Up Users and Groups to Control Access To the Server

Setting up users associates certain privileges and screen functions with an ID and password. Setting up groups is a convenient way to communicate with or change settings for similar users.

1. Select Home|Users|Groups.

2. You now need at least one group in which to put all new users. You may see a group called "all users," depending on the template options that you selected during setup . If you do not have an existing group, click **CREATE** to create one. For help in creating a group, click

    and follow the detailed instructions displayed.

3. When you have completed creating a group, select Home|Users|Users and click on **DEFAULTS**.

   You will now set up the default settings for new users.

4. Select the appropriate settings. Planning ahead at this point can save time later. Consider the services that your server will be providing and check boxes to enable users to access these services, even if you are not implementing them immediately. For example, enable email for users now, even if the email server is not being set up yet. For help in selecting

   default settings, click and follow the detailed instructions displayed.

5. Select the **Group** tab.

6. Click **SELECT** to choose all of the groups in which new users will be members.

7. Check the group that you would like as the primary group. This should be the group that you created or noted in step 2.

8. Optionally, select the Home Path tab to have a home path automatically created for each user who has Unix shell enabled (under the General tab).

9. Select Home|Users|Users. You will now enter users who will be using the RedRak.

10. Click **CREATE** to create your user identities.

11. For each new user, select **Password** and type in their password. They will be able to change their password at a later time on their own. For help in adding new users, click

    and follow the detailed instructions displayed.

12. Now you can put users into their own groups. Groups allow you to assign privileges (such as viewing newsgroups and file access permissions) to groups of users. Click on the **Groups**
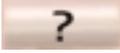
   tab, click and follow the detailed instructions displayed.

C. Setting up a Company Web Site on the Internet or Intranet

This procedure allocates the space for a company web site and assigns the appropriate permissions for the site to be accessed by users.

1. Follow the procedures for "Creating a Shared Path" in this chapter . One or several paths will be needed to provide a storage location for your web pages.

2. Select Home|Services|WWW. Click on the Internet or Intranet tab, depending upon the type

   of site to set up. Then click for detailed instructions.

3. If you want to use the Internet, you must also follow the procedures below for "Accessing Your Internet Service Provider (ISP) by Modem" or "Accessing Your Internet Service Provider (ISP) by Ethernet."

D. Accessing Your Internet Service Provider (ISP) by Modem

Accessing your ISP is usually your first step in providing web access to users.

1. Select Home|Network|Interfaces.

2. Verify that the modem you are configuring is plugged in and turned on.

3. Click [?], select "Setting Up For Dial-In/Point-To-Point Server" and follow the detailed instructions displayed.

E. Accessing Your Internet Service Provider (ISP) by Ethernet

The procedure for accessing your ISP is different, depending on whether you are dialing in or accessing through Ethernet.

1. Select Home|Network|Interfaces.

2. Click the row containing the interface you will be using, either Ethernet or HDLC.

3. Click [?]. For the Ethernet connection, read "Configuring the Addressing in an Ethernet Adapter." For the HDLC connection, read "Configuring the HDLC Device."

F. Having Employees Share Hardware, such as a CD-ROM

Removable media include floppy disks, CD-ROM disks, and Zip and Jazz disks. Mounting removable media makes these disks accessible to the users.

1. Select Home|Sharing|Removable Media.

2. Click in the **Mounted** column next to the disk you wish to use.

3. Select the file system that was used to format the disk. For example, the default File System for a CD-ROM is ISO9660.

4. Click **OK**.

5. To see the disk that you have just mounted, select Home|Sharing|File Sharing. Click the pencil to edit the CD-ROM, then select the appropriate file export methods to share the files on

   the CD-ROM. For more help on selecting a file export method, click [?].and follow the detailed instructions displayed.

6. You must repeat steps 1 through 4 each time you insert a disk or CD-ROM into a drive connected to the RedRak.

G. Having Users Share a Printer

You can use either of these two methods, depending on whether the printer is connected to your RedRak via a parallel or serial port or via an Ethernet card.

RedRak Professional User Manual

Method 1

If your printer is plugged into the back of the RedRak (that is, directly connected) via a parallel or serial port:

1. Select Home|Sharing|Printer Sharing.

2. Create a printer queue by clicking **CREATE**.

3. Then click ![?].and follow the detailed instructions displayed.

Method 2

If your printer has an Ethernet card, is plugged into an Ethernet cable, and requires an IP address:

1. Print out a test page or configuration page to determine the printer 's Ethernet MAC.

2. Select Home|Network|Machines. Click ![?].and follow the detailed instructions displayed. These instructions describe how to add a new machine (which is, in this case, a printer) to the network.

3. If you plan to print using the BSD LPR printing protocol, you will need to assign the printer its IP address. The RedRak can provide the printer 's IP address via DHCP if the printer is not already obtaining it some other way. Click ![?].and read "Dynamic Host Control Protocol Servers."

4. Select Home|Sharing|Printer Sharing.

5. Create a printer queue.
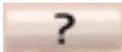
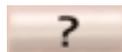6. Then click ![?].and follow the detailed instructions displayed.

H. Backing up Clients of the RedRak Server and the RedRak Itself

This procedure can back up the data on any drive accessible to the RedRak. A separate procedure (Home|Services|Configuration) is used to back up RedRak software settings in the event that the RedRak software needs to be reinstalled.

1. Select Home|Services|Backup|Options.

2. Select a path on which to store catalog files.

3. Enter an expiration time for the catalog files. The catalog files are large and do not need to be kept indefinitely. Old tapes can be recataloged to recreate the deleted catalog files.

4. **COMMIT** the options.

5. Select Home|Services|Backup|Configure to configure each machine to be backed-up. Click ![?].for instructions on how to do this.

6. To back up a machine right now, select Home|Services|Backup|Backup Now, then click
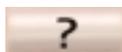
[?] .for detailed instructions.

7. To schedule a backup event that will occur at a later time, select

Home|Services|Backup|Schedule and click [?] .for detailed instructions.

I. Using RedRak as an Email Server

The RedRak can hold and distribute user email.

1. Follow the procedures for "Creating a Shared Path" in this chapter . A path is needed to provide a storage location for your "shared mail spool."

2. Select Home|Services|Mail to select the type of mail server you will use.

3. Select the shared mail spool that you just created for the mail.

4. Enable either the IMAP mail server, the POP mail server, or both.

5. Click and follow the detailed instructions displayed.

6. Select Home|Report|Users to verify that all users have mail enabled.

7. To enable mail for any user, select Home|Users|Users|Edit User|General and check **Mail Enabled**.

8. Users will need to have their email client applications point to the RedRak as the email server.

J. Having Users Access Internet or Intranet News Groups

News groups are a way to share information among users. They can also be used to create both public and private discussion groups

1. Follow the procedures for "Creating a Shared Path" in this chapter . A path is needed to provide a storage location for your "news spool." Note: : This volume could get very large (12GB, for example) depending upon your expiration policy and the number of groups you will feed. For this reason, a dedicated volume for news groups is recommended.

2. Select Home|Services|News.

3. Select the shared path you just created.

4. Check **Enable News Server**.

Intranet News (internal)

An intranet news server will receive and transmit news only within the domain served by RedRak.

1. For an intranet news group, select the News group tab, type in your own news

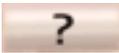group's name, then press [+] to add the group. For example, type

ournews.mailtoall

2. Select the Clients tab, and type in your domain at the bottom, and check

RedRak Professional User Manual

**Deny all except**. This means that your intranet news cannot be read by people outside of your company.

Internet News (external)

An Internet news server receives and transmits news from external news feed servers that you select. You can deny or allow access to the RedRak news server to certain domains or IP addresses.

1. To receive news groups from the Internet, you have to arrange a news feed on your own from your ISP (there might be a fee for the news feed). To set up RedRak to receive the news feed, select the Server tab and click CREATE.

2. Click **Enable the News feed** and create the news feed name, and enter the name of the news feed server that you received from your ISP.

3. Select the Groups tab to specify the specific newsgroups you want to send and/ or receive news from. Wildcards can be used (e. g.comp. freebsd. *will get groups which fall under the comp. freebsd category). Click [?] and follow the detailed instructions displayed.

4. If your ISP requires that you authenticate your subscription by an account ID or password, select the Authenticate tab.

5. Users will need to have their newsreader point to RedRak as the newsgroup server.

6. If you want to use the Internet, you must also follow the procedures above for "Accessing Your Internet Service Provider by Modem" or "Accessing Your Internet Service Provider by Ethernet."

K. Having Users Work from a Remote Location Via Modem

Dial-in access to the RedRak is a convenient feature for users who wish to work from home.

1. To do this, you must have a dial-in modem for the RedRak. Hook up the modem to the serial port on the back of your RedRak machine.

2. Select Home|Network|Interfaces to configure the serial port for that modem.

3. Look for a description with TTY (for serial) in the type column. Click on the [pencil icon] to edit the TTY device to which the dial-in modem is connected.
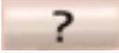
4. Then click [?] and follow the detailed instructions displayed.

5. Select Home|User|Users.

6. Edit the users to whom you wish to provide dial in access. Ensure that **Dial-In Enabled** is checked for each of these users.

L. Giving Users the Opportunity to Have Their Own Web Site

User web sites can be set to be accessible to your network and/or to the Internet.

1. Verify the users who have **Public HTML Enabled** checked on their users ' pages . To do this,

    select Home|User|Users. Select the ✎ to edit the user who will have his own web site. Alternately, select Home|Reports|Users and select **Show Public HTML** from column control.

2. Select Home|Services|WWW|User pages. Click [?] and follow the detailed instructions displayed.

3. If you want to use the Internet, you must also follow the procedures above for "Accessing Your Internet Service Provider (ISP) by Modem" or "Accessing Your Internet Service Provider (ISP) by Ethernet."

V
Repair Mode

Note: A complete repair kit, including a drive bay with a drive loaded with the current system ready to boot, is available from **NETmachines.net**.

Use the Repair Mode to fix certain conditions in an already installed RedRak.

The repair option runs directly off of the RedRak boot floppy and CD-ROM. Use the repair option when you have a working RedRak system installed and any of these situations exist:
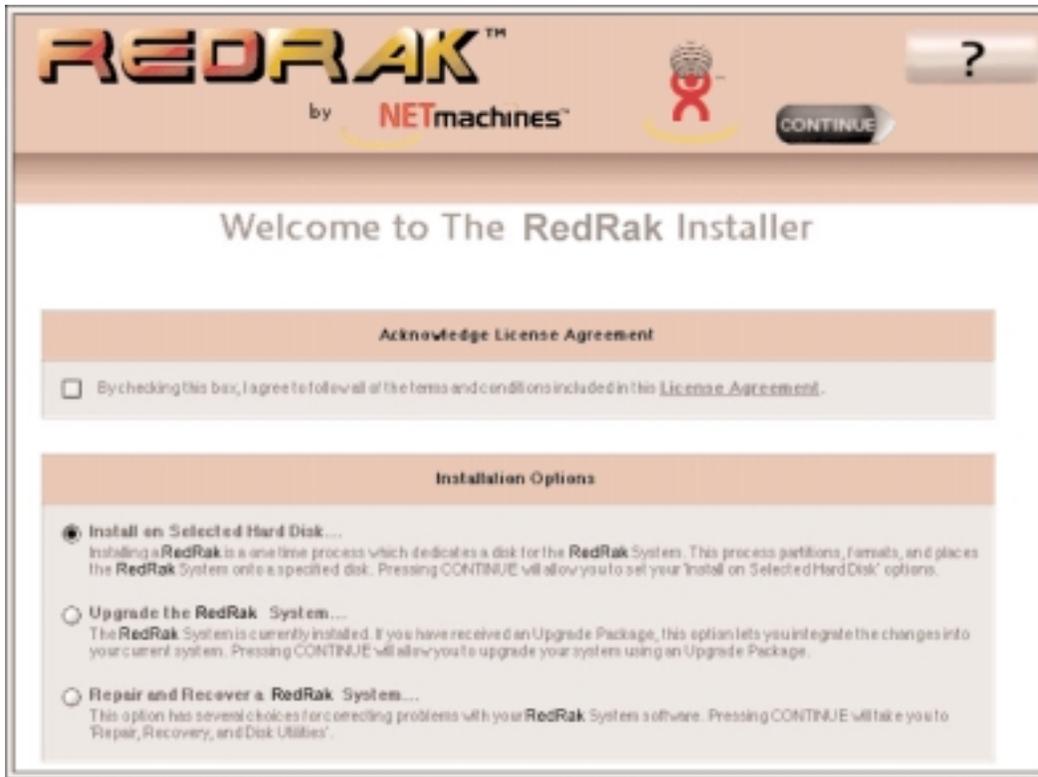
• Your RedRak will not boot or reboot.

• You had to reinstall your RedRak and want to restore the backup of your old RedRak configuration onto your reinstalled system.

• You had to reinstall your RedRak and want to reconstruct the System Volume that was a mirror on your old RedRak installation.

• An administrator has forgotten his or her password.

• You suspect your RedRak has been broken into and modified by unauthorized users.

Using the repair option means that you are booting off of the RedRak CD-ROM, not the RedRak installed on your hard disk. However, using the repair option does not:

- Re-install the RedRak software on your hard disk (you have to choose install to do this).
- Affect your existing configuration on your hard disk, (unless you select the RESTORE option to restore a configuration to your hard disk).
  1. If you have not done so already, follow the instructions in your RedRak for Linux Installation Manual, Chapter III "Remote Install Method".
  2. You should see the RedRak "splash" screen followed by **Welcome to the RedRak Installer**.

3. Check the **Repair and Recover a RedRak System** radio button.

4. Click **CONTINUE**.

5. The repair screen appears. Choose the disk to affect (check, restore, etc.) from the pull down list.

6. Select one of the following (note that the first three options only appear if you have selected a RedRak system disk):

• **Check**: Select this if your RedRak will not boot or reboot. One cause of this problem may be that you lost power while using your RedRak and were not able to shut down normally. This option is explained below in "Checking Your RedRak Disk for Errors (Repair >Check Option)."

• **Restore**: Select this if you had to reinstall your RedRak and want to restore the backup of your old RedRak configuration onto your reinstalled system. This option is explained below in "Restoring Your RedRak Configuration (Repair > Restore Option)."

• **Reconstruct**: Select this if you had to reinstall your RedRak and want to reconstruct the System Volume that was a mirror on your old RedRak installation onto your reinstalled system. This option is explained below in "Reconstruct a System Volume Mirror."

• **Password**: Select this if an administrator has forgotten his or her password. This option is explained below in "Resetting an Administrative Password (Repair > Password Option)."

• **Shutdown**: Select this to exit the installer and shut down. This is explained below in "Shutting Down the RedRak."

NETmachines™

A. Checking Your RedRak Disk for Errors (Repair > Check Option)

Use the check option if your RedRak will not boot or reboot. One cause of this problem may be that you lost power while using your RedRak and were not able to shut down normally. This option also lets you see if programs have been altered, which may be a sign of a break in.

If a problem is found, the RedRak software will automatically make the needed repairs. Note that if your RedRak was installed onto a single partition, there needs to be at least 64MB of RAM to run Repair.

1. Click **CHECK** from the RedRak Repair Screen. If you need assistance in displaying the RedRak Repair Screen, read "Repair Mode" in the online help. .

2. You will see a list of check tasks and their status. Note this about the check function:

  • If a disk needs to be repaired, the software does it automatically. If the entire check process completes successfully, the disk is fine.

  • Unsuccessful repairs will halt the check process and an error message will appear. If that happens, call RedRak technical support.

  • If you had to perform an advanced configuration to install RedRak the first time, you will need to repeat it after you perform the check.

3. After Check has completed, click **SHUTDOWN** and follow the instructions below, "Shutting Down the RedRak."

B. Restoring Your RedRak Configuration (Repair > Restore Option)

Use the restore option if you had to reinstall your RedRak software onto your PC, and you want your RedRak to function as it did before the reinstallation.

The restore option restores all of the files used to configure the RedRak. This includes all of the RedRak settings, such as settings for users, machines, and network settings. The files restored are in these RedRak directories:

/var/conf

/etc

When and how is the backup made from which you will restore?

  • If you have more than one hard drive managed by RedRak (i. e. , drives containing volumes other than the System volume), each time you click **COMMIT** the configuration is automatically backed up to any and all hard drives not containing the RedRak system software.

  • You can back up the configuration to floppy whenever you wish. To do so, select

    Home|Services|Configuration, click ![? button], and follow the online help instructions.

Note that the restore option does not restore other non-configuration files stored on your RedRak. See "Restoring Files to Your Hard Disk" in online help.

To Restore:

  1. Click **RESTORE** from the RedRak Repair Screen. If you need assistance in dis-

playing the RedRak Repair Screen, read "Repair Mode."

2. Select a floppy or hard drive from which to restore and click **CONTINUE**.

3. If you selected a floppy drive, you will then be prompted to insert the floppy disk or disks.

4. When the restoration is complete, you will see the Configuration Restore Log and messages. These messages tell you:

- The number of disks required to complete the restore.

- The results of the test that checks to see whether the restored files can extract correctly. If they cannot, there are no files written to your hard drive; the restore process halts and you see "Current configuration not replaced."

- Whether or not the current configuration was overwritten (a successful install always overwrites the current configuration).

- Whether the configuration to restore was written correctly to your hard drive - "configuration updated," or was not -- "Configuration may no longer function." If you see the latter message, you have a problem -the configuration you tried to restore will not work, and the current configuration probably will not either, because the restore terminated before the file writing was complete.

- Whether or not the restore was completed.

5. Click **SHUTDOWN** from the RedRak Repair Screen and follow the instructions below, "Shutting Down the RedRak."

C. Reconstruct a System Volume Mirror (Repair > Reconstruct Option)

Use the reconstruct option if you had to reinstall your RedRak software onto your PC, and you want your RedRak System Volume to have the same contents as it did before the reinstallation.

The reconstruct option copies the contents of the other half of the mirror to the System Volume of the reinstalled RedRak disk. The disk that RedRak was reinstalled onto needs to be the same disk as the old RedRak installation in order for the size of the System Volume to match that of the other side of the mirror in which the contents are being copied. The contents that are copied include all of the RedRak settings, such a settings for users, machines, and network settings. The contents of the mirror are copied to the RedRak directory:

`/root/var`

To reconstruct:

1. Click **RECONSTRUCT** from the RedRak Repair Screen. If you need assistance in displaying the RedRak Repair Screen, read Using the RedRak Remote Installer - Repair Mode in your RedRak for Linux Installation Manual

2. Select the hard drive that was the RedRak Volume which was the other half of the System Volume mirror on the old RedRak installation and click **CONTNUE**.

3. The reconstruction will then progress which may take some time, depending on the size of the System Volume.

4. When the reconstruction is complete, you will get a message of completion and will be allowed to go back to the RedRak Repair Screen.

5. You may want to **RESTORE** the previous configuration, see Restoring Your RedRak

Configuration (Repair >Restore Option).

6. Click **SHUTDOWN** from the RedRak Repair Screen and follow the instructions below.

D. Resetting an Administrative Password (Repair > Password Option)

Use the password option if an administrator has forgotten his or her password, and needs to create a new password without typing in the old one. Resetting your password does not affect the RedRak configuration or your user capabilities.

1. Click **PASSWORD** from the RedRak Repair Screen. If you need assistance in displaying the RedRak Repair Screen, read "Completing the RedRak Remote Installer > Repair Mode."

2. Select an administrator account from the drop-down list. This is your username.

3. Type a new password, and then type the same password to confirm it.

It is important that a password be selected that cannot be easily guessed or discovered. Note these facts about your password:

- Restrictions for the password depend on the policy set up in Home|User|Password.
- Passwords are case sensitive -they must always be entered exactly as specified, including uppercase and lowercase letters.
- Do not type a password longer than eight characters if you will be using AppleShare file sharing.

Here are some hints for choosing a secure password:

- Choose a password that is easy to remember.
- The password should be at least six characters in length with mixed case.
- The first letters of a favorite phrase with a missed letter is a good example, or a password using one or more numerals.

4. Click **SHUTDOWN** from the RedRak Repair Screen and follow the instructions below in "Shutting Down the RedRak."

E. Shutting Down the RedRak

This function allows you to safely shutdown the RedRak after any of the repair functions are completed.

1. Click **SHUTDOWN** from the RedRak Repair Screen.

2. When the RedRak emits a continuous tone, reset the RedRak by pressing its reset or startup button.

3. Take out the RedRak floppy disk and CD-ROM before your computer has a chance to boot from them again.

4. In approximately two minutes, you will hear beep-beep, beep-beep, beep-beep from your RedRak. It is now up and ready to access via its web pages.

5. Open your browser, or access it if it is already open.

6. If your browser was already open, a link to RedRak will be available. If you just opened your
   browser, type the following RedRak URL into your browser:

`http://IPAddress:5150/`

For example: `http://192.168.33.5:5150/`

VI
Where to Go From Here

The User Manual covers the basic procedures required to use your RedRak. This chapter describes some other resources that can take you beyond basics.

A. RedRak Online Help

Access the RedRak online help by clicking the [?] icon in the upper-right corner of any RedRak web page. The most extensive RedRak documentation is in the online help.

In addition, here are some other reasons to use online help:

- Online help always opens at the right page because it is "context sensitive." In other words, when you click on the [?], an explanation of your current RedRak screen automatically appears.

- An excellent search engine (Search All) lets you search through online help text and headings for a word or combination of words. Then, click the Search Topic Search Topic Search Topic Search Topic Search Topic button to find all occurrences of a word within a single topic.

- The RedRak Help Contents RedRak Help Contents RedRak Help Contents RedRak Help Contents RedRak Help Contents are ordered chronologically, starting with the first things that you should do when you are setting up your RedRak.

- Help text terms are hyperlinked to their definitions in the glossary. The Glossary displays a list of the entire glossary for browsing.

- Online help is accessible from any machine using the RedRak browser interface.

B. RedRak Technical Support

If you need an answer you were not able to find in RedRak online help, try Frequently Asked Questions under Support on the RedRak web page (see below). User and install manuals are also there online.

NETmachines, Inc.
http://www.NETmachines.net/support

RedRak Professional User Manual

C. Web Site Resources

For products and pricing information, direct email links to Netmachines, Frequently Asked Questions and other technical support information, see our web site.

- http://www.netmachines.net

Here are some sites that have helpful background information on networks and

network terminology:

- http://www. linux.org/-Linux Online!
- http://www. pcwebopedia.com/-A dictionary and encyclopedia
- http://www. whatis.com/-A dictionary and encyclopedia
- http://wombat.doc.ic.ac.uk/-The Free On-line Dictionary of Computing

D. Further Reading

Essential System Administration, Frisch, A. , O 'Reilly &Associates, Inc. , 2nd Edition

Getting Connected, Dowd, K. , O 'Reilly &Associates, Inc.

Using Samba, Kelly, P. , Donham, P. , Collier-Brown, D. , O 'Reilly &Associates, Inc.

JavaScript: The Definitive Guide, Flanagan, D. , O 'Reilly &Associates, Inc.

JavaScript Handbook, Goodman, D. , IDG Books

HTML: The Definitive Guide, Musciano, C. , Kennedy, B. , O 'Reilly &Associates, Inc.

The Complete FreeBSD, Lehey, G. , Walnut Creek CDROM

Apache: The Definitive Guide, Laurie, B. &P. , O 'Reilly &Associates, Inc.

Learning the UNIX Operating System, Peek, J. , Todino, G. , Strang, J. , O 'Reilly &Associates, Inc. , 4th Edition

Linux in a Nutshell, Hekman, J. et al. , O 'Reilly &Associates, Inc.

Glossary

administrator -The systems person in charge of a computer. On a RedRak, an administrator is also a special category of user with more system permissions than non-administrator users. There are three levels of users on RedRak: network administrators, who have full access to the RedRak and see the full home menu, local administrators who have full access to all non-network controls (they won 't see the Network heading on the home menu, for example) and non-administrator users, who see only the functions available under the "Personal" menu heading. .

alias -RedRak uses two types of aliases: network device aliases and email aliases. A network device alias provides your network device with more than one hostname at the same Internet address. Alternative hostnames are specified in Home|Network|Machines|Aliases. Hostname aliases often indicate that the host with that alias provides a particular network service such as archie, finger, FTP, or World Wide Web. The assignment of services to computers can then be changed simply by moving an alias (e. g. www.doc.ic.ac.uk) from one Internet address to another, without the clients needing to be aware of the change. For example, this network device could be called mail. domainname.com, news. domainname.com, etc. The second kind of alias is an email alias, which allows you to redirect email from a unique alias (an alias that is not a current user, user alias, or news alias) to one or more email accounts. For example, mail sent to administrator could be redirected to your email address. Email aliases can be added or deleted on the RedRak.

Appleshare -An Appleshare server is a dedicated Macintosh that all users on a network share. It is used primarily as data storage and a printer server device for workgroups.

AppleTalk -A proprietary local area network protocol developed by Apple Computer, Inc. for communication between Apple products (e. g. Macintosh) and other computers. This protocol is independent of the network layer on which it runs. See "zone."

application -A complete, self-contained program that performs a specific function directly for the user.

backup (Sometimes "back up" when used as a verb) -A spare copy of a file, file system or other resource for use in the event of failure or loss of the original. The term is most commonly used to refer to a copy of all the files on a computer 's disks which is made periodically and kept on removable medium. This essential precaution is neglected by most new computer users until the first time they experience a disk crash or accidentally delete the only copy of the file they have been working on for the last six months. Ideally, the backup copies should be kept at a different site or in a fireproof safe.

BSD LPR printing protocol -BSD is for Berkeley System Distribution, a family of Unix versions. LPR is the Unix Line PRinter print command. This does not actually print files but rather copies (or links) them to a spool area, then a daemon copies them from the spool area to the printer. See "daemon."

catalog -This is the RedRak list of backed up files. One catalog is created for each machine included in the backup. The catalogs are stored on the RedRak for a limited period of time and then are deleted. However, deleted catalogs can be

recreated (by using the recatalog function in Home|Services|Backup).

client -A computer system or process that requests a service of another computer system or process (a "server") using some kind of protocol and that accepts the server 's responses. A client is part of a client-server software architecture.

commit -In the RedRak, clicking the COMMIT button implements a batch of RedRak changes. A user adds to that queue of changes to be made each time he or she clicks the STORE button.

cookies -A packet of information sent by an HTTP server to a World Wide Web browser and then sent back by the browser each time it accesses that server. Cookies can contain any arbitrary information the server chooses. Typically this is used to authenticate or identify a registered user of a web site without requiring them to sign in again every time they access that site. Cookies are required because a server cannot keep records of who has visited it - that record is maintained by a user 's browser and then transmitted back to the server. RedRak requires that your browser be enabled to accept cookies -otherwise, logon will always fail.

daemon -A program that is not invoked explicitly, but lies dormant waiting for some condition(s) to occur.

device -In RedRak, valid devices include a floppy drive, CD-ROM, or hard disk.

DHCP (Dynamic Host Control Protocol) -This protocol provides a means to dynamically allocate IP addresses to computers running on a local area network. The system administrator assigns a range of IP addresses to DHCP and each client computer on the LAN has its TCP/IP software configured to request an IP address from the DHCP server. The request and grant process uses a lease concept with a controllable time period. See "Dynamic Host Control Protocol Servers" in the online help

DNS (domain name server) -A domain name server is a computer program that maintains a table for translating host names (such as frontdesk. localdomain.com) to IP addresses (such as 192. 168. 3. 37) and IP addresses to host names. Anytime a person sends an email or surfs the web, this translation is needed. The RedRak can perform this function.

domain name -A domain name is the character string name given to a computer network. The domain name gives the machine its identity to the outside world -the world outside your own network. Think of the domain name as your machine 's last name. (The host name followed by a dot and the domain name are called the fully- qualified domain name.) You should have already received a domain name from your ISP or InterNIC. It typically has one of the standard Internet suffixes such as ". EDU", ".org", ". GOV", ".com", ".net" or ".<country>." Domain names are case insensitive so ". EDU" is the same as ". edu". Some examples are "NETmachines.net", openskies.net, "darpa.mil", or "umich.edu".

domain -On the Internet, "domain" is most commonly used to refer to a group of computers whose hostnames share a common suffix: the domain name.

download -To transfer data from one computer to another. Downloading (as opposed to uploading) usually refers to transfer from a larger "host" system (especially a server or mainframe) to a smaller "client " system, especially a microcomputer or specialized peripheral.

Ethernet -This is the most widely-installed local area network (LAN) technology. Now specified in a standard, IEEE 802. 3, Ethernet was originally developed by Xerox and then developed further by Xerox, DEC, and Intel. An Ethernet LAN typically uses coaxial cable or special grades of twisted pair wires. The most commonly installed Ethernet systems are called 10BASE-T and provide transmission speeds up to 10 Mbps. Devices are connected to the

cable and compete for access using a Carrier Sense Multiple Access with Collision Detection (CSMA/CD) protocol. Fast Ethernet or 100BASE-T10 provides transmission speeds up to 100 megabits per second and is typically used for LAN backbone systems, supporting workstations with 10BASE-T cards. Gigabit Ethernet provides an even higher level of backbone support at 1000 megabits per second (1 gigabit or 1 billion bits per second).

FAT (File Allocation Table) Partition -This is a classic file system that is used by MS-DOS and continues to be used by other Microsoft operating systems like Windows 95, Windows 98, and Windows NT 4.0. FAT partitions are specified as a type to be created when they are set up by a utility called fdisk. The RedRak "Run from CD-ROM" mode requires a FAT partition on the PC in order to run

Firewall -A firewall restricts the traffic into and out of your network. A firewall is the implementation of your security policy. It will allow only that traffic that meets the conditions set by the firewall rules. It is usually installed at the connection between your local network and the Internet.

fully qualified domain name (FQDN) -The full name of a system, consisting of its local hostname and its domain name. For example, "venera" is a hostname and "venera. isi.edu" is an FQDN . A FQDN should be sufficient to determine a unique Internet address for any host on the Internet.

format -Hard disks and other storage devices are said to be formatted when their space has been organized and divided into pieces that can be controlled for convenient storage and access. For example, a hard disk may be formatted into areas called sectors, tracks, and clusters… See "reformat."

FTP (File Transfer Protocol) -A client-server protocol which allows a user on one computer to transfer files to and from another computer over a TCP/IP network. FTP is also the client program the user executes to transfer files.

group -In RedRak, you can apply common characteristics to a collection (grouping) of users, machines, or newsgroups.

host -A computer connected to a network.

hostname -The unique name by which a computer is known on a network, or identified in electronic mail, Usenet news, or other forms of electronic information interchange. On the Internet the hostname is an ASCII string, e. g. "wombat.doc.ic.ac.uk", which consists of a local part (wombat) and a domain name (doc.ic.ac.uk). The hostname is translated into an Internet address by the Domain Name System (DNS). It is possible for one computer to have several hostnames (aliases), though one is designated as its canonical name.

HTML (HyperText Markup Language) -A Hypertext document format used on the World Wide Web.

HTTP (HyperText Transfer Protocol) -The client-server TCP/IP protocol used on the World Wide Web for the exchange of HTML documents.

icon -A small picture intended to represent something (a file, directory or action) in a graphical user interface. When you click an icon, an action such as opening a folder is performed.

IMAP (Internet Message Access Protocol) mail server -A protocol allowing a client to access and manipulate electronic mail messages on a server. It permits manipulation of remote message folders (mailboxes), in a way that is functionally equivalent to local mailboxes. IMAP includes operations for creating, deleting, and renaming mailboxes; checking for new messages; permanently removing messages; searching; and selective

fetching of message attributes, texts, and portions thereof. It does not specify a means of posting mail; this function is handled by a mail transfer protocol such as SMTP. See "POP," and "Setting up the RedRak as an IMAP and/or POP Mail Server" under "Mail Servers" under "RedRak Services" in the online help…

Internet -A set of networks all over the world interconnected with routers. The Internet was started by the U. S. Government in 1969 as a network that would continue to function even if a large portion of it were destroyed. The Internet is now a public, cooperative, and self-sustaining facility accessible to tens of millions of people worldwide. Technically, what distinguishes the Internet is its use of a set of protocols called TCP/IP (Transmission Control Protocol/Internet Protocol). For many Internet users, electronic mail (email) has practically replaced paper mailPlace both the RedRak CD-ROM and boot floppy in the PC that will be the RedRak server. for short written transactions. The most widely used part of the Internet is the World Wide Web (often abbreviated "WWW" or called "the Web"). Its outstanding feature is Hypertext, a method of instant cross-referencing.

InterNIC (Internet Network Information Center) -The InterNIC provides domain name registration services. For more information write Info@is. internic.net or visit http:// www.interNIC.net.

intranet -Any network, which provides internal services within the network, that are similar to the types of services provided externally by the Internet. Intranet networks need not be connected to the Internet. The most common example of an intranet is the company use of one or more World Wide Web servers on an internal TCP/IP network for distribution of information within the company.

IP (Internet Protocol) -The network layer for the TCP/IP protocol suite widely used on Ethernet networks. It is a scheme that enables information to be rerouted from one network to another, as necessary. Technically, IP is a connectionless, best-effort packet switching protocol.

IP address (also called internet address, TCP/IP address) -The 32-bit host address defined by Internet Protocol that is usually represented in dotted decimal notation, e. g. 192.168.47.216.

ISP (Internet Service Provider) -A company which provides other companies or individuals with access to or presence on the Internet. Most ISPs are also Internet Access Providers; extra services include help with design, creation and administration of World Wide Web sites, training, and administration of intranets.

kiosk -A stall set up in a public place where one can obtain information, e. g. tourist information. The information may be provided by a human or by a computer. In the latter case, the data may be stored locally (e. g. on CD-ROM) or accessed via a network using some kind of distributed information retrieval system such as Gopher or World Wide Web.

LDAP (Lightweight Directory Access Protocol) -A protocol for accessing online directory services. LDAP defines a relatively simple protocol for updating and searching directories running over TCP/IP. LDAP is gaining support from vendors such as Netscape, Novell, Sun, HP, IBM/Lotus, SGI, AT&T, and Banyan. An LDAP directory entry is a collection of attributes with a name, called a distinguished name (DN). Each of the entry 's attributes has a type and one or more values. The types are typically mnemonic strings, like "cn" for common name, or "mail" for e--mail address.

LAN (Local Area Network) -A data communications network which is geographically limited (typically to a 1 km radius) allowing easy interconnection of terminals, microprocessors and computers within adjacent buildings. Ethernet and FDDI are examples of standard LANs.

Because the network is known to cover only a small area, optimizations can be made in the network signal protocols that permit data rates up to 100Mb/s.

log on -To start a session with a system, usually by giving a user name and password as a means of user authentication. The term, when used as a noun, describes the combination of a user name and password (also called an account), e. g. "Have you been given a logon yet?"

MAC address -The Ethernet card 's unique hardware address. This does not have anything to do with Macintosh computers -it stands for Media Access Control. It is the Ethernet card 's unique hardware address and is written as twelve hexadecimal (base-16) digits. Each digit is 0-9 or A-F. An example is 0060B039DD24. In the RedRak, the MAC address is optional in order to add a device to the network, but may be required by the DHCP Server. A printer 's MAC address can usually be determined by printing out its test or configuration page.

machine -Common term for "computer," usually when considered at the hardware level. In RedRak, printers are also considered a "machine.

netmask -The netmask is usually provided by your ISP. The netmask is a numerical way of specifying the range of IP addresses on your network. For example, all Class C networks have a range of 254 IP addresses and use the Netmask 255. 255. 255. 0.

network -Hardware and software data communication systems. In information technology, a network is a series of points or nodes interconnected by communication paths.networks can interconnect with other networks and contain subnetworks. The most common topologies or general configurations of networks include the bus, star, and ring topologies.networks can also be characterized in terms of spatial distance as local area networks (LANs), metropolitan area networks (MANs), and wide area networks (WANs). A given network can also be characterized by the type of data transmission technology in use on it (for example, a TCP/IP or SNA network); by whether it carries voice, data, or both kinds of signals; by who can use the network (public or private); by the usual nature of its connections (dial-up or switched, dedicated or nonswitched, or virtual connections); and by the types of physical links (for example, optical fiber, coaxial cable, and copper wire). Large telephone networks and networks using their infrastructure (such as the Internet) have sharing and exchange arrangements with other companies so that larger networks are created.

network devices -Any computer, printer or router on the network with its own IP address.

news group -One of Usenet 's huge collection of topic groups or fora. Usenet groups can be "unmoderated" (anyone can post) or "moderated" (submissions are automatically directed to a moderator, who edits or filters and then posts the results). Among the best-known are comp.lang.c (the C-language forum), comp. arch (on computer architectures), comp. unix. wizards (for Unix wizards), rec. arts. sf-lovers (for science fiction fans), and talk. politics. misc (miscellaneous political discussions and flamage). packet packet packet packet packet - The unit of data sent across a network.

package -A collection of files which (usually) comprise an application, although packages may contain extensions (libraries) which other packages depend upon in order to function. For example, the modem application 'minicom ' depends upon the package 'kermit ' to provide minicom with the ability to transfer files using the kermit protocol.

parallel port -An interface from a computer system where data is transferred in or out in parallel; that is, on more than one wire. A parallel port carries one bit on each wire thus multiplying the transfer rate obtainable over a single wire. There will usually be some control signals on the port as well to say when data is ready to be sent or received. The most common kind of parallel port is a printer port; for example,

a Centronics port which transfers eight bits at a time. Disks are also connected via special parallel ports; for example, SCSI or IDE.

password -A user identifies himself with a name and a password, the latter of which is a secret word or series of characters. On the RedRak, passwords are case sensitive. Here are some guidelines for selecting a password: Choose a password that is easy for you to remember but difficult for others to guess. The password should be at least six characters in length with mixed case; the first letter of a favorite phrase with missed letters is a good example. Also, include numbers and symbols. For example, using the phrase "It was the best of times!" the password could be Iwtbot6!!

path -The specification of a node (file or directory) in a hierarchical file system. The path is usually specified by listing the nodes top-down, separating the directories by the pathname separator ("/" in Unix, "\" in MS--DOS). For example, a RedRak template creates a path called /public. You may create additional folders or files under that path, for example, to create this path: /public/onlinedoc/marketing.

ping -This stands for Packet InterNet Groper (ping was probably originally contrived to match submariners ' term for the sound of a returned sonar pulse). A program used to test reachability of destinations by sending them one, or repeated, ICMP echo requests and waiting for replies. Since ping works at the IP level, its server-side is often implemented entirely within the operating system kernel and is therefore the lowest level test of whether a remote host is alive. Ping will often respond even when higher level, TCP-based services cannot. The term is also used as a verb: "Ping host X to see if it is up."

POP (Post Office Protocol) -A protocol designed to allow single user computers to retrieve electronic mail from a POP server. The POP server might be a computer with a permanent Internet connection whereas its clients might only connect to it occasionally, e. g. by modem. See "Setting up the RedRak as an IMAP and/or POP Mail Server" under "Mail Servers" under "RedRak Services" in the online help

port -A logical channel or channel endpoint in a communications system. The Transmission Control Protocol (TCP) and User Datagram Protocol (UDP) transport layer protocols used on Ethernet use port numbers to distinguish between different logical channels on the same network interface on the same computer. Each application program has a unique port number associated with it, defined in /etc/ services or the Network Information Service "services" database . Some protocols, e. g. telnet and HTTP (which is actually a special form of telnet), have default ports specified but can use other ports as well. For example, the program that handles incoming telnet sessions uses port 23, and the program that handles HTTP uses port 80.

protocol -A set of formal rules describing how to transmit data, especially across a network. Low level protocols define the electrical and physical standards to be observed, bit-and byteordering and the transmission and error detection and correction of the bit stream. High level protocols deal with the data formatting, including the syntax of messages, the terminal to computer dialogue, character sets, sequencing of messages, etc.

queue -A first-in first-out data structure used to sequence multiple demands for a resource such as a printer, processor, or communications channel. Objects are added to the tail of the queue and taken off the head. A typical use of queues in an operating system involves a user command which places something on a queue, e. g. a file on a printer queue or a job on a job queue, and a background process or "daemon" which takes things off and processes them (e. g. prints or executes them). In the RedRak, the STORE command queues changes to be committed.

reboot -A boot with the implication that the computer has not been down for long.

reformat -A reorganization of a hard disk, starting with the lowest level of information storage. To reformat, all information should first be copied to a temporary storage area. That is because a reformat deletes all data on the hard disk. A brand new disk usually needs to be formatted, also called initialized. See "format" and "initialize."

restore -In RedRak, the restore process involves finding backed-up files stored on tape and copying them from the back-up medium to the RedRak.

root -The Unix superuser account (with user name "root" and user ID 0) that overrides file permissions.

router -On the Internet, a router is a device or, in some cases, software in a computer, that determines the next network point to which a packet should be forwarded toward its final destination. The router is connected to at least two networks and decides which way to send each information packet based on its current understanding of the state of the networks it is connected to. A router is located at any juncture of networks or router, including each Internet point-of-presence. A router is often included as part of a network switch. A router creates or maintains a table of the available routes and their conditions and uses this information along with distance and cost algorithms to determine the best route for a given packet. Typically, a packet may travel through a number of network points with routers before arriving at its destination.

serial port -A connector on a computer to which you can attach a serial line connected to peripherals which communicate using a serial (bit-stream) protocol. The most common type of serial port is a 25-pin D-type connector carrying RS-232 signals. Smaller connectors (e. g. 9-pin D-type) carrying a subset of RS-232 are often used on personal computers. The serial port is usually connected to an integrated circuit called a UART which handles the conversion between serial and parallel data. In the days before bit-mapped displays, and today on multi-user systems, the serial port was and is used to connect one or more terminals (teletypes or VDUs), printers, modems, and other serial peripherals. Two computers connected together via their serial ports, possibly via modems, can communicate using a protocol such as UUCP or PPP.

server -1. A program that provides some service to other (client) programs. The connection between client and server is normally by means of message passing, often over a network, and uses some protocol to encode the client 's requests and the server 's responses. The server may run continuously (as a daemon), waiting for requests to arrive or it may be invoked by some higher level daemon which controls a number of specific servers (inetd on Unix). There are many servers associated with the Internet, such as those for Network File System, Network Information Service (NIS), Domain Name System (DNS), FTP, news, finger, Network Time Protocol. On Unix, a long list can be found in /etc/services or in the NIS database "services." 2 . A computer which provides some service for other computers connected to it via a network. The most common example is a file server which has a local disk and services requests from remote clients to read and write files on that disk, often using Sun 's Network File System (NFS) protocol or CIFS (Windows) or AppleTalk (Macintosh).

shell -The command interpreter used to pass commands to an operating system; so called because it is the part of the operating system that interfaces with the outside world. The most common Unix shells are the c shell (csh) and the Bourne shell (sh).

SMTP (Simple Mail Transfer Protocol) -SMTP is a TCP/IP protocol governing electronic mail transmission and reception. The details of SMTP are in RFC 821 of the Internet Engineering Task Force (IETF). An alternative to SMTP that is widely

used in Europe is X. 400. Also see "POP" and "IMAP," the two main protocols for reading e--mail from your server.

spool -To send files to some device or program (a "spooler" or daemon) that puts them in a queue for later processing of some kind. Usually, the spooler is the "print spooler" controlling output of jobs to a printer; but the term has been used in connection with other peripherals (especially plotters and graphics devices) and occasionally even for input devices. Also called a print queue.

STORE -This RedRak button saves all RedRak changes to be implemented (that is, committed) in a temporary queue. The changes in that queue become permanent and functional after you click the COMMIT button.

TCP/IP (Transmission Control Protocol over Internet Protocol) -The de facto standard Ethernet protocols incorporated into 4. 2BSD Unix. This is the system networks use to communicate with each other on the Internet.

telnet -The Internet standard protocol for remote login. Runs on top of TCP/IP. Unix BSD networking software includes a program, telnet, which uses the protocol and acts as a terminal emulator for the remote login session. Sometimes abbreviated to TN.

template -RedRak templates are guides to assist in easily and accurately setting up your network. The RedRak has configuration templates, which are a set of defaults to assist you in setting up the RedRak program, a user web page template, and a template directory for home shares. All of the files in the template directory will be copied into each new user 's directory.

traffic -In the RedRak, the Traffic Monitor Report tracks outgoing traffic (user visits) to external Internet sites including web sites, FTP, telnet, etc. Local Internet traffic is not tracked.

Unix -An interactive time-sharing operating system which is both powerful but at times confusing to use. The RedRak server makes full use of the power of Unix while eliminating the confusion. This is because RedRak users interact with the RedRak browser-based interface, which then implements the Unix commands. "Unix" or "UNIX"?Both seem roughly equally popular, perhaps with a historical bias towards the latter. "UNIX" is a trademark, however, since it is a name and not an acronym. Unix or Unix-like operating systems include OSF, Version 7, BSD, USG Unix, Xenix, Ultrix, Linux, and GNU. "Unix" has been adopted in this document . Since the operating system is case-sensitive and exists in many different versions, it is fitting that its name should reflect this.

upload -To transfer programs or data over a digital communications link from a smaller or peripheral "client" system to a larger or central "host" one. .

URL (Uniform Resource Locator) -A standard for specifying the location of an object on the Internet, such as a file or a newsgroup. URLs are used extensively on the WorldWide Web. They are used in HTML documents to specify the target of a hyperlink which is often another HTML document (possibly stored on another computer). Here are some sample URLs: http://www.w3.org/default. html, ftp://wuarchive.wustl.edu/mirrors/msdos/graphics/gifkit.zip, mailto:dbh@doc.ic.ac.uk, news:alt.hypertext, telnet://dra.com. The part before the first colon specifies the access scheme or protocol. The part after the colon is interpreted according to the access scheme. In general, two slashes after the colon introduce a hostname. Host: port is also valid. The port number is usually omitted and defaults to the standard port for the scheme, e. g. port 80 for HTTP. For an HTTP or FTP URL the next part is a pathname which is usually related to the pathname of a file on the server.

volume -Similar to a hard disk partition, a volume is a finite-sized, named storage area existing on one or more hard disks. Volumes can be one of several types: normal, Raid 0 (stripe), Raid 1 (mirror), RAID 5, and noncontiguous. A normal volume uses one contiguous area on one disk. A stripe is a way of storing files across more than one disk. A mirror duplicates the same information on two or more disks. A RAID 5 array duplicates data on "n" disks over "n+1" disks . The redundancy in mirrors and RAID 5 arrays allows reconstruction of the data on a failed disk in the array without any data loss. A noncontiguous volume contains two or more noncontiguous areas across one or more disks. RedRak volume management allows you to create, modify and reconfigure (change volume type from normal to stripe, or from mirror to normal or stripe) volumes.

WAN (Wide Area Network) -A network, usually constructed with serial lines, extending over distances greater than one-half mile.

Web -"The Web" is the World Wide Web (WWW). The World Wide Web is an Internet client-server hypertext distributed-information retrieval system which originated from the CERN High-Energy Physics laboratories in Geneva, Switzerland in 1991. On the WWW everything (documents, menus, indices) is represented to the user as a hypertext object in HTML format. Hypertext links refer to other documents by their URLs. These can refer to local or remote resources accessible via FTP, Gopher, Telnet or news, as well as those available via the http protocol used to transfer hypertext documents. The client program (known as a browser), e. g. NCSA Mosaic, Netscape Navigator, Windows Explorer, etc. , runs on the user 's computer and provides two basic navigation operations: to follow a link or to send a query to a server. A variety of client and server software is freely available.

wildcard -A special character or character sequence which matches any character in a string comparison, like ellipsis (…) in ordinary written text.

zone -A logical group of network devices on AppleTalk…

Some definitions in this glossary are from whatis.com, copyright © 1996--98 whatis.com Inc. , and The Free On-line Dictionary of Computing,

http://wombat.doc.ic.ac.uk/, Editor Denis Howe, copyright © 1993, 1998 Denis Howe.

Index

NETmachines™

RedRak Professional User Manual

NETmachines™

NETmachines™