



Console Guide

Version 9

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Preface

Welcome to Cyberoam's – Console guide.

Cyberoam is an Identity-based UTM Appliance. Cyberoam's solution is purpose-built to meet the security needs of corporate, government organizations, and educational institutions.

Cyberoam's perfect blend of best-of-breed solutions includes user based Firewall, Content filtering, Anti Virus, Anti Spam, Intrusion Detection and Prevention (IDP), and VPN.

Cyberoam provides increased LAN security by providing separate port for connecting to the publicly accessible servers like Web server, Mail server, FTP server etc. hosted in DMZ which are visible the external world and still have firewall protection.

Cyberoam Console guide helps you administer, monitor and manage Cyberoam with the help of Console.

Note that by default, Cyberoam Console password is 'admin'. It is recommended to change the default password immediately after Installation.

Guide Audience

Cyberoam Console Guide provides functional and technical information of the Cyberoam Software. This Guide is written to serve as a technical reference and describes features that are specific to the Console.

Guide also provides the brief summary on using the Console commands.

This guide is intended for the Network Administrators and Support personnel who perform the following tasks:

- Configure System & Network
- Manage and maintain Network
- Manage various services
- Troubleshooting

This guide is intended for reference purpose and readers are expected to possess basic-to-advanced knowledge of systems networking.

Note

The Corporate and individual names, data and images in this guide are for demonstration purposes only and does not reflect the real data.

If you are new to Cyberoam, use this guide along with the 'Cyberoam User Guide'

Guide Sets

Guide	Describes
User Guide	
Console Guide	Console Management
Windows Client Guide	Installation & configuration of Cyberoam Windows Client
Linux Client Guide	Installation & configuration of Cyberoam Linux Client
HTTP Client Guide	Installation & configuration of Cyberoam HTTP Client
Analytical Tool Guide	Using the Analytical tool for diagnosing and troubleshooting common problems
LDAP Integration Guide	Configuration for integrating LDAP with Cyberoam for external authentication
ADS Integration Guide	Configuration for integrating ADS with Cyberoam for external authentication
PDC Integration Guide	Configuration for integrating PDC with Cyberoam for authentication
RADIUS Integration Guide	Configuration for integrating RADIUS with Cyberoam for external authentication
High Availability Configuration Guide	Configuration of High Availability (HA)
Data transfer Management Guide	Configuration and Management of user based data transfer policy
Multi Link Manager User Guide	Configuration of Multiple Gateways, load balancing and failover
VPN Management	Implementing and managing VPN
Cyberoam IDP Implementation Guide	Configuring, implementing and managing Intrusion Detection and Prevention
Cyberoam Anti Virus Implementation Guide	Configuring and implementing anti virus solution
Cyberoam Anti Spam Implementation Guide	Configuring and implementing anti spam solution

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Typographic Conventions

Material in this manual is presented in text, screen displays, or command-line notation.

Item	Convention	Example
Server		Machine where Cyberoam Software - Server component is installed
Client		Machine where Cyberoam Software - Client component is installed
User		The end user
Username		Username uniquely identifies the user of the system
Topic titles	Shaded font typefaces	Introduction
Subtitles	Bold and Black typefaces	Notation conventions
Navigation link	Bold typeface	Group Management → Groups → Create it means, to open the required page click on Group management then on Groups and finally click Create tab
Notes & points to remember	Bold typeface between the black borders	Note

Introduction

Cyberoam console provides a collection of tools to administer, monitor and control certain Cyberoam system components.

Accessing Cyberoam Console

There are two ways to access Cyberoam Console as explained below

1. Direct Console connection - attaching a keyboard and monitor directly to the Cyberoam server
2. Remote connection - Using remote login utility TELNET - Telnet provides user support for the Telnet protocol, a remote access protocol you can use to log on to a remote computer, network device, or private TCP/IP network.

Accessing Console via TELNET

To use TELNET, IP Address of the Cyberoam server is required.

To start the TELNET utility:

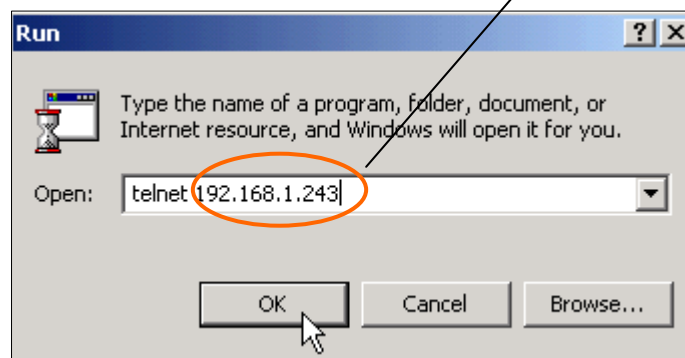
Click Start from Windows Taskbar followed by Run

In Open, type TELNET xxx.xxx.x.xxx

Click OK, opens new window and prompts to enter

IP address of
Cyberoam server

Password



Default password for Cyberoam console is "admin".

```
Cyberoam Version 9.3.0 build 5 (Default password is admin)
Password:
```

On successful login, following Main menu screen will be shown.

```
Main Menu
R.  Restart Management Services
1.  Network Configuration
2.  System Configuration
3.  Route Configuration
4.  Cyberoam Console
5.  Cyberoam Management
6.  Upgrade Version
7.  Bandwidth Monitor
8.  UPN Management
9.  Shutdown/Reboot Cyberoam
0.  Exit

Select Menu Number [0-9]: _
```

To access any of the menu items, type the number corresponding to the menu item in the 'Select Menu Number' field and press <Enter> key.

Example

<u>To access</u>	<u>Type</u>
System Configuration	2
DNS services	8
Exit	0 or Ctrl -C

R. Restart Management Services

Use to restart the Management services. It will restart all the Cyberoam services. To minimize the startup time, instead of re-applying each firewall rule again, RMS simply stores the firewall state snapshot and restores the firewall state.

Message 'Restarting Authentication service Done' displayed

Press <Enter> to return to the Main menu.

```
Do you really want to Restart Management Services (y/n): No (Enter) > y
Restarting Management Service .....Done_
```

1. Network configuration

Use this menu to

- View & change network setting
- Set IP address
- Set Alias

Following screen displays the current Network setting like IP address & Net mask for all the Ports. In addition, it also displays IP address and Net mask of Aliases if bound.

```
Network Settings
IP Status of Ethernet Port: A
IP Address       : 8.8.8.1
NetMask Address  : 255.255.255.0

Press Enter to continue .....
```

```
Network Settings
IP Status of Ethernet Port: B
IP Address       : 192.168.15.204
NetMask Address  : 255.255.240.0

Press Enter to continue .....
```

```
Network Settings
IP Status of Ethernet Port: C
IP Address       : 7.7.7.1
NetMask Address  : 255.255.255.0

Press Enter to continue .....
```

```
Network Settings
IP Status of Ethernet Port: D
IP Address       : 182.7.7.254
NetMask Address  : 255.255.255.252

Press Enter to continue .....
```

Set IP Address and Alias

Following screen allows setting or modifying the IP address for any port. Type 'y' and press <Enter> to set IP address

```
Set IP Address (y/n) : No (Enter) >
```

Displays the IP address and Net mask and prompts for the new IP address and Net mask for each Port.

Press <Enter> if you do not want to change any details.

To bind Alias, type 's'. It displays the details of Aliases bound.

Type Alias number, IP address and Net mask for the Alias

```
Network configuration Menu
Network Configuration of Ethernet Port : A
    Current IP address : 172.16.16.235
    New IP address      :
    Current Netmask    : 255.255.255.0
    New Netmask        :
    Zone               : LAN (LAN)
Set (s) or Remove (r) Alias for Ethernet Port A (s/r) : No (Enter)s
No of Alias for Ethernet Port : A [range 1-8]: 1
    New Alias IP       : 172.16.16.236
    New Alias Netmask  : 255.255.255.0_
```

```
Changing IP Address of cyberoam .....
Restarting Management Service .....Done
IP Address Changed and Management Service Restarted
_
```

Note

One can assign or bind more than one IP address to the same Ethernet or the Network card. These are Aliases. It is possible to define Aliases for both Internal as well as External network. Maximum eight IP addresses (Aliases) can be bound to a single Network card.

Displays message on successful completion of the operation and restarts management services.

Press <Enter> to return to the Main menu.

2. System configuration

Use this menu to

- View & change various system properties

```
System Settings
  1. Set Console Password
  2. Set System Date
  3. View Access Logs
  4. Set Cyberoam Administrator Email Id
  5. Traceroute Utility
  6. Set Module Info
  7. Bandwidth Graph Settings
  8. Disable LAN Bypass
  0. Exit

Select Menu Number [0-10]:
```

2.1 Set Console Password

Use to change the Console password

Type new password, retype for confirmation, and press <Enter>

```
Enter new password:
Re-Enter new Password:
Password Changed_
```

Displays message on successful completion of the operation.

Press <Enter> to return to the System Setting Menu.

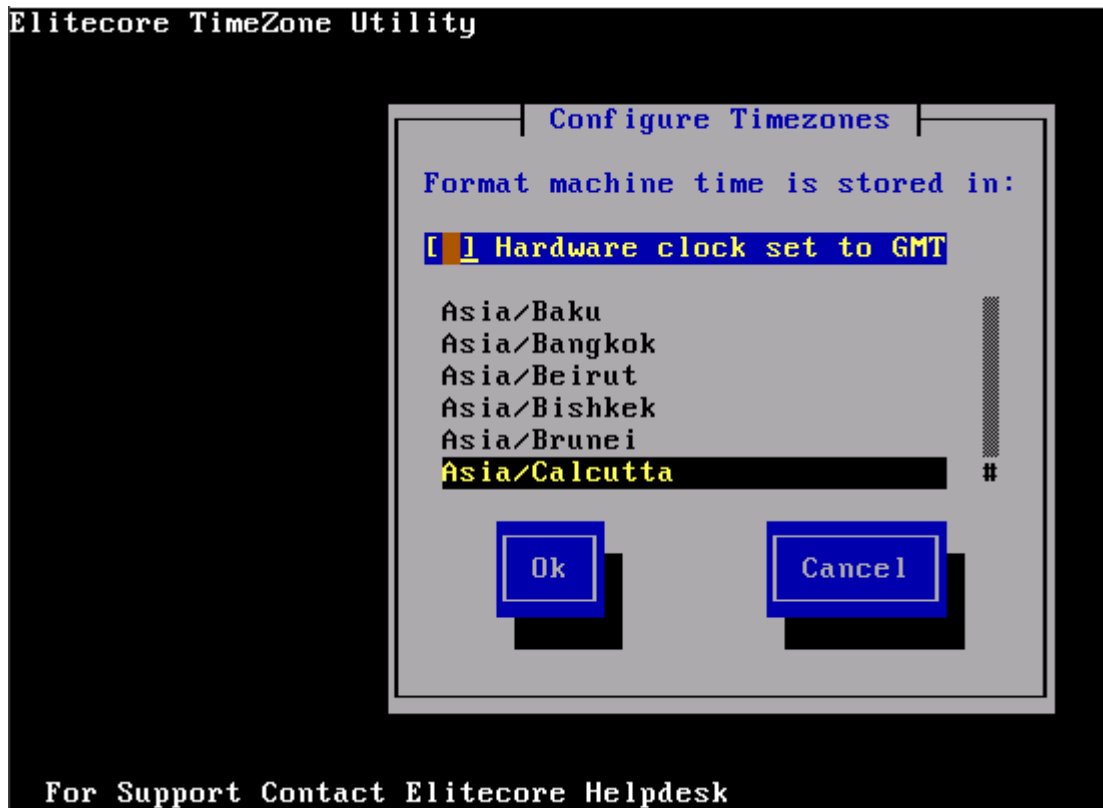
2.2 Set System Date

Use to change time zone and system date

Type 'y' to set new time and press <Enter>

```
Current Date :Tue Mar 22 02:24:56 IST 2005
Set TimeZone (y/n) : No (Enter) > y_
```

Select the appropriate zone by using 'Tab' key and press 'OK' followed by <Enter>



Type 'y' to reset Date and press <Enter>

Type Month, Day, Year, Hour, Minutes

```

Setting New Date :
Enter Month (01,02....12): 03 (Enter) >
Enter Day (01,02....31): 22 (Enter) >
Enter Year (2000,2001..): 2005 (Enter) >
Enter Hour (00,01,...23): 02 (Enter) >
Enter Minute (00,01..59): 29 (Enter) >
Changing Date of System .....Done

New Date : Tue Mar 22 02:32:17 IST 2005

Press Enter to continue ....._

```

Press <Enter> to return to the System Menu

2.3 View Access logs

Use to view Access log

Displays list of IP addresses from where the Console was accessed along with Date & time


```

Access log
Dec 22 12:11:05 1072075265 in.telnetd[6680]: connect from 192.168.1.119
Dec 22 15:23:31 1072086811 in.telnetd[5587]: connect from 192.168.1.119
Dec 22 16:10:25 1072089625 in.telnetd[2143]: connect from 192.168.1.119
Dec 23 11:26:28 1072158988 in.telnetd[1680]: connect from 192.168.1.119
Dec 23 11:49:57 1072160397 in.telnetd[3998]: connect from 192.168.1.65
Dec 23 12:20:32 1072162232 in.telnetd[7757]: connect from 192.168.1.58
Dec 23 12:21:07 1072162267 in.telnetd[7760]: connect from 192.168.1.58
Dec 23 12:22:11 1072162331 in.telnetd[7763]: connect from 192.168.1.59
Dec 23 12:22:19 1072162339 in.telnetd[7770]: connect from 192.168.1.58
Dec 23 12:33:40 1072163020 in.telnetd[8966]: connect from 192.168.1.58
Dec 23 12:47:33 1072163853 in.telnetd[10470]: connect from 192.168.1.119
Dec 23 13:05:53 1072164953 in.telnetd[12441]: connect from 192.168.1.58
Dec 23 13:16:34 1072165594 in.telnetd[13703]: connect from 192.168.1.58
Dec 23 13:48:26 1072167506 in.telnetd[16812]: connect from 192.168.1.58
Dec 23 13:51:05 1072167665 in.telnetd[17332]: connect from 192.168.1.58
Dec 23 13:57:20 1072168040 in.telnetd[17793]: connect from 192.168.1.58
Dec 23 14:33:08 1072170188 in.telnetd[21729]: connect from 192.168.1.58
Dec 23 16:24:16 1072176856 in.telnetd[935]: connect from 192.168.1.65
Dec 23 18:24:13 1072184053 in.telnetd[5674]: connect from 192.168.1.58
Dec 23 18:29:49 1072184389 in.telnetd[6051]: connect from 192.168.1.119
Dec 23 18:31:39 1072184499 in.telnetd[6600]: connect from 192.168.1.119
Dec 23 18:31:54 1072184514 in.telnetd[6622]: connect from 192.168.1.119
Dec 23 18:32:11 1072184531 in.telnetd[6667]: connect from 192.168.1.119
--More--

```

2.4 Set Cyberoam Administrator Email ID

Use to change the Email ID of Cyberoam Administrator. Cyberoam sends system alert mails on the specified Email ID.

Type Email ID and press <Enter>. It displays the new Email ID.

```

Cyberoam Server will send System alerts on this email address: > e
ecore.com
Want to chngae Email Address (y/n) : No (Enter) > y
Enter Administrator Email ID: az@elitecore.com
Cyberoam Administrator Email ID is changed to: > raz@elitecore.com

```

Press <Enter> to return to the System Setting Menu

2.5 Traceroute Utility

Use to trace the path taken by a packet from the source system to the destination system, over the Internet.

The typical path taken by data packets sent by the source to the destination has been depicted by the below figure:

Source System → Router of the Source Network → Router of the Source Network's ISP → Router of the Destination's ISP → Router of the Destination Network → Destination System

Traceroute displays all the routers through which data packets pass on way to the destination system from the source system. Thus, in effect, we come to know the exact path taken by the data packets in the data transit.

```

Enter Host IP to Traceroute : www.yahoo.com

 1 203.88.135.209 0.559 ms 0.335 ms 0.306 ms
 2 203.88.128.93 0.681 ms 0.670 ms 0.687 ms
 3 203.88.128.102 1.005 ms 1.746 ms 1.288 ms
 4 202.56.240.133 10.219 ms 9.822 ms 9.881 ms
 5 61.95.150.3 43.474 ms 22.160 ms 11.678 ms
 6 61.95.240.213 36.711 ms 37.140 ms 39.953 ms
 7 203.208.168.165 261.749 ms 302.326 ms 259.440 ms
 8 65.57.244.1 259.693 ms 259.662 ms 305.013 ms
 9 209.244.13.225 408.758 ms 374.707 ms *
10 4.68.112.49 263.354 ms 261.111 ms 266.126 ms
11 64.159.1.86 335.666 ms 348.051 ms 336.517 ms
12 64.159.18.99 338.621 ms 339.736 ms 345.677 ms
13 63.210.59.254 345.084 ms 336.396 ms 336.500 ms
14 216.109.120.218 339.045 ms 347.808 ms 216.109.120.146 337.736 ms
15 216.109.118.67 338.194 ms 385.291 ms 338.533 ms

Please Press Enter to continue.....

```

Press <Enter> to return to the System Setting Menu

2.6 Set Module Info

Use to add the NIC details after the Card is added physically

2.7 Bandwidth Graph Setting

Cyberoam generates Gateway wise – Total and Composite as well as Host Group wise bandwidth usage graphs, which allows Administrator to monitor the amount of data uploaded or downloaded.

If the graphs are generated with erroneous data due to data corruption, the analysis of the graphs will results into wrong information. To flush the bandwidth graphs generated with erroneous data use this option.

```

Bandwidth Graph Management

 1. Flush Host groups Graphs
 2. Flush Gateway Graphs
 3. Flush All Bandwidth Graphs
 4. Flush Cache Graphs
 0. Exit

Select Menu Number [0-4]:

```

Flushing deletes graph and along with the data with which the graph was generated. Graphs generated after flushing will be generated using the new data.

2.7.1 Flush Host group Graphs

Use to flush the graph generated for different Host groups defined in the Cyberoam

2.7.2 Flush Gateway Graphs

Use to flush the graph generated for different Gateways defined in the Cyberoam

2.7.3 Flush All Bandwidth Graphs

Use to flush all the Bandwidth graphs generated

2.7.4 Flush Cache Graphs

Use to flush the Cache graphs generated

2.7.0 Exit

Type '0' to exit from the Bandwidth Graph Menu and return to the System Settings Menu

2.8 Enable/Disable LAN Bypass

Use to enable/disable LAN Bypass

Option available only if Cyberoam is in Bridge mode

2.0 Exit

Type '0' to exit from System Setting menu and return to the Main Menu.

3. Route configuration

Use to configure and view permanent Route details

Cyberoam supports two types of Routes:

1. Permanent – These routes once created, are saved permanently until you explicitly delete them. In this section, we are talking about permanent routes.
2. Temporary – Flushed when the system is rebooted. Use option 4 – Cyberoam Console in Cyberoam Main menu to define them.

```
Routing Tables:
-----
Main Menu
1. Add Route
2. Delete Route
3. Show Route
0. Exit

Select Menu Number [0-3]: _
```

3.1 Add Route

Use to add 1) Network route 2) Host route

```
Add Route
1. Add Network Route
2. Add Host Route
0. Exit

Select Menu Number [0-2]: _
```

3.1.1 Add Network Route

Use to add route for the Network

Type Network, Net mask and Gateway Address and press <Enter>

```
-->Type Destination Network to add
For e.g 172.16.0.0, 192.168.0.0

Network Address : 172.16.0.0

-->Type Destination Subnet mask
For e.g 255.0.0.0, 255.255.0.0, 255.255.255.0

Netmask Address : 255.255.255.0

-->Type Gateway Address

Gateway Address :
```

3.1.2 Add Host route

Use to add route for a single Host

Type Host and Gateway Address and press <Enter>

```
-->Type Destination Host to add route.
    For e.g 172.16.16.15, 192.168.16.15

    Host Address : 172.16.16.15

-->Type Gateway Address

    Gateway Address : _
```

3.1.0 Exit

Type '0' to exit from Add Route menu and return to the Routing tables menu

3.2 Delete Route

Use to delete Network or Host route

```
Delete Route

1.   Delete Network Route
2.   Delete Host Route
0.   Exit

Select Menu Number [0-2]: _
```

3.2.1 Delete Network Route

Use to delete the Network route already created.

Type Network, Subnet mask and Gateway address for the Network to be deleted.

3.2.2 Delete Host Route

Use to delete the Host route already created.

Type IP address of the Host to be deleted.

3.2.0 Exit

Type '0' to exit from Add Route menu and return to the Routing tables menu

3.3 Show Route

Use to view the routing table

Routing is the technique by which data finds its way from one host computer to another. Within any host, there will be a routing table that the host uses to determine which physical interface address to use for outgoing IP datagram.

There are four basic items of information in such a routing table

1. A destination IP address
2. A gateway IP address
3. Various flags usually displayed as U, G, H and sometimes D and M. U means the route is up, G means the route is via a gateway, H means the destination address is a host address as distinct from a network address
4. The physical interface identification

```

Routing Tables
=====
Current Routes
Kernel IP routing table
Destination      Gateway         Genmask         Flags Metric Ref    Use Iface
192.168.1.243    0.0.0.0         255.255.255.255 UH      0     0     0 eth0
203.88.135.214   0.0.0.0         255.255.255.255 UH      0     0     0 eth1
203.88.135.208   0.0.0.0         255.255.255.240 U       0     0     0 eth1
192.168.1.0      0.0.0.0         255.255.255.0   U       0     0     0 eth0
192.168.0.0      0.0.0.0         255.255.255.0   U       0     0     0 eth0
127.0.0.0        0.0.0.0         255.0.0.0       U       0     0     0 lo
0.0.0.0          203.88.135.209 0.0.0.0         UG      0     0     0 eth1
-----
Permanent Routes
Desstination Address      Netmask          Gateway Address
-----
Press Enter to Continue.....

```

3.0 Exit

Type '0' to exit from Routing tables menu and return to Main Menu.

4. Cyberoam Console

Use to perform various checks and view logs for troubleshooting

Generally, when using command line help, one has to remember parameters/arguments of the command or has to go to the help and check for the parameters. Users using command line for the first time face difficulty in both the situation.

To remove the above difficulty, Cyberoam has inbuilt help at the command prompt itself.

Press 'Tab' to view the list of commands supported.

```
corporate>
arp                dnslookup         message           show
clear              enableremote     ping             tcpdump
cyberoam           httpclient       route            telnet
disableremote     ip               set              traceroute
corporate>
```

Type command and then press tab to view the list of argument(s) supported or required. For example after typing ping press tab, it shows what all parameters are required or allowed

```
corporate> ping
<ipaddress>      interface         quiet            timeout
<string>         interval         record-route    tos
count            numeric          size            ttl
corporate> ping _
```

Type command and then press question mark to view the list of argument(s) supported with its description. For example after typing ping press question mark, it shows what all parameters are required or allowed with description

```
corporate> ping
record-route     displays the route from response
numeric          Do not resolve IP address to hostname
quiet            display the summary at startup and end
count            Stop after sending count packets
interval         Wait seconds between sending each packet
size             number of data bytes to be sent
ttl              IP Time to Live
timeout          timeout 'in seconds' before ping exits
interface        Set source address
tos              Set Quality of Service
<ipaddress>     A.B.C.D (0 <= A,B,C,D < 256)
<string>        Alpha-Numeric TEXT with/without quotes
corporate> ping
```

Type Exit to return to the Main menu

Note

Refer to [Annexure A](#) for the detailed help on various commands supported.

5. Cyberoam Management

Use this menu to

- Restart management services
- Reset Web management password
- Restore Backup
- Remove Firewall rules
- Manage various Databases
- Setup/Configure DHCP client
- View Audit logs
- Reset to factory defaults

```

Cyberoam Management
 1. Restart Management Services
 2. Remove Firewall Rules
 3. Reset Management Password
 4. Database Utilities
 5. Download Backup
 6. Restore Backup
 7. DHCP Client Settings
 8. View Audit Logs
 9. Check and Upgrade Cyberoam New Version
10. Cyberoam Auto Upgrade Status
11. Check and Upgrade Webcat Latest Database
12. Webcat Auto Upgrade Status
13. Reset to Factory Defaults
14. Custom Menu
15. Logging Management
16. Restore Backup of Version 7.4.2.x
17. ReBuild New Firewall State
 0. Exit

Select Menu Number [0-17]:

```

5.1 Restart Management Services

Use to restart Management service

```

 0. Exit

Select Menu Number [0-13]: 1

Restarting Management Service .....Done_

```

Press <Enter> to return to the Main menu.

5.2 Remove Firewall Rules

Firewall defines certain rules that determine what traffic should be allowed in or out of the Internal network. One can restrict access to certain IP addresses or domain names, or block certain traffic by blocking the TCP/IP ports used.

By default, Cyberoam does not allow outbound traffic to pass through. Removing all the firewall rules will allow all the inbound and outbound traffic to pass through Cyberoam.

This option does not delete the firewall rules but allows bypassing firewall till the next RMS. In other word, it temporarily flushes all the rules to allow the traffic without any restriction. Restart management services to reapply the firewall rules.

You will need to temporarily flush the firewall rules in case you have locked yourself outside Cyberoam i.e. are not able to access Cyberoam Web Console.

```

0. Exit

Select Menu Number [0-10]: 2

Removing Firewall Service .... Done_

```

5.3 Reset Management Password

Use to reset Web management password.

The password for the username 'cyberoam' is reset to 'cyber'

```

15. CUSTOM MENU
0. Exit

Select Menu Number [0-13]: 3
Restarting Management Service .....Done
Password of User cyberoam reset to cyber
Press enter to continue ...._

```

Press <Enter> to return to the Main menu.

5.4 Database Utilities

Use to repair databases in case of any corruption in data.

```

Database Utilities

1. Database Quick Repair
2. Database Full Repair
3. Repair Web Surfing Logs
4. Repair User Session Logs
5. Repair Live User Data
6. Synchronize Live User Data
7. Repair Summary Table Data
0. Exit

Select Menu Number [0-7]: _

```

5.4.1 Database Quick Repair

Use to repair database if User is not able to login and receives message 'Login request unsuccessful, Contact Administrator'.

It does not repair any of the log tables

Automatically restarts the Management services.

Note

Use Database full repair if you want to repair all databases along with log tables.

To repair only the log tables, use the respective repair log options

5.4.2 Database Full Repair

Use this repair if any inconsistency found in any of the log data tables or user database. Automatically restarts the Management services.

Use this option rarely as the time taken to repair the full database is directly proportional to the size of log tables.

Use the full repair option if the system was shut down abnormally and is giving some unexpected results.

Database quick repair is a more preferred option.

5.4.3 Repair Web Surfing logs

Use to repair Web surfing log tables if any inconsistency found in the log data tables. Web surfing log stores the information of all the websites visited by all the users.

5.4.4 Repair User Session logs

Use to repair User Session log tables.

Use this option when user accounting reports are not coming or are mismatched.

Also, use this option if there is some problem in user logout. This might be because the user accounting record is not being put into the user session table.

Every time the user logs in, session is created. User session log stores the session entries of all the users and specifies the login and logout time.

5.4.5 Repair Live User Data

Use to repair Live User data table if user login/logout is being affected. This table stores the current/live user data

5.4.6 Synchronize Live User Data

Use this option if a certain user is not able to logon into Cyberoam.

This happens if the user has not logged out cleanly from his last Cyberoam session due to network errors.

This option synchronizes the current/live user data with the current scenario.

5.4.7 Repair Summary table Data

Use this option if you are not getting web surfing or internet usage reports.

This option repairs the summary tables.

5.4.0 Exit

Type '0' to exit from the Database Utilities Menu and return to Cyberoam Management Menu

5.5 Download Backup

Use to download backup taken

5.6 Restore Backup

Use to restore backup taken from Web Interface

```
Restore Backup (y/n): No (Enter) > _
```

5.7 DHCP Client Settings

Use to enable DHCP for a particular interface.

The configured interface will obtain an IP address automatically from a DHCP server running on the network connected to that interface.

5.8 View Audit Logs

Use to view Audit log

This log stores the details of all the actions performed the User administrating Cyberoam.

Displays operation performed, IP address of the User and result of the operation

```

Esc  menu      ^P  prev page  ^K  del char   ^O  end of lin ^Y  adv word
^E  command    ^L  del line   ^G^K und char ^U  mark      ^Z  replace
^T  top of txt ^G^L und line ^F  search    ^X  cut       ^G^Z repl pr
^B  end of txt ^W  del word   ^G^F srch prmpt ^C  copy      ^G^C clear l
^N  next page  ^G^W und word ^D  beg of lin ^V  paste     ^G^N next bu

=====
Change Date Query: Currentl
admin
admin
Configuration Updated Succe
Restart Management Query: C
192.168.1.119
admin
admin
Restarted Management Services
Restart Management Query: Currently Login IP:
192.168.1.119
admin
  
```

5.9 Check and Upgrade New version

Use to check and upgrade to new version

```

Do you really want to check for Cyberoam Upgrade (y/n): y
System is checking for the available upgrade
If upgrade is available, system will download it and apply it
Press Enter to view upgrade status...

```

5.10 Auto Upgrade status

Use to check the auto upgrade status.

```

Autoupgrade started at Wed Jun 2 04:51:35 IST 2004

Press 'r' or 'R' to refresh the status and ctrl + c to navigate to Main Menu: _

```

5.11 Check and Update Webcat Latest Database

Use to check and upgrade latest webcat database

```

Select Menu Number [0-12]: 11
Do you really want to check for Webcat Upgrade (y/n): _

```

```

Do you really want to check for Webcat Upgrade (y/n): y
System is checking for the available upgrade
If upgrade is available, system will download it and apply it
Press Enter to continue...

```

5.12 Webcat Auto Upgrade Status

Use to check the auto upgrade status

```

Press 'r' or 'R' to refresh the status and ctrl + c to navigate to Main Menu:

```

5.13 Reset to Factory Defaults

This option resets all the customized configurations to their original state and un-registers Cyberoam. All customization done after the initial installation will be deleted including network configuration, HTTP proxy cache, passwords, groups, users and policies.

5.14 Custom Menu

Any customized menu option provided especially for the client.

5.15 Logging Management

Use to configure log settings.

```
Logging Management
  1. Network Logging Management
  0. Exit
Select Menu Number [0-1]: _
```

5.15.1 Network Logging Management

Use to enable/disable network logging.

Cyberoam provides extensive logging capabilities for traffic, system and network protection functions. Detailed log information and reports provide historical as well as current analysis of network activity to help identify security issues and reduce network misuse and abuse.

```
Network Logging Management
  1. On/Off Firewall Rules Logging          <Current Status : On
  0. Exit
Select Menu Number [0-1]:
```

Firewall Rules Log

Log records the traffic, both permitted and denied by the firewall rule.

By default, only the firewall rule logging will be ON i.e. only traffic allowed/denied by the firewall will be logged.

Cyberoam also provides following logs which can be enabled/disabled from the Web Admin Console:

- DoS Attack Log
- Invalid Traffic Log
- Local ACL Log
- Dropped ICMP Redirected Packet Log
- Dropped Source Routed Packet Log

5.16 Restore Backup of Version 7.4.2.x

Use this option when you are migrating from v 742x.

```
Restore Backup (y/n): No <Enter> > _
```

5.17 ReBuild New Firewall State

This option will re-apply all the firewall rules one-by-one instead of just restoring the previous state. Take note that this operation would take time to execute as each firewall rule re-applied. Use this option only when firewall state has to be rebuilt in case of unexpected behavior.

5.0 Exit

Type '0' to exit from Cyberoam Management menu and return to Main menu

6. Upgrade version

Use to upgrade Cyberoam version

Before using this option, please check upgrade file is uploaded properly.

```
Upgrade Cyberoam to Latest Version (y/n): No <Enter> > y
```

```
Upgrade from :
  1. Uploaded Upgrade
  2. CD-ROM
  0. Exit
Select Menu Number [0-2]:
```

You can upgrade from CD-ROM or if you have uploaded the upgraded version. Follow the on-screen instructions to upgrade the version.

Some of the common errors:

Error message: "Upgrade File not found. Please upload version File Properly"

Reason/Solution: This error may occur if the upgrade file is not uploaded from Cyberoam Web Console. Go to Cyberoam Web Console and upload the file again

Error message: "System requires Restart of Cyberoam, Please reboot System before doing upgrade"

Reason/Solution: This error may occur if system is in inconsistent state, reboot the system from Cyberoam Telnet Console and try again. If still not able to upgrade contact Cyberoam Support

Error message/Solution: "Could not extract upgrade file, Please upload upgrade file properly"

Reason/Solution: This error may occur if upgrade file is corrupted, download Upgrade file again and repeat the above steps to upgrade

Error message: "Could not find upgrade file, Please upload upgrade file properly"

Reason/Solution: This error may occur if upgrade file is corrupted, download Upgrade file again and repeat the above steps to upgrade

Error message: "Cyberoam already Upgraded to Version"

Reason/Solution: This error may occur if you try to upgrade to the same version that is running currently

Error message: "Cyberoam can not be upgraded from Current Version to Newer Version"

Reason/Solution: This error may occur if you are trying to upgrade the version, which is lower than the current version i.e. from Version 5.0.6.2 to Version 5.0.6.0 or from Version 5.0.6.2 to Version 4.0.0

7. Bandwidth Monitor

Use to monitor the bandwidth used by each Interface.

Displays bandwidth used for receiving, transmitting and total bandwidth used by each interface.

Cyberoam Network Bandwidth Monitor

Interface	Received(Kbps)	Transmit(Kbps)	Total(Kbps)
lo	0.000	0.000	0.000
max:	0.000	0.000	0.000
aver:	0.769	0.769	1.539
eth0	0.621	0.153	0.774
max:	2.128	0.153	2.281
aver:	1.332	0.198	1.530
imq0	0.000	0.000	0.000
max:	0.000	0.000	0.000
aver:	0.654	0.654	1.308
imq1	0.000	0.000	0.000
max:	0.000	0.000	0.000
aver:	0.000	0.000	0.000
All	0.621	0.153	0.774

manage uptime: 0 days 5 hours 1 minutes and 0 seconds

Press 'q' or 'Q' to exit

Press 'q' or 'Q' to return to the Main menu

8. VPN Management

VPN Management is an add-on module which needs to be registered before use.

```

VPN Management Menu
-----
Main Menu
1. Regenerate RSA Key
2. Restart VPN Service
3. View VPN Logs
4. View Connection Wise VPN Logs
5. Advance VPN Logs
6. PPTP VPN Logs
0. Exit

Select Menu Number [0-6]: _

```

8.1 Regenerate RSA Key

Use to regenerates the local public key used for authenticating users.

Public key authentication uses two keys – public key available to anyone and a private key held by only one individual. The sender encrypts the data with the recipient's public key. Only the recipient can decrypt the data, being the only one who possesses the corresponding private key.

RSA key is used for authenticating user, when authentication type is defined as 'Public key' for Net to Net connection. Connection type and Authentication type are defined from Web based Administration Console.

Public key available to all is termed as Local Public/RSA key while private key known to only one individual is termed as Remote Public key.

Longer the key life, larger the risk as it becomes easier to intercept the ciphered text, hence it is better to regenerate the RSA key after certain time interval.

```

0. Exit

Select Menu Number [0-3]: 1

This will restart your management services. Do you want to continue (y/n) : No
(Enter) > _

```

Once the key is generated it is to be send to all the users.

8.2 Restart VPN service

Use to restart VPN Service

```

3. View VPN Logs
0. Exit

Select Menu Number [0-3]: 2

Do you want to continue (y/n) : No (Enter) > _

```

8.3 View VPN Logs

Use to view VPN logs for troubleshooting

```

Sep 15 23:47:52 1126808272 pluto[11500]: ike_alg_register_enc(): Activating OAKL
EY_SSH_PRIVATE_65289: Ok (ret=0)
Sep 15 23:47:52 1126808272 pluto[11500]: Could not change to directory '/etc/ips
ec.d/cacerts'
Sep 15 23:47:52 1126808272 pluto[11500]: Could not change to directory '/etc/ips
ec.d/crls'
Sep 15 23:47:52 1126808272 pluto[11500]: OpenPGP certificate file '/etc/pgpcert.
pgp' not found
Sep 15 23:47:53 1126808273 pluto[11500]: listening for IKE messages
Sep 15 23:47:53 1126808273 pluto[11500]: no public interfaces found
Sep 15 23:47:53 1126808273 pluto[11500]: loading secrets from "/etc/ipsec.secret
s"
Sep 16 00:23:27 1126810407 pluto[11500]: Pluto ignores SIGHUP -- perhaps you wan
t "whack --listen"
Sep 16 00:23:27 1126810407 pluto[11500]: ADNS process terminated by signal 1

```

8.3 View Connection wise VPN Logs

Use to view VPN logs for troubleshooting

```

Connection Name : [ all ]
Jul 14 17:20:50 1152877850 pluto[24370]: "net54-1" #221: IPsec SA expired (--don
trekey)
Jul 14 17:20:50 1152877850 pluto[24370]: ! processing connection net54-1
Jul 14 17:20:50 1152877850 pluto[24370]: "net54-1" #221: down-client output: net
54-1 :: net54
Thu Jul 6 12:14:55 IST 2006:START: IP:8.8.8.1 GATEWAY:8.8.8.20 SPEED:150 DNS1: D
NS2:
Thu Jul 6 12:16:28 IST 2006:STOP: SECONDS:64 SENT:206 RECEIVED:2652
Thu Jul 6 13:17:44 IST 2006:START: IP:8.8.8.1 GATEWAY:8.8.8.20 SPEED:150 DNS1: D
NS2:
Thu Jul 6 13:19:26 IST 2006:STOP: SECONDS:72 SENT:11477 RECEIVED:9828
Thu Jul 6 14:53:48 IST 2006:START: IP:8.8.8.1 GATEWAY:8.8.8.20 SPEED:150 DNS1: D
NS2:
Thu Jul 6 14:54:22 IST 2006:STOP: SECONDS:4 SENT:152 RECEIVED:1388

```

8.4 View Connection wise VPN Logs

Use to view VPN logs. Specify the connection name to view specific connection log or press <Enter> to view logs of all the connections.

```

3. View UPN Logs
4. View Connection Wise UPN Logs
5. Advance UPN Logs
6. PPTP UPN Logs
0. Exit

Select Menu Number [0-6]: 4

Connection Name : [ all ]
Jan 08 11:12:27 1168234947 pluto[27948]: added connection description "CR15_183-1"
Jan 08 11:12:27 1168234947 pluto[27948]: listening for IKE messages
Jan 08 11:12:27 1168234947 pluto[27948]: adding interface ipsec0/ppp0 10.67.15.17:5000
Jan 08 11:12:27 1168234947 pluto[27948]: adding interface ipsec0/ppp0 10.67.15.17:4500
Jan 08 11:12:27 1168234947 pluto[27948]: loading secrets from "/etc/ipsec.secrets"
Jan 08 11:12:27 1168234947 pluto[27948]: loaded private key file '/etc/ipsec.d/private/remote_cert.key' (887 bytes)
Jan 08 11:12:27 1168234947 pluto[27948]: loaded private key file '/etc/ipsec.d/private/local_cert.key' (887 bytes)
Jan 08 11:12:27 1168234947 pluto[27948]: loaded private key file '/etc/ipsec.d/private/nirav_fortinet.key' (887 bytes)
Jan 08 11:12:27 1168234947 pluto[27948]: loaded private key file '/etc/ipsec.d/private/nirav_local.key' (887 bytes)
Jan 08 11:12:28 1168234948 ipsec__plutorun: ...could not route conn "clear"
Jan 08 11:12:28 1168234948 ipsec__plutorun: 021 no connection named "private-or-
```

8.5 Advance VPN Logs

Use to view date wise connection VPN logs. Specify date and connection name to view specific connection's date wise log.

```

Select Menu Number [0-6]: 5

Start Date (YYYY-MM-DD) : [ Current Date ]
End Date (YYYY-MM-DD) : [ Current Date ]
Connection Name : [ all ]
Jan 08 11:05:46 1168234546 pluto[25959]: shutting down
Jan 08 11:05:46 1168234546 pluto[25959]: forgetting secrets
Jan 08 11:05:46 1168234546 pluto[25959]: "CR15_183-1": deleting connection
Jan 08 11:05:46 1168234546 pluto[25959]: "CR15_204-1": deleting connection
Jan 08 11:05:46 1168234546 pluto[25959]: "test_12tp": deleting connection
Jan 08 11:05:46 1168234546 pluto[25959]: "CR15_183-2": deleting connection
Jan 08 11:05:46 1168234546 pluto[25959]: shutting down interface ipsec0/ppp0 10.67.15.16:4500
Jan 08 11:05:46 1168234546 pluto[25959]: shutting down interface ipsec0/ppp0 10.67.15.16:5000
Jan 08 11:12:27 1168234947 ipsec__plutorun: Starting Pluto subsystem...
Jan 08 11:12:27 1168234947 pluto[27948]: Starting Pluto (Openswan Version 2.4.5 X.509-1.5.4 LDAP_U3 PLUTO_SENDS_UENDORID PLUTO_USES_KEYRR; Vendor ID OEGfuJYe(Ah)
Jan 08 11:12:27 1168234947 pluto[27948]: Setting NAT-Traversal port-4500 floating to on
Jan 08 11:12:27 1168234947 pluto[27948]: port floating activation criteria nat_t=1/port_fload=1
Jan 08 11:12:27 1168234947 pluto[27948]: including NAT-Traversal patch (Version 0.6c)
Jan 08 11:12:27 1168234947 pluto[27948]: ike_alg_register_enc(): Activating OAKL_EY_TWOFISH_CBC_SSH: Ok (ret=0)
Jan 08 11:12:27 1168234947 pluto[27948]: ike_alg_register_enc(): Activating OAKL_EY_TWOFISH_CBC: Ok (ret=0)
Jan 08 11:12:27 1168234947 pluto[27948]: ike_alg_register_enc(): Activating OAKL
```

8.6 PPTP VPN Logs

Use to view date wise connection VPN logs. Specify date and connection name to view specific connection's date wise log.

8.0 Exit

Type '0' to exit from VPN menu and return to the Main menu

9. Shutdown/Reboot Cyberoam

Use to shutdown or reboot Cyberoam server.

0. Exit

Type '0' to exit from Cyberoam Console Management

Annexure A

arp

Used for debugging purposes, to get a complete dump of the ARP cache

Syntax

arp [ping] [show]

Parameter list & description

ping	Sends ICMP ECHO_REQUEST packets to network hosts. Refer to Ping command for details.
Show	Show / manipulate arp cache. Refer to Show command for details.

cacheclient

Client to query cache server using URL as argument

Syntax

cacheclient <string>

clear

Clears the screen

Syntax

clear

cyberoam

Cyberoam Management

Syntax

cyberoam [autoupgrade] [bandwidth] [check_disk] [cpu_burn_test] [dialup-menu] [dns-menu] [repair_disk] [restart] [shutdown] [system_monitor] [view]

Parameter list & description

autoupgrade
[show | on | off]

show Displays current status of Autoupgrade mode
 on Enables autoupgrade mode. Cyberoam will be automatically upgarded incase autoupgrade is available without any notification or manual intervention.
 off Disables autoupgrade mode. If Autoupgrade if off Cyberoam can be upgraded only with the manual intervention.

bandwidth Bandwidth Management
 [graph-settings] [monitor]

graph-settings opens Bandwidth Graph Management menu. It allows to flush the generated graphs
 monitor displays bandwidth bonsumed by all clients

restart Restart Cyberoam Machine

shutdown Shutdown Cyberoam Machine

system-monitor

view Show Logs
 audit-log View Audit Log

disableremote

Disables the remote (SSH) connection, if enabled. By default, it is not allowed. Refer to enable remote to allow to establish the remote connection

Syntax

disableremote

dnslookup

Query Internet domain name servers for hostname resolving

Syntax

dnslookup [host | server]

Parameter list & description

server Internet name or address of the name server
 [- | <ipaddress> [host!] <string>]

host Host to find

```
[<ipaddress> [dot_notation_address | queryclass <string> | querytype <string> | time <number>]]
  <string> | [queryclass <string> | time <number>]]
```

enableremote

Allows to connect to the Cyberoam remotely i.e. allows to establish remote (SSH) connection. By default remote connection is not allowed

Syntax

```
enableremote [port <number> | serverip <ipaddress>]
```

Parameter list & description

port Port through which the remote SSH connection can be established

serverip IP address of the Cyberoam to which the remote connection can be established

ip

IP Utility from iproute2 package

Syntax

```
ip [ -family | addr | dnet | inet | inet6 | ipx | link | maddr | monitor | mroute | neigh | no_protocol |
  route | rule | tunnel ]
```

Parameter list & description

-family Protocol family identifier: inet, inet6, ipx, dnet or link

```
[ dnet | inet | inet6 | ipx | no_protocol ]
```

Specifies the address family which affects interpretation of the remaining parameters. Since an interface can receive transmissions in differing protocols with different naming schemes, specifying the address family is recommended.

addr Protocol Address Management

```
[add | del | flush | show]
```

add Add a new Protocol address
[<ipaddress> | dev | peer]

del Delete a Protocol address
[<ipaddress> | dev | peer]

dev Device name

[eth0 | lo]

peer For PointToPoint Interfaces
 [<ipaddress> | anycast | broadcast | dev | label | scope]

anycast - Destinations are anycast addresses
 [<ipaddress> | broadcast | dev | label | scope]

broadcast Broadcast address on the interface
 [<ipaddress> | anycast | dev | label | scope]

scope The scope of the area where this address is valid
 [<number> | anycast | broadcast | dev | global | host | label | link]

label Each address may be tagged with a label string
 [<string> | anycast | broadcast | dev | scope]

global
 [anycast | broadcast | dev | label]

host
 [anycast | broadcast | dev | label]

link
 [anycast | broadcast | dev | label]

flush Flush Protocol addresses
 [deprecated | dev | dynamic | label | permanent | primary | scope | secondary | tentative | to]

show Display Protocol addresses
 [deprecated | dev | dynamic | label | permanent | primary | scope | secondary | tentative | to]

deprecated (IPv6 only) list deprecated addresses
 [dev | label | scope | to]

dev Device name
 [eth0 | lo]

dynamic List addresses installed due to stateless address configuration
 [dev | label | scope | to]

label Each address may be tagged with a label string
 [<string> | deprecated | dev | dynamic | permanent | primary | scope | secondary | tentative | to]

permanent Permanent addresses only
[dev | label | scope | to]

primary Primary addresses only
[dev | label | scope | to]

scope Scope of the area where this address is valid
[<number> | deprecated | dev | dynamic | global | host | label | | link | permanent | primary | secondary | tentative | to]

secondary Secondary addresses only
[dev | label | scope | to]

tentative (IPv6 only) Addresses which did not pass duplicate address detection
[dev | label | scope | to]

to List addresses matching this prefix
[<string> | deprecated | dev | dynamic | label | permanent | primary | secondary | tentative]

global

[deprecated | dev | dynamic | label | permanent | primary | secondary | tentative | to]

host

[deprecated | dev | dynamic | label | permanent | primary | secondary | tentative | to]

link

[deprecated | dev | dynamic | label | permanent | primary | secondary | tentative | to]

dnet

[addr | link | maddr | monitor | mroute | neigh | route | rule | tunnel]

inet

[addr | link | maddr | monitor | mroute | neigh | route | rule | tunnel]

inet6

[addr | link | maddr | monitor | mroute | neigh | route | rule | tunnel]

ipx

[addr | link | maddr | monitor | mroute | neigh | route | rule | tunnel]

link Network Device Configuration

[set | show [eth0 | lo]]

set

[eth0 | lo] [address | allmulti | arp | broadcast | down | dynamic | mtu | multicat | name
| promisc | txqueuelen | up]

address Change the Station address of the Interface
[<string>]

allmulti Device receives all Multicast Packets on the link
[off | on]

arp Change the NOARP flag on the Device.
[off | on]

broadcast Change the link layer Broadcast Address.
[<string>]

down Change the State of Device to DOWN

dynamic Flag indicating that Interface is dynamically
created/destroyed
[off | on]

mtu Change the MTU of the Device.
[<number>]

name Change the Name of the Device
[<text>]

multicast Flag indicating that the Interface is aware of Multicasting
[off | on]

promisc Device listens to and feeds to the kernel all traffic on the link
[off | on]

txqueuelen Transmit Queue Length
[<number>]

up Change the State of Device to UP

maddr Link Layer Multicast Address Management
[add | del | show]

add Add a Multicast Address
[<string> | dev]

del Delete a Multicast Address
[<string> | dev]

dev Device to join/leave this Multicast Address
[eth0 | lo]

show List Multicast Addresses
[dev]

monitor State Monitoring
[<string> | all]

mroute Multicast Routing Cache Management
[show [from <string>| interface [eth0 | lo]] to <string>]]

no_protocol
[addr | link | maddr | monitor | mroute | neigh | route | rule | tunnel]

neigh Neighbour/Arp Tables Management
[add | change | del | flush | replace | show]

add Add a new Neighbour entry
[<ipaddress> [dev | lladdr | nud] | proxy [dev]]

lladdr lladdr Link Layer Address of neighbour
[<text> | dev | nud]

nud Neighbour Unreachability Detection
[noarp | permanent | reachable | stale] [dev | lladdr]

change Change an Existing entry
[<ipaddress> [dev | lladdr | nud] | proxy [dev]]

del Delete a Neighbour entry
[<ipaddress> [dev | lladdr | nud] | proxy [dev]]

flush Flush Neighbour Entries
[dev | nud | to <text>]

replace Add a new entry or Change an existing one
[<ipaddress> [dev | lladdr | nud] | proxy [dev]]

show List Neighbour Entries
[dev | nud | to <text>]

route Routing Table Management
[add | append | change | del | flush | get | list | replace]

add Add a new route
[<string> | blackhole | broadcast | local | multicast | nat | prohibit | throw | unicast | unreachable]

append Adds route to the end of list

[<string> | blackhole | broadcast | local | multicast | nat | prohibit | throw | unicast | unreachable]

change Change a route

[<string> | blackhole | broadcast | local | multicast | nat | prohibit | throw | unicast | unreachable]

del Delete a route

[<string> | blackhole | broadcast | local | multicast | nat | prohibit | throw | unicast | unreachable]

flush Flush routing tables

[exact <string> | match <string> | proto | root | scope | table | type]

exact

[<string> | match <string> | proto | root | scope | table | type]

match

[<string> | exact | proto | root | scope | table | type]

proto

[<number> | boot | exact | kernel | match | root | scope | static | table | type]

boot

[exact <string> | match <string> | root | scope | table | type]

kernal

[exact <string> | match <string> | root | scope | table | type]

static

[exact <string> | match <string> | root | scope | table | type]

root

[<string> | exact | match | proto | scope | table | type]

scope

[<number> | exact | global | host | link | match | proto | root | table | type]

global

[exact | match | proto | root | table | type]

host

[exact | match | proto | root | table | type]

link

[exact | match | proto | root | table | type]

table

[<number> | all | default | exact | local | main | match | protoc | root | scope | type]

type

[blackhole | broadcast | exact | local | match | multicast | nat | prohibit | proto | root | scope | table | throw | unicast | unreachable]

get Get a single route

[<ipaddress> | from | output_iface | tos]

from from

[<ipaddress> | input_iface [eth0 | lo] | output_iface [eth0 | lo]] tos <number>]

output_iface

[eth0 | lo | from | tos]

tos

[<number> | from | output_iface]

list List routes

[<string> | blackhole | broadcast | local | multicast | nat | prohibit | throw | unicast | unreachable]

replace Replace

[<string> | blackhole | broadcast | local | multicast | nat | prohibit | throw | unicast | unreachable]

blackhole Unreachable destinations

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | proto | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

broadcast Destinations are broadcast addresses

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

local Destinations are assigned to this host

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

multicast Used for mutlicasting routing

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

nat NAT route

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

prohibit Unreachable destinations

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

throw Route used with policy rules

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

unicast Route entry describes real paths to the destinations

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

unreachable Unreachable destinations

[<string> | advmss | cwnd | dev | equalize | metric | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

advms Advertise Maximal Segment Size.

[<number> | cwnd | equalize | mtu | nexthop | realms | rtt | rttvar | ssthresh | window]

cwnd Clamp for congestion window.

[<number> | advmss | equalize | mtu | nexthop | realms | rtt | rttvar | ssthresh | window]

dev The Output Device name.

[etho | lo] [advmss | cwnd | equalize | mtu | nexthop | online | pervasive | realms | rtt | rttvar | ssthresh | via | weight | window]

equalize Allow packet by packet randomization on multipath routes.

[nexthop | dev | online | pervasive | via]

metric Preference value of the Route

[<number> | advmss | cwnd | dev | equalize | mtu | nexthop | onlink | pervasive | proto | realms | rtt | rttvar | scope | ssthresh | table | tos | via | weight | window]

mtu Maximal Transfer Unit

[<number> | advmss | cwnd | equalize | nexthop | realms | rtt | rttvar | ssthresh | window]

nexthop The nexthop of a multipath route

[dev | onlink | pervasive | via | weigh]

onlink Pretend that nexthop is directly attached to this link.

[<number> | advmss | cwnd | equalize | nexthop | realms | rtt | rttvar | ssthresh | window]

pervasive Pervasive hop

[advms | cwnd | equalize | mtu | nexthop | realms | rtt | rttvar | ssthresh | window]

realms Route with this realm

[<string> | advmss | cwnd | equalize | mtu | nexthop | rtt | rttvar | ssthresh | window]

rtt Round Trip Time

[<number> | advmss | cwnd | equalize | mtu | nexthop | realms | rttvar | ssthresh | window]

rttvar Initial RTT variance estimate

[<number> | advmss | cwnd | equalize | mtu | nexthop | realms | rtt | ssthresh | window]

ssthresh Estimate for the initial slow start threshold.

[<tesx> | advmss | cwnd | equalize | mtu | nexthop | realms | rtt | rttvar | window]

via Address of the nexthop router.

[<ipaddress> | advmss | cwnd | dev | equalize | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | ssthresh | weight | window]

weight Weight for this element of a multipath route reflecting its quality.

[<number> | advmss | cwnd | dev | equalize | mtu | nexthop | onlink | pervasive | realms | rtt | rttvar | ssthresh | weight | window]

window Maximal window for TCP to advertise

[<number> | advmss | cwnd | equalize | mtu | nexthop | realms | rtt | rttvar | ssthresh]

rule Routing policy database management

[add | del | dev | from | fwmark | list | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

add Insert new rule

[dev | from | fwmark | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

del Delete rule

[dev | from | fwmark | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

dev Network device

[eth0 | lo] [from | fwmark | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

from Source prefix

[<string>] [dev | fwmark | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

fwmark fwmark value

[<string>] [dev | from | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

list List rules

[dev | from | fwmark | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

nat Base of the IP address block to translate
[<ipaddress>] [prohibit | realms | reject | table | unreachable]

pref Rule priority
[<number>] [dev | from | fwmark | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

prohibit Prohibit Communication administratively
[nat | realms | table]

realms Select realm(s)
[<text>] [nat | prohibit | reject | table | unreachable]

reject Bad Path
[nat | realms | table]

table Rules for this table
[<number>] [default | local | main | nat | prohibit | realms | reject | unreachable]

to Destination prefix
[<string>] [dev | from | fwmark | nat | pref | prohibit | realms | reject | table | tos | unreachable]

tos TOS value
[<number>] [dev | from | fwmark | nat | pref | prohibit | realms | reject | table | to | tos | unreachable]

tunnel (IP tunnel devices only.) Configure the physical source and destination address for IP tunnel interfaces
[add | change | del | show]

add Add a new tunnel
[<interface> | csum | dev | icsum | ikey | iseq | key | local | mode | nopmtudisc | ocsum | okey | oseq | pmtudisc | remote | seq | tos | ttl]

change Change existing tunnel
[<interface> | csum | dev | icsum | ikey | iseq | key | local | mode | nopmtudisc | ocsum | okey | oseq | pmtudisc | remote | seq | tos | ttl]

del Delete a tunnel
[<interface> | csum | dev | icsum | ikey | iseq | key | local | mode | nopmtudisc | ocsum | okey | oseq | pmtudisc | remote | seq | tos | ttl]

show List tunnels
[<interface> | csum | dev | icsum | ikey | iseq | key | local | mode | nopmtudisc | ocsum | okey | oseq | pmtudisc | remote | seq | tos | ttl]

csum (only GRE tunnels) generate/require checksums for tunneled packets

[<interface> | dev | ikey | iseq | key | local | mode | nopmtudisc | okey | oseq | pmtudisc | remote | seq | tos | ttl]

dev	Network device [eth0 lo] [<interface> csum icsum ikey iseq key local mode nopmtudisc ocsum okey oseq pmtudisc remote seq tos ttl]
icsum	Generate/require checksums for tunneled packets [<interface> dev ikey iseq key local mode nopmtudisc okey oseq pmtudisc remote seq tos ttl]
ikey	Use keyed GRE with this Input key [<ipaddress> <number>] [<interface> csum dev icsum iseq local mode nopmtudisc ocsum oseq pmtudisc remote seq tos ttl]
iseq	Flag enables sequencing of incoming packets [<interface> csum dev icsum ikey key local mode nopmtudisc ocsum okey pmtudisc remote tos ttl]
key	(only GRE tunnels) use keyed GRE with key K [<ipaddress> <number>] [<interface> csum dev icsum iseq local mode nopmtudisc ocsum oseq pmtudisc remote seq tos ttl]
local	Set the fixed local address for tunneled packets [<ipaddress>] [<interface> csum dev icsum ikey iseq key mode nopmtudisc ocsum okey oseq pmtudisc remote seq tos ttl]
mode	Set the tunnel mode [gre ipip sit] [<interface> csum dev icsum ikey iseq key local nopmtudisc ocsum okey oseq pmtudisc remote seq tos ttl]
nopmtudisc	Disable Path MTU Discovery on this tunnel [<interface> csum dev icsum ikey iseq key local mode ocsum okey oseq remote seq tos ttl]
ocsum	Generate/require checksums for tunneled packets [<interface> dev ikey iseq key local mode nopmtudisc okey oseq pmtudisc remote seq tos ttl]
okey	Use keyed GRE with this output key [<ipaddress> <number>] [<interface> csum dev icsum iseq local mode nopmtudisc ocsum oseq pmtudisc remote seq tos ttl]
oseq	Flag enables sequencing of outgoing packets [<interface> csum dev icsum ikey key local mode nopmtudisc ocsum okey pmtudisc remote tos ttl]
pmtudisc	Enable Path MTU Discovery on this tunnel

	[<interface> csum dev icsum ikey iseq key local mode ocsum okey oseq remote seq tos ttl]
remote	Set the remote endpoint of the tunnel [<ipaddress>] [<interface> csum dev icsum ikey iseq key local mode nopmtudisc ocsum okey oseq pmtudisc seq tos ttl]
seq	Flag is equivalent to the combination `iseq oseq` [<interface> csum dev icsum ikey key local mode nopmtudisc ocsum okey pmtudisc remote tos ttl]
tos	Type of Service [<number>] [<interface> csum dev icsum ikey iseq key local mode nopmtudisc ocsum okey oseq pmtudisc remote seq ttl]
ttl	Time to Live [<number>] [<interface> csum dev icsum ikey iseq key local mode nopmtudisc ocsum okey oseq pmtudisc remote seq tos ttl]

message

Send Message to all the users

Syntax

Message all-users <text>

ping

Sends ICMP ECHO_REQUEST packets to network hosts

Syntax

ping [count | duplicate | interface | silent | source | timeout]

Parameter list & description

count Amount of times to send the ping request
[<number> | duplicate | interface | silent | source | timeout]

duplicate duplicate address detection mode

[interface | silent | source | timeout]

interface outgoing interface address to use for multicast packets

[eth0 | lo <ipaddress>]

silent does not print any message(s)

[duplicate | interface | source | timeout]

source source address

[count | duplicate | interface | silent | timeout]

timeout stop after this time

[<number> | count | duplicate | interface | silent | source]

route

Use to view / manipulate the IP routing table. Route manipulates the kernel's IP routing tables. Its primary use is to set up static routes to specific hosts or networks via an interface.

When the add or del options are used, route modifies the routing tables. Without these options, route displays the current contents of the routing tables

Syntax

route [add | del | show]

Parameter list & description

add add a new route

[<ipaddress> | default | host | mss | net | window]

del delete route

[<ipaddress> | default | host | mss | net]

show displays the routing table in the following format

Output

Destination The destination network or destination host

Gateway The gateway address or '*' if none set

Genmask The netmask for the destination net; '255.255.255.255' for a host destination and '0.0.0.0' for the default route

Flags

Possible flags include

U (route is up)

H (target is a host)

	G (use gateway)
	R (reinstate route for dynamic routing)
	D (dynamically installed by daemon or redirect)
	M (modified from routing daemon or redirect)
	A (installed by addrconf)
	C (cache entry)
	! (reject route)
Metric	The 'distance' to the target (usually counted in hops). It is not used by recent kernels, but may be needed by routing daemons.
Ref	Number of references to this route. (Not used in the Linux kernel.)
Use	Count of lookups for the route. Depending on the use of -F and -C this will be either route cache misses (-F) or hits (-C).
Iface	Interface to which packets for this route will be sent

set

Set entities

Syntax

set [advanced-firewall | arp-flux | bandwidth | cache | date]

Parameter list & description

advanced-firewall Displays current advanced firewall setting
 [ftpbounce-prevention | strict-policy | tcp_est_idle_timeout]

ftpbounce-prevention
 [control | data]

control	Prevent ftp-bounce attack on FTP control connection
data	Prevent ftp-bounce attack on FTP data connection

strict-policy
 [on | off]

on	Applies strict firewall policy. It drops UDP Dst Port 0, TCP Src Port 0 and/or Dst Port 0, Land Attack, Winnuke Attack, Data On TCP Sync, Zero IP Protocol, TTL Value 0 traffic
off	Disables strict firewall policy

tcp_est_idle_timeout	Set Idle Timeout between 2700-432000 seconds for tcp connections in the established state
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arp-flux	ARP flux occurs when multiple ethernet adaptors often on a single machine respond to an ARP query. Due to this, problem with the link layer address to IP address mapping can occur. Cyberoam may respond to ARP requests from both Ethernet interfaces. On the machine creating the ARP request, these multiple answers can cause confusion. ARP flux affects only when Cyberoam has multiple physical connections to the same medium or broadcast domain.
	<p>on Cyberoam may respond to ARP requests from both Ethernet interfaces when Cyberoam has multiple physical connections to the same medium or broadcast domain.</p> <p>off Cyberoam responds to ARP requests from respective Ethernet interface when Cyberoam has multiple physical connections to the same medium or broadcast domain.</p>
bandwidth [graph]	Bandwidth Settings
	graph Opens the Bandwidth Graph Management menu and allows to flush the generated graphs
cache	Set Cache Properties
clean	Removes all Cached files
date	Set Timezone, Date and Time

show

Shows various system modules information

Syntax

show [access-log | advanced-firewall | antispam | antivirus | cache | date | login | mail | monitor | network | pppoe connection | reboot | system | vpn]

Parameter list & description

access-log View IP addresses of machines from where Cyberoam was (attempt-)accessed

cache Show cache Information
[log [access | all | error] | space]

date System Time & Date

login Show who is/was logged on

mail	Information about mail subsystem [livelog log queue]
network	Show network connections from system [bandwidth connections interfaces [all]]
PPPoE	Displays PPPoE connection status
reboot	Show system reboot history
system	Information about system hardware, resources, and softwares [cpu devices disk dma filesystems interrupts iomem ioports logs memory messages modules partitions pci processes statistics uptime]
cpu	Displays cpu information like processor, vendor, model, model name, speed, cache size
devices	Displays list of System Devices
disk	Displays the records of disk space used. Also displays distribution of disk space, used and unused disk space by the various file systems on a volume.
dma	Displays DMA information
filesystems	Displays filesystems supported by System
interrupts	Displays System Interrupts information
iomem	Displays I/O and Memory information
ioports	Displays I/O Ports information
logs	Displays PPPoE logs
memory	Display system memory status
messages	Use to examine or control the kernel ring buffer. Helps to print bootup messages used for debug
modules	Displays list of loaded modules
partitions	Displays Partition information
pci	Displays Peripherals information
processes	Displays Process Tree
statistics	Displays reports about processes, memory, paging, block IO, traps, and cpu activity

uptime Tell how long the system has been running

tcpdump

tcpdump prints out the headers of packets on a network interface that match the boolean expression. Only packets that match expression will be processed by tcpdump.

Syntax

tcpdump [<text> | count | hex | interface | llh | no_time | dump line | quite | verbose]

Parameter list & description

<text> Packet filter expression

[count | hex | interface | llh | no_time | dump line | quite | verbose]

selects which packets will be dumped. If no expression is given, all packets on the net will be dumped. Otherwise, only packets for which expression is `true' will be dumped.

The expression consists of one or more primitives. Primitives usually consist of an id (name or number) proceeded by one or more qualifiers.

count Exit after receiving count packets

[<count> | <text> | hex | interface | llh | no_time | dump line | quite | verbose]

hex Print each packet (minus its link level header) in hex

[<text> | count | interface | len <number>| llh | no_time | dump line | quite | verbose]

interface Listen on <interface>

[[eth0 | lo] | <text> | <count> | hex | llh | no_time | promisc | quite | verbose]

promisc Do not put the interface into promiscuous mode

[<count> | hex | interface | llh | no_time | quite | verbose]

llh Print the link-level header on each dump line

[<text> | count | hex | interface | no_time | quite | verbose]

no_time Do not print a timestamp on each dump line

[<text> | count | hex | interface | llh | quite | verbose]

quite Print less protocol information so output lines are shorter.

[<text> | count | hex | interface | llh | no_time | verbose]

verbose Verbose output. For example, the time to live, identification, total length and options in an IP packet are printed. Also enables

additional packet integrity checks such as verifying the IP and ICMP header checksum.

[<text> | count | hex | interface | llh | no_time | quite]

telnet

Uses the telnet protocol to connect to another remote computer.

Syntax

telnet [<ipaddress> <port> | source | tos]

Parameter list & description

ipaddress official name, an alias, or the Internet address of a remote host

port Indicates a port number (address of an application). If a number is not specified, the default telnet port is used.

source Use given IP address as source address
[<ipaddress> <port> | tos]

tos IP type-of-service option for the connection
[<number> | <ipaddress> <port> | tos]

traceroute

Use to print the route packets take to network host

The Internet is a large and complex aggregation of network hardware, connected together by gateways. Tracking the route one's packets follow (or finding the miscreant gateway that is discarding your packets) can be difficult. Traceroute utilizes the IP protocol 'time to live' field and attempts to elicit an ICMP TIME_EXCEEDED response from each gateway along the path to some host.

Syntax

traceroute [[<ipaddress> | <string> | size] [base-port <port> | first-ttl | icmp | max-ttl | no-frag | probes | source | timeout | tos]

Parameter list & description

base Set the base UDP port number used in probes -default 33434
[<port> | <ipaddress> | first-ttl | icmp | no-frag | probes | source | timeout | tos]

first-ttl Set the initial time-to-live used in the first outgoing probe packet
[<number>|<ipaddress> <string>|base-port|icmp | max-ttl | no-frag | probes | source | timeout | tos]

icmp Use ICMP ECHO instead of UDP datagrams

[<ipaddress> <string> | base-port | first-ttl | max-ttl | no-frag | probes | source | timeout | tos]

max-ttl Set the max time-to-live

[<number> | <ipaddress> <string> | base-port|first-ttl| icmp | no-frag | probes | source | timeout | tos]

no-frag Set the 'don't fragment' bit

[<ipaddress> <string> | base-port | first-ttl | icmp | max-ttl | probes | source | timeout | tos]

probes Probes are sent at each ttl -default 3

[<count> | <ipaddress> <string> | base-port| first-ttl | icmp | max-ttl | no-frag | source | timeout | tos]

source Use given IP address as source address

[<ipaddress> <string> | base-port | first-ttl | icmp | max-ttl | no-frag | probes | timeout | tos]

timeout Set the timeout -in seconds for a response to a probe -default 5

[<count> | <ipaddress> <string> | base-port | first-ttl | icmp | max-ttl | no-frag | probes | source | tos]

tos Set the type-of-service

[<number> | <ipaddress> <string> | base-port | first-ttl | icmp | max-ttl | no-frag | probes | source | timeout]