eScan for Linux File Server

User Guide

MicroWorld Technologies Inc. - Anti-Virus & Content Security

User Guide - eScan for Linux File Server

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Introduction

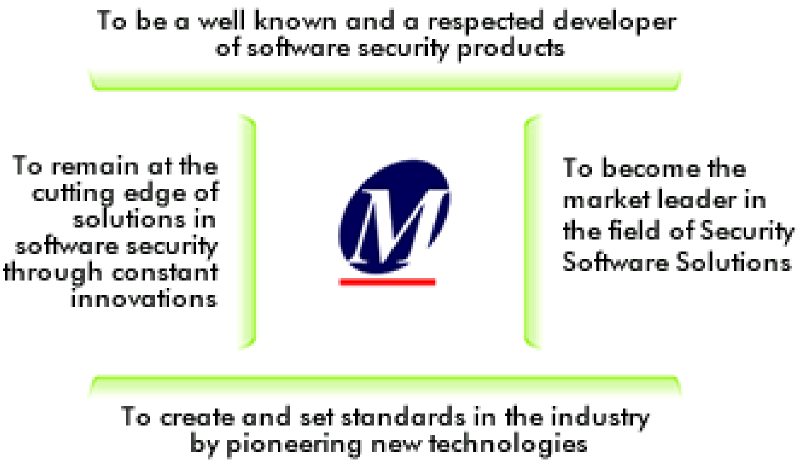
About MicroWorld

MicroWorld is the developer of advanced Information Security solutions that provide comprehensive protection against evolving computer security threats. MicroWorld's product portfolio includes eScan and MailScan that encompass Anti-Virus, Anti-Spyware, Content Security, Anti-Spam, and Network Intrusion Prevention solutions. Incorporated in the USA, MicroWorld has its offices worldwide and is internationally represented by a widespread network of partners in more than 90 countries.

MicroWorld began its operations in the year 1993. Since then, it has been a pioneer in the development of advanced. Information Security solutions and has been an active contributor to the Information Security industry in combating complex and evolving IT threats.

MicroWorld's range of products covers the entire spectrum of the Information Security sphere making it a one-stop shop for protecting all Information Security assets. Over the years, it has been redefining the Information Security landscape by developing innovative technologies and solutions. MicroWorld's continued endeavor is to provide Futuristic Security Intelligence to computers—be it in an Enterprise, SMB or Home.

Our Vision


To be a well known and a respected developer of software security products
To remain at the cutting edge of solutions in software security through constant innovations
M
To become the market leader in the field of Security Software Solutions
To create and set standards in the industry by pioneering new technologies

About eScan for Linux

The increasing use of Linux as an alternate operating system has increased the number of viruses targeting machines. eScan for linux is a reliable virus scanning software for workstations and servers running on Linux. It offers a complete and secure anti-virus security solution that detects and removes viruses, Trojans and other malware threats.

eScan for Linux is also designed to understand different file types, data-streams and compression formats. It can look inside date-streams and identify complex file architecture. It has a user-friendly interface and automatically downloads updates from our download site.

Features of eScan for Linux File Servers (SAMBA Server)

- **Real Time Monitoring -** eScan detects viruses, trojans and other malwares on real-time monitoring basis of shared files / directory mounted on a SAMBA shared server.

- **Web-Based Administration -** Easy and convenient web-based administration of configurations and settings.

- **eScan Graphical User Interface (GUI) -** The graphical user interface of eScan (for a GNOME / KDE environment) has been designed to suit the needs of a normal and an expert user for On-Demand Scanning task / Schedule scanning task of the system or specific files / directories.

- **eScan Command-line scanner -** eScan Command-line scanner for non-GNOME / non-KDE environment i.e. executing a manual On-Demand scanning / Schedule scanning task of the system or specific files / directories from a SSH Terminal.

- **Automated / Scheduled download of Virus Definitions -** Anti-virus updates are automatically updated, with also an option to manually downloading the updates.

- **Extensive Logs / Reports -** Provides extensive logs of the eScan activity.

System Requirements

- **Intel^{TM} Pentium^{TM} 200 MHz or higher processor**
- **256 MB RAM or more (512 MB recommended for file servers)**
- **500 MB disk space**

Linux Distributions:

- **Debian**
- **Fedora**
- **RHEL**
- **SuSE**
- **Ubuntu**

I. Packages of eScan for Linux File Servers (SAMBA) - RPMS / Debian

RPM Modules	Package / File name
mwadmin	mwadmin-<ver>.<linux distro-release>.<arch>.rpm
mwav	mwav-<ver>.<linux distro-release>.<arch>.rpm
escan	escan-<ver>.<linux distro-release>.<arch>.rpm
escan-rtm	escan-rtm-<ver>.<linux distro-release>.<arch>.rpm

Debian Modules	Package / File name
mwadmin	mwadmin-<ver>.<linux distro><release>.<arch>.deb
mwav	mwav-<ver>.<linux distro><release>.<arch>.deb
escan	escan-<ver>.<linux distro><release>.<arch>.deb
escan-rtm	escan-rtm-<ver>.<linux distro><release>.<arch>.deb

II. Installation

Step 1:-

NOTE: The packages should be installed as per the order given below

Command Line Installation:

For RPM based Linux distro's:

```
# rpm -ivh  mwadmin-<ver>.<linux distro-release>.<arch>.rpm

# rpm -ivh  mwav-<ver>.<linux distro-release>.<arch>.rpm

# rpm -ivh   escan-<ver>.<linux distro-release>.<arch>.rpm

# rpm -ivh  escan-rtm-<ver>.<linux distro-release>.<arch>.rpm
```

For Debian based Linux distro's:

```
# dpkg -i  mwadmin-x.x-x.deb.<linux distro><release>.<arch>.deb

# dpkg -i  mwav-x.x-x. deb.<linux distro><release>.<arch>.deb

# dpkg -i  escan-x.x-x. deb.<linux distro><release>.<arch>.deb

# dpkg -i  escan-rtm-x.x-x. deb.<linux distro><release>.<arch>.deb
```

Step 2:-

After the installation is complete,
a) Add following entries in **[global]** section of /etc/samba/smb.conf file

```
[global]
max mux = 1
```

b) Add following entries under the shared folder section **[share_name]** in /etc/samba/smb.conf file

```
vfs object = vscan-mwav
vscan-mwav: config-file = /opt/MicroWorld/etc/escan/vscan-mwav.conf
```

(NOTE: This [share_name] folder will be scanned by eScan)

c) Restart the samba server. This completes the Installation procedure for eScan for Linux File Server.

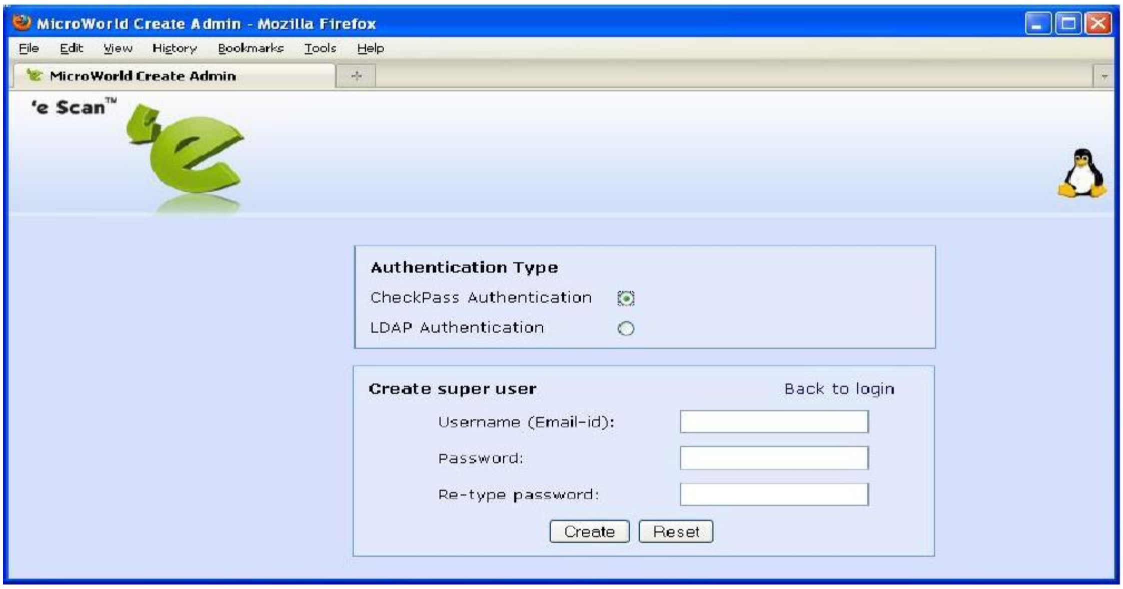
III. Managing eScan for Linux using the Web Administrator

a) Login to the Web Administration using the Hypertext Transfer Protocol Secure (HTTPS) using a web-browser:

https://<eScan_Server_IP_address>:10443

b) On first time login, a super user account has to be created either using the CheckPass Authentication or the LDAP Authentication.

- **CheckPass Authentication –** Select this option to create a Super User in eScan's user database. (Refer F**ig. 1**). Username should be in the EMAIL-ID format i.e. username@domain.com


MicroWorld Create Admin - Mozilla Firefox
File Edit View History Bookmarks Tools Help
MicroWorld Create Admin
'e Scan™

Authentication Type

CheckPass Authentication ●

LDAP Authentication ○

Create super user — Back to login

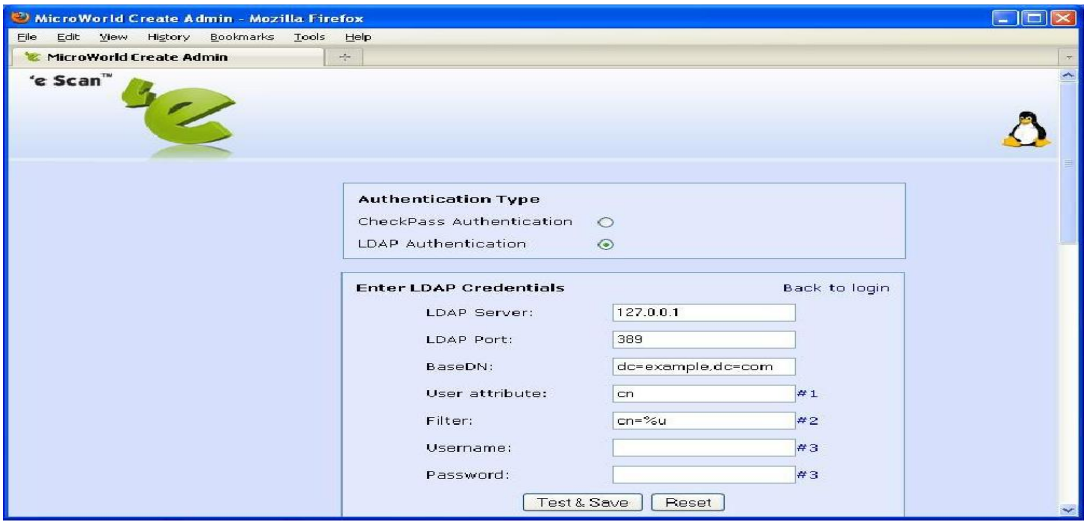
Username (Email-id):

Password:

Re-type password:

Fig.1

- **LDAP Authentication:** Selecting this option for logging to the Web-Administration of the eScan using the LDAP server in the network for authentication. Enter the required LDAP settings applicable for the LDAP authentication.


MicroWorld Create Admin - Mozilla Firefox
File Edit View History Bookmarks Tools Help
MicroWorld Create Admin
'e Scan™

Authentication Type

CheckPass Authentication ○

LDAP Authentication ●

Enter LDAP Credentials — Back to login

LDAP Server: 127.0.0.1

LDAP Port: 389

BaseDN: dc=example,dc=com

User attribute: cn #1

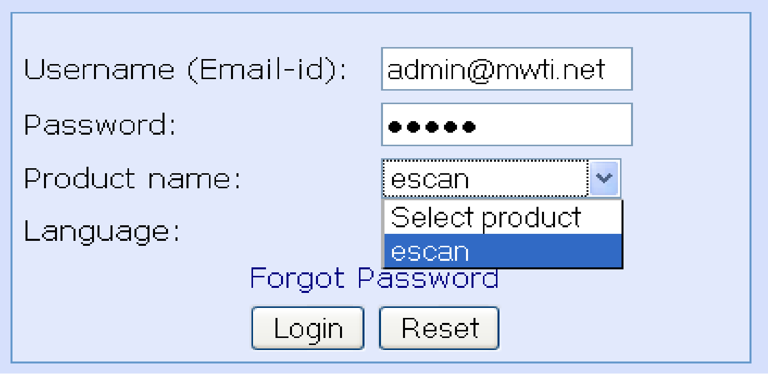
Filter: cn=%u #2

Username: #3

Password: #3

Fig.2

c) After creating the Super user, login to Web-administration by clicking on the **Back to login** option. To access the settings, select **eScan** from the list of Product Name drop down box. Enter the Username and Password to login to the Web Administrator.



Username (Email-id): admin@mwti.net

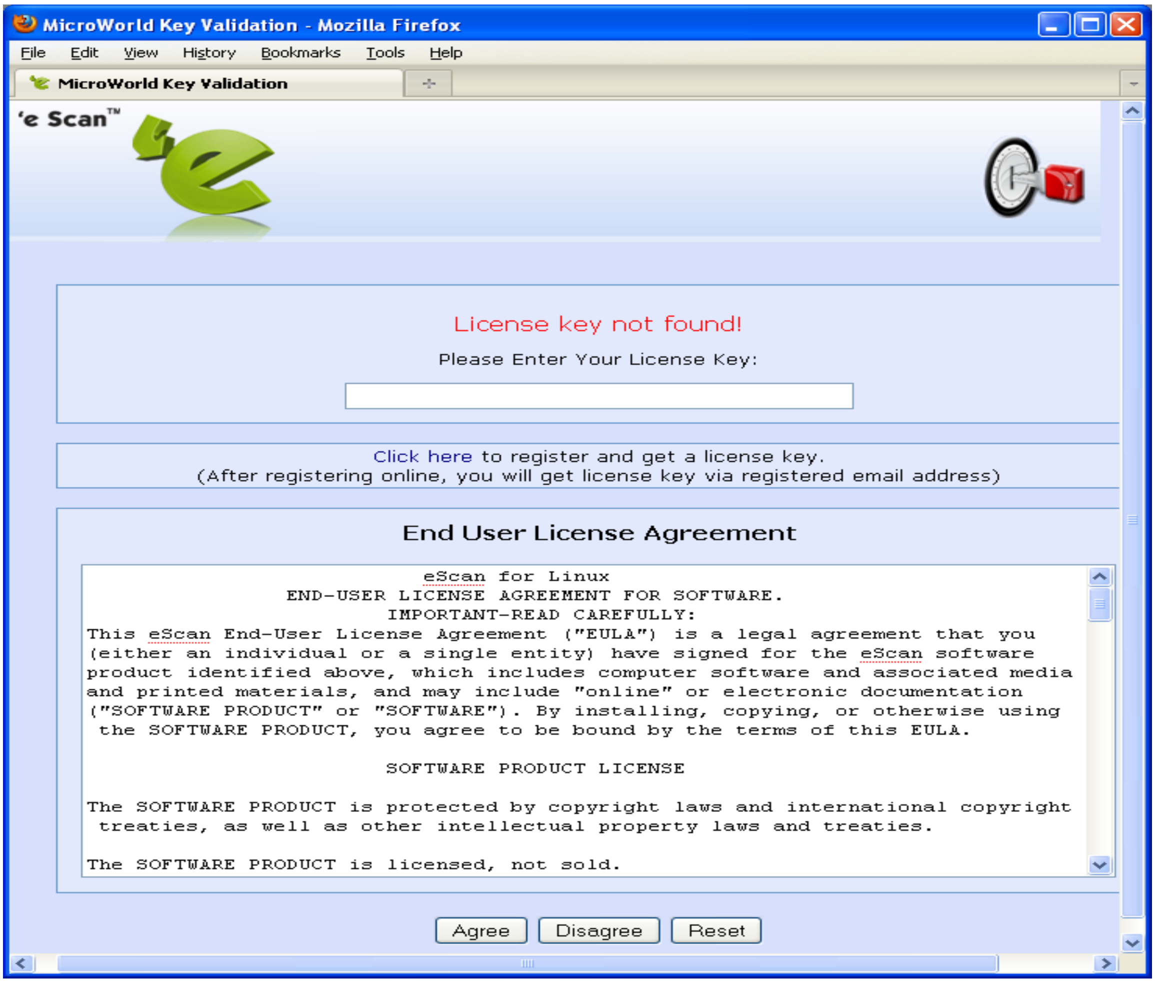
Password: ●●●●●

Product name: escan

Language:

Fig.3

d) This will open the License Key and the EULA page. Enter and apply the eScan License key provided to you. For evaluation, select the "Click here to register and get a license key". This will take to the official website of eScan. Fill-up the registration form and an evaluation license key will be emailed. Apply the same in the space provided.



MicroWorld Key Validation - Mozilla Firefox
File
Edit
View
History
Bookmarks
Tools
Help
MicroWorld Key Validation
'e Scan™

License key not found!

Please Enter Your License Key:

Click here to register and get a license key.
(After registering online, you will get license key via registered email address)

End User License Agreement

eScan for Linux
END-USER LICENSE AGREEMENT FOR SOFTWARE.
IMPORTANT-READ CAREFULLY:

This eScan End-User License Agreement ("EULA") is a legal agreement that you (either an individual or a single entity) have signed for the eScan software product identified above, which includes computer software and associated media and printed materials, and may include "online" or electronic documentation ("SOFTWARE PRODUCT" or "SOFTWARE"). By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA.

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Fig.4

e) The Welcome Screen is displayed after applying the eScan License Key.

IV. Features and Options in eScan AV (Web-Administration):

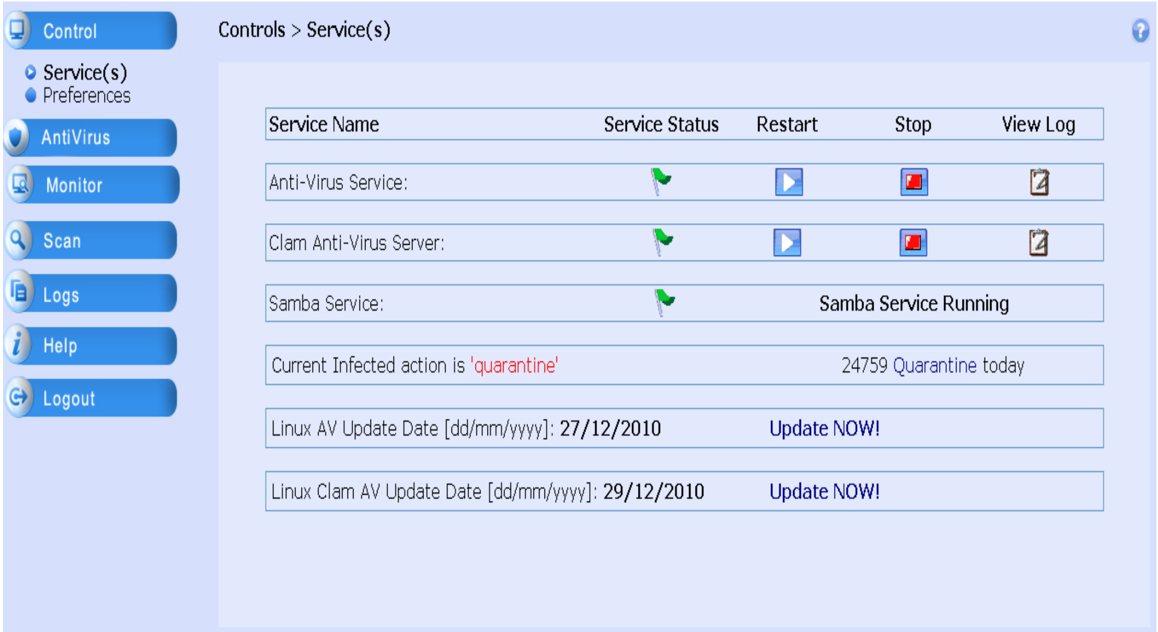
1) Control ►►► Services

Displays the status of the Anti-virus Service, Samba Service and the date of the current AV database.

- Services running is indicated with a Green Flag.
- Services stopped is indicated with a Red Flag.
- Services can be Restarted / Stopped using the respective buttons
- View Log will display the logs of the services

It also displays:

- the current action by eScan AV on the infected files accessed on the Samba shared folder/s,
- total number of infected files which has been Quarantined,
- status of the AV update date.



Controls > Service(s)

Service Name	Service Status	Restart	Stop	View Log
Anti-Virus Service:	⚑	▶	■	📝
Clam Anti-Virus Server:	⚑	▶	■	📝
Samba Service:	⚑	Samba Service Running		

Current Infected action is 'quarantine' 24759 Quarantine today

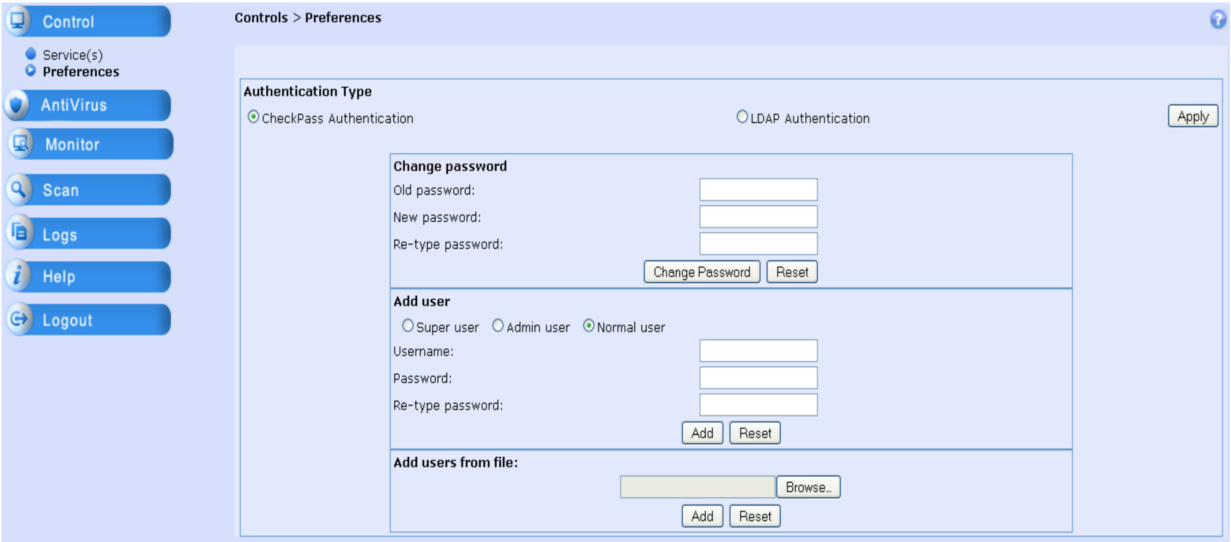
Linux AV Update Date [dd/mm/yyyy]: 27/12/2010 Update NOW!

Linux Clam AV Update Date [dd/mm/yyyy]: 29/12/2010 Update NOW!

Fig.5

2) Control ►►► Preferences

This section contains the various settings for changing the password of the logged in user, adding a new users for the eScan Web-administrator console. The authentication type used is the CheckPass Authentication or the LDAP Authentication.



Controls > Preferences

Authentication Type

● CheckPass Authentication ○ LDAP Authentication [Apply]

Change password

Old password:

New password:

Re-type password:

[Change Password] [Reset]

Add user

○ Super user ○ Admin user ● Normal user

Username:

Password:

Re-type password:

[Add] [Reset]

Add users from file:

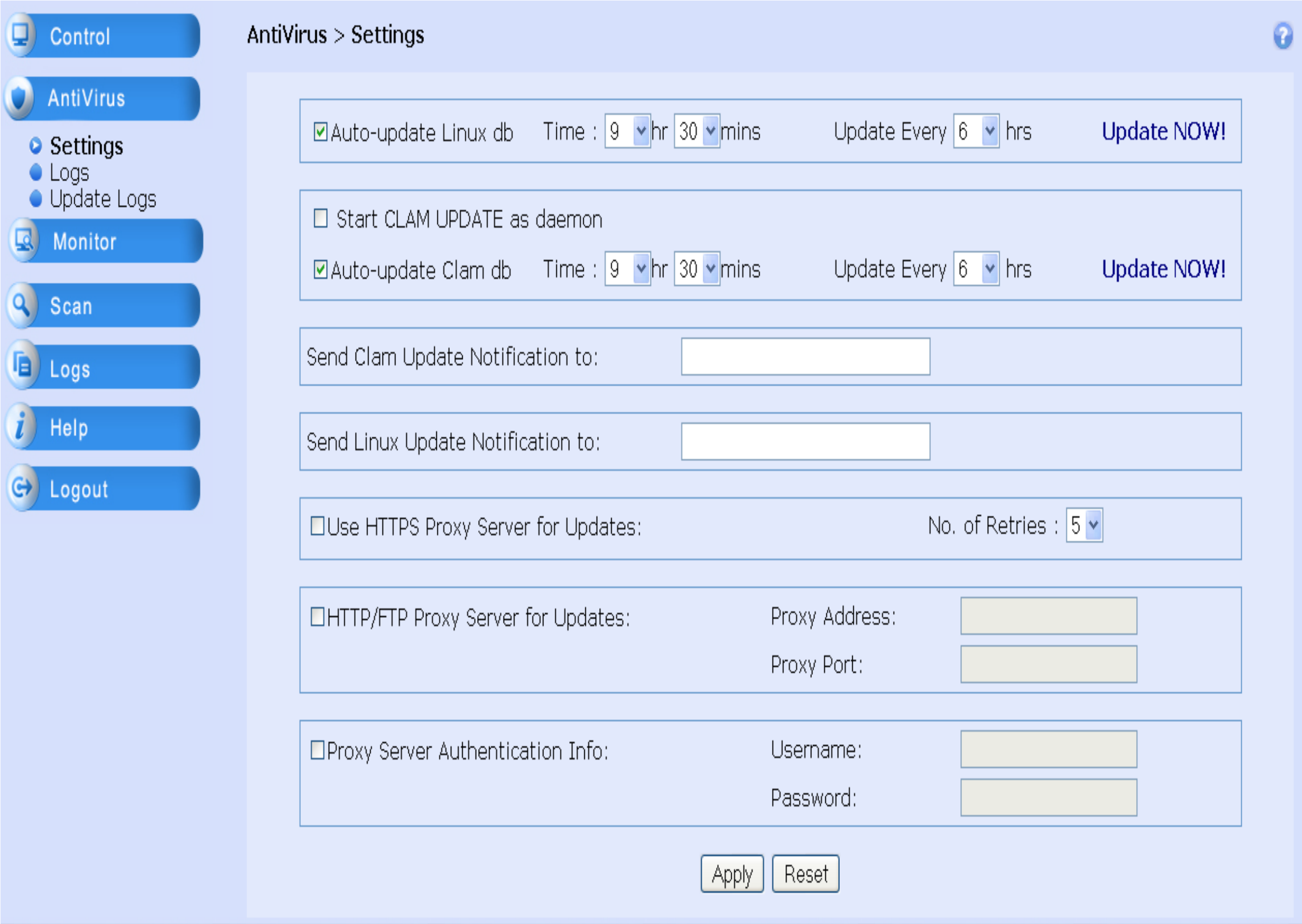
[Browse..]

[Add] [Reset]

Fig.6

3) AntiVirus ►►► Settings

This section contains the settings and configuration for downloading the Anti-virus updates.



AntiVirus > Settings

☑ Auto-update Linux db Time : 9 hr 30 mins Update Every 6 hrs Update NOW!

☐ Start CLAM UPDATE as daemon

☑ Auto-update Clam db Time : 9 hr 30 mins Update Every 6 hrs Update NOW!

Send Clam Update Notification to:

Send Linux Update Notification to:

☐ Use HTTPS Proxy Server for Updates: No. of Retries : 5

☐ HTTP/FTP Proxy Server for Updates: Proxy Address: Proxy Port:

☐ Proxy Server Authentication Info: Username: Password:

Fig.7

a) Auto-update Virus Definition database - Set a schedule time for downloading the AV updates.

b) Update Now – Click the link to immediately download the latest AV updates.

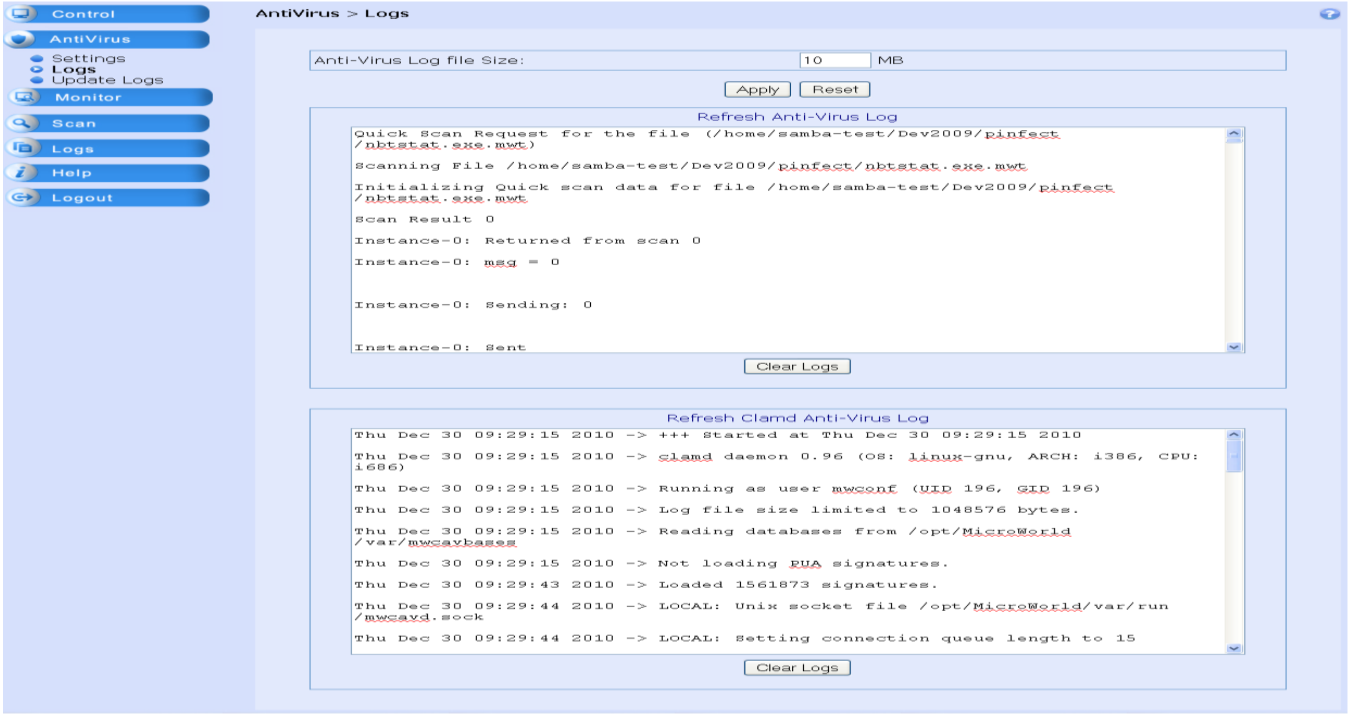
c) Send Update Notification to – Enter the email id to receive a notification after every download of updates.

d) HTTP/FTP Proxy Server for Updates – Select the check-box and enter the internet proxy server IP address and the proxy port for downloading the AV updates.

e) Proxy Server Authentication info – Select the checkbox and enter the Username and Password credentials if your proxy requires authentication, before connecting to the internet.

4) AntiVirus ►►► Logs

This section will display the logs of the AV services.



Anti-Virus Log file Size: 10 MB

```
Quick Scan Request for the file (/home/samba-test/Dev2009/pinfect
/nbtstat.exe.mwt)

Scanning File /home/samba-test/Dev2009/pinfect/nbtstat.exe.mwt

Initializing Quick scan data for file /home/samba-test/Dev2009/pinfect
/nbtstat.exe.mwt

Scan Result 0

Instance-0: Returned from scan 0

Instance-0: msg = 0


Instance-0: Sending: 0


Instance-0: Sent
```

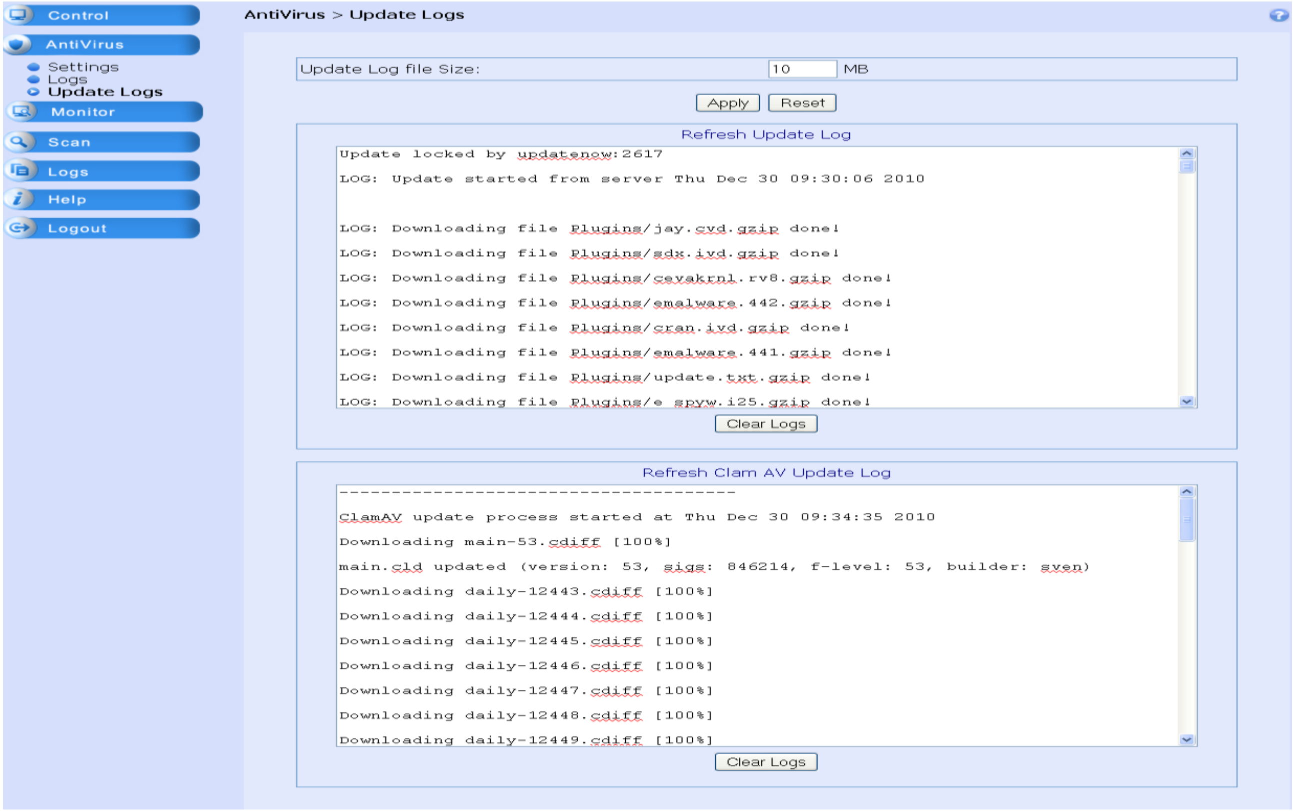
```
Thu Dec 30 09:29:15 2010 -> +++ Started at Thu Dec 30 09:29:15 2010

Thu Dec 30 09:29:15 2010 -> clamd daemon 0.96 (OS: linux-gnu, ARCH: i386, CPU:
i686)

Thu Dec 30 09:29:15 2010 -> Running as user mwconf (UID 196, GID 196)

Thu Dec 30 09:29:15 2010 -> Log file size limited to 1048576 bytes.

Thu Dec 30 09:29:15 2010 -> Reading databases from /opt/MicroWorld
/var/mwcavbases

Thu Dec 30 09:29:15 2010 -> Not loading PUA signatures.

Thu Dec 30 09:29:43 2010 -> Loaded 1561873 signatures.

Thu Dec 30 09:29:44 2010 -> LOCAL: Unix socket file /opt/MicroWorld/var/run
/mwcavd.sock

Thu Dec 30 09:29:44 2010 -> LOCAL: Setting connection queue length to 15
```

Fig.8

a) Anti-Virus Log File Size – Set the maximum size for the anti-virus log.
b) Anti-Virus Logs – Displays the AV Logs.

5) AntiVirus ►►► Update Logs

This section will display the logs of the AV update database.



Update Log file Size: 10 MB

```
Update locked by updatenow:2617

LOG: Update started from server Thu Dec 30 09:30:06 2010


LOG: Downloading file Plugins/jay.cvd.gzip done!

LOG: Downloading file Plugins/sdx.ivd.gzip done!

LOG: Downloading file Plugins/cevakrnl.rv8.gzip done!

LOG: Downloading file Plugins/emalware.442.gzip done!

LOG: Downloading file Plugins/cran.ivd.gzip done!

LOG: Downloading file Plugins/emalware.441.gzip done!

LOG: Downloading file Plugins/update.txt.gzip done!

LOG: Downloading file Plugins/e spyw.i25.gzip done!
```

```
--------------------------------------

ClamAV update process started at Thu Dec 30 09:34:35 2010

Downloading main-53.cdiff [100%]

main.cld updated (version: 53, sigs: 846214, f-level: 53, builder: sven)

Downloading daily-12443.cdiff [100%]

Downloading daily-12444.cdiff [100%]

Downloading daily-12445.cdiff [100%]

Downloading daily-12446.cdiff [100%]

Downloading daily-12447.cdiff [100%]

Downloading daily-12448.cdiff [100%]

Downloading daily-12449.cdiff [100%]
```

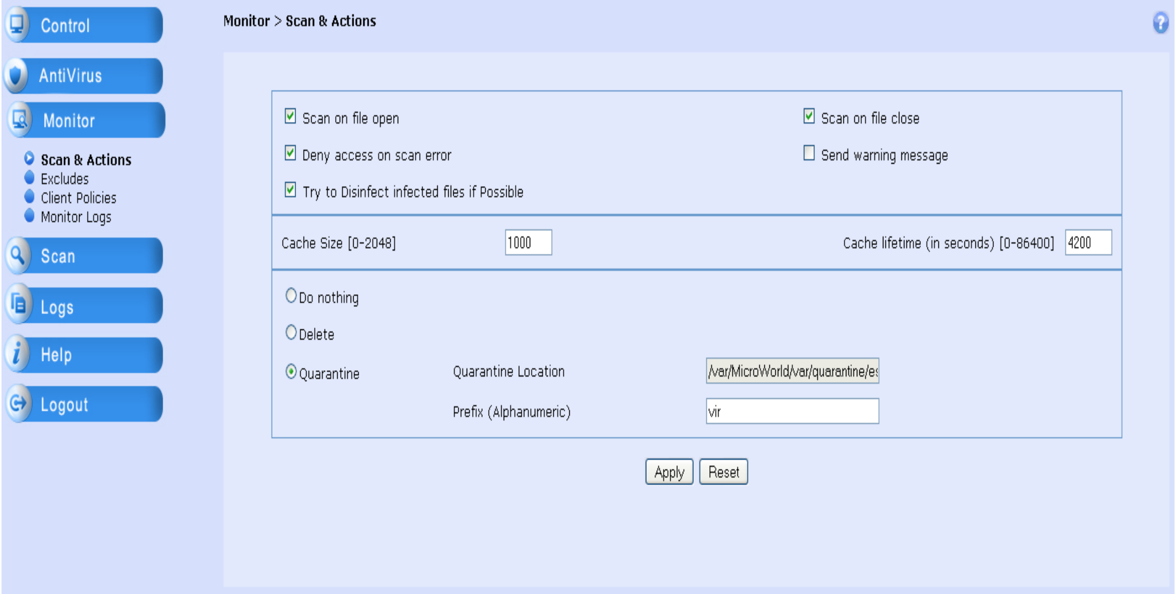
Fig.9

a) Update Log file size – Set the maximum size for update logs.
b) Update Logs – Displays the update logs.

5) Monitor ►►► Scan & Actions

(NOTE:-The Monitor section contains the settings to be configured for the real time monitoring and the AV action on the [shared_name] folder on a Samba server).

This section contains the settings for monitoring, scanning and actions to be taken by eScan on real-time basis on the shared folders / files on the Samba server.



☑ Scan on file open
☑ Scan on file close
☑ Deny access on scan error
□ Send warning message
☑ Try to Disinfect infected files if Possible

Cache Size [0-2048] 1000
Cache lifetime (in seconds) [0-86400] 4200

○ Do nothing
○ Delete
● Quarantine
Quarantine Location /var/MicroWorld/var/quarantine/es
Prefix (Alphanumeric) vir

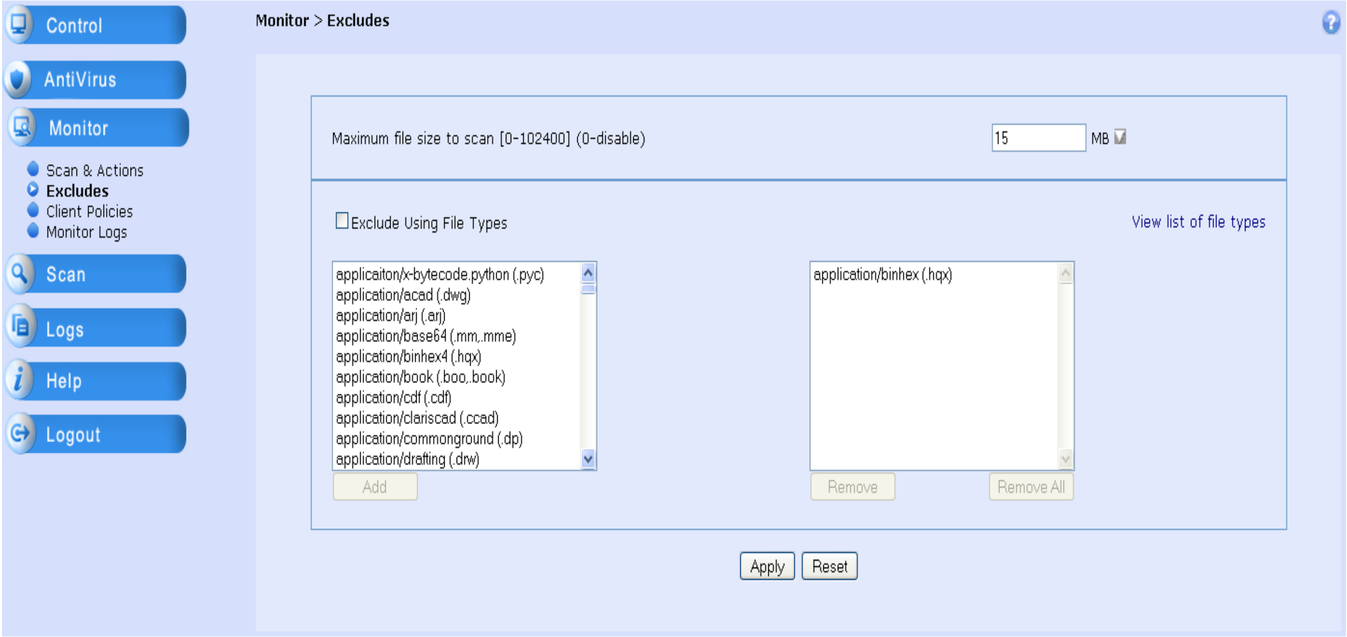
Fig.10

a) Scan on file open – Files will be scanned on Open event.
b) Scan on file close – Files will be scanned on Close event.
c) Deny access on scan error – This will deny access to the file if there was any error during scanning of the file.
d) Send warning message – This will send a warning message to client via Windows Messenger service when a virus is detected. The Messenger service should be ON on the Client system for this feature.
e) Try to Disinfect infected if Possible – eScan will try to disinfect the infected file first and if it is not possible it will take the alternate actions:

- **i) Do nothing -** will take no action on the infected file.
- **ii) Delete -** will delete the infected file from the server.
- **iii) Quarantine –** will quarantine the file to the /opt/MicroWorld/var/quarantine/escan/ directory.

6) Monitor ►►► Excludes

Set the Maximum file size to scan by eScan. File exceeding the size limit will be excluded from scanning. Also, set the file type that has to be excluded from real-time scanning.



Maximum file size to scan [0-102400] (0-disable) 15 MB

☐Exclude Using File Types

applicaiton/x-bytecode.python (.pyc)
application/acad (.dwg)
application/arj (.arj)
application/base64 (.mm,.mme)
application/binhex4 (.hqx)
application/book (.boo,.book)
application/cdf (.cdf)
application/clariscad (.ccad)
application/commonground (.dp)
application/drafting (.drw)

application/binhex (.hqx)

Fig.11

a) Maximum file size to scan – Set the maximum file size limit for eScan to scan. Files above the set limit will be excluded from scanning. On setting the value to '0', eScan shall scan all files. Size can be set in Bytes, KB and MB.

b) Exclude Using File Types – Select this option to exclude certain types of files from being scanned by eScan. Select from the pre-listed file types and click on the "Add" button.

7) Monitor ►►► Client Policies

Set policies on the basis of IP addresses / Machine names.

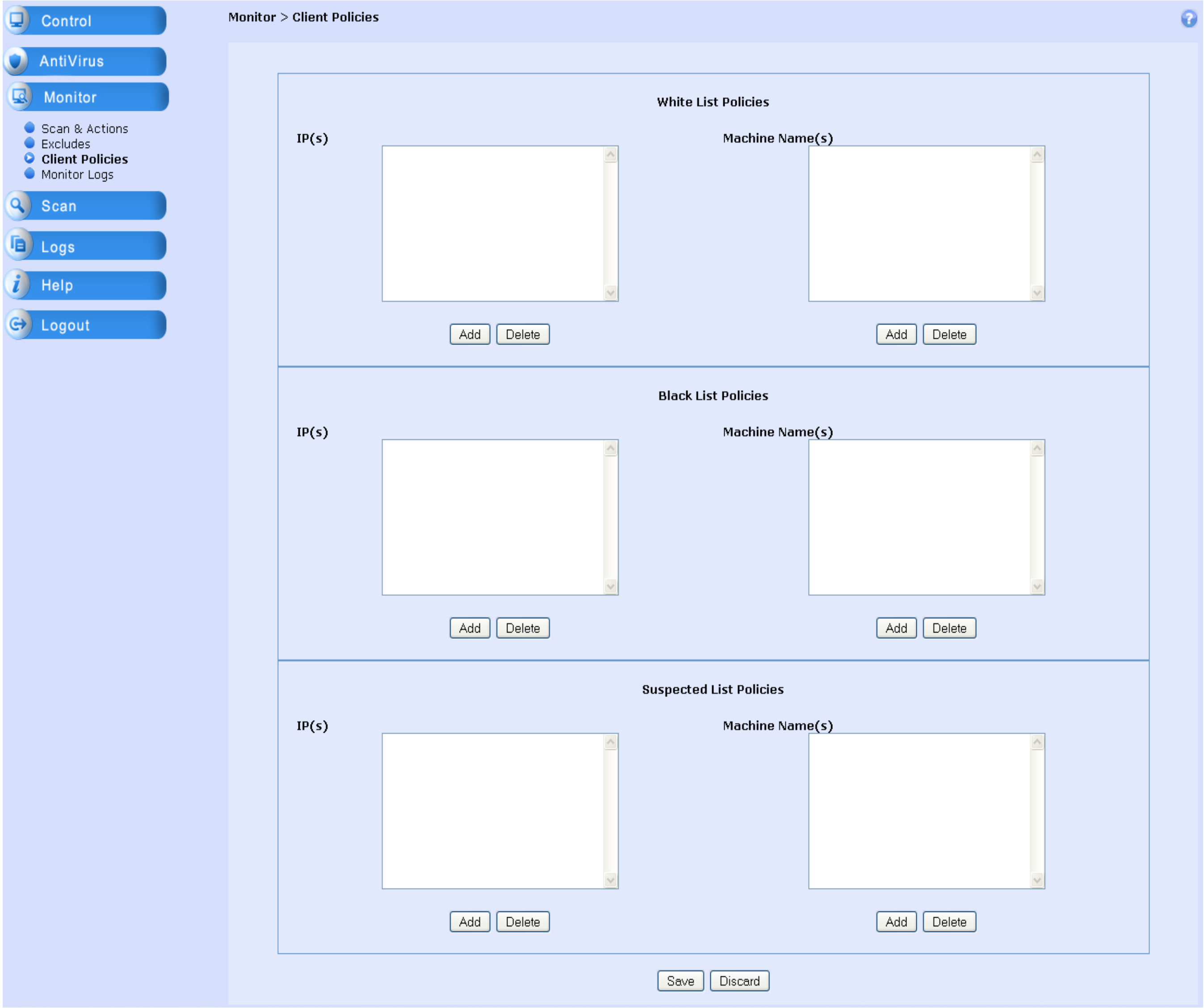


Fig.12

a) White List Policies: Files accessed or saved from the listed IP(s) / Machine Name(s) will not be scanned by eScan.
b) Black List Policies: The listed IP(s) / Machine Name(s) will not be allowed to access the Samba shared folder(s)
c) Suspected List Policies: All files accessed or saved from these listed IP(s) / Machine Name(s) will be scanned by eScan regardless of any exclude criteria i.e. Files of all size and types will be scanned irrespective of whether it is above the Maximum File size scanning or file being accessed is one of the excluded type.

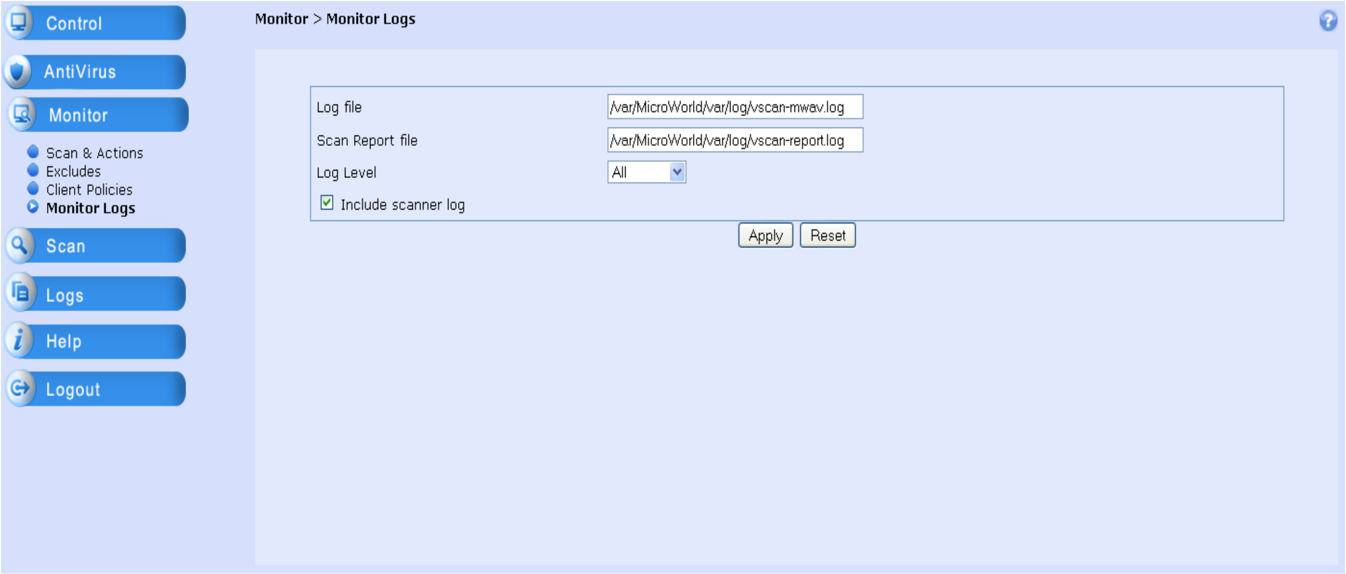
NOTE:

A generalized form IP is allowed to be added to any of the above policies except (.*.*.*) but no generalized form of Machine name is acceptable.*

Eg. 192.168.0. (IP in generalized form is allowed)*
Comp11   (Machine in generalized form is not allowed)*

White listing policy has greater preference than that of back listing policy which in turn has greater preference than that of suspected listing policy. So if a client's IP or Machine Name is in suspected or black list and also in White list, Client will be considered as white listed. Similarly, if a client's IP or Machine Name is both in suspected list and black list, client will be treated as a black listed client. This rule also applies for generalized form IP entries.

8) Monitor ►►► Logs
This section configures the path for vscan-mwav.log and vscan-report.log and set the type of log level.



Monitor > Monitor Logs

Log file /var/MicroWorld/var/log/vscan-mwav.log

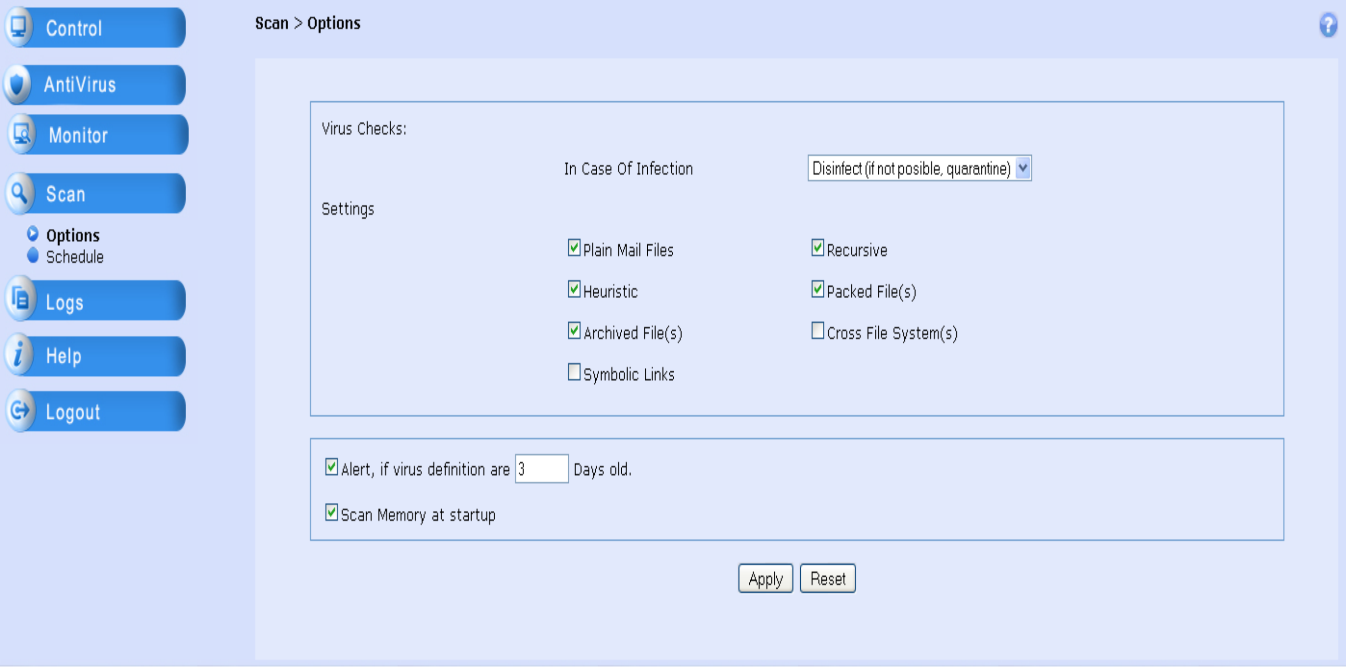
Scan Report file /var/MicroWorld/var/log/vscan-report.log

Log Level All

☑ Include scanner log

Fig.13

3) Scan ►►► Options
In this section you can set the default settings for the **On Demand Scanner** of eScan. The same settings can be set from the eScan Graphical User Interface (GUI) in GNOME or KDE environment of the Linux Distribution.



Scan > Options

Virus Checks:

In Case Of Infection Disinfect (if not posible, quarantine)

Settings

☑ Plain Mail Files ☑ Recursive

☑ Heuristic ☑ Packed File(s)

☑ Archived File(s) □ Cross File System(s)

□ Symbolic Links

☑ Alert, if virus definition are 3 Days old.

☑ Scan Memory at startup

Fig.14

Virus Checks: Set any one of the below action to be taken in case of an infected file.

In Case Of Infection – a) Log Only
b) Disinfect (if not possible, log)
c) Disinfect (if not possible, delete)
d) Disinfect (if not possible, rename)
e) Disinfect (if not possible, quarantine)

f) Disinfect (if not possible, prompt)
g) Delete infected
h) Rename
i) Quarantine
j) Prompt

Settings: Set the type of objects / files to be scanned

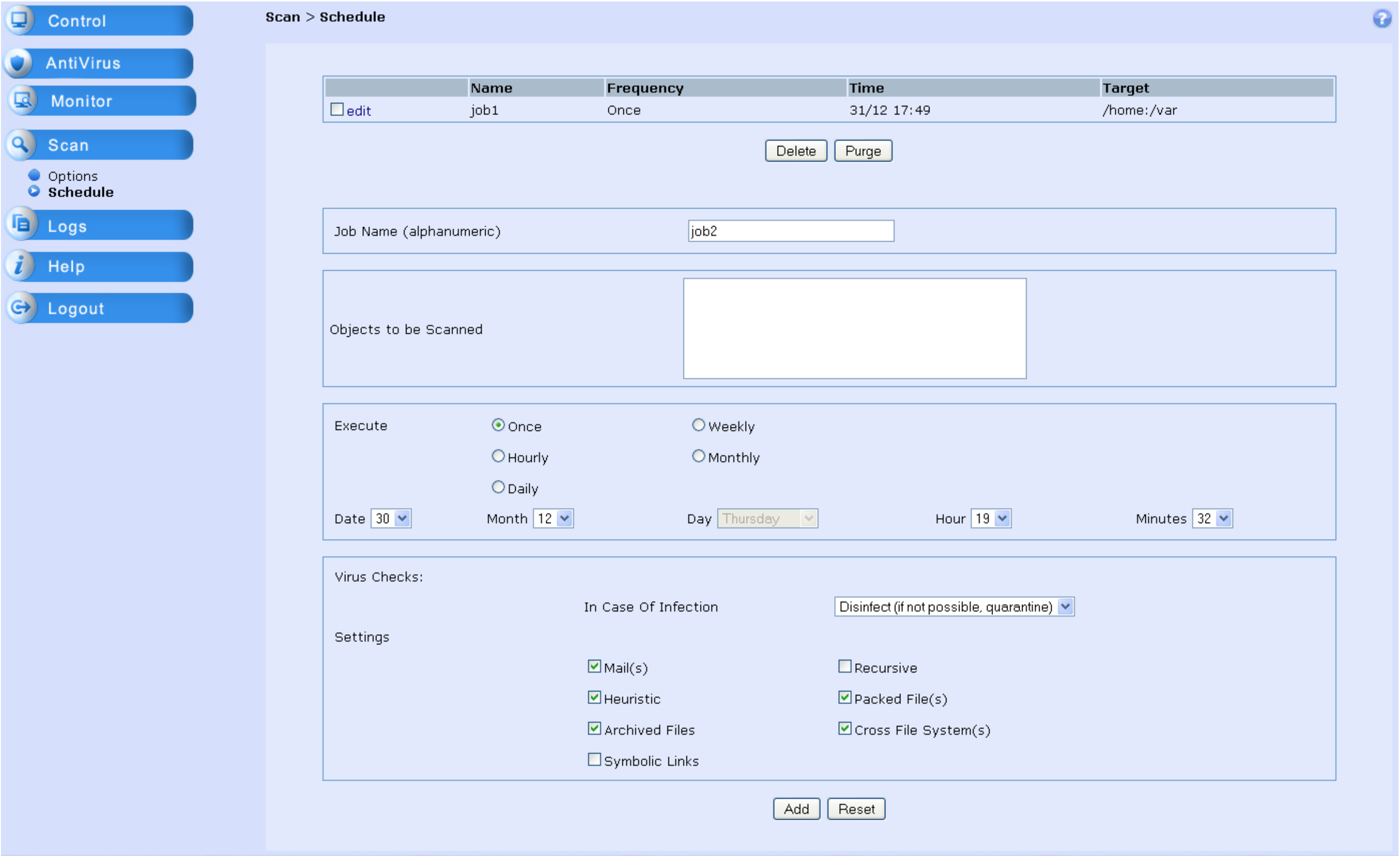
a) Plain Mail Files
b) Recursive
c) Heuristic
d) Packed File(s)
e) Archived File(s)
f) Cross File System(s)
g) Symbolic Links

Alert, if virus definition are ____ Days old – Set an alert notification when the AV updates are old. An alert will pop-up whenever the eScan GUI is accessed for On Demand Scanning. The alert will also be displayed when using the command line for On-Demand scanning.

Scan Memory at startup – All the running process will be scanned when ever the On-Demand scanner starts.

4) Scan ►►► Schedule

In this section, a schedule can be set for auto-scan of the system at a specified date and time. This ensures a periodic scanning of a desired folder or the entire system is carried out. Schedule task can also be set from the eScan Graphical User Interface (GUI) in GNOME or KDE environment of the Linux Distribution.



Scan > Schedule

	Name	Frequency	Time	Target
□ edit	job1	Once	31/12 17:49	/home:/var

Job Name (alphanumeric) job2

Objects to be Scanned

Execute ● Once ○ Weekly ○ Hourly ○ Monthly ○ Daily

Date 30 Month 12 Day Thursday Hour 19 Minutes 32

Virus Checks:

In Case Of Infection Disinfect (if not possible, quarantine)

Settings

☑ Mail(s) □ Recursive
☑ Heuristic ☑ Packed File(s)
☑ Archived Files ☑ Cross File System(s)
□ Symbolic Links

Fig.15

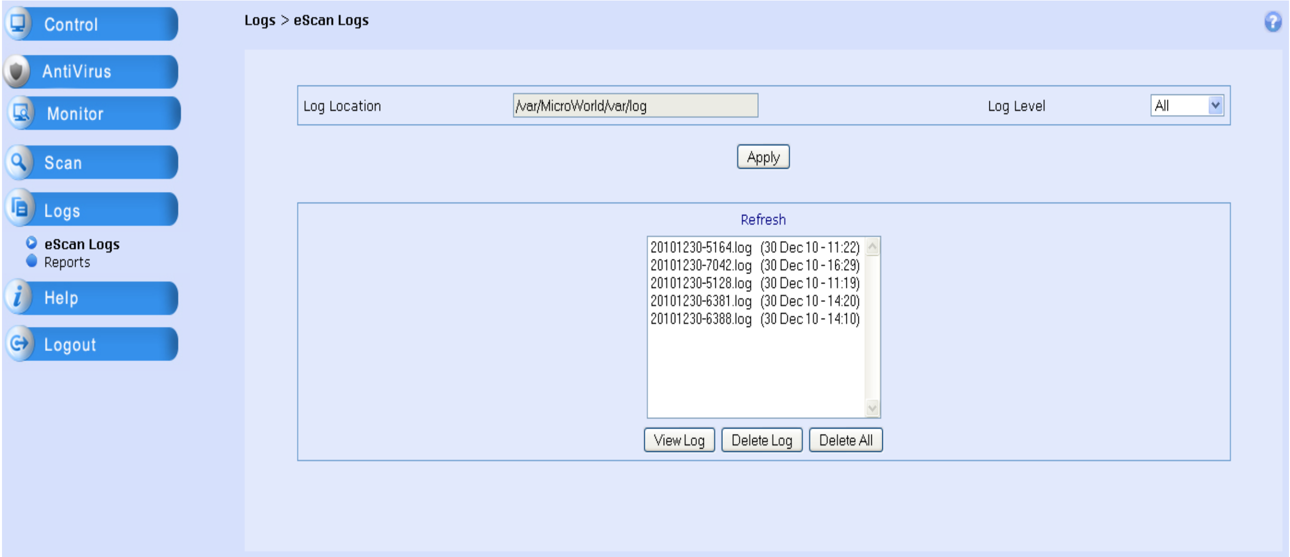
This section will display the list of already created scheduled task and its details. This can be edited / deleted.

A Scheduled Task can be executed

- **a) Once**
- **b) Hourly**
- **c) Daily**
- **d) Weekly**

9) Logs ►►► eScan Logs

In this section, you can set the log levels and view the logs of the On-Demand Scanner



Logs > eScan Logs

Log Location /var/MicroWorld/var/log

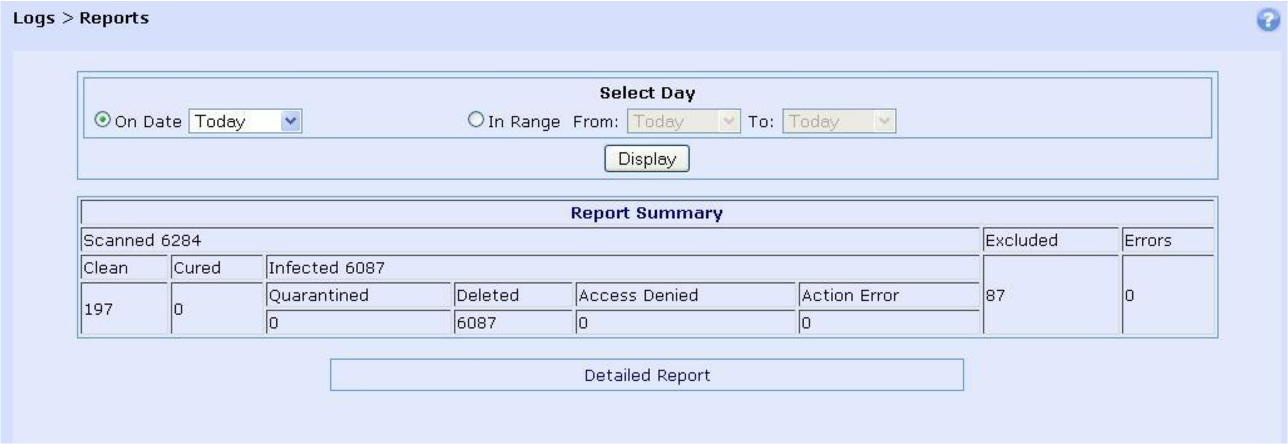
Log Level All

```
20101230-5164.log  (30 Dec 10 - 11:22)
20101230-7042.log  (30 Dec 10 - 16:29)
20101230-5128.log  (30 Dec 10 - 11:19)
20101230-6381.log  (30 Dec 10 - 14:20)
20101230-6388.log  (30 Dec 10 - 14:10)
```

Fig.16

10) Logs ►►► Reports

This section will display the Reports of the eScan Real Time monitoring on the Samba share.



Logs > Reports

Select Day

● On Date Today ○ In Range From: Today To: Today

Report Summary							
Scanned 6284						Excluded	Errors
Clean	Cured	Infected 6087					
197	0	Quarantined	Deleted	Access Denied	Action Error	87	0
		0	6087	0	0		

Fig.17

V. Features and Options in eScan AV [eScan Graphical User Interface (GUI)]:

In a GNOME or KDE Desktop environment,

a) eScan administrator - Desktop Icon – This will be with limited permission i.e. Normal user. Download of Updates & settings, scheduling of task will not be available in this mode (refer Fig.18).

b) eScan administrator - Application menu – This is similar to **eScan administrator – Desktop Icon** (refer Fig.19).

c) eScan administrator (root) - Application menu – This will be with ROOT user / SUDO user permission. When accessing the eScan GUI in ROOT user / SUDO user mode, it will be prompted for the password (refer Fig.19)..

d) eScan command-line help - Application menu – Provides command-line help for executing escan on-demand scanner from a SSH Terminal (refer Fig.19).

e) eScan web administrator - Application menu – This will invoke the Web-admin from a browser using the https://127.0.0.1:10443 url (refer Fig.19).

Aternatively, eScan GUI can also be accessed from a SSH Terminal

```
# escangui          - NORMAL USER MODE

# sudo escangui   - ROOT USER MODE
```

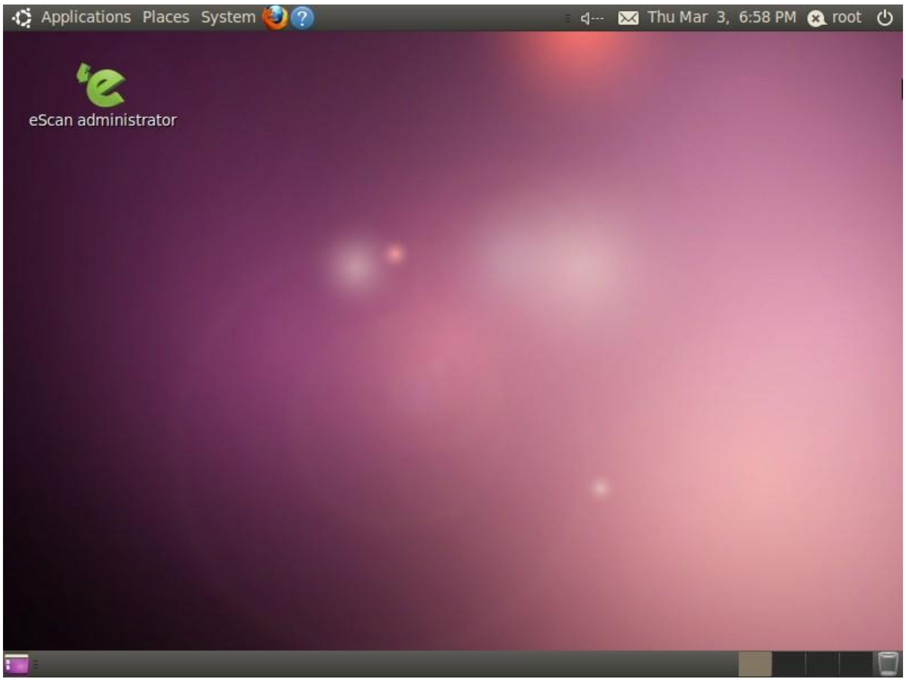


Fig.18

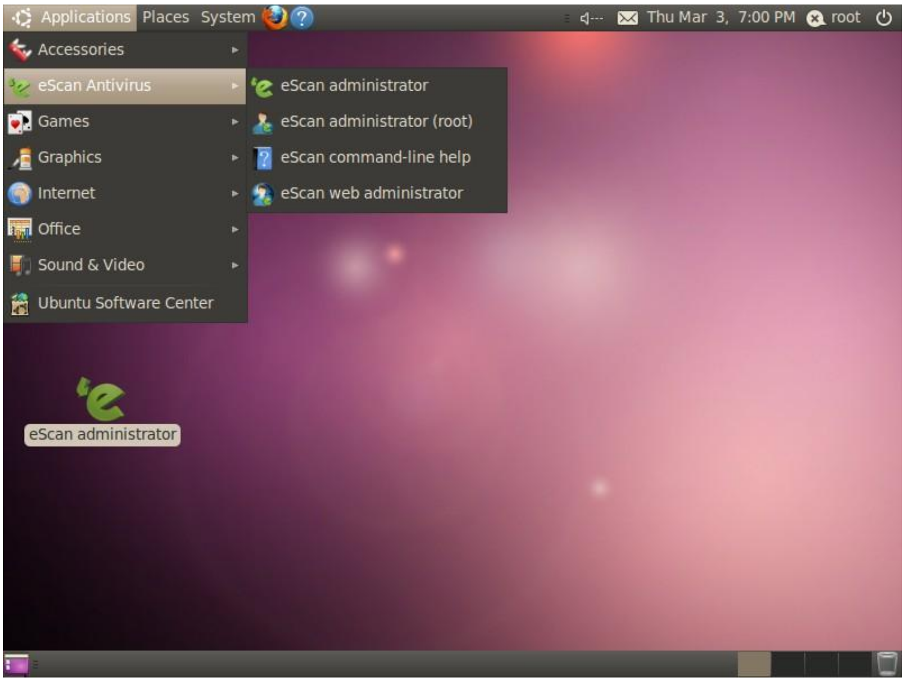
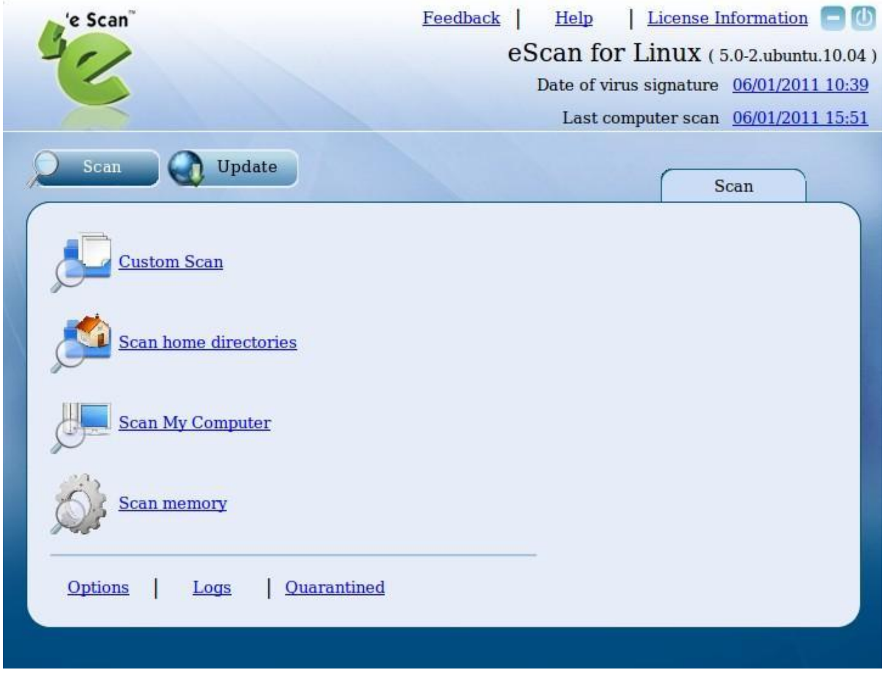


Fig.19

Normal User:

Fig.20 will be displayed when in Normal User login.



eScan for Linux (5.0-2.ubuntu.10.04)

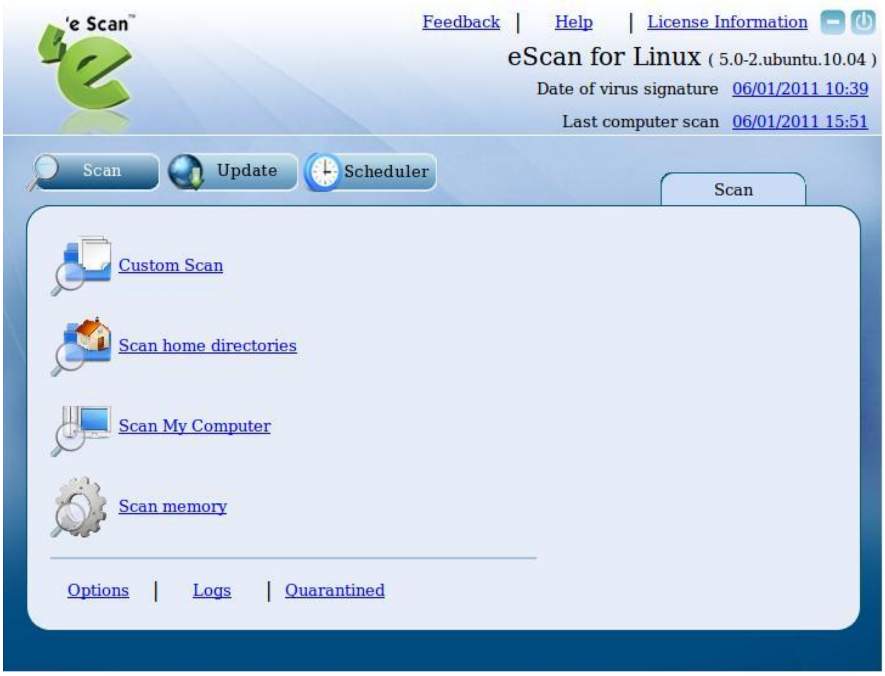
Date of virus signature 06/01/2011 10:39

Last computer scan 06/01/2011 15:51

Fig.20

Root User:

Fig.21 will be displayed when in Root User login with additional option of Update and Scheduler.



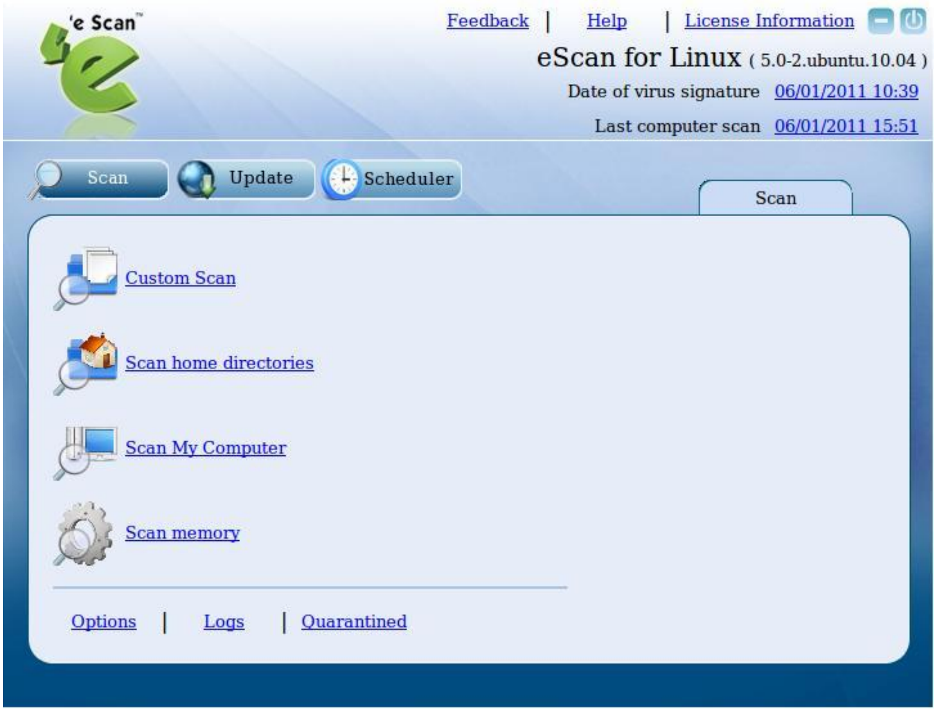
eScan for Linux (5.0-2.ubuntu.10.04)

Date of virus signature 06/01/2011 10:39

Last computer scan 06/01/2011 15:51

Fig.21

Clicking on this button will display the various options to execute the On-Demand scanning



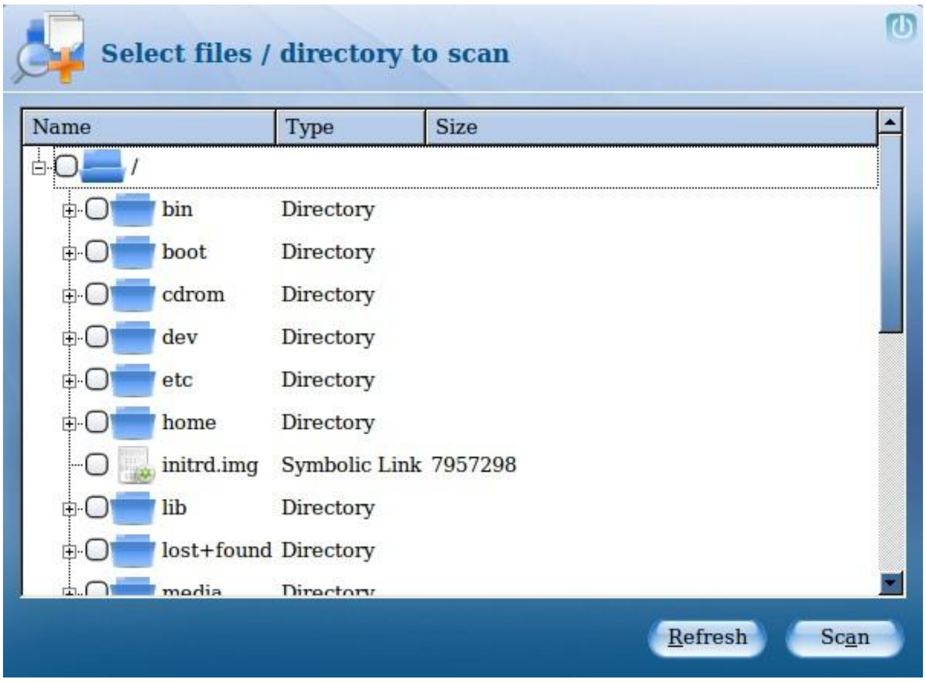
eScan for Linux (5.0-2.ubuntu.10.04)

Date of virus signature 06/01/2011 10:39

Last computer scan 06/01/2011 15:51

Fig.22

- Custom Scan - Click on this button to scan a specific directories/files. Select the directories / files and the click on the Scan button, which will begin the scanning of the selected directories / files (refer. Fig.23)



Name	Type	Size
○ /		
○ bin	Directory	
○ boot	Directory	
○ cdrom	Directory	
○ dev	Directory	
○ etc	Directory	
○ home	Directory	
○ initrd.img	Symbolic Link	7957298
○ lib	Directory	
○ lost+found	Directory	
○ media	Directory	

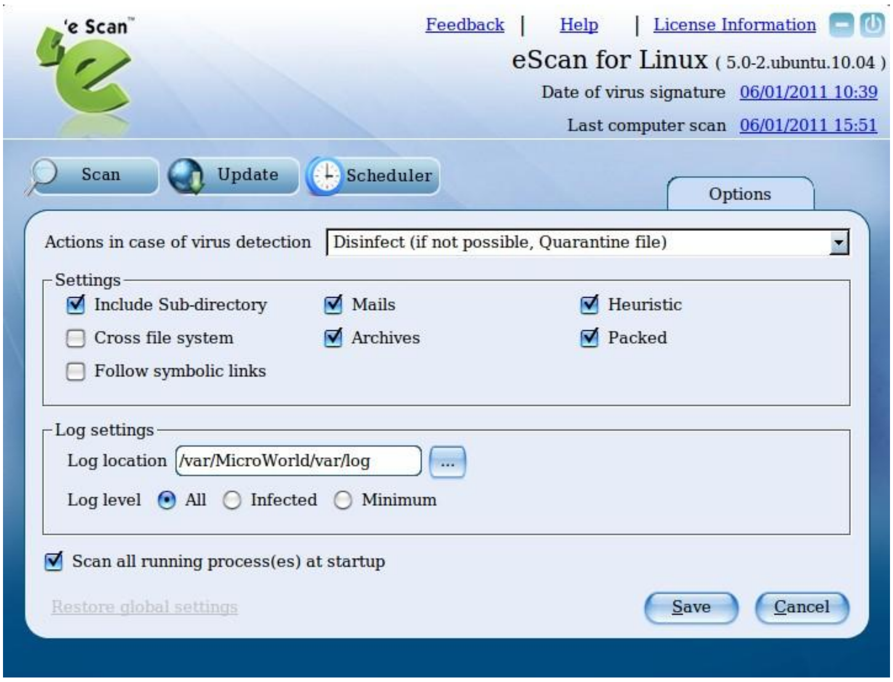
Fig.23

- Scan home directories – Click on this button to scan the Home directories and files of the logged in user.

- Scan Computer - Click on this button to scan the entire computer.

- Scan running processes – Click on this button to scan the processes running in the memory.

Clicking on the Options link, the eScan setting for the On-demand scanning will be displayed.Settings configured in this section will be the default action by the On-Demand Scanner whenever it is being executed:



eScan for Linux (5.0-2.ubuntu.10.04)

Date of virus signature 06/01/2011 10:39

Last computer scan 06/01/2011 15:51

Actions in case of virus detection: Disinfect (if not possible, Quarantine file)

Settings

☑ Include Sub-directory ☑ Mails ☑ Heuristic

□ Cross file system ☑ Archives ☑ Packed

□ Follow symbolic links

Log settings

Log location: /var/MicroWorld/var/log

Log level ● All ○ Infected ○ Minimum

☑ Scan all running process(es) at startup

Fig. 24

- Action in case of virus detection – The selected action, from the drop-down list, will be taken during the eScan On-Demand scanning.

  i. Log Only – This will only log the information of the infected object.

  ii. Disinfect (if not possible Log) – This will try to disinfect and if disinfection is not possible it will only log the information of the infected object.

  iii. Disinfect (if not possible Delete) - This will try to disinfect and if disinfection is not possible it will delete the infected object.

  iv. Disinfect (if not possible quarantine) – This will try to disinfect and if disinfection is not possible it will quarantine the infected object.

  v. Disinfect (if not possible Rename) - This will try to disinfect and if disinfection is not possible it will rename the infected object.

  vi. Disinfect (if not possible prompt action) - This will try to disinfect and if disinfection is not possible it will prompt the user for an action to be taken on the infected object.

  vii. Delete Infected – This will directly delete the infected object.

  viii. Quarantine – This will directly quarantine the infected object.

  ix. Rename – This will directly rename the infected object.

  x. Prompt for an action (no disinfect) – This will prompt the user for an action to be taken on the infected object.

- Settings – The selected objects will be scanned by default during On-Demand Scanning.

    i. Archive(s) - This option will specify the On-Demand Scanner to scan the archived files like zip, tar etc.

    ii. Mail(s) - This option will specify the On-Demand Scanner to scan mail files.

    iii. Follow Symbolic Links - Symbolic links allows to access one file from another through links. This option specifies the On-Demand scanner whether to resolve the symbolic link before actually scanning the object or to skip any such links.

    iv. Include Sub-directory - This option spcifies the On-Demand scanner to scan the sub-driectories while scanning the directory object.

    v. Packed File(s) - This option specifies whether to scan compressed executables.

    vi. Heuristic - Selecting this option allows eScan to check for unusual sequence(s), pattern(s) or content.

    vii. Cross File System(s) - In Linux, different file systems can be mounted at different location. Crossing the file systems means checking files on different partitions and/or network mounted file systems. This option specifies to On-Demand scanner whether to cross file system in scan path.

- Log Options

    i. Log Location – This option specifies the location of the eScan log.

    ii. Log Level – This option specifies the type of logs to be created.

        (a) All – This option will specify a detailed eScan log.

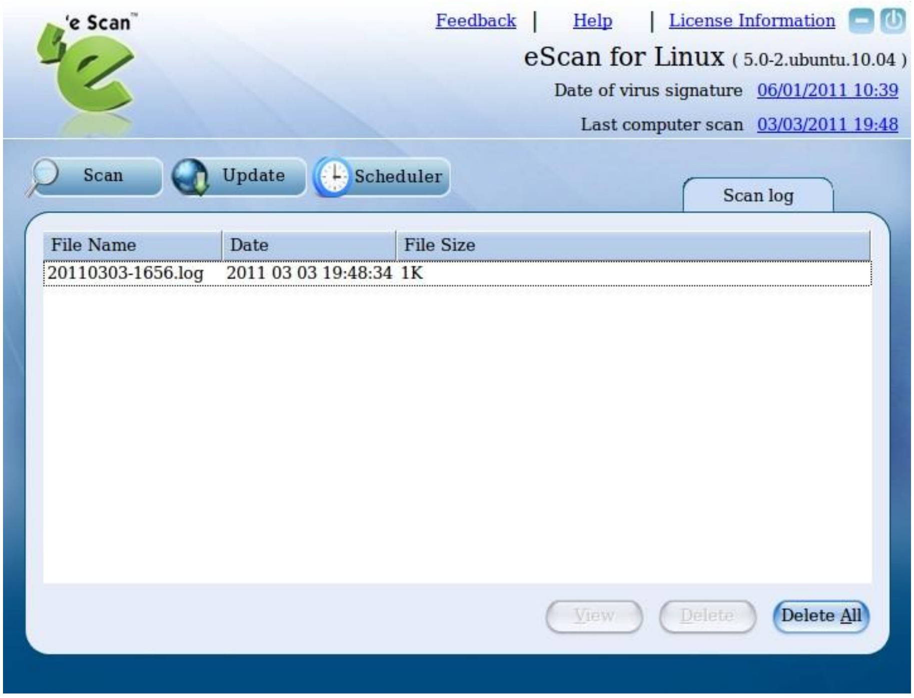
        (b) Infected – This option will specify only details of the infected objects in the eScan log.

        (c) Minimum – This option will specify only a minimum detail of the objects scanned in the eScan log.

- Scan All Running Process(es) at Startup – This option specifies the On-Demand scanner to scan all processes that are running are checked for any memory resident and other viruses.

- Restore global settings – This option is available only for Normal user. Clicking on this option will restore the settings made by the ROOT user.

Clicking on the Logs links, displays the scanned logs:



eScan for Linux (5.0-2.ubuntu.10.04)

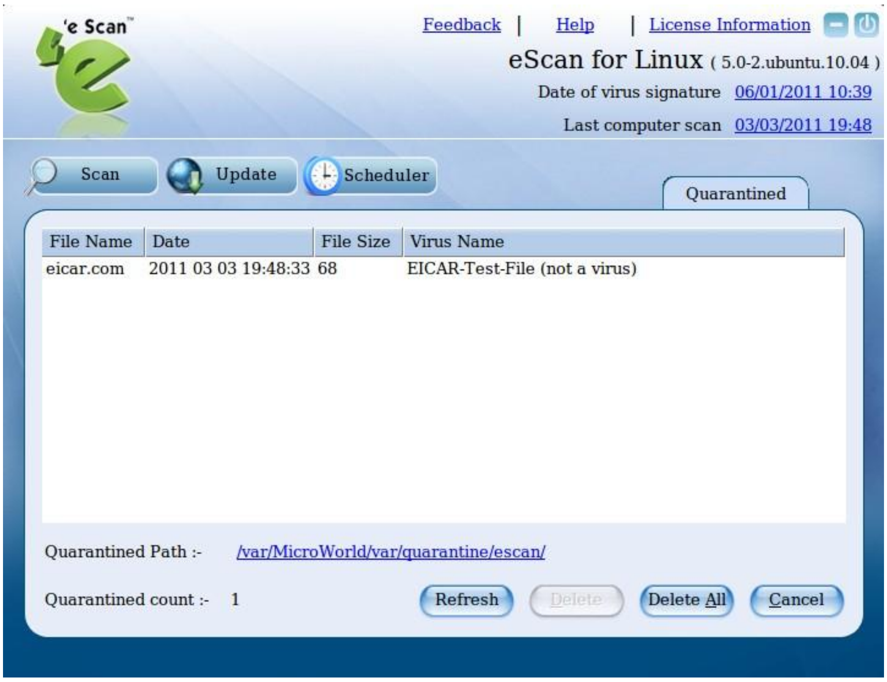
Date of virus signature 06/01/2011 10:39

Last computer scan 03/03/2011 19:48

File Name	Date	File Size
20110303-1656.log	2011 03 03 19:48:34	1K

Fig.25

Clicking on the Quarantined linl, displays the infected objects which has been quarantined:



eScan for Linux (5.0-2.ubuntu.10.04)

Date of virus signature 06/01/2011 10:39

Last computer scan 03/03/2011 19:48

File Name	Date	File Size	Virus Name
eicar.com	2011 03 03 19:48:33	68	EICAR-Test-File (not a virus)

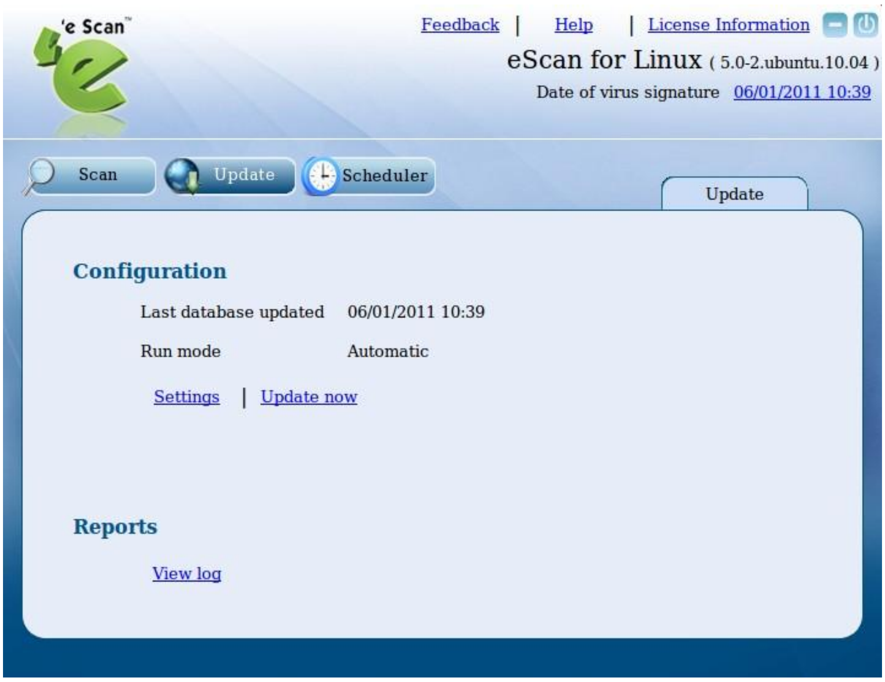
Quarantined Path :- /var/MicroWorld/var/quarantine/escan/

Quarantined count :- 1

Fig.26

Update

Only in case of root user login, the Settings link and the Update now link will be activated. This section contains the internet settings for downloading of virus signature updates.



eScan for Linux (5.0-2.ubuntu.10.04)

Date of virus signature 06/01/2011 10:39

Configuration

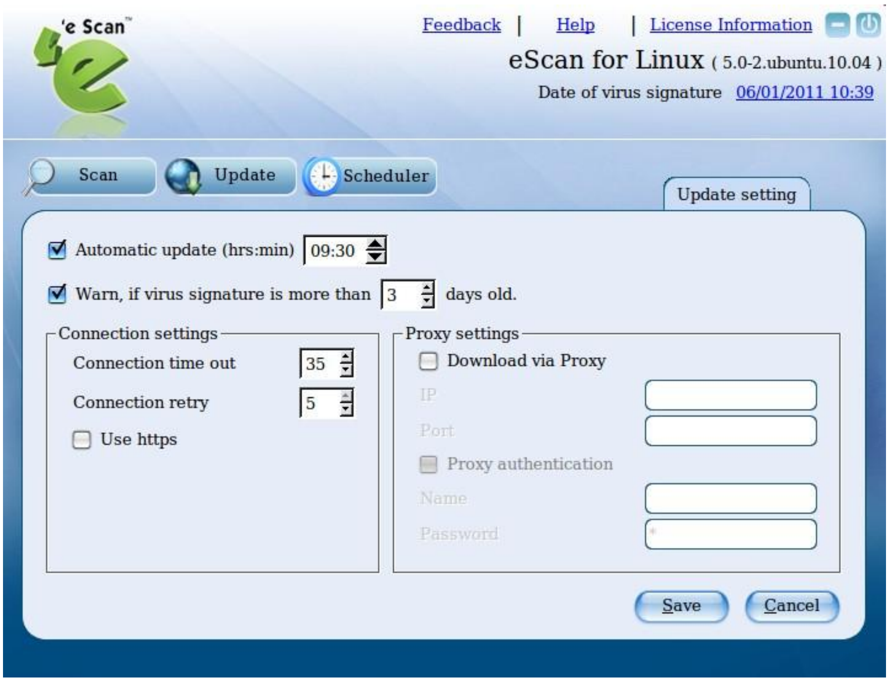
Last database updated 06/01/2011 10:39

Run mode Automatic

Reports

Fig. 27

Clicking on the Settings link, will display the settings for downloading of AV updates.



eScan for Linux (5.0-2.ubuntu.10.04)

Date of virus signature 06/01/2011 10:39

☑ Automatic update (hrs:min) 09:30

☑ Warn, if virus signature is more than 3 days old.

Connection settings

Connection time out 35

Connection retry 5

□ Use https

Proxy settings

□ Download via Proxy

IP

Port

□ Proxy authentication

Name

Password

Fig.28

- Connection Settings – This specifies in case of :

  i. Connection Time Out – It will disconnect after a specified time in seconds, if it is unable to connect to the internet.
  ii. Connection Retry – It will try to reconnect the specified number of times in case of internet connection timed out.

- Proxy Settings – Select Use Proxy, to configure the Proxy settings for connecting to the internet to download the AV updates.

  i. IP – Enter the IP address of the Internet proxy server.

  ii. Port – Enter the Port of the internet proxy server.

  iii. Proxy Authentication: Enter the credentials in case the Proxy requires authentication.

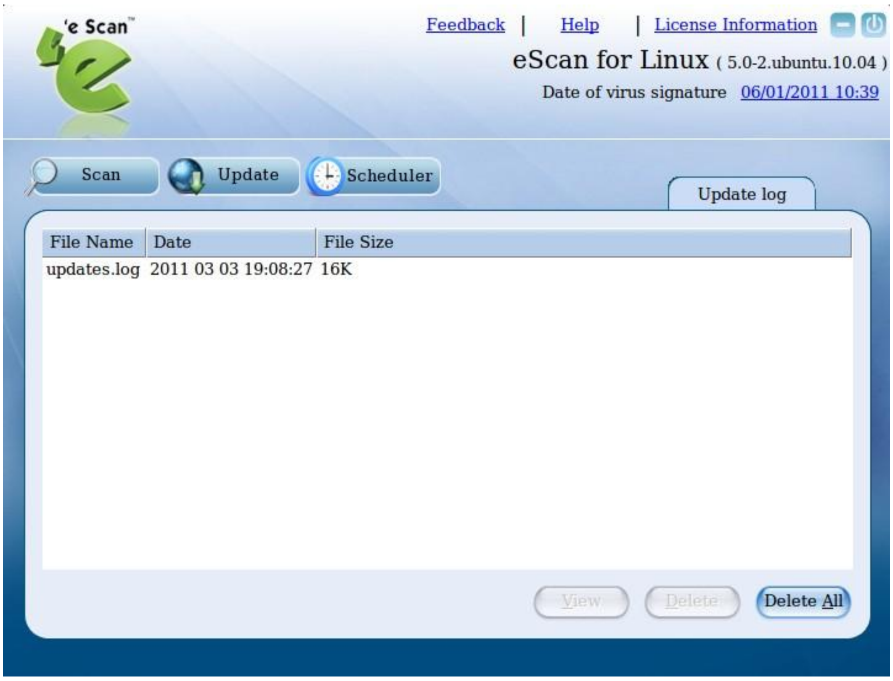
    ✓ Name – Enter the user name for the proxy server.

    ✓ Password – Enter the password.

- Automatic Update – Select this option for eScan to download the AV updates automatically at specified time.

- Alert if Virus Definitions are ___ days old – This will Alert the user when AV updates are more than the specified number of days.

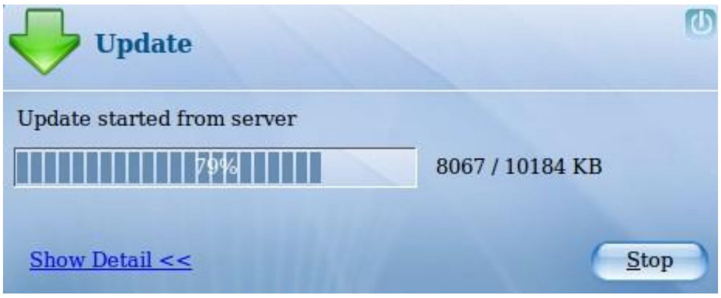
Clicking on this View Log will display updates.log.


'e Scan
Feedback | Help | License Information
eScan for Linux (5.0-2.ubuntu.10.04)
Date of virus signature 06/01/2011 10:39
Scan
Update
Scheduler
Update log
View
Delete
Delete All

File Name	Date	File Size
updates.log	2011 03 03 19:08:27	16K

Fig. 29

Clicking on the Update now link will begin the downloading of latest eScan AV updates. **(NOTE- This button is available for root user login only).**



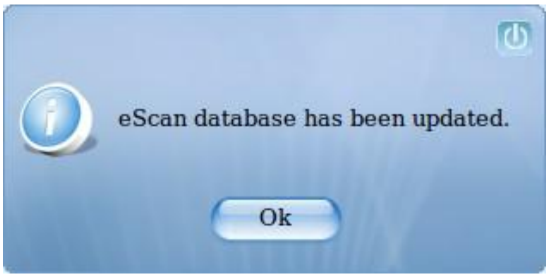
Update

Update started from server

79%

8067 / 10184 KB

Fig.30



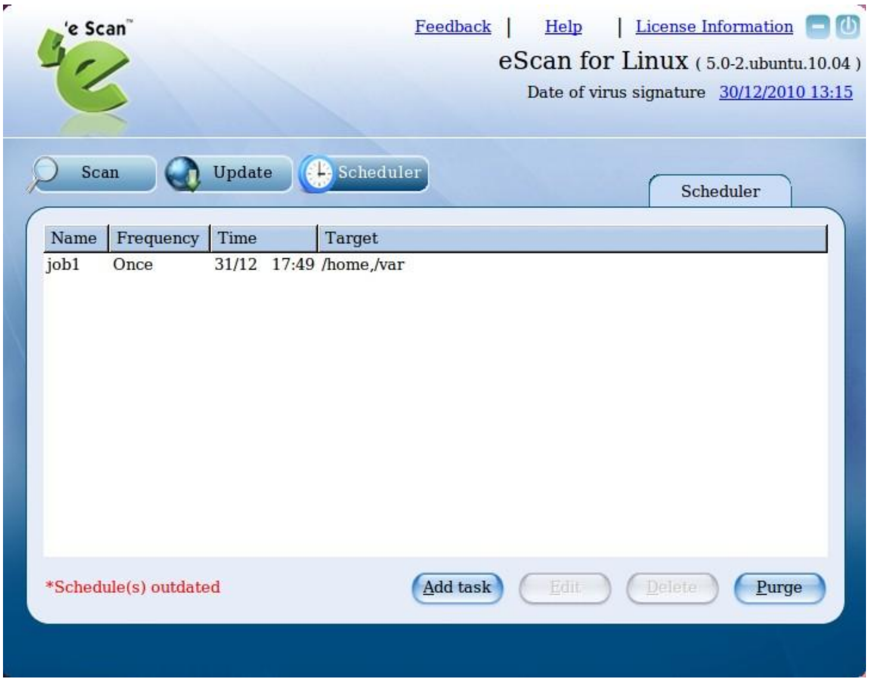
eScan database has been updated.

Fig. 31

Once the download completes, “Virus Database updated successfully” alert message is displayed.

Scheduler

Clicking on this button, will display the list of On-Demand scanning scheduled to be executed at a specified time.



eScan for Linux (5.0-2.ubuntu.10.04)

Date of virus signature 30/12/2010 13:15

Name	Frequency	Time	Target
job1	Once	31/12 17:49	/home,/var

*Schedule(s) outdated

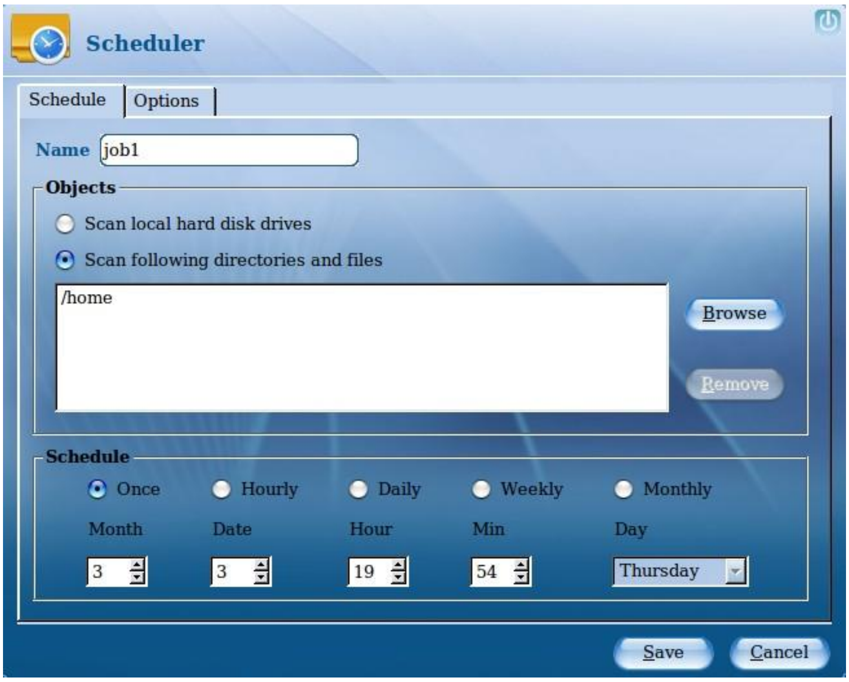
Fig.32

BUTTONS:

1) **Add –** Click on this button to add a new job for scanning.
2) **Edit -** Click on this button to modify an existing job.
3) **Delete –** Click on this button to delete an existing job.
4) **Purge –** Click on this button to delete outdated jobs i.e. jobs already have been completed.

Settings for Schedule Task:

Schedule tab:



Name: job1

Objects

○ Scan local hard disk drives

● Scan following directories and files

/home

Schedule

● Once ○ Hourly ○ Daily ○ Weekly ○ Monthly

Month	Date	Hour	Min	Day
3	3	19	54	Thursday

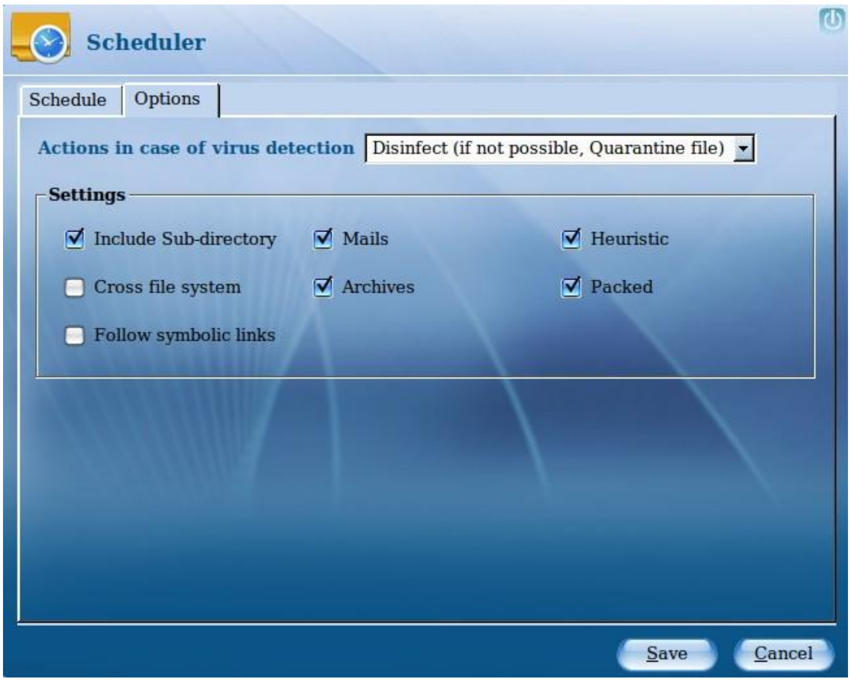
Fig.33

a) Name - Enter the name of the task.

b) Objects - Select the objects which should be scanned

c) Schedule – Set the Frequency, Date and time for the task to be executed.

Options tab:



Actions in case of virus detection: Disinfect (if not possible, Quarantine file)

Settings

☑ Include Sub-directory ☑ Mails ☑ Heuristic

□ Cross file system ☑ Archives ☑ Packed

□ Follow symbolic links

Fig.34

a) Actions in case of virus detection – Set the action when a virus is detected

b) Settings – Set the type of objects to be scanned.

VI. Command-Line to run eScan from Terminal for scanning of viruses and other malwares

For Command-line help to run eScan for scanning of viruses and other malwares, refer to the manual page

```
# man escan
```

eScan Command-line help can also be accessed from the Application Menu in a GNOME / KDE environment (refer fig.19).

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