User Guide - eScan for Linux File Server

I. Required eScan for Linux RPMS / Debian packages

RPM Package Name	File name
mwadmin	mwadmin-x.x-x.<linux distro><release>.i386.rpm
mwav	mwav-x.x-x.<linux distro><release>.i386.rpm
escan	escan-x.x-x.<linux distro><linux release>.i386.rpm
escan-rtm	escan-rtm-x.x-x.<linux distro><release>.i386.rpm

Debian Package Name	File name
mwadmin	mwadmin-x.x-x.<linux distro><release>.i386.deb
mwav	mwav-x.x-x.<linux distro><release>.i386.deb
escan	escan-x.x-x.<linux distro><release>.i386.deb
escan-rtm	escan-rtm-x.x-x.<linux distro><release>.i386.deb

II. Installation

Step 1:-

<u>NOTE: The packages should be installed as per the order given below</u>

Command Line Installation:

For RPM Packages:

```
# rpm -ivh  mwadmin-x.x-x.<linux flavor><release>.i386.rpm

# rpm -ivh  mwav-x.x-x.<linux flavor><release>.i386.rpm

# rpm -ivh   escan-x.x-x.<linux flavor><linux release>.i386.rpm

# rpm -ivh  escan-rtm-x.x-x.<linux flavor><linux release>.i386.rpm
```

For Debian packages:

```
# dpkg -i  mwadmin-x.x-x.<linux flavor><release>.i386.deb

# dpkg -i  mwav-x.x-x.<linux flavor><release>.i386.deb

# dpkg -i  escan-x.x-x.<linux flavor><linux release>.i386.deb

# dpkg -i  escan-rtm-x.x-x.<linux flavor><linux release>.i386.deb
```

Step 2:-

After the installation is complete,

a) Add following entries in **[global]** section of /etc/samba/smb.conf file

```
max mux = 1
```

b) Add following entries in your **[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) And restart the samba server

This completes the Installation procedure for eScan for Linux File Server.

III. Managing eScan for linux using the Web Administrator

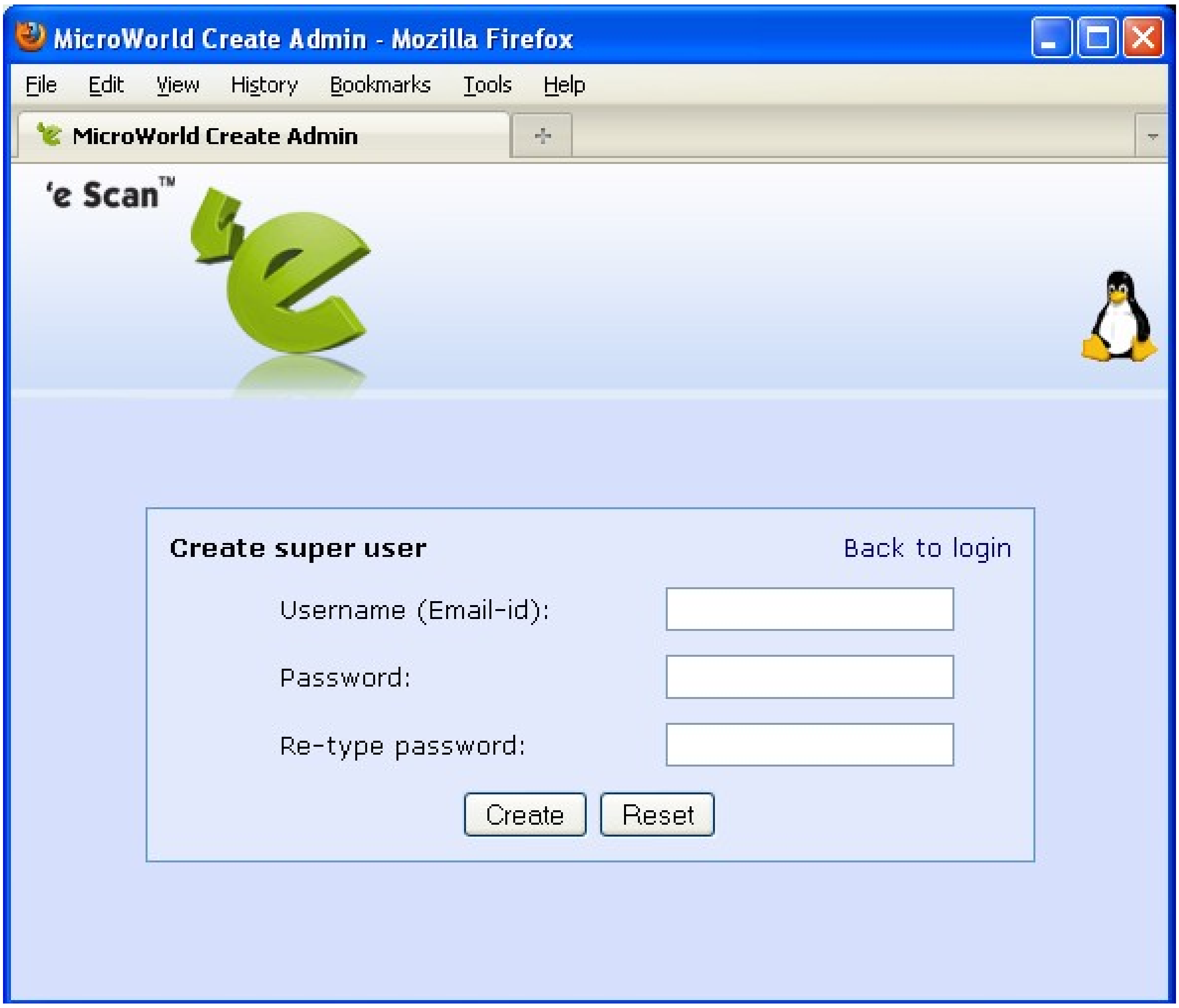
(NOTE: Browser supported is Firefox).

a) To login to the Web Administration using the Hypertext Transfer Protocol Secure (HTTPS)

https://<eScan_Server_IP_address>:10443

b) On first time login, "Create Super USER" window will be displayed. Create a new Super User to access the MWAV and the eScan Module settings

Username should be in the EMAIL-ID format i.e. username@domain.com



MicroWorld Create Admin - Mozilla Firefox

Create super user

Back to login

Username (Email-id):

Password:

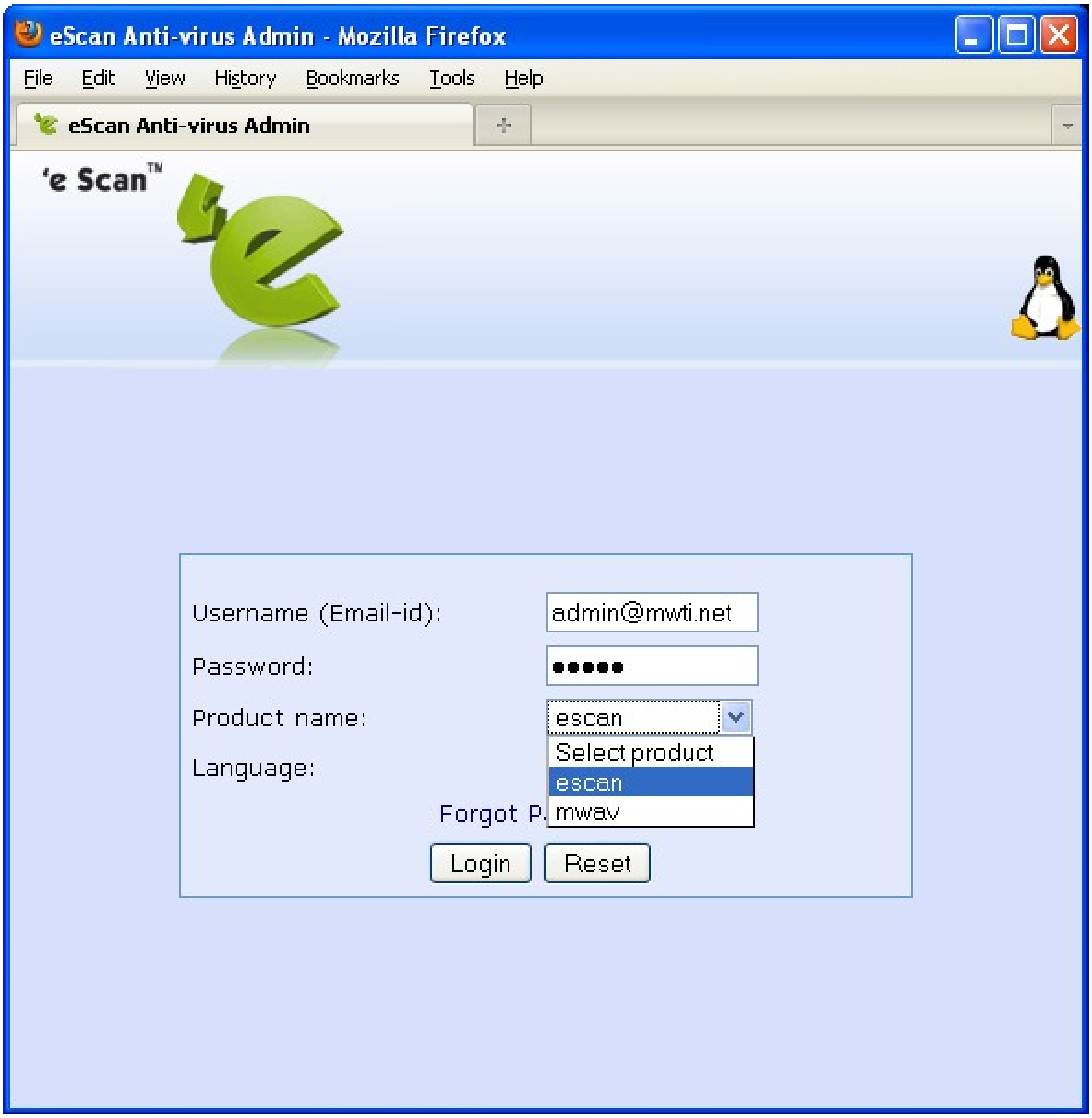
Re-type password:

Fig.1

- **MANAGING eScan AV FROM THE WEB ADMINISTRATOR:**

1) To access the eScan AV settings, select **eScan** in the list of Product-Name drop down box.

2) Login to the Web Administrator using the Super User email id and password


eScan Anti-virus Admin - Mozilla Firefox
File Edit View History Bookmarks Tools Help
eScan Anti-virus Admin
'e Scan™
Forgot P
Login
Reset

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

Password: ●●●●●

Product name: escan

Select product

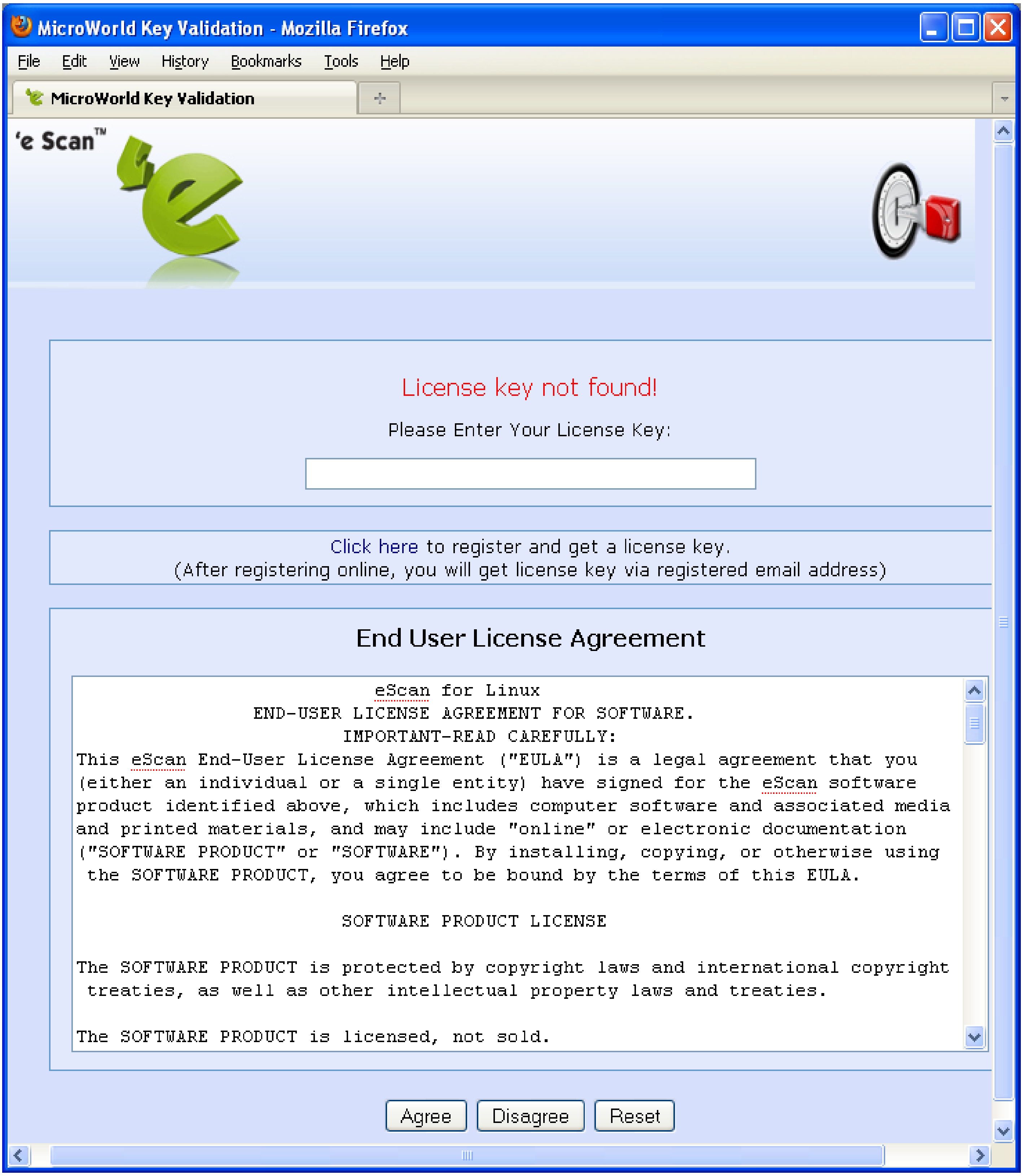
escan

mwav

Language:

Fig.2

3) This will open the License Key and the EULA page. Apply the eScan License key provided to you. For evaluation, select the “Click here to register and get a license key.” A license key will be emailed and apply the same to the 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.

                    SOFTWARE PRODUCT LICENSE

The SOFTWARE PRODUCT is protected by copyright laws and international copyright
 treaties, as well as other intellectual property laws and treaties.

The SOFTWARE PRODUCT is licensed, not sold.
```

Fig.3

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

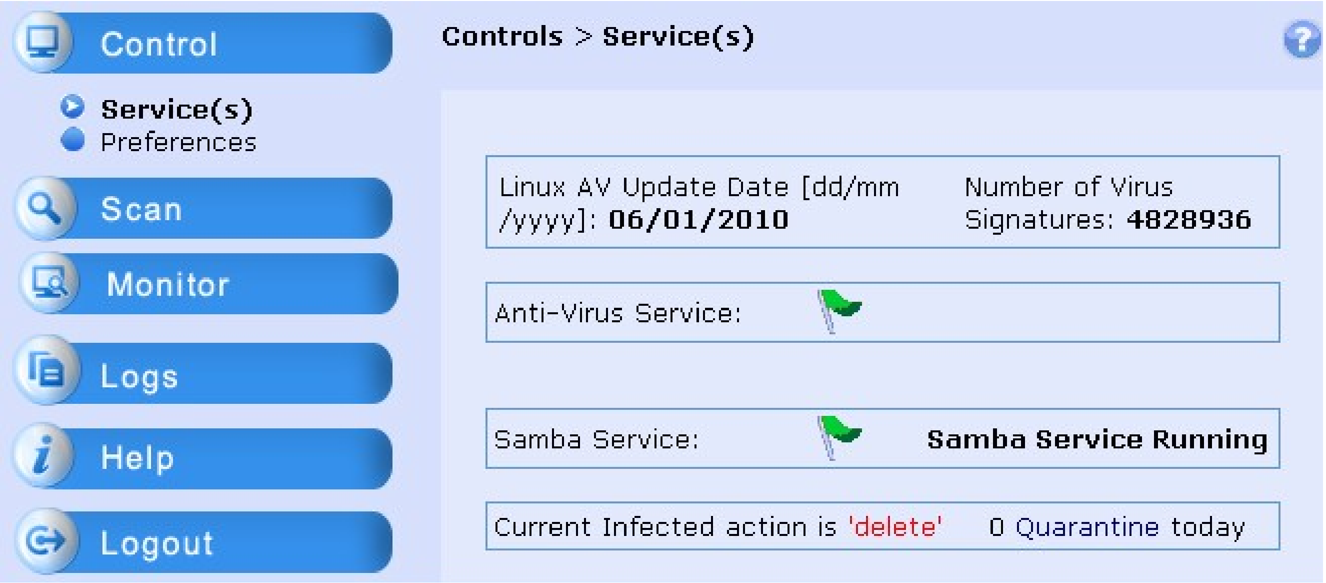
Features and Options in eScan AV:

1) Control > Services

Displays the MicroWorld Anti-virus database update status, AV and the Samba Service status.

- Running Services is indicated with a Green Flag.
- Stopped Services is indicated with a Red Flag.

It also displays the current action by eScan AV on infected files accessed on the Samba shared folder.



Controls > Service(s)

Linux AV Update Date [dd/mm /yyyy]: 06/01/2010

Number of Virus Signatures: 4828936

Anti-Virus Service:

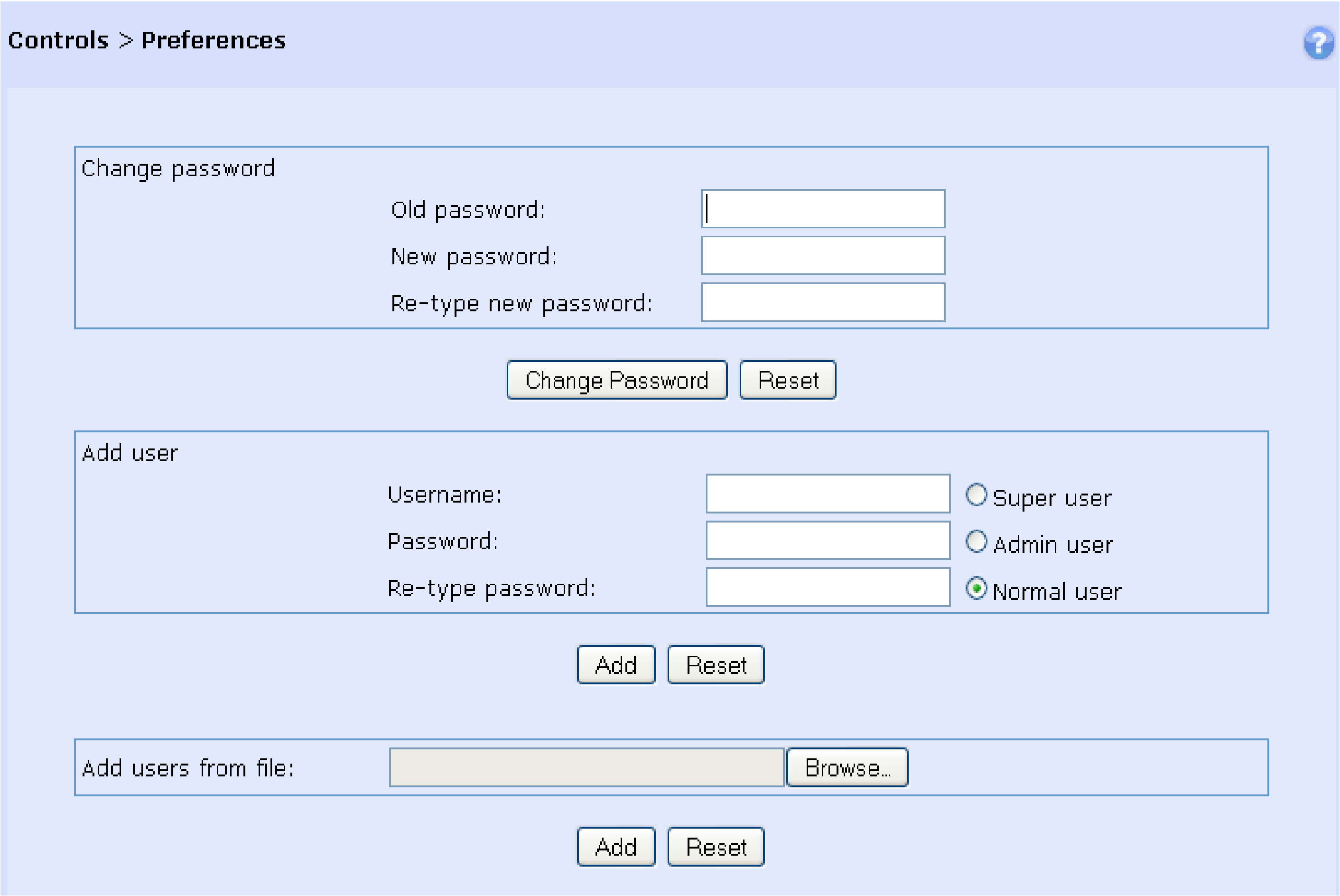
Samba Service: Samba Service Running

Current Infected action is 'delete' 0 Quarantine today

Fig.4

2) Control > Preferences : In this section, Admin password can be changed, new users can be added. The type of users that can be created are Super user and Admin user. Normal user types are not available for eScan for Linux File Servers.

- Super users can access both the eScan AV module and the MWAV module from the Webscan Administrator.
- Admin users can access the particular module in which they are created. For eg. A normal user created in the eScan module can access only the eScan Module and not the MWAV module in the Web Administrator.



Controls > Preferences

Change password

Old password:

New password:

Re-type new password:

Add user

Username: ○ Super user

Password: ○ Admin user

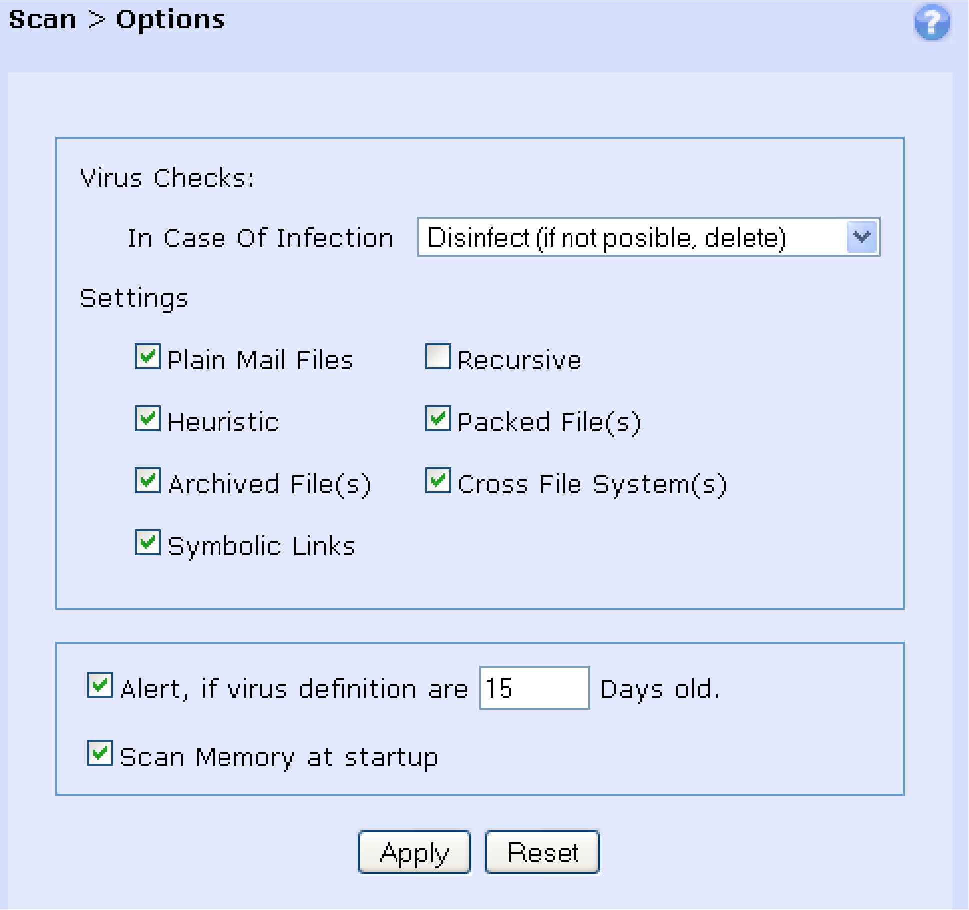
Re-type password: ● Normal user

Add users from file:

Fig.5

3) Scan > Options

In this section, the default action scan options can be set for **On Demand Virus Scanning** i.e. Manual Virus scanning of the system. Also, here it allows you to set the option to alert for outdated AV database.



Scan > Options

Virus Checks:

In Case Of Infection: Disinfect (if not posible, delete)

Settings

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

☑ Alert, if virus definition are 15 Days old.

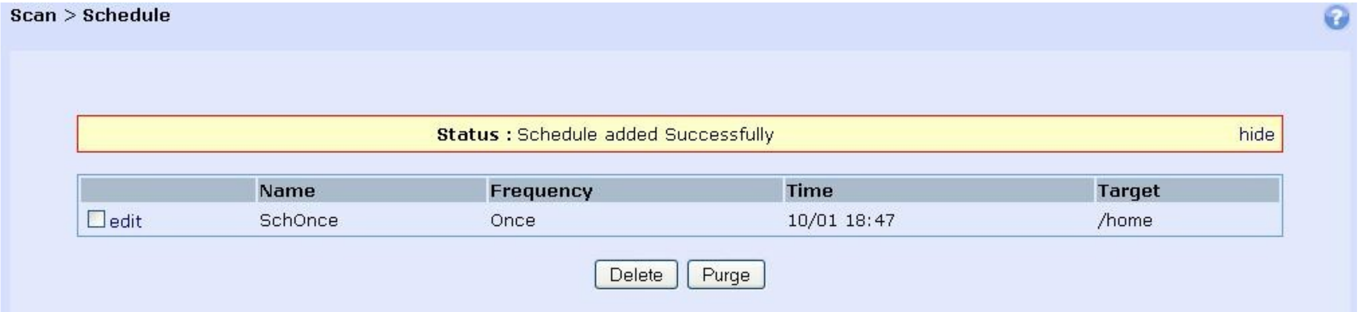
☑ Scan Memory at startup

Fig.6

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 is carried out.

A list of schedules, already created is displayed in the top list box. Schedule name, time when it should start, when it is next due. User can delete the existing schedule by selecting the schedule and choosing Delete.

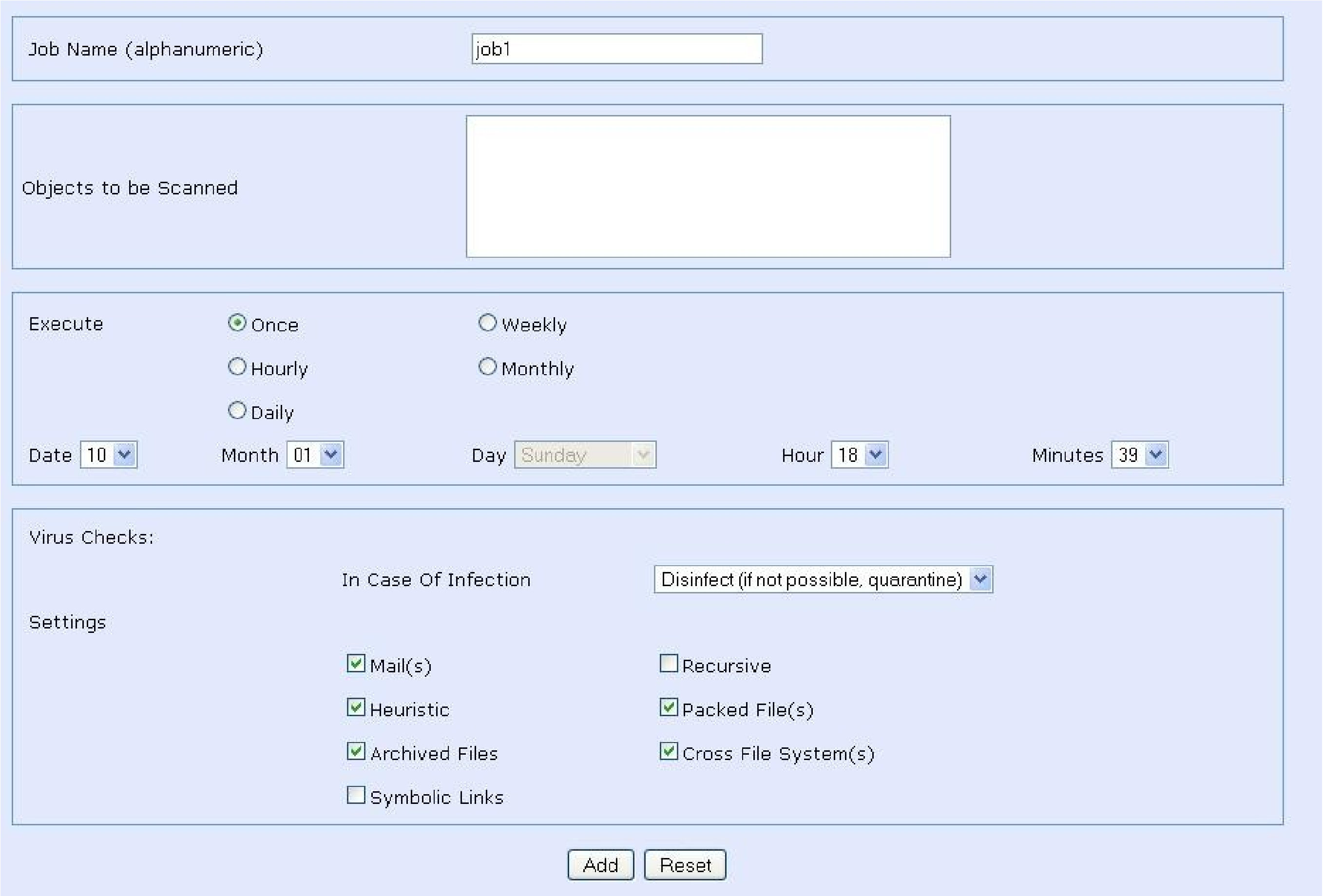


Scan > Schedule

Status : Schedule added Successfully

	Name	Frequency	Time	Target
□ edit	SchOnce	Once	10/01 18:47	/home

Fig.7



Job Name (alphanumeric): job1

Objects to be Scanned:

Execute: ● Once ○ Weekly ○ Hourly ○ Monthly ○ Daily

Date 10 Month 01 Day Sunday Hour 18 Minutes 39

Virus Checks:

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

Settings

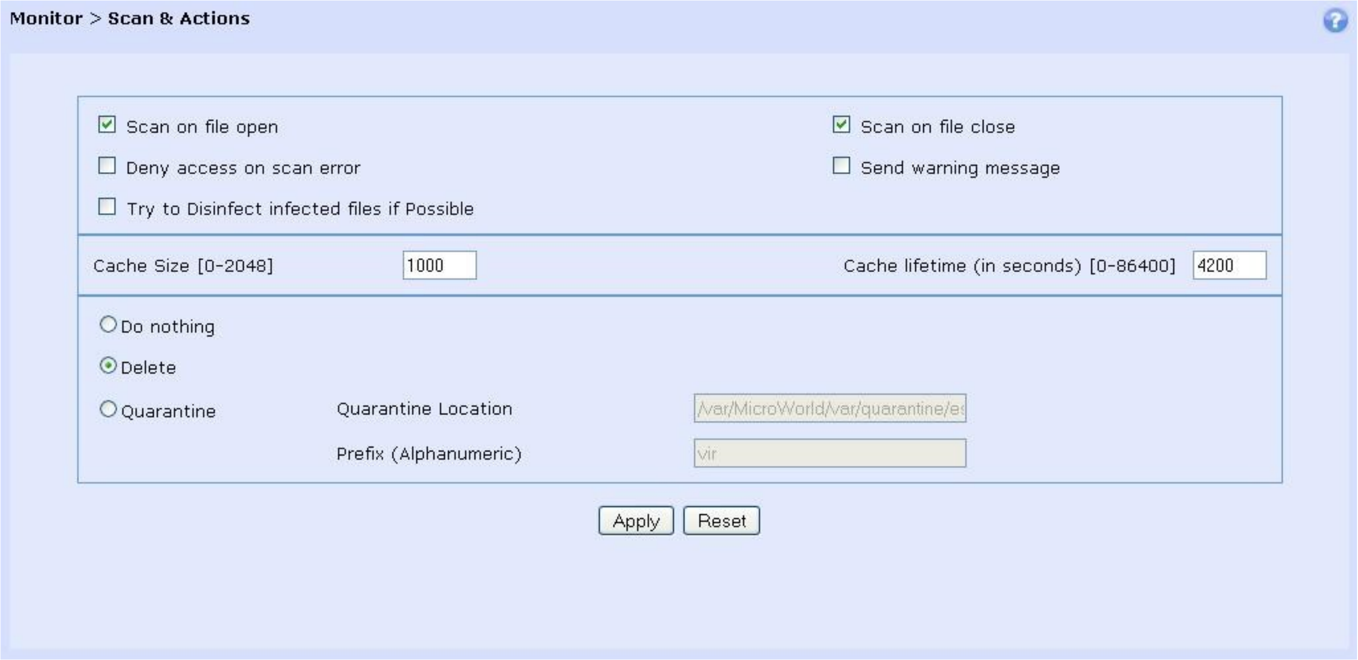
☑ Mail(s) □ Recursive
☑ Heuristic ☑ Packed File(s)
☑ Archived Files ☑ Cross File System(s)
□ Symbolic Links

Fig.8

5) Monitor > Scan & Actions

NOTE:- The Monitor section contains the settings to be configured for AV action on the [shared_name] folder for Samba server.

In this section, contains the settings for scaning and actions to be taken by eScan on Real Time basis on the Samba shared file.



Monitor > Scan & Actions

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

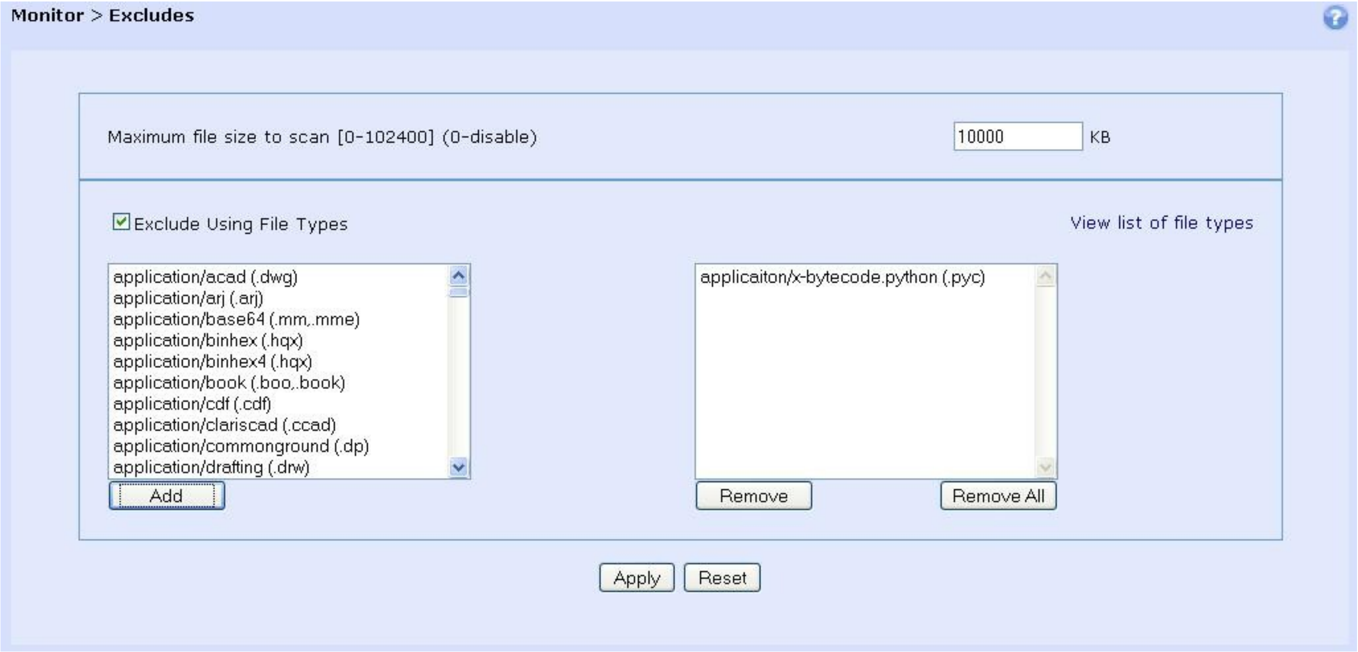
Cache Size [0-2048] 1000
Cache lifetime (in seconds) [0-86400] 4200

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

Fig.9

6) Monitor > Excludes

This screen allows to set various criteria to exclude the Scan of few file(s) like limiting the Maximum size of files to be scanned and types of files to be excluded.


Monitor > Excludes

Maximum file size to scan [0-102400] (0-disable) 10000 KB

☑ Exclude Using File Types

View list of file types

application/acad (.dwg)
application/arj (.arj)
application/base64 (.mm,.mme)
application/binhex (.hqx)
application/binhex4 (.hqx)
application/book (.boo,.book)
application/cdf (.cdf)
application/clariscad (.ccad)
application/commonground (.dp)
application/drafting (.drw)

applicaiton/x-bytecode.python (.pyc)

Fig.10

7) Monitor > Client Policies

In this section, policies can be set like allowing access to clients without any scanning of files (White list Policies), blocking clients from access (Black list policies), allowing access to clients with scanning of all files (Suspected List Policies)

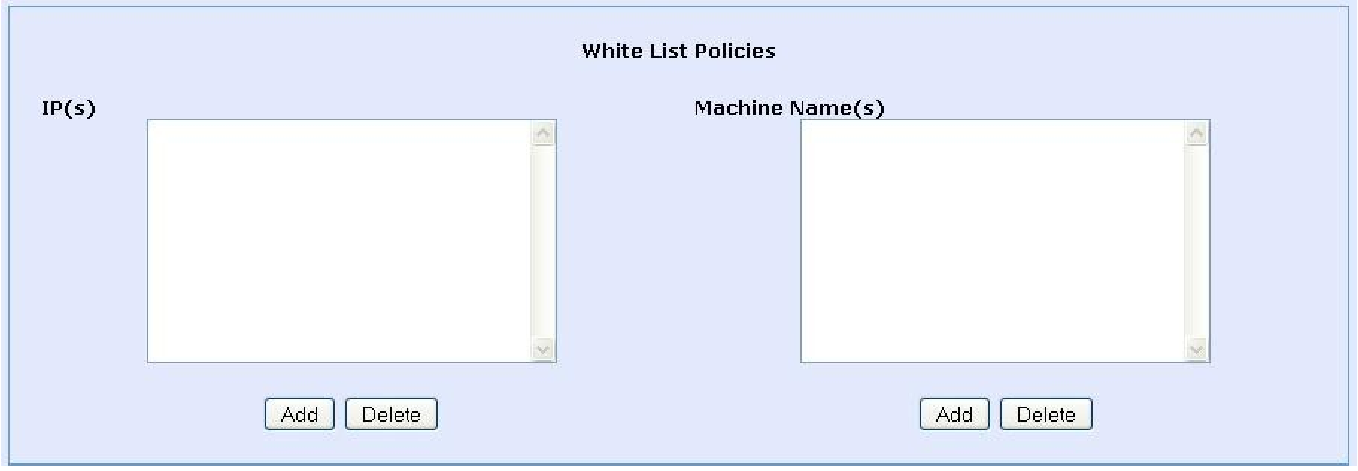


Fig.11

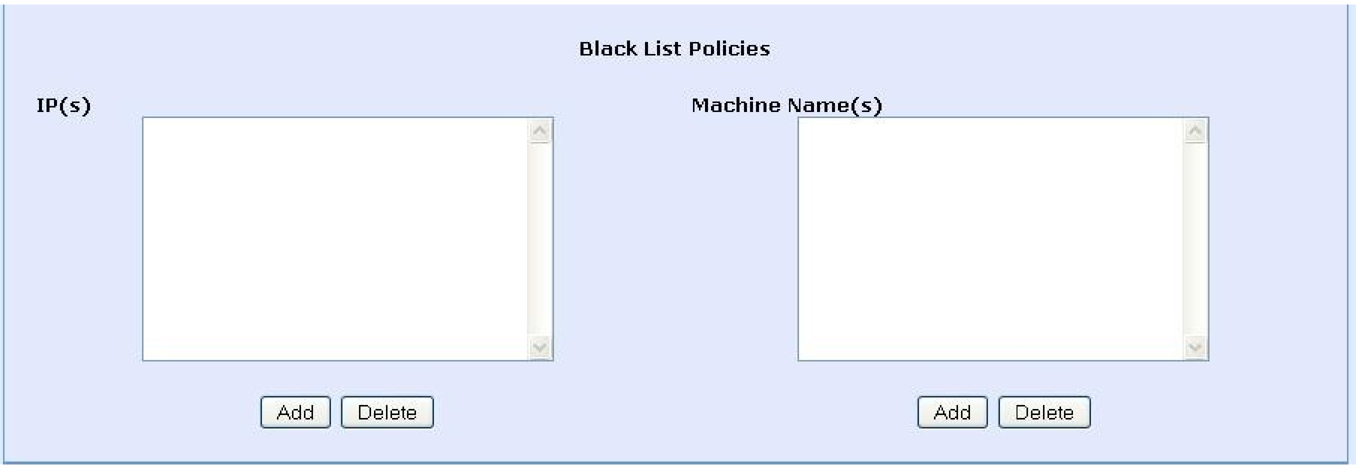


Fig.12

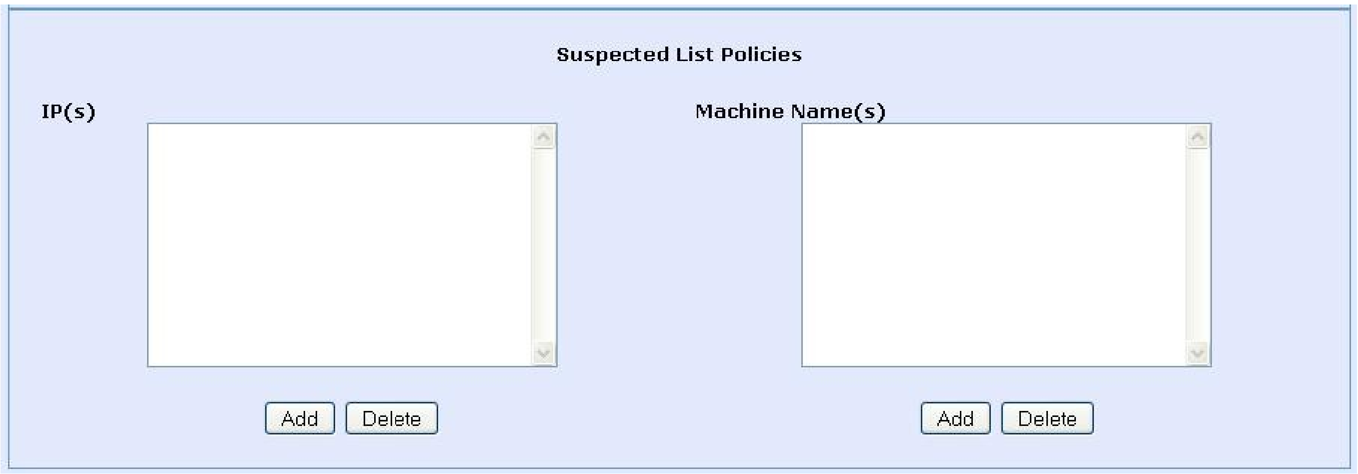
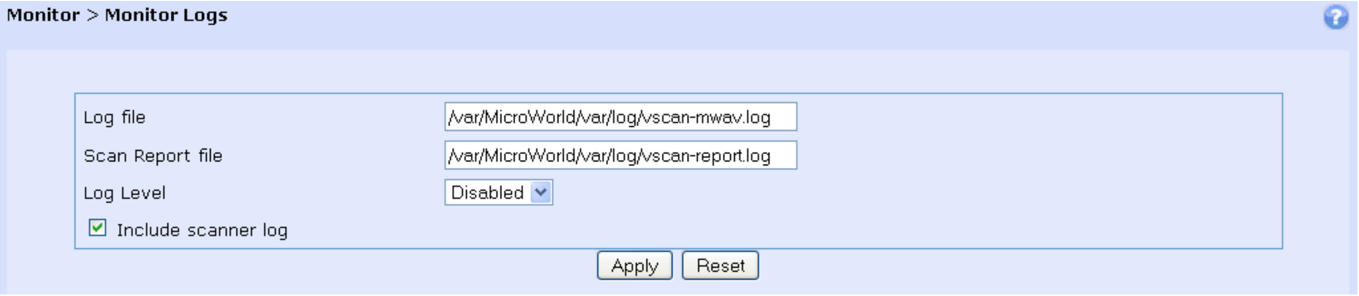


Fig.13

8) Monitor > Logs

This section allows to configure the log and report options,



Monitor > Monitor Logs

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

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

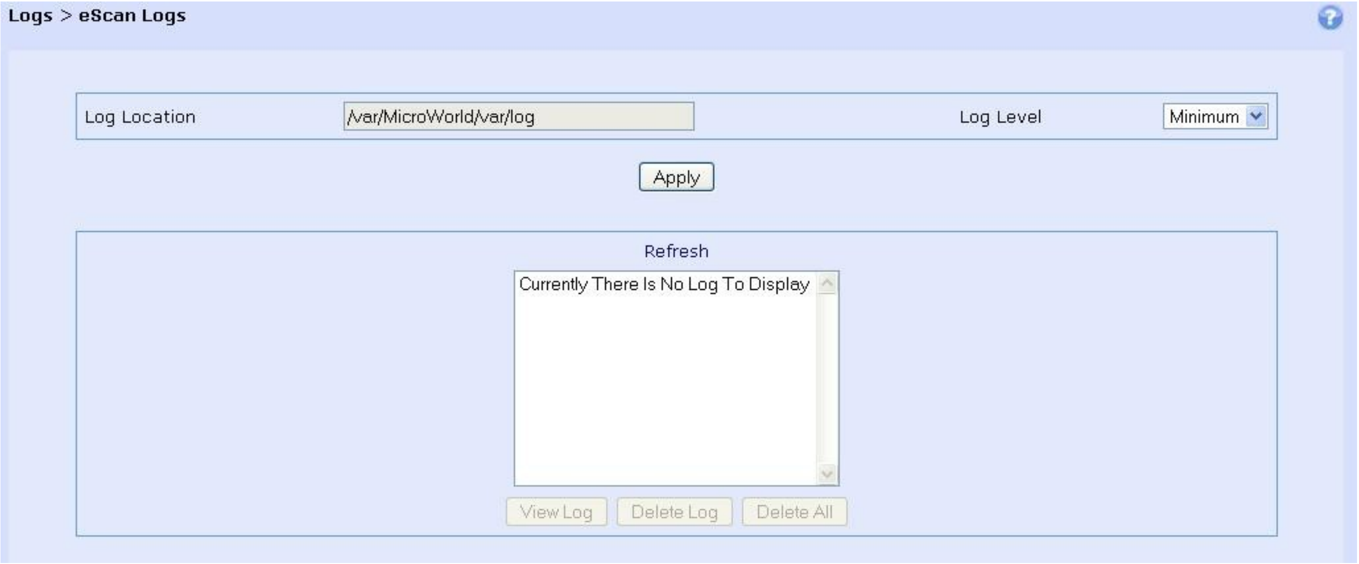
Log Level: Disabled

☑ Include scanner log

Fig.14

9) Logs > eScan Logs

In this section, you can set the log related settings and to view a previous log of eScan activity as well as to clear previous log(s).



Logs > eScan Logs

Log Location: /var/MicroWorld/var/log

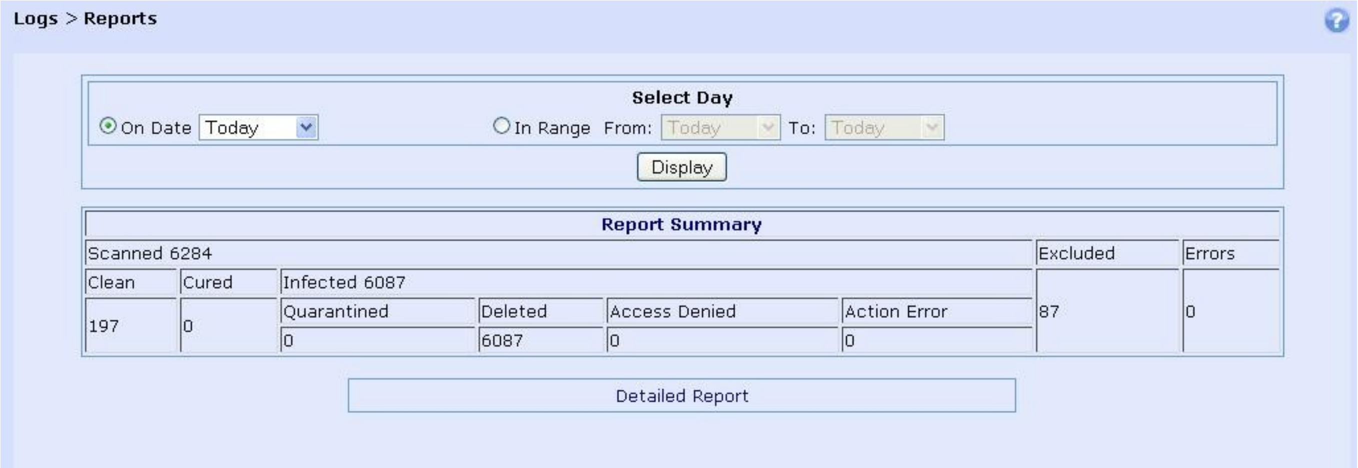
Log Level: Minimum

Currently There Is No Log To Display

Fig.15

10) Logs > Reports

This section will display the online eScan AV report.



Logs > Reports

Select Day

● On Date Today

○ In Range From: Today To: Today

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

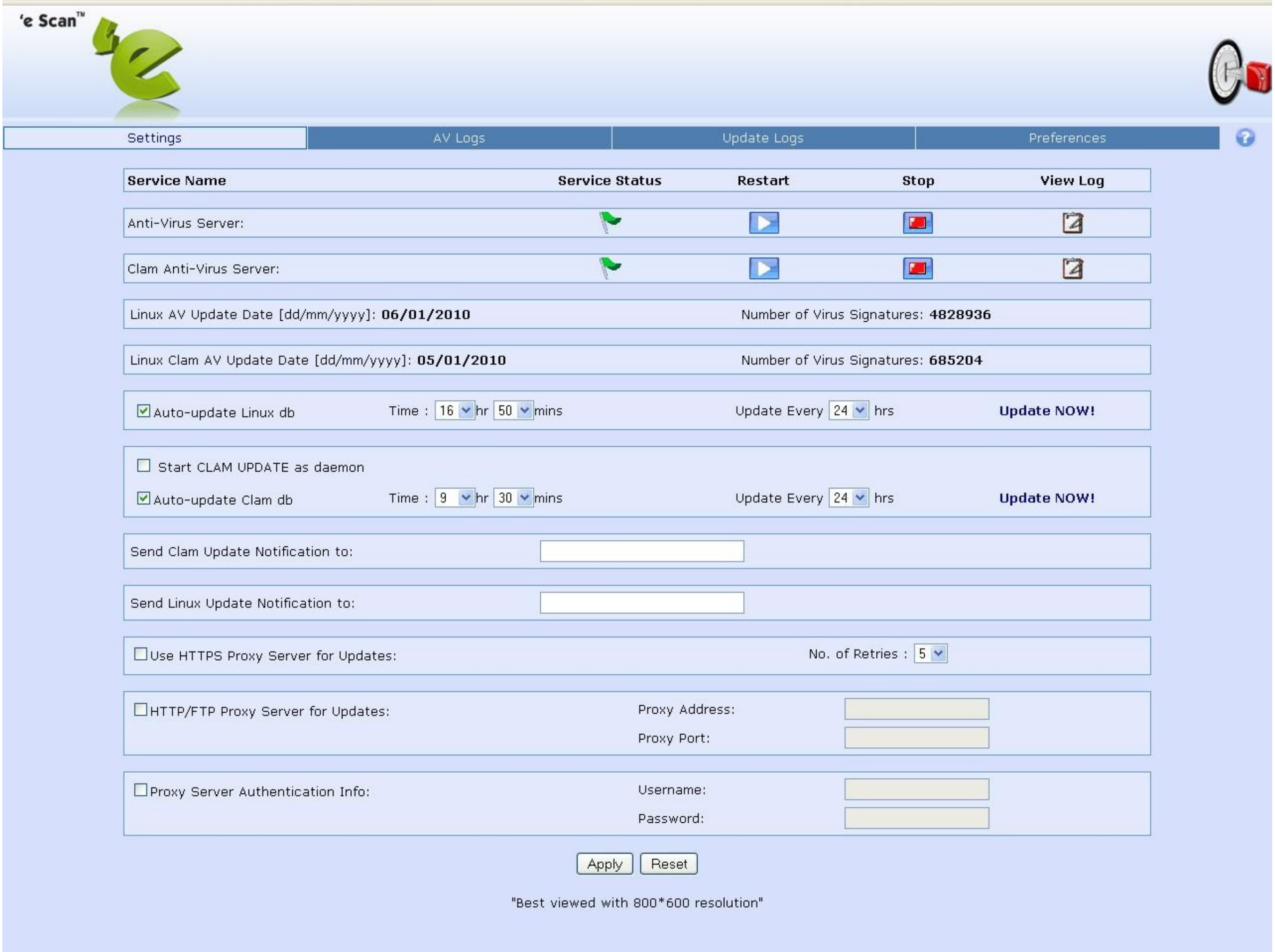
Fig.16

- **MANAGING MWAV FROM THE Web ADMINISTRATOR:**

1) To access the eScan AV settings, select **MWAV** in the list of Product-Name drop down box.

2) Login to the Web Administrator using the Super User email id and password

3) This screen specifies Server Status, and Settings to schedule the download of updates for MWAV for Linux and Windows and MWCAV for Linux.



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

Linux AV Update Date [dd/mm/yyyy]: **06/01/2010** Number of Virus Signatures: **4828936**

Linux Clam AV Update Date [dd/mm/yyyy]: **05/01/2010** Number of Virus Signatures: **685204**

☑ Auto-update Linux db Time : 16 hr 50 mins Update Every 24 hrs **Update NOW!**

□ Start CLAM UPDATE as daemon

☑ Auto-update Clam db Time : 9 hr 30 mins Update Every 24 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:

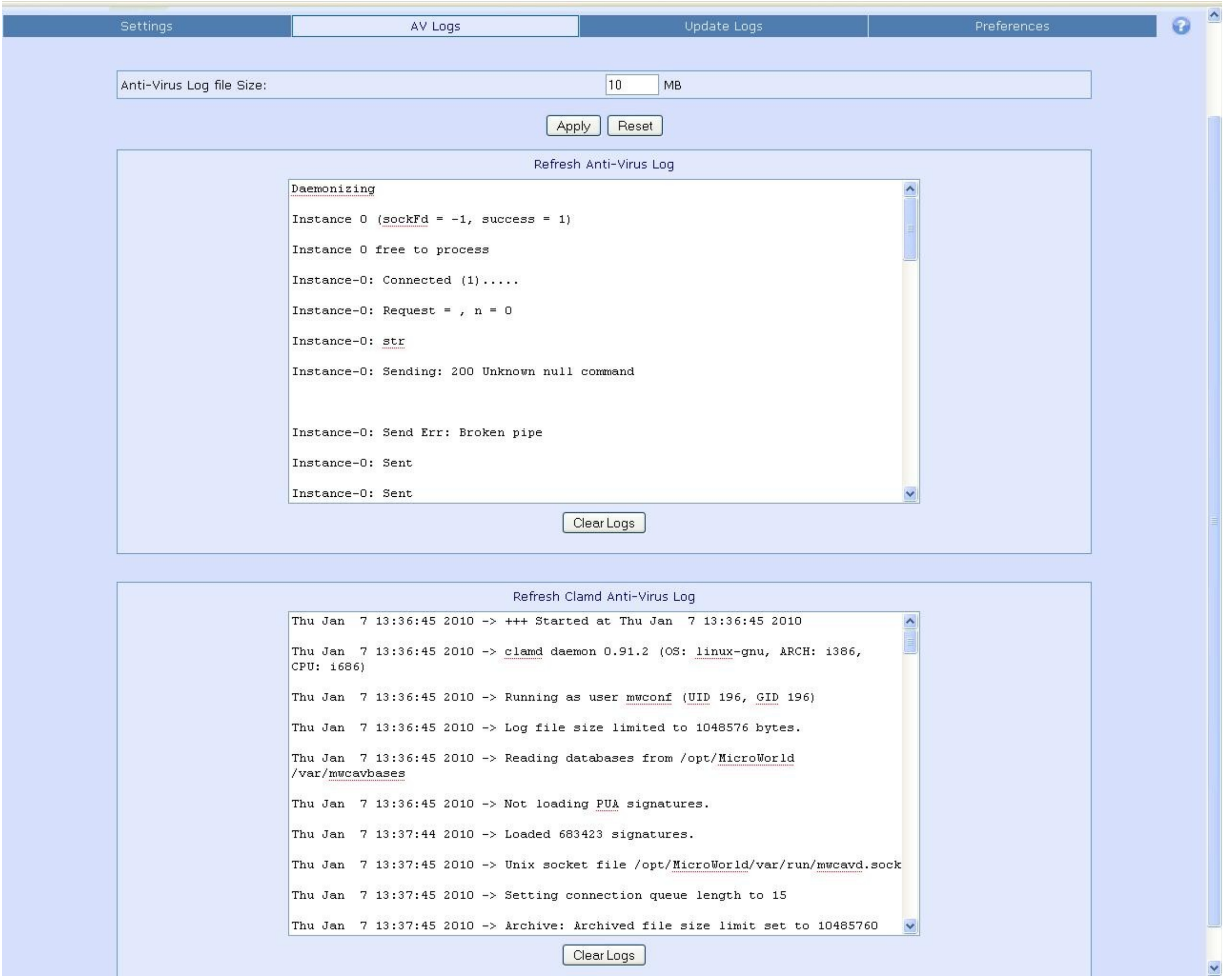
□ Proxy Server Authentication Info: Username: Password:

"Best viewed with 800*600 resolution"

Fig.17

4) AV Logs

This section will display the logs of the AV services



Anti-Virus Log file Size: 10 MB

Refresh Anti-Virus Log

```
Daemonizing

Instance 0 (sockFd = -1, success = 1)

Instance 0 free to process

Instance-0: Connected (1).....

Instance-0: Request = , n = 0

Instance-0: str

Instance-0: Sending: 200 Unknown null command


Instance-0: Send Err: Broken pipe

Instance-0: Sent

Instance-0: Sent
```

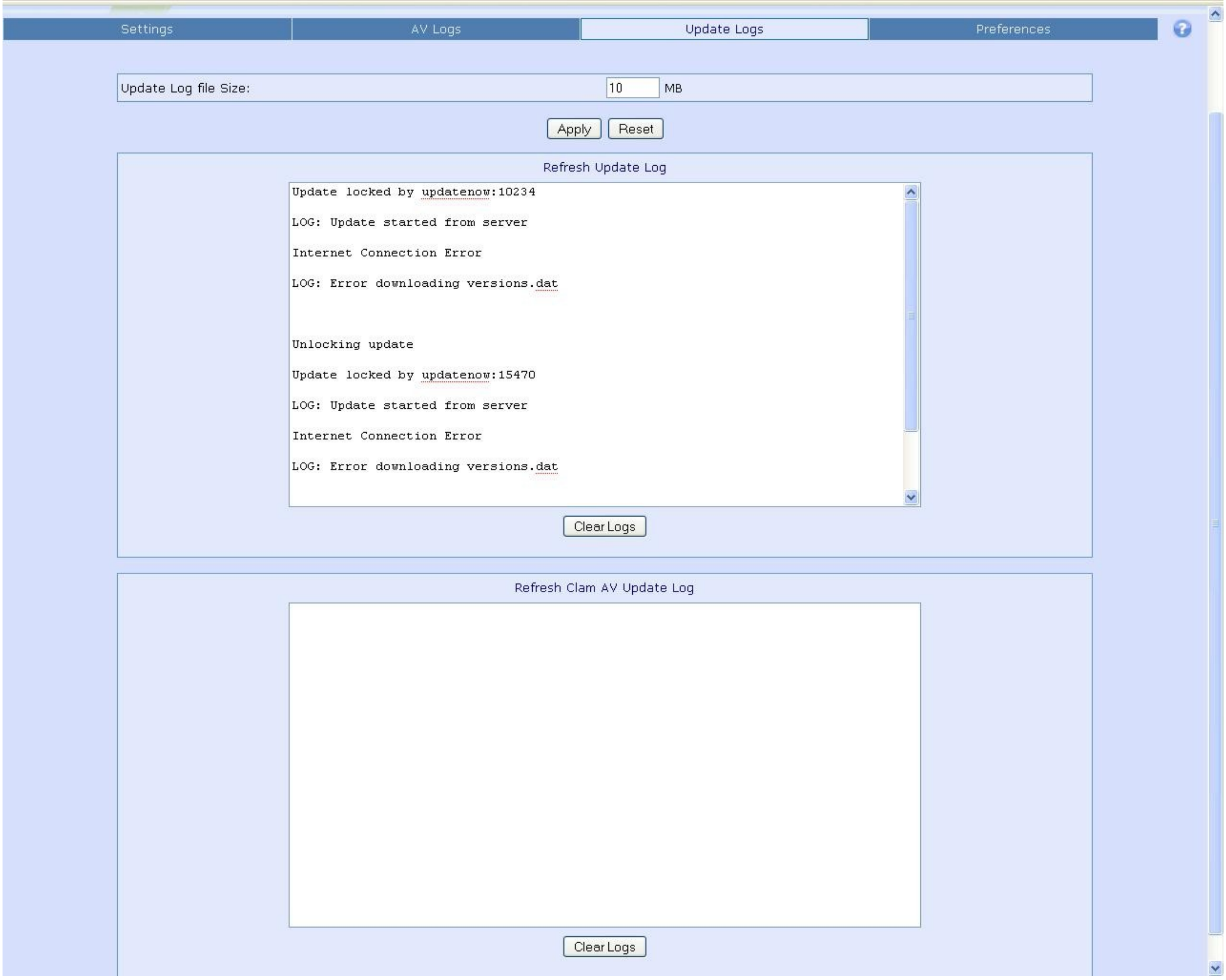
Refresh Clamd Anti-Virus Log

```
Thu Jan  7 13:36:45 2010 -> +++ Started at Thu Jan  7 13:36:45 2010

Thu Jan  7 13:36:45 2010 -> clamd daemon 0.91.2 (OS: linux-gnu, ARCH: i386,
CPU: i686)

Thu Jan  7 13:36:45 2010 -> Running as user mwconf (UID 196, GID 196)

Thu Jan  7 13:36:45 2010 -> Log file size limited to 1048576 bytes.

Thu Jan  7 13:36:45 2010 -> Reading databases from /opt/MicroWorld
/var/mwcavbases

Thu Jan  7 13:36:45 2010 -> Not loading PUA signatures.

Thu Jan  7 13:37:44 2010 -> Loaded 683423 signatures.

Thu Jan  7 13:37:45 2010 -> Unix socket file /opt/MicroWorld/var/run/mwcavd.sock

Thu Jan  7 13:37:45 2010 -> Setting connection queue length to 15

Thu Jan  7 13:37:45 2010 -> Archive: Archived file size limit set to 10485760
```

Fig.18

5) Update Logs

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



Update Log file Size: 10 MB

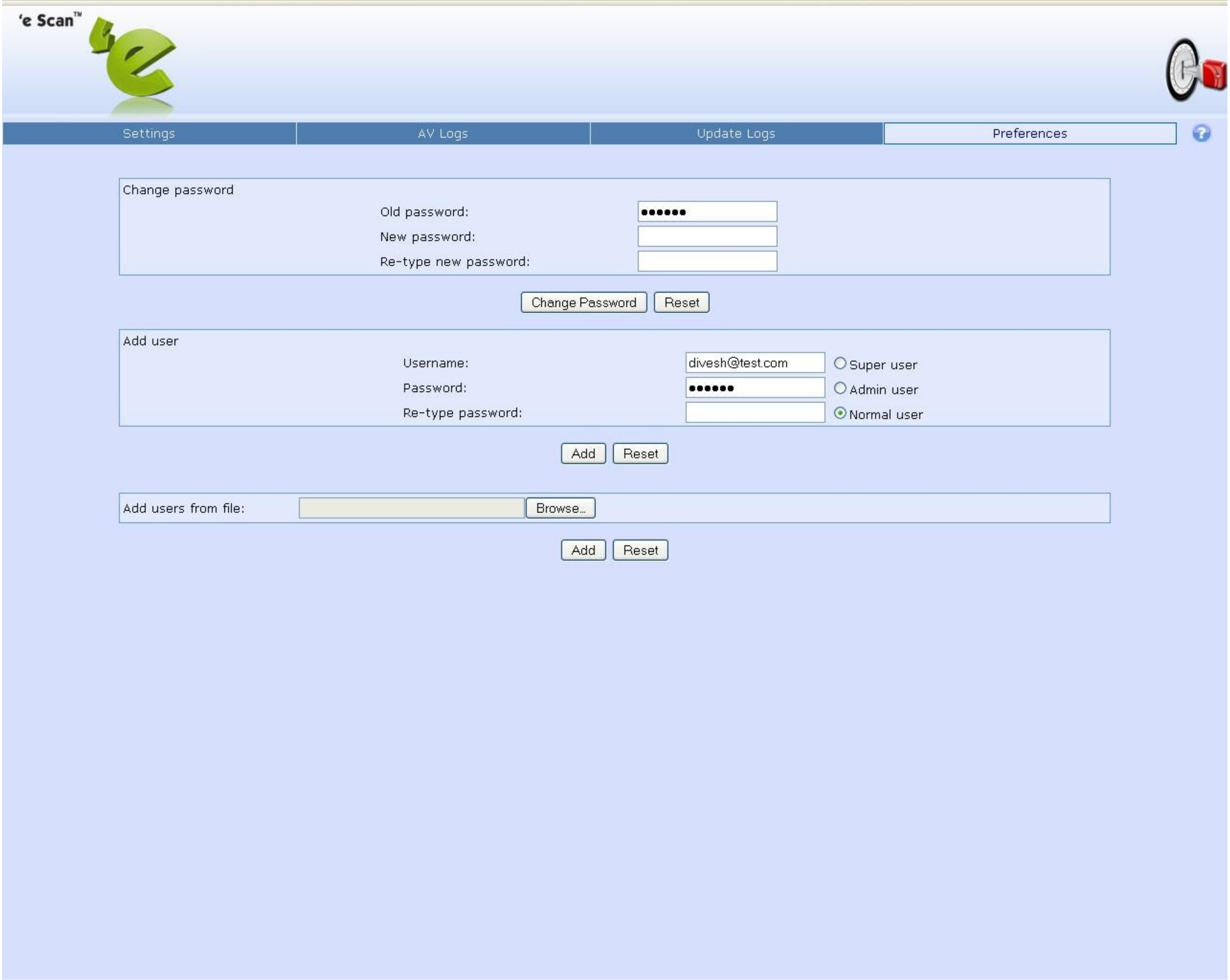
```
Update locked by updatenow:10234

LOG: Update started from server

Internet Connection Error

LOG: Error downloading versions.dat


Unlocking update

Update locked by updatenow:15470

LOG: Update started from server

Internet Connection Error

LOG: Error downloading versions.dat
```

Fig.19

5) Preferences

In this section, logged in user can change the password, new users can be added. The type of users that can be created are Super user and Admin user. Normal user types are not available for eScan for Linux File Servers.

- Super users can access both the eScan AV module and the MWAV module from the Webscan Administrator.
- Admin users can access the particular module in which they are created. For eg. An Admin user created in the eScan module can access only the eScan Module and not the MWAV module in the Web Administrator.



Change password

Old password: ••••••

New password:

Re-type new password:

Add user

Username: divesh@test.com ○ Super user

Password: •••••• ○ Admin user

Re-type password: ● Normal user

Add users from file:

Fig.20

IV. On-Demand Scanner (eScan GUI)

To access the On-Demand Scanner from the Desktop, click on the eScan "e" icon on the Desktop.

Normal User:

Fig.21 will be displayed when in Normal User login.

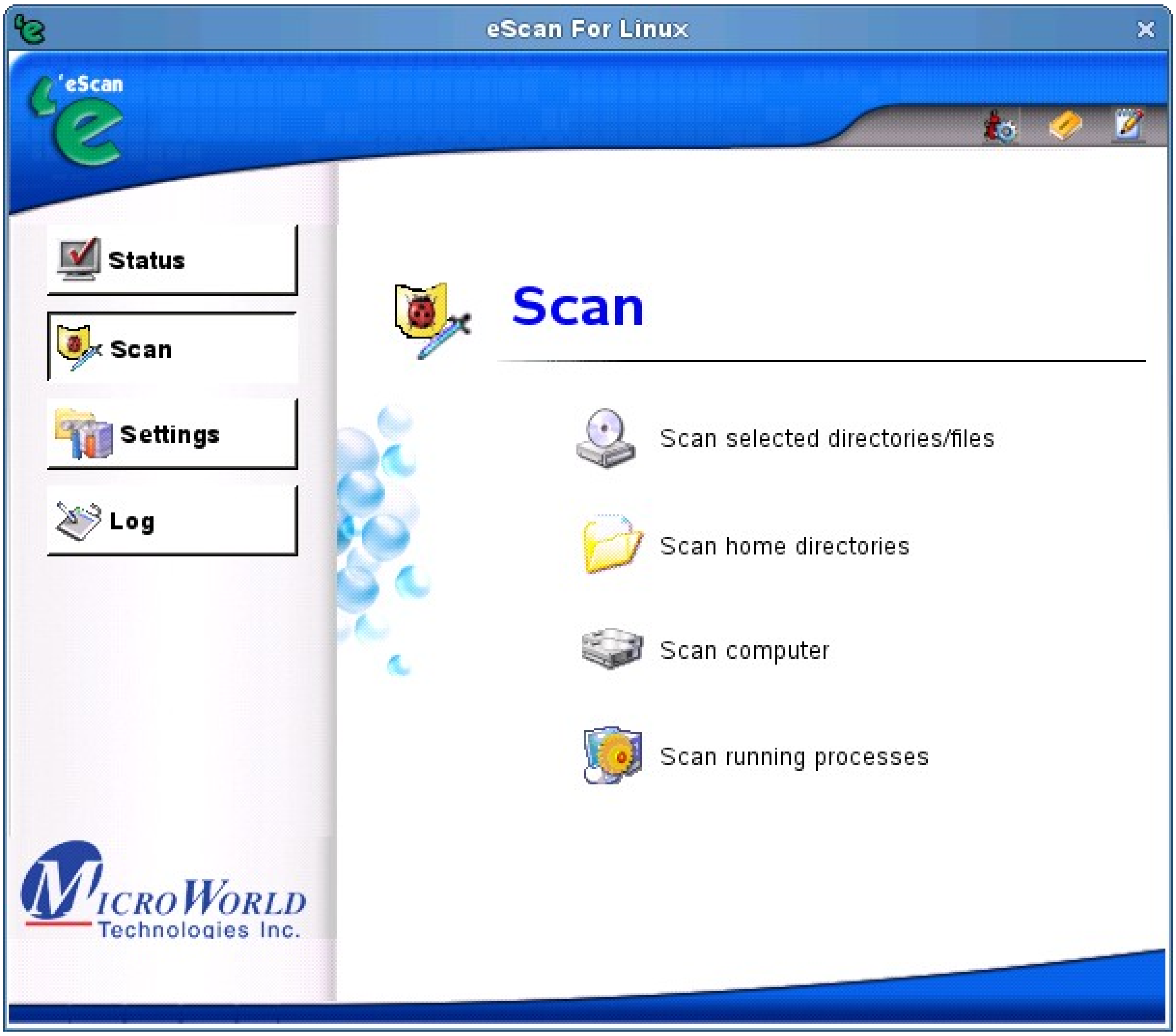
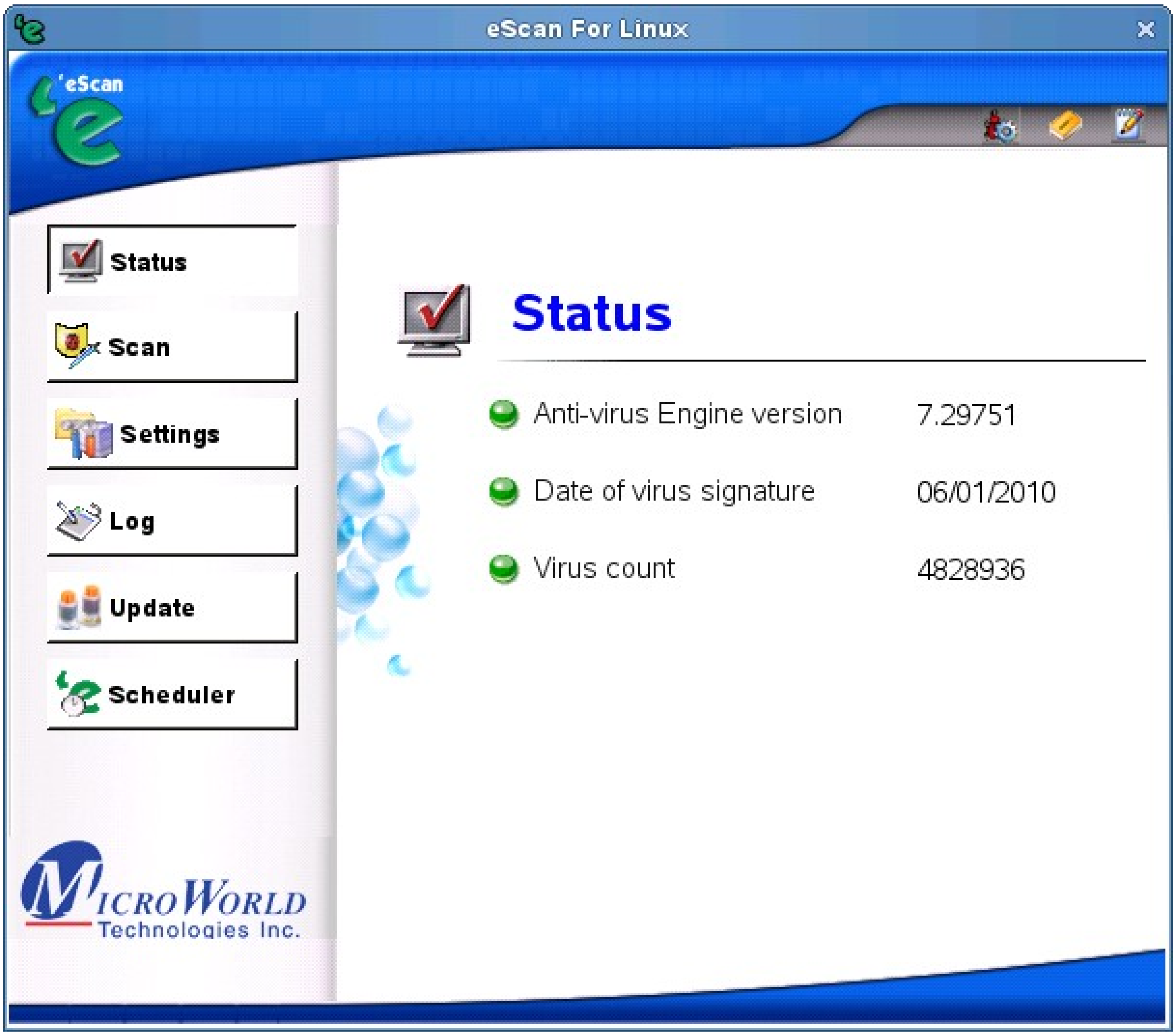


Fig.21

Root User:

Fig. 22 will be displayed when in Root User login with additional option of Update and Scheduler.



Status

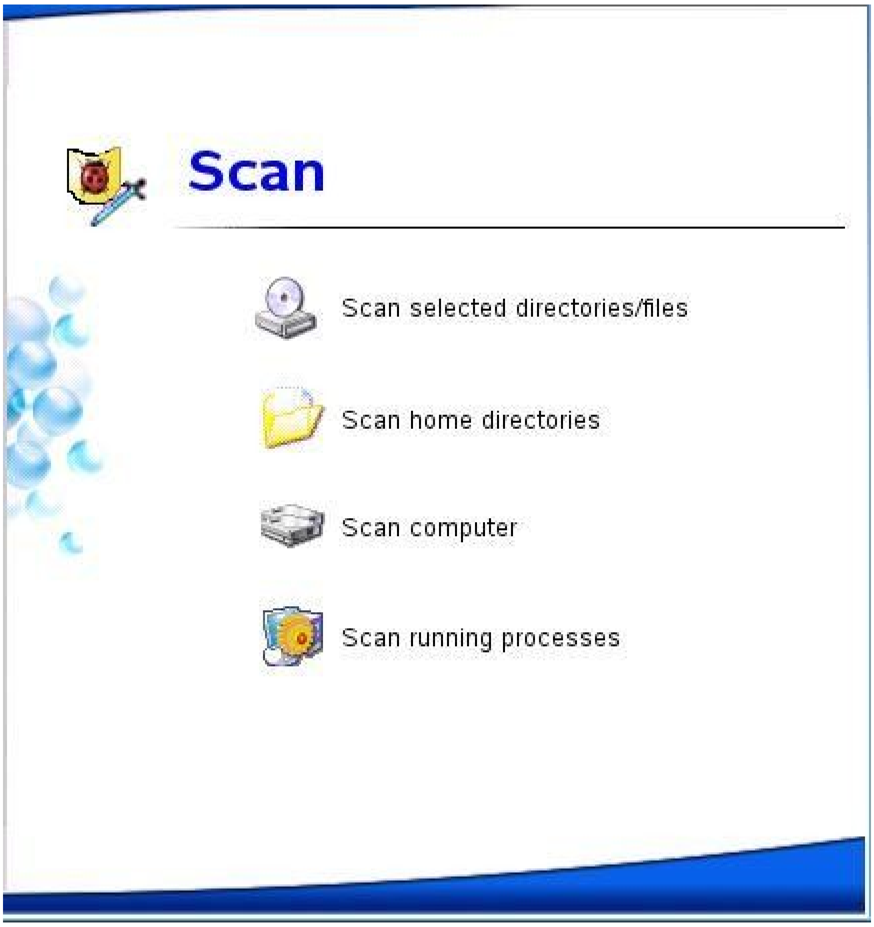
Anti-virus Engine version	7.29751
Date of virus signature	06/01/2010
Virus count	4828936

Fig. 22

Clicking on this button will display the Status of :

- Anti-virus Engine version – Displays the version number eScan AV engine.
- Date of virus signature – Displays the date of the downloaded virus signature updates.
- Virus count – Displays the total count of the Viruses detected by eScan.

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



Scan

Scan selected directories/files

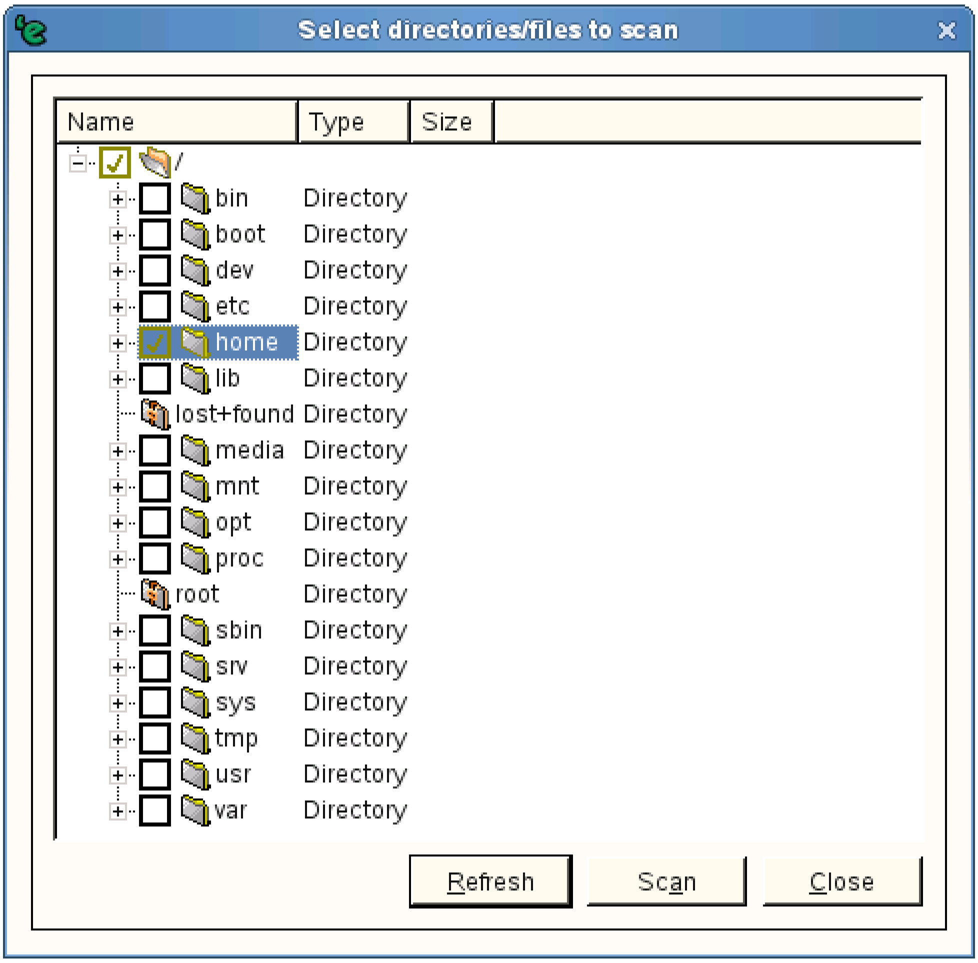
Scan home directories

Scan computer

Scan running processes

Fig.23

- Scan selected directories/files – 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. (Ref. Fig.24)



Name	Type	Size
☑ /		
□ bin	Directory	
□ boot	Directory	
□ dev	Directory	
□ etc	Directory	
☑ home	Directory	
□ lib	Directory	
lost+found	Directory	
□ media	Directory	
□ mnt	Directory	
□ opt	Directory	
□ proc	Directory	
root	Directory	
□ sbin	Directory	
□ srv	Directory	
□ sys	Directory	
□ tmp	Directory	
□ usr	Directory	
□ var	Directory	

Fig.24

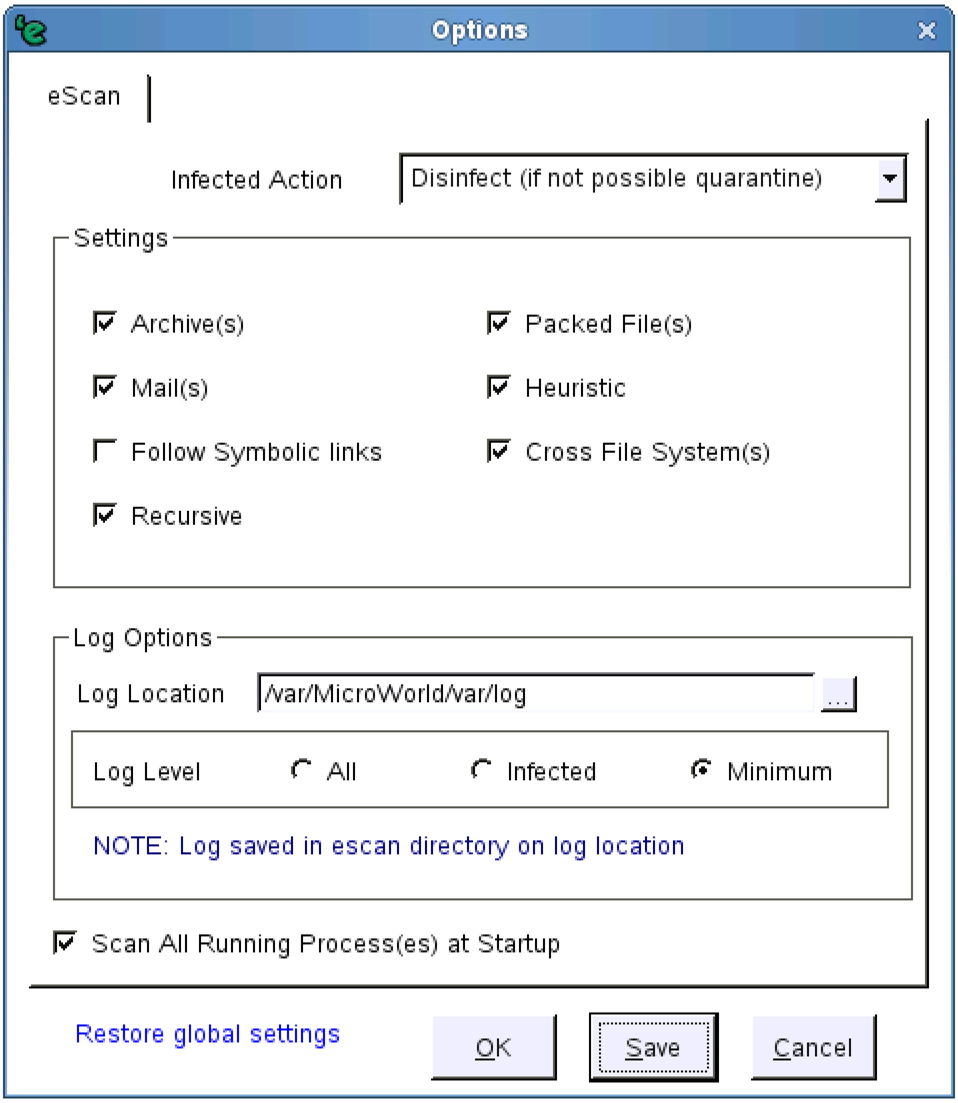
- Scan home directories – Click on this button to scan the Home directories and files of the logged in user.

- 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 this button, the eScan tab will display the settings for the On-Demand Scanning (ODS). Setting configured in this section will be the default action by the On-Demand Scanner whenever it is being executed.:

eScan Tab: In case of normal user login, only the eScan tab will be visible.



Infected Action: Disinfect (if not possible quarantine)

Settings

☑ Archive(s) ☑ Packed File(s)

☑ Mail(s) ☑ Heuristic

☐ Follow Symbolic links ☑ Cross File System(s)

☑ Recursive

Log Options

Log Location: /var/MicroWorld/var/log

Log Level: ○ All ○ Infected ● Minimum

NOTE: Log saved in escan directory on log location

☑ Scan All Running Process(es) at Startup

Restore global settings

Fig. 25

- Infected Action – 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. Recursive - 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.

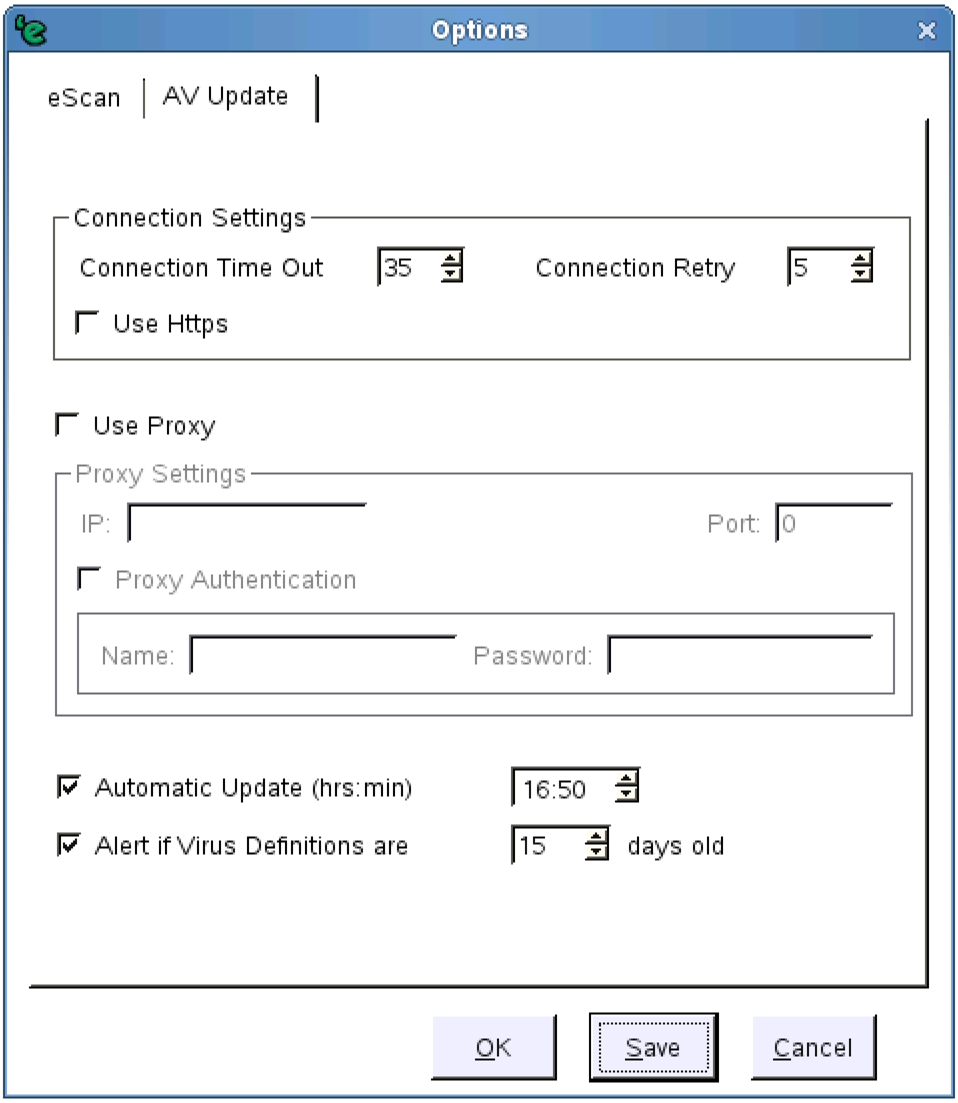
        (b) Infected – This option will specify only details of the infected objects in the eScan log.

        (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.

AV Update Tab: In case of root user login, the eScan tab as well as AV Update tab will be visible. This section contains the internet settings for downloading of virus signature updates.



Options

eScan | AV Update

Connection Settings

Connection Time Out 35 Connection Retry 5

□ Use Https

□ Use Proxy

Proxy Settings

IP: Port: 0

□ Proxy Authentication

Name: Password:

☑ Automatic Update (hrs:min) 16:50

☑ Alert if Virus Definitions are 15 days old

Fig. 26

- 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.

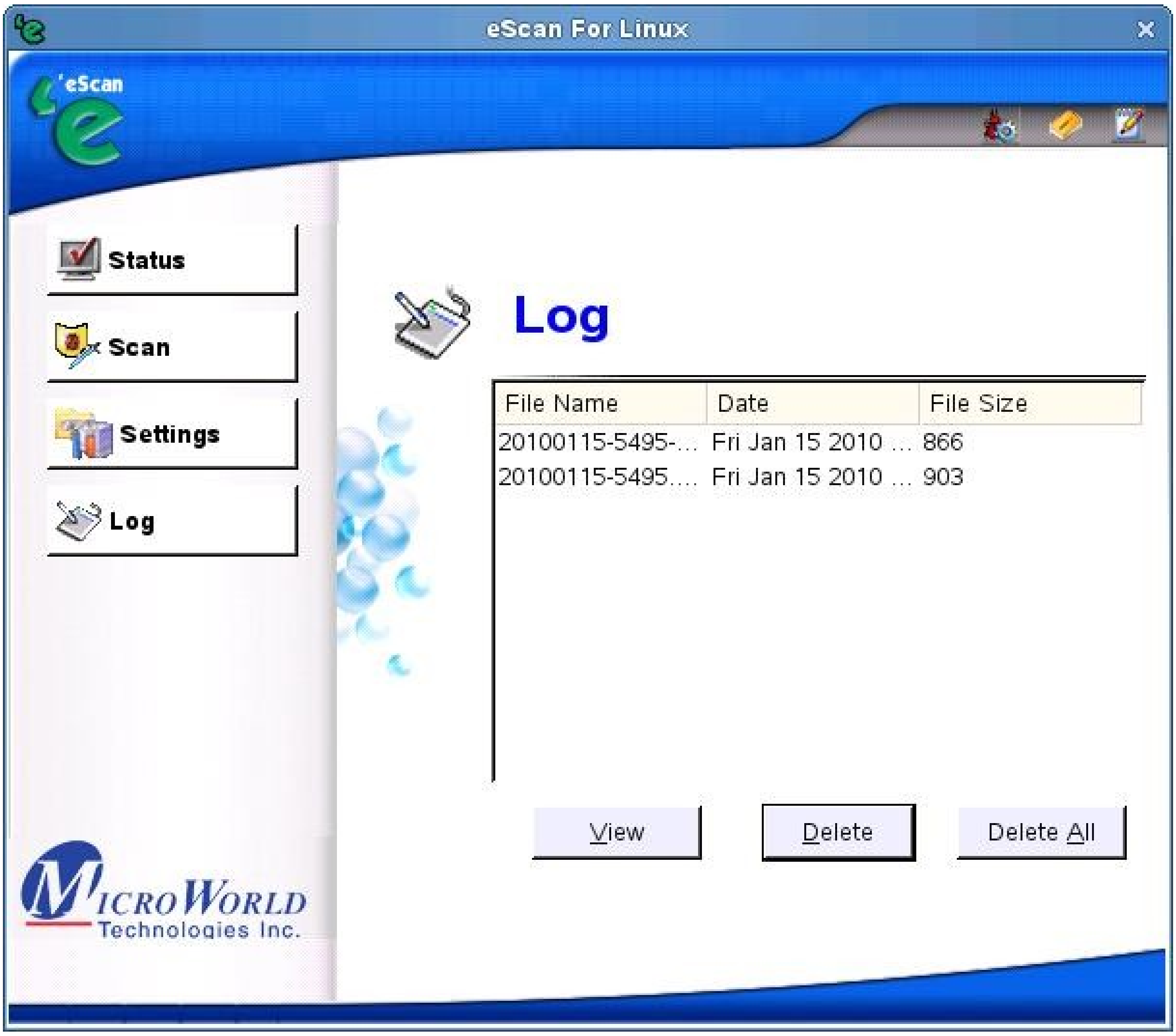
    ii. Port – Enter the Port of the internet proxy server.

    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.

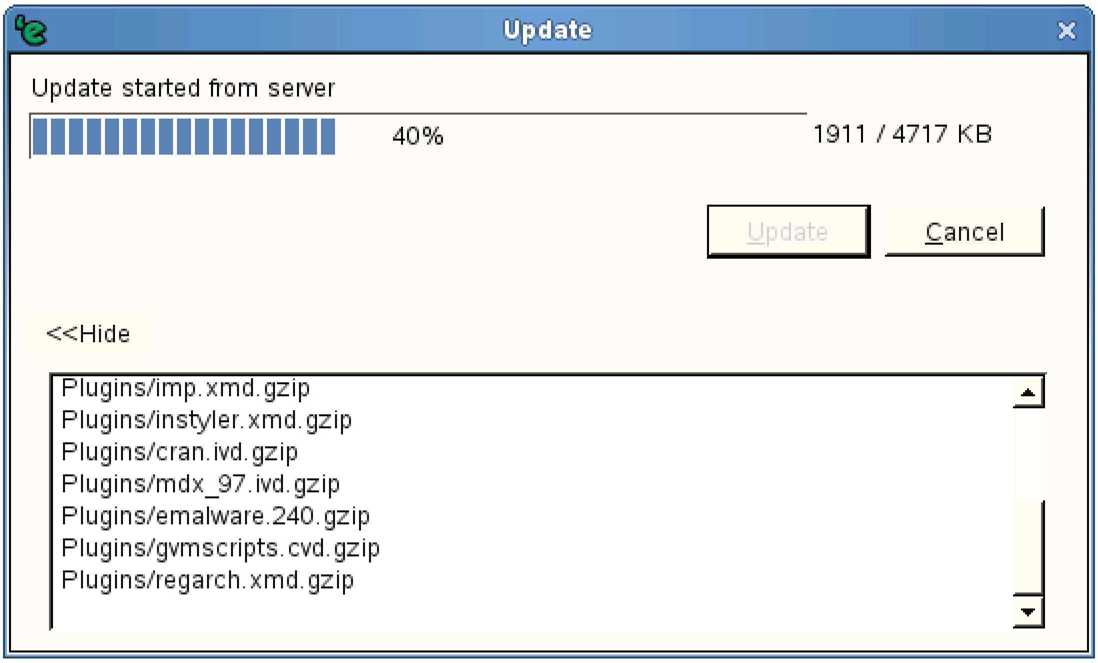
Clicking on this button will display all the On-Demand Scanner logs.



File Name	Date	File Size
20100115-5495-...	Fri Jan 15 2010 ...	866
20100115-5495....	Fri Jan 15 2010 ...	903

Fig. 27

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



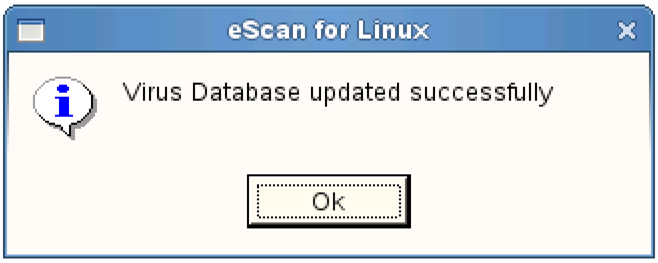
Update started from server

40%

1911 / 4717 KB

```
Plugins/imp.xmd.gzip
Plugins/instyler.xmd.gzip
Plugins/cran.ivd.gzip
Plugins/mdx_97.ivd.gzip
Plugins/emalware.240.gzip
Plugins/gvmscripts.cvd.gzip
Plugins/regarch.xmd.gzip
```

Fig.28

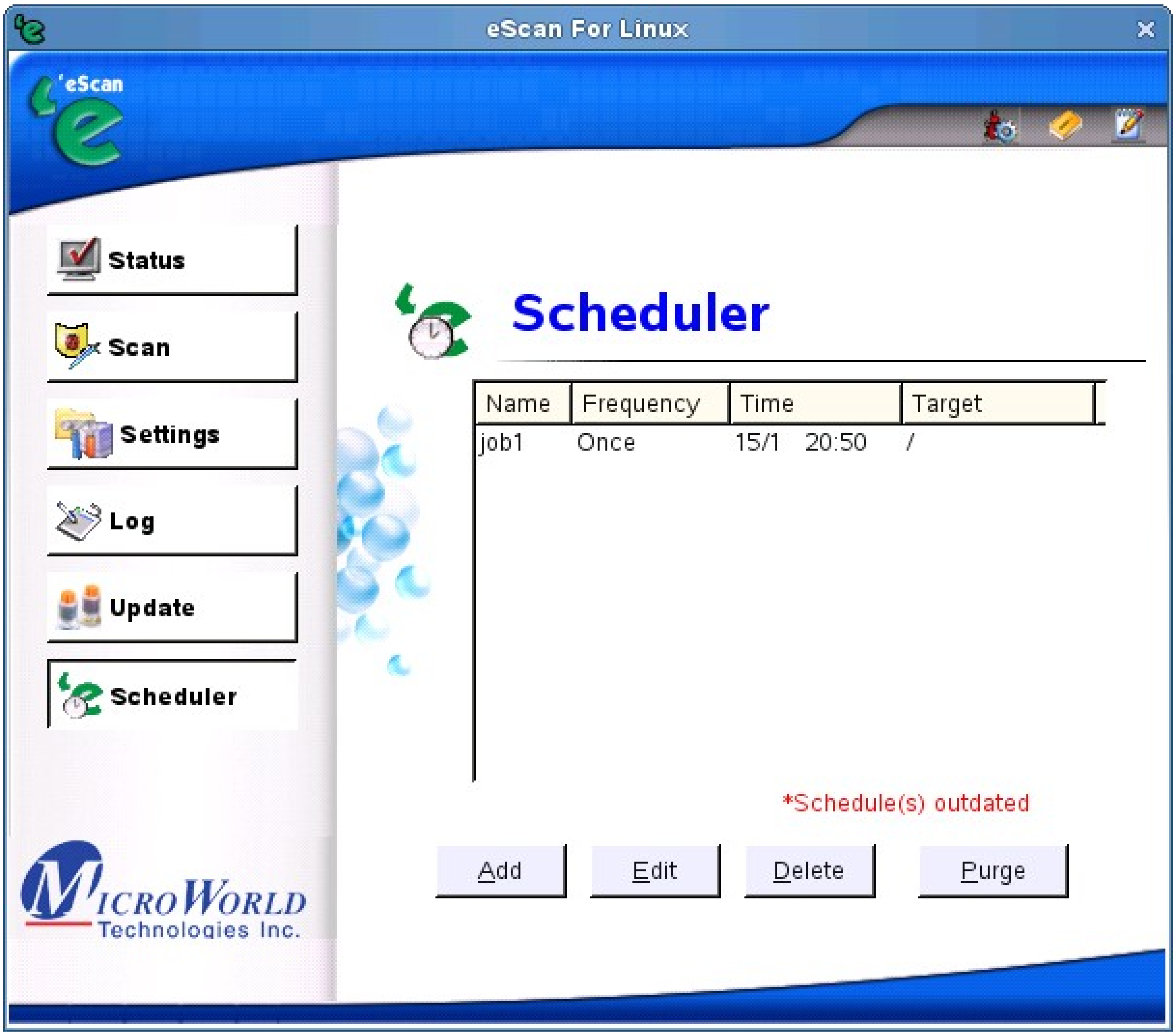


Virus Database updated successfully

Fig. 29

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

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



Name	Frequency	Time	Target
job1	Once	15/1 20:50	/

*Schedule(s) outdated

Fig.30

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.

IV. 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
```