Esia upgrade - Debian 9 to Debian 10

Introduction

The upgrade process depends very much on the customisation that has been done on your Esia in terms of plugins.

The more plugins you have added, the greater the risk that these plugins will go into error after the update. It is therefore all the more important to respect the backup process in addition to the snapshot in order to avoid having to perform a rollback.

The rest of the tutorial covers :

- **2. Prerequisites** Necessary to start the update.
- **3. Updating process** Steps required to complete the update.
- **4. Troubleshooting** Troubleshooting: Refer to this chapter only if you encounter a problem in point 3.
- **5. Cleaning** To recover disk space after the update.

We strongly recommend that you read this tutorial in its entirety at least once before starting the production update.

Prerequisites

Before starting the update, all of the following points must be met:

- Have an internet connection to download the update packages.
- **Make a snapshot of the VM beforehand** in order to quickly return to the previous state in the event of MAJOR problems.
- Make a backup of certain Esia files. To avoid having to rollback the snapshot in the event of a SMALL problem. **This step is NECESSARY in the event of a support call. See point 3.1.1 « Faire un backup de votre Esia »**
- **Have an Esia licence file to hand.** (usually called esia.lic) unless you have a Mercury licence. Otherwise, contact your file manager or partners.contact@esia-sa.com

Update steps

Pre-update preparation

The following 3 steps should be carried out in the desired order.

Make a backup of your Esia

This will avoid having to return to the snapshot in the event of a simple plugin error or similar. Plugin errors are sometimes unavoidable and make this task necessary.

The steps are :

Check that you have enough disk space for the backup using the command :

copy

```
df -h /root
```

The disk space required for the backup depends on your Esia. But if you use less than 50% of your disk space. You are sure to have enough.

backup.sh

```bash
#!/bin/bash
cd /
mkdir -p /root/BACKUP_ESIA
su postgres -c pg_dumpall > /root/BACKUP_ESIA/pg_database.sql
cp -r /usr/local/esia/plugins /root/BACKUP_ESIA/plugins
cp -r /usr/local/esia/public_html /root/BACKUP_ESIA/public_html
cp -r /etc/apache2 /root/BACKUP_ESIA/apache2
cp -r /etc/esia /root/BACKUP_ESIA/esia_conf
iptables-save > /root/BACKUP_ESIA/iptables.txt
dpkg -l > /root/BACKUP_ESIA/version.txt
```

You can check whether the backup was successful by entering the following command:

copy

```
du -sh /root/BACKUP_ESIA/*
```

Examples:

On a small esia

```
root@debian-stretch:~# cd /
root@debian-stretch:/# mkdir -p /root/BACKUP_ESIA
root@debian-stretch:/# su postgres -c pg_dumpall >
/root/BACKUP_ESIA/pg_database.sql
root@debian-stretch:/# cp -r /usr/local/esia/plugins
/root/BACKUP_ESIA/plugins
```

```
root@debian-stretch:/# cp -r /usr/local/esia/public_html
/root/BACKUP_ESIA/public_html
root@debian-stretch:/# cp -r /etc/apache2 /root/BACKUP_ESIA/apache2
root@debian-stretch:/# cp -r /etc/esia /root/BACKUP_ESIA/esia_conf
root@debian-stretch:/# iptables-save > /root/BACKUP_ESIA/iptables.txt
root@debian-stretch:/# dpkg -l > /root/BACKUP_ESIA/version.txt
root@debian-stretch:/# du -sh /root/BACKUP_ESIA/*
652K /root/BACKUP_ESIA/apache2
32K /root/BACKUP_ESIA/esia_conf
4,0K /root/BACKUP_ESIA/iptables.txt
660K /root/BACKUP_ESIA/pg_database.sql
7.9M /root/BACKUP_ESIA/plugins
23M /root/BACKUP_ESIA/public_html
96K /root/BACKUP_ESIA/version.txt
root@debian-stretch:/#
```

On an Esia with 150 nodes/1800 services

```
root@enterprise-v3:~# cd /
root@enterprise-v3:/# mkdir -p /root/BACKUP_ESIA
root@enterprise-v3:/# su postgres -c pg_dumpall >
/root/BACKUP_ESIA/pg_database.sql
root@enterprise-v3:/# cp -r /usr/local/esia/plugins
/root/BACKUP_ESIA/plugins
root@enterprise-v3:/# cp -r /usr/local/esia/public_html
/root/BACKUP_ESIA/public_html
root@enterprise-v3:/# cp -r /etc/apache2 /root/BACKUP_ESIA/apache2
root@enterprise-v3:/# cp -r /etc/esia /root/BACKUP_ESIA/esia_conf
root@enterprise-v3:/# iptables-save > /root/BACKUP_ESIA/iptables.txt
root@enterprise-v3:/# dpkg -l > /root/BACKUP_ESIA/version.txt
root@enterprise-v3:/# du -sh /root/BACKUP_ESIA/*
692K /root/BACKUP_ESIA/apache2
32K /root/BACKUP_ESIA/esia_conf
4,0K /root/BACKUP_ESIA/iptables.txt
22M /root/BACKUP_ESIA/pg_database.sql
9,1M /root/BACKUP_ESIA/plugins
604M /root/BACKUP_ESIA/public_html
116K /root/BACKUP_ESIA/version.txt
root@enterprise-v3:/#
```

In the event of an error, files/directories are missing or empty

```
root@debian-stretch:/# cd /
root@debian-stretch:/# mkdir -p /root/BACKUP_ESIA
root@debian-stretch:/# su postgres -c pg_dumpall >
/root/BACKUP_ESIA/pg_database.sql
pg_dumpall: could not connect to database "template1": could not connect to
server: No such file or directory
    Is the server running locally and accepting
    connections on Unix domain socket "/var/run/postgresql/.s.PGSQL.5432"?
root@debian-stretch:/# cp -r /usr/local/esia/plugins
```

```
/root/BACKUP_ESIA/plugins
root@debian-stretch:/# cp -r /usr/local/esia/public_html
/root/BACKUP_ESIA/public_html
root@debian-stretch:/# cp -r /etc/apache2 /root/BACKUP_ESIA/apache2
root@debian-stretch:/# cp -r /etc/esia /root/BACKUP_ESIA/esia_conf
root@debian-stretch:/# iptables-save > /root/BACKUP_ESIA/iptables.txt
root@debian-stretch:/# dpkg -l > /root/BACKUP_ESIA/version.txt
root@debian-stretch:/# du -sh /root/BACKUP_ESIA/*
652K /root/BACKUP_ESIA/apache2
32K /root/BACKUP_ESIA/esia_conf
4,0K /root/BACKUP_ESIA/iptables.txt
0 /root/BACKUP_ESIA/pg_database.sql
7.9M /root/BACKUP_ESIA/plugins
23M /root/BACKUP_ESIA/public_html
96K /root/BACKUP_ESIA/version.txt
root@debian-stretch:/#
```

Make a snapshot of the VM

In order to come back quickly in case of a complete crash.

Disable the alerting system

To avoid receiving false positives during the update.

copy

```
chmod -x /usr/local/esia/plugins/alerting/*
```

Updating

Updating works like this:

1. Modify the package source file to indicate that you are switching to buster (command **sed**)
2. Update the system database containing the list of packages (command **apt update**)
3. Update the system (**apt dist-upgrade**). Before executing this command, we strongly recommend that you note the time and check the current status of your alerts. This will help you later to check whether the Esia plugins are working correctly after the update.

Prepare the update :

Check the source apt file, using the following command:

copy

```
cat /etc/apt/sources.list
```

You should get the following lines:

```
deb http://deb.debian.org/debian stretch main contrib non-free
deb-src http://deb.debian.org/debian stretch main contrib non-free
deb http://stable.repository.esia-sa.com/esia stretch contrib non-free
```

If necessary, edit the file with the nano command (ctrl + o to save and ctrl +x to quit).

copy

```
nano /etc/apt/sources.list
```

We are now going to replace all the stretches with buster and update the list of packages.

copy

```
sed -i s/stretch/buster/g /etc/apt/sources.list
apt update
```

Example

```
root@debian-stretch:/# sed -i s/stretch/buster/g /etc/apt/sources.list
root@debian-stretch:/# apt update
Get:1 http://10.8.0.9 buster InRelease [2,271 B]
Get:2 http://10.8.0.9 buster/contrib amd64 Packages [7,200 B]
Get:3 http://10.8.0.9 buster/non-free amd64 Packages [1,963 B]
Ign http://10.8.0.9 buster/contrib Translation-en_US
Ign http://10.8.0.9 buster/contrib Translation-en
Ign http://10.8.0.9 buster/non-free Translation-en_US
Ign http://10.8.0.9 buster/non-free Translation-en
Ign http://ftp.be.debian.org buster InRelease
Get:4 http://ftp.be.debian.org buster Release.gpg [2,410 B]
Get:5 http://ftp.be.debian.org buster Release [118 kB]
Get:6 http://ftp.be.debian.org buster/main amd64 Packages [7,080 kB]
Get:7 http://ftp.be.debian.org buster/main Translation-en [5,377 kB]
Fetched 12.6 MB in 2s (4,354 kB/s)
Reading package lists... Done
root@debian-stretch:/#
```

Check the current state of your system:

1. Make a screenshot of the state of your nodes and services.

ETAT DES NOEUDS	154	0	0	1	ETAT DES SERVICES	1800	0	0	1	16

2. Note what time it is.

3. Check system disk space using the command below:

copy

```
df -h |grep -v tmpfs|grep -v udev|grep -v /boot
```

Example:

```
root@enterprise-v3:/# df -h |grep -v tmpfs|grep -v udev|grep -v /boot
File system Size Used Available Uti% Mounted on
/dev/mapper/jessie--students--vg-root 19G 7,7G 9,9G 44% /
root@enterprise-v3:/#
```

Running the update :

To download the ESIA + OS update

copy

```
apt -d dist-upgrade
```

Before confirming, check that you have enough disk space:

Then run the following command to apply and configure the packages:

copy

```
apt dist-upgrade
```

In the example below, 392 MB + 935 MB will be required during installation.

```
498 upgraded, 148 newly installed, 5 to remove and 0 not upgraded.
Need to get 0 B/323 MB of archives.
After this operation, 652 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

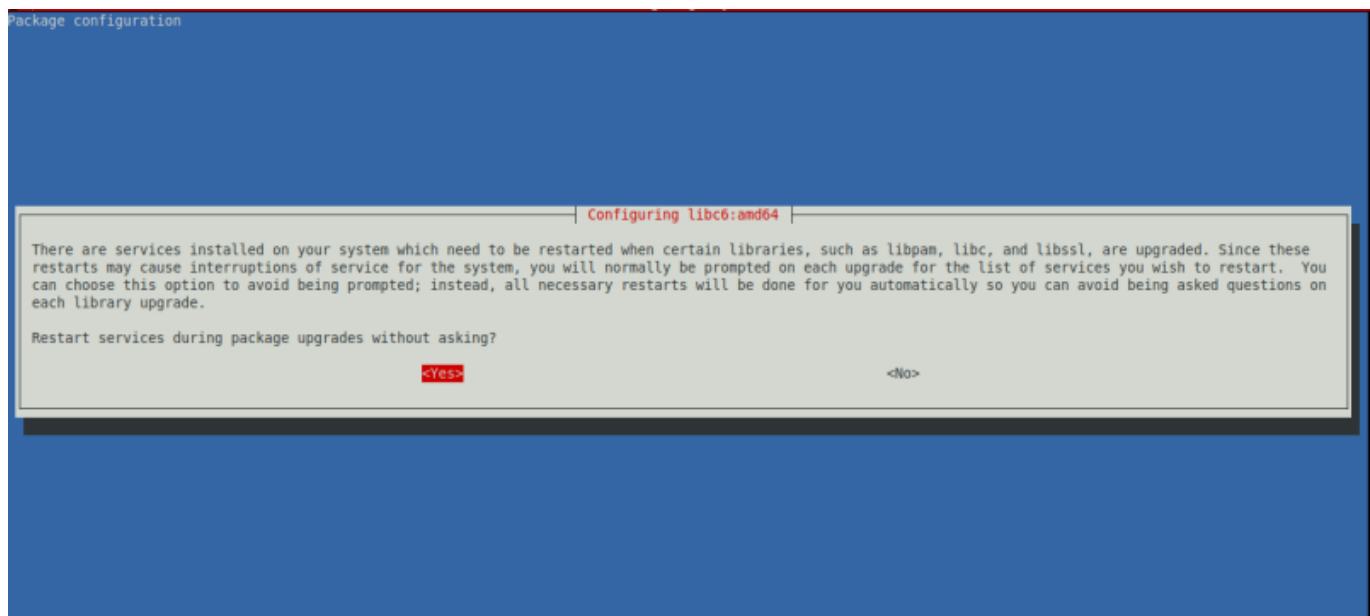- For all questions, leave the default answer.

- For the question about **GRUB** it is important not to make a mistake and to tick the correct **the correct VM boot disk**. Otherwise it might not boot anymore.

Examples of questions asked

Answer with "Yes" then ENTER
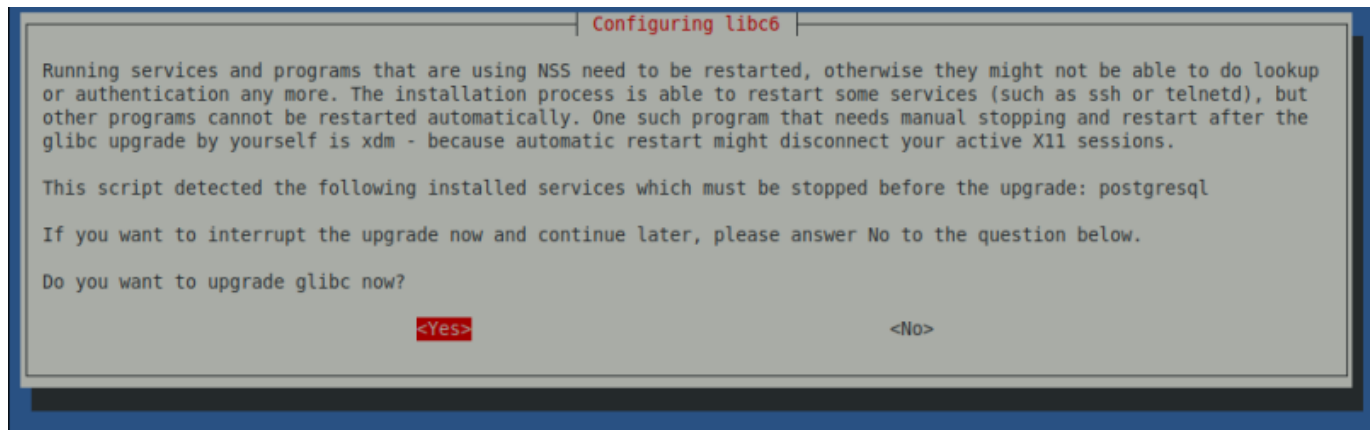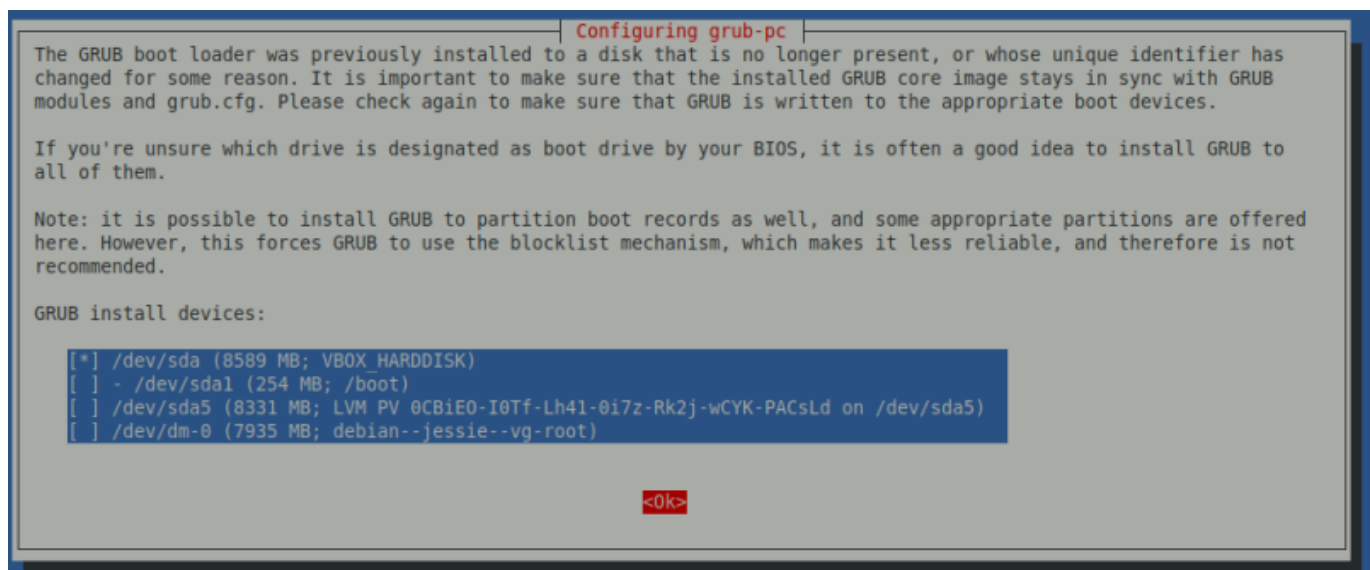

Answer with "Yes" then ENTER

The default answer is always 'N', so all you have to do is press ENTER.

```
Setting up libsnmp-base (5.7.3+dfsg-1.7+deb9u1) ...
Setting up libsnmp30:amd64 (5.7.3+dfsg-1.7+deb9u1) ...
Setting up snmp (5.7.3+dfsg-1.7+deb9u1) ...
Setting up snmpd (5.7.3+dfsg-1.7+deb9u1) ...

Configuration file '/etc/default/snmpd'
 ==> Modified (by you or by a script) since installation.
 ==> Package distributor has shipped an updated version.
   What would you like to do about it ?  Your options are:
     Y or I  : install the package maintainer's version
     N or O  : keep your currently-installed version
       D     : show the differences between the versions
       Z     : start a shell to examine the situation
 The default action is to keep your current version.
*** snmpd (Y/I/N/O/D/Z) [default=N] ?
```

Use the space bar to tick the boxes. Use the arrows to move around. TAB to activate 'OK', then ENTER

It is **absolutely** tick the VM's boot disk.

```
┌─────────────────────┤ Configuring grub-pc ├─────────────────────┐
│ The GRUB boot loader was previously installed to a disk that is no longer present, or whose unique identifier has │
│ changed for some reason. It is important to make sure that the installed GRUB core image stays in sync with GRUB │
│ modules and grub.cfg. Please check again to make sure that GRUB is written to the appropriate boot devices.       │
│                                                                                                                  │
│ If you're unsure which drive is designated as boot drive by your BIOS, it is often a good idea to install GRUB to │
│ all of them.                                                                                                     │
│                                                                                                                  │
│ Note: it is possible to install GRUB to partition boot records as well, and some appropriate partitions are offered │
│ here. However, this forces GRUB to use the blocklist mechanism, which makes it less reliable, and therefore is not │
│ recommended.                                                                                                     │
│                                                                                                                  │
│ GRUB install devices:                                                                                            │
│                                                                                                                  │
│    [*] /dev/sda (8589 MB; VBOX_HARDDISK)                                                                          │
│    [ ] - /dev/sda1 (254 MB; /boot)                                                                               │
│    [ ] /dev/sda5 (8331 MB; LVM PV 0CBiEO-I0Tf-Lh41-0i7z-Rk2j-wCYK-PACsLd on /dev/sda5)                           │
│    [ ] /dev/dm-0 (7935 MB; debian--jessie--vg-root)                                                              │
│                                                                                                                  │
│                                    <Ok>                                                                           │
└──────────────────────────────────────────────────────────────────┘
```

The update is complete

```
Running hooks in /etc/ca-certificates/update.d...
done.
Processing triggers for systemd (232-25+deb9u12) ...
Processing triggers for initramfs-tools (0.130) ...
update-initramfs: Generating /boot/initrd.img-4.9.0-13-amd64
Processing triggers for dbus (1.10.32-0+deb9u1) ...
Processing triggers for libapache2-mod-php7.0 (7.0.33-0+deb9u8) ...
Processing triggers for libgdk-pixbuf2.0-0:amd64 (2.36.5-2+deb9u2) ...
Processing triggers for dictionaries-common (1.27.2) ...
ispell-autobuildhash: Processing 'american' dict.
ispell-autobuildhash: Processing 'british' dict.
Processing triggers for sgml-base (1.29) ...
root@debian-jessie:/#
```

Post-update restart of important modules

Disable the alerting system again

The Esia update automatically reactivates the alerting system. As long as you do not activate the Esia licence, you will not receive any alerts. However, once the licence has been activated, you may receive false positives.

It is therefore advisable to re-execute the following command before activating the licence.

copy

```
chmod -x /usr/local/esia/plugins/alerting/*
```

Remove the old Debian Stretch packages

This step is necessary, in addition to saving disk space, keeping old versions of packages could :

- Cause bugs in Esia
- Cause problems in future updates.

It is therefore strongly recommended that you carry out this step even if your Esia is now working correctly. In addition, this also allows problems/bugs that would have occurred randomly later to be highlighted immediately.

copy

```
apt autoremove
```

Then confirm the deletion.

Updating your Esia database

Use the following commands to update your database. Your Esia is currently running without this step. But if you ignore it, problems will occur in future updates.

Check the presence of the databases :

copy

```
pg_lsclusters
```

Example

```
root@debian-stretch:/# pg_lsclusters
Ver Cluster Port Status Owner Data directory Log file
9.6 main 5432 online postgres /var/lib/postgresql/9.6/main
/var/log/postgresql/postgresql-9.6-main.log
11 main 5433 online postgres /var/lib/postgresql/11/main
/var/log/postgresql/postgresql-11-main.log
```

root@debian-stretch:/# Delete the new database

copy

```
pg_dropcluster 11 main --stop
pg_lsclusters
```

⚠ For the **pg_dropcluster** be sure to put **11** and not 9.6!

Example

```
root@debian-stretch:/# pg_dropcluster 11 main --stop
Redirecting stop request to systemctl
root@debian-stretch:/# pg_lsclusters
Ver Cluster Port Status Owner Data directory Log file
9.6 main 5432 online postgres /var/lib/postgresql/9.6/main
/var/log/postgresql/postgresql-9.6-main.log
root@debian-stretch:/#
```

Copy the old database (from your Esia) to the new version

copy

```
pg_upgradecluster 9.6 main
pg_lsclusters
```

The first command takes some time to run. Once completed, the **pg_lscluster** shows this:

Example

```
root@debian-stretch:/# pg_lsclusters
Ver Cluster Port Status Owner Data directory Log file
9.6 main 5433 down postgres /var/lib/postgresql/9.6/main
/var/log/postgresql/postgresql-9.6-main.log
11 main 5432 online postgres /var/lib/postgresql/11/main
/var/log/postgresql/postgresql-11-main.log
root@debian-stretch:/#
```

Then check that your web interface is working correctly.

Getting the Esia web interface to work

After installation, you need to run the following commands to get the web interface working again.

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```
a2dismod php7.0
a2enmod php7.3
service apache2 restart
apt remove php7.0
apt autoremove
```

Go to your Esia main web page

After the update, connect to your Esia server and refresh your browser cache (ctrl +F5 in Firefox). The menu button bugs will be corrected.

Essential tasks at the end of the update

Check if your VM restarts

Restart your VM and check that the restart works. A configuration error in GRUB or in the system update could mean that the VM no longer starts. Or that certain Esia services do not restart automatically.

It is necessary to perform this operation as long as the snapshot is sufficient to avoid losing too much data.

To reboot cleanly, enter the following command:

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```
shutdown -r now
```

Check the status of your services

Some monitoring plugins may no longer work after the update. This is often the case when additional plugins have been manually installed. It is therefore advisable to check that these plugins are working in 2 ways:

Method 1: Check the status of nodes and services

Compare the current status of your nodes and services with the screenshot taken earlier. If there is a small or minimal difference, then the update has probably gone well.
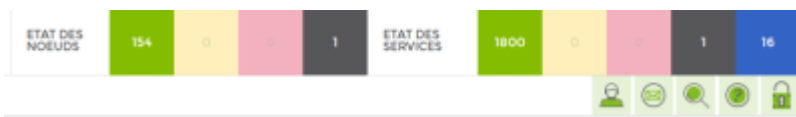
If there is a large difference, either :

- There have been breakdowns in your infrastructure.
- Some of your plugins are no longer working after the update. (If this is the case, please contact our support team)

Method 2: Check for new alerts

Go to the current alerts page. If you have a lot of alerts, sort them by date.

You should have noted the start time of the update. Use this information to check the alerts that took place afterwards. For the most part, within 10 minutes of :

- licence activation.
- reboot of the machine.

These alerts can be caused by :

- A problem in your infrastructure.
- A malfunction of the plugin after the update.

Example:

The 7:36 update probably caused the 7:44 error in one of the plugins:

Reactivate the alerting system

Once your Esia is working properly, don't forget to reactivate alerting:

Activation :

copy

```
chmod +x /usr/local/esia/plugins/alerting/*
```

Check if it is activated :

copy

```
ls --color -l /usr/local/esia/plugins/alerting/*
```

In the examples below, the green colour indicates that the scripts are executable. They are therefore activated.

Examples :

Alerting disabled

Alerting on

Now you need to check that you are receiving the alert emails.

copy

```
/usr/local/esia/plugins/alerting/send_mail_html.pl -e min -t
<votre adresse mail> -D
```

Check whether an email has arrived in your inbox.

Troubleshooting

All units are disconnected

The configuration of Esia's internal firewall may have removed the connection authorisation for the unitys. Type the following command line

copy

```
iptables -L
```

If you don't find a line like:

```
ACCEPT tcp -- anywhere anywhere tcp dpt:2080
```

Type the following commands to open the port and save the configuration:

copy

```
iptables -A INPUT -p tcp -m tcp --dport 2080 -j ACCEPT
iptables-save > /etc/iptables.rules
```

The web page is inaccessible

Configuring php7 in Apache

Have you run the following command?

copy

```
a2dismod php7.0
a2enmod php7.3
service apache2 restart
```

Check the status of the Apache2 service

copy

```
service apache2 status
```

Example of a stopped Apache2 service :

Example of a started Apache2 service :

Try to restart the Apache2 service

copy

```
service apache2 start
service apache2 status
```

Cleaning

This little clean-up is not compulsory. It saves a lot of disk space. It is advisable to carry out the following steps once you are sure that everything has gone smoothly. You may even want to**wait several days** after the update.

- Delete the snapshot
- Deleting the backup

  copy

  ```
  rm -R /root/BACKUP_ESIA/
  ```

- Delete the old database (BE CAREFUL to set 9.6)

  copy

  ```
  pg_dropcluster 9.6 main
  ```

From:
https://wiki.esia-sa.com/ - **Esia Wiki**

Permanent link:
https://wiki.esia-sa.com/en/advanced/update_esia_deb9-10

Last update: **2025/05/12 12:47**