



8.nn to 9.nn Migration Guide

Clavister CorePlus

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Published 2010-05-19
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Preface

Target Audience

The target audience for this guide is the administrator who wishes to upgrade a Clavister Security Gateway from a 8.nn version to the latest 9.nn version.

Text Structure

The text is divided into chapters and subsections. Numbered subsections are shown in the table of contents at the beginning of the document.

Text links

Where a "See section" link is provided in the main text, this can be clicked on to take the reader directly to that reference. For example, see Chapter 1, *Upgrading from 8.nn Versions*.

Web links

Web links included in the document are clickable eg. <http://www.clavister.com>

Notes to the main text

Special sections of text which the reader should pay special attention to are indicated by icons on the the left hand side of the page followed by a short paragraph in italicized text. There are the following types of such sections:



Note

This indicates some piece of information that is an addition to the preceding text. It may concern something that is being emphasised or something that is not obvious or explicitly stated in the preceding text.



Tip

This indicates a piece of non-critical information that is useful to know in certain situations but is not essential reading.



Caution

This indicates where the reader should be careful with their actions as an undesirable situation may result if care is not exercised.



Important

This is an essential point that the reader should read and understand.



Warning

This is essential reading for the user as they should be aware that a serious situation may result if certain actions are taken or not taken.

Upgrading from 8.nn Versions

This document deals with the procedure for upgrading an older 8.nn version of CorePlus to the latest 9.nn CorePlus version. All CorePlus 8.nn versions from and including 8.60.01 upwards can be upgraded in this way. This document is NOT relevant if any CorePlus 9.nn version is already installed.

Running *upgrade.exe*

In all 9.nn distributions, a separate Microsoft Windows based PC executable file is included called *upgrade.exe*. This is found in the *Upgrade/Wizard* folder. Running this program will start the upgrade wizard which will take the user through the process of upgrading Clavister Security Gateways running an 8.nn version of CorePlus.

This program should be run on the same PC which is running the copy of the Clavister FineTune™ software being used for administration of the 8.nn version. This is helpful because *upgrade.exe* can then find and use the FineTune *Data Source* files which contain definition data for the Clavister Security Gateway being upgraded.

Alternatively the wizard may be run on a PC which is not also running InControl. This is only possible with Clavister Security Gateways that are brand new or an older unit that has the NetCon keys reset to the defaults. Select the *Reset to default management keys* option in the boot menu of older units to do this. In either case no NetCon keys will be set and therefore the data source is not needed. This option is discussed further near the end of this chapter.

The Clavister Security Gateway being upgraded should be up and running but not being used with live traffic since the upgrade process will interrupt and temporarily suspend CorePlus operation with current connections being lost.

Upgrade Wizard Step Sequence

The upgrade wizard uses a familiar layout with successive dialogs controlled by forward, back and cancel buttons. The first two screens are:

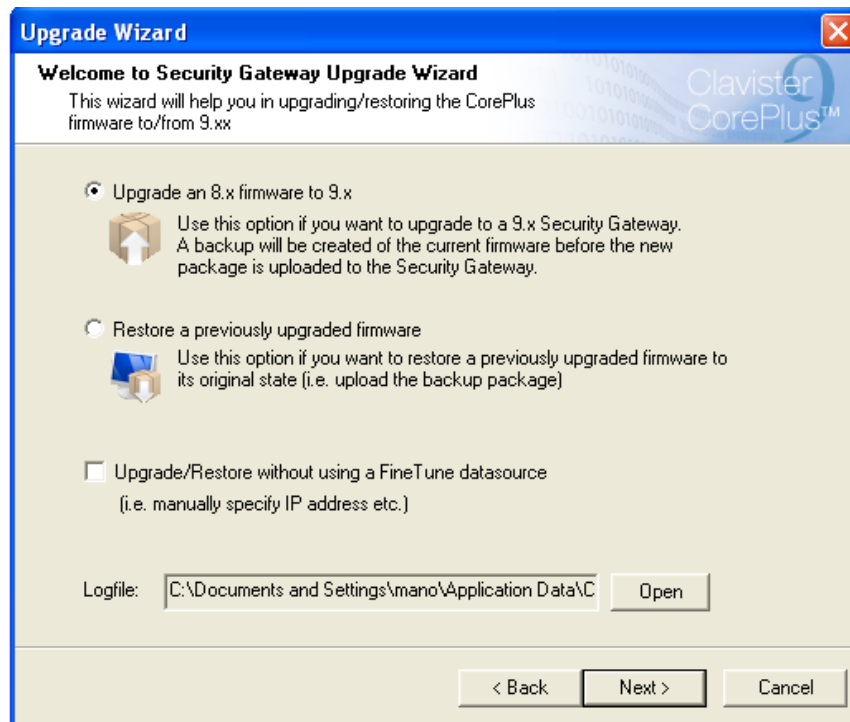
- The initial start screen informs the user of the wizard's purpose.



- The next screen offers the user two choices:
 - i. Upgrade from 8.nn to 9.nn.
 - ii. Restore from a backup.

The first option is the default and is the one being considered in the following steps. The second option provides a way of reversing the upgrade and is discussed later.

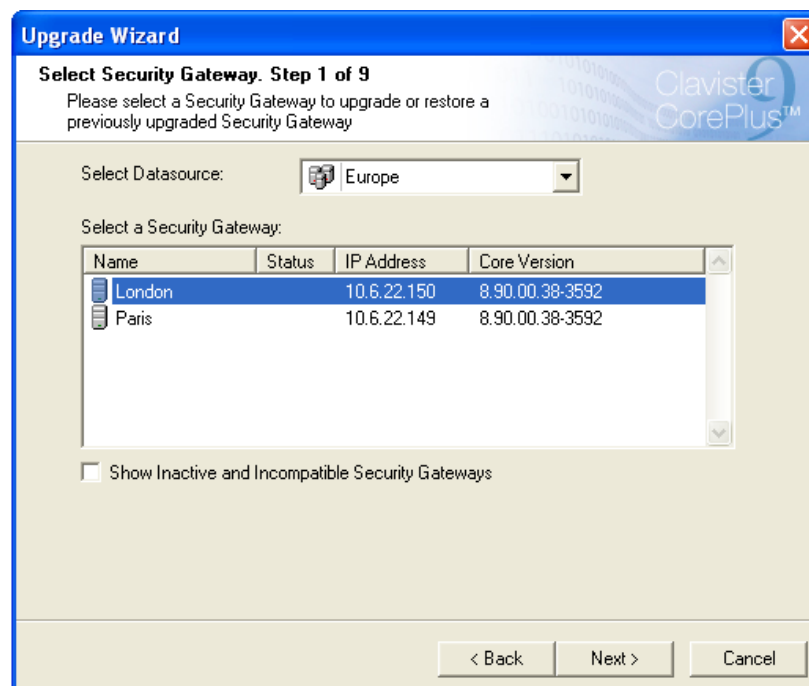
This screen also offers a further option to upgrade/restore without InControl installed and that is discussed at the very end.



The administrator now enters the upgrade procedure and each step and its corresponding screen is numbered:

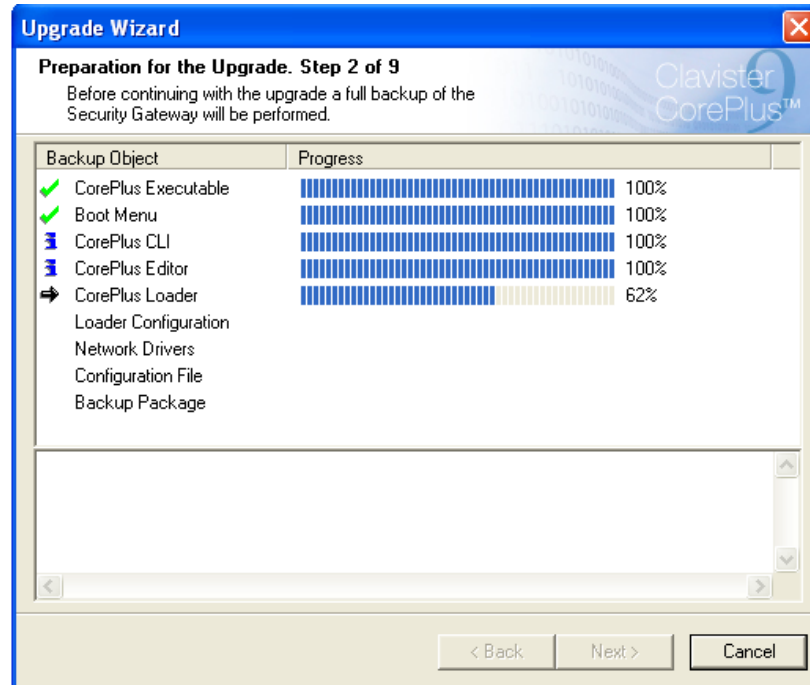
1. Select the unit to upgrade

The wizard scans the local PC to find the 8.nn data source files and lists the data sources it finds with a list of Clavister Security Gateways defined for each data source. The unit that is to be upgraded should be selected before pressing the **Next** button.



2. Initial Processing

The wizard now performs the initial processing, gathering the data required for the upgrade. A unique backup file associated with the Clavister Security Gateway is created in this step if reversing the upgrade is required later. When complete press the **Next** button.



3. Specify web interface and/or SSH access

This step specifies the web interface and/or SSH (Secure Shell) client access allowed for system management. At least one option should be checked and the appropriate parameters should be added. The *Network* is where management traffic will come from and the *Interface* is where that traffic will arrive on the Clavister Security Gateway.

Upgrade Wizard

Remote Management Configuration Parameters. Step 3 of 9
Additional administrator parameters that will be added to the converted configuration

☒ Allow administrator access via Web User Interface

Network:

Interface:

HTTP Port:

HTTPS Port:

☒ Allow administrator access via SSH

Network:

Interface:

< Back Next > Cancel

4. Enter the administrators username and password

A username/password combination must be added for initial administrator access. After entering these and confirming the password, press the **Next** button.

Upgrade Wizard

Administrator Credentials. Step 4 of 9
Please specify your administrator credentials

Administrator Credentials

Enter a username and password below. These credentials can be used for administrator access to the Security Gateway through SSH or the Web User Interface.

User Name:

Password:

Retype Password:

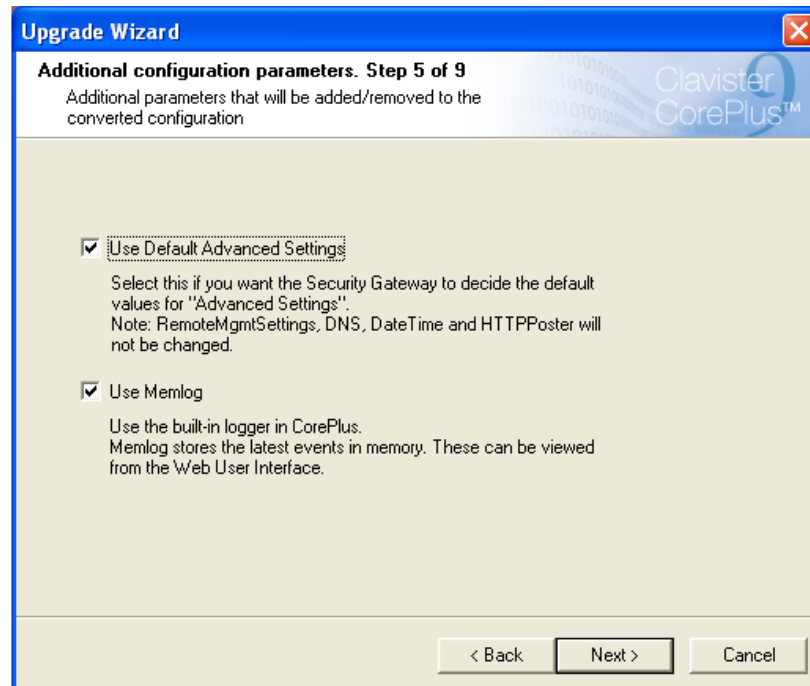
< Back Next > Cancel

5. Advanced Settings and Memlog

Two options are now displayed:

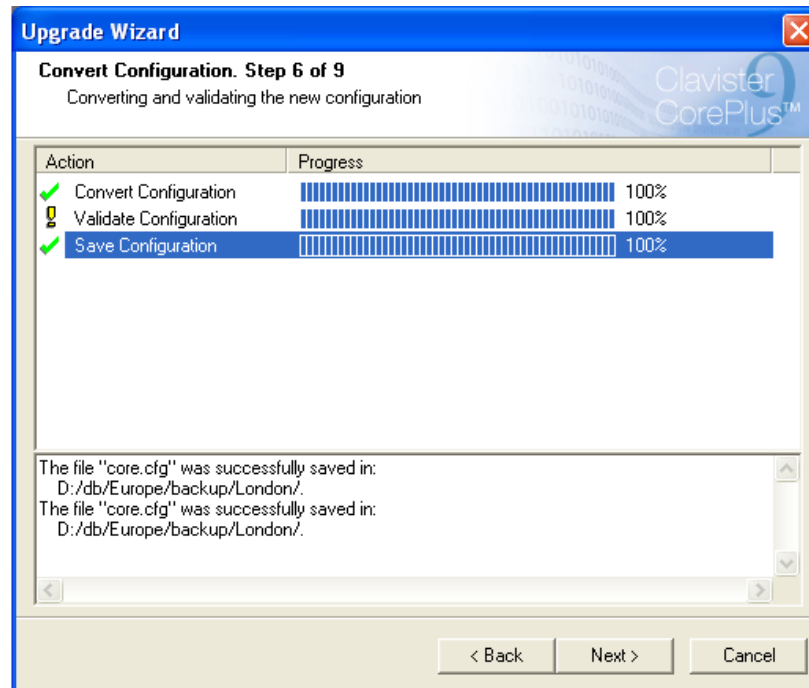
- *Use Default advanced settings* - If this option is checked then the default of all CorePlus advanced settings will be used in the upgraded configuration. If the option is not checked then the advanced settings will remain as they were in the old CorePlus configuration.
- *Use Memlog* - MemLog is the facility to save a stack of log messages in memory. These can then be directly queried through the management interface instead of needing to query a separate log server. Memlog consumes a small amount of memory which will not affect performance.

After selection, press the **Next** button.



6. Create Files for Uploading

All the files required for the upgrade are now created, validated and saved ready for uploading. After processing is complete, press the **Next** button.

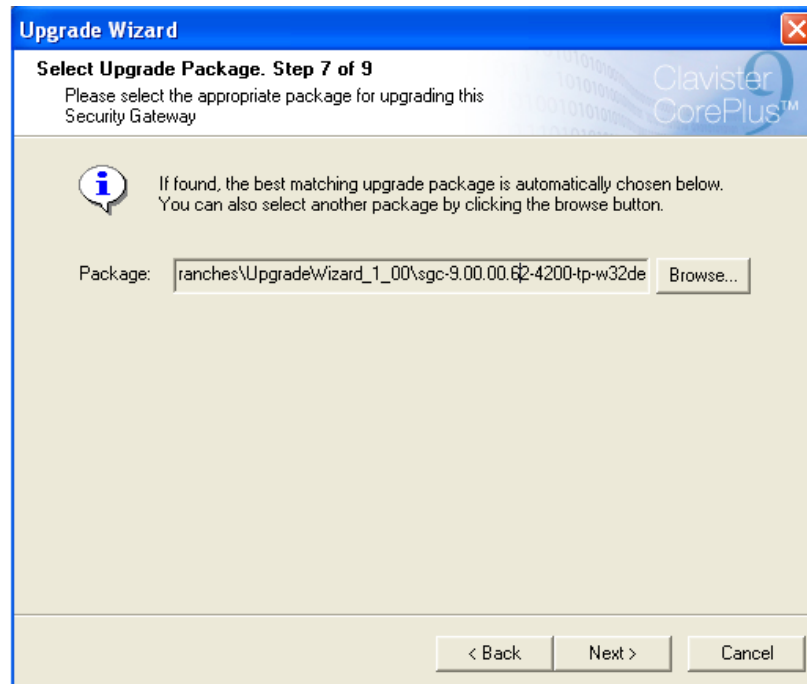


7. Select Upgrade Packet

The Clavister upgrade packet is a file which contains the executable CorePlus software version to be uploaded. There are different packets for different processor types and the packet file name indicates what it is intended for.

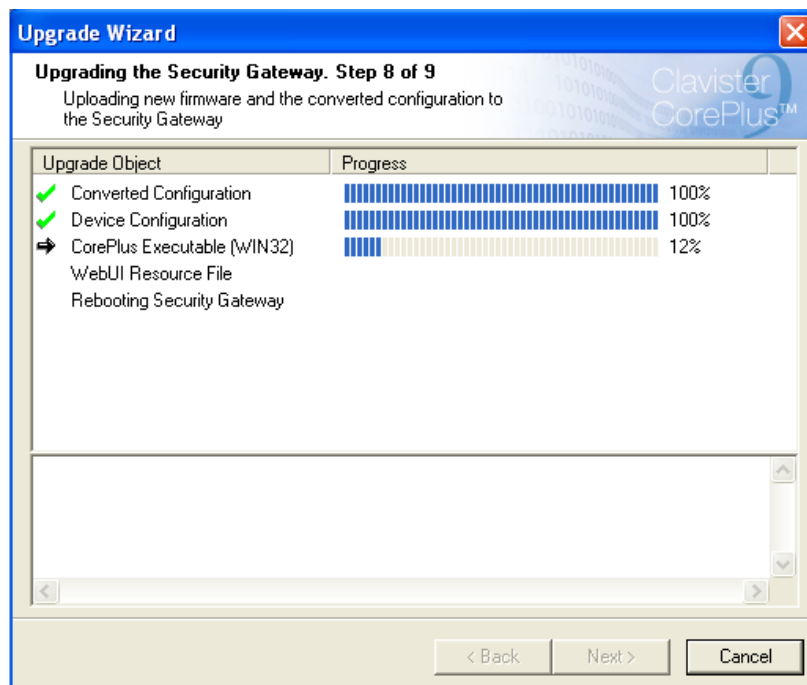
The wizard will automatically pick out the right upgrade packet to suit the hardware type from the ones it comes included with and pressing **Next** is all that is needed to go to the next step.

If a new upgrade packet has been downloaded from the Clavister Customer Web then pressing the **Browse** button will allow you to pick that packet instead of the default.



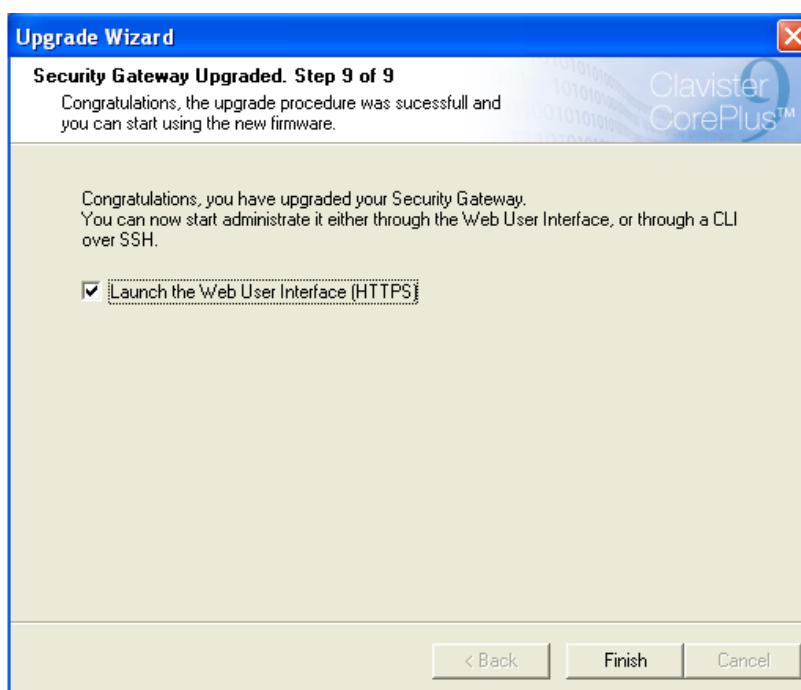
8. Upload to complete the upgrade

The upgrade files are now uploaded to the Clavister Security Gateway and the unit is then rebooted. After completion, press the **Next** button.



9. Finish screen

Press the **Finish** button to close the wizard. The option is given on the final screen to automatically open the web interface in a browser window.



Reversing an Upgrade with a Wizard Created Backup

As mentioned above, an 8.nn to 9.nn upgrade automatically creates a backup file for the old 8.nn configuration (which also contains the core and loader as well as the configuration).

If required the upgrade wizard can then be used to undo the upgrade and restore the CorePlus back to the old 8.nn version. The backup file contains all the data needed to do this.

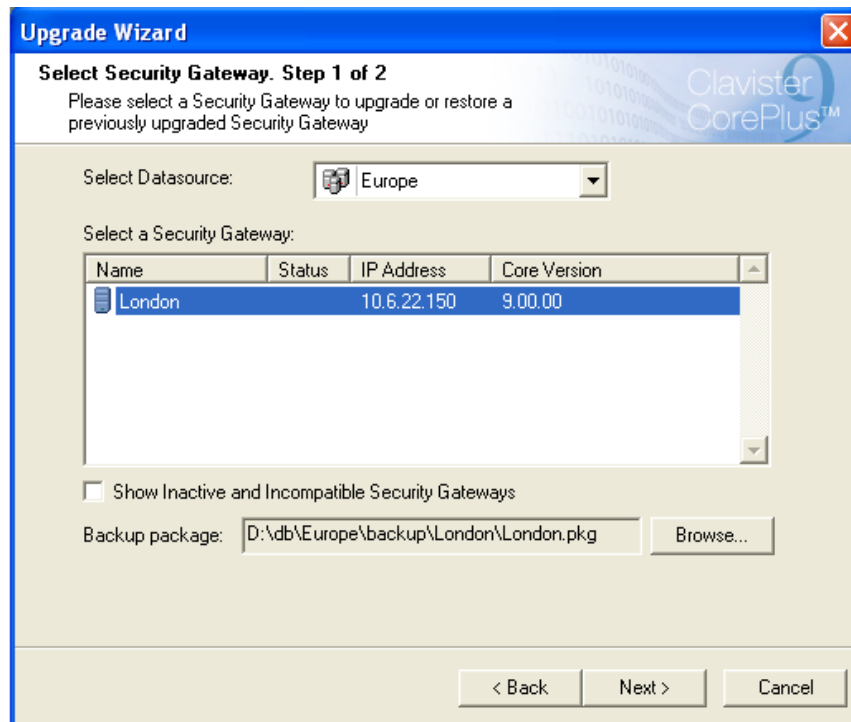
There are now two possible steps involved in reversing the upgrade. If the first step is unsuccessful then the second will be needed:

Step 1.

The wizard is run and just the option to **Restore a previously upgraded firmware** is chosen. A dialog is then displayed which shows a list of Clavister Security Gateways that have associated backup files. A backup file is uniquely associated with the Clavister Security Gateway.

An example of this dialog is shown below. The *Datasource* needs only be selected if the target security gateway resides in one of several possible datasources

When the available security gateways are listed in the dialog, the icon on the left of the name will initially appear with a red cross symbol over it. These red cross symbols will gradually disappear as the wizard is able to establish communications with each unit.



Once the Clavister Security Gateway is selected, pressing the **Next button** will cause the upgrade reversal to begin.

If the red cross symbol over the icon of the target security gateway does not disappear after a few seconds this means that the device cannot be reached and the **Next** button will be disabled. In this case a different approach is required which is described below in *Step 2*.

Step 2.

If *Step 1* above is unsuccessful and the wizard cannot communicate with the target security gateway, it is necessary to revert the NetCon management keys on the device to the default value. This is done with the following steps:

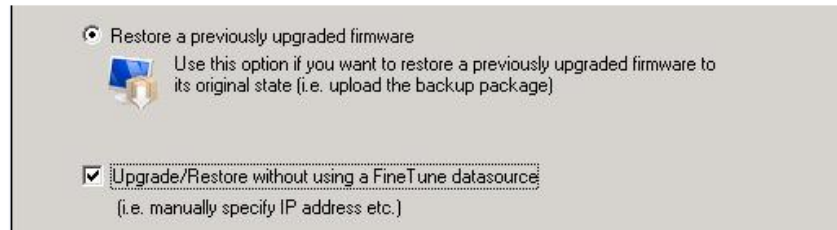
- i. Login to the security gateway using the web interface
- ii. Go to **Authentication Objects** and create a new *Pre-shared Key* object and paste in the default NetCon management key as the key for this object. This default key is:

```
DBC2A65220E2D3753149EDED524FC1A140CDA6810FA68E2A78FCD2684A048A70
8A1D97B6B10BE90FD52AA39634830E1EEE1F406B812CC550EBCDDCC447307C8E
```

Note: The key is shown here as 2 lines which can be copied and pasted from the PDF but the linebreak must be removed after pasting in.

- iii. Go to **Remote Management** and create a *NetconMgmt* object that uses the pre-shared key created in the step above. This allows the wizard to communicate using the default keys.

The wizard **Back** button should now be used to return to the first wizard dialog (or the wizard can be restarted). This time, the additional option **Upgrade/Restore without using a FineTune Datasource** should be chosen as shown below.



The next dialog displayed by the wizard asks for the IP address of the security gateway.

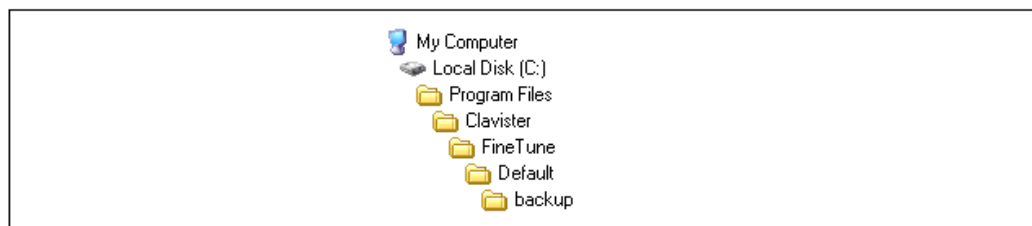
Name:

IP Address:

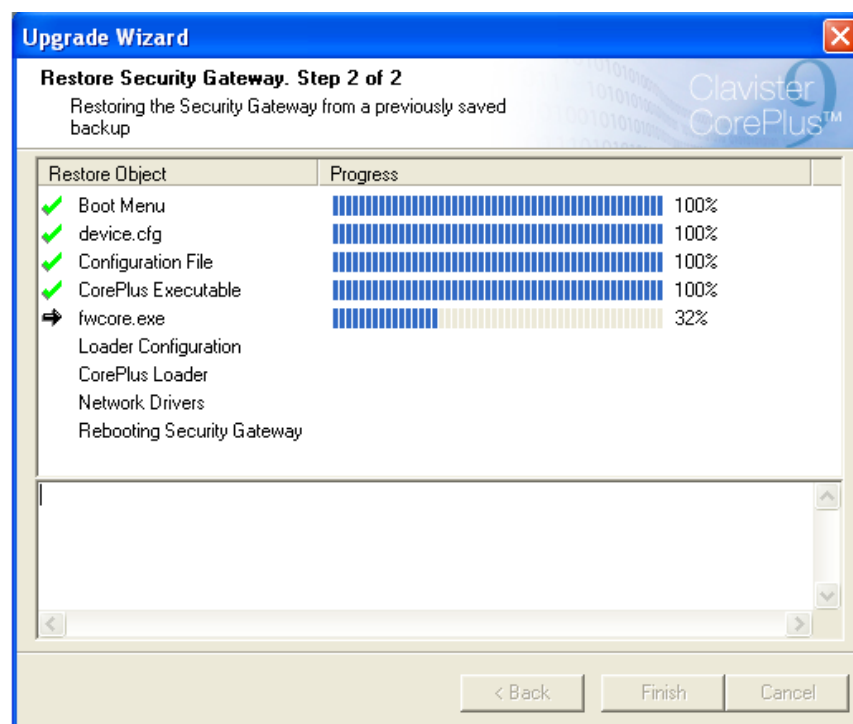
Type:

Backup package:

In addition, the **Browse** button should be pressed to select the *.pkg* file that was created by the wizard during the upgrade process. This is typically found in the file path shown below.



As the upgrade reversal process begins, a dialog showing the progress of the restore will appear. Completion of the process will be followed by an automatic reboot of the hardware.



Reversing an Upgrade Manually

It should usually not be necessary to undo an upgrade manually since the wizard provides an automatic feature to do this but in unusual circumstances this might be required. The manual steps are:

1. Perform a reset to factory defaults on the hardware.
2. Open InControl and re-establish communication with the Clavister Security Gateway.
3. Reinstall the CorePlus loader by choosing the InControl option:
Action > Communication > Upgrade > Loader
4. Reinstall the CorePlus core by choosing the option:
Action > Communication > Upgrade > Core
5. Reinstall the last pre-upgrade configuration by choosing the option:
Action > Communication > Upload > Configuration



Note on losing changes made since upgrading.

Any configuration changes made since upgrading using the wizard will be lost when reversing the process. This is because the InControl data source for the Clavister Security Gateway will not be recording any configuration changes made since the upgrade.

Upgrading Without FineTune Installed

As explained at the beginning of this document, it is possible to upgrade a 8.nn Clavister Security Gateway unit by running the upgrade wizard on a PC that does not also have FineTune installed. This is possible only if:

- The unit is brand new and has not yet been configured.
- The unit is not brand new but has had the default NetCon keys restored. This can be achieved by selecting the *Reset to default management keys* option in the boot menu of the unit.

In either case, the steps to upgrade are as follows:

1. Configure the 8.nn system normally so that traffic from the PC running the upgrade wizard is accepted (in other words the upgrade wizard will communicate with CorePlus as though it were InControl, using NetCon).
2. Below the initial upgrade wizard option to choose an upgrade or restore, tick the checkbox to indicate that **Upgrade/Restore without using any InControl data source**.
3. An extra wizard dialog will then appear asking for the following information:
 - **Name**
This is the name of the Clavister Security Gateway as it will appear to the administrator by all management interfaces.
 - **IP Address**
This is the IP address of the Clavister Security Gateway that will be used for access by management interfaces.
 - **Type**

This allows the unit to be designated as a master or slave in a high availability cluster.

- **Backup Path**

This is the location of the backup created during the upgrade. This path must be specified since the wizard may be running directly from non-writable media such as a CD-ROM. If the directory specified is *<path>* then the backup files will be written in: *<path>/backup/<gw-name>* where *<gw-name>* is the name specified above for the Clavister Security Gateway.

4. The wizard will now continue on as described in the first part of this document.

Restoring Factory Defaults after Upgrades

After using the wizard to upgrade, it is important to understand that restoring a Clavister Security Gateway to its factory defaults returns the unit **to the state it was in immediately before the upgrade wizard was used**. In other words, the original pre-upgrade 8.nn configuration is preserved in the hardware's memory and will be reinstated after the first restore to factory defaults is done.

To achieve a reset to the state the unit was in when it was actually shipped from the factory, an upgraded unit must therefore go through the restore to factory defaults procedure twice: once to go back to the 8.nn configuration as it was before the upgrade, and then once again to go back to the actual factory defaults.

Going back to the actual factory defaults is important as part of an end of life procedure for a unit in order that all sensitive configuration data, including the original 8.nn configuration, is deleted from the memory. In addition to this and as a further precaution, it is recommended that the memory media in a decommissioned Clavister Security Gateway is destroyed and certified as destroyed by a suitable provider of computer disposal services.

Upgrading a High Availability Cluster

It is possible to upgrade an CorePlus HA cluster and this can be done in either of two ways:

- By using the upgrade wizard on both units.
- By importing the 8.nn FineTune datasource into the Clavister InControl product.

The option to upgrade using InControl is discussed in that product's user manual and will not be explored in this document.

When using the upgrade wizard to upgrade a cluster, the steps are as follows:

1. Ensure that the cluster isn't being used in a live environment. The upgrade of a cluster will result in connections being lost and a brief period of unavailability.
2. Start by applying the upgrade wizard on the *inactive* unit in the cluster exactly as though it were a standalone unit.
3. Next, apply the upgrade wizard to the *active* unit.
4. Once both units in the cluster are upgraded and running, the cluster will re-synchronize.

Downgrading to 8.nn

The SG4300 Series comes preinstalled with a CorePlus 9.nn version and sometimes the requirement is to downgrade the unit back to the latest 8.nn version. This operation is possible but is not done with the wizard.

To do this, an "upgrade" file called:

```
coreplus_9.10_downgrade_sg4300.upg
```

should be downloaded from the Clavister *Customer Web* and then applied though the Web Interface as though it were an upgrade. The *SG4300 Getting Started Guide* also covers this topic.



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