Software Web Update

Web Interface Manual

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Chapter 1 Introduction

bintec elmeg routers execute several types of software in order to work. Next, we shall briefly describe the software elements:

- *BIOS FLASH*

  It is the basic interface with the router's hardware. Thanks to the application services, the hardware is accessible and any variations that take place (e.g. changing the integrated circuit used to control PSTN) are revealed.
- *APPLICATION*

  This is the part of the code that handles internetworking processes (IP routing, X.25, IPSec, ATM, etc.) and the configuration and monitoring consoles.
- *Auxiliary Files (*.BFW, ...)*

  In order to simplify the modular updating of bintec elmeg routers, as well as to reduce the size of the application, certain blocks are provided as independent files. The need for these depends on the hardware available. For instance, bintec elmeg devices support several ADSL chipsets that, depending on the one available in your device, will need one firmware (BFW) or another.

Software updating in bintec elmeg routers is done through the replacement of one (or several) of the aforementioned elements. This manual explains how.

Chapter 2 Web Interface overview

This section will briefly describe the web interface.

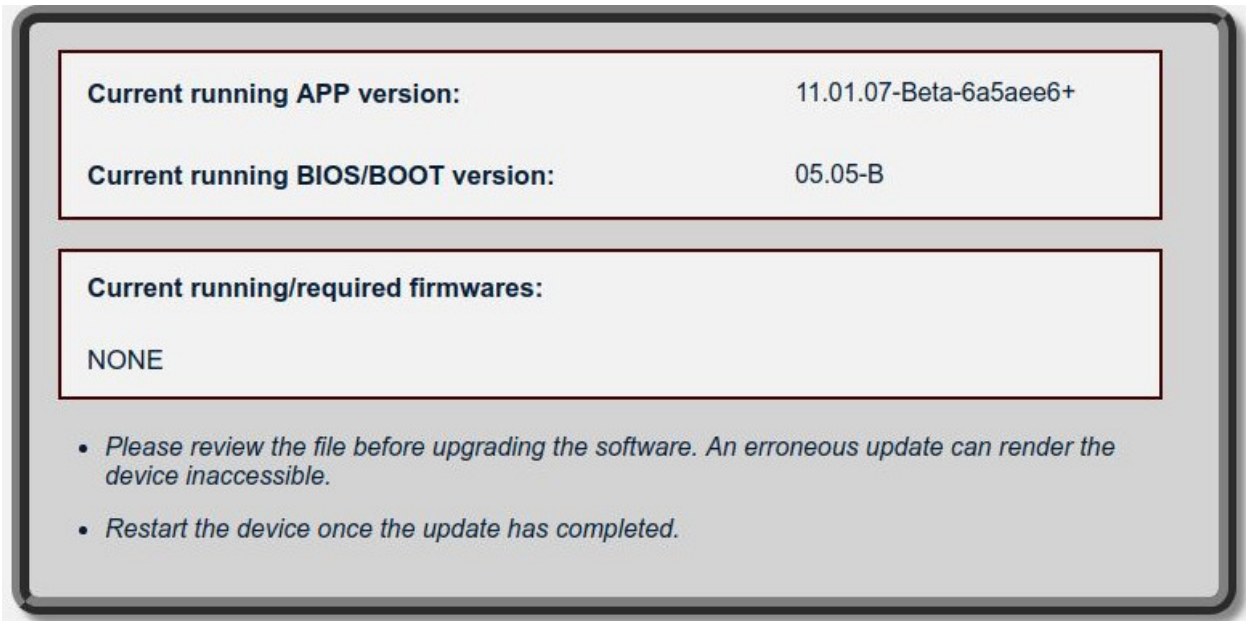
Connect to the device's WEB server. Open your web browser and type, in the URL bar, the device's configured and accessible IP and the /upgrade path (as it appears in the next picture).

You need to enter a user and password. Valid user/password pairs are those configured in the device. If no user configuration is present in the device, the default user and password are both blank. Click on *Apply* to access the web interface.

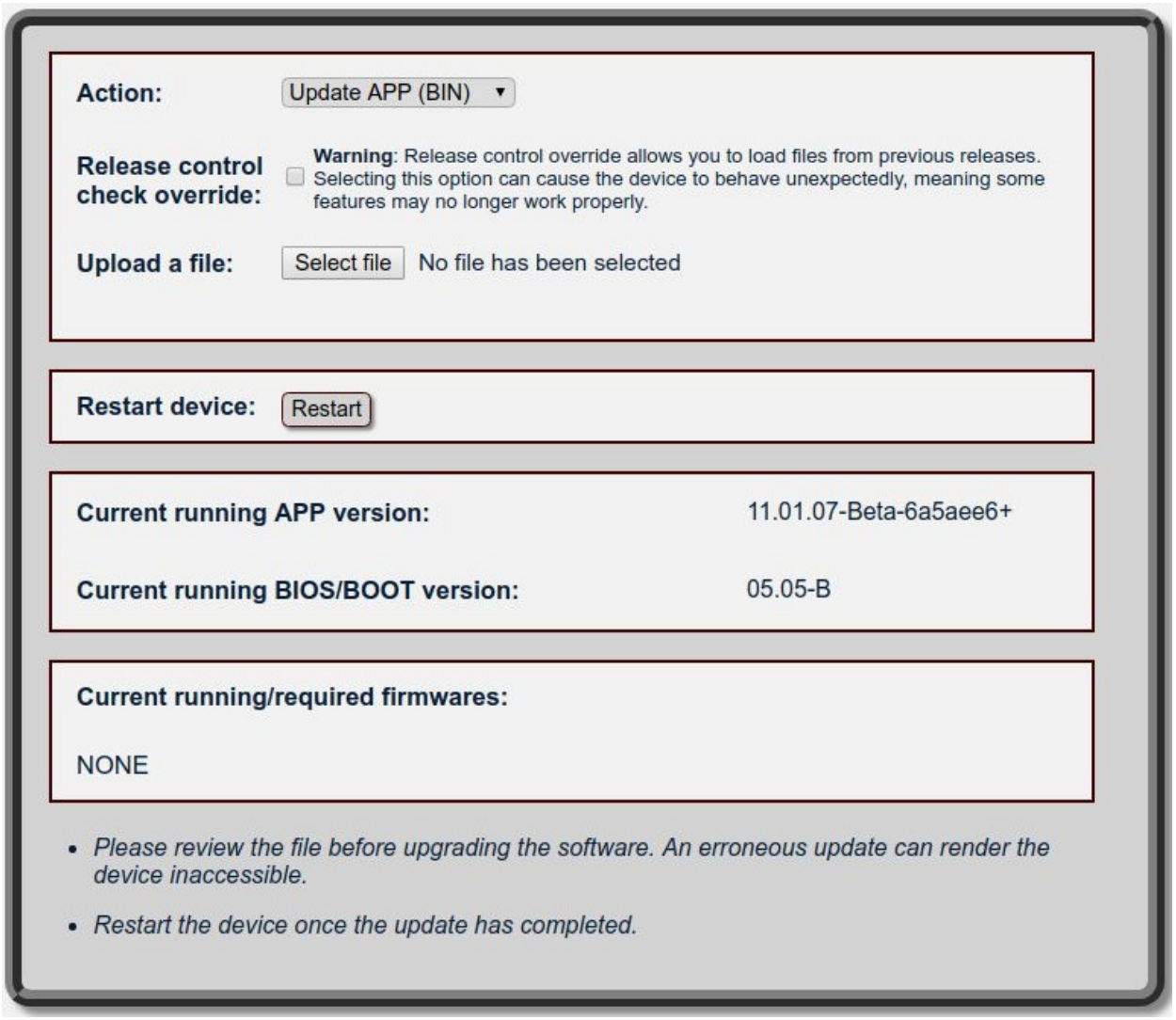
In order to prevent brute-force attacks, the number of login attempts is limited. If you try to login three times to no avail, the login page will lock for one minute and the following page will appear:

When the locking period ends, the login page will appear again upon refresh. You may now try to login again.

Once you have logged in, an interface will appear. Its display will depend on the login access level. If the latter is lower than *root*, only the device information that is readily available will appear (without any upgrading or restarting options):



Upgrading and restarting the device is possible at the *root* access level:

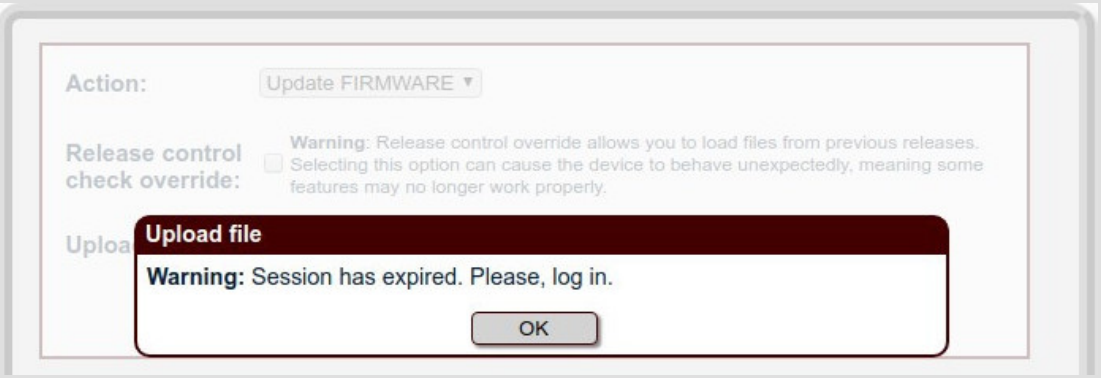


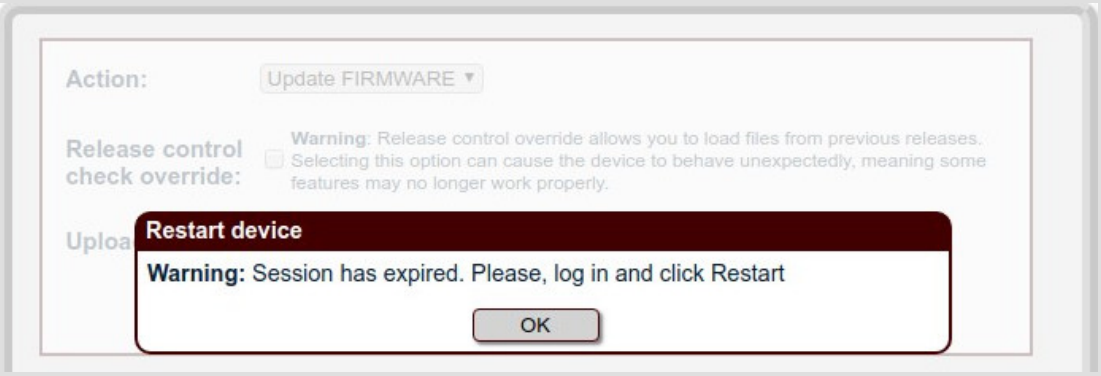
Chapter 3 Updating Process

Software updating in bintec elmeg routers is done through the replacement of one (or several) of the aforementioned elements. This manual explains how to do it via WEB.

Warning

When you click on *Apply* to update the software, or *Yes* to restart the router after uploading the file, sessions that have expired cannot be restarted. In these cases, the following warning messages appear:





Clicking on *OK* loads the login page. There, the user can sign in again and update the software or restart the device.

3.1 Updating Application with BIN file

The steps to execute updating are as follows:

(a) Save the distribution content in a directory. When done successfully, the content will remain unaltered.

(b) Connect to the device's WEB server. Open your web browser and type, in the URL bar, the device's configured and accessible IP and the /upgrade path (as it appears in the next picture).

(c) You need to enter a user and password. Valid user/password pairs are those configured in the device. If no user configuration is present in the device, the default user and password are both blank. Click on "*Sign in*" to access the web interface.

(d) Now, select *Update APP (BIN)* and then click on the *<application.bin>* file previously exported. Hit *Apply* to start the process.

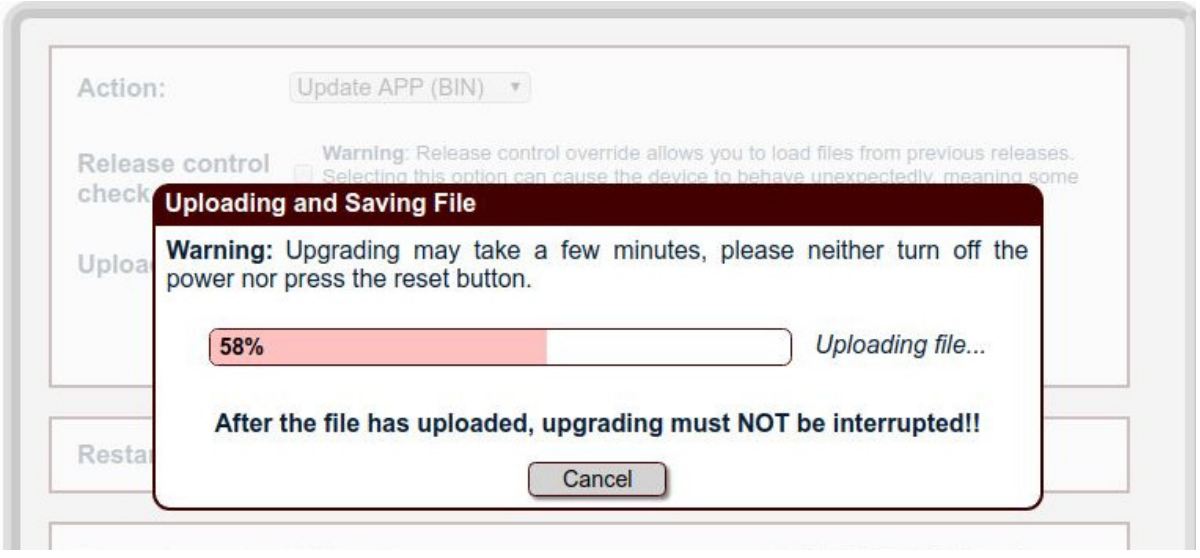
Note

Leave the *Release control check override* option unchecked, as it appears by default. To learn more about it, take a look at the relevant section in this document.

Warning

Do not turn off or restart the system after you hit *Apply*. Also, don't close your browser or click on the return or refresh page button.

(e) After clicking on *Apply*, the selected file will be uploaded:



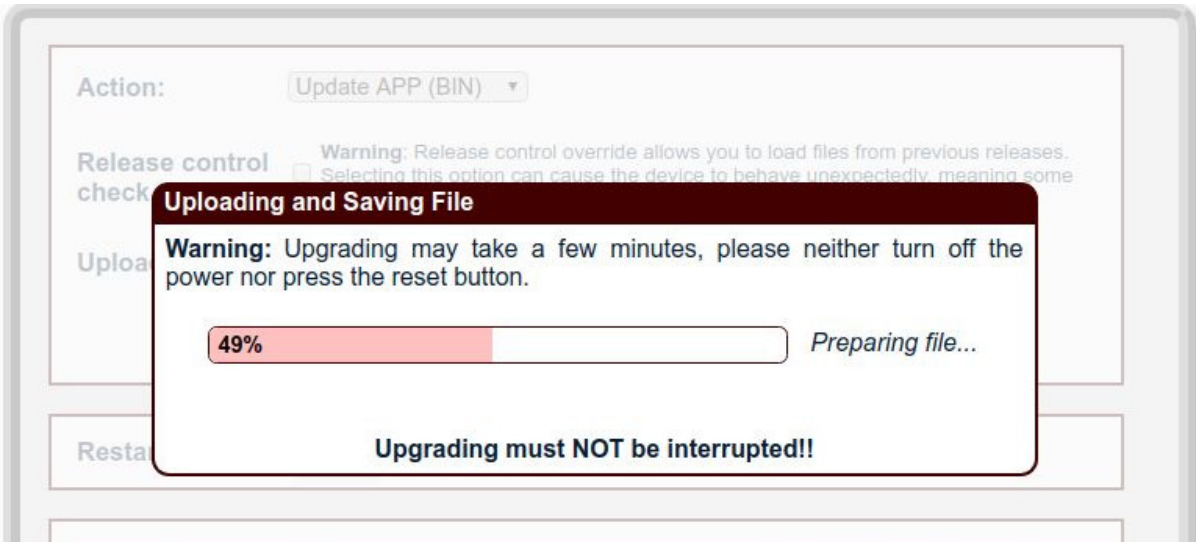
You may click on *Cancel* if you believe you have selected the wrong file or want to stop the process. Once the file has been uploaded, the *Cancel* option will no longer be available.

Note

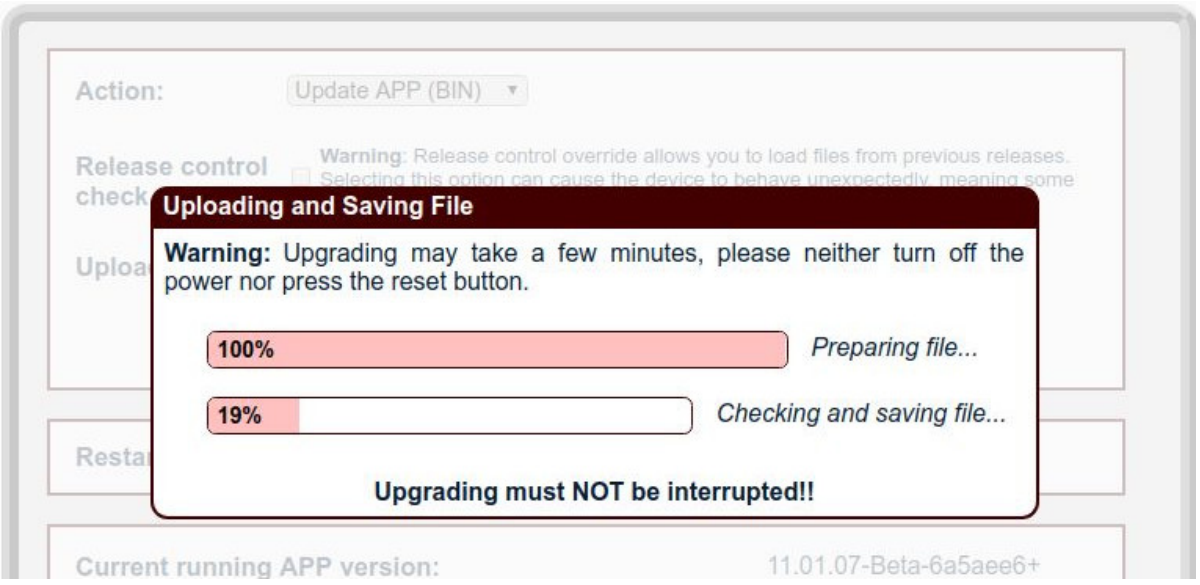
If the uploading progress bar stops, or if it resets to 0% and starts again, the uploading process is not working properly. This is likely due to insufficient device memory, which prevents file uploading.

To solve this issue, click on *Cancel*, restart the router and set a simpler configuration that better suits the available memory.

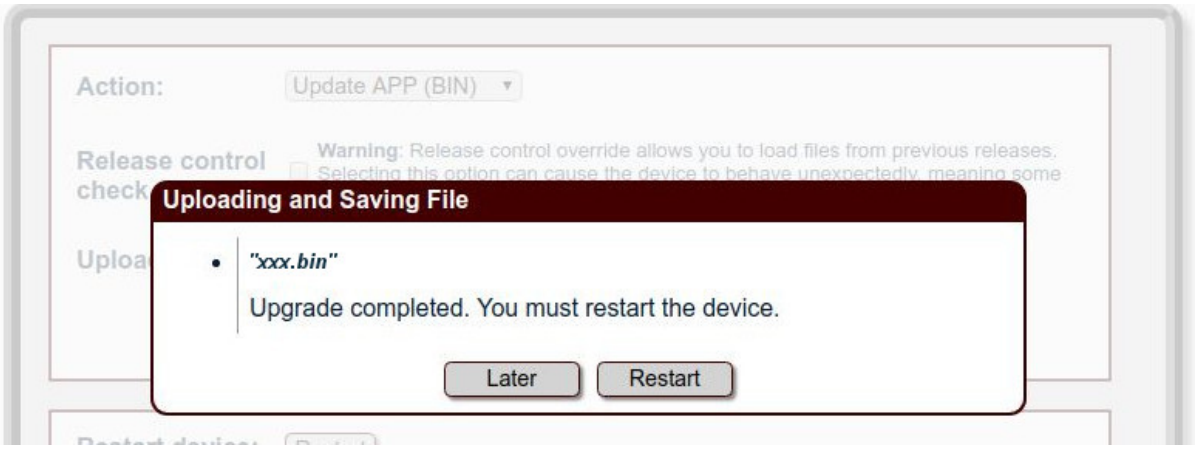
After the file has been uploaded, it will be prepared.



Once prepared, the file will be checked and saved. The progress bar will show you the file saving process:



(f) If the process has completed successfully, restart the router to use the updated software. To do this, click on *Restart*. If you'd prefer to do this later, click on *Later*.



An error message will appear if something goes wrong. In that case, the *Restart* button will not be available. To find out more about possible errors, please see the section on **Error Control.**

3.2 Updating BIOS

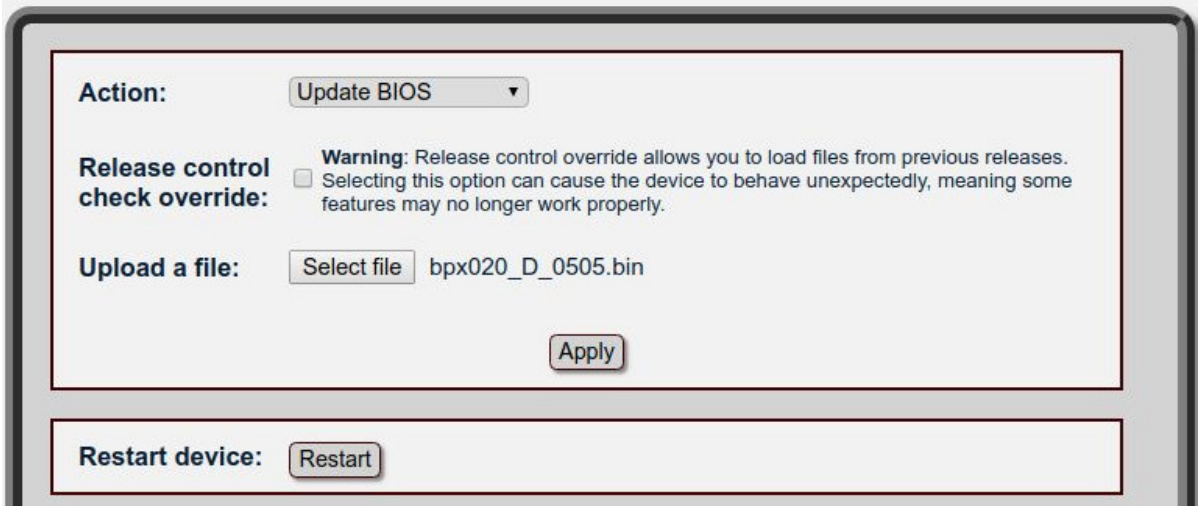
The steps to execute updating are as follows:

(a) Save the distribution content in a directory. When done successfully, the content will remain unaltered.

(b) Connect to the device's WEB server. Open your web browser and type, in the URL bar, the device's configured and accessible IP and the /upgrade path (as it appears in the next picture).

(c) You need to enter a user and password. Valid user/password pairs are those configured in the device. If there is no user configuration present in the device, the default user and password are both blank. Click on "*Sign in*" to access the web interface.

(d) Now, select *Update BIOS* and then click on the previously exported <.*BIN*> file. Hit *Apply* to start the process.



Note

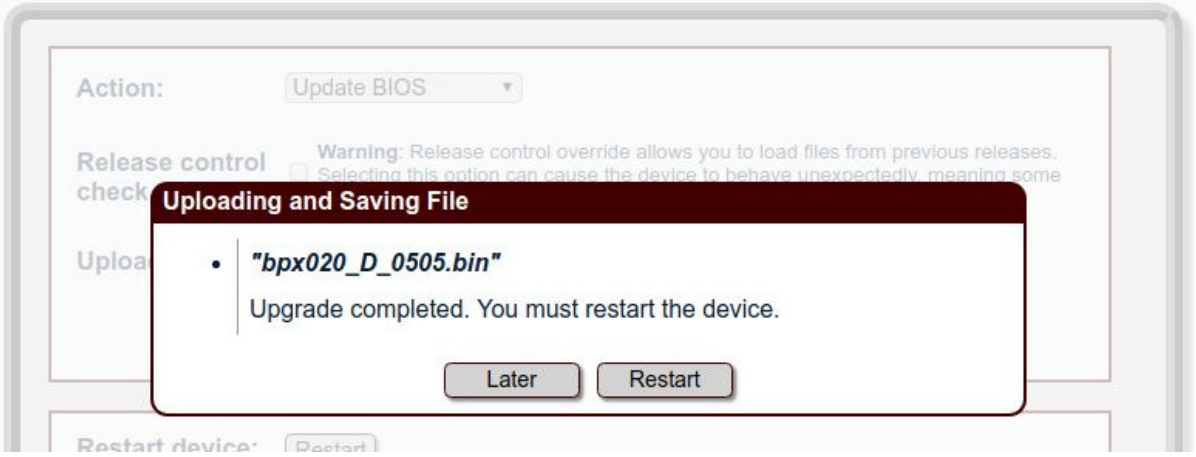
On the version control check override option: leave this option unchecked, as it appears by default. To know more about this option, take a look at the relevant section in this document.

Warning

Do not turn off or restart the system after you hit *Apply*. Also, don't close your browser or click on the return or refresh page button.

(e) After clicking on *Apply*, the selected file will be uploaded.

(f) If the process has completed successfully, restart the router to use the updated software. To do this, click on the *Restart* button. If you want to do it later, click on the *Later* button.



An error message will appear if something goes wrong. In that case, the *Restart* button will not be available. To find out more about possible errors, please see the section on **Error Control**.

3.3 Updating Firmware

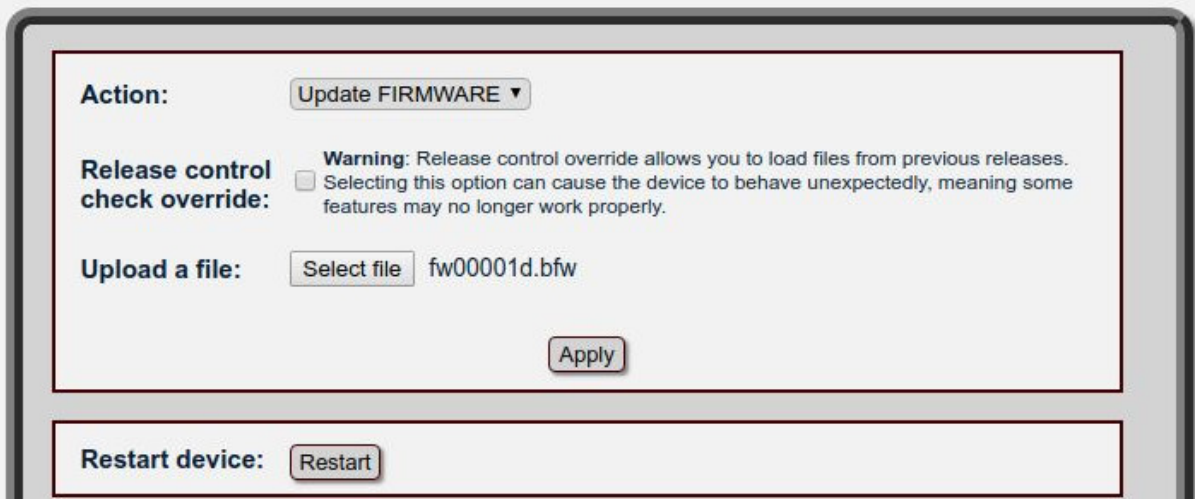
The steps to execute updating are as follows:

(a) Save the distribution content in a directory. When done successfully, the content will remain unaltered.

(b) Connect to the device's WEB server. Open your web browser and type, in the URL bar, the device's configured and accessible IP and the /upgrade path (as it appears in the next picture).

(c) You need to enter a user and password. Valid user/password pairs are those configured in the device. If there is no user configuration present in the device, the default user and password are both blank. Click on "*Sign in*" to access the web interface.

(d) Now, select *Update FIRMWARE* and then click on the <*.bfw*> file previously exported. Hit *Apply* to start the process.



Note

Leave the *Release control check override* option unchecked, as it appears by default. To learn more about it, take a look at the relevant section in this document.

Warning

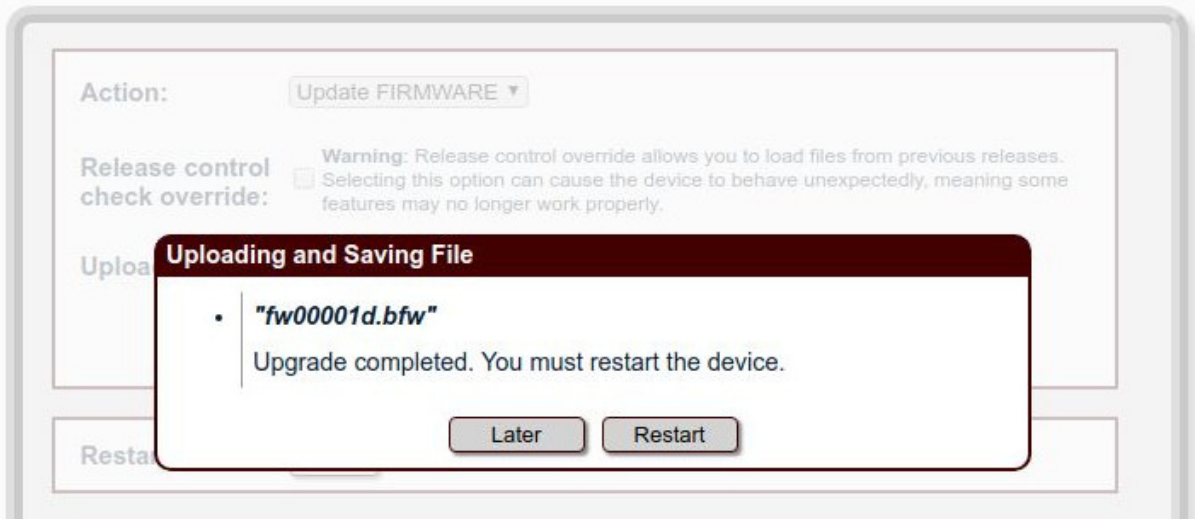
Do not turn off or restart the system after you hit *Apply*. Also, don't close your browser or click on the return or refresh page button.

(e) After clicking on *Apply*, the selected file will be uploaded.

Note

Please be patient. The progress bar may stay at 0% for some time while checking and saving the file.

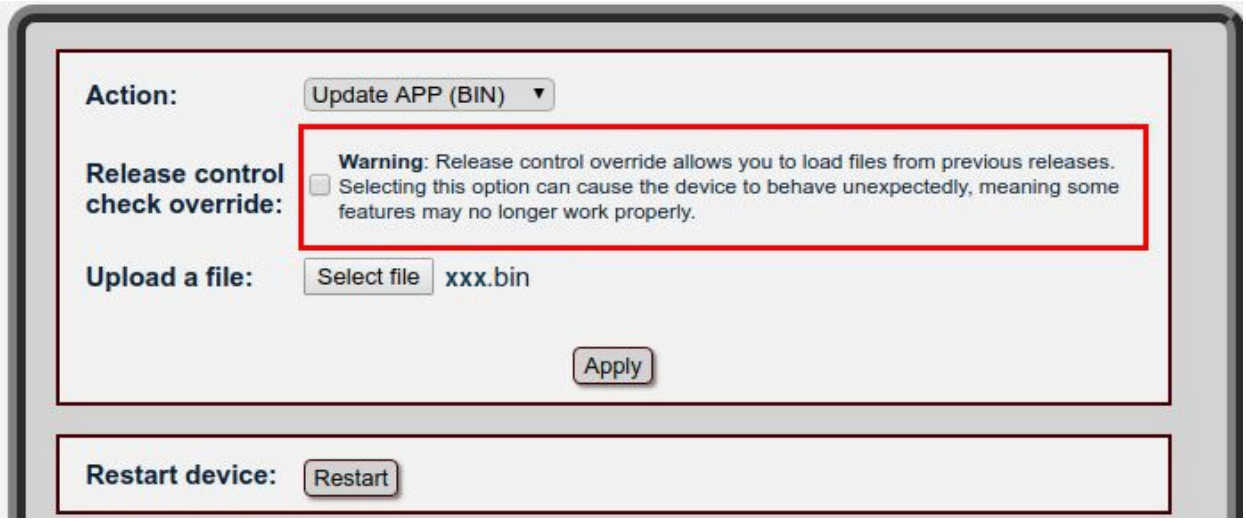
(f) If the process has completed successfully, restart the router to use the updated software. To do so, click on the *Restart* button. If you want to do it later, click on the *Later* button.



An error message will appear if something goes wrong. In that case, the *Restart* button will not be available. To find out more about possible errors, please see the section on **Error Control**.

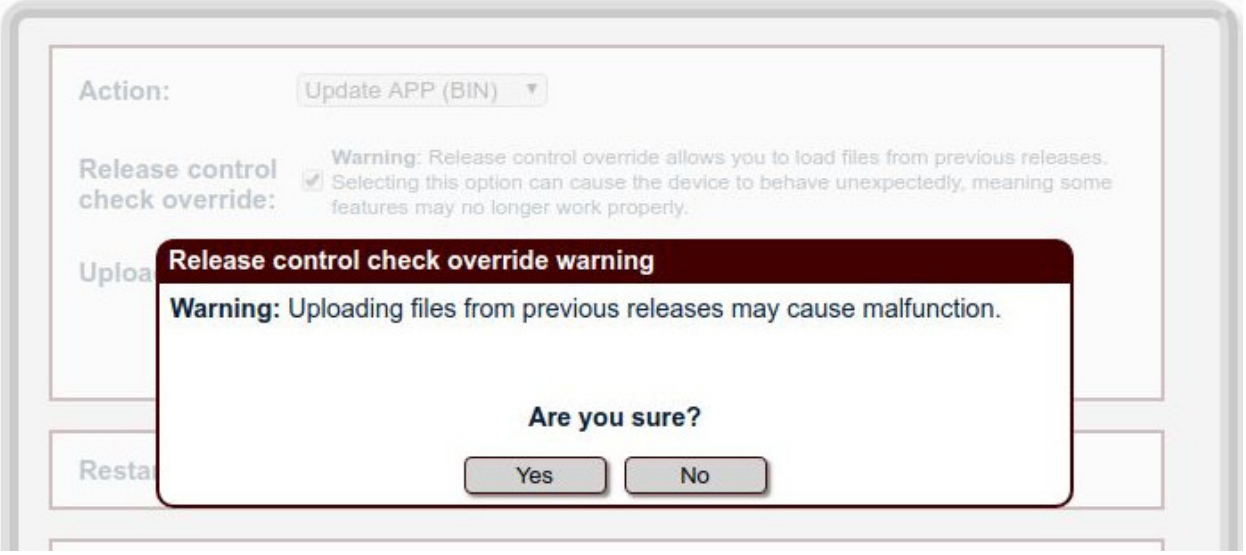
Chapter 4 Release control override option

By default, the device will not let you load files that are older than the application version currently in place. This safety measure prevents obsolete versions, which may cause the device to behave unexpectedly or malfunction, from being uploaded. There is, however, an option to disable the release control check in case you need to load an older application version. This is controlled by the check box in the WEB interface:



As previously stated, the box is unchecked by default and version control is enabled.

When you click on the box, a warning will appear asking the user to confirm said action. This is to make sure the box is not checked by mistake.

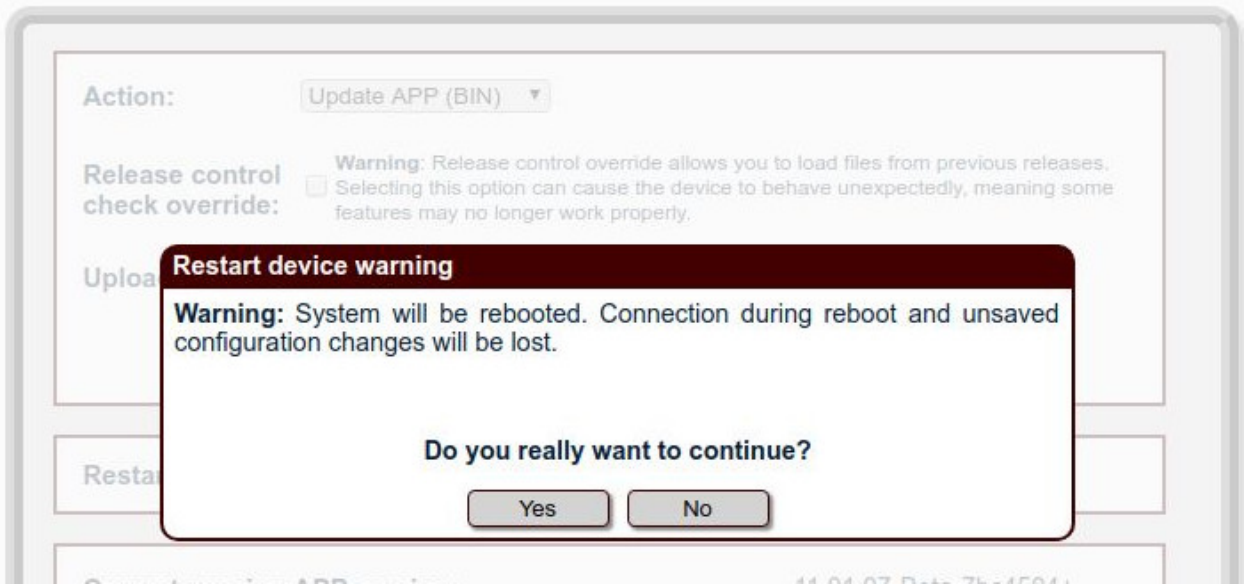


After confirmation, you may carry on with the process as usual.

Chapter 5 Restart device

When this button is clicked, the device restarts.

Before this process is carried out, a confirmation message pops up:

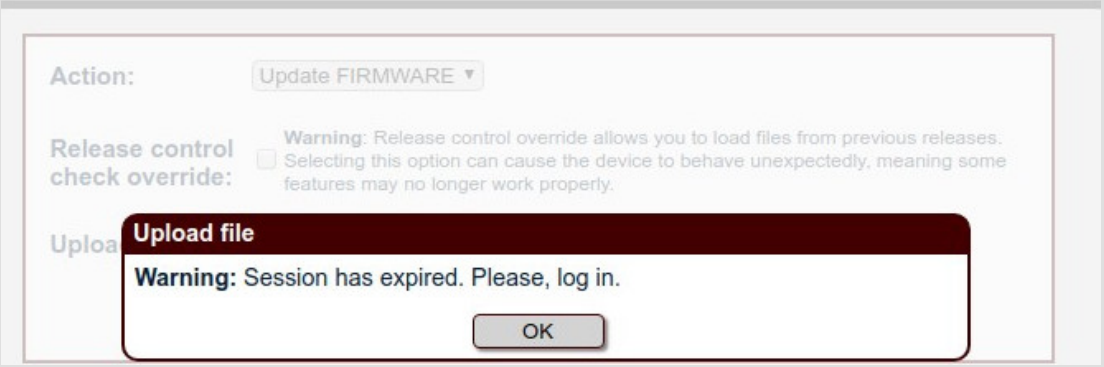


If you choose *Yes* , the device restarts. During this process, the following waiting page appears:

Finally, when the restarting process has finished, the login page reloads automatically.

Warning

When you click on *Restart* or *Yes* , sessions that have expired cannot be restarted. In these cases, the following warning message appears:



Clicking on *OK* loads the login page. There, the user can sign in again and restart the device.

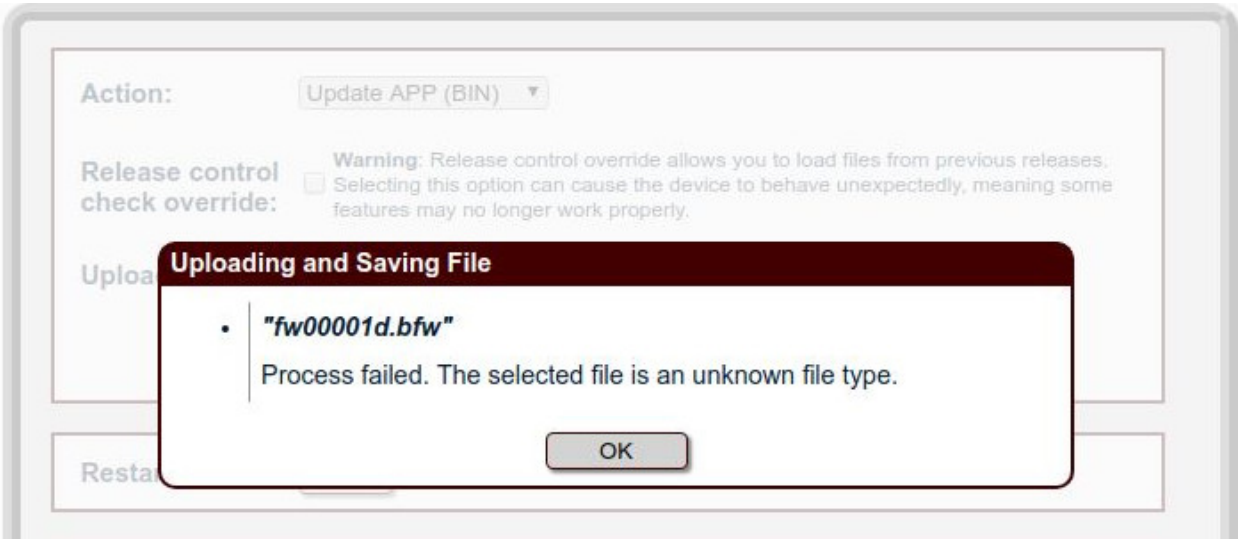
Chapter 6 Error control

When an error is detected, the WEB interface will display error messages. They will contain useful troubleshooting information.

The following sections include several error examples.

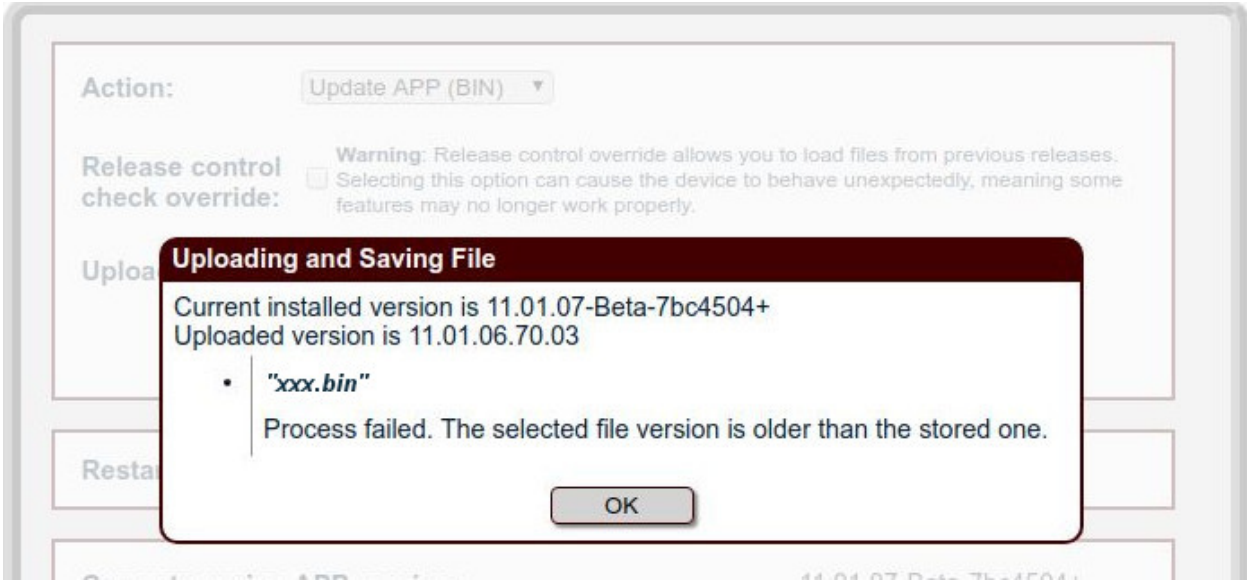
6.1 Unknown file type

The following error message appears when the device cannot match the uploaded file to the file type selected.



6.2 Older version than the one stored

The following warning appears if you try to load an application version that is older than the current one.

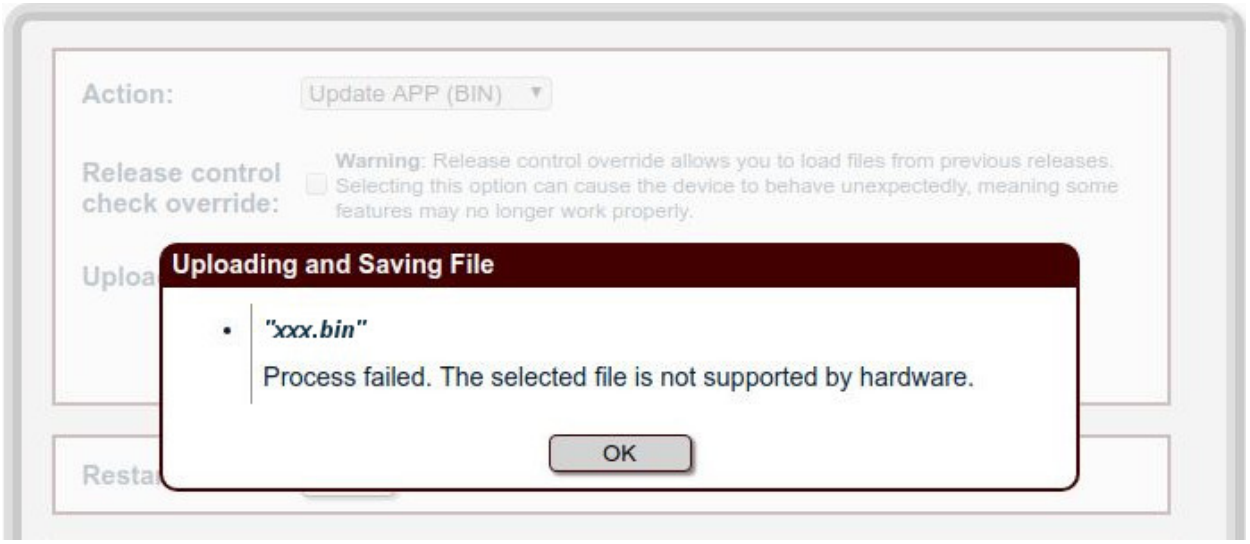


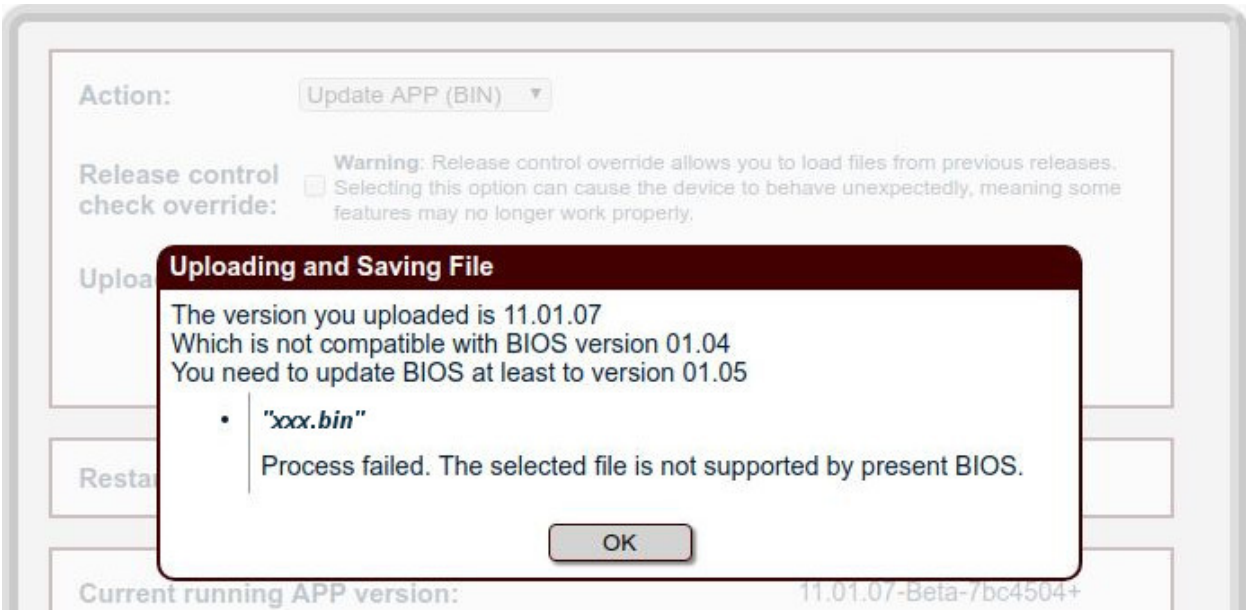
Note

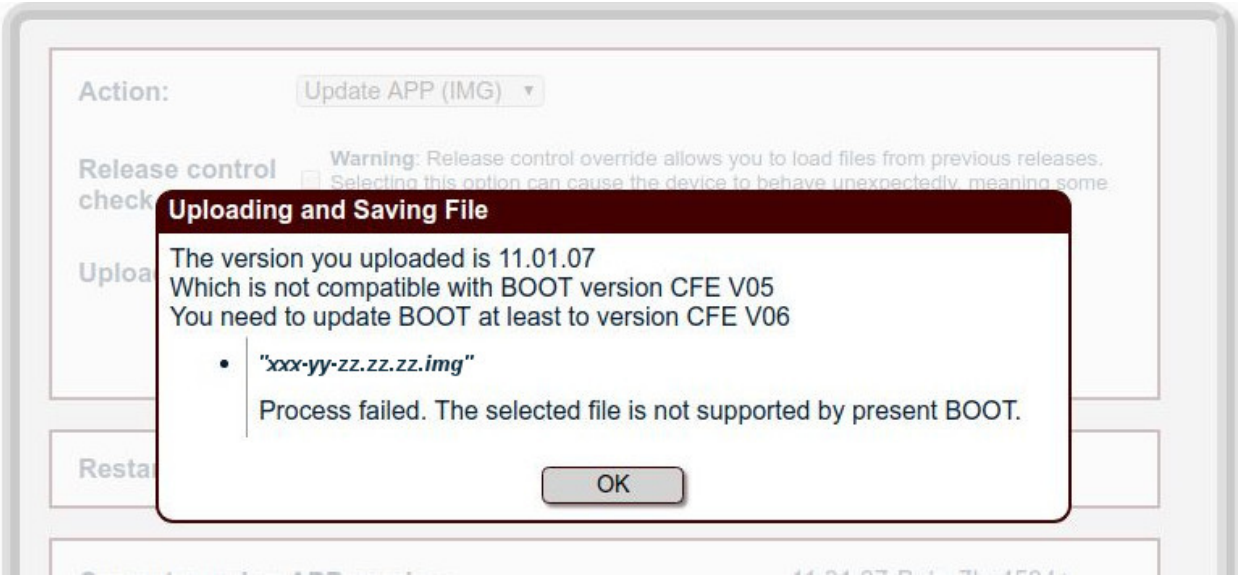
Remember that, if necessary, you may disable the version check (as explained in the previous section).

6.3 The selected file is not supported

This error will happen when the file you are trying to upload is not supported by the device's current BIOS / BOOT or hardware.





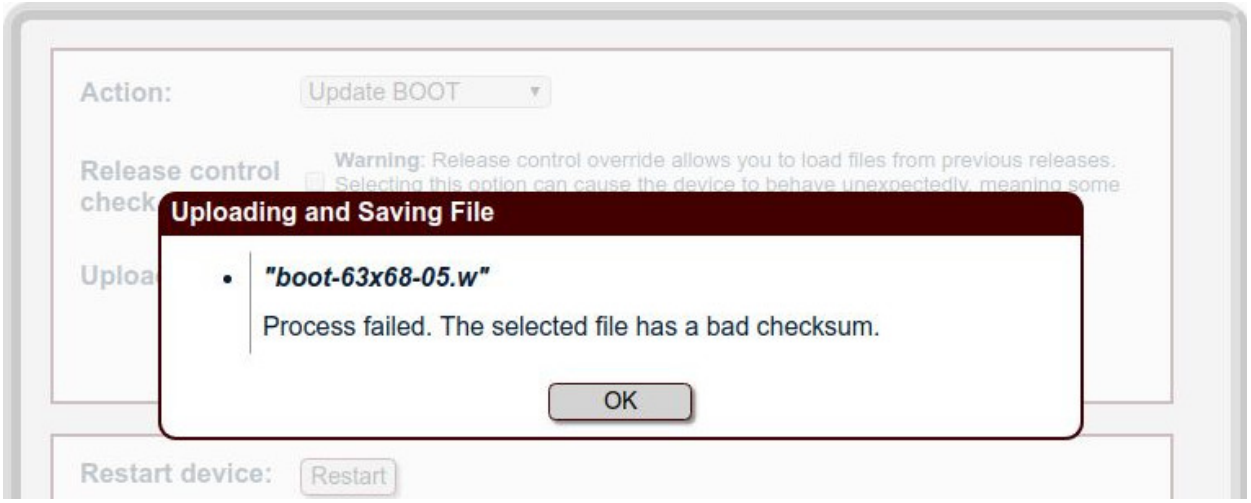


The most probable error causes are:

- You are trying to upload an application file that is not suitable for your device and was meant for another device instead.
- You need to update the device's BIOS / BOOT before uploading the application file.

6.4 Bad checksum

This warning appears when the file you are trying to upload is recognized as a valid file but is found to be defective when analyzed.

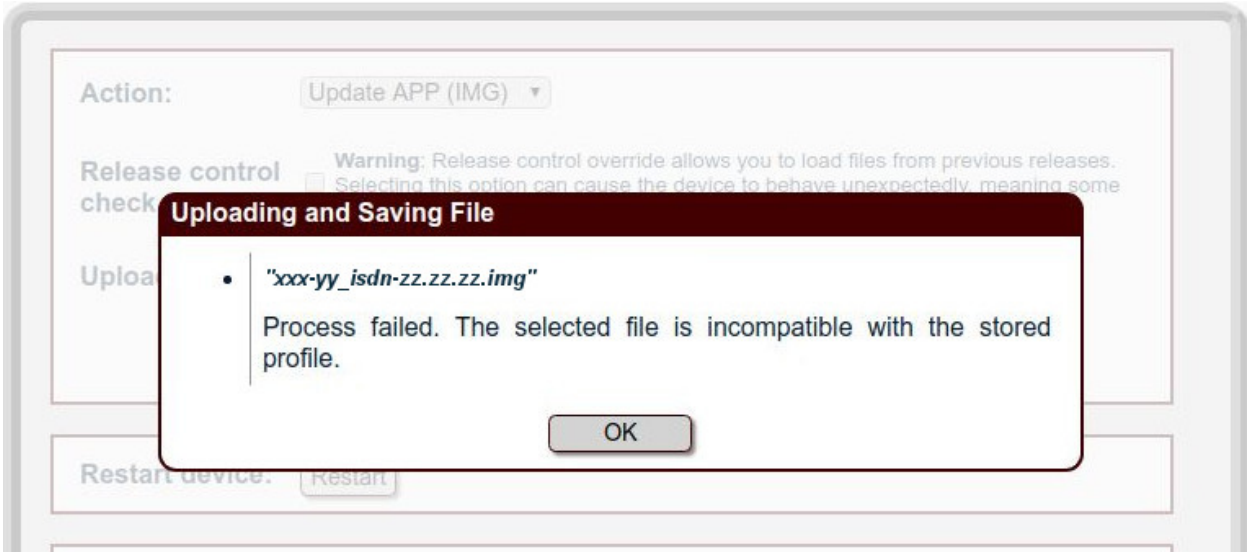


This error may be due to some parts of the file being modified (for instance, when extracting errors) or because of a disk error.

To solve this problem, try to extract the file again from the original compressed file or save it into a different disk or physical medium.

6.5 File is incompatible with the stored profile

If you try to upload a file that does not match the device profile you will get this warning:

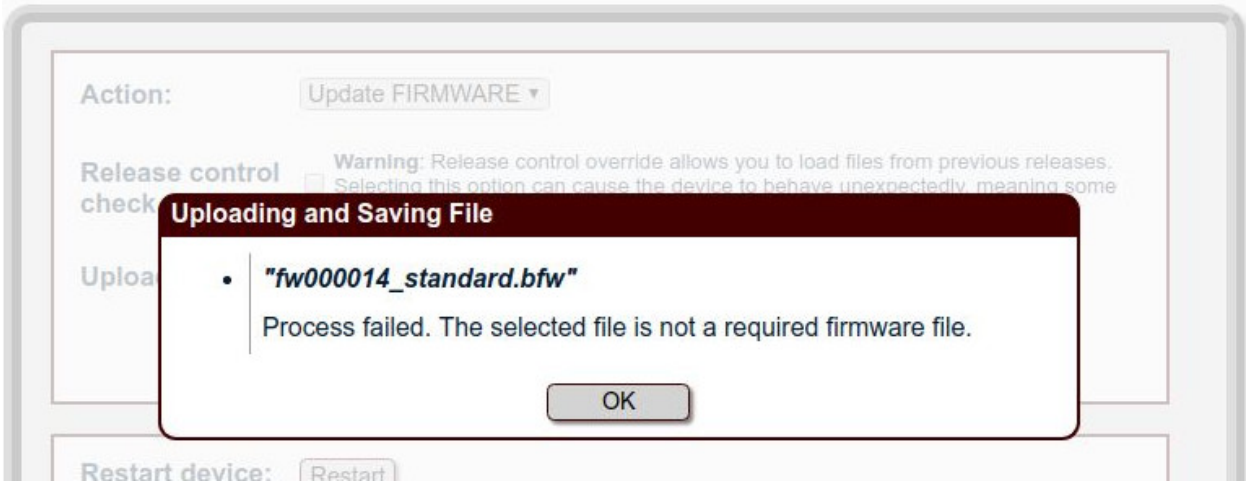


Here, we were trying to upload an “isdn” profile file in a device that does not support it.

To solve this issue, select the right file for the device.

6.6 Firmware not required

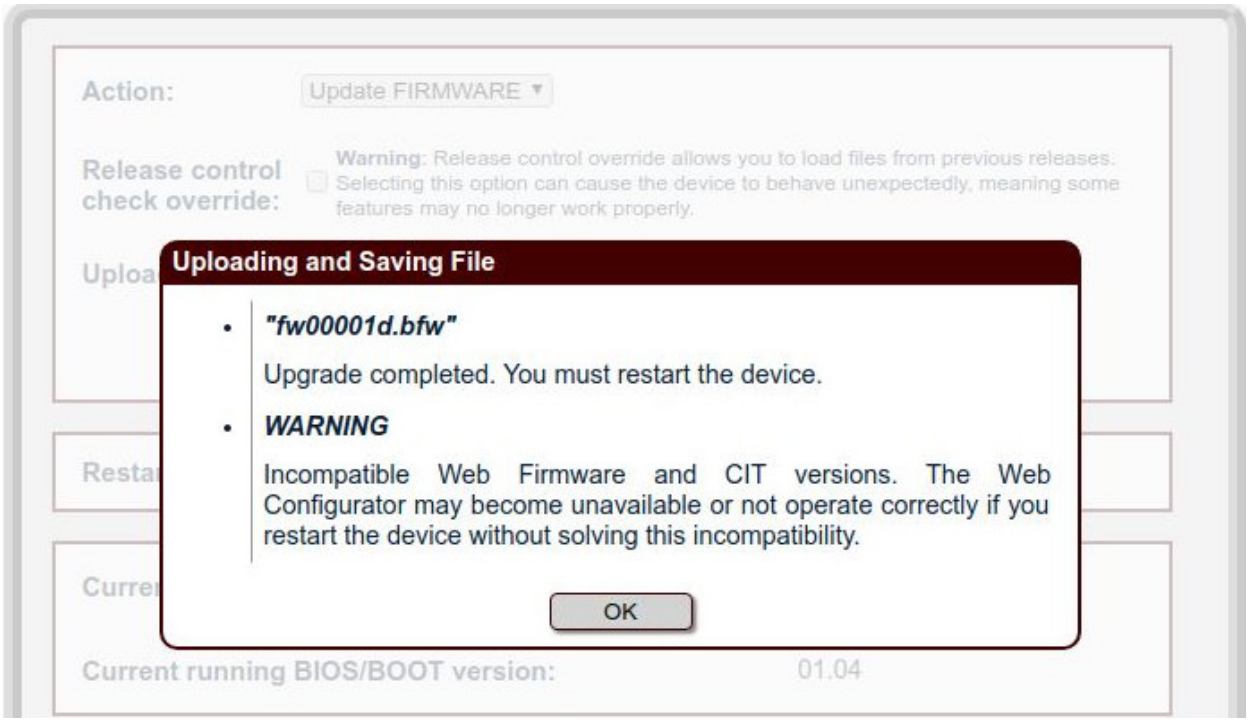
This warning appears when you try upload a firmware file in a device that does not require it:



To solve this problem, make sure you have selected the correct firmware file for the device.

6.7 Incompatible web firmware

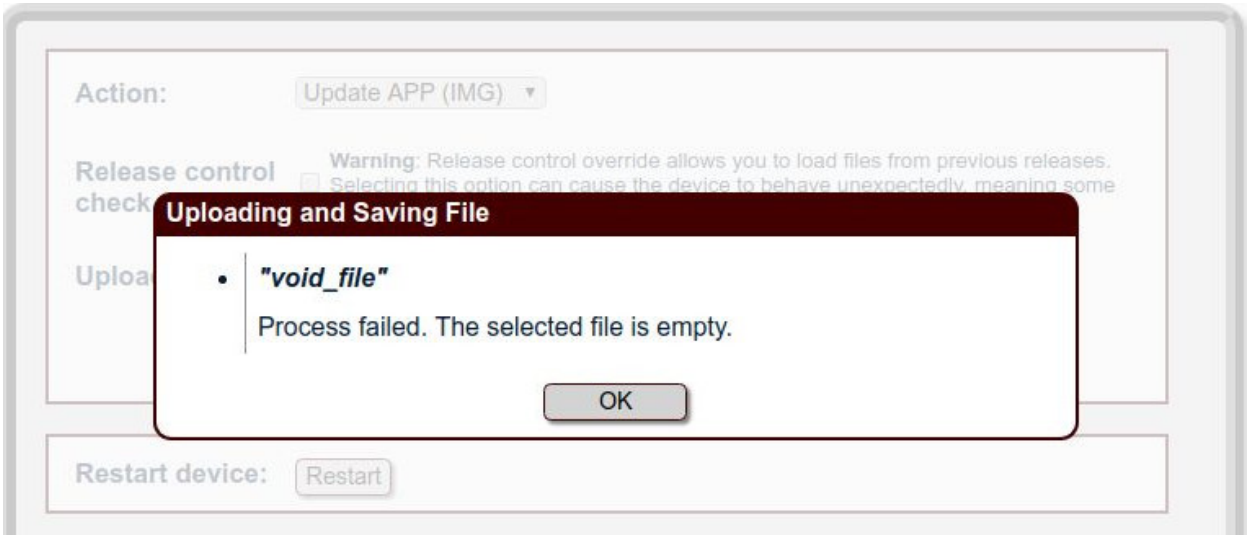
This warning appears when you update the application's web firmware and it proves incompatible:



To make sure the web configurator will work correctly, click on *OK* and then upload a mutually compatible application or firmware file.

6.8 The selected file is empty

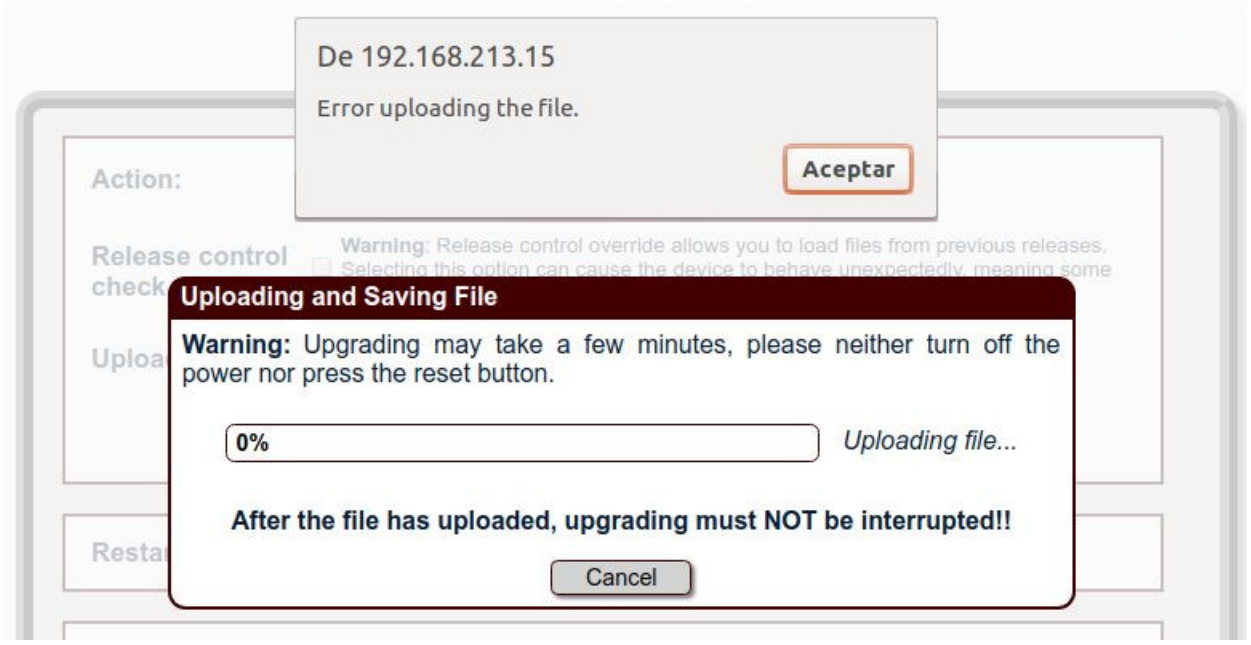
This warning appears when you select a file that is empty.



Select the right file to fix this issue.

6.9 Error uploading the file

If there is an error while uploading the file, this warning will appear.



There are many possible causes for this error (for instance, uploading files that the device cannot handle properly).

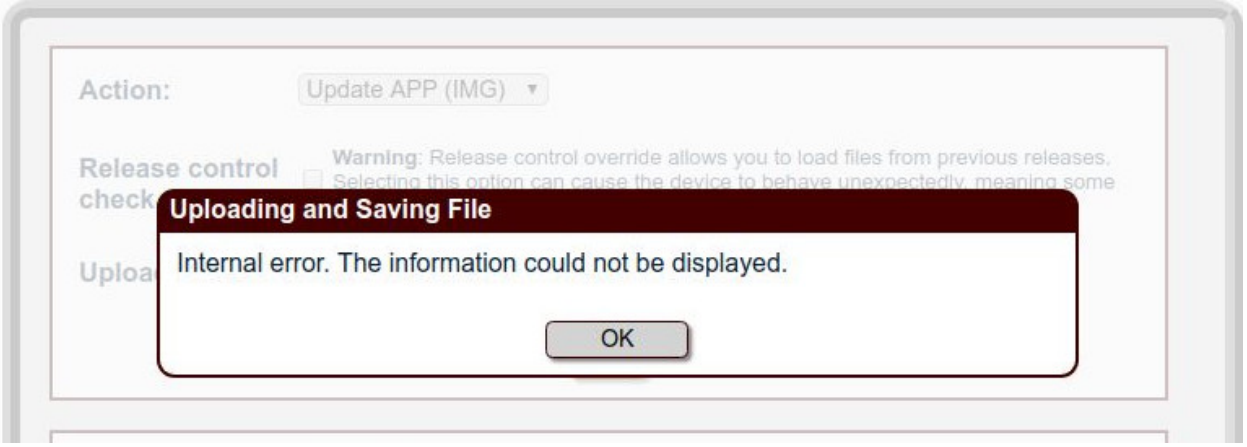
6.10 Disk-related errors

These errors appear when the device has tried to save the file in its internal drive but could not.

- If the error message indicates the disk is full, you may want to free space for the newly loaded application by deleting old files.
- If the error messages have to do with writing or renaming issues, the disk cannot save files due to an internal problem. In this case, an immediate solution cannot be provided and further analysis is needed.

6.11 Internal error

This warning appears when the device cannot handle the request.



This generic error warning appears when an error that does not match any of the foregoing scenarios is detected.

Chapter 7 Information required for updating

7.1 How to determine the appropriate distribution and the appropriate binary

To update a device, you need to know its identifier and current license. This information can be obtained by:

- Checking the label found on the bottom of the device (this only helps determine the device identifier, not the current license).
- Entering the "*configuration*" monitoring command in the local or Telnet console (in this case *M8-Smart*).

```
*monitor
+configuration
bintec elmeg's Router, M8-Smart S/N: 918/394847
SWL:BASE BINTEC
ID:  M8-Smart

Boot ROM release:
 BIOS CODE VERSION: 02.03-B  Sep  2 2020 15:46:56 L0

System Info:
PCB:0x159 PVR:0x80241021 SVR:0x85490010 T1023
CLKs: PLAT=600 CPU0/1=1400/1400 DDR=1600 LBUS=75 PCI0/1/2/3=0/0/0/0
Watchdog:Enabled
...
```

- Via FTP, using the "*quote site systid*" command.

```
ftp> quote site systid
211 M8-Smart
ftp>
```

To identify what application binary should be downloaded in your device, check the "version_map.txt" file included in the distribution and find the first matching condition.

For example, if there are several devices where M8-Smart is the corresponding distribution, the "version_map.txt" file contained there is as follows:¶

```
M8-Smart, *F, *R, *, m8smart.bin, M8-Smart
M8-Smart-WiFi, *F, *R, *, m8smart.bin, M8-Smart-WiFi
```

- If the device identifier is M8-Smart, the binary to be loaded is *m8smart.bin*.