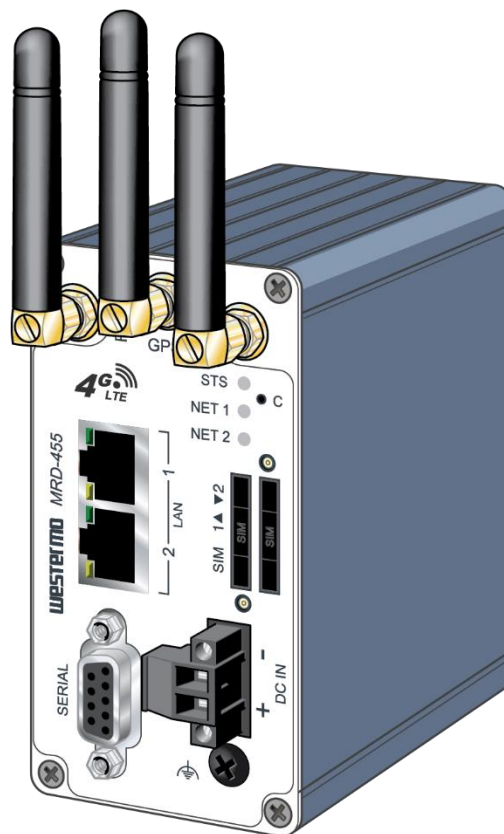


How to Upgrade the Firmware on xRD routers

Upgrading the Firmware on all ADSL/BRD broadband routers and MRD wireless routers

QN-003-WNT



Overview

The easiest way to manage the firmware update process is to download and install WeConfig. WeConfig will automatically update the xRD to the latest version, including any stepping stone upgrades to get to the latest version. Follow the link to download the latest version of WeConfig.

<https://www.westermo.com/solutions/weconfig/get-weconfig>

To manually update the firmware the following pages, show how to upgrade the firmware on the MRD wireless routers and ADSL-350/BRD-355 broadband routers. Please ensure you have read and understood the legal.pdf regarding License and Copyright when using the firmware. This document can be found in the firmware folder along with the firmware release notes. In this quick note we will show how to upgrade the firmware via the Web GUI and FTP methods.

PLEASE NOTE THAT UPGRADING A REV 1&2 HARDWARE TO VERSION 1.9.5.0 OR LATER WILL TAKE 10-15 MINUTES TO COMPLETE. DURING THE UPGRADE THE STS AN NET1 LEDS WILL FLASH ALTERNATLY, WAIT FOR THE LED'S TO RETURN TO NORMAL BEFORE POWER CYCLING OR TRYING TO ACCESS THE UNIT. IF THE POWER IS INTERRUPTED BEFORE COMPLETION THE DEVICE WILL NEED TO BE RETURNED TO THE FACTORY. THIS IS NOT COVERED BY THE WARRANTY.

Upgrading a Rev 1& Rev 2 hardware to Version 1.9.5.0

From version 1.9.5.0 it is possible to upgrade older Rev 1& Rev 2 hardware. It is not strictly necessary to update to 1.9.5.0. When upgrading Rev 1 & 2 hardware to 1.9.5.0 it is necessary to first upgrade the xRD device to 1.8.8.9 and then install 1.9.5.0. This is handled automatically by WeConfig. The manual process for upgrading firmware is listed below.

Upgrading the firmware of the ADSL-350/BRD-355 or the MRD-Series using the Web GUI

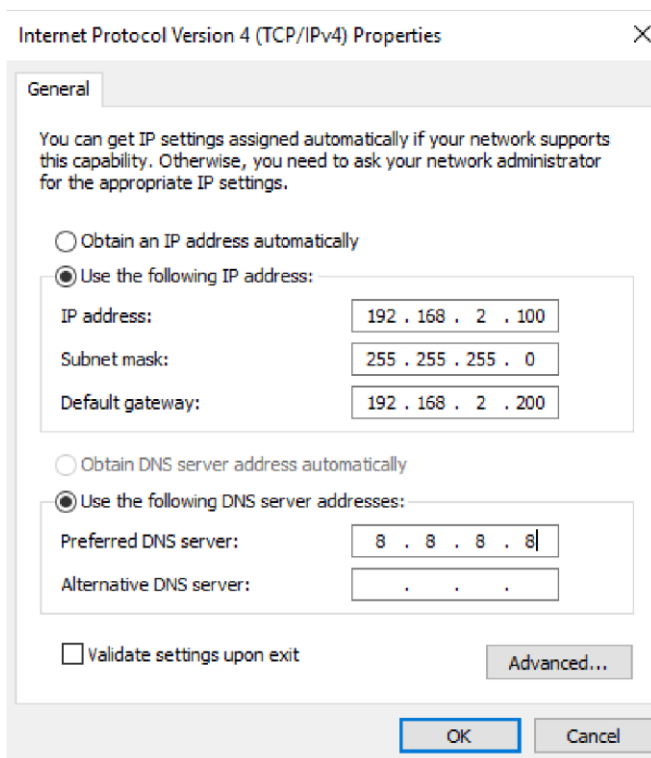
Do not disconnect the power from the unit during the upgrade procedure!

The firmware update can be carried out local to the device or over the air/xDSL connection but can take considerably longer over low bandwidth connection.

Step 1 – Configure your IP Address (local device update)

In order to connect to the unit via the web-interface, you need to configure your pc to the same subnet. You will need Admin rights or temp admin rights to change the IP address.

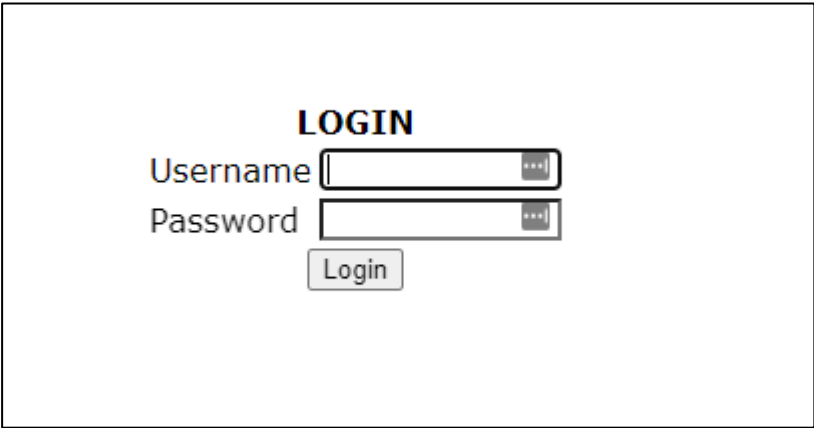
- Configure your PC to the same subnet (example)



Step 2 – Backup your Configuration

In order to make sure that your configuration is not lost during the upgrade procedure, please make sure to backup your settings.

- Login to the web-user-interface of the unit (default IP: 192.168.2.200 subnet: 255.255.255.0)



Note; Depending on the age of the software the software the login screen will vary.

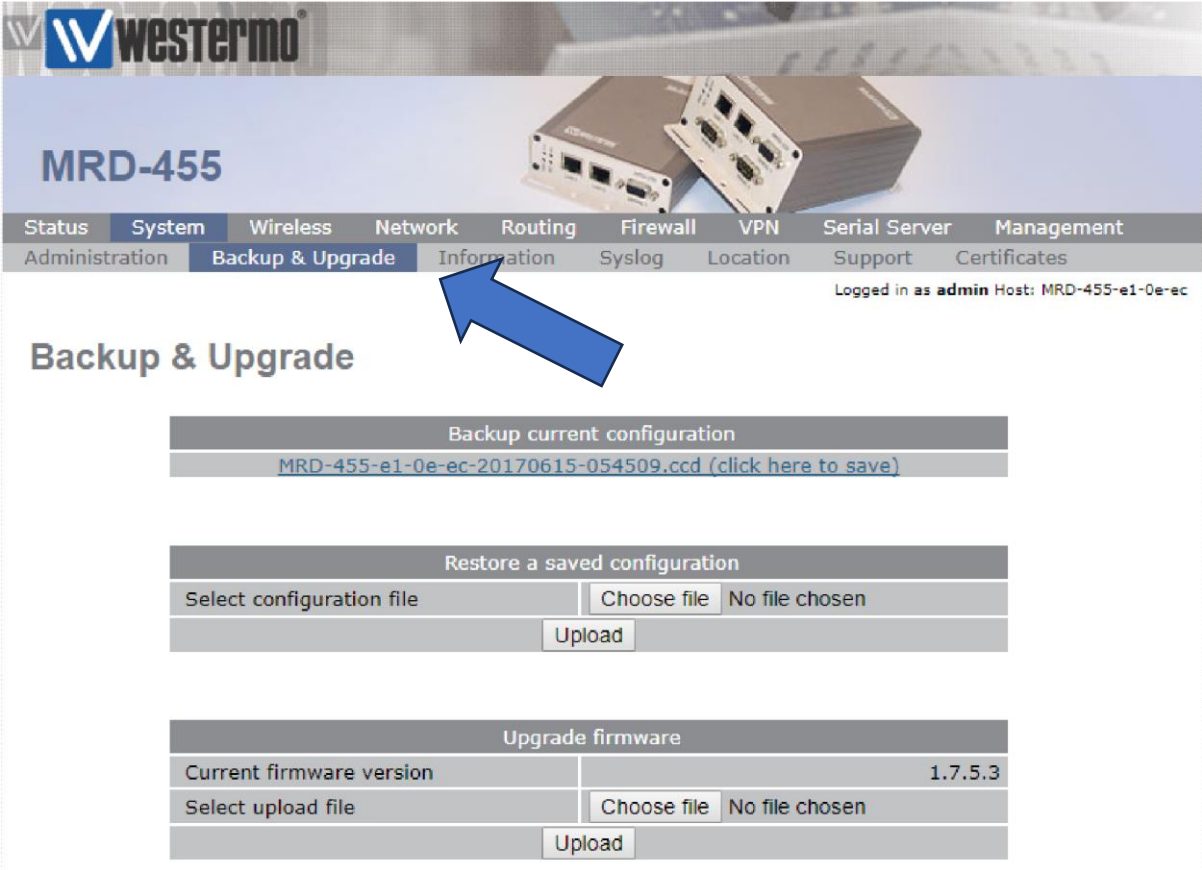
Default Credentials :

UN admin

PW westermo

Backup device

- Access the “Backup & Upgrade” page by clicking System -> Backup & Upgrade in the menu



- Now click on the link under “Backup current configuration” and save the file

Step 3 – Upgrade the Firmware

- Click on the “Choose file” tab under “Upgrade firmware” and navigate to the firmware file in the popup window.

Upgrade firmware	
Current firmware version	1.7.5.3
Select upload file	<input type="button" value="Choose file"/> No file chosen
<input type="button" value="Upload"/>	



Select the .img file and click open


Name	Status	Date modified	Type	Size
legal.pdf	✓	26/06/2023 12:19	Adobe Acrobat D...	1,106 KB
MRD455-V1.8.8.9.img	✓	26/06/2023 12:41	Disc Image File	23,184 KB
MRD455-V1.8.8.9.img.md5	✓	26/06/2023 12:41	MD5 File	1 KB
MRD455-V1.8.8.9.zip	✓	14/07/2023 14:59	Compressed (zipp...	24,282 KB
westermo_qn_xRD-series_firmware_upgr...	✓	26/06/2023 12:19	Adobe Acrobat D...	1,192 KB
westermo_rn_xrd_v1.8.8.9.pdf	✓	06/07/2023 16:05	Adobe Acrobat D...	406 KB
westermo-mrd.mib	✓	26/06/2023 12:41	MIB File	18 KB
westermo-mrd.my	✓	26/06/2023 12:52	MY File	18 KB

- Now click “Upload” and wait for the file to be uploaded to the unit.

Upgrade firmware	
Current firmware version	1.8.8.9
Select upload file	<input type="button" value="Choose file"/> MRD455-V1.8.8.9.img
<input type="button" value="Upload"/>	

The file will be verified before the actual upgrade procedure is started. As the screenshot below illustrates the user can either go ahead with the upgrade procedure by clicking on “Upgrade” or abort by clicking “Cancel Upgrade”

Upgrade firmware	
Status of uploaded file	Passed
Filename	MRD455-V1.8.8.9.intimg
Release	V1.8.8.9
Build date	23/06/2023
MD5Sum	fb54f44f1538e1b2eccf52b85329abc1
SHA1Sum	345fe8a9c67bc2f8787365a8d347b08c0121fb5d
<input type="button" value="Upgrade"/>	<input type="button" value="Cancel Upgrade"/>



Firmware uploaded and verified as a valid firmware file.

- Select “Upgrade” to begin the upgrade procedure.

The unit will now be upgraded to the selected firmware version and will be rebooted once the upgrade is completed.

The screenshot shows the Westermo MRD-455 web interface. At the top left is the Westermo logo. Below it, the model name 'MRD-455' is displayed. A navigation menu includes: Status, System, Wireless, Network, Routing, Firewall, VPN, Serial Server, Management, Administration, Backup & Upgrade (highlighted), Information, Syslog, Location, Support, and Certificates. The user is logged in as 'admin' on host 'MRD-455-e1-0e-ec'. The main content area is titled 'Backup & Upgrade' and contains three sections:

- Backup current configuration**: A button labeled 'MRD-455-e1-0e-ec-20170615-054807.ccd (click here to save)'.
- Restore a saved configuration**: A form with a 'Select configuration file' label, a 'Choose file' button, and 'No file chosen' text. Below the form is an 'Upload' button.
- Upgrade firmware**: A section with the following text: 'The upgrade is now starting.', 'The upgrade will take several minutes to complete and the modem will be offline during this time.', and 'The modem will reboot once the upgrade is complete.'

Firmware upgrade procedure in progress. Do **NOT** disconnect the power!

- The web page will not be updated automatically once the firmware upgrade is completed. The upgrade process is between 5-10 min. (10-15 min when upgrading to 1.9.5.0 or later)

Once the firmware upgrade is completed, you can verify this simply by refreshing the page. You will have to log back in the unit with the username and password.

Administration

10:51:00 19/12/2023

Administration	
Hostname	MRD-455-e1-36-f7
Domain Name	
Time source	Wireless Network
NTP server	
Timezone	<input type="checkbox"/> + 0:00
Manually set time	Set time
Edit users and passwords	
Timed reboot (hours, 0 for none)	0
Shutdown with timed restart	Shutdown
Reboot modem	Reboot
Config reset modem	Config Reset
Reset	Update



Upgrading the firmware of the ADSL-350/BRD-355 or the MRD-Series using the FTP/TFTP

All xRD routers have a CLI that can be used for minor configuration, upgrade or make backups. The xRD routers supports Telnet and SSH to manage the routers via the CLI.

This Quick Note will focus on the Upgrade process using TFTP or FTP and how you can upgrade the xRD routers using 3rd party FTP software.

Note: when updating to 1.9.5.0 or later on a Rev 1 & 2 hardware the firmware should first be updated to 1.8.8.9 then updated again to 1.9.5.0 or later. Always take a backup of the config file before updating to the next version.

Step – 1 Configuration of FTP/TFTP server

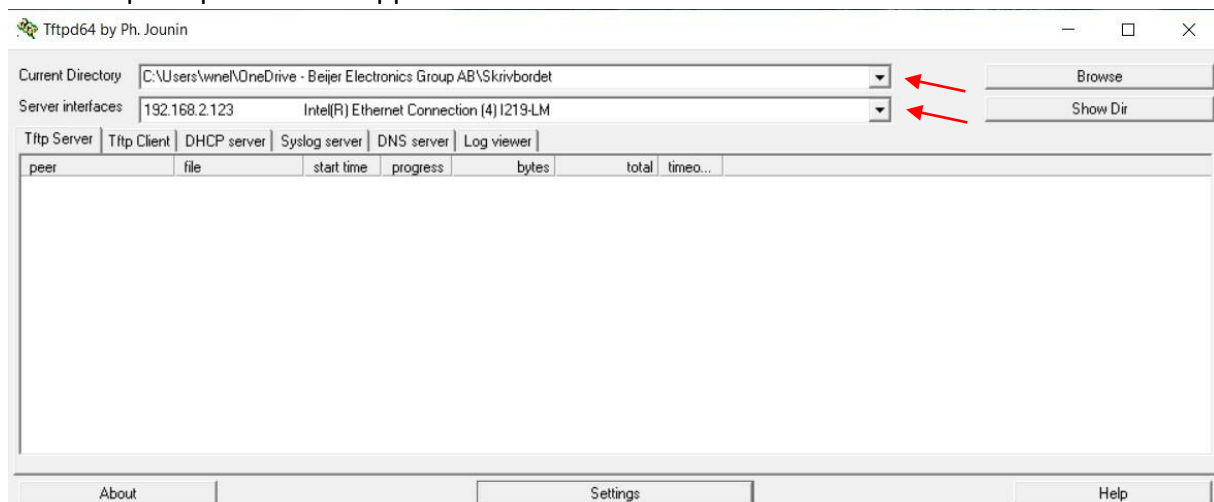
You can use any FTP/TFTP software like *FileZilla*, *Winscp*, *TFTPD64* or similar.

Do not disconnect the power from the unit during the upgrade procedure!

- In this example we are using *TFTPD64* which is opensource firmware, free to download.

Please Note that TFTPD64 has no affiliation with Westermo.

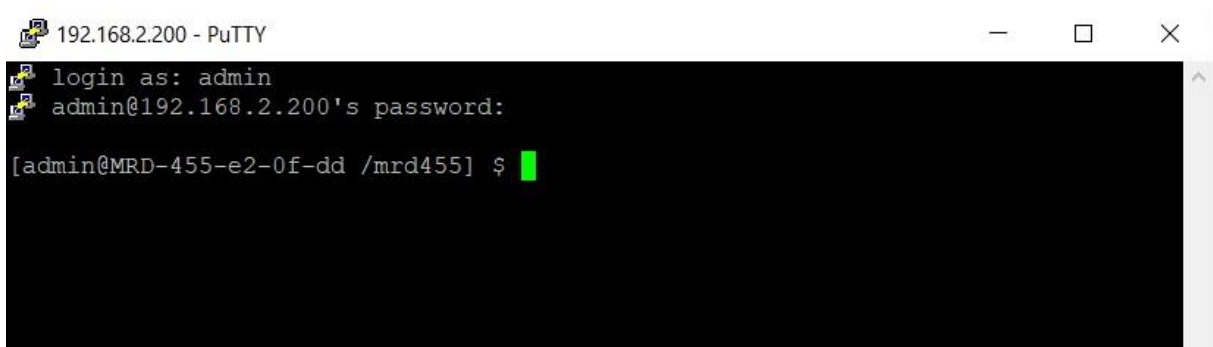
- Open up the TFTPD application.



- Here you need to select your Firmware folder, click “Browse” and select the folder/firmware location you want to use. (in example I am using my desktop to keep is simple and not many folders to navigate through).
- Then select the interface you are using to connect to the Router (in example I am using my LAN adaptor)
- You may need to check your firewall settings to make sure that FTP/TFTP and associated ports are allowed.

Step 2 – Start Upgrade Process

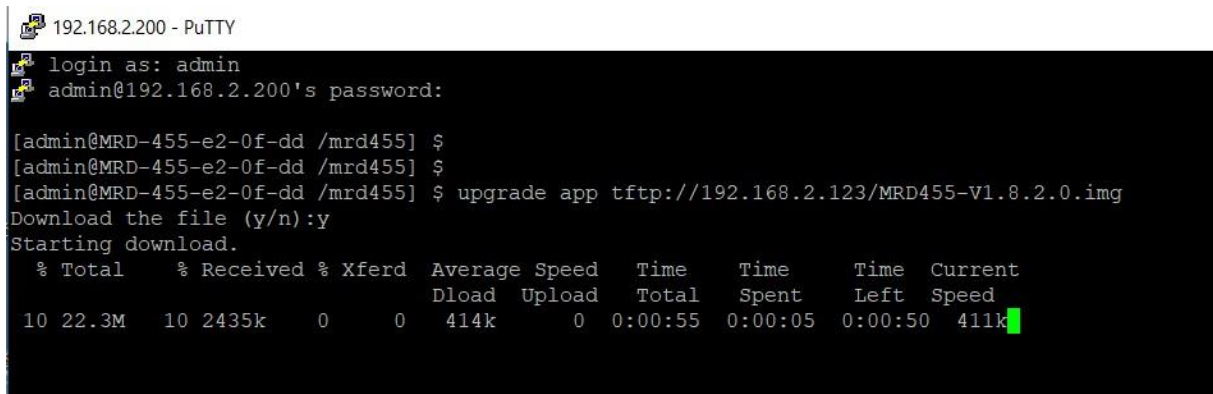
- To start the upgrade process, access the device using SSH (TeraTerm or Putty) and log in using the Username and Password for the router



```
192.168.2.200 - PuTTY
login as: admin
admin@192.168.2.200's password:
[admin@MRD-455-e2-0f-dd /mrd455] $
```

- Once you have logged in, run the command below to start the TFTP upgrade. Please note that the file name must be exact, or the upgrade will not work.

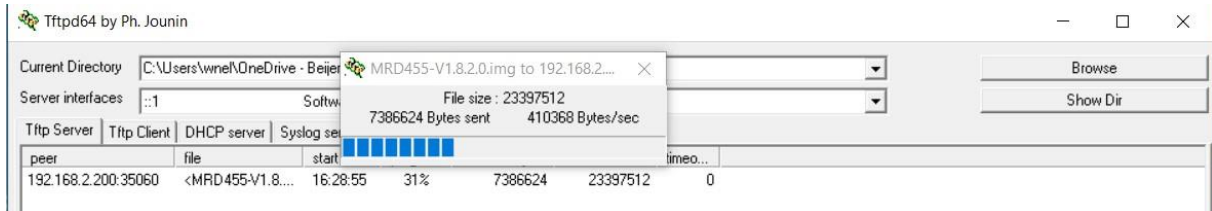
"upgrade app tftp://192.168.2.123/MRD455-V1.8.2.0.img"



```
192.168.2.200 - PuTTY
login as: admin
admin@192.168.2.200's password:
[admin@MRD-455-e2-0f-dd /mrd455] $
[admin@MRD-455-e2-0f-dd /mrd455] $
[admin@MRD-455-e2-0f-dd /mrd455] $ upgrade app tftp://192.168.2.123/MRD455-V1.8.2.0.img
Download the file (y/n):y
Starting download.
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
   Dload  Upload   Total   Spent    Left   Speed
  10  22.3M   10 2435k    0     0   414k    0  0:00:55  0:00:05  0:00:50  411k
```

- You will be prompted to enter Y or N to proceed or cancel the upload process.

- You can see the progress of the file transfer on TFTPd software.



- Once the file has successfully uploaded you will be prompted to start the upgrade. The Router will reboot once the upgrade has completed and you will need to re-establish a SSH session.

```
[admin@MRD-455-e2-0f-dd /mrd455] $ upgrade app tftp://192.168.2.123/MRD455-V1.8.2.0.img
Download the file (y/n):y
Starting download.
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 22.3M  100 22.3M    0     0   391k    0  0:00:58  0:00:58  --:--:--  423k
100 22.3M  100 22.3M    0     0   391k    0  0:00:58  0:00:58  --:--:--  391k

Firmware upgrade information
=====
Version: V1.8.2.0
Date: 13/11/2020

Do you want to start the upgrade (y/n):y
Beginning firmware upgrade.
Do not power off the modem until upgrade is complete.
Your current console session will end soon.
[admin@MRD-455-e2-0f-dd /mrd455] $
```

Firmware upgrade in progress. DO NOT Disconnect the power!

- Once the router has rebooted you can view the firmware version on **System->Backup & Upgrade**

Status	System	Wireless	Network	Routing	Firewall	VPN	Serial Server	Management
Administration	Backup & Upgrade	Information	Syslog	Power	Location	Support	Certificates	

Logged in as **admin** Host: MRD-455-e2-0f-dd [Logout](#)

Backup & Upgrade 16:36:43 13/01/2021

Backup current configuration

MRD-455-e2-0f-dd-20210113-163643.ccd ([click here to save](#))

Restore a saved configuration

Select configuration file No file chosen

Upgrade firmware

Current firmware version 1.8.2.0

Select upload file No file chosen

Revision History

Revision	Rev by	Revision note	Date
00	WN	First Draft	03/01/18
01	WN	Update Template, added TFTP method	18/01/21
02	RTL	Updated to include note on 1.9.5.0 upgrade and WeConfig	19/12/23
03			
04			
05			
06			

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