
Upgrading the software on a MiMOMax radio

Description

This application note details the process of upgrading the software on a MiMOMax radio.

MiMOMax radios may be upgraded via the Ethernet port or remotely over the air. All MiMOMax radios store two copies of software, this allows for a software rollback should a software upgrade not perform as expected.

Logging into CCMS

MiMOMax radios have a built in web configuration package called CCMS. To access the CCMS, point a web browser to the radio's IP address (see Figure 1). MiMOMax radios are often preconfigured with an IP address specified by the customer when the radio is ordered. If no IP address has been assigned, the default is 192.168.0.1 for Tx-high radios and 192.168.0.2 for Tx-low radios.

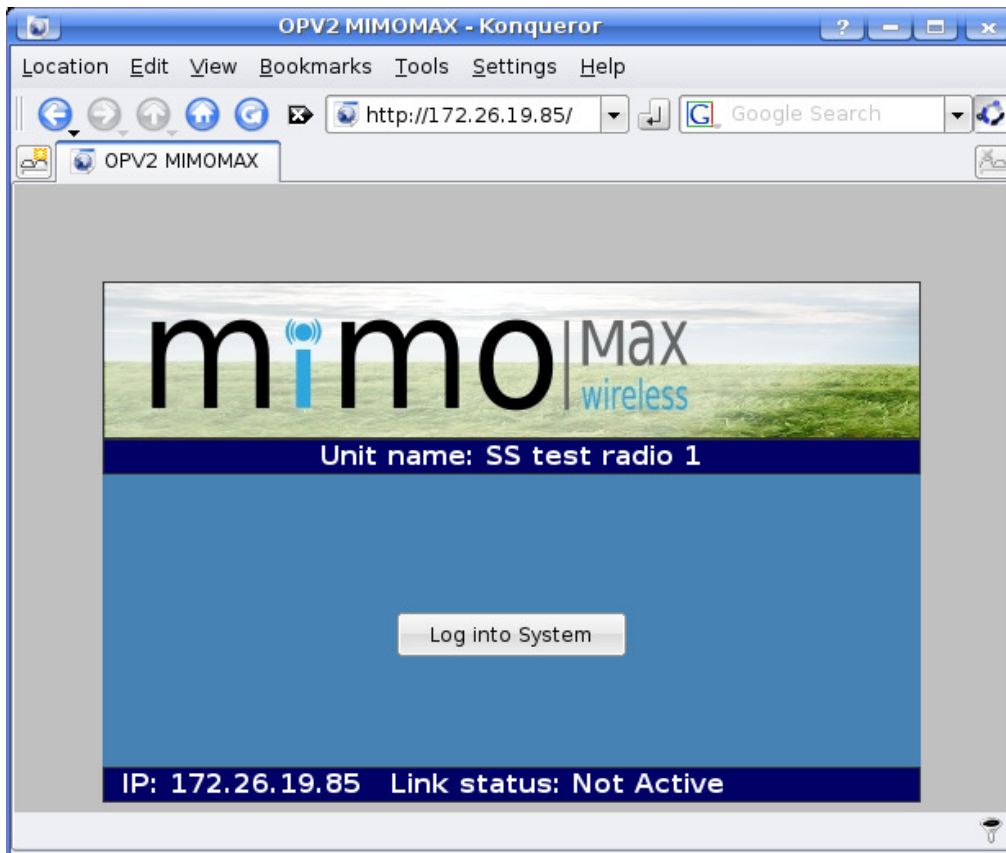


Figure 1: MiMOMax logon

To logon to the radio, press the “log into System” button. MiMOMax radios have two levels of access (user and tech). The default login credentials are:

Username	Default password
user	user
tech	tech

Figure 2: Default login credentials

Determining the current version of software

To determine the version of software currently running on the radio, click on “System” and then on “Information”, see Figure 3. This page shows both the active (running) version of software as well as the version in the inactive partition.

OPV2 192.168.254.122 Link Active Tue Feb 9 00:58:37 UTC 2010		
Diagnostics	System Information	
System	Manufacture date	25/06/2008
Transmitter	Product code	MWL-RADIOUNIT-LLAA
Receiver	Product serial number	23000004
Network	DPS IPN	XMWL-DPS-AAAA
Sync Serial	DPS revision	IP008
Control Panel	DPS serial number	2600242
SFE	Transmitter IPN	XMWL-TX-AAAA
Log out	Transmitter revision	IP001
Logged in as tech	Transmitter serial number	2600234
	Receiver IPN	XMWL-RX-AAAA
	Receiver revision	IP004
	Receiver serial number	2600149
	Software version	OPV2-3.9
	Bootloader version	1.6
	Kernel version	Oct 28 09:06:40 NZDT 2009
	FPGA version	NDL 3-9
	Rootfs version	Oct 29 13:51:21 NZDT 2009
	Database version	OPV2 0-03
	Inactive partition software version	OPV2-3.5

System Information
 Various component codes, serial numbers and revision numbers.
 This radio has two banks for software images. The version of software currently running is shown in **Software version**. The alternate software image is shown in **Inactive partition software version**.
 The alternate software image can be activated by clicking "**Rollback software**" in the **Control Panel**.

Figure 3: System information page

Making a copy of the radio database

All radio settings are stored in a database. It is advisable that a copy of the radio settings is made before upgrading the software.

To make a backup of the radio settings, click on “Control Panel” and then on “Configuration database”. This will download the database as an XML file onto the computer. Make sure that the filename is pre-fixed with OPV2, for example, OPV2_Rithin_10-02-2010.xml.

Upgrading the radio software

When upgrading software over the air link, one must take special care to upgrade the far end of the link first. (I.e. upgrade the radio that is not accessible via a wired Ethernet connection first). This is because the RF link may not be usable if the software differs between the two ends of the link.

The following steps detail the process of performing a software upgrade:


1. MiMOMax will provide a software upgrade file. The file name will be similar to ndl_opv2_software_5.4_RC5.bz2
2. Click on Control Panel and then on the browse button  next to the "File to be uploaded:" text box. Select the software upgrade file and then click on "Upload file", see Figure 4.



Figure 4: Control Panel

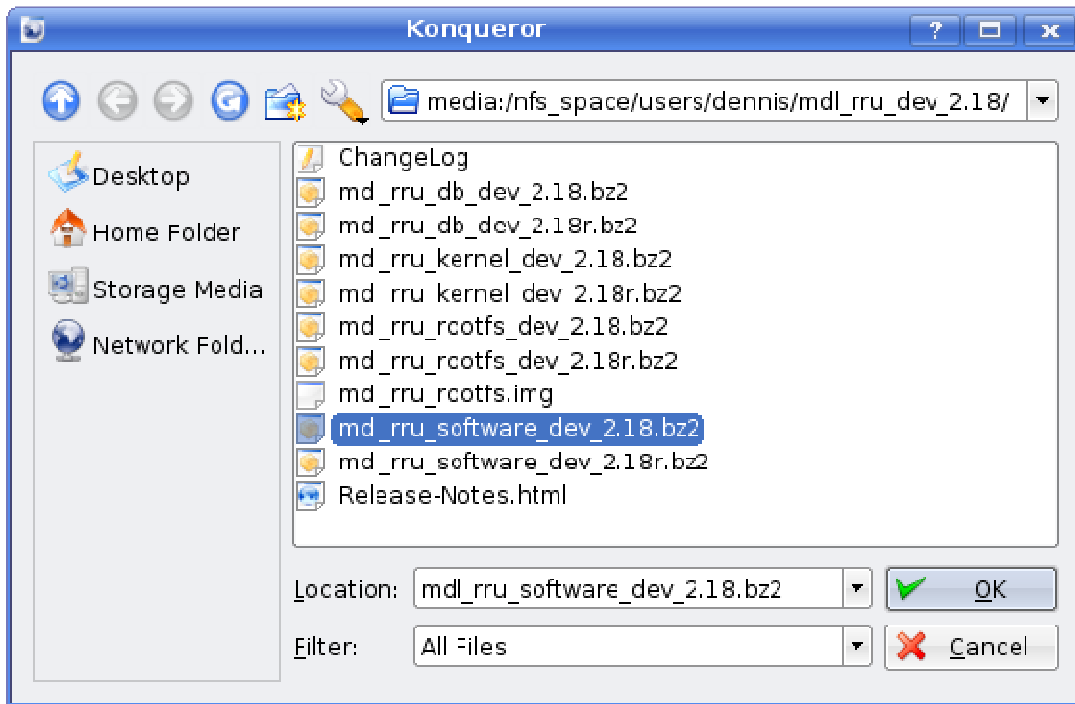


Figure 5: Selection of file to upload

3. Once the file is selected, a confirmation box will popup prompting the user to continue the process or not.

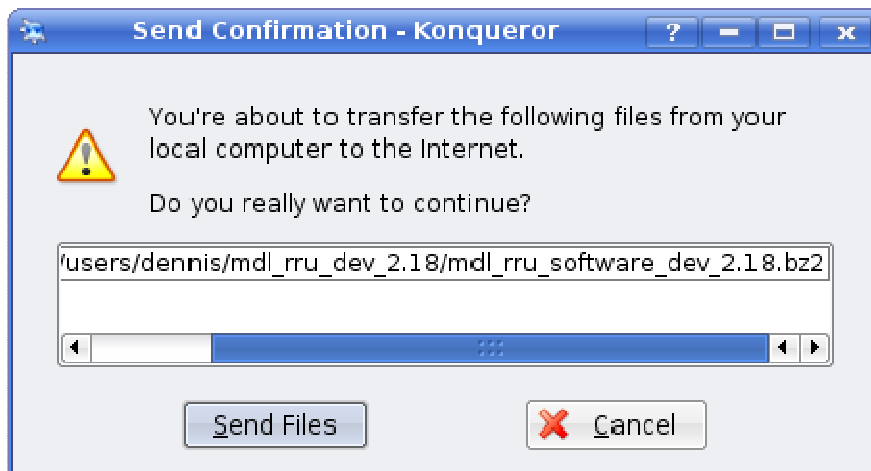


Figure 6: Send confirmation

4. Click the "Upload File" button to upload the file. A pop-up message window (see Figure 7) will then inform the user whether the upload was successful or not.

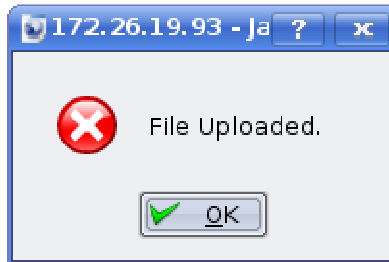


Figure 7: File upload confirmation

- The user will need to scroll down to the "System Upgrade Operations" section of the Control Panel page and click on the "Upgrade Software" button (see Figure 8).

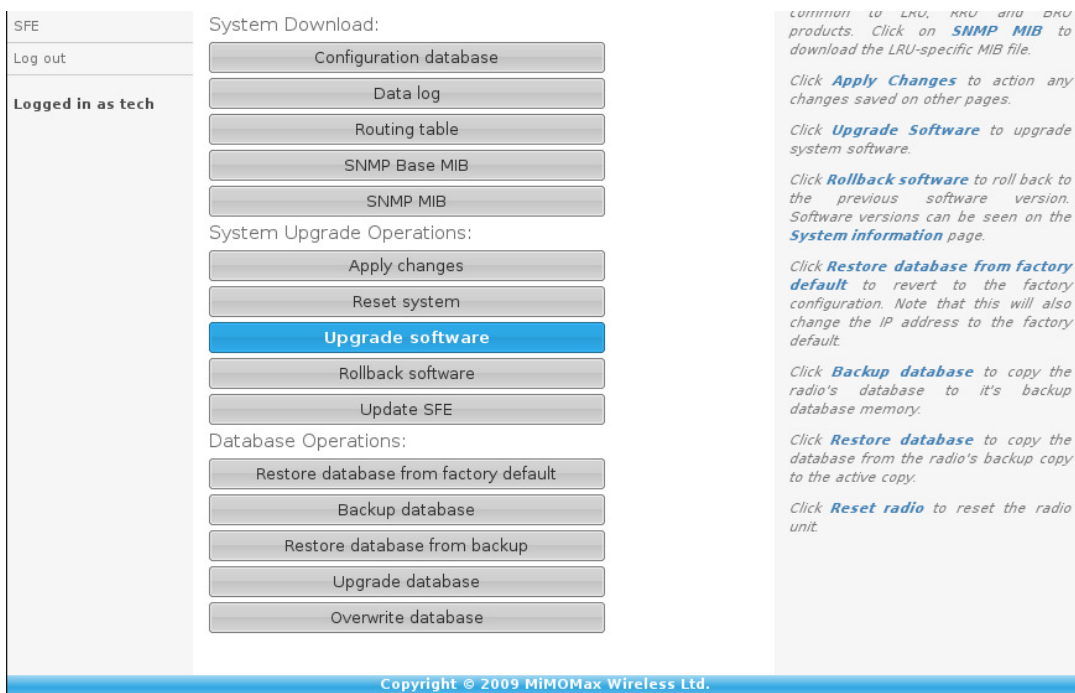


Figure 8: Control Panel

- Once the upgrade process is started, the user will be redirected to a self-reloading page that shows the process status. It reloads every 5 seconds. See Figure 9.

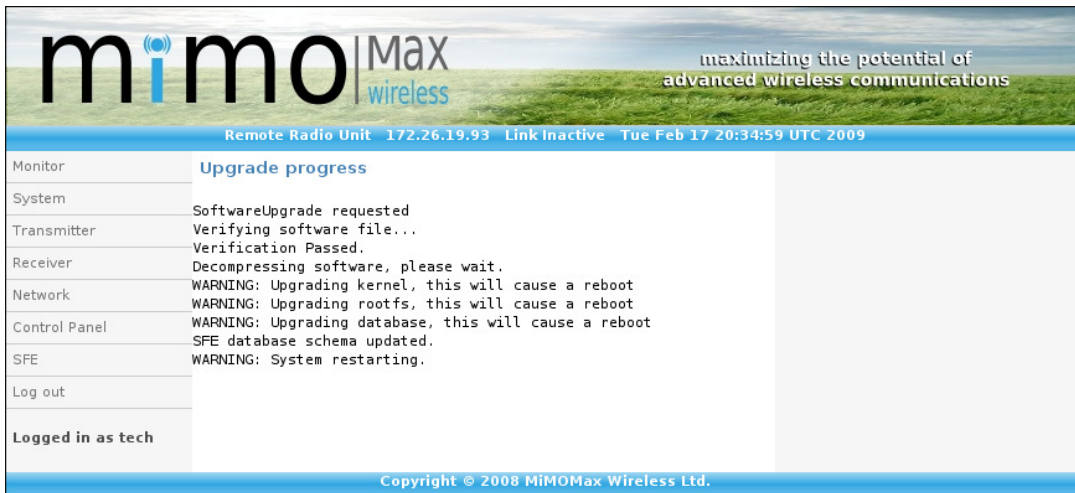


Figure 9: Software update progress page

- The system will automatically reboot when the upgrade is done and the system should be back up in about 1.5 minutes.

The upgrade process takes about 3 minutes to complete plus 1.5 minutes for reboot for a total of 4.5 minutes downtime.

Software Rollback

Should the software upgrade fail for whatever reason, the previous software version can be restored by performing a software rollback.

To perform the rollback, click on “Control Panel” and then “Rollback software”. This will cause the radio to reboot and the software to be restored to the previous version. This will need to be done on both radios.

Flowchart of the process

