FIBERME Communications LLC.

Using FCM630A as Firmware Upgrade Server Guide

Table of Contents

Table of Figures

INTRODUCTION

FIBERME FCM630A series have the possibility to act as firmware server allowing to upgrade FIBERME endpoints introduced by Zero-Config module using different template levels.

Using FCM630A as firmware server allows to manage firmware files for FIBERME endpoints in a single server, the firmware files can be uploaded and stored using FCM internal memory or using connected SD card/USB flash drive.

This feature is very useful in closed network environments (without Internet access) with many FIBERME devices, and it can help also to reduce bandwidth usage; instead of having each device contacting a remote server to upgrade, this can be managed locally using FCM630A series.

This guide provides steps on how to configure the FCM630A as firmware upgrade server and provision discovered FIBERME devices via Zero Config.

To find out more options and parameter descriptions regarding Zero Config and Provisioning, please refer to one of the FCM630A user manuals, FCM630A series User Manual as example.

FCM630A SETUP OVERVIEW

The following diagram illustrates a typical scenario using FIBERME FCM630A and different endpoints:

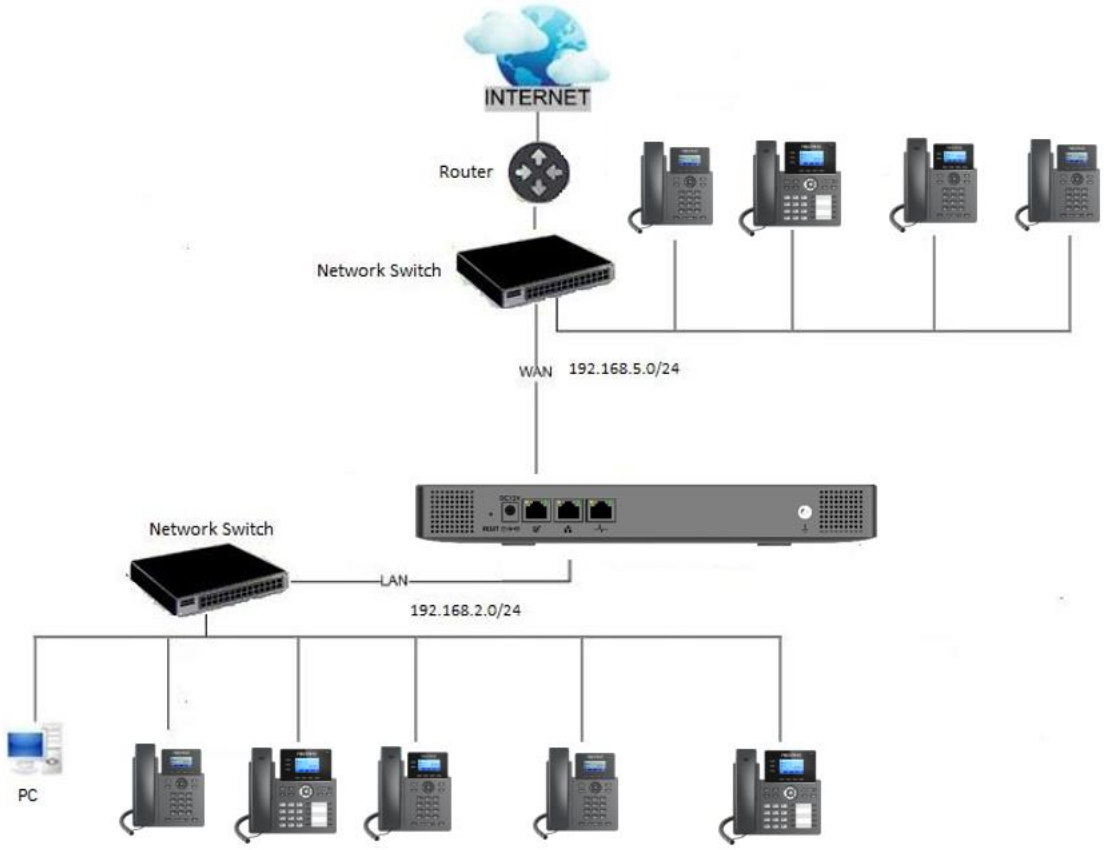

Figure 1: F CM630A Typical Scenario

By default, FCM630A has network method set to Route in network settings, WAN port interface is used for uplink connection and will act as DHCP client while LAN port interface is used as a router assigning IP addresses to connected devices (default segment is 192.168.2.0/24).

Administrator can change networking method from Web UI→Settings→Network Settings→Basic Settings to use FCM630A as Switch or Dual modes. To find out more options and parameter descriptions related to network settings, please refer to user manual: FCM630A series User Manual

Note: All FCM630A series models can act as firmware upgrade server using any network interface method (Route, Switch or Dual). Endpoints and FCM630A need to be on the same LAN/VPN using private or public IPaddresses, or can be connected through a router using public or private IP addresses (with necessary port forwarding or DMZ).

CONFIGURING FCM630A AS FIRMWARE SERVER

The ability for FCM630A series to act as firmware server is introduced by Zero-Config module and it can be used with different templates levels (Global Policy, Global Templates, Model Templates, Device Template).

In the following sections, we will provide steps how to use each method and users may choose the best methodfitting their environments depending on deployed units (models, quantity). Different templates levels can be combined, and template with highest priority will override settings in other templates with lower one.

Prerequisites

Download Firmware files

We will assume that needed firmware files are previously downloaded from FIBERME website: https://www.fiberme.com/firmware

Update and Download Default Model Templates

Users may need first to update and download Model Templates for their specific FIBERME devices.To update or download default model templates:

1. Access to **Value-added Features→Zero Config→Model Update** as shown on the below figure.

2. Click on  to download or update the corresponding default template for the device's model.

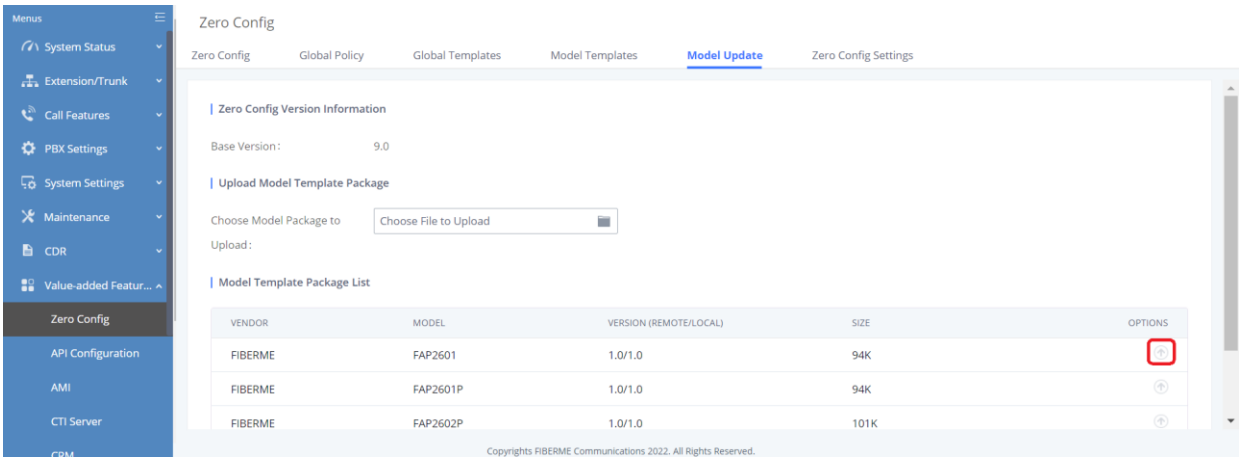

Figure 2: Update and Download Model Templates

Configuration via Zero-Config Templates

Using Global Policy

1. Access web UI→**Value-added Features→Zero Config→Global Policy**.
2. Under Maintenance section, check "**Firmware Source**".
3. Select "**Local FCM Server**" from "Source" dropdown list.

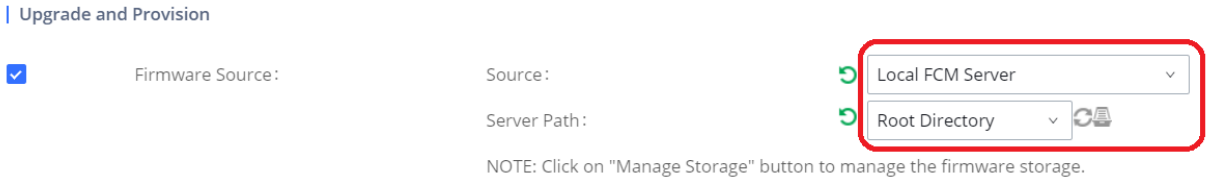

Figure 3: Firmware Source

4. Select "**Directory**" where firmware files are uploaded.

   To manage FCM630A firmware storage and upload firmware files. Please refer to [MANAGINGFIRMWARE STORAGE].
5. Once firmware file(s) uploaded, press "Save" button to store Global Policy settings.
6. Provision endpoints to start upgrade process. Please refer to [PROVISIONING DEVICES].

Notes:

- Global Policy has the lowest priority compared to other templates. To use Global Policy, other templates should not have Firmware Source settings, otherwise they will be overridden.
- Only one Global Policy can be configured.

Using Global Template(s)

1. Access web UI→**Value-added Features→Zero Config→Global Templates**.
2. Press, "**Add**" to create a new global template.
3. Enter "Template Name" and "Description" (optional) fields. Keep "**Active**" checked and press "**Save**".

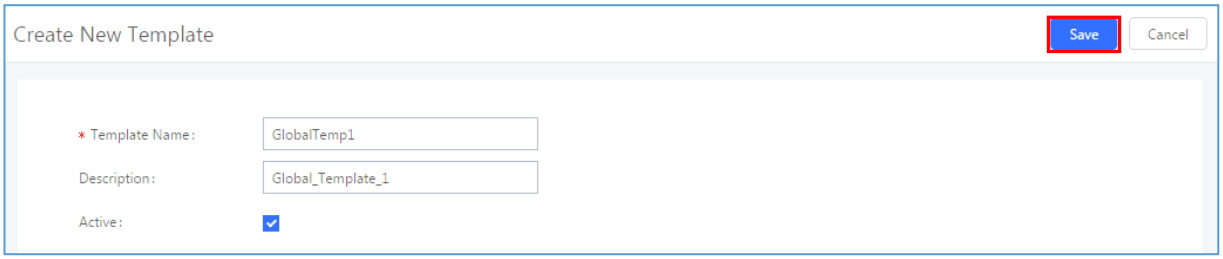

Figure 4: Global Template Creation

Steps 2 and 3 can be skipped if Global Templates are previously created. Customers can press Edit button andfollow below instructions.

4. In "Options" dropdown list, select "**Firmware Source**".

5. Select “**Local FCM Server**” from “Source” dropdown list as shown in [Figure 3: Firmware Source].
6. Select “**Directory**” where firmware files are uploaded.

   To manage FCM630A firmware storage and upload firmware files. Please refer to [MANAGINGFIRMWARE STORAGE].
7. Provision endpoints using created Global Template to start upgrade process. Please refer to [PROVISIONING DEVICES].

Notes:

- Global Templates have higher priority compared to Global Policy and lower than Model templates andDevice Template. If “Firmware Source” setting is available in templates with higher priority, settings on global templates might be overridden.
- Many Global Templates can be created on the same FCM630A system.
- Global Template needs to be selected when provisioning a device.

Using Model Template(s)

1. Access web UI→**Value-added Features→Zero Config→Model Templates**.
2. Click on “**Add**” to add a model template.

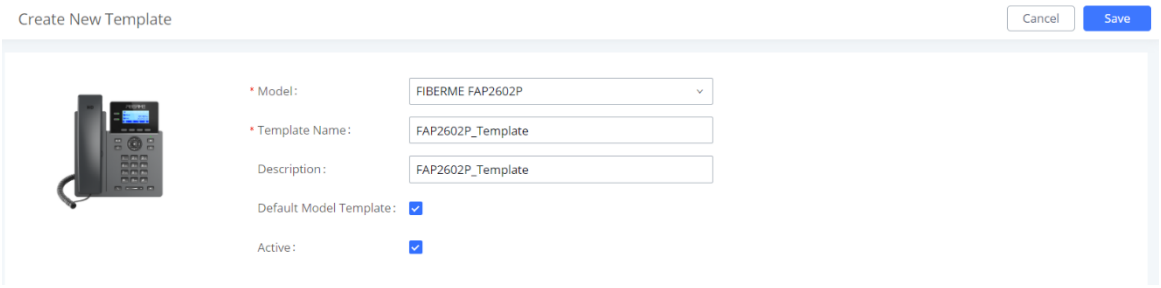

Figure 5: Create a New Model Template

3. Choose the **Model**, enter the **Template Name** and **Description** (optional).
4. Check **Default Model Template** if you want to use this template as default for the chosen device’smodel.
5. Check **Active** to make this template active and press “Save”.
6. In “Options” dropdown list, select “Firmware Source”.
7. Select “Local FCM Server” from “Source” dropdown list as shown in [Figure 3: Firmware Source].
8. Select “**Directory**” where firmware files are uploaded.

   To manage FCM630A firmware storage and upload firmware files. Please refer to [MANAGINGFIRMWARE STORAGE].
9. Provision endpoints using created Model Template to start upgrade process. Please refer to [PROVISIONING DEVICES].

Notes:

- Model Templates have higher priority compared to Global Policy and Global Templates. If “Firmware Source” setting is available in templates with higher priority, settings on Global Templates or Global Policy might be overridden.
- Many Model Templates can be created on the same FCM630A system and only one can be assignedas Default Model Template.
- Model Template needs to be selected when provision a device, unless if Default Model Template is available. “Selected Model Template” will have higher priority compared to Default Model Template.

Using Device Configuration

1. Access web UI→**Value-added Features→Zero Config→Zero Config**.
2. Locate the device to upgrade and press to edit device configuration.
3. Access “**Advanced**” tab as shown in next figure.
4. Press “**Modify Customize Settings**” and go to “**Custom Parameters**” → “**Maintenance**”.

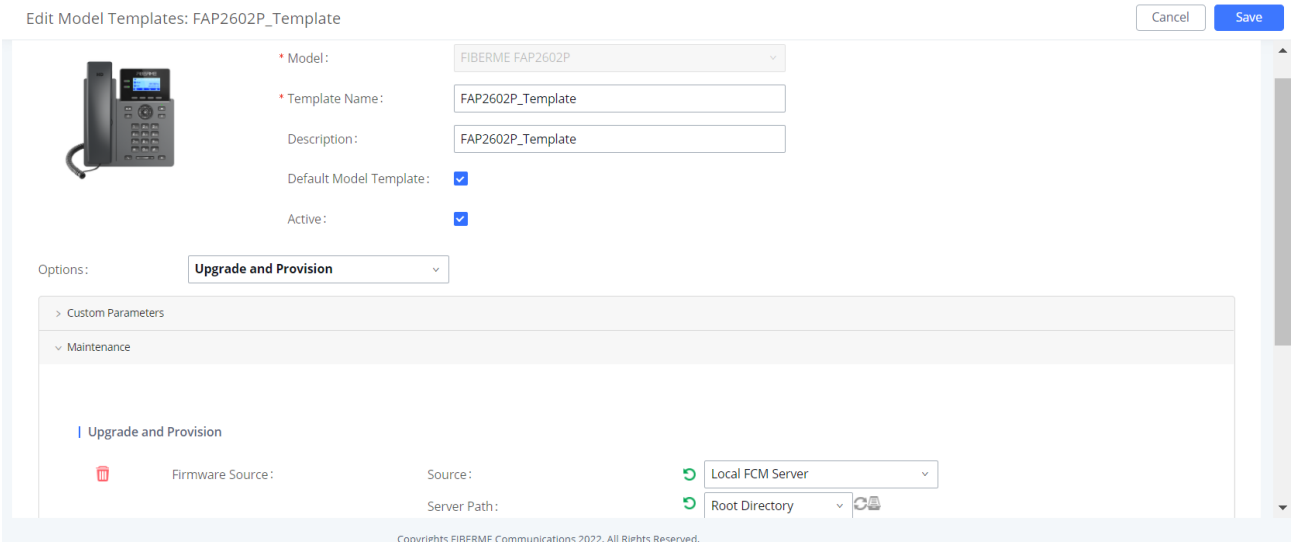

Figure 6: Modify Customize Settings

5. Check “Firmware Source”, then select “**Local FCM Server**” from “Source” dropdown list as shown in [Figure 3: Firmware Source].

6. Select “**Directory**” where firmware files are uploaded.

   To manage FCM630A firmware storage and upload firmware files. Please refer to [MANAGINGFIRMWARE STORAGE]

7. Press “Save” button and provision the device to start upgrade process. Please refer to [PROVISIONINGDEVICES].

Note:

Device Configuration Template has the highest priority compared to all other templates. If “Firmware Source” setting is defined available in templates with higher priority, settings on Global Templates or Global Policy might be overridden.

MANAGING FIRMWARE STORAGE

During template creation/edition, after selecting “Local FCM Server” in “Source” list under “Maintenance -> Upgrade and Provision” section, press button next to “Directory” option to manage FCM630A local storagefor firmware files.

Root Directory

Users may upload firmware files to Root Directory or create another personalized directory when using FCM630A local storage.

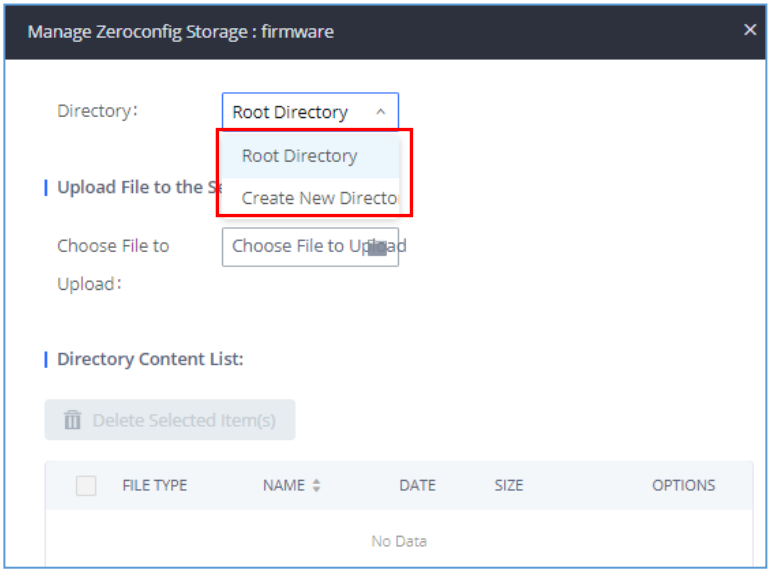

Figure 7: Root Directory

Create New Directory

For better management, it’s recommended to create a directory for each model/firmware. For instance, createdirectory named “FAP2602P” where to upload firmware version 1.0.3.36 for FAP2602P.

1. Select “Create New Directory” from “Directory” list.

2. Enter a name in “New Directory” field and press “Create” button.

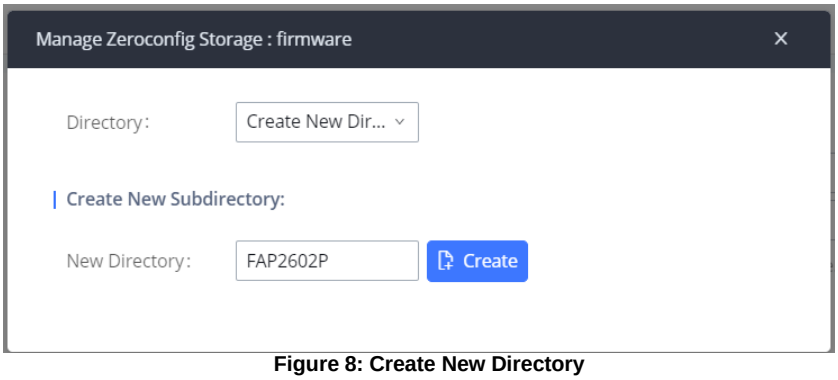

Figure 8: Create New Directory

Upload Firmware Files

1. Select “Root Directory” or create new directory as “Directory”.
2. Click on  to browse for the firmware files and select them.
3. Click on  to upload the selected firmware file to the directory.

Note: Firmware files should have extension “.bin”, other formats are not allowed.

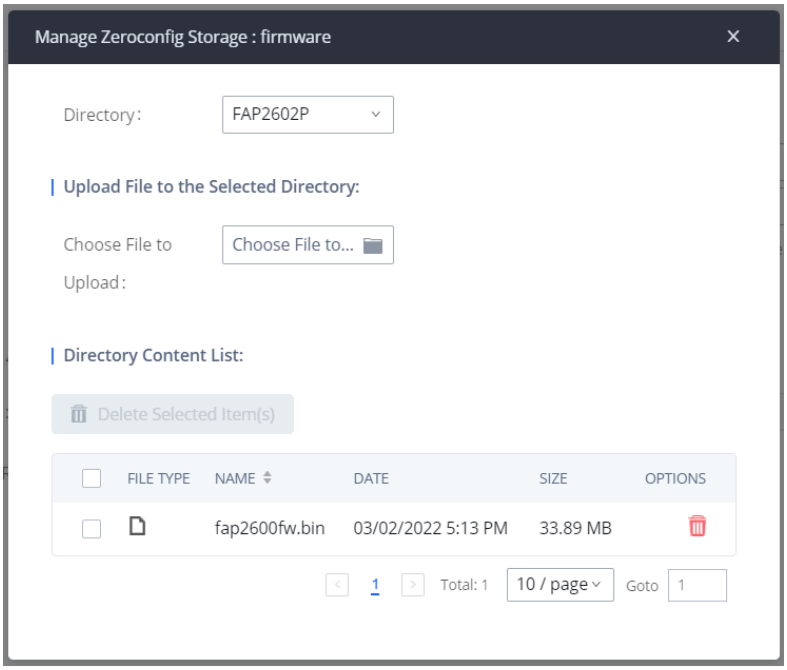

Figure 9: Firmware File Uploaded

Users can click  to delete a previously uploaded firmware file or directory.

Local USB / SD Card Media

Users can connect a USB flash drive to USB port of FCM630A or SD card to its corresponding port and usethem as external firmware file storage.

In this case, firmware files need to be stored in “ZC_firmware” directory under root of the USB or SD card.

PROVISIONING DEVICES

1. Access web UI→**Value-added Features→Zero Config→Zero Config**.
2. Locate the device to provision and press to send a notify to the device.

The device will then reboot to apply the config, and use the FCM630A as firmware upgrade server.

Note: If "**Default Model Template**" option is enabled as shown in [Figure 5], default template settings will be applied to all discovered new devices matching template model. Otherwise users will have to click on to editthe device configuration, and assign the template(s) to use for the device.

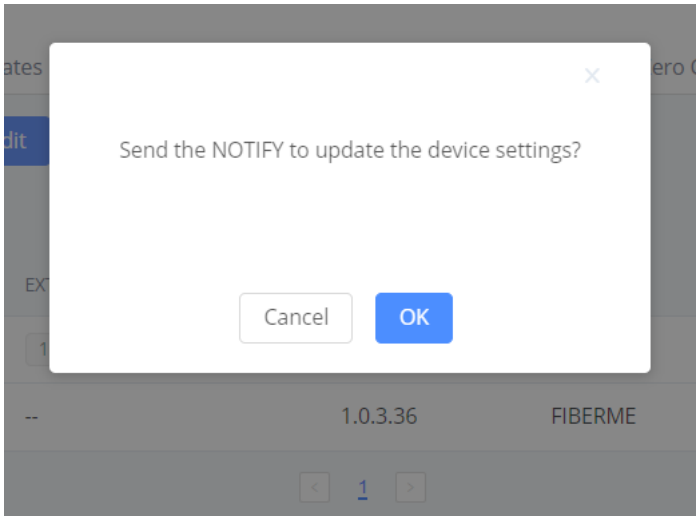

Figure 10: Send Notify to Discovered Devices