

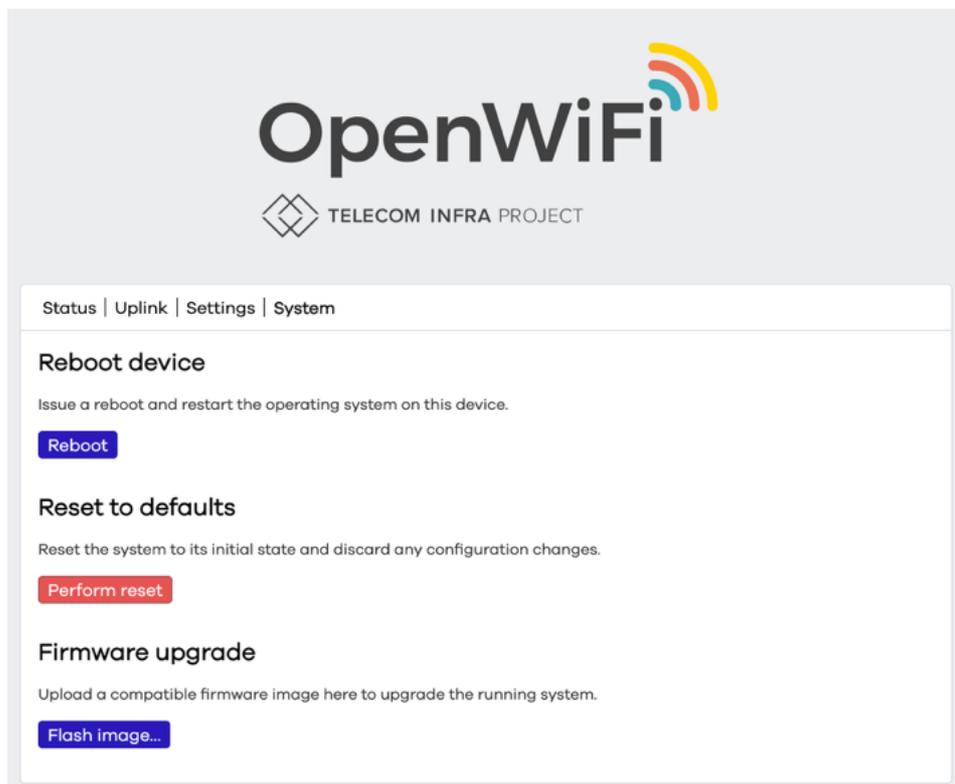
# Upgrade your OpenWiFi AP

There are 4 ways to upgrade ways to upgrade your OpenWiFi AP to another version:

1. Upgrade by AP's Web UI
2. Upgrade by AP's command line tool
3. Upgrade by Cloud SDK command line tool
4. Upgrade by Cloud SDK OWFMS microservice

## Upgrade by AP's Web UI

In the onboarding mode, you can access the AP's Web UI from the LAN side (or wireless). You can manually upgrade the AP by the page:



If the AP is managed, the Web UI will be hidden and you can not use this method.

## Upgrade by AP's command line tool

You can login to the AP by several ways:

1. ssh
2. Remote TTY from the cloud

After you login to the CLI of the AP, you can use the command to upgrade the AP:

```
# sysupgrade <path-of-the-firmware>
```

Or

```
# sysupgrade <URL-of-the-firmware>
```

For example, I want to upgrade my EAP101 (903cb3c24270) to the latest v2.6.0:

```
# scp https://ucentral-ap-firmware.s3.amazonaws.com/20220707-  
edgecore_eap101-v2.6.0-4c21f5c-upgrade.bin /tmp
```

```
# sysupgrade /tmp/20220707-edgecore_eap101-v2.6.0-4c21f5c-upgrade.bin
```

Or

```
# sysupgrade https://ucentral-ap-firmware.s3.amazonaws.com/20220707-  
edgecore_eap101-v2.6.0-4c21f5c-upgrade.bin
```

Here is the usage of the tool:

```
root@903cb3c24270:~# sysupgrade
Usage: /sbin/sysupgrade [<upgrade-option>...] <image file or URL>
       /sbin/sysupgrade [-q] [-i] [-c] [-u] [-o] [-k] <backup-command> <file>

upgrade-option:
-f <config>  restore configuration from .tar.gz (file or url)
-i          interactive mode
-c          attempt to preserve all changed files in /etc/
-o          attempt to preserve all changed files in /, except those
           from packages but including changed confs.
-u          skip from backup files that are equal to those in /rom
-n          do not save configuration over reflash
-p          do not attempt to restore the partition table after flash.
-k          include in backup a list of current installed packages at
           /etc/backup/installed_packages.txt
-T | --test  Verify image and config .tar.gz but do not actually flash.
-F | --force Flash image even if image checks fail, this is dangerous!
-q          less verbose
-v          more verbose
-h | --help display this help

backup-command:
-b | --create-backup <file>
           create .tar.gz of files specified in sysupgrade.conf
           then exit. Does not flash an image. If file is '-',
           i.e. stdout, verbosity is set to 0 (i.e. quiet).
-r | --restore-backup <file>
           restore a .tar.gz created with sysupgrade -b
           then exit. Does not flash an image. If file is '-',
           the archive is read from stdin.
-l | --list-backup
           list the files that would be backed up when calling
           sysupgrade -b. Does not create a backup file.
```

## Upgrade by Cloud SDK command line tool

You can use the CLI tool to do the upgrade the AP.

The tool can be found here:

[https://github.com/Telecominfraproject/wlan-cloud-ucentralgw/tree/master/test\\_scripts/curl](https://github.com/Telecominfraproject/wlan-cloud-ucentralgw/tree/master/test_scripts/curl)

You can create a file to store the following information:

```
OWSEC=<your-cloud-sdk-location>
```

```
FLAGS=<flags pass to curl>
```

```
OWSEC_USERNAME=<username-for-cloud-sdk-account>
```

```
OWSEC_PASSWORD=<password-for-cloud-sdk-account>
```

Then, you can run the command to upgrade the desired AP after sourcing the previous file:

```
# ./cli <device-mac> <firmware-url>
```

For example, I want to upgrade my EAP101 (903cb3c24270) to the latest v2.6.0:

```
# ./cli upgrade 903cb3c24270 https://ucentral-ap-firmware.s3.amazonaws.com/20220707-edgecore_eap101-v2.6.0-4c21f5c-upgrade.bin
```

## Upgrade by Cloud SDK OWFMS microservice

The Cloud SDK provides the microservice 'owfms' which can manage the firmware located in the Amazon S3 bucket. By this, you can easily to upgrade the AP by the Cloud SDK Web UI. We assume you already have a S3 bucket with AWS Access Key ID and AWS Secret Access Key.

In your S3 bucket, you need to upload the firmware file and the description JSON file. For example, we have uploaded a firmware file and the description file in our S3 bucket ([openwifi-ec-firmware.s3.amazonaws.com](https://openwifi-ec-firmware.s3.amazonaws.com)). You can find the files here:

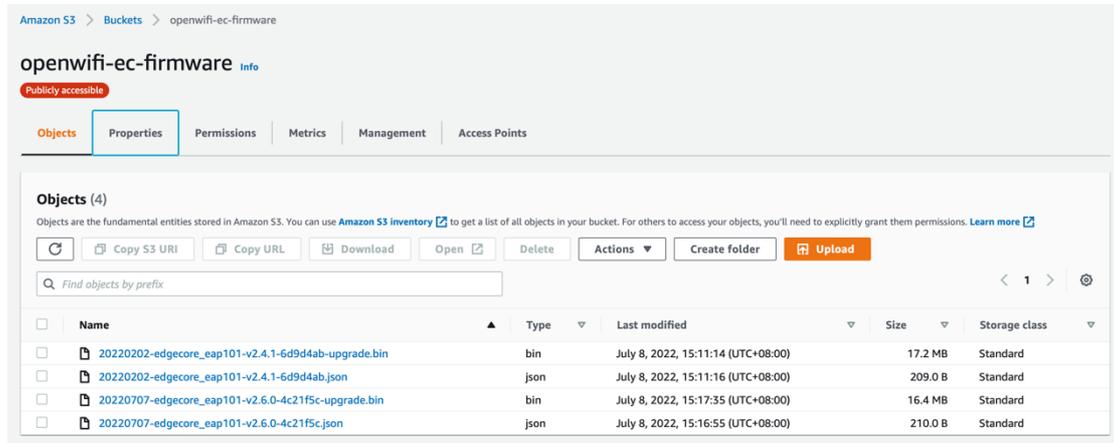
Firmware: [https://openwifi-ec-firmware.s3.amazonaws.com/20220707-edgecore\\_eap101-v2.6.0-4c21f5c-upgrade.bin](https://openwifi-ec-firmware.s3.amazonaws.com/20220707-edgecore_eap101-v2.6.0-4c21f5c-upgrade.bin)

JSON: <https://openwifi-ec-firmware.s3.amazonaws.com/20220707->

edgecore\_eap101-v2.6.0-4c21f5c.json

In the JSON, the content describes the firmware like this:

```
{
  "image": "20220202-edgecore_eap101-v2.4.1-6d9d4ab-upgrade.bin",
  "revision": "OpenWrt 21.02-SNAPSHOT r16273+94-378769b555 / TIP-v2.4.1-6d9d4ab",
  "timestamp": "1643832035",
  "compatible": "edgecore_eap101"
}
```



After the files in S3 bucket are ready, you can edit the **owfms.properties** and replace with your value:

`s3.bucketname = <AWS-BUCKET-NAME>`

`s3.region = <AWS-REGION>`

`s3.secret = <AWS-SECRET-ACCERSS-KEY>`

`s3.key = <AWS-ACCESS-KEY-ID>`

`s3.retry = 60`

`s3.bucket.uri = <AWS-BUCKET-URI>`

After you restart the owfms service, the service will update the firmware information automatically:

```
owfms_1 | 2022-07-08 07:18:05 MANIFEST-MGR: [Information] Performing DB refresh
owfms_1 | 2022-07-08 07:18:06 MANIFEST-MGR: [Information] Found 2 firmware entries in S3 repository.
owfms_1 | 2022-07-08 07:18:06 MANIFEST-MGR: [Information] Accepted 1 firmwares.
owfms_1 | 2022-07-08 07:18:06 MANIFEST-MGR: [Information] Rejected 1 too old firmwares.
owfms_1 | 2022-07-08 07:18:06 MANIFEST-MGR: [Information] Rejected 0 bad JSON.
owfms_1 | 2022-07-08 07:18:06 MANIFEST-MGR: [Information] Rejected 0 missing JSON.
owfms_1 | 2022-07-08 07:18:06 MANIFEST-MGR: [Information] Adding firmware '20220707-edgecore_eap101-v2.6.0-4c21f5c', size=17193772
owfms_1 | 2022-07-08 07:48:05 MANIFEST-MGR: [Information] Performing DB refresh
owfms_1 | 2022-07-08 07:48:07 MANIFEST-MGR: [Information] Found 2 firmware entries in S3 repository.
owfms_1 | 2022-07-08 07:48:07 MANIFEST-MGR: [Information] Accepted 1 firmwares.
owfms_1 | 2022-07-08 07:48:07 MANIFEST-MGR: [Information] Rejected 1 too old firmwares.
owfms_1 | 2022-07-08 07:48:07 MANIFEST-MGR: [Information] Rejected 0 bad JSON.
owfms_1 | 2022-07-08 07:48:07 MANIFEST-MGR: [Information] Rejected 0 missing JSON.
```

When the information is updated, you can use the firmware in the

## Cloud SDK Web UI:

OpenWiFi

English EC

Devices

Firmware

Default Configs

Users

System

### Firmware

Dashboard Table

Device Type:  edgecore\_esp101  Show Dev Releases

Image Date	Size	Revision	URI
2022-07-08 15:17:35	16.4 MB	TIP-v2.6.0-4c21f5c	<a href="https://openwifi-ec-firmware.s3.amazonaws.com/20220707-edgecore_esp101-v2.6.0-4c21f5c-upgrade.bin">https://openwifi-ec-firmware.s3.amazonaws.com/20220707-edgecore_esp101-v2.6.0-4c21f5c-upgrade.bin</a>

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Please note, if your firmware is too old, the firmware will be rejected.

The default age is 90. You can modify it in **owfms.properties**:

*firmwaredb.maxage = 90*