

BMC Firmware Update

1. Update through the x86 CPU

1.1. Use the "Yafuflash" utility

1.1.1. Through USB interface

1.1.1.1. Single Image

- Full upgrade without Config Module preserved
\$ Yafuflash -cd -force-boot <Firmware Filename>
- Upgrade with Config Module preserved
\$ Yafuflash -cd -preserve-config <Firmware Filename>

1.1.1.2. Dual Image

- Full upgrade without Config Module preserved
\$ Yafuflash -cd -mse <Select Image> -force-boot <Firmware Filename>
- Upgrade with Config Module preserved
\$ Yafuflash -cd -mse <Select Image> -preserve-config <Firmware Filename>

The options for <Select Image> are listed below.

Option	Description
0	Update the inactive image
1	Update the image 1
2	Update the image 2
3	Update both images

1.1.2. Through KCS interface (slowest)

1.1.2.1. Single Image

- Full upgrade without Config Module preserved
\$ Yafuflash -kcs -force-boot <Firmware Filename>
- Upgrade with Config Module preserved
\$ Yafuflash -kcs -preserve-config <Firmware Filename>

1.1.2.2. Dual Image

- Full upgrade without Config Module preserved
\$ Yafuflash -kcs -mse <Select Image> -force-boot <Firmware Filename>
- Upgrade with Config Module preserved
\$ Yafuflash -kcs -mse <Select Image> -preserve-config <Firmware Filename>

The options for <Select Image> are listed below.

Option	Description
0	Update the inactive image
1	Update the image 1
2	Update the image 2
3	Update both images

1.2. Use the "socflash" utility

It's full upgrade without Config Module preserved.

```
$ socflash -s <Firmware Filename> <Chip Select>
```

2. Update through TCP/IP network

2.1. Use the "Yafuflash" utility

2.1.1. Single Image

- Full upgrade without Config Module preserved
\$ Yafuflash -nw -ip <BMC IP Address> -u <Username> -p <Password> -force-boot <Firmware Filename>
- Upgrade with Config Module preserved
\$ Yafuflash -nw -ip <BMC IP Address> -u <Username> -p <Password> -preserve-config <Firmware Filename>

2.1.1. Dual Image

- Full upgrade without Config Module preserved
\$ Yafuflash -nw -ip <BMC IP Address> -u <Username> -p <Password> -mse <Select Image> -force-boot <Firmware Filename>
- Upgrade with Config Module preserved
\$ Yafuflash -nw -ip <BMC IP Address> -u <Username> -p <Password> -mse <Select Image> -preserve-config <Firmware Filename>

The options for <Select Image> are listed below.

Option	Description
0	Update the inactive image
1	Update the image 1
2	Update the image 2
3	Update both images

2.2. Use the "Redfish"

Steps for full upgrade without Config Module preserved follow.

Using POSTMAN for the request is recommended.

(1) Upload Image

Request:

```
POST https://{ip}/redfish/v1/UpdateService/Actions/Oem/UpdateService.UploadFirmwareImage
Content-Type: multipart/form-data; boundary=-----287032381131322

-----287032381131322
Content-Disposition: form-data; name="image_file"; filename="rom.ima"
Content-Type: application/octet-stream

(image file content)

-----287032381131322--
```

Response:

- Success: HTTP status will be **204 No content**. This means the action has been completed and the resource has been updated.
- Failure: HTTP status will be other.

(2) Update Firmware

Request:

```
POST https://{ip}/redfish/v1/UpdateService/Actions/Oem/UpdateService.BMCFwUpdate
Content-Type: application/json
```

In the POST Request Body, there are options for the FlashType and UploadSelector.

FlashType		UploadSelector	
Option	Description	Option	Description
FULLFwUpdate	Single image update	Default	Update the current image
DUALIMAGEFwUpdate	Dual image update	AutoInactive	Update the inactive image
		Image1	Update the image 1
		Image2	Update the image 2
		ImageBoth	Update both images
		Default	Update the current image
HPMFwUpdate	HPM firmware update	Default	Update the current image

Response:

- Success: HTTP status will be **202 Accepted**. The server would create a Task and response status 202 after accepted this request, but the update has not been completed. The response http headers would include a Location header. Location header has the link to the Task resource for this updating service.
- Failure: HTTP status will be other.