

Technical

Service

Bulletin

Maintenance & Support

CUSTOMER SERVICE

FILE CONTROL		ORIGIN	ISSUE DATE	EXP.DATE	
BullSequana Edge		XCL	March 2023	INDEF	
SUBJECT: BullSequana Edge server replacement field operations			DOSSIER BSE	2023-A02	REV 2

This document provides the operations to perform in the field for replacing a faulty BullSequana Edge system at customers' sites. It describes which components to keep on and how to recover them from failed server and install them in a replacement server, when it is required.

You will therefore find the list of elements to keep as well as how to remove them from the faulty server without the risk of damaging them. You have then to install them reversely, in the replacement server (part unit to order).

You will need to use this document for installing the parts below, in the case of Major Replacement Unit of BullSequana Edge server. These parts must be ordered to Atos Global Logistics (GLS). Both parts are equivalent.

Parts#	Description
11541117-000	MI MODULE 2
11541118-000	MI MODULE 1

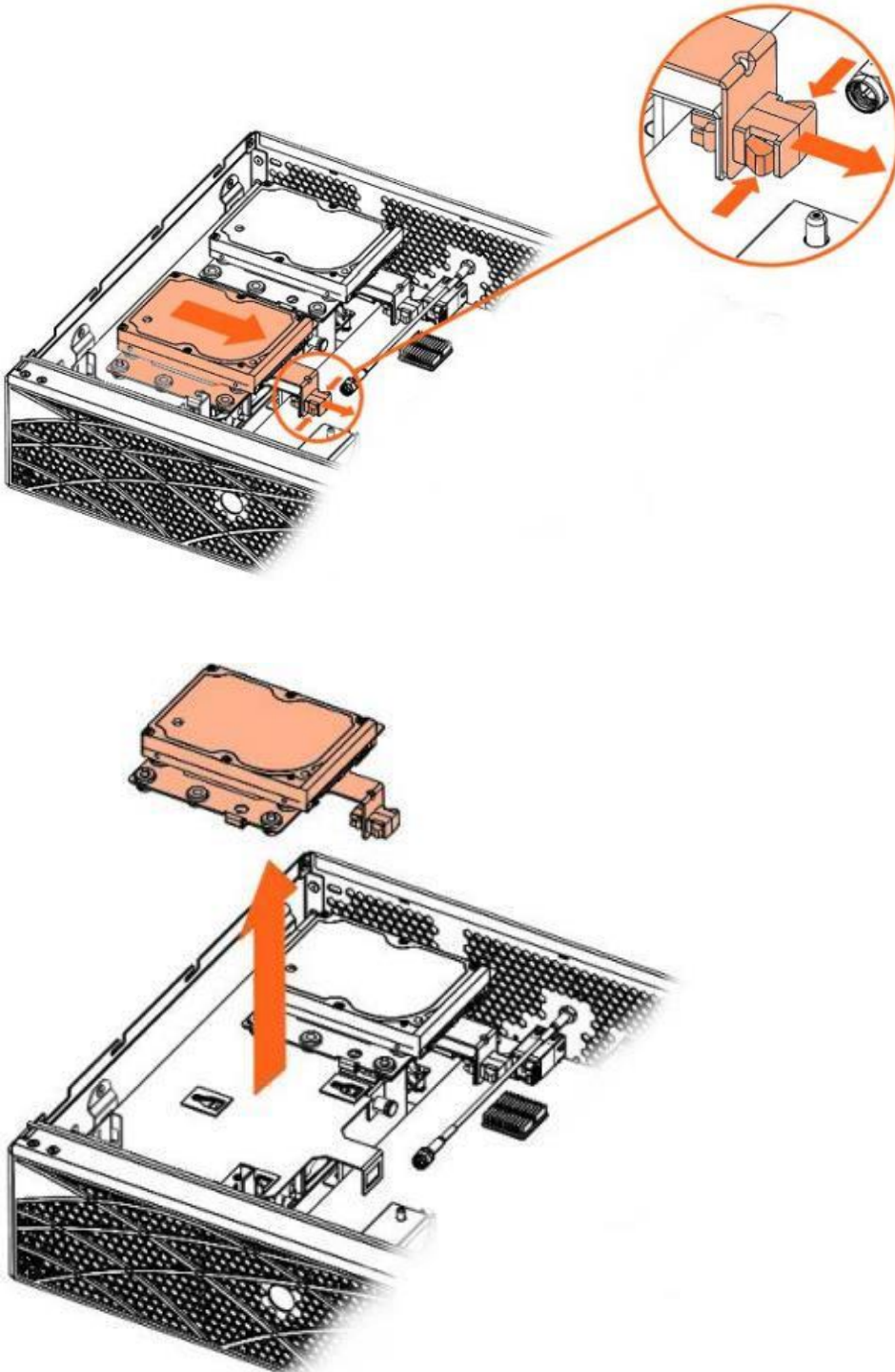
Perform the following operations sequentially.

For more information please refer to **Customer Service Guide** manual (Ref : 86 A1 93FR XX).

1. Removing the disk cage

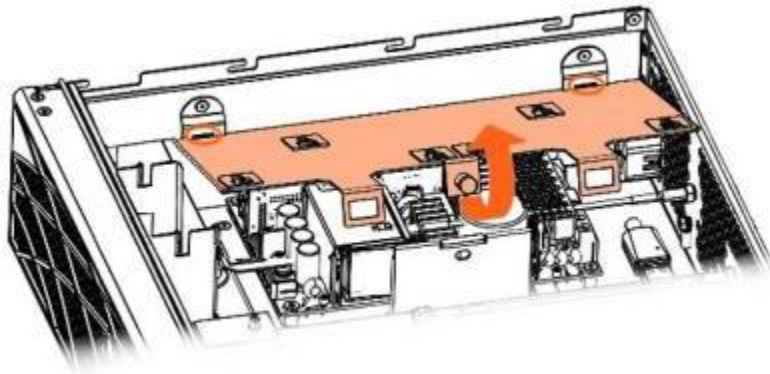
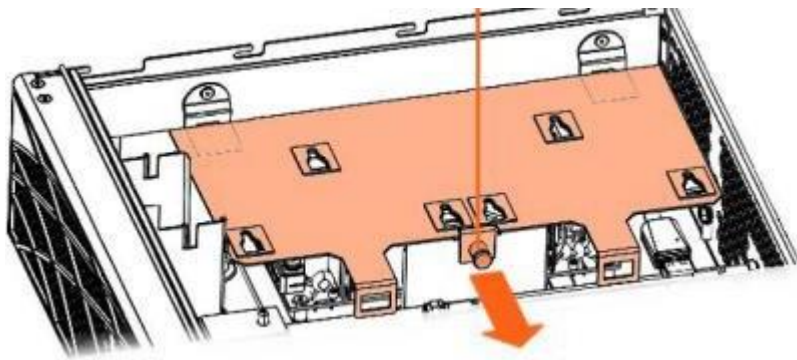
For each disk cage, perform the following steps:

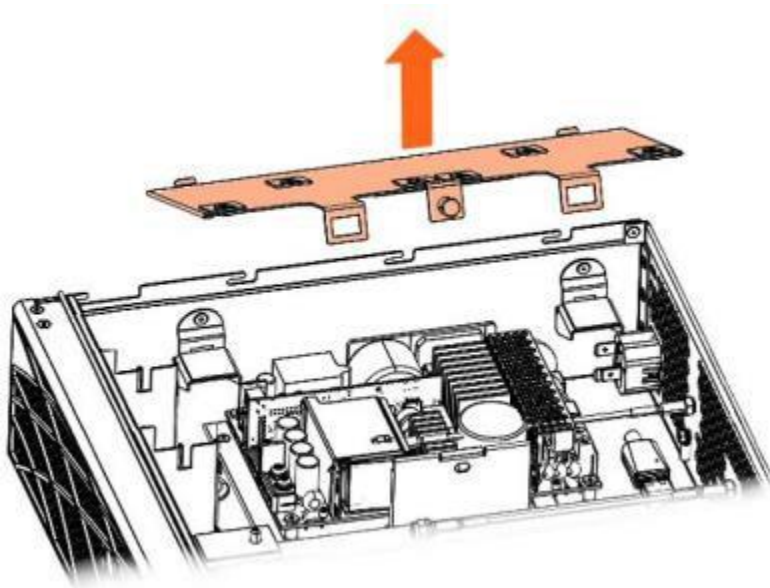
1. Disconnect the power and signal cables from the disk.
2. Push in the latches on either side of the disk cage assembly lock.
3. Pull on the lock and disk cage assembly to unlock the assembly.
4. Pull the disk cage assembly out.



2. Removing the disk tray

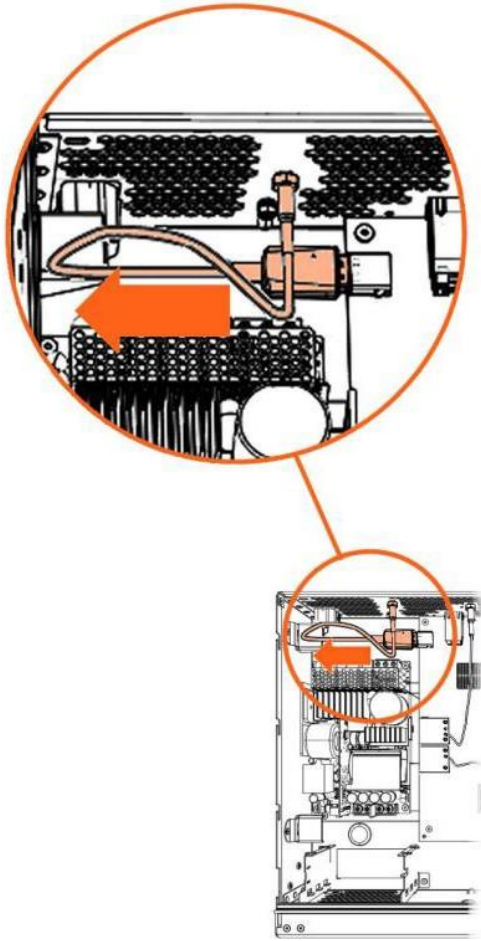
1. Use the plunger to unlock the disk tray.
2. Pull the disk tray sideways
3. Rotate the disk tray upwards to release the mounting brackets from the cutouts
4. Pull the disk tray up.





3. Removing the BMC antenna

1. First you need to remove the disc and the disc tray (see above for how to do this)
2. Disconnect the USB cable and dongle from the board connector.
3. Remove the external antenna.
4. Remove the USB dongle from the antenna cable

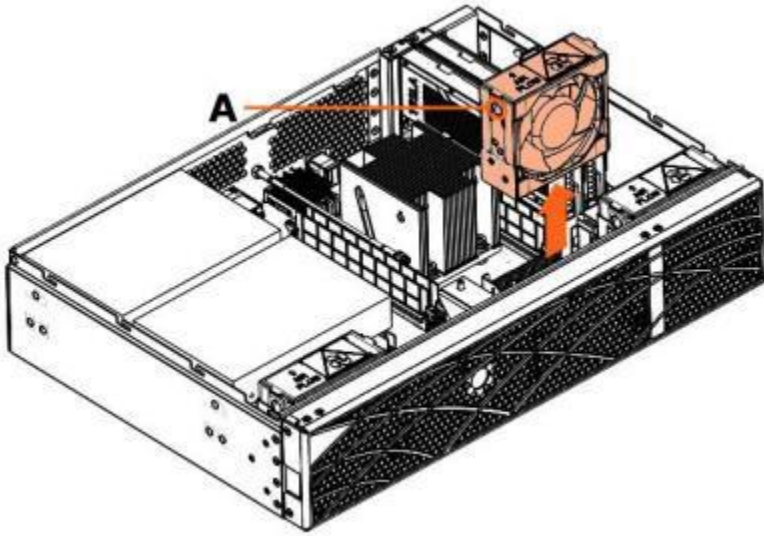


4. Removing the fans

This is not mandatory in the case of the parts received contains new fan devices.

For each fan, perform the following steps:

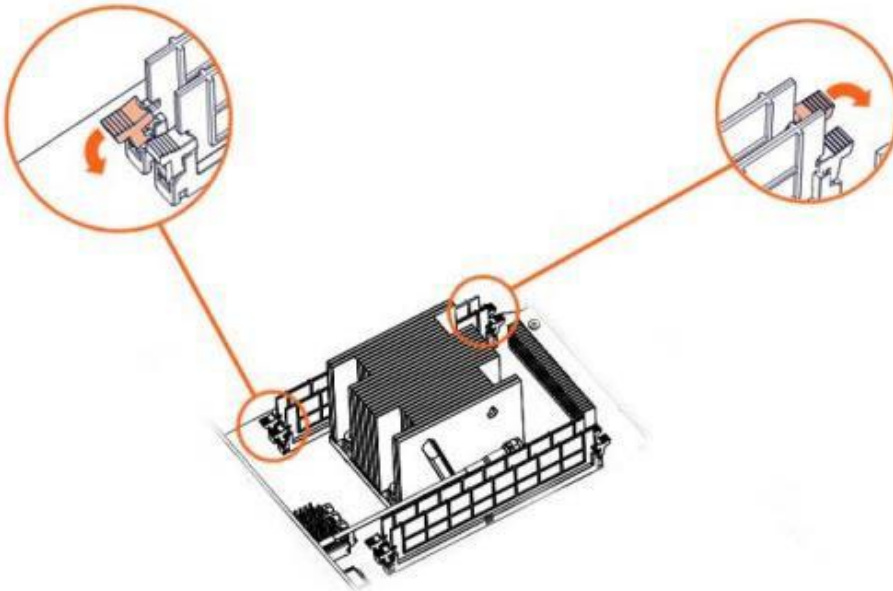
1. Disconnect the fan cable.
2. Press the fan latch in.
3. Pull the fan up

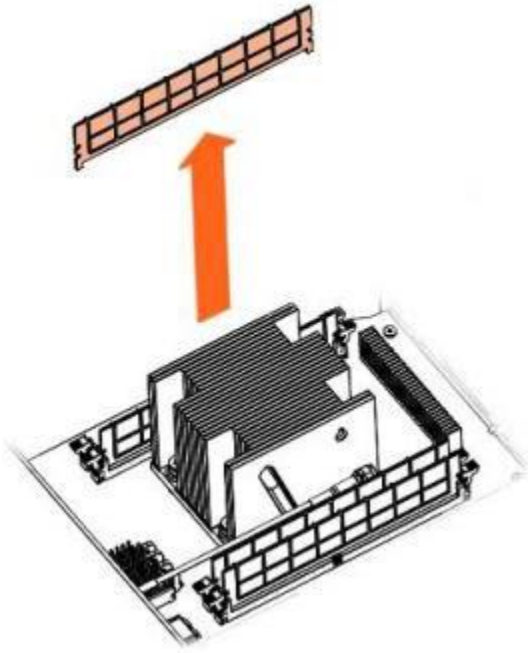


5. Removing the memory modules

For each memory module, perform the following steps:

1. Press the retention latches down to release the memory module
2. Remove the memory module



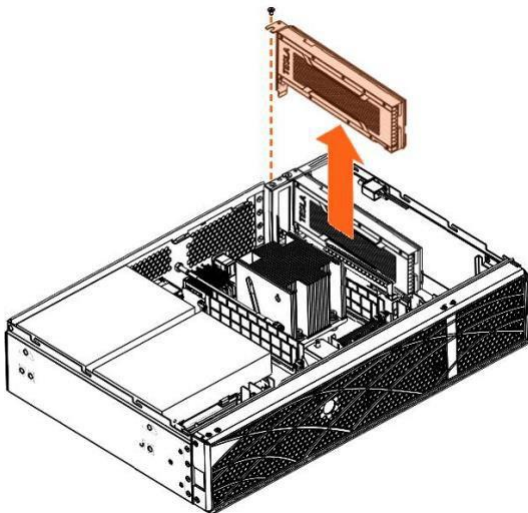


6. Removing the GPU devices

This operation is performed only when the GPU devices (accelerators) option is used in the failed server.

For each accelerator, perform the following steps:

1. Remove the screw.
2. Pull the accelerator out.



7. SN modification with IPMIFRU tool

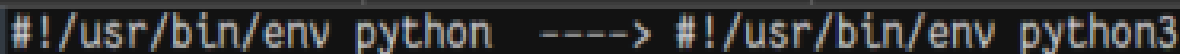
In many cases the system serial number (SN) must be modified.

For this purpose, to re engrave the serial number (SN) on the server, follow the step below:

- If you don't have the Technical State ISO file - Example: **Technical State 019.02 Engineering (iso file containing BIOS_SKD080, CPLD_MIPCS, OMF_MIPCS)**, download it from SOL (Atos Support web site):
<https://support.bull.com/ols/product/platforms/bullion/bullsequana-edge-servers/dl/pkgf/pkgf>
- Once the iso has been recovered, you can open it and follow the path below to access the IPMIFRU tool which will allow you to re-burn your EDGE serial number.

DVD_MIPocket_Engineering_019.02.iso\Resources\Tools_and_related_documents\IPMIFRU

Attention: Once you have access to the python script file **ipmiFRU.py**, it is necessary to modify the first line of the script according to the version of python you were using on your environment. For example, if you are using the latest version of python, i.e., 3, you should replace the word python with python3



```
#!/usr/bin/env python ----> #!/usr/bin/env python3
```

Moreover, considering that BMC does not support most of the linux commands that help creating the python script binaries, so we suggest any linux machine in your environment to perform these actions that has good connectivity to the edge server.

Once the binaries have been created using the Linux machine, we need to transfer the binaries to the BMC of the Edge Server.

Please find the log in the appendix below to follow the step-by-step procedures in order to modify the serial number of the edge servers:

Appendix:

```
[bull@localhost ~]$ ll
```

```
total 7232
```

```
-rw-----. 1 bull bull 25575424 Sep 25 12:40 core.17519
```

```
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Desktop
```

```
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Documents
```

```
drwxr-xr-x. 2 bull bull 4096 Sep 16 14:24 Downloads
```

```
-rw-rw-r--. 1 bull bull 0 Dec 17 09:10 fr
```

```
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Music
```

```
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Pictures
```



```
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Public
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Templates
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Videos
```

```
-----
[bull@localhost ~]$ mkdir MIPCS_FRU
```

```
[bull@localhost ~]$ ll
```

```
total 7236
```

```
-rw-----. 1 bull bull 25575424 Sep 25 12:40 core.17519
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Desktop
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Documents
drwxr-xr-x. 2 bull bull 4096 Sep 16 14:24 Downloads
-rw-rw-r--. 1 bull bull 0 Dec 17 09:10 fr
drwxrwxr-x. 2 bull bull 4096 Dec 23 14:51 MIPCS_FRU <=====
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Music
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Pictures
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Public
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Templates
drwxr-xr-x. 2 bull bull 4096 Sep 3 2019 Videos
```

```
-----
[bull@localhost ~]$ cd MIPCS_FRU
```

```
[bull@localhost MIPCS_FRU]$ ll
```

```
total 0
```

```
*****
```

Transfer the 3 files ipmiFRU.py, MIPocket-MIPCSFRU.xml and MIPocket-System.xml to the directory MIPCS_FRU once the modifications have been done(Refer to the document IPMIFRU_OperatingManuval on the DVD_MIPocket_Engineering_019.02.iso\Resources\Tools_and_related_documents\IPMIFRU)

```
-----
[bull@localhost MIPCS_FRU]$ ll
```

```
total 36
```

```
-rw-rw-r--. 1 bull bull 28387 Dec 23 14:52 ipmiFRU.py
-rw-rw-r--. 1 bull bull 1668 Dec 23 14:52 MIPocket-MIPCSFRU.xml
-rw-rw-r--. 1 bull bull 999 Dec 23 14:52 MIPocket-System.xml
```

```
[bull@localhost MIPCS_FRU]$ mkdir FRU-BULL
```

```
[bull@localhost MIPCS_FRU]$ ll
```

```
total 40
```

```
drwxrwxr-x. 2 bull bull 4096 Dec 23 14:53 FRU-BULL
-rw-rw-r--. 1 bull bull 28387 Dec 23 14:52 ipmiFRU.py
-rw-rw-r--. 1 bull bull 1668 Dec 23 14:52 MIPocket-MIPCSFRU.xml
-rw-rw-r--. 1 bull bull 999 Dec 23 14:52 MIPocket-System.xml
```

```
*****
```

Transfer the modified file FRU-family-MIPOCKET.xml to the directory FRU-BULL (Refer to the document IPMIFRU_OperatingManuval on the

DVD_MIPocket_Engineering_019.02.iso\Resources\Tools_and_related_documents\IPMIFRU).

```
[bull@localhost MIPCS_FRU]$ ll FRU-BULL
```

```
total 4
```

```
-rw-rw-r--. 1 bull bull 2545 Dec 23 14:53 FRU-family-MIPOCKET.xml
```

```
*****
```

Give the permission to the file ipmiFRU.py if not :

```
[bull@localhost MIPCS_FRU]$ ./ipmiFRU.py -s MIPOCKET -d ./FRU-BULL/ -f MIPCS -i ./MIPocket-MIPCSFRU.xml
```

```
-bash: ./ipmiFRU.py : Permission denied
```

```
[bull@localhost MIPCS_FRU]$ chmod 760 ipmiFRU.py
```

```
[bull@localhost MIPCS_FRU]$ ll ipmiFRU.py
```

```
-rwxrw----. 1 bull bull 28387 Dec 23 14:52 ipmiFRU.py
```

```
*****
```

```
[bull@localhost MIPCS_FRU]$ ./ipmiFRU.py -s MIPOCKET -d ./FRU-BULL/ -f MIPCS -i ./MIPocket-MIPCSFRU.xml
```

binary file ./MIPocket-MIPCSFRU generated

```
[bull@localhost MIPCS_FRU]$ ll
```

```
total 48
```

```
drwxrwxr-x. 2 bull bull 4096 Dec 23 14:53 FRU-BULL
```

```
-rw-rw-r--. 1 bull bull 3939 Dec 23 14:57 ipmiFRU.log
-rwxrw----. 1 bull bull 28387 Dec 23 14:52 ipmiFRU.py
-rw-rw-r--. 1 bull bull 256 Dec 23 14:57 MIPocket-MIPCSFRU
-rw-rw-r--. 1 bull bull 1668 Dec 23 14:52 MIPocket-MIPCSFRU.xml
-rw-rw-r--. 1 bull bull 999 Dec 23 14:52 MIPocket-System.xml
```

```
[bull@localhost MIPCS_FRU]$ ./ipmiFRU.py -s MIPOCKET -d ./FRU-BULL/ -f System -i ./MIPocket-System.xml
```

binary file ./MIPocket-System generated

```
[bull@localhost MIPCS_FRU]$ ll
```

```
total 52
drwxrwxr-x. 2 bull bull 4096 Dec 23 14:53 FRU-BULL
-rw-rw-r--. 1 bull bull 3939 Dec 23 15:01 ipmiFRU.log
-rwxrw----. 1 bull bull 28387 Dec 23 14:52 ipmiFRU.py
-rw-rw-r--. 1 bull bull 256 Dec 23 14:57 MIPocket-MIPCSFRU
-rw-rw-r--. 1 bull bull 1668 Dec 23 14:52 MIPocket-MIPCSFRU.xml
-rw-rw-r--. 1 bull bull 256 Dec 23 14:58 MIPocket-System
-rw-rw-r--. 1 bull bull 999 Dec 23 14:52 MIPocket-System.xml
```

```
[bull@localhost MIPCS_FRU]$
```

Once the binary files are generated, transfer the files to the edge server <BMC IP ADDRESS> user name

```
[bull@localhost MIPCS_FRU]$ scp MIPocket-System <username>@<BMC IP ADDRESS >:/run/initramfs
```

ATOS Management Controller (OpenBMC) MIPCS 25.00.0295

username@ <BMC IP ADDRESS > password:

```
MIPocket-System 100% 256 104.9KB/s 00:00
```

```
[bull@localhost MIPCS_FRU]$ scp MIPocket-MIPCSFRU <username>@<BMC IP ADDRESS>:/run/initramfs
```

ATOS Management Controller (OpenBMC) MIPCS 25.00.0295

username@ <BMC IP ADDRESS> password:

```
MIPocket-MIPCSFRU 100% 256 142.1KB/s 00:00
```

[bull@localhost MIPCS_FRU]\$ ll

total 52

drwxrwxr-x. 2 bull bull 4096 Dec 23 14:53 FRU-BULL
-rw-rw-r--. 1 bull bull 3939 Dec 23 15:01 ipmiFRU.log
-rwxrw----. 1 bull bull 28387 Dec 23 14:52 ipmiFRU.py
-rw-rw-r--. 1 bull bull 256 Dec 23 15:01 MIPocket-MIPCSFRU
-rw-rw-r--. 1 bull bull 1668 Dec 23 14:52 MIPocket-MIPCSFRU.xml
-rw-rw-r--. 1 bull bull 256 Dec 23 14:58 MIPocket-System
-rw-rw-r--. 1 bull bull 999 Dec 23 14:52 MIPocket-System.xml

[bull@localhost MIPCS_FRU]\$

Connect to the SSH of the BMC with the username and password:

root@bullhwmipcs:~# **ipmitool fru** **Check before to confirm the old Serial Number**

FRU Device Description : Builtin FRU Device (ID 0)

FRU Device Description : system (ID 1)

Product Manufacturer : BULL

Product Name : BullSequana Edge

Product Part Number : BullSequana Edge

Product Version : 003

Product Serial : XAN-SE1-00276

FRU Device Description : motherboard (ID 2)

Board Mfg Date : Thu Apr 30 12:52:00 2020 UTC

Board Mfg : PLEXUS

Board Product : MIPCS

Board Serial : P019390RZ

Board Part Number : 11540978-002

root@bullhwmipcs:~# **FRU Device Description : Builtin**

root@bullhwmipcs:~# **ll /run/initramfs**

-rw-r--r-- 1 root root 256 Oct 31 14:36 **MIPocket-MIPCSFRU** <=====

```

-rw-r--r-- 1 root root 256 Oct 31 14:35 MIPocket-System <=====
drwxr-xr-x 2 root root 1380 Mar 14 2020 bin
drwxr-xr-x 5 root root 240 Mar 14 2020 etc
-rwxr-xr-x 1 root root 9385 Mar 14 2020 init
-rw-r--r-- 1 root root 43 Jan 1 1970 init-options
-rw-r--r-- 1 root root 0 Jan 1 1970 init-options-base
drwxr-xr-x 5 root root 780 Mar 14 2020 lib
drwxr-xr-x 18 root root 248 Mar 14 2020 ro
drwxr-xr-x 5 root root 0 Jan 1 1970 rw
drwxr-xr-x 2 root root 840 Mar 14 2020 sbin
-rwxr-xr-x 1 root root 1917 Mar 14 2020 shutdown
-rwxr-xr-x 1 root root 5180 Mar 14 2020 update
drwxr-xr-x 7 root root 140 Mar 14 2020 usr
drwxr-xr-x 4 root root 80 Mar 14 2020 var
-rw-r--r-- 1 root root 744 Mar 14 2020 whitelist

```

```

-----
root@bullhwmipcs:~# dd bs=1 count=256 if=/run/initramfs/MIPocket-System of=/sys/bus/i2c/devices/6-0054/eeprom

```

```

256+0 records in
256+0 records out

```

```

-----
root@bullhwmipcs:~# dd bs=1 count=256 if=/run/initramfs/MIPocket-MIPCSFRU of=/sys/bus/i2c/devices/6-0055/eeprom

```

```

256+0 records in
256+0 records out

```

```

-----
root@bullhwmipcs:~# reboot

```

```

root@bullhwmipcs:~#

```

```

Remote side unexpectedly closed network connection

```

```

*****

```

Once the reboot is done, retype the command ipmifru tool to check the modification of the Serial number:

```

root@bullhwmipcs:~# ipmitool fru

```

```

FRU Device Description : Builtin FRU Device (ID 0)

```

FRU Device Description : system (ID 1)

Product Manufacturer : BULL

Product Name : BullSequana Edge

Product Part Number : BullSequana Edge

Product Version : 003

Product Serial : XAN-SE1-00273 <===== **Before 276**

FRU Device Description : motherboard (ID 2)

Board Mfg Date : Mon Dec 21 10:00:00 2020 UTC

Board Mfg : PLEXUS

Board Product : MIPCS

Board Serial : P019390SM <===== **Before P019390RZ**

Board Part Number : 11540978-002

root@bullhwmipcs:~#

----- End of the document-----