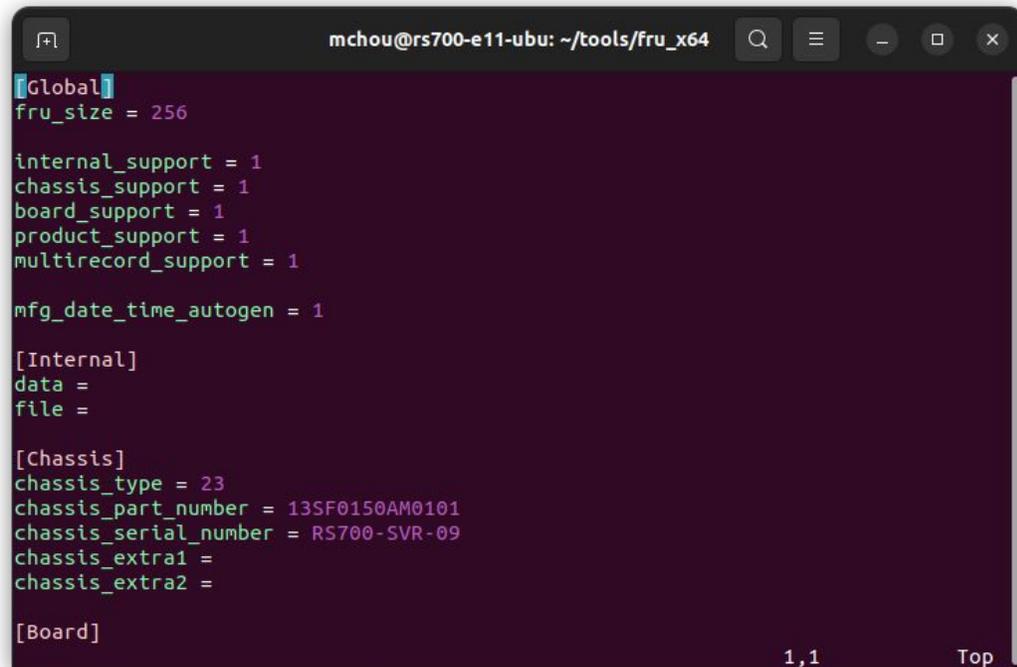


Edit FRU

Before Update

- Before Update, you need to prepare below things
 - OS: Windows or Linux
 - Ipmitool: Windows or Linux version
 - ASUS_FRU_Tools: Windows or Linux version
- The Steps executed on Linux environment

First Step: Edit FRU INI



```
mchou@rs700-e11-ubu: ~/tools/fru_x64
[Global]
fru_size = 256

internal_support = 1
chassis_support = 1
board_support = 1
product_support = 1
multirecord_support = 1

mfg_date_time_autogen = 1

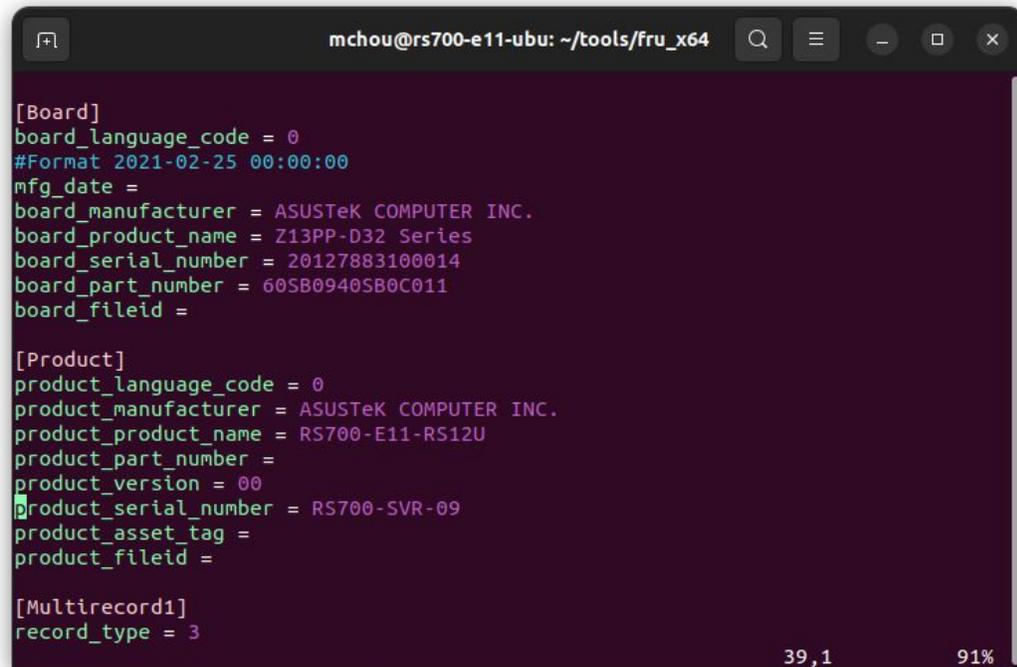
[Internal]
data =
file =

[Chassis]
chassis_type = 23
chassis_part_number = 13SF0150AM0101
chassis_serial_number = RS700-SVR-09
chassis_extra1 =
chassis_extra2 =

[Board]
```

- The FRU INI contains FRU data that will fill into FRU
- In the INI [Global] session, if set item to 1, the asus_fru_tool will phase in.
- Typically our modification will be [Chassis] / [Board] / [Product] sessions.
- [Chassis] session included part number and serial number

First Step: Edit FRU INI

A terminal window with a dark purple background and light-colored text. The window title is 'mchou@rs700-e11-ubu: ~/tools/fru_x64'. The content shows an INI file with three sections: [Board], [Product], and [Multirecord1]. The [Board] section includes fields for language code, manufacturer (ASUSTeK), product name (Z13PP-D32 Series), serial number (20127883100014), and part number (60SB0940SB0C011). The [Product] section includes fields for language code, manufacturer (ASUSTeK), product name (RS700-E11-RS12U), version (00), and serial number (RS700-SVR-09). The [Multirecord1] section includes record_type = 3. The bottom right corner of the terminal shows '39,1' and '91%'.

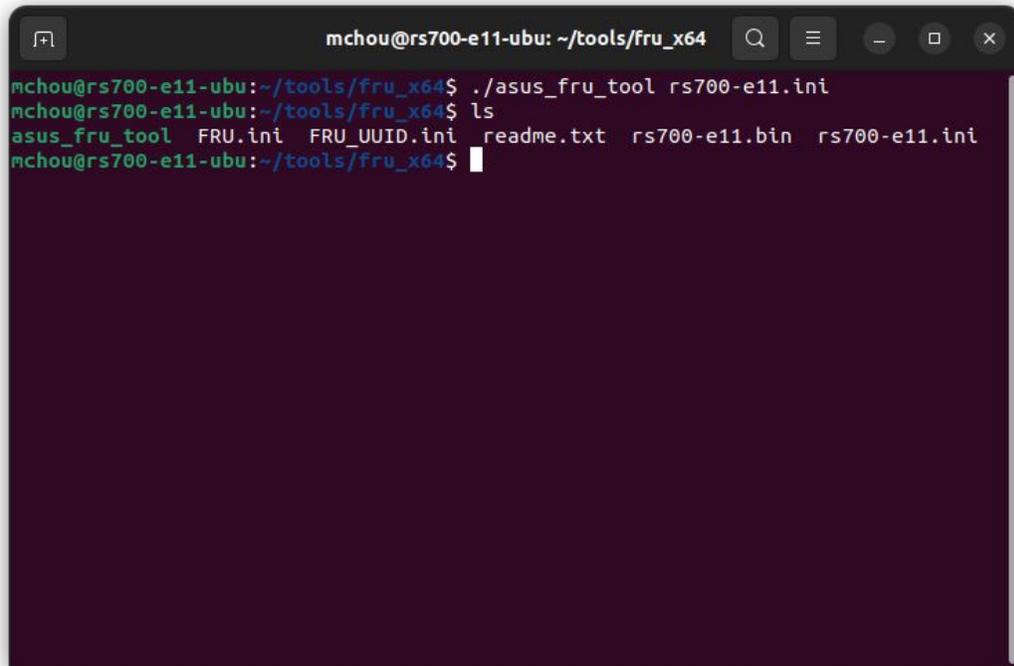
```
[Board]
board_language_code = 0
#Format 2021-02-25 00:00:00
mfg_date =
board_manufacturer = ASUSTeK COMPUTER INC.
board_product_name = Z13PP-D32 Series
board_serial_number = 20127883100014
board_part_number = 60SB0940SB0C011
board_fileid =

[Product]
product_language_code = 0
product_manufacturer = ASUSTeK COMPUTER INC.
product_product_name = RS700-E11-RS12U
product_part_number =
product_version = 00
product_serial_number = RS700-SVR-09
product_asset_tag =
product_fileid =

[Multirecord1]
record_type = 3
```

- [Board] session included MB info that is important. Included manufacturer, name, serial number and part number.
- [Product] session include Server info that included manufacturer, name part number version and serial number.
- [Multirecord1] included system UUID, if you don't need to modify this field, just set support to 0 or remove this session

Second Step: Convert INI to BIN file



```
mchou@rs700-e11-ubu: ~/tools/fru_x64
mchou@rs700-e11-ubu:~/tools/fru_x64$ ./asus_fru_tool rs700-e11.ini
mchou@rs700-e11-ubu:~/tools/fru_x64$ ls
asus_fru_tool  FRU.ini  FRU_UUID.ini  readme.txt  rs700-e11.bin  rs700-e11.ini
mchou@rs700-e11-ubu:~/tools/fru_x64$
```

- After INI file modified. The Next step is to run the `asus_fru_tool` to convert the ini into BIN file.
- The `asus_fru_tool` will check the content of ini and convert to bin file if correct. If the INI included error syntax, the tool will also highlight it.
- Execute `asus_fru_tool xxx.ini` to convert

Third Step: Write FRU by Ipmitool

```
mchou@rs700-e11-ubu: ~/tools/fru_x64
mchou@rs700-e11-ubu:~/tools/fru_x64$ sudo ipmitool raw 0x30 0x17 0x01
mchou@rs700-e11-ubu:~/tools/fru_x64$ sudo ipmitool fru write 0 rs700-e11.bin
Fru Size      : 256 bytes
Size to Write : 256 bytes
mchou@rs700-e11-ubu:~/tools/fru_x64$ sudo ipmitool fru print
FRU Device Description : Builtin FRU Device (ID 0)
Chassis Type          : Rack Mount Chassis
Chassis Part Number   : 13SF0150AM0101
Chassis Serial        : RS700-SVR-09
Board Mfg Date        : Tue May 10 15:41:00 2022
Board Mfg             : ASUSTeK COMPUTER INC.
Board Product         : Z13PP-D32 Series
Board Serial          : 20127883100014
Board Part Number     : 605B0940SB0C011
Product Manufacturer  : ASUSTeK COMPUTER INC.
Product Name          : RS700-E11-RS12U
Product Version       : 00
Product Serial        : RS700-SVR-09
mchou@rs700-e11-ubu:~/tools/fru_x64$
```

- After bin file converted, now we can start the FRU update process.
- First if will need to execute **ipmitool raw 0x30 0x17 0x01** to unlock FRU protection
- Next execute **ipmitool fru write 0 xxx.bin** to write FRU
- After FRU write finished, you can check it with **ipmitool fru print**

Thank You