Fru-change user guide

1. Purpose

Introduce the method to use fru-change tool.

2. Range

Applicable product: All Inspur servers that include BMC module.

Applicable OS: Linux

3. Tool Catalog and Content

OS	Catalog	Content
Linux	**fru-change**	fru-change_x86_32 fru-change_x86_64

4. Tool operation flow

The fru-change tool has a 32-bit version and a 64-bit version. fru-change_x86_32 is used in a 32-bit Linux system.fru-change_x86_64 is used in a 64-bit Linux system. Please select the appropriate version depending on the Operating System.

4.1 Function

The fru-change tool is used to modify the FRU device information on the local and remote servers.

The modifiable FRU device information is shown in Table 1:

Table 1 fru-change Modifiable FRU Device Information

Abbreviation	Full name	Abbreviation	Full name
CT	Chassis Type	BM	Board Mfg
CPN	Chassis Part Number	BP	Board Product
CS	Chassis Serial	BS	Board Serial
CE	Chassis Extra	BPN	Board Part Number

PM	Product Manufacturer	PN	Product Name
PPN	Product Part Number	PV	Product Version
PS	Product Serial	PAT	Product Asset Tag

4.2 Command format

Command	Media	Device information code	Write value
fru-change	-kcs -nw,-ip,-u,-p	fruinfo	value

In the command, "-kcs" in the media means that the FRU device information is rewritten on the server itself through the KCS interface. "-nw" indicates overwriting the FRU device information of the remote server through the network. "fruinfo" is the code of the modifiable FRU device information. The specific code is shown in "Code" in "Table 1 fru-change Modifiable FRU Device Information".

Example 1: Modify the Product Serial (PS) Product Serial (PS) to "NA123" in the Remote Server FRU The 32-bit Linux system (that is the 32-bit Linux system for the fru-change operating system) corresponds to The fru-change executable file is fru-change_x86_32, the remote server BMC dedicated port IP address is 192.168.1.2, the log-in account is admin, and the password for the admin account is 123456. Then execute the following command:

./fru-change_x86_32 -nw -ip 192.168.1.2 -u admin -p 123456 PS NA123

Note: When entering commands, pay attention to the case of each parameter, the order between the parameters, and the space between the parameters.

Example 2: Modify the product serial number Product Serial (PS) "NA123" in the FRU device on the local server, where the local server is a 64-bit Linux system (that is the operating system of fru-change is a 64-bit Linux system), corresponding to The fru-change executable is fru-change_x86_64. Then execute the following command:

./fru-change_x86_64 -kcs PS NA123

4.3 Operating procedures

1) Operating procedures for rewriting the FRU device information of the remote server using the fru-change tool in the Linux system:

The Linux environment here is the operating system environment of the local machine (that is the machine where the fru-change tool is located), and there is no requirement on the operating system of the remote server.

Note: The fru-change utility in Linux environment has a 32-bit and 64-bit distinction. When using it, select the appropriate fru-change version according to the number of bits in the operating system.

The operation flow in the 32-bit Linux environment and the 64-bit Linux system is same. This section uses the fru-change application in the 32-bit Linux system as an example to introduce the operation flow of fru-change.

Case: The local environment is a 32-bit Linux operating system. The product serial (PS) in the remote server FRU device information is rewritten to "NA123" over the network. Among them, the remote server BMC dedicated port IP address is: 10.53.11.191, and login as the admin user. The password of the admin user is admin.

The specific operation flow is as follows:

(1) Copy the fru-change tool used in the 32-bit Linux environment to the local Linux system. Such as home/fru-change/fru-change_x86_32.

(2) Through the console in the Linux system, use the cd command to enter the directory where fru-change_x86_32 is located, as shown in the following figure.

```
root@hlc-VIT-P2412:/fruchange# ls
fru-change_x86_32  fru-change_x86_64
```

(3) Execute the fru-change command, enter the following command, and press Enter.

```
./fru-change_x86_32 -nw 100.2.74.23 -u admin -p admin PS NA123
```

(4) fru-change will give the following feedback information after performing the modification operation. All information of the FRU device (including the PS item just modified) will be listed in the feedback information. The specific feedback results are shown in the figure below.

```
FRU Device Description : Builtin FRU Device (ID 0)
 Chassis Type          : LapTop
 Chassis Part Number   : wxy
 Chassis Extra         : wxy
 Chassis Extra         : q
 Board Mfg Date        : Thu Oct 16 01:36:00 2014
 Board Mfg             : Inspur
 Board Product         : Caishen
 Board Serial          : 0
 Board Part Number     : light
 Product Manufacturer  : Inspur
 Product Name          : NF5166M4
 Product Version       : NF5170M4
 Product Serial        : 0
 Product Asset Tag     : 12345
```

Here, the FRU device information before the modification is given, as shown in the figure below.

```
FRU Device Description : Builtin FRU Device (ID 0)
 Chassis Type          : LapTop
 Chassis Part Number   : wxy
 Chassis Extra         : wxy
 Chassis Extra         : q
 Board Mfg Date        : Thu Oct 16 01:36:00 2014
 Board Mfg             : Inspur
 Board Product         : Caishen
 Board Serial          : 0
 Board Part Number     : light
 Product Manufacturer  : Inspur
 Product Name          : NF5166M4
 Product Version       : NF5170M4
 Product Serial        : NA123
 Product Asset Tag     : 12345
```

For comparison, you can see the Product Serial item, which has changed from "0" to "NA123".

At this point, the operation flow for rewriting the FRU device information of the remote server using fru-change is described.

The procedure for rewriting FRU device information using fru-change on the server itself is just the same as entering the command and using "-kcs" instead of "-nw" in the media item.

(5) Help Information

With "-?" and "-h", you can get help with fru-change.

```
root@hlc-VIT-P2412:~/Desktop/img/BMC_Tools/BMC发布相关工具/fruchange# ./fru-change_x86_64_0.9.6_20170705 
=====================================================
   Inspur FRU Change Tool
   Version 0.9.6
changenote:
   Version 0.9.3:
        add Chassis Type Support
   Version 0.9.4: 20150511
        modify An exception
   Version 0.9.5: 20170117
        modify command to verify inspur server for purley platform
   Version 0.9.6: 20170705
        make linux follow DOS naming rule: BP->BPN, BN->BP, PPN->PPM, CPN->CP
=====================================================
Usage: ./fru-change [MEDIUM] [FEILD] [VALUE]
 MEDIUM :
 -kcs             Option to use KCS
 -nw,-ip,-u,-p    Option to use Network
                 '-ip' Option to enter IP, When using Network
                 '-u'  Option to enter Username, When using Network
                 '-p'  Option to enter Password, When using Network
 FEILD :
 CT      Modify Chassis Type
 CP      Modify Chassis Part Number
 CS      Modify Chassis Serial
 CE      Modify Chassis Extra
 BM      Modify Board Mfg
 BPN     Modify Board Product
 BS      Modify Board Serial
 BP      Modify Board Part Number
 PM      Modify Product Manufacturer
 PN      Modify Product Name
 PPM     Modify Product Part Number
 PV      Modify Product Version
 PS      Modify Product Serial
 PAT     Modify Product Asset Tag
 VALUE : The Value of the Modify
 root@hlc-VIT-P2412:~/Desktop/img/BMC_Tools/BMC发布相关工具/fruchange#
```

NOTE:

Ver	date	modify
Version 0.9.3		add Chassis Type Support
Version 0.9.4	20150511	modify An exception
Version 0.9.5	20170117	modify command to verify inspur server for purley platform
Version 0.9.6	20170705	make linux follow DOS naming rule: BP->BPN, BN->BP, PPN->PPM, CPN->CP
Version 0.9.8	20181020	modify gibberish exception
Version 0.9.9	20190214	BPN->BP, BP->BPN, PPM->PPN, CP->CPN