knowledge base and tools



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KB Url: http://218.57.146.166:8443/display/H

Input the Username and password to log in the knowledge base

Username: overseas Password: overseas

Log in	
Heerneme	
Username	
Password	
	Remember me
	Log in Forgot your password?



Choose knowledge base from homepage





Inspur Service Knowledge Base System

Created by 邓杨, last modified by 邓杨 on Feb 05, 2018

产品资料 Product Documentation









服务器-SV

STR-存储

高性能

快捷入口 Site Navigation



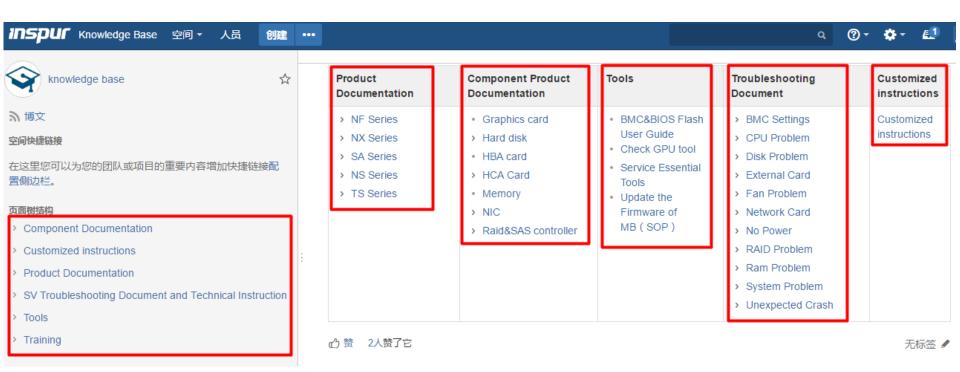








Choose different part, get different knowledge





Component Documentation

This part provides the component documentation, such as hard disk, memory, NIC, Raid and so on.

Customized instructions

This part provides the customized instruction and customized firmware, when the engineer maintains a customized, he need to pay attention to this part.

Product Documentation

This part introduces the different product provides the product document.

SV Troubleshooting Document and Technical Instruction

This part provides troubleshooting documents and technical instructions.

Tools

This part provides different tools, including log collecting, firmware updating.

• **Training**

New engineer training and new product training

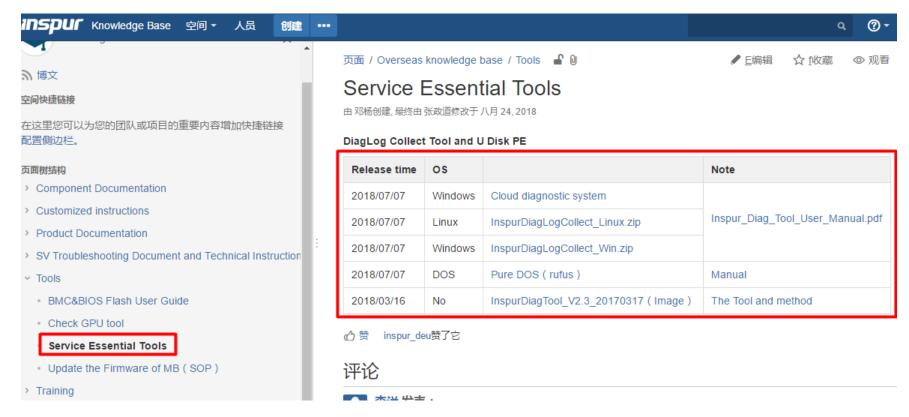
Tools

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Tools

In this part the engineer can download the log-collecting tools, DOS tool.





Tools

Cloud diagnostic system

The cloud fault diagnosis system is oriented to customer service, test and engineering personnel and is used for log analysis when a fault occurs to the server. But the log must be collected by InspurDiagLogCollect tool.

InspurDiagLogCollect_Linux

The Linux version log collection tool is oriented to customer service, test and engineering personnel, and the tool runs under the Linux system to collect server fault logs.

InspurDiagLogCollect_Win

The Windows version log collection tool is oriented to customer service, test and engineering personnel, and the tool runs under the Windows system to collect server fault logs..

Pure DOS (rufus)

Make an pure DOS PE by rufus tool.

InspurDiagTool

The tool provide a Linux environment, the engineer can filling the tool into a USB disk by the rufus tool.



All Inspur Tools

Tool	OS	Usage	Note
Cloud diagnostic system	Use on Windows	1.Automatic log analysis The log must be collected by InspurDiagLogCollect tool. Note: The Cloud diagnostic system analysis is not necessarily accurate. If necessary, please contact Global Support	Inspur Diag Tool Use
InspurDiagLogCollect_Linux.zip	Use on Linux	1.Log collecting The tool runs under the Linux system	r_Manual.pdf
InspurDiagLogCollect_Win.zip		1.Log collecting The tool runs under the Windows system	
Pure DOS (rufus)	Self boot DOS	1.Updating BMC/BIOS/FRU	<u>Manual</u>
InspurDiagTool_V2.3_2017031 7 (Image)	Self boot Linux PE	3.Updating BMC/BIOS/FRU	The Tool and method
Inspur Server U-Disk Manager Suite (ISLIMS)	Self boot Linux PE	1.Updating BMC/BIOS/FRU 2.Hardware config 3.HDD/Memory/CPU hardware Diagnosis	Manual of ISUMS
	NA	1.Component Documentation 2.Customized instructions 3.Product Documentation 4.SV Troubleshooting Document and Technical	http://218.57.146.166: 8443/display/H
Troubleshooting Guides	NA	1. Analyze and deal with common server faults	http://www.gzwxsl.co



Cloud diagnostic system

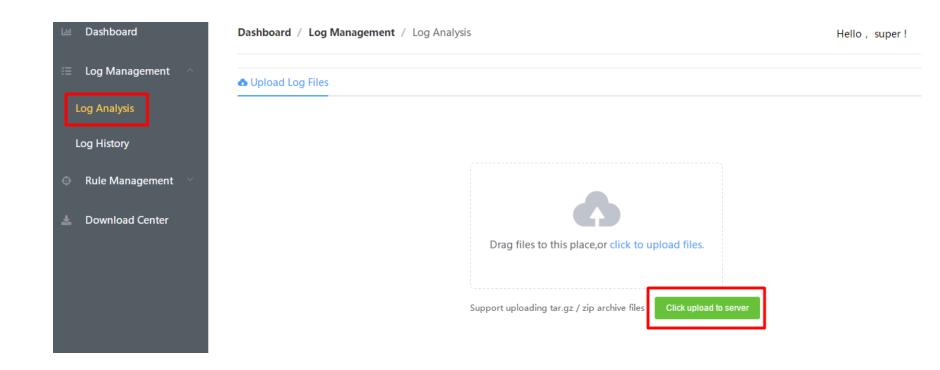
http://218.57.146.166:8888/#/sign

Input the user name, password and verification code, then log in the system. (The user/password is same with your online system)



Cloud diagnostic system

Click "Upload Log Files " to perform log upload.

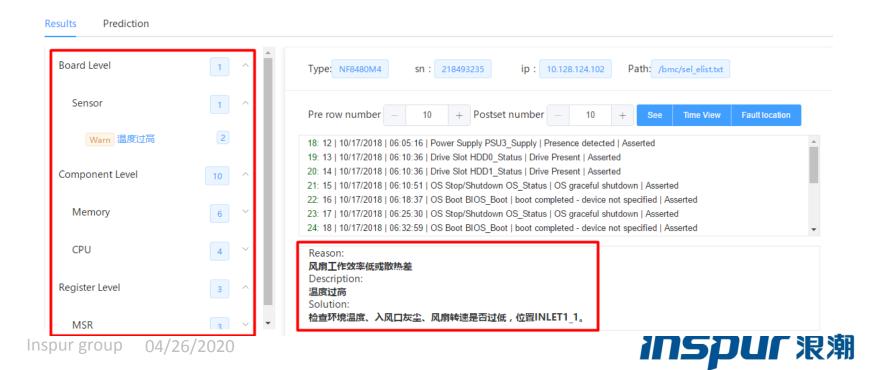




Cloud diagnostic system

A fault diagnosis is made automatically after the logs are uploaded, and the diagnosis results are displayed on the interface.

Note: the log must be collected by InspurDiagLogCollect tool. There is still some Chinese on the system. We will update the system later



The instructions of different log collecting tools

Tool Model		Instruction		
InspurDiagInfoCollast	Local	The tool runs under the Windoows operating system of the server and obtains the OS system log, RAID card log, BMC log and other hardware logs.		
InspurDiagInfoCollect (Windows)	Remote	The tool runs on the remote PC(Win OS) and accesses the target server BMC to acquire the BMC log, blackbox log, CPU register log and other BMC related logs.		
InspurDiagInfoCollast	Local	The tool runs under the Linux operating system of the server and obtains the OS system log, RAID card log, BMC log and other hardware logs.		
InspurDiagInfoCollect (Linux) Remote		The tool runs on the remote PC(Linux OS) and accesses the target server BMC to acquire the BMC log, blackbox log, CPU register log and other BMC related logs.		



Collecting different logs in different fault situations

Fault	Describe	Logs need collected	Tools
BMC related	The front indicator is abnormal The fan is abnormal The system abnormal shutdown/reboot	BMC, blackbox	InspurDiagInfoCollect (Remote mode)
	The system abnormal crash	BMC, blackbox, CPU register	
OS related	Network is abnormal The system abnormal shutdown/reboot/crash The hardware has something fault in	OS log	InspurDiagInfoCollect
Raid/HDD related	the OS log Data read/write slowly The HDD/Raid is offline There are something alarm from the Raid card	Raid card log	(Local mode)



InspurDiagLogCollect-Win:

Installation steps

□ Download the latest version tool from the customer service website;
 □ package is consistent with the original software package on

2019/9/27 15:04

2018/1/8 15:41

the website config

Obtain ar ipmitool

Double-c logsdir
tools

collection to blackbox_decrypt.exe
config.ini

get.bat

2019/9/27 16:29
2019/8/7 11:23
2019/11/25 12:22
2019/9/26 11:03
2018/1/8 15:41
2019/4/15 14:38
2018/1/8 15:41

InspurDiagLogCollect.exe

wget.exe



InspurDiagl on Collect-Win • ____X File User Language Help Instructions There are three stens for this Toolkit to collect the required log: 1. BMC log collection Log into the server's BMC through BMC management port, collect the remote bmc log, the BlackBox Log and the CPU registers' information in the case of system down. 2. OS log collection For Linux OS, log into the system via a third-party tool, then collect the OS log, RAID log, and other relevant log. For Windows OS, run Windows Local Collecting Tool on the Windows server to collect system log and other log, then load those log into this tool 3. Output combination Combine the two kinds of log of the same machine and transfer them to the management node that this tool runs at. Click the button named "next", you will begin the progress.



InspurDiagLogCollect-Win: BMC log:

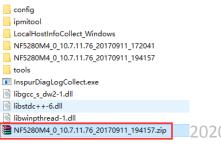


- ➤ BMC log collection can collect BMC, black box and register logs. Input BMC IP, user name and password. Check to collect CPU register information when the machine is dumped. it is useful. It is not checked by default. If the machine is down, it needs to be checked manually. According to the number of CPUs, it needs 5-20 times
- ➤ Platform selection. This option is used to collect CPU register information. It is not collected by default. When checked, it will

InspurDiagLogCollect-Win: BMC log:

Log collection is successful

You can find the log package in the same folder.

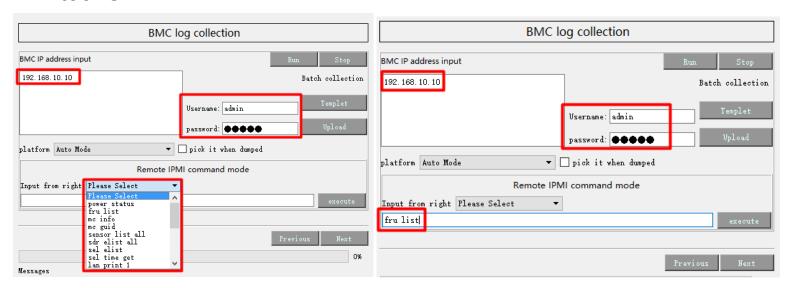


group



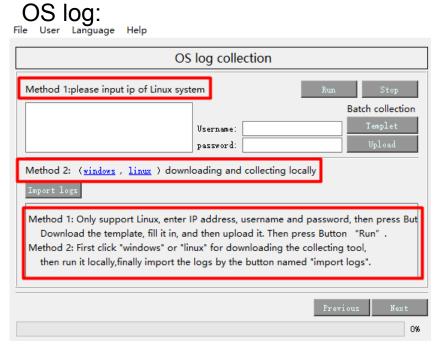
InspurDiagLogCollect-Win:

IPMItool CMD:





InspurDiagLogCollect-Win:

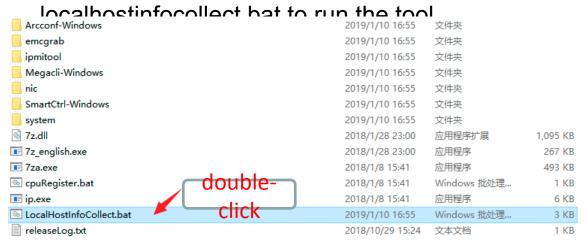


- Select the system log collection tool according to the operating system differentiation of the server (Windows / Linux), click and select the save location, and then extract the compression package of inspurdiaglogcollect. Windows runs localhostinfocollect, and Linux runs. / run.sh.
- After running, a compressed package (file name is model serial number IP time, extension. Zip) will be generated under this folder, that is, the log of successful collection (including system log, raid card log, BMC)

InspurDiagLogCollect-Win:

Windows OS log:

Upload the tool to the local server, unzip it to a folder, and double-click

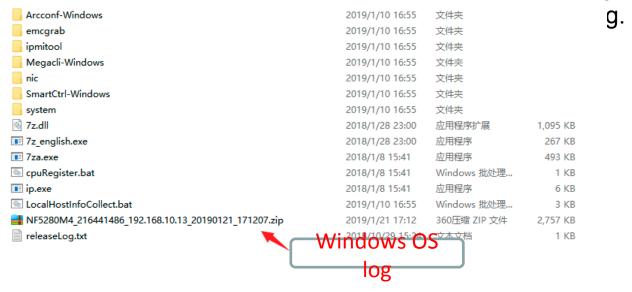


In the process of log collection, you need to wait for about 10 minutes inspur gro (due to different machine configurations, system versions) and other factors, the time of log collection is variable)

InspurDiagLogCollect-Win:

Windows OS log:

➤ After the log collection is completed, a compressed package (file name is model serial number IP time, extension. Zip) will be generated in the





InspurDiagLogCollect-Linux:

- **→** Installation steps:
- □ Download the latest version tool from the customer service website;
- □ Package is consistent with the original software package on the website;
- Obtain an executable tool by decompression;

```
[root@localhost usb]#
[root@localhost usb]# cd InspurDiagLogCollect_Linux/InspurDiagLogCollect_Linux_U5.1.2_20180917/
[root@localhost InspurDiagLogCollect_Linux_V5.1.2_20180917]# ls
                         collect_k1910_all.exp
                                                        config.ini
                                                                            loca lMode
                                                                                                    process manager.sh run from file.sh
                         collect_k1910_logs.exp
                                                                            mcd_ivt.pu
arguments_parsing.sh
                                                                                                    progress_bmc.sh
                                                                                                                        runlog
                                                        csr.pq
ChannelConfirm.pu
                         collect_k1910.sh
                                                        decodeCPUReg.pg
                                                                            mcd.py
                                                                                                    progress_os_per.sh
                                                                                                                        run.sh
                                                        DiagInfoCollect.sh modules
collect_checkIp.exp
                         collect_os_remote_clear.exp
                                                                                                    progress_os.sh
                                                                                                                        userinfo.conf
collect_getSerialNum.exp collect_os_remote.exp
                                                        final.sh
                                                                            muiltiple_process_z.sh readConf.sh
                                                                                                                        userinfo_os.conf
collect k1910 1380.exp collect os remote howmuch.exp lib
                                                                                                    readme.txt
                                                                            pcie.py
[root@localhost InspurDiagLogCollect_Linux_U5.1.2_20180917]#
```

InspurDiagLogCollect-Linux:

```
[root@localhost InspurDiagLogCollect Linux V4.2.0 20180413]# ./run.sh
run.sh, used to call Diagnose Info Collect tool!

    Local mode, tool should run in host os, to collect local logs!

Remote mode, tool should run in remote PC, to collect bmc logs!
Please input BMC IP, No input will goto [Local Mode]!>
[root@localhost InspurDiagLogCollect Linux V4.2.0 20180413]# ./run.sh
run.sh, used to call Diagnose Info Collect tool!

    Local mode, tool should run in host os, to collect local logs!

P. Remote mode, tool should run in remote PC, to collect bmc logs!
                   _____
Please input BMC IP, No input will goto [Local Mode]!>100.2.7.2
Please input BMC User(Defaut:admin)>
lease input BMC PassWord(Defaut:admin)>
       Inspur Diag Info Collect: V4.2.0
            Release Date: 2018-04-13
 Only professionals are qualified to use this tool.
 -Before performing any maintenance operations by using this
 tool.obtain authorization from the customer.
```



InspurDiagLogCollect-Linux:

Linux OS log:

```
lease input BMC IP, No input will goto [Local Model!>
      Inspur Diag Info Collect: V5.1.2
           Release Date:2018-09-17
Only professionals are qualified to use this tool.
-Before performing any maintenance operations by using this
 tool, obtain authorization from the customer.
Excute [getbmclogs] ..... please waitlog | getpecilog
[bmc]...
[cpu]...
[disk]...
[driver]...
[hba]...
[memory]...
[nic]...
[raid] ...
[sysconf]...
                                                       Done
ompress NF5280M4_216441486_192.168.10.12_20150717_122313
ile Path: /usb/InspurDiagLogCollect_Linux/InspurDiagLogCollect_Linux_V5.1.2_28188917/NF5288M4_216441486_192.168.18.12_28158717_122313.tar.gz
ile size: 1.7M
ile md5sum: 83cbcb5ae44aa8f568d86566ff1d6b6b
                                                                        Linux OS log
[root@localhost InspurDiagLogCollect_Linux_V5.1.2_20180917]# _
```



Check the log after collecting

Remote BMC log

Model	Log	Remark	
	chassis_power_status.txt	Server power status	
	bmc_customid.txt	Customer ID	
	power_status.txt	Server power status	
	fru.txt	FRU information	
	mc_info.txt	BMC version	
	sensor_list_all.txt		
	sensor.txt	Sensor	
	sdr_elist_all.txt		
bmc	sel_elist.txt	SEL log	
	lan_print_1.txt	BMC network information	
	lan_print_8.txt		
	lan_print.txt		
	blackbox.log	BMC blackbox log	
	blackboxpeci.log		
	onekeylog.asp	BMC onekey log	
	csr.txt	CPU CSR register	
	msr.txt	CPU MSR register	

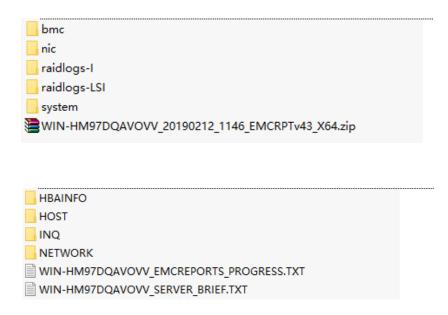
Note: The main log refer to the list, the more detailed refer to the manual.



Check the log after collecting

Windows OS log

Model	Log	Remark	
	fru.txt	FRU	
BMC	sensor_list_all.txt	Sensor	
	sel_elist.txt	SEL	
	lpconfig.txt		
	netclient.htm	- Network	
nic	netlogin.htm	information	
	nic.htm		
	nicconfig.htm		
	raidlogs-I	Onboard intel Raid	
Raid	raidlogs-LSI	LSI/Avago RAID log	
	raidlogs-A	PMC Raid log	
	drivers.txt		
	Hw_BIOSInfo.htm		
	Hw_CPUInfo.htm		
	Hw_DiskInfo.htm		
arratam	Hw_MemInfo.htm	System information	
system	Hw_ProductInfo.htm		
	MEMORY.DMP		
	Sys_OSInfo.htm		
	Sys_ProcessList.htm		
	systeminfo.txt		
0S	WIN-xxx_EMCRPTv43_X64.zip	OS log	



Note: The main log refer to the list, the more detailed refer to the manual.



Check the log after collecting

Linux OS log

Mode1	Log	Remark	
	version_bios.txt	BIOS version	
bios	dmisystem.txt	System information	
	dmidecode	DMI information	
	fru.txt	FRU	
	sensor_list_all.txt	Sensor	
BMC	sel_elist.txt	SEL	
	csr.txt	CPU CSR register	
	msr.txt	CPU MSR register	
anu	cpuinfo.txt	CPU information	
cpu	cpu_dmidecode.txt	er o information	
	fdisk_l.txt		
	sys_block.txt		
disk	disklist	HDD information	
	parted_disk.txt		
	disk_smart.txt		
driver	lsmod.txt	Driver information	
	memory_dmidecode.txt		
memory	memory_free.txt	Memory information	
	mem_ecc.txt		
	lspci_eth.txt		
	ifconfig.txt		
nic	/etc/sysconfig/network-scripts/	Network information	
	ethtool.txt		
	modinfo.txt		
	storcliAdpalilog	LSI/Avago RAID log	
Raid	MgEvtLog	LSI/AVago NAID log	
	support.tar.gz	PMC Raid log	
	/etc/		
	/var/log/		
system	last_reboot.txt	OS log	
	dump_list.txt		
	command_log.txt		

hios	2019/4/8 11:55	文件夹
hmc bmc	2019/4/8 11:55	文件夹
, сри	2019/4/8 11:55	文件夹
disk disk	2019/4/8 11:55	文件夹
driver	2019/4/8 11:55	文件夹
hba	2019/4/8 11:55	文件夹
memory	2019/4/8 11:55	文件夹
nic nic	2019/4/8 11:55	文件夹
, raid	2019/4/8 11:55	文件夹
sysconf	2019/4/8 11:55	文件夹
system	2019/4/8 11:55	文件夹

Note: The main log refer to the list, the more detailed refer to the manual.



BMC log collection method – M4/M5 platform



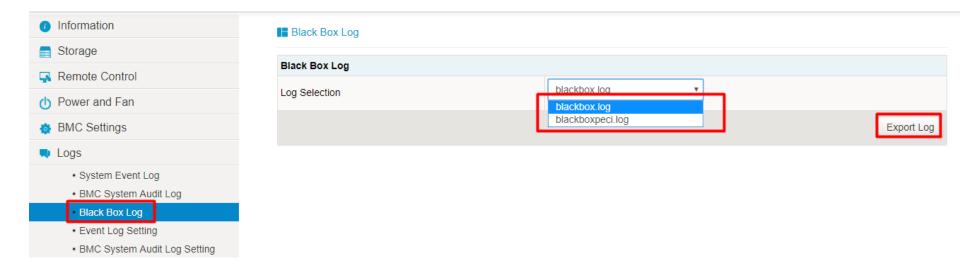


BMC log collection method – M4/M5 platform

$\leftarrow \ \Rightarrow$	C (i) 10.2	22.11.75/tmp/se	l.txt			Q 🕸 🕁 📵
Event ID	Time Stamp		Severity Se	ensor Name S	ensor Type De:	scription
247	01/01/2000	07:50:22	Information	OS_Boot	OS Boot	Boot Completed - Boot Device Not Specified - Asserted
246	01/01/2000	07:49:00	Information	System_Restart	System Boot / Resta	art Initiated System Restart - Asserted
245	01/01/2000	07:48:25	Information	OS_Status	OS Stop / Shutdown	OS Graceful Shutdown - Asserted
244	01/01/2000	07:45:30	Information	OS_Boot	OS Boot	Boot Completed - Boot Device Not Specified - Asserted
243	01/01/2000	07:44:01	Information	System_Restart	System Boot / Rest:	art Initiated System Restart - Asserted
242	01/01/2000	07:43:26	Information	OS_Status		OS Graceful Shutdown - Asserted
241	01/01/2000	07:33:25	Information	OS_Boot	OS Boot	Boot Completed - Boot Device Not Specified - Asserted
240	01/01/2000	07:31:55	Information	System_Restart	System Boot / Rest:	art Initiated System Restart - Asserted
239	01/01/2000	07:31:17	Information	Power_Status	System ACPI Power S	State Legacy ON State - Asserted
238	01/01/2000	07:31:12	Information	Power_Status	System ACPI Power S	State Legacy OFF State - Asserted
237	01/01/2000	07:29:15	Information	System_Restart	System Boot / Rest	art Initiated System Restart - Asserted
236	01/01/2000	07:28:40	Information	Reset_Button		Reset Button Pressed - Asserted
235	01/01/2000	07:28:40	Information	OS_Status	OS Stop / Shutdown	OS Graceful Shutdown - Asserted
234	01/01/2000	07:27:48	Information	OS_Boot	OS Boot	Boot Completed - Boot Device Not Specified - Asserted
233	01/01/2000	07:26:22	Information	System_Restart	System Boot / Rest:	art Initiated System Restart - Asserted
232	01/01/2000	07:25:47	Information	Reset_Button	Button / Switch	Reset Button Pressed - Asserted
231	01/01/2000	07:25:47	Information	OS_Status	OS Stop / Shutdown	OS Graceful Shutdown - Asserted
230	01/01/2000	07:25:36	Information	Reset_Button	Button / Switch	Reset Button Pressed - Asserted
229	01/01/2000	07:25:36	Information	OS_Status	OS Stop / Shutdown	OS Graceful Shutdown - Asserted
228	01/01/2000	07:24:52	Information	OS_Boot	OS Boot	Boot Completed - Boot Device Not Specified - Asserted
227	01/01/2000	07:23:19	Information	System_Restart	System Boot / Rest:	art Initiated System Restart - Asserted
226	01/01/2000	07:22:44	Information	OS_Status	OS Stop / Shutdown	OS Graceful Shutdown - Asserted
225	01/01/2000	07:22:44	Information	Reset_Button	Button / Switch	Reset Button Pressed - Asserted
224	01/01/2000	07:16:27	Information	System_Restart	System Boot / Rest:	art Initiated System Restart - Asserted
223	01/01/2000	07:15:52	Information	OS_Status		OS Graceful Shutdown - Asserted
222	01/01/2000		Information	Reset_Button	Button / Switch	Reset Button Pressed - Asserted



BMC log collection method – M4/M5 platform





BIOS/BMC/FRU updating

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BIOS/BMC/FRU updating

FW updating methods:







- ◆Updating with dos OS
- ◆Updating with BMC web
- ◆Updating with Linux/Windows OS





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BIOS/BMC/FRU updating

Tool	OS	Usage	Note
Pure DOS (rufus)	Self boot DOS	1.Firmware updating	<u>Manual</u>
InspurDiagTool_V2.3_20170317 (Image)	Self boot Linux	1.Log collecting 2.HDD/Memory/CPU pressure test 3. 1.Firmware updating	The Tool and method
Inspur Server U-Disk Manager Suite (ISUMS)	Self boot Linux PE	1. 1.Firmware updating (Recommend) 2.Hardware configuration 3.HDD/Memory/CPU hardware Diagnosis	<u>Manual of ISUMS</u>

We have three tools to update firmware. It's confusing which one should be used and which one is best to be used?

Step 1. Try to use ISUMS at first.

Step 2. If we can't find the FW and customized instruction on ISUMS, try to find the FW and customized instruction from knowledge base: http://

<u>218.57.146.166:8443/display/H/Overseas+knowledge+base</u>. Follow the knowledge base flash method to update FW:

NF5280M5

Release time	BIOS	ВМС	FRU	Instruction Number	Flash Method
2018/09/17	Universal 4.0.7	Universal 4.12.0	fru	V2018_09_14_05	BIOS: First in the Linux system to open ipmi service:service ipmi start, and then execute ./flash.sh, After the completion of refresh, unplug the

Step 3. If we can't find the FW and customized instruction on ISUMS and knowledge base. Please contact the Global/service

Updating with ISUMS tool

Refer to the ISUMS training materials.

If we can't find the FW and customized instruction on ISUMS, try to find the FW and customized instruction from knowledge base: http://

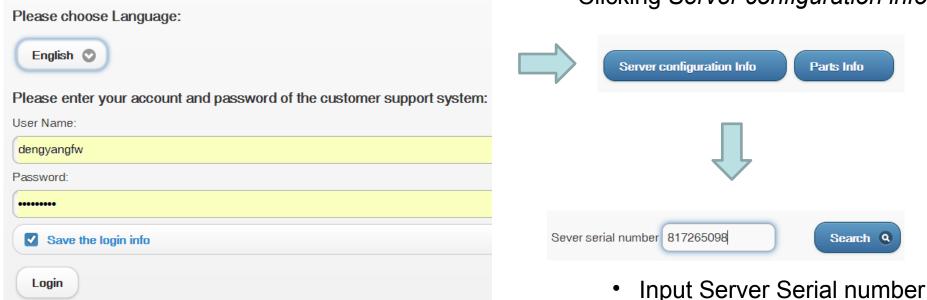
218.57.146.166:8443/display/H/Overseas+knowledge+base

And use the other updating method to update BIOS/BMC/FRU.



How to download customized instruction and firmwar e

- Visit http://218.57.146.175/inspurindiacall/config.htm
- Change the language to English.
- Enter the user name, password, and then login. Clicking Server configuration info





How to download customized instruction and firmwar e



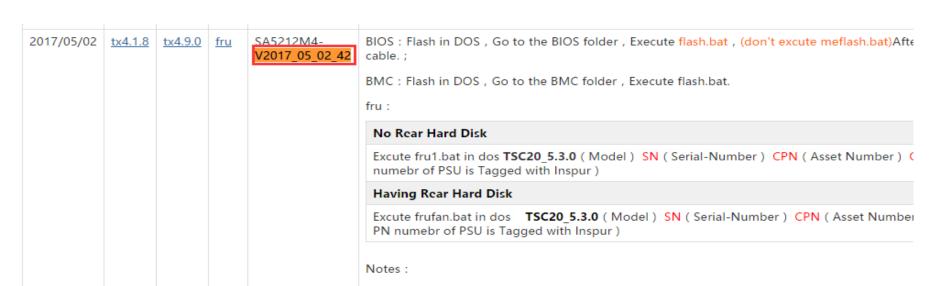
- In Customized information, You can find the instruction number: V2017 05 02 42.
- Then click
 Customized
 instruction and
 firmware



➢ How to download customized instruction and firmwar e

- And then jump to the knowledge base web site.
- When you enter your username and password, you'll see the firmware download link.
- Find firmware according to the instruction number(V2017_05_02_42).

If the engineer can't find the instruction, please let the global support confirm



You can refer to the website to update BIOS/BMC/FRU

FW updating (SOP):

FW refreshing SOP

Knowledge base: http://218.57.146.166:8443/display/H

User: overseas password: overseas

- Tool : U disk inserted with DOS system
- Steps:
 - 1. Check the customized instruction number
 - 2. Download the BIOS/BMC upgrade files from the knowledge base
 - 3. Put the files into the U disk (pay attention to modify the file name less than eight characters)
 - 4. Start the U disk into the DOS environment
 - 5. Enter the U disk directory under C:
 - 6. Execution of upgrade instructions



1. Check the customized instruction number

主机信息				
序列号SN	产品线 Product line	e 产品型号 Product	model 生产日期 Date	
218403181	Server	SA5224MA	2018-06-22	

The SN is 218403181, login the configuration system to check the customized instruction number

The system: http://218.57.146.175/inspurindiacall/config.htm

```
● Customized Information

指令 V2018_06_20_41; 阿里项目SA5224M4A产品;
阿里项目: TOP-VIP客户;
阿里机型: L44;
全字段信息: L44.32.C0V1P0U4;
TD: TD11101000257974-TD11101000258023;
产品类别: ATO订单(海外英文);
V0230Q4硬盘刷新: 40005836
V0230V3硬盘刷新: 40005835

Customized instruction and firmware
```



2. Download the BIOS/BMC upgrade files from the knowledge base

```
● Customized Information

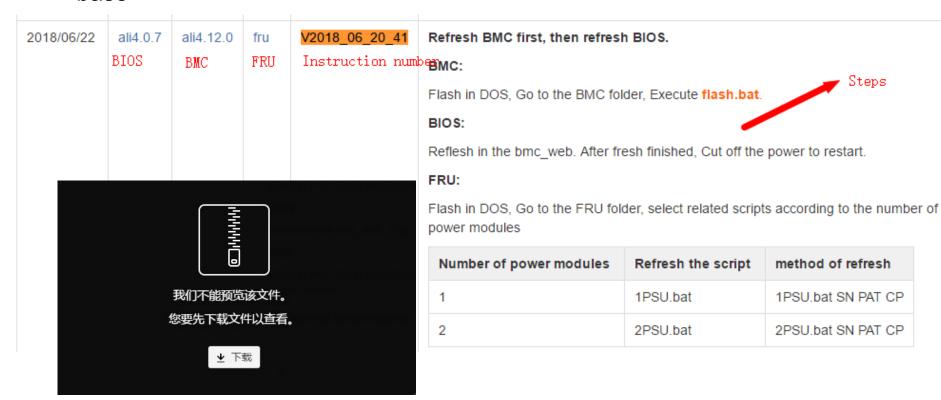
指令 V2018_06_20_41; 阿里项目SA5224M4A产品;
阿里项目: TOP-VIP客户;
阿里机型: L44;
全字段信息: L44.32.C0V1P0U4;
TD: TD11101000257974-TD11101000258023;
产品类别: ATO订单(海外英文);
V0230Q4硬盘刷新: 40005836
V0230V3硬盘刷新: 40005835

Customized instruction and firmware
```

Knowledge base: http://218.57.146.166:8443/display/H
User: overseas password: overseas



2. Download the BIOS/BMC upgrade files from the knowledge base





3. Put the Decompressed files into the U disk (pay attention to modify the file name less than eight characters)



- 4. Start the U disk into the DOS environment
- 5. Enter the U disk directory under C:

```
C:\>dir
Volume in drive C is GHOST
Volume Serial Number is B4FE-5315
Directory of C:\
COMMAND COM
            94,292 05-05-99 22:22
        SYS
                 224,150 05-05-99 22:22
10
MSDOS
        SYS
                    157 06-01-08
                                  0:00
             <DIR>
                         04-19-14 16:36
BMC
BIOS
                        10-15-13
             <DIR>
                                  9:53
       3 file(s) 318,599 bytes
        2 dir(s) 4,000,526,336 bytes free
C:\>
```



Enter the cd command to enter the BIOS directory.

```
C:\>cd bios
C:\BIOS>_
```

Enter the dir command to view the files in the directory.

```
C:\BIOS>dir
Volume in drive C is GHOST
Volume Serial Number is B4FE-5315
Directory of C:\BIOS
              <DIR>
                          04-19-14 16:36
              <DIR>
                          04-19-14
                                   16:36
AFUDOS
                  133,168 01-06-12 11:39
FLASH
                          08-12-13 16:01
WHALES
        112
                4,194,304 08-08-13 17:50
                      4,327,509 bytes
        3 file(s)
                  4,000,526,336 bytes free
        2 dir(s)
```

- 6. Execution of upgrade instructions
- Execute flash.bat (according to the KB) to start the refresh process.

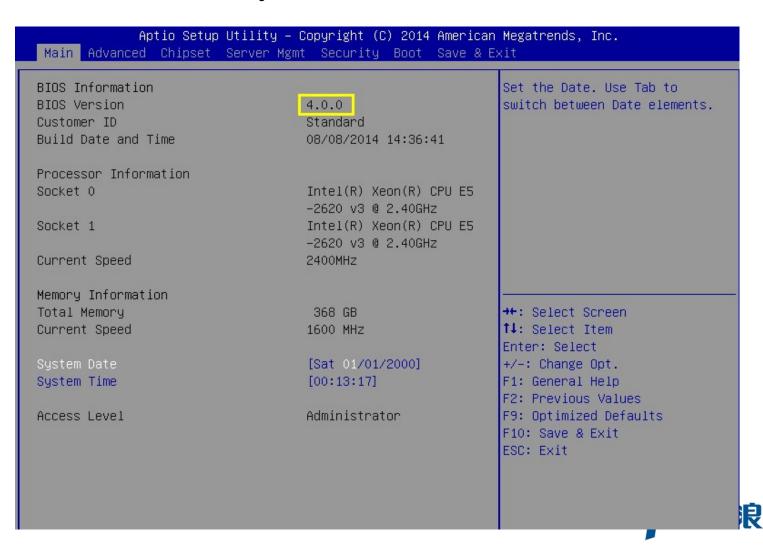


 After the BIOS refresh is complete, turn off the power to restart.

```
C:\BIOS>flash.bat
C:\BIOS>AFUDOS WHALES.112 /p /b /n /x /reboot
                AMI Firmware Update Utility v3.00.00
      Copyright (C)2011 American Megatrends Inc. All Rights Reserved.
Reading flash ..... done
- FFS checksums ..... ok
Erasing Boot Block ..... done
Updating Boot Block ..... done
Verifying Boot Block ...... done
Erasing Main Block ..... done
Updating Main Block ..... done
Verifying Main Block ..... done
Erasing NVRAM Block ..... done
Updating NVRAM Block ..... done
Verifying NVRAM Block ...... done
```



Go to the BIOS, you can confirm the BIOS version.



Enter the cd command to enter the BMC directory.

```
C:\>cd bnc
C:\BMC>_
```

 Enter the dir command to view the files in the directory. flash.bat is the refresh script.

```
C:\BMC>dir
Volume in drive C is GHOST
Volume Serial Number is B4FE-5315
Directory of C:\BMC
              <DIR>
                           04-19-14 16:36
               <DIR>
                           04-19-14
                                     16:36
        22
               33,554,432 02-20-14
                                     14:08
DOS4GW
        EXE
                  265,396 05-04-11 11:12
FLASH
        BAT
                           04-03-14
                                      8:25
SOCFLASH EXE
                  221,049
                           05-26-11
                                      9:32
        4 file(s)
                      34,040,894 bytes
                   4,000,526,336 bytes free
```

Enter the cd command to enter the BMC directory.

```
C:\>cd bnc
C:\BMC>_
```

 Enter the dir command to view the files in the directory. flash.bat is the refresh script.

```
C:\BMC>dir
Volume in drive C is GHOST
Volume Serial Number is B4FE-5315
Directory of C:\BMC
              <DIR>
                           04-19-14 16:36
               <DIR>
                           04-19-14
                                     16:36
        22
               33,554,432 02-20-14
                                     14:08
DOS4GW
        EXE
                  265,396 05-04-11 11:12
FLASH
        BAT
                           04-03-14
                                      8:25
SOCFLASH EXE
                  221,049
                           05-26-11
                                      9:32
        4 file(s)
                      34,040,894 bytes
                   4,000,526,336 bytes free
```

 Execute flash.bat (according to the KB) to start the refresh process.

```
C:\BMC>flash.bat
C:\BMC>socflash if=12.22
DOS/4GW Protected Mode Run-time Version 1.97
Copyright (c) Rational Systems, Inc. 1990-1994
ASPEED SOC Flash Utility v.1.04.03
Static Memory Controller Information:
CSO Flash Type is SPI
CS1 Flash Type is SPI
```

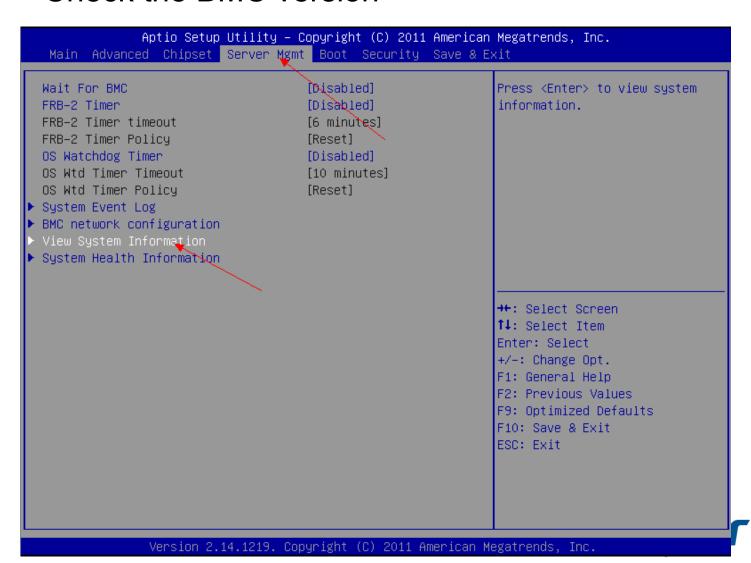


BMC refresh is complete.

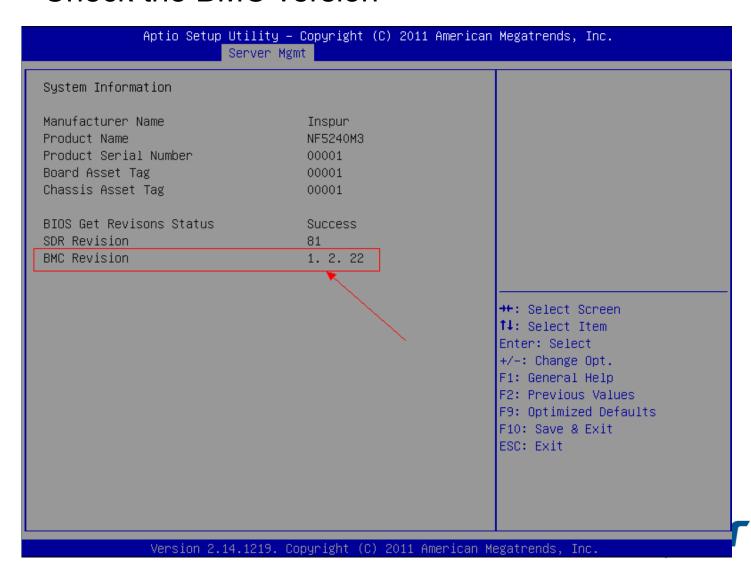
```
C:\BMC>flash.bat
C:\BMC\socflash if=12.22
DOS/4GN Protected Mode Run-time Version 1.97
Copyright (c) Rational Systems, Inc. 1990-1994
ASPEED SOC Flash Utility v.1.04.03
Static Memory Controller Information:
CSO Flash Type is SPI
CS1 Flash Type is SPI
CSZ Flash Type is MOR
CS3 Flash Type is NOR
CS4 Flash Type is NOR
Boot CS is 0
Option Information:
CS: B
Flash Type: SPI
[SOCFLASH] Flash ID : 1920c2
Find Flash Chip #1: MXIC MX25L25735E
Update Flash Chip #1 0.K.
Update Flash Chip O.K.
```



Check the BMC version



Check the BMC version



- After the BMC refresh is complete, execute fru.bat
 SN PAT (according to the KB) to refresh the FRU.
- SN: serial number
- PAT : Product Asset
 - Example: fru.bat 0001 Inspur001

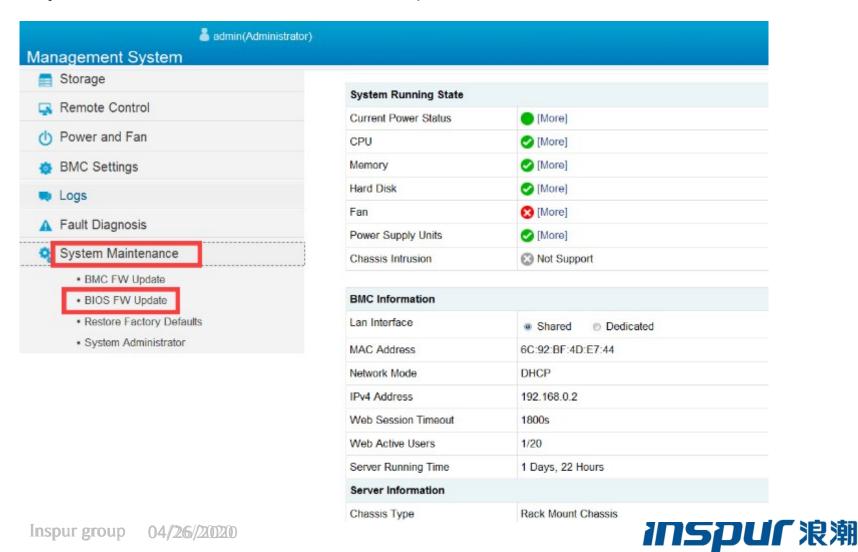


After the refresh is complete, execute the *ipmicfg* -fru list to confirm that FRU has flashed

```
SUCCESSFULLY
                                = Rack Mount Chassis(17h)
Chassis Type (CT)
Chassis Part number (CP)
                                = 00001
Chassis Serial number (CS)
                                = 00001
                                          6E 73 70 75 72 30 30 30 30 31
Chassis Custom Info
                                = 2013/03/27 13:45:00 (99 54 8A)
Board Mfg. Date/Time(BDT)
Board Manufacturer (BM)
                                = Inspur
Board Product Name (BPN)
                                = Shark
Board Serial number (BS)
                                = 00001
Board Part number (BP)
                                = 00001
Product Manufacturer (PM)
                                = Inspur
Product Name (PN)
                                = NF5240M3
Product Part/Model number (PPM) = 00001
Product Version (PV)
                                = 00011
Product Serial number (PS)
                                = 00001
                                = Inspur0001
Product Asset Tag (PAT)
```

Note: This is the only way to refresh the FRU with DOS.

System Maintenance -> BIOS FW Update



- 1.Select "BIOS+ME"
- 2.Press "Enter Firmware Update Mode"

BIOS Firmware Update

Please note:

(1) Power Off the system if you want to do BIOS Update. (2) BIOS NVRAM will be cleared and BIOS will become default after BIOS flashed. (3) After BIOS+ME flashed, we recommand to AC Power Off and On to enable NEW ME. 1. Please click the button to enter firmware update mode. Current Power Status BIOS Bin File Type 1 BIOS+ME 2 Enter Firmware Update Mode



Press "确定"



Please note:

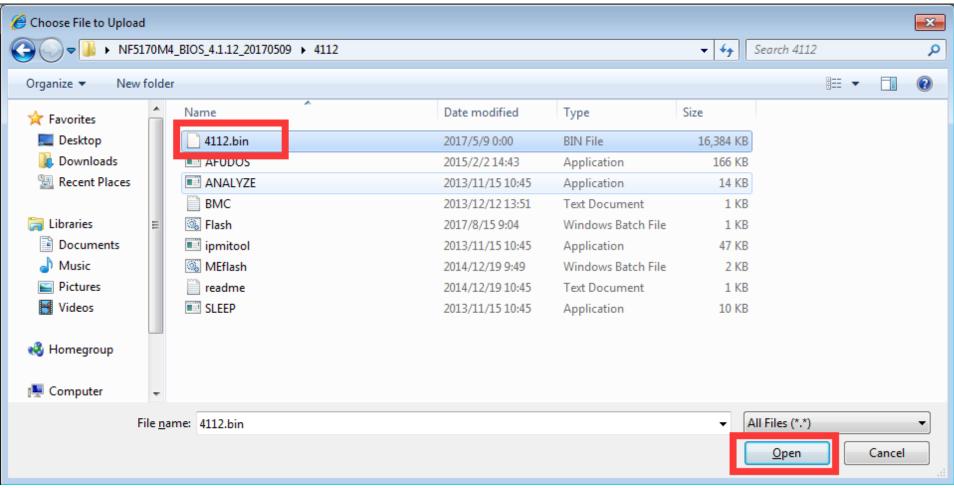
Updating with BMC web

Click the button shown with the red line

rease note.				
1) Power Off the system if you want to do BIOS Update.				
(2) BIOS NVRAM will be cleared and BIOS will become default after BIOS flashed.				
(3) After BIOS+ME flashed, we recommand to AC Power Off and On to enable NEW N	ИE.			
1. Please click the button to enter firmware update mode. Note: Device is in BIOS Flash Mode. To perform this action, you must make sure no user is updating BIOS Flash.				
Current Power Status	● OFF			
BIOS Bin File Type	BIOS+ME			
		Enter Firmware Update Mode		
2. Please select the Image file, click the button to upload and verify.				
Select Bin File	Browse			
		Upload Cancel		



Select the file to refresh



Select the file to refresh, then press "Upload"

2. Please select the Image file, click the button to upload and verify.		
Select Bin File	C:\Users\lc1\Desktop\NF Browse	
		Upload Cancel

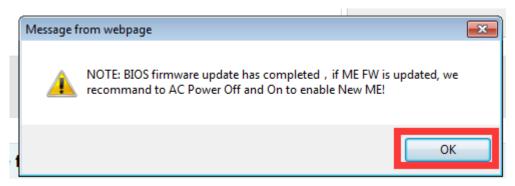
tem i	The file is being uploaded, please be patient
cle	ared and BIOS will become default after BIOS flashed.

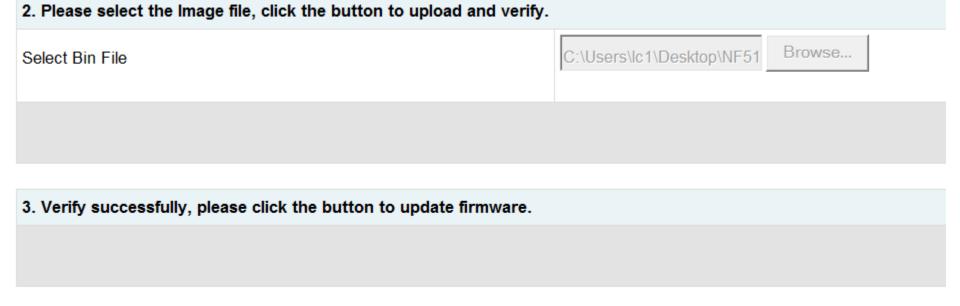


Press "Proceed to update"

2. Please select the Imag	ge file, click the button to upload and verify.				
Select Bin File		C:\Users\lc1\Desktop\NF51 Browse	a		
				Upload	
3 Varify euccasefully n	lease click the button to update firmware.				
o. Verify successibility, pr	lease click the button to appare innivare.				
				Proceed to update	Cancel
	Refresh progress				

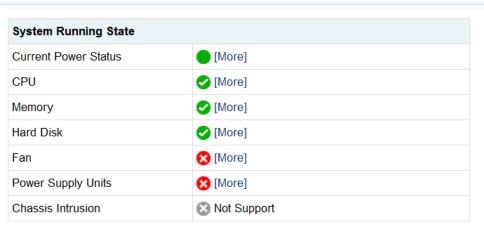
BIOS firmware update complete, unplug power cable. After 1 minute plug power cable, then power on the server.





4. BIOS firmware update has completed!NOTE: New BIOS will be avaliable after AC Power Off and On!

BIOS firmware update complete, unplug power cable. After 1 minute plug power cable, then power on the server.

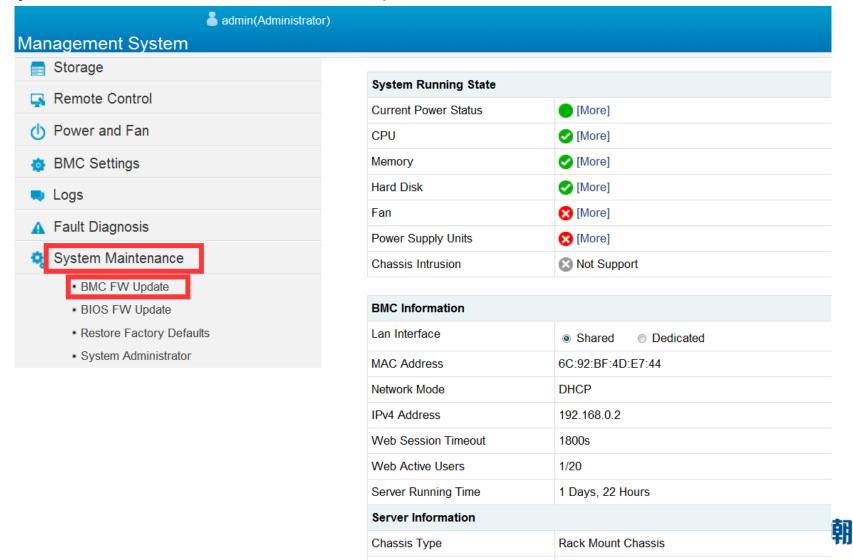


Quick Launch Tasks		
(e)	(0)	Q
Console Redirection	Power Control	Users
		(1)
Network	Hardware Monitor	Firmware Update

BMC Information	
Lan Interface	Shared
MAC Address	6C:92:BF:4D:E7:44
Network Mode	Current BIOS version
IPv4 Address	192.168.0.2
Web Session Timeout	1800s
Web Active Users	1/20
Server Running Time	1 Days, 22 Hours
Server Information	
Chassis Type	Rack Mount Chassis

FW Version Information		
BMC Revision	4.17.0(Sep 9 2016 15:52:19 CST)	
BIOS Revision	4.1.12(May 9 2017)	
ME Revision	3.1.3.38	
PSU0 Revision	1.000	
PSU1 Revision	N/A	
CPU0 VR Revision	01	
CPU1 VR Revision	01	
MEM_AB VR Revision	01	
MEM_CD VR Revision	01	

System Maintenance -> BMC FW Update



Press "Enter Firmware Update Mode"

Please note:

- 1. After entering update mode widgets, other web pages and services will not work. All open widgets will be closed automatically. If upgrade process is cancelled in the middle of the wizard, the device will reset.
- 2.Click 'Preserve all configuration' will preserve all the configuration settings during the firmware update.
- 3. This section lists the configuration items, items that configured as 'Preserve' will be preserved during restore factory default configuration. Click 'Preserve Configuration' to modify the preserve configuration items.
- 4. Click 'Enter Firmware Update Mode' to update firmware.

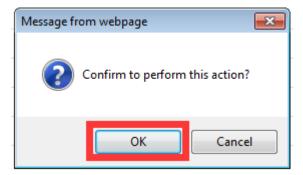
Preserve all configuration

NO.	Preserve Settings	Update Policy	
1	SDR	Overwrite	
2	SEL	Overwrite	
3	IPMI	Overwrite	
4	Network	Overwrite	
5	NTP Overwrite		
6	SSH Overwrite		
7	KVM Overwrite		
8	Authentication	Overwrite	

Enter Preserve Configuration Enter Firmware Update Mode



Press "OK"

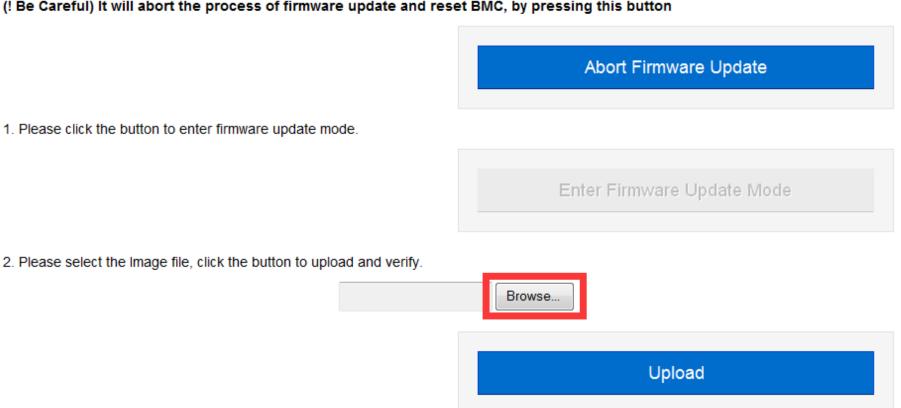






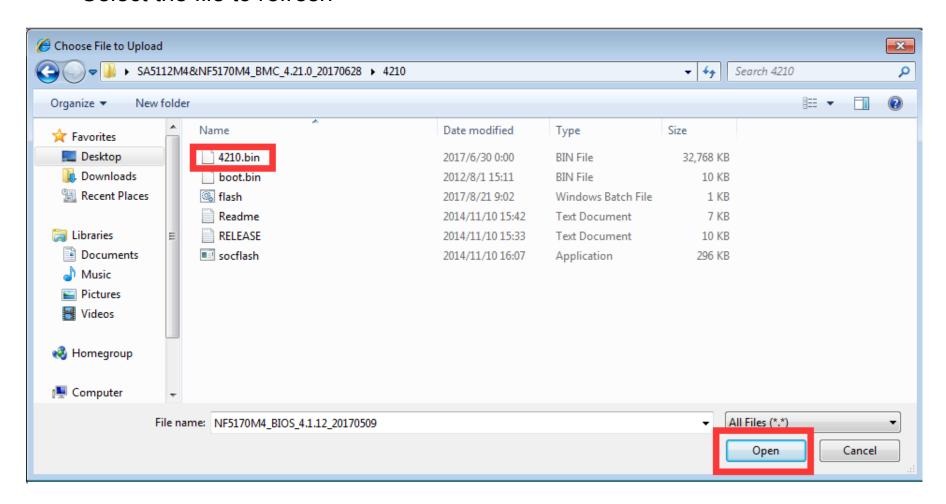
Click the button shown with the red line

(! Be Careful) It will abort the process of firmware update and reset BMC, by pressing this button





Select the file to refresh





Select the file to refresh, then press "Upload"

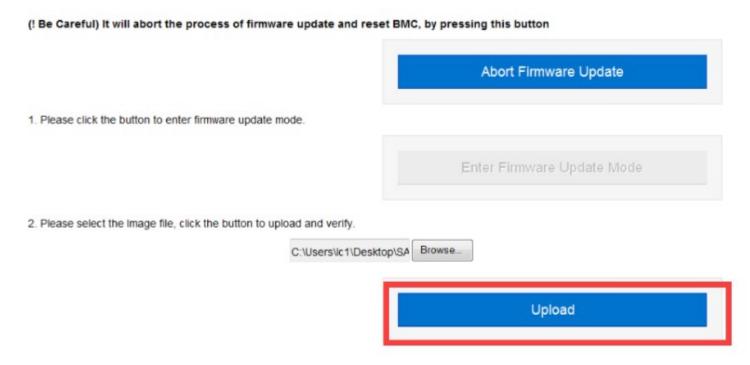
(! Be Careful) It will abort the process of firmware update and reset BMC, by pressing this button

Abort Firmware Update 1. Please click the button to enter firmware update mode. Enter Firmware Update Mode 2. Please select the Image file, click the button to upload and verify. Browse... C:\Users\lc1\Desktop\SA Upload

The file is being uploaded, please be patient



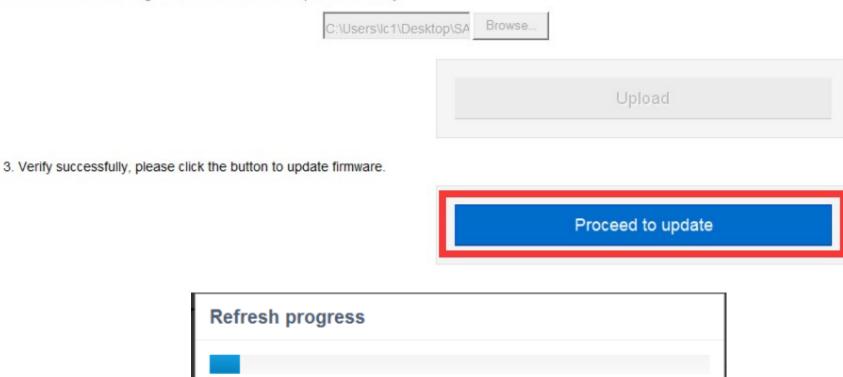
Press "Upload"





Press "Proceed to update"

Please select the Image file, click the button to upload and verify.





Device has been reset

The device has been reset. Please close this browser session and open a new browser session to reconnect to the device. The device may take about a minute to boot up.



General Information

Chassis Intrusion

Updating with BMC web

BMC firmware update complete.

Not Support

Quick Launch Tasks System Running State Current Power Status More] CPU [More] Console Redirection Power Control Users Memory [More] Hard Disk (More) [More] Fan Network Firmware Update Hardware Monitor Power Supply Units More]





Updating with Linux OS

Steps:

- 1. Download the FW from the knowledge base
- 2. Boot from Linux OS (Inspur Linux PE and ISUMS can switch to Linux OS)
- 3. Enter the directory of FW files
- 4. Execute the updating command



Updating with Linux OS

For example NF5280M5:

1. Download the FW from the knowledge base

http:// 218.57.146.166:8443/display/H/NF5280M5-Relatedtextnavpagetreemode

NF5280M5-Related Download

由 未知用户 (yangchaoqun)创建, 最终由 李明凯修改于 六月 04, 2019

- mib
- · Universal firmware
 - BIOS
 BMC
 FRU
- · Barebone firmware
 - BIOS
 - BMC
- BIOS with SF0204P1(PCIE Switch)
 - BIOS
 - BMC
- 2. Boot from Linux OS (Inspur Linux PE and ISUMS can switch to Linux OS)
- 3. Enter the directory of FW files
- 1 Evacute the undating command





Show and practice



- How to use the knowledge base
- How to collect the log
- How to make a PE OS

http://218.57.146.166:8443/display/H



Thank you!



