BIOS Update Tools 使用说明

1．目的

介绍BIOS Update Tools工具的使用

2．注意事项

适用产品：Whitley/CedarIsland & EagleStream & AMD & BirchStream平台的产品
适用操作系统：Linux、Windows，且确保 OS 下 IPMI 服务可用,若 IPMI 服务不可用保留 BIOS 选项参数功能失效

3．工具目录及包含的内容

系统	目录	包含工具
Linux	\Afu\AfuLnx64	afulnx_64 readme.txt updateLnx_BirchStream.sh updateLnx_EagleStream.sh updateLnx_Genoa.sh updateLnx_Milan.sh updateLnx_Turin.sh updateLnx_Whitely.sh updateLnx tools user guide.txt updateLnx 工具使用说明.txt
Windows	\Afu\AfuWin64	drivers\ AFUWINGUIx64.EXE AFUWINx64.exe amigendrv64.sys install.bat wtc.bat ipmitool.exe libeay32.dll readme.txt updateWin_EagleStream.bat updateWin_BirchStream.bat updateWin_Genoa.bat updateWin_Milan.bat updateWin_Turin.bat updateWin_Whitley.bat updateWin tools user guide.txt updateWin 工具使用说明.txt

4．工具使用操作流程

Linux和Windows下的运行工具，使用时请根据使用环境选择合适的版本。

4.1 功能

BIOS Update Tool 用来刷新服务器上的 BIOS 镜像。

4.2 命令格式

命令	待刷写文件	参数	参数
updateLnx.sh 或 updateWin.bat	BIOS.bin	param1	param2

参数说明：
/P:保留 BIOS SETUP 参数；
/ME:刷新 ME 区域;
/NP:不保留 BIOS SETUP 参数；
/NOME:不刷新 ME 区域;

4.3 操作流程

1）Linux环境下updateLnx.sh工具的操作流程：

在Linux环境下使用updateLnx.sh需要准备必要的工具。为便于操作，这里将文件夹Linux拷贝到根目录下，并将需要将待刷写的BIOS image 文件也拷贝到Linux文件夹内。

具体操作流程如下：

（1）开机进入 Linux。

（2）进入目录 Linux，如下图所示：

```
[root@localhost AfuLnx64]# ls
afulnx_64  BIOS.bin  updateLnx.sh  updateLnx tools user guide.txt  updateLnx??????.txt
```

（3）输入./updateLnx.sh.出现帮助提示，如下图所示：

```
[root@localhost AfuLnx64]# ./updateLnx.sh
1.0.0
*******************************************************************************
       Usage:./updateLnx.sh  <BIOS.bin> [param]¦[...]
   command:
   -------------------------------------------------------------
       ¦    Afu_Tools    ¦    BIOS.bin    ¦    param1  ¦    param2  ¦
       -------------------------------------------------------------


       param1:/P:Preserve BIOS Setup; /NP: Not Preserve BIOS Setup
       param2:/ME:refresh ME; /NOME:None refresh ME

       eg:
       1.AFU Preserve BIOS Setup, refresh ME
       ./updateLnx.sh  BIOS.bin /P /ME
       2.AFU Preserve BIOS Setup, None refresh ME
       ./updateLnx.sh  BIOS.bin /P /NOME
       3.AFU Not Preserve BIOS Setup, refresh ME
       ./updateLnx.sh  BIOS.bin /NP /ME
       4.AFU Not Preserve BIOS Setup, None refresh ME
       ./updateLnx.sh  BIOS.bin /NP /NOME
       5.The same instruct as 1. :
       ./updateLnx.sh  BIOS.bin
       6.The same instruct as 2. :
       ./updateLnx.sh  BIOS.bin /NOME
       7.The same instruct as 3. :
       ./updateLnx.sh  BIOS.bin /NP


  Note: -h¦--help for this help.
*******************************************************************************
```

（4）输入如下命令执行刷新动作，默认保留BIOS SETUP参数并刷新ME区域

```
[root@localhost AfuLnx64]# ./updateLnx.sh BIOS.bin
```

（5）刷写完成后，新BIOS需重启系统后生效，若配置中含有PHY卡，刷新PHY FW必须断AC才能生效。刷写完成标志如下图所示。

```
[root@localhost AfuLnx64]# ./updateLnx.sh BIOS.bin
Afu_Tools
64 BIOS.bin
preserve  01
/b /p /n /k /l /x /ME
+-------------------------------------------------------------------------------+
|                 AMI Firmware Update Utility v5.14.02.0026                     |
|      Copyright (c) 1985-2021, American Megatrends International LLC.         |
|         All rights reserved. Subject to AMI licensing agreement.              |
+-------------------------------------------------------------------------------+
 Reading flash ..................... Done
 - ME Data Size Checking ........... Pass
 - System Secure Flash ............. Enabled
 - FFS Checksums ................... Pass
 - Check RomLayout ................. Pass
 Loading File To Verify Memory ..... Done
 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
 Erasing NCB Block ................. Done
 Updating NCB Block ................ Done
 Verifying NCB Block ............... Done
 Erasing RomHole Block ............. Done
 Updating RomHole Block ............ Done
 Verifying RomHole Block ........... Done
 Loading The ME Data To BIOS ....... Done
 - Update success for FDR
 - PTT is locked, skip updating. Or trying assert HDA_SDO pin.
 - Successful Update Recovery Loader to OPRx!!
 - Successful Update MFSB
 - Successful update factory data
 - ME Entire Image update success !!
 WARNING !!
  System must power-off to have the changes which take effect!

 Process completed.
0
```

2）Windows环境下updateWin.bat工具的操作流程：

具体操作流程如下：

（1） 将Windows工具拷贝到windows server 2019系统的某个目录下，如C:\Desktop\AfuWin64\。

（2）将待刷写的文件BIOS文件拷贝到C:\Desktop\ AfuWin64\ 工具所在的目录

（3）通过CMD控制台，利用cd 命令进入到C:\Desktop\ AfuWin64\所在的目录，如下图所示。

```
C:\Users\Administrator\Desktop\AfuWin64>dir
 Volume in drive C has no label.
 Volume Serial Number is 9C23-00C8

 Directory of C:\Users\Administrator\Desktop\AfuWin64

10/30/2099  09:23 PM    <DIR>          .
10/30/2099  09:23 PM    <DIR>          ..
02/19/2021  06:39 PM         1,065,584 AFUWINx64.EXE
08/14/2019  01:06 AM            29,776 amifldrv64.sys
01/12/2021  05:28 PM        33,554,432 BIOS.bin
11/02/2020  07:11 PM    <DIR>          drivers
06/13/2015  04:13 PM               112 install.bat
02/25/2013  03:14 PM           585,728 ipmitool.exe
09/13/2007  05:26 PM         1,093,632 libeay32.dll
08/06/2018  03:28 PM             1,157 updateWin tools user guide.txt
09/02/2019  07:39 PM             2,501 updateWin.bat
08/06/2018  03:24 PM             1,189 updateWin□ □ □ □ □ □ .txt
               9 File(s)     36,334,111 bytes
               3 Dir(s)  943,250,780,160 bytes free
```

（4）配置 updateWin 工具运行环境，运行 install.bat，安装 Intel IMB Driver。

```
C:\Users\Administrator\Desktop\AfuWin64>.\install.bat
Scanning for new hardware.
Scanning completed.

Installing IMB driver...

"MSIPMI Driver detected. Skipping IMBDRV installation"
Done!

Installation Successful
```

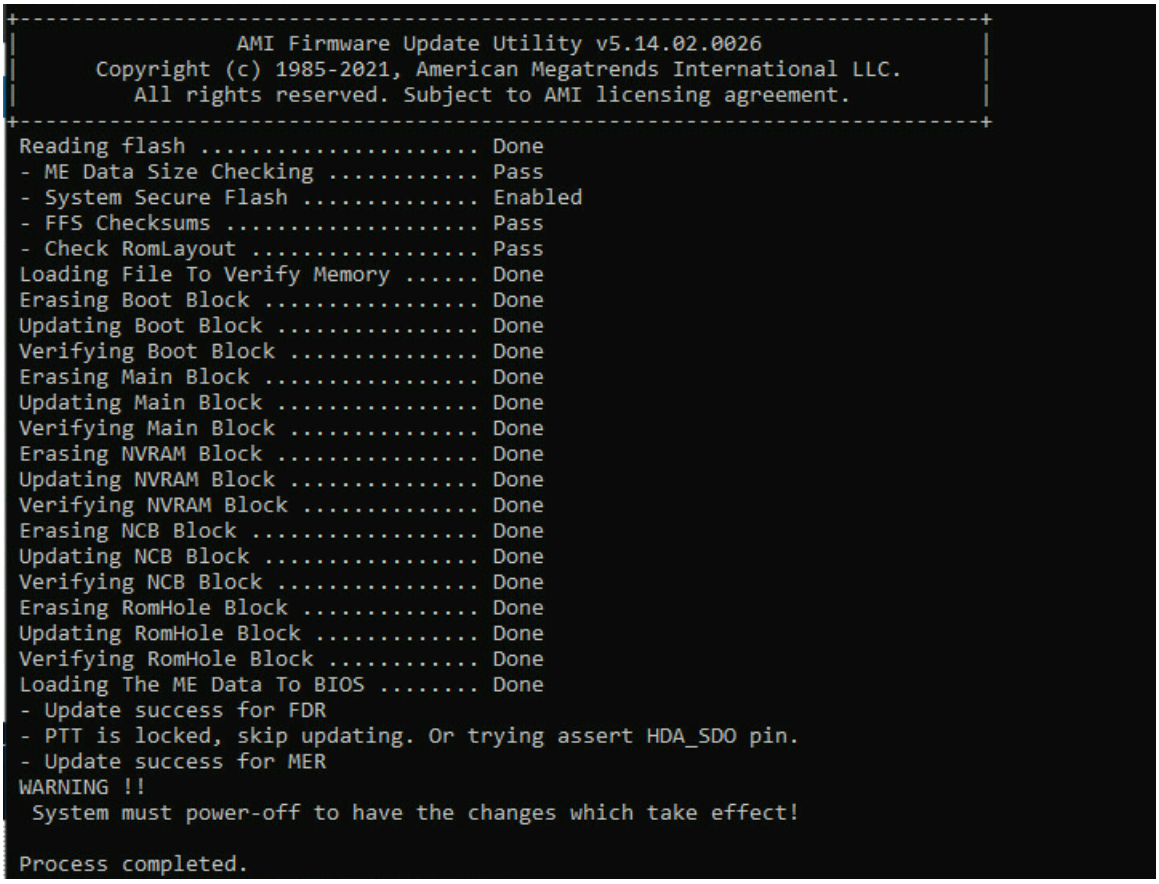
（5）运行ipmitool.exe -vvv，确认ipmitool工具运行正常。

```
C:\Users\Administrator\Desktop\AfuWin64>ipmitool.exe -vvv
```

（6）输入如下命令，并回车。执行刷新动作,默认保留BIOS SETUP参数并刷新ME区域

```
C:\Users\Administrator\Desktop\AfuWin64>.\updateWin.bat BIOS.bin
```

（7）刷写完成后，新 BIOS 需重启系统后生效，若配置中含有 PHY 卡，刷新 PHY FW 必须断 AC 才能生效。


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Reading flash ..... Done
- ME Data Size Checking ..... Pass
- System Secure Flash ..... Enabled
- FFS Checksums ..... Pass
- Check RomLayout ..... Pass
Loading File To Verify Memory ..... Done
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
Erasing NCB Block ..... Done
Updating NCB Block ..... Done
Verifying NCB Block ..... Done
Erasing RomHole Block ..... Done
Updating RomHole Block ..... Done
Verifying RomHole Block ..... Done
Loading The ME Data To BIOS ..... Done
- Update success for FDR
- PTT is locked, skip updating. Or trying assert HDA_SDO pin.
- Update success for MER
WARNING !!
System must power-off to have the changes which take effect!
Process completed.