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ShMC Firmware Upgrade SOP on PAC-6009

V1.0

Version	Author	Release date	Note
1.0	Darryl.Hsu	2019-01-31	Initial version

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Trusted ePlatform Services



For PAC-6009 F/W upgrade procedure, you need to use external PC/x86 client to upgrade/rollback the F/W via LAN. Please follow below diagram to setup the environment.



A. Upgrade ShMC procedure on PAC-6009

Please make sure you have new version files before start upgrade ShMC. Step 1: Please login to ShMC via console and check the IP address. Assume upper ShMC is at Active status, if upper ShMC is not at Active status, please change console cable to lower ShMC console port.

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Trusted ePlatform Services



```
CLI> lan 0x10 list
Channel |IP Address
            Subnet Mask |Default Gateway|MAC Address
                                      T
1 192.168.001.254 255.255.255.000 000.000.000.000 74:FE:48:14:FD:D7
   2 | 192.168.002.001 | 255.255.255.000 | 000.000.000.000 | 74:FE:48:14:FD:D8 |
   3 000.000.000 255.255.255.000 000.000.000 00:0B:AB:00:01:01
CLI> lan 0x12 list
Channel | IP Address | Subnet Mask | Default Gateway | MAC Address
                                      1 192.168.001.253 255.255.255.000 000.000.000 000 74:FE:48:14:FD:D9
   2|192.168.002.002|255.255.255.000|000.000.000.000|74:FE:48:14:FD:DA|
```

Step 2: Login to your PC/x86 client and then set the IP address in the same network section.

[root@1010 ~]# ifconfig eth3 192.168.1.10 [root@1010 ~]# ping 192.168.1.254 PING 192.168.1.254 (192.168.1.254) 56(84) bytes of data. 64 bytes from 192.168.1.254: icmp_seq=1 ttl=64 time=0.360 ms ^C --- 192.168.1.254 ping statistics ---1 packets transmitted, 1 received, 0% packet loss, time 0ms rtt min/avg/max/mdev = 0.360/0.360/0.360/0.000 ms [root@1010 ~]# ping 192.168.1.253 PING 192.168.1.253 (192.168.1.253) 56(84) bytes of data. 64 bytes from 192.168.1.253: icmp_seq=1 ttl=64 time=0.361 ms ^C --- 192.168.1.253 ping statistics ---1 packets transmitted, 1 received, 0% packet loss, time 0ms rtt min/avg/max/mdev = 0.361/0.361/0.361/0.000 ms

Step 3: Execute HPM check via IPMItool over LAN. Make sure the IPMItool is working first.



```
[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.254 -U administrator -P advantech hpm check
PICMG HPM.1 Upgrade Agent 1.0.9:
-----Target Information-----
Device Id : 0x77
Device Revision : 0x81
Product Id : 0x9002
Manufacturer Id : 0x2839 (Advantech)
ID Name Versions
           Active Backup Deferred
_____
| 0|9002 BL | 1.00 0000000 | ----- | ----- | ----- |
| 1|9002 SHMC | 1.04 0000000 | 1.04 00000000 | ------ |
| 2|9002 FPGA | 1.00 0000000 | ---.-- | ---.-- |
3 9002 CPLD | 144.02 0000000 | ---.-- | ---.-- | ---.-- |
 _____
(*) Component requires Payload Cold Reset
[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.253 -U administrator -P advantech hpm check
PICMG HPM.1 Upgrade Agent 1.0.9:
-----Target Information-----
Device Id : 0x77
Device Revision : 0x81
Product Id : 0x9002
Manufacturer Id : 0x2839 (Advantech)
_____

        ID
        Name
        Versions
        |

        |
        |
        Active
        Backup
        Deferred
        |

  _____
 0|9002 BL | 1.00 0000000 | ---.- | ---.- | ---.- |
1|9002 SHMC | 1.04 0000000 | 1.04 00000000 | ---.-- |
| 2|9002 FPGA | 1.00 0000000 | ---.-- | ---.-- |
| 3|9002 CPLD | 144.02 0000000 | ---.-- | ---.-- |
 -----
(*) Component requires Payload Cold Reset
```

Step 4: Please put the new firmware to your PC/x86 client first. Execute Upper side ShMC firmware upgrade via IPMItool over LAN.

[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.254 -U administrator -P advantech hpm
upgrade \$file_name activate



Step 5: After side ShMC firmware upgrade successfully. Please execute lower side ShMC firmware upgrade via IPMItool over LAN again.

```
[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.253 -U administrator -P advantech hpm
upgrade $file_name activate
```

Step 6: Execute HPM check via IPMItool over LAN. Make sure the firmware version is correct.

```
[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.254 -U administrator -P advantech hpm check
PICMG HPM.1 Upgrade Agent 1.0.9:
-----Target Information------
Device Id : 0x77
Device Revision : 0x81
Product Id : 0x9002
Manufacturer Id : 0x2839 (Advantech)
_____
                           Versions
|ID | Name |
                                                      Active Backup Deferred
 _____

      0|9002 BL
      1.00 0000000 | ---.-
      ---.-

      1|9002 SHMC
      1.09 0000000 | 1.04 0000000 | ---.-

      * 2|9002 FPGA
      1.00 0000000 | ---.-

| 3|9002 CPLD | 144.02 0000000 | ---.-- | ---.-- |
_____
(*) Component requires Payload Cold Reset
[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.253 -U administrator -P advantech hpm check
PICMG HPM.1 Upgrade Agent 1.0.9:
-----Target Information-----
Device Id : 0x77
Device Revision : 0x81
Product Id : 0x9002
Manufacturer Id : 0x2839 (Advantech)
_____
IDNameVersions|||ActiveBackupDeferred
            .....

      0|9002 BL
      1.00 0000000 | ---.--
      ---.--

      1|9002 SHMC
      1.09 0000000 | 1.04 0000000 | ---.--

      * 2|9002 FPGA
      1.00 0000000 | ---.--

| 3|9002 CPLD | 144.02 0000000 | ---.-- | ---.-- | ---.-- |
_____
(*) Component requires Payload Cold Reset
```



B. Rollback ShMC procedure

Step 1: Execute HPM rollback via IPMItool over LAN for Upper side ShMC.

[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.254 -U administrator -P advantech hpm rollback

Step 2: Make sure the firmware version is rollback successfully for Upper side ShMC.

```
[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.254 -U administrator -P advantech hpm check
PICMG HPM.1 Upgrade Agent 1.0.9:
-----Target Information------
Device Id
           : 0x77
Device Revision : 0x81
Product Id : 0x9002
Manufacturer Id : 0x2839 (Advantech)
_____
                               Versions
ID Name
               | Active | Backup |
Deferred
_____

      0|9002 BL
      1.00 0000000 | ---.-
      ---.-

      1|9002 SHMC
      1.04 0000000 | ---.-
      ---.-

      * 2|9002 FPGA
      1.00 0000000 | ---.-
      ---.-

      3|9002 CPLD
      144.02 0000000 | ---.-
      ---.-

   _____
(*) Component requires Payload Cold Reset
```

Step 3: Execute HPM rollback via IPMItool over LAN for Lower side ShMC.

[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.253 -U administrator -P advantech hpm rollback

Step 2: Make sure the firmware version is rollback successfully for Lower side ShMC.



[root@1010 ~]# ipmitool -I lanplus -H 192.168.1.253 -U administrator -P advantech hpm check			
PICMG HPM.1 Upgrade Agent 1.0.9:			
Target Inf	Formation		
Device Id	: 0x77		
Device Revision	: 0x81		
Product Id	: 0x9002		
Manufacturer Id	: 0x2839 (Advantech)		
ID Name	Versions		
	Active Backup Deferred		
0 9002 BL	1.00 0000000		
1 9002 SHMC	1.04 00000000		
* 2 9002 FPGA	1.00 00000000		
3 9002 CPLD	144.02 00000000		
(*) Component rec	quires Payload Cold Reset		



Appendix : Ipmitool

If you run CentOS on the PC/x86, please download ipmitool from Internet via "yum install ipmitool" directly. And make sure your ipmitool version is $\geq 1.8.15$ if you have any problem occurs.

```
[root@1010 ~]# yum install ipmitool
Loaded plugins: fastestmirror
Setting up Install Process
Determining fastest mirrors
* base: ftp.tc.edu.tw
 * extras: ftp.tc.edu.tw
 * updates: ftp.tc.edu.tw
                                                   3.7 kB
                                                              00:00
base
extras
                                                   | 3.4 kB 00:00
extras/primary_db
                                                   29 kB
                                                               00:00
                                                   3.4 kB
                                                               00:00
updates
                                                    4.7 MB 00:00
updates/primary_db
Package ipmitool-1.8.15-2.el6.x86_64 already installed and latest version
Nothing to do
[root@1010 ~]# ipmitool -V
ipmitool version 1.8.15
```

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