

Remote firmware updates on T2 PCoIP Hosts

Overview

Amulet Hotkey T2 PCoIP hosts and zero clients now support remote updates for Board Support Microcontroller (BSM) firmware. Specifically, you can now update the BSM firmware by downloading a firmware update package over your network to the target BSM.

Firmware updates are supported on T2 PCoIP hosts running BSM firmware version 0.4.x or later.

The update process has four stages. First, you activate the BSM network interface to allow the BSM to acquire an IP address. Second, you transfer the firmware package to the target BSM. Third, you confirm that the package was successfully applied. Finally, you free up the IP address assigned to the BSM during the firmware upgrade.

Note: For details about BSM firmware updates on T2 zero clients, see Application Note 59.

1. Activate the BSM network interface

We currently use a Teradici network feature to temporarily activate the BSM network interface for the duration of the update process.

We apologise! The methods described here for activating and deactivating the BSM network interface are temporary workarounds. In future releases, we will replace these methods with a designed solution that streamlines the firmware update process.

Follow these steps:

1. Verify that the blade is powered on.
2. Log on to the Teradici *PCoIP® Host Card* web application. (This web application uses the same IP address as the PCoIP session.)
3. From the home page, choose Configuration > Network.
4. Set the Ethernet Mode to '10Mbps Full Duplex'.
5. Click Apply.
6. Power cycle the blade workstation. When the blade restarts, the BSM acquires an IP address from the DHCP server.
7. (Optional) Ping the BSM to confirm that an IP address has been successfully assigned.

First, you will need to obtain the BSM IP address from your DHCP server. If you are upgrading the firmware on multiple units, you may prefer to automate this process. For example, you can use a script to discover Amulet Hotkey BSMs on your network, querying the ARP cache for known MAC address patterns. Amulet Hotkey Technical Support can offer guidance on this.



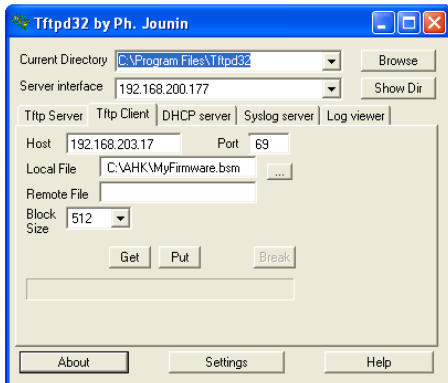
Teradici PCoIP Host Card web application, Network page: Ethernet Mode setting (1)

2. Transfer the firmware package to the target BSM

Use a TFTP server to transfer the .bsm file containing the firmware package. These instructions use the Tftpd32 utility as an example (available from <http://tftpd32.jounin.net/>).

Follow these steps:

1. Launch the Tftpd32 utility.
2. When Tftpd32 starts, go to the 'Tftp Client' tab and enter the following settings:
 - Host:** Enter the BSM IP address.
 - Port:** Set to port 69. Note that port 69 on the BSM is used to initiate the transfer. The actual port used during the transfer is randomly assigned.
 - Local File:** Browse to the .bsm file containing the firmware update. You can retrieve this file from anywhere accessible on your network.
 - Remote File:** Leave this setting blank.
 - Block Size:** Set to 512 bytes.
3. Click Put to start the package transfer.
4. After the BSM receives and validates the package, the BSM restarts automatically.



Example TFTP utility: Tftpd32.exe

3. Confirm that the firmware was updated

Now check the log file to confirm that the firmware update was successfully applied.

Follow these steps:

1. Power cycle the blade workstation.
2. When the blade restarts, log on to the Teradici web application again.
3. From the home page, choose Diagnostics > Event Log.
4. Click View Event Log Messages.
5. When the log file displays, search for log entries that start with 'MCU'. Within this log entry, the **FW:** section (shown in bold) indicates the current BSM firmware version:

MCU : HWID: 0x86, Major/Minor **FW:** <0xNN>/<0xNN>, <MAC address>

Your Amulet Hotkey contact can advise on the correct firmware version number.

4. Deactivate the BSM network interface

Finally, you must deactivate the BSM network interface to free up the IP address assigned in section 1.

Follow these steps:

1. Verify that the blade is powered on
2. Log on to the Teradici *PCoIP*[®] *Host Card* web application.
3. In the Teradici web application, choose Configuration > Network.
4. Change the Ethernet Mode back to 'Auto'.
5. Click Apply.
6. Power cycle the blade workstation.

The BSM firmware update is now complete.

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