



*Dell PTM Software and Firmware Upgrade  
Procedure (Firmware fw-BridgeX-rel-  
8\_2\_958.bin)*

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## 1 Introduction

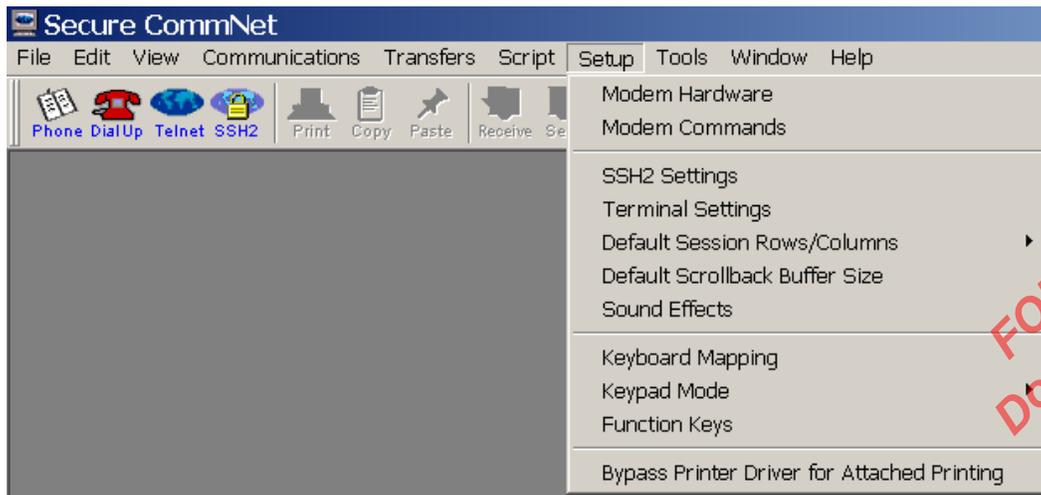
This manual explains the use of the embedded software management of the Dell PTM. It explains how to connect to the PTM and to the CRC, and how to update the module and device FW and SW.

## 2 Connecting to the PTM using an SSH Client

You will need an SSH client that supports ZModem file transfer. This Example uses Secure CommNet v2.35.

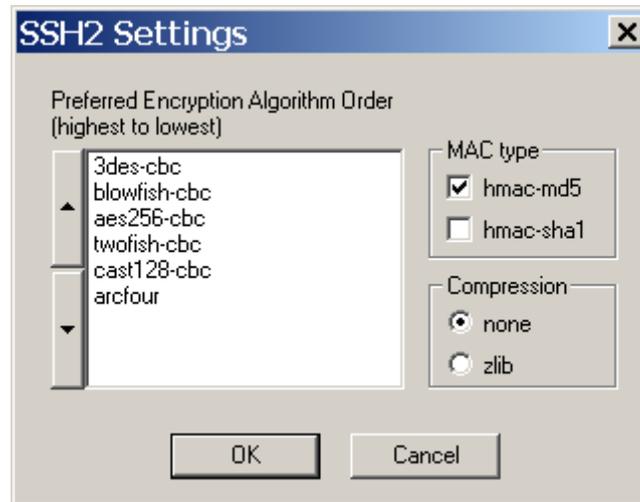
After you download this software, there is some initial configuration that is necessary before you start using the program.

Figure 1 - Setup Menu



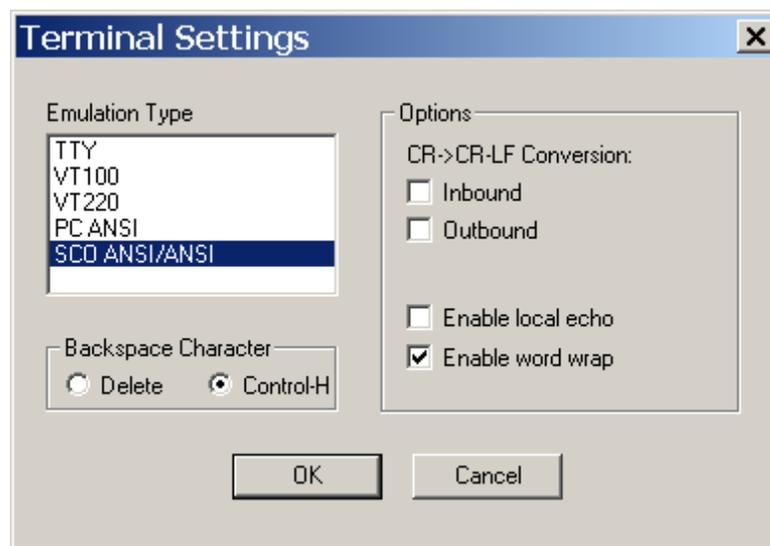
Go to Setup => SSH2 Settings, and set the compression to none. See  
Step 1. Figure 2- Compression Setting.

Figure 2- Compression Setting



Step 2. Go to Setup => Terminal Settings and set Emulation type =>  
SCOANSI/ANSI, and Backspace Character => Control-H.

Figure 3- Set Emulation Type and Backspace Character



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Step 3. Go to Communications =>Open SSH2 connection. This will open the SSH2 Connection dialog box.

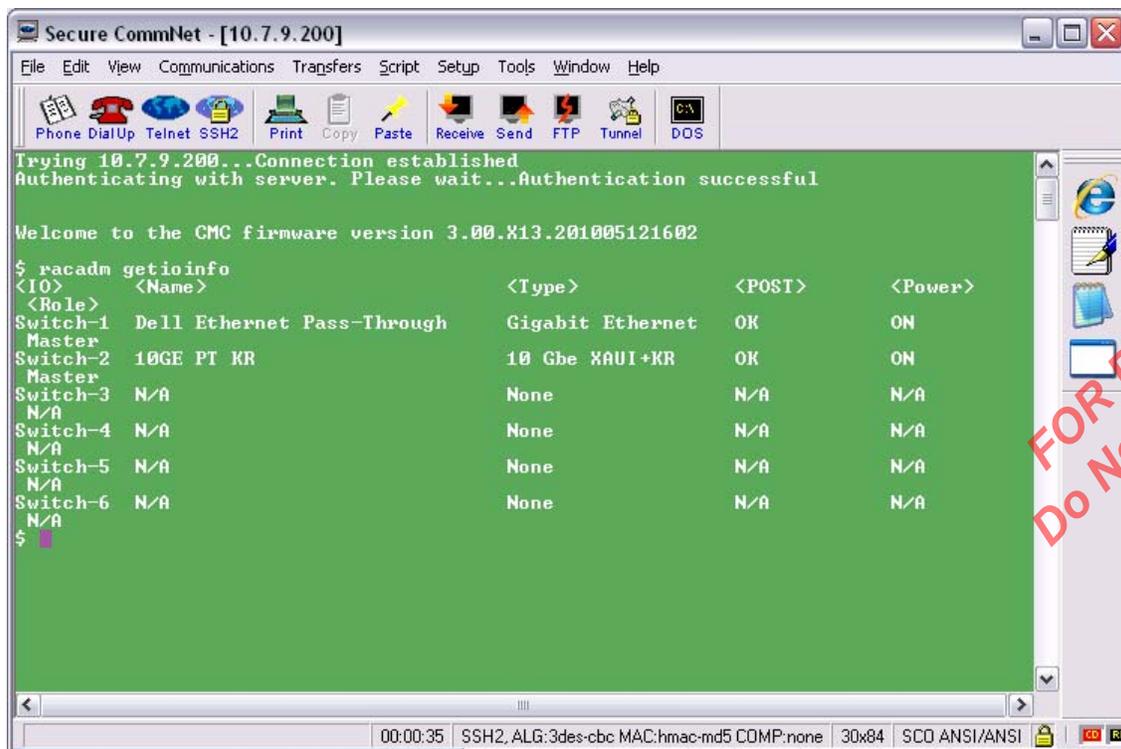
Step 4. Fill in the hostname or IP address of the PTM, the user name and password. Then click OK to open the SSH connection. The prompt will be a \$.

Step 5. List the devices in the chassis. Run the command:

```
$ racadm getioinfo
```

Note: The pass thru module is identified by 10GE PT KR.

Figure 4- getioinfo Output



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### 3 Management CPU Software Update

Step 1. From the CMC command line, enter the following command:

```
$ racadm chassisaction -m [PTM device Name] powercycle
```

Example according to section 2 output:

```
$ racadm chassisaction -m switch-2 powercycle
```

NOTE: You must connect before the 15-second countdown expires in order to interrupt the Boot Loader.

Step 2. Connect to the PTM command line interface (CLI). Enter:

```
$ connect switch-<n>
```

Where n is the number of the switch, 2 in our example.

NOTE: Press any key before the 15-second countdown expires in order to get to the boot loader command line.

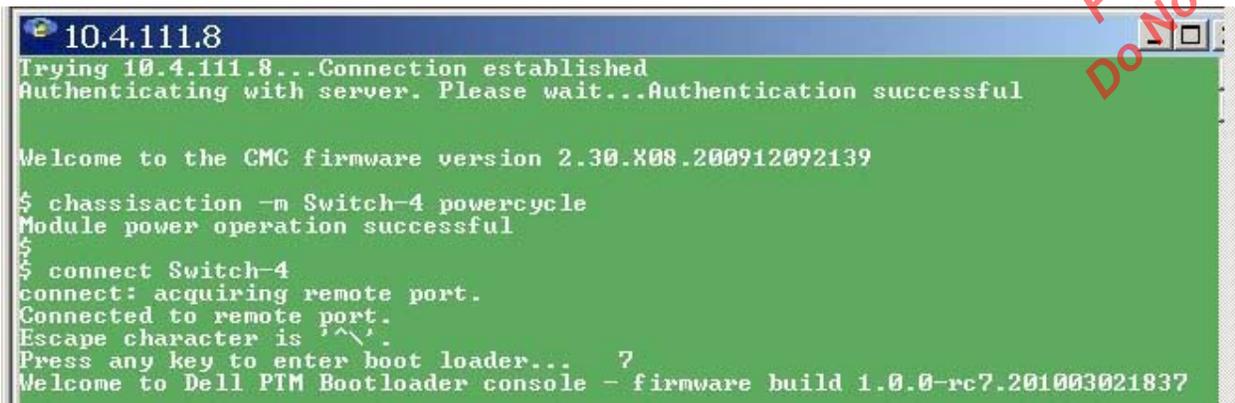
You should see the banner “Welcome to Dell PTM Boot loader console”. Note that the banner displays the current CPU FW build. If you did not succeed, then you need to exit the PTM CLI (enter "exit"), and then go back to Step 1 of this section.

Step 3. From the Boot loader command line, run:

```
# cpufwupdate
```

NOTE: Some older Boot loader versions may use the `cpu_fwupdate` command (with underscore).

Figure 5- Boot loader



The system is now waiting for the file to be transferred from the SSH client.

Step 4. In your SSH client, initiate file transfer by clicking Transfers and then providing the path to the SW binary file. (File Name: dell-ptm-app-project-at91sam9xe512-flash.bin)



Step 5. Exit the bootload. Run: “exit”

Step 6. Power cycle to allow for the SW to take effect. From the CMC CLI, type the following command:

```
$ racadm chassisaction -m switch-<n> powercycle
```

Where n is the number of the switch, 2 in our example.

Step 7. Wait at least 20 seconds to allow for the boot loader to load.

## 4 PTM PHY Chip FW Update

Step 1. Connect to the PTM. Run:

```
$ Connect switch-<n>
```

The PTM consists of three PhyX chips. The three chips will be updated using a single file (fw-BridgeX-rel-8\_2\_958.bin).

Step 2. Run the command:

```
# login admin
```

Step 3. To upgrade PhyX chips all at once, run the command:

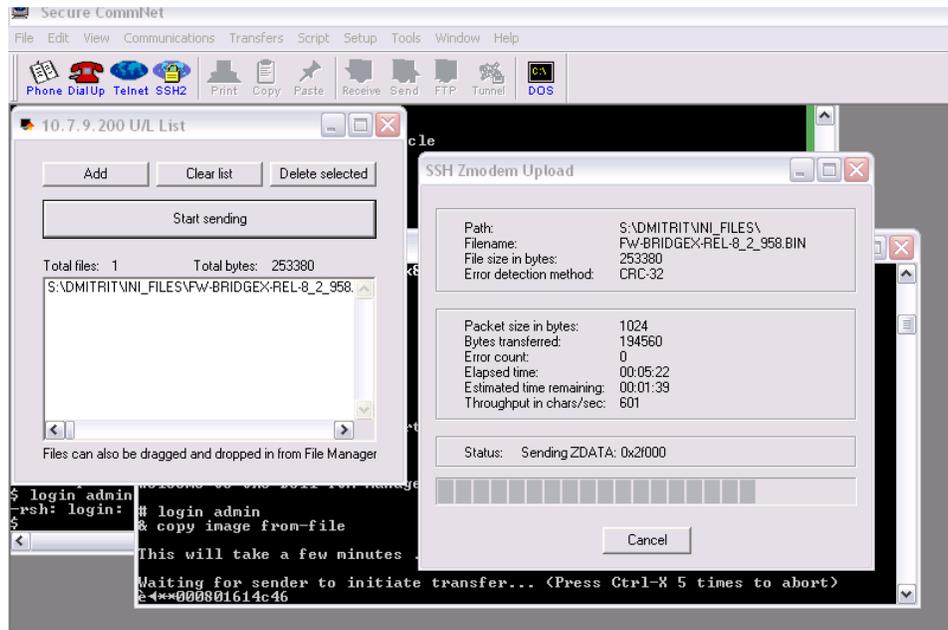
```
& copy image from-file
```

The system is now waiting for the file to be transferred from the SSH client.

Step 4. In your SSH client, initiate file transfer by pulling down the Transfers menu and clicking Send Files. Provide the path to the PhyX FW binary file and send it.

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**Figure 6- Firmware File Transfer**



After loading the firmware binary file, the firmware will be programmed onto the PhyX devices. This process takes a few minutes.

At the end, the following message will be displayed at the prompt:  
"FW updated successfully!"

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Step 5. Exit the PTM command line to the CMC command line. Run:  
& exit

Step 6. Power cycle the PTM for the firmware to take effect. From the CMC command line type the following command:

```
$ racadm chassisaction -m switch-<n> powercycle
```

Step 7. Wait for 20 seconds, and then connect to the PTM. Run:  
\$ connect switch-<n>

Step 8. Login to the PTM command line interface. Run:



```
# login admin
```

Step 9. To confirm that all three PhyX chips have the same firmware version, run the command:

```
& show image ver
```

```
Software image version: 1.0.28-201005131448-62
```

```
Component #1 FW version: 8.2.958
```

```
Component #2 FW version: 8.2.958
```

```
Component #3 FW version: 8.2.958
```

```
&
```

Indeed, all three PhyX devices have the same firmware version:  
8.2.958

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