

# **IBM Switched and monitored PDUs: Firmware update instructions**

**By**

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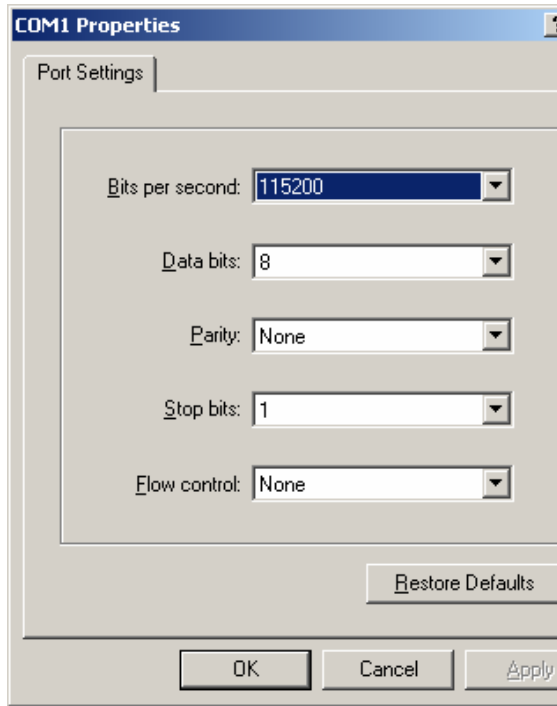
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**Updated: 6/12/2012**

## Outline

- ❑ Firmware upgrade via **Bootloader (Hyperterminal)**
- ❑ Firmware upgrade via **WEB Interface**

# Firmware upgrade via Bootloader (Hyper-Terminal)

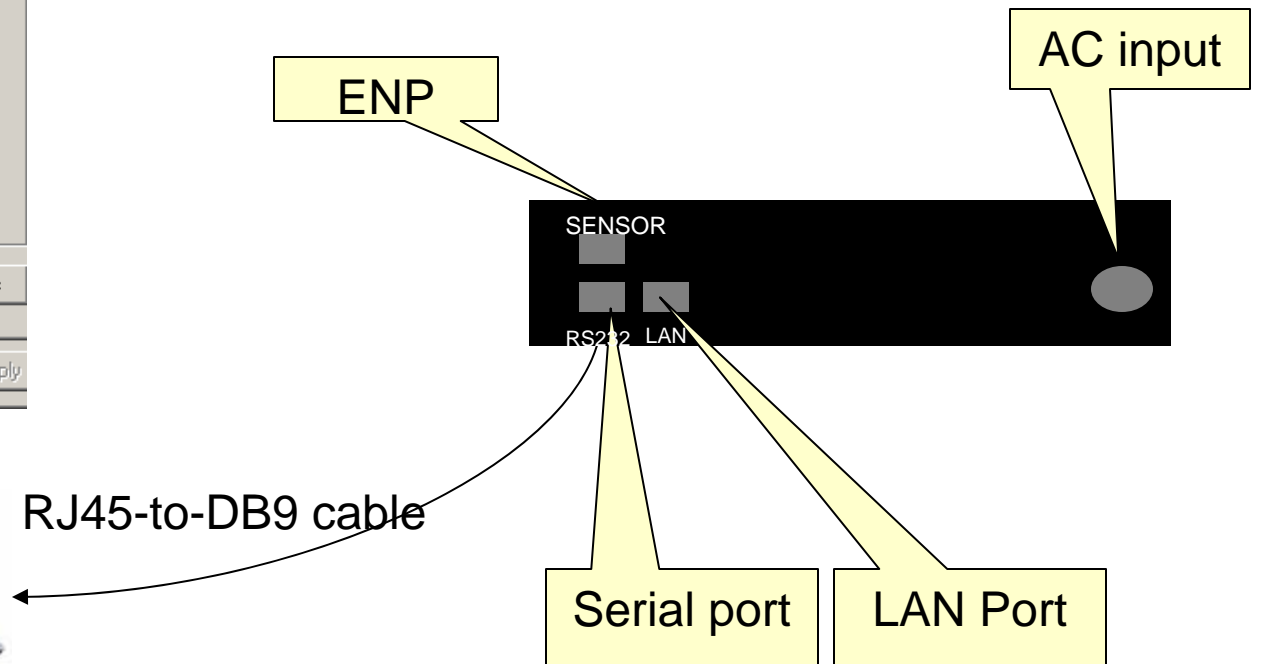


## System Setting

Running Hyper-terminal on you computer



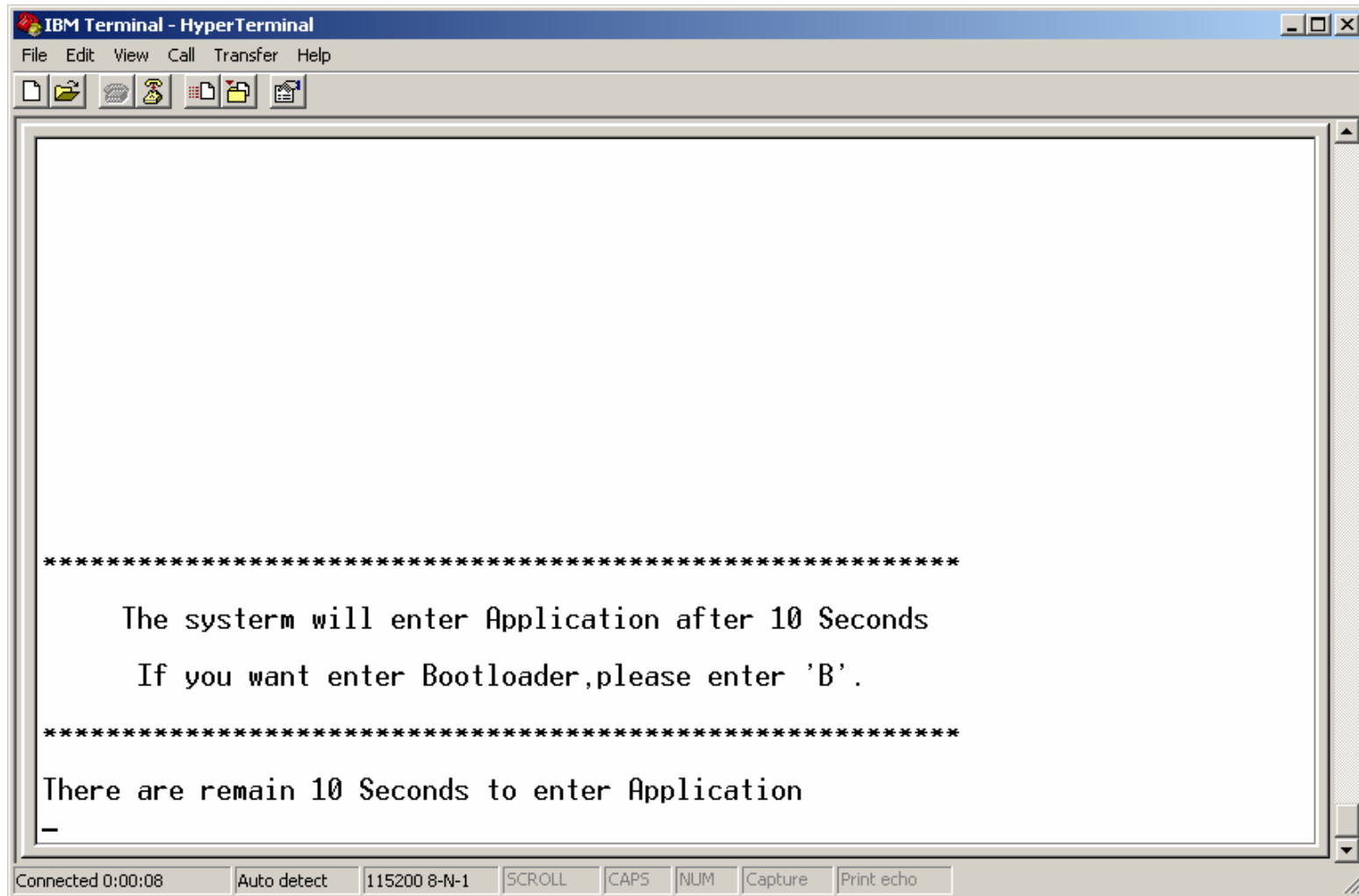
RJ45-to-DB9 cable



- After you have system configured and set up, you reset PDU (OFF, then ON)
- If you logged in to the web interface, please log out before starting the upgrade via the Bootloader.

# Firmware upgrade via Bootloader

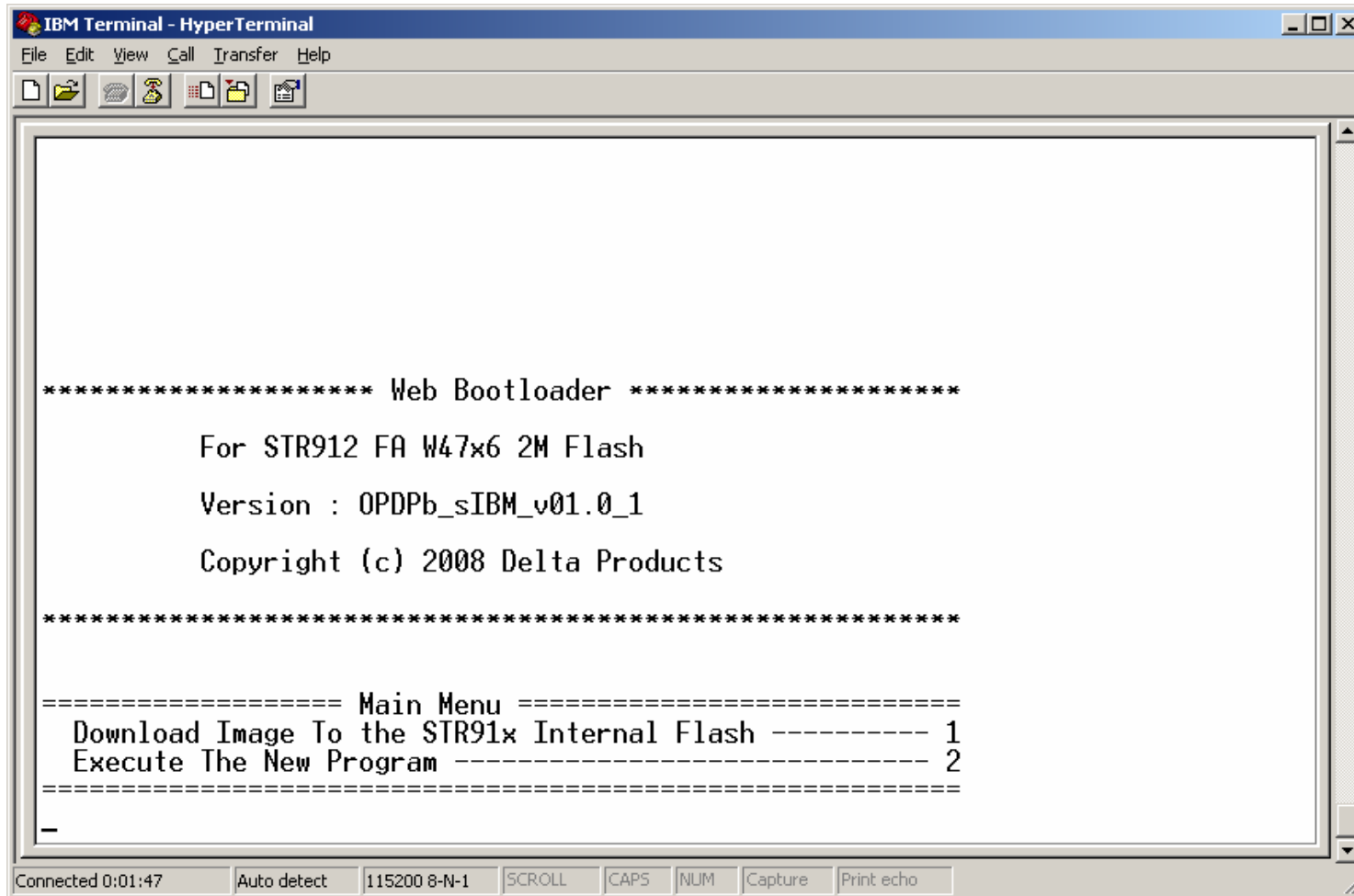
After power on, your hyper-terminal will show up as below:



Enter "B" from your keyboard, you will go into bootloader mode.

# Firmware upgrade via Bootloader

## Bootloader mode



The screenshot shows an IBM Terminal window titled "IBM Terminal - HyperTerminal". The window contains the following text:

```
***** Web Bootloader *****  
  
For STR912 FA W47x6 2M Flash  
Version : OPDPb_sIBM_v01.0_1  
Copyright (c) 2008 Delta Products  
  
*****  
  
===== Main Menu =====  
Download Image To the STR91x Internal Flash ----- 1  
Execute The New Program ----- 2  
=====
```

At the bottom of the terminal window, there is a status bar with the following information: "Connected 0:01:47", "Auto detect", "115200 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

After select “1”, you can start to down load the new firmware.

# Firmware upgrade via Bootloader

Transfer>Send File

It must be Ymodem.

Your image file location

```
***** Web Bootloader *****  
  
For STR912 FA W47x6 2M Flash  
Version : OPDPb_sIBM_v01.0_1  
Copyright (c) 2008 Delta Products  
  
*****  
  
===== Main Menu =====  
Download Image To the STR91x Internal Flash ----- 1  
Execute The New Program ----- 2  
=====
```

Waiting for the file to be sent ... (press 'a' to abort)  
CCCCC

Connected 0:03:31 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

Start to send file (update firmware) for PDU by "Send".

# Firmware upgrade via Bootloader

IBM Terminal - HyperTerminal

File Edit View Call Transfer Help

\*\*\*\*\* Web Boot \*\*\*\*\*  
For STR912 FA W47x6  
Version : OPDPb\_sIB  
Copyright (c) 2008  
\*\*\*\*\*

===== Main Menu =====  
Download Image To the STR91x Internal Flash ----- 1  
Execute The New Program ----- 2  
=====

Waiting for the file to be sent ... (press 'a' to abort)  
CCCCCC

Ymodem file send for IBM Terminal

Sending: C:\IBM Potencia\IBM firmware release\20090605\OPDP\_sIBM\_v00.0\_0E

Packet: 51 Error checking: CRC File size: 1606K

Retries: 0 Total retries: 0 Files: 1 of 1

Last error:

File: 46K of 1606K

Elapsed: 00:00:34 Remaining: 00:19:12 Throughput: 1385 cps

Cancel cps/bps

Connected 0:03:31 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

Updating firmware!!!!

# Firmware upgrade via Bootloader

Finished the update!!!

```
IBM Terminal - HyperTerminal
File Edit View Call Transfer Help
[Icons]
For STR912 FA W47x6 2M Flash
Version : OPDPb_sIBM_v01.0_1

Copyright (c) 2008 Delta Products
*****

===== Main Menu =====
Download Image To the STR91x Internal Flash ----- 1
Execute The New Program ----- 2
=====

Waiting for the file to be sent ... (press 'a' to abort)
CCCCC

Programming Completed Successfully!
Name: OPDP_sIBM_v01.1_1.bin
Size: 1532380 Bytes

===== Main Menu =====
Download Image To the STR91x Internal Flash ----- 1
Execute The New Program ----- 2
=====

Connected 00:05:13 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo
```

Select "2" to execute the new program.



# Firmware upgrade via Bootloader

```
IBM Terminal - HyperTerminal
File Edit View Call Transfer Help
Execute The New Program ----- 2
=====
Waiting for the file to be sent ... (press 'a' to abort)

CCCCC

Programming Completed Successfully!
-----
Name: OPDP_sIBM_v01.1_1.bin
Size: 1532380 Bytes
-----

===== Main Menu =====
Download Image To the STR91x Internal Flash ----- 1
Execute The New Program ----- 2
=====

Select "2" to execute the program

Press Any Key to Enter IBM PDU Configuration Utility.

+-----+
|                               [ IBM PDU Configuration Utility ]                               LOGIN
+-----+

Login ID: _

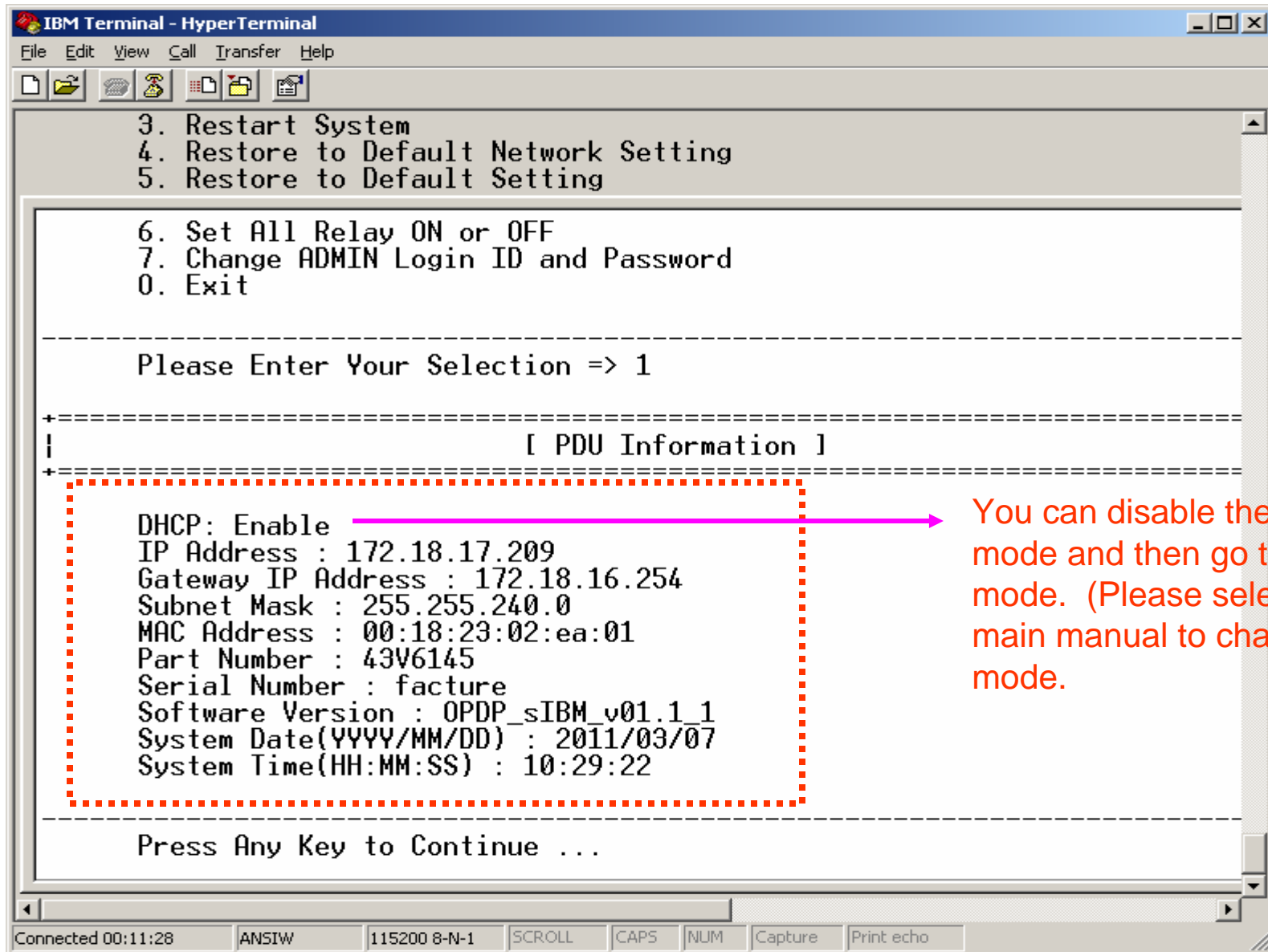
Connected 00:06:36  ANSIW  115200 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Login ID: **ADMIN**

Login Passwd: \*\*\*\* → it is **1001**

# Firmware upgrade via Bootloader

Select "1" for PDU information



# Firmware upgrade via Bootloader

Select "2" to modify network information.

1. PDU Information  
2. Setup Network Parameter  
3. Restart System  
4. Restore to Default Network Setting  
5. Restore to Default Setting  
6. Set All Relay ON or OFF  
7. Change ADMIN Login ID and Password  
0. Exit

Please Enter Your Selection => 2

[ Setup Network Information ]

DHCP(Enable):  
1. Enable  
2. Disable

Please Enter Your Selection => 2

DHCP Function Disable!

Please Enter IP Address ( 172.18.17.209 ) =>  
Please Enter Gateway IP Address ( 172.18.16.254 ) =>  
Please Enter Subnet Mask ( 255.255.240.0 ) =>

[ IBM PDU Configuration Utility ] ADMIN Level

1. PDU Information  
2. Setup Network Parameter

Select "2" at main manual to modify IP configuration

Select "2" at Network Information to disable DHCP mode (go into Static mode to modify IP address)

Modify this IP , Gateway, and Subnet mask to your network.

Connected 00:16:19 ANSIW 115200 8-N-1 SCROLL CAPS NUM Capture Print echo EN English (United States)

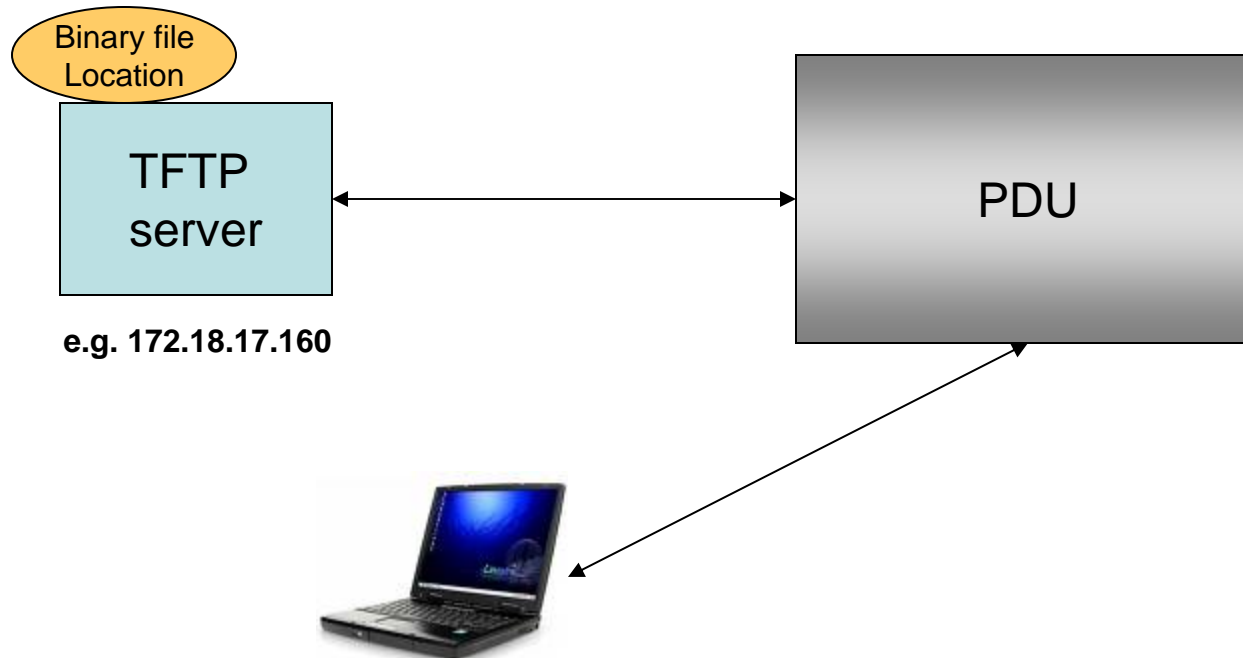
## Outline

- ❑ Firmware upgrade via Bootloader (Hyperterminal)
- ❑ Firmware upgrade via **WEB Interface**

# Firmware upgrade via WEB

## System Setting Up

e.g. OPDP\_sIBM\_v01.1\_1.bin

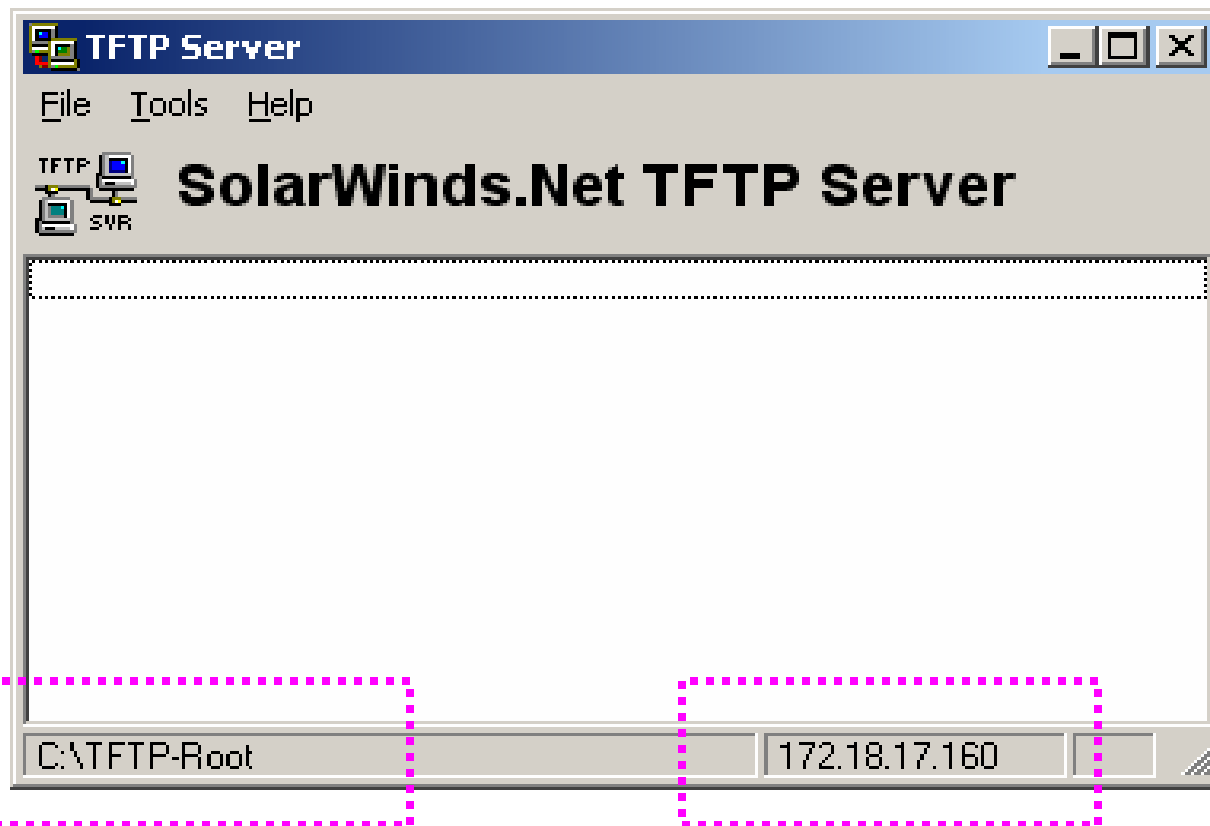


Set up TFTP server IP address and file name for transferring the binary (image) file to PDU (Firmware upgrade) via WEB page.

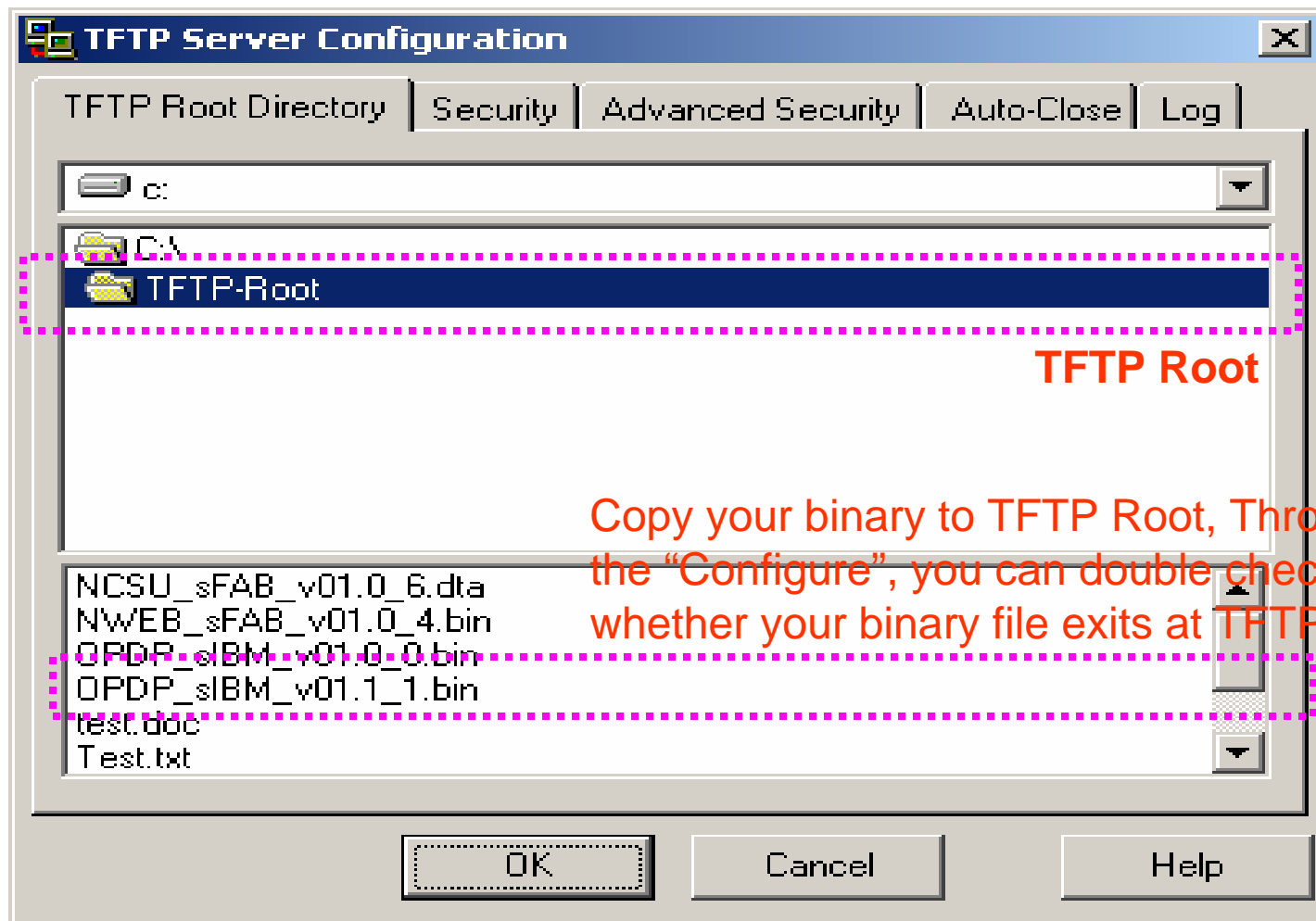
## Start TFTP server

(My TFTP server is at 172.18.17.160,

And my the TFTP root is c:\TFTP-Root\ , we will download/put the binary file under TFTP root)



TFTP server configuration: (From main manual)  
(File → Configure)



# Login to your PDU via WEB Interface

On your browser (e.g. Internet Explore) put  
you PDU's IP address (e.g. 172.18.17.209)

IBM DPI Remote Power Management - Windows Internet Explorer

http://172.18.17.209/

IBM Intelligent Power Distribution Unit

User Name

Password

Login Cancel

Microsoft IE 6.0/Firefox3.0.1+ is required  
1024\*768+ pixel is recommended

Firmware version: OPDP\_sIBM\_v01.1\_1



# Firmware upgrade via WEB

At Manual tree, select “System→ Upgrade firmware

The screenshot displays the IBM DPI Remote Power Management web interface in Internet Explorer. The main navigation menu on the left includes 'Power Management', 'Environment', 'System', 'Configuration', 'SNMPv3 USM Setting', 'Identification', 'Date & Time', 'Trap Receiver', 'Upgrade Firmware', 'Import Configuration', and 'Export Configuration'. The 'System' menu is expanded, and 'Upgrade Firmware' is highlighted. A 'TFTP Server' window is open, showing the 'SolarWinds.Net TFTP Server' interface with the address 'C:\TFTP\Root' and IP '172.18.17.160'. A dialog box titled 'Upgrade Communication Board Firmware - TFTP Server Setting' is shown, with the following fields: 'TFTP Server IP Address' (172.18.17.160) and 'Firmware Image File Name' (OPDP\_sIBM\_v01.1\_1.bin). A red note below the fields says 'Please input the Firmware Image File Name (include extension)'. An 'Upgrade' button is at the bottom of the dialog. The main page shows the IBM logo, a timestamp '07/2011 11:09:55', the device ID 'OPDP\_sIBM\_v01.1\_1', and a 'Log Out' button. The status bar at the bottom shows 'http://172.18.17.209/web\_tftp.htm'.

Make sure to have the correct TFTP server IP address, and the correct file name under your TFTP Root. (Make sure to have the binary file under your TFTP root.)

# Firmware upgrade via WEB

Downloading/transferring the file from TFTP server to PDU...

The screenshot shows a web browser window titled "IBM DPI Remote Power Management - Windows Internet Explorer". The address bar shows the URL "http://172.18.17.209/login.htm". The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help), a search bar, and various toolbars. The main content area has a blue header with the IBM logo on the left, the date and time "03/07/2011 11:17:13" in the center, and the version "OPDP\_sIBM\_v01.1\_1" on the right. A "Log Out" button is visible in the top right corner. On the left side, there is a navigation menu with categories: Power Management, Environment, System, Network, and Logs. The main content area displays a "Verify Image" button at the top. Below it, the text "Transferring..." is shown in red. A green progress bar indicates that "178176 bytes have been received." Below the progress bar, a red instruction reads: "After Download Finished, Please Click 'Verify Image' to Continue!". The status bar at the bottom shows "Done", "EN English (United States)", and "Internet" with a 100% zoom level.

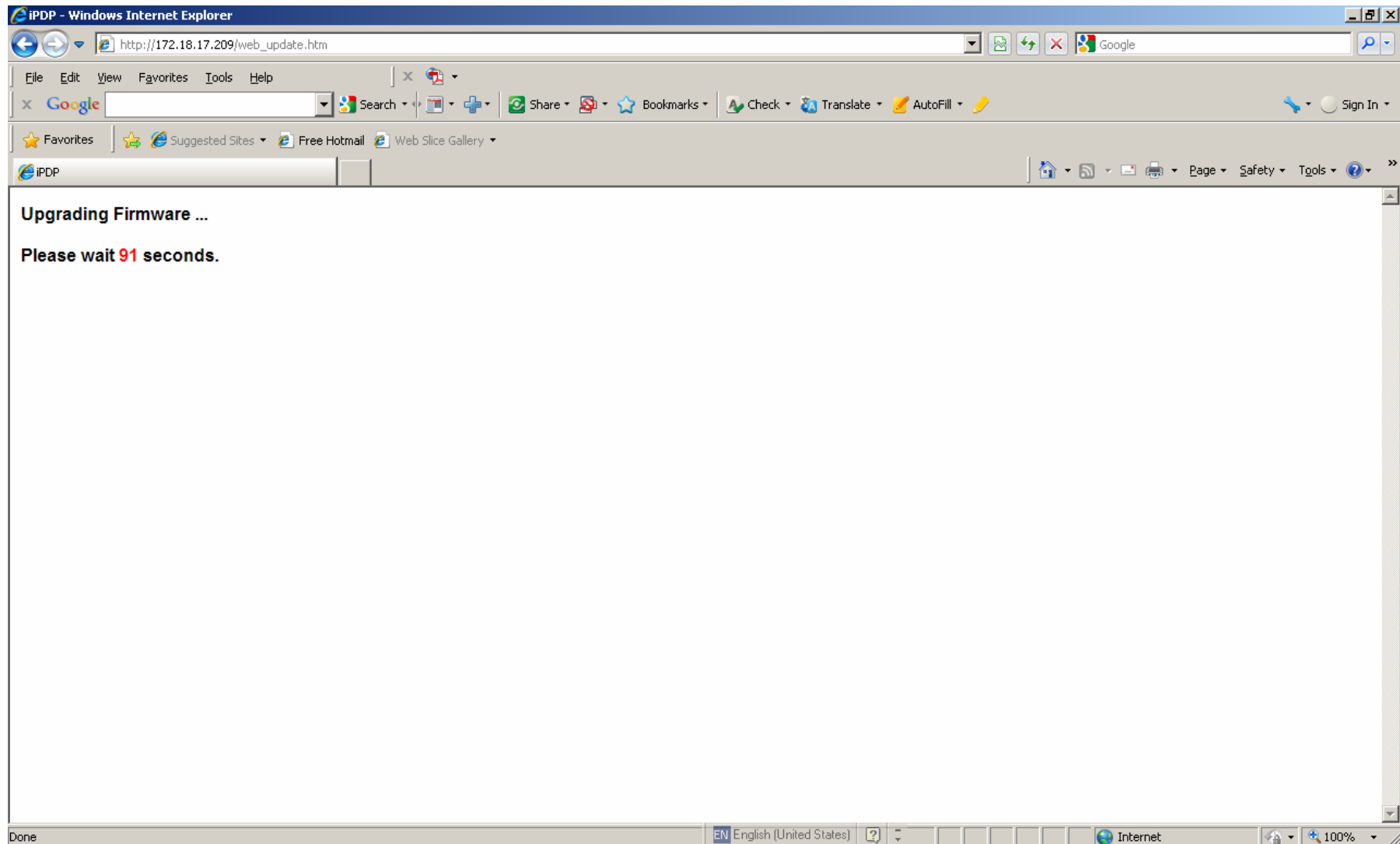
# Firmware upgrade via WEB

Finished the download process. Click on “Verify the Image” to continue.

The screenshot shows a Windows Internet Explorer browser window displaying the IBM DPI Remote Power Management web interface. The address bar shows the URL <http://172.18.17.209/login.htm>. The page header includes the IBM logo, the date and time '03/07/2011 11:19:10', the session ID 'OPDP\_slBM\_v01.1\_1', and a 'Log Out' button. A left-hand navigation menu lists various system management options: Power Management, Environment, System (with sub-items: Configuration, SNMPv3 USM Setting, Identification, Date & Time, Trap Receiver, Upgrade Firmware, Import Configuration, Export Configuration), Network, and Logs. The main content area features a 'Verify Image' button at the top. Below it, a green dashed circle highlights the text 'Finished!' in red. Underneath, the text '1532380 bytes have been received.' is displayed in green. At the bottom of the main content area, a red instruction reads: 'After Download Finished, Please Click "Verify Image" to Continue!'. The browser's status bar at the bottom shows 'Done', 'EN English (United States)', and 'Internet'.

# Firmware upgrade via WEB

After “Verify Image, PDU will automatically upgrade firmware.



# Firmware upgrade via WEB

After finished the firmware upgrade, PDU will do “software” reboot automatically without affecting any outlets’ power output!

IBM DPI Remote Power Management - Windows Internet Explorer

http://172.18.17.209/

File Edit View Favorites Tools Help

Google Search

Share Bookmarks Check Translate AutoFill Sign In

IBM DPI Remote Power Management

**IBM** Intelligent Power Distribution Unit

User Name

Password

Login Cancel

Microsoft IE 6.0/Firefox3.0.1+ is required  
1024\*768+ pixel is recommended

Firmware version: OPDP\_sIBM\_v01.1\_1

New upgraded firmware via WEB page

Done EN English (United States) Internet 100%