

Firmware Upgrade Instructions

for IP DSLAM Uplink Modules, Micro DSLAMs, and Mini DSLAMs

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Overview

This document explains how to use the Trivial File Transfer Protocol (TFTP) to upload firmware to an uplink module, Micro DSLAM, or Mini DSLAM.

TFTP Client

A TFTP client must be installed on your PC in order to execute the flash upload procedure for firmware upgrades.

Copying TFTP from Windows NT or Windows 2000

Windows NT, 2000 and XP all come with a command line TFTP client program. Although Windows 95, 98 and ME do not come with a TFTP client, the file can be copied from a PC running Windows NT or 2000 (but not XP):

1. On a PC running Windows NT or Windows 2000, locate the TFTP file at C:\WINNT\SYSTEM32\tftp.exe.
2. Copy the file to C:\WINDOWS on your PC running Windows 95, 98, or ME.

Downloading TFTP from the Internet

If your operating system does not include a TFTP client program and you are unable to copy Window's command line TFTP client, TFTP client programs can also be downloaded from the Internet. Although any standard TFTP tool may be used, PumpKIN from the Klever Group is known to be reliable. Download it as follows:

1. Open a web browser. Type **<http://kin.klever.net/pumpkin/>** in the Address field and press the Enter key.
2. On the ensuing page, select the link for Binary Downloads.
3. Download the latest version of PumpKIN displayed.
4. Execute the installation program, installing PumpKIN in its default directory.
5. Start PumpKIN from the Windows Start menu. It will be listed there under Klever Group.

IP DSLAM Backup

Back up all IP DSLAM configurations prior to downloading any new firmware versions.

An IP DSLAM backup file contains all IP DSLAM management and port configurations. A DSLAM backup can be flash uploaded to a file on your PC or local network via a TFTP *get* command and the following information:

Table 1. Items Required for Creating a Backup File

Item	Data Needed for Backup	Example
Host Name	DSLAM IP Address (syntax: xxx.xxx.xxx.xxx)	193.166.254.98
Remote Filename	nvr_backup.bin.[Superuser password]*	nvr_backup.bin.Password
Local Filename	user preference	dslam4921_backup.bin

* The default Superuser password is **Password**.

When saving IP DSLAM configurations to a local backup file, it is very important that your local filename should identify the specific DSLAM from which the configurations were saved. A backup file records all DSLAM data, including its IP address. If the file is accidentally downloaded to a different DSLAM than that from which the file was originally created, the DSLAM's IP Address will be replaced with the IP address in the file. Unless you know the IP address that was in the backup file, you will be locked out of the DSLAM and will only be able to access it via a direct CLI connection. You may be forced to clear NVRAM, which requires a complete reconfiguration of the chassis.

If you are uncomfortable with the potential for inadvertently copying over a chassis' IP Address, you may wish to create a template file rather than a backup file.

An IP DSLAM template contains all IP DSLAM management and port configurations, except IP address. A template can be flash uploaded to a file on your PC or local network using a TFTP *get* command and the following information:

Table 2. Items Required for Creating a Template File

Item	Data Needed for Backup	Example
Host Name	DSLAM IP Address (syntax: xxx.xxx.xxx.xxx)	193.166.254.98
Remote Filename	nvr_cfg.bin.[Superuser password]*	nvr_cfg.bin.Password
Local Filename	user preference	dslam4921_template.bin

* The default Superuser password is **Password**.

When saving IP DSLAM configurations to a local backup file, it is very important that your local filename should identify the specific DSLAM from which the configurations were saved. A template file records all DSLAM data, except IP address, with that of the DSLAM from which the file was originally created.

Download Firmware to Your PC

The latest firmware versions may be downloaded from <http://paradyne.com/support/downloads/> and saved to a file on your PC or local network. Firmware files are organized by product type first and then by model name. Each filename reflects the firmware level in addition to the model name of the product for which it is intended (for example, **bsx8000-10202.bin**). You may change the filename as desired when saving the file locally.

Caution:

Download firmware for your exact model. The full model name of a product is printed on a small white label that can be found on the rear or bottom of most units, or on the printed circuit board of interface modules. The full model name can also be determined using your web browser and the Network Management System (NMS).

Upload Firmware to Your DSLAM

The following describes how to use Windows TFTP to upload firmware. For information about using PumpKIN, execute PumpKIN and click on its Help button.

1. Click on Start, then Run.
2. In the Run window, enter **cmd** (or **command** for Windows 95 or 98) to open a command prompt window.
3. At the command prompt, type:

```
tftp -i [DSLAM IP Address] put [image filename]
```

Where:

- [DSLAM IP Address] is the address of the uplink module, Micro DSLAM, or Mini DSLAM to which you are uploading the firmware image.
- [image filename] is the filename under which the firmware file was saved on your PC or local network.

For example:

```
tftp -i 192.168.254.252 put c:\bsx8000-10202.bin
```

4. Press Enter.

Firmware Upload Completion

- Micro DSLAM and Mini DSLAM – Once the file upload has been completed, the Micro DSLAM or Mini DSLAM will take approximately two minutes to reboot, during which time DSLAM subscribers will lose their Internet connectivity.
- IP DSLAM – Firmware upgrades for uplink modules and interface modules in an IPD12000 or IPD4000 must be uploaded separately:
 - BSX or MUM Upgrade – Once the file upload has been completed, the DSLAM will take approximately two minutes to reboot, during which time DSLAM subscribers will lose their Internet connectivity.
 - Interface Module Upgrade – Firmware upgrades for interface modules are uploaded to the DSLAM as shown in [Upload Firmware to Your DSLAM](#) on page 3. The BSX or MUM automatically passes the firmware on to the appropriate interface module or modules. Interface modules receiving the firmware upgrade will reboot after receiving the new firmware, during which time DSLAM subscribers connected through that interface module will lose their Internet connectivity. An interface module reboot takes approximately two minutes.

A firmware upgrade file is applied to all modules in the chassis of the applicable model, excepting any module that already has that firmware version loaded.

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