Pipeline 6.0.13 Cumulative Release Note

Ascend Communications, Inc.
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Known Issue

Pipeline 85 units with serial numbers 8517294 (*U interface*) or serial numbers 8509727 (*S interface*) or later may have power up issues when operating with software versions earlier than 6.1.19. It is strongly recommended that you **do not** downgrade these units to a software version earlier than 6.1.19.

Caution: You must use the software loading procedure explained in "Upgrading system software" to load this version of software onto your system. Read the instructions carefully before upgrading your system.

This cumulative release note describes corrections and enhancements introduced in software releases after 6.0 for the Pipeline. To use this release note:

1 Read through the table of contents to determine which software release applies to your environment.

2 Obtain the file from the Ascend anonymous FTP server (ftp.ascend.com). Log in using `anonymous` as your name, and your email address as the password. If you need Technical Assistance, contact Ascend in one of the following ways:

Telephone in the United States	800-ASCEND-4 (800-272-3634)
Telephone outside the United States	(+01) 510-769-8027 (800-697-4772)
Australia	(+61) 3 9656 7000
Austria/Germany/Switzerland	(+33) 492 96 5672
Benelux	(+33) 492 96 5674
France	(+33) 492 96 5673
Italy	(+33) 492 96 5676
Japan	(+81) 3 5325 7397
Middle East/Africa	(+33) 492 96 5679
Scandinavia	(+33) 492 96 5677
Spain/Portugal	(+33) 492 96 5675
UK	(+33) 492 96 5671
Email	support@ascend.com
Email (outside US)	EMEAsupport@ascend.com
Facsimile (FAX)	510-814-2312
Customer Support BBS by modem	510-814-2302

3 Upgrade to the new software by following the instructions in the next section, "Upgrading system software." Then configure the features that apply to your site.

Upgrading system software

This section explains how to upgrade your system software. It contains the following sections:

- Guidelines for upgrading system software
- Upgrading system software with a standard load
- Upgrading system software with a fat load
- Recovering from a failed fat load upgrade

Which binary to use

For any new Pipeline 50, 75, or 85 (no switch on back panel), use b2.p75. For older models, see the README information on the Ascend FTP server where the binaries are stored. For most older Pipeline 75 models, use b.p75. Similarly, for older Pipeline 50 models, use b.p50, however, note that there are several models.

On your Pipeline, the current load appears in the Sys Options status window. Tab to the Sys Options window and use the down arrow to see the software load. For example:

```
00-100 Sys Option
>Access Router          ^
 Load: b2.p75
 Switched Installed     v
```

Guidelines for upgrading system software

The following table lists the different formats for Ascend system software. How you upgrade your unit depends on the version of software you are upgrading to.

Format of load	Size
Standard (thin)	Less than 448 Kb.
Fat	Compressed size larger than 448 Kb
Extended	Compressed size larger than 448 Kb

These restrictions apply when upgrading:

- You must use TFTP to upload a fat or extended load.

  Note: To use Trivial File Transfer Protocol (TFTP) you need a TFTP server on your computer (host) or accessible over the Ethernet. You can obtain a TFTP server from software download sites on the Internet. Additionally, you need a Pipeline model 50 or higher. The Pipeline 25 models do not support TFTP.

- **If you use TFTP, you must execute the `fsave` command immediately after executing the `tload` command. Failure to do so might cause your Pipeline to lose its configuration.**
- Before you can upgrade to a fat or extended load, you must first upgrade to a version of software that understands the new format, then upgrade to the fat or extended load. You

can upgrade directly to a thin load (which is fat-load aware) or an extended-aware load from any version of software.

Before you begin

Caution: Uploading system software overwrites all existing profiles. Save your current Pipeline configuration before you begin. After upgrading the system software, restore the configuration. Since the saved configuration is readable text, you can manually reenter the settings, if necessary. For more information, see how to save a configuration in your Pipeline documentation.

Before upgrading your system software:

1. Obtain the appropriate load file, either by downloading it from the FTP server or by contacting Ascend technical support.

Caution: Be sure your unit can handle the binary, for example, an older Pipeline (with a switch on the back) cannot use a binary for a version 2 Pipeline (such as b2.p75). If you "upgrade" to a version of software not supported by your unit, the unit will no longer function and you will need to returned it to Ascend for repair.

2. Save the current configuration.

   Note: For security reasons, passwords are not included in the saved configuration text file. When you restore the configuration, the default (factory-set) passwords are reinstated. See the section on Security Profiles in your documentation for more information.

3. If necessary, activate a Security Profile that allows for field upgrade.

   If you are not sure how, see the section on Security Profiles in your documentation.

4. If you are using TFTP, load the correct binaries into the /tftpboot directory on the TFTP server.

Upgrading system software with a standard load

You can upgrade system software with a standard load using either the serial console or using TFTP over the Ethernet.

Upgrading using the serial console

1. From the VT100 interface, access the diagnostics monitor by typing these characters in rapid succession:

   Press Ctrl-D to invoke the DO menu and select D=Diagnostics.

2. Enter `fsave` to save your current configuration to flash memory.
3. Enter `quit` to exit the Diagnostic interface.
4. Type the following four-key sequence in rapid succession (press each key in the sequence shown, one after the other, as quickly as possible):

   Esc [Esc -

   (Press the escape key, the left bracket key, the escape key, and the minus key, in that order, in rapid succession.) The following string of Xmodem control characters appear:

   CKCKCKCK

If you do not see these characters, you probably did not press the four-key sequence quickly enough. Try again—most people use both hands and keep one finger on the escape key.

5 Use the Xmodem file transfer protocol to send the system file to the Pipeline.

6 Your communications program begins sending the file to your Ascend unit. This normally takes anywhere from 5 to 15 minutes. The time displayed on the screen does not represent real time. Do not worry if your communication program displays several “bad batch” messages. This is normal.

7 When the upgrade process completes, the Pipeline resets. When the self-test completes, the unit’s initial menu appears in the Edit window with all parameters set to default values.

8 From the VT100 interface, access the diagnostics monitor by typing these characters in rapid succession:

Press Ctrl-D to invoke the DO menu and select D=Diagnostics.

9 Type `nvramclear` to clear any differences in NVRAM memory before and after the upgrade. After the Ascend unit clears NVRAM memory, it automatically resets.

10 The unit resets a second time to load the configuration from flash memory.

This completes the upgrade.

Note: You can also restore your configuration from the text file saved on your hard disk. If you are not sure how to restore a configuration, see the section on restoring a configuration in the documentation.

Upgrading standard load using TFTP

1 Obtain the correct binary from ftp.ascend.com/pub/Software-Releases/Pipeline. Place the binary in a TFTP boot directory accessible via the Ethernet. Be sure the TFTP server is running. Be sure you know the IP address or host name of the server.

2 From the Pipeline VT100 interface, press Ctrl-D to invoke the DO menu and select D=Diagnostics.

3 At the > prompt, type:

`tload` *hostname filename*

where *hostname* is the name or IP address of your TFTP server (which is your computer or a server on your LAN that has a TFTP server program running), and *filename* is the name of the binary that you placed in your TFTP server’s boot directory.

For example:

```
tload hummer b.p75
or
tload 198.168.100.169 b.p75
```

loads b.p75 into the Pipeline from a host named *hummer*, or loads b.p75 into the Pipeline from a host with an IP address of 198.168.100.169.

4 Enter the following command to save your configuration to flash memory:

```
fsave
```

5 Enter the following command to clear any differences in NVRAM memory before and after the upgrade.

```
nvramclear
```

After executing this command, the Pipeline will be inaccessible while it clears NVRAM and resets. Please wait for the unit to reset before attempting to use it.

This completes the upgrade.

Upgrading system software to a fat or extended load

1. If you want to upgrade your system to a fat or extended load, and your unit currently is using a standard load, you must first upgrade your system to a version that understands the new format. Start with a thin load to upgrade to a fat load, then upgrade to a fat load.
2. Obtain the correct binary from ftp.ascend.com/pub/Software-Releases/Pipeline. Place the binary in a TFTP boot directory accessible via the Ethernet. Be sure the TFTP server is running. Be sure you know the IP address or host name of the server.
3. From the Pipeline VT100 interface, press Ctrl-D to invoke the DO menu and select D=Diagnostics.
4. At the > prompt, type:

   `tload` *hostname filename*

   where *hostname* is the name or IP address of your TFTP server (which is your computer or a server on your LAN that has a TFTP server program running), and *filename* is the name of the binary that you placed in your TFTP server's boot directory.

   For example:

   ```
   tload hummer b.p75
   or
   tload 198.168.100.169 b.p75
   ```

   loads b.p75 into the Pipeline from a host named *hummer*, or loads b.p75 into the Pipeline from a host with an IP address of 198.168.100.169.
5. Enter the following command to save your configuration to flash memory:

   `fsave`
6. Enter the following command to clear any differences in NVRAM memory before and after the upgrade.

   `nvramclear`

   After executing this command, the Pipeline will be inaccessible while it clears NVRAM and resets. Please wait for the unit to reset before attempting to use it.
7. Repeat the procedure, this time uploading the fat or extended load. Be sure your system is backed up before you begin so you can revert to a saved configuration, if necessary.

After a successful upgrade, one of the following messages appears.

- If the load is thin:

  ```
  UART initialized
  thin load: inflate
  ..........................................................
  starting system...
  ```
- If the load is fat:

  ```
  UART initialized
  fat load: inflate
  ..........................................................
  starting system...
  ```
- If the load is extended:

  ```
  UART initialized
  extended load: inflate
  ```

```
.....................................................
starting system...
```

This completes the update load if you have no errors. If the upgrade is not successful, refer to "Recovering from a failed upgrade" next.

Recovering from a failed upgrade

If a load has an "incompatible format" message, you must first download a thin or extended-aware load that can understand the new format.

If a load has a CRC error, the following message appears:

```
UART initialized
fat load: bad CRC!!
forcing serial download at 57600 bps
please download a "thin" system...
```

Immediately after this message appears, the serial console speed is switched to 57600 bps, and the Pipeline initiates an Xmodem serial download. To recover from this error and load the new system, you must load a thin system that is fat load aware, or an extended-aware system:

1 Invoke your Xmodem software to load the thin load through the console port.

2 After you have finished loading the prerequisite load, reboot the unit.

3 Download the new load using the tloadcode command.

When you download a fat load, messages similar to the following appear on the diagnostics monitor screen:

```
> tload 192.168.1.82 b.p50
saving config to flash
.....................................
loading code from 192.168.1.82:69
file b.p50..
fat load part 1:
.............................................................
......
fat load part 2:
.............................................
```

Note the "fat load part *x*:" messages. They notify you when the first and second halves of the fat load are being loaded.

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Problems Corrected

TR NA

Pipelines 220 and 130 now receiving Frame Relay frames.

This problem is related to the same type of was corrected in release 6.1.17 by TR 3309

Corrected in: 6.0.13

TR NA

NT 4 workstation able to connect to a novell server.

The windows NT 4 workstation is now able to connect to a novell server using a Pipeline 50 with IPX SAP proxy turned on. This problem was covered in release 6.1.17 by TR 3800.

Corrected in: 6.0.13

TR 1512

The Net3 PTP switch option is now available on all Pipelines supporting BRI.

Corrected in: 6.0.13

TR 3289

Pipeline 75 no longer has X.25 re-establishing connection problem.

On the Pipeline 75 X.25 no longer has difficulty re-establishing the connection once it has been released.

Corrected in: 6.0.13

TR 3598

Static no longer a problem on call waiting on the Pipeline 25.

Static and noise are no longer a problem when using call waiting on the Pipeline 25.

Corrected in: 6.0.13

TR 3742

SecureConnect now works on bridged WAN connection.

Corrected in: 6.0.13

TR 258652

The DHCP server is correctly allocating IP addresses on the Pipeline 50

The DHCP server on the Pipeline 50 is no longer allocating the same IP address twice.

Corrected in: 6.0.13

TR NA

IPsec Feature Code Authorization Error

When the system fails to authenticate a feature code, an IPsec message is now correctly generated.

Corrected in: 6.0.10

TR 2928

NAT no longer stops routing after a few hours

On all Pipelines the NAT translation table was reaching overflow capacity and consequently, routing stopped. The translation table entries are now being freed up in a timely fashion to allow continuous NAT function.

Corrected in: 6.0.9

TR 3304

Pipeline 75 now accepting incoming voice calls when it detects name display information.

Corrected in: 6.0.9

TR 3459

Now able to break dial tone when preempting a 2 channel data call.

On a Pipeline 25 when a 2-channel call is in progress, going off hook to place a voice call allowed dial tone to be brought up but the dial tone could not be broken. This dial tone problem has been fixed.

Corrected in: 6.0.9

TR 3463

Call ID=Yes and the P75 is able to accept more than 10 digits without reset.

On a Pipeline 75, the unit no longer resets itself when Caller ID=Yes and more than 10 digits come in on an incoming call.

Corrected in: 6.0.9

TR 2854 Multicast now functioning in 5.1A

The Pipeline 75 now forwards IGMP reports properly. The problem occurred on a Pipeline 75 connected to a PC running Windows 95 which was dialing into a MAX 4000 via RADIUS authentication.

Corrected in: 6.0.4

TR 3276 POTS ports noise after upgrade to 6.0.0 (P75 only) resolved.

An echo or buzzing sound was audible on the POTS ports of some P75 units after upgrading from 5.1A to 6.0.0. This problem has been solved.

Corrected in: 6.0.4

TR 3293 Ascend units no longer reset due to specific malformed UDP packet.

Corrected in: 6.0.2