



# *PMTools 4.1 Release Note*

*March 25, 1999*

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The PMTools are a group of Java programs that supplement certain PMVision™ functions. You can incorporate these utilities into your suite of scripts for PortMaster® management. PMTools 4.1 is available to Lucent customers at no charge.

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## ***About PMTools***

<b>pmbackup</b>	Backs up a PortMaster configuration to an ASCII file.
<b>pmcommand</b>	Sends commands to a PortMaster.
<b>pmdial</b>	Dials a location on a PortMaster.
<b>pmdumpfilter</b>	Saves the filters from a PortMaster to an ASCII file.
<b>pmreset</b>	Resets a port on a PortMaster.
<b>pmupgrade</b>	Upgrades the ComOS® on a PortMaster.

The following sections describe the options associated with each utility. For backwards compatibility you can omit the **-h** and **-p** before <Hostname> and <Password> if they are given as the first two arguments and the <Username> is **!root**.

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## pmbackup

<b>-h</b> <Hostname>	PortMaster address.
<b>-p</b> <Password>	Password for the PortMaster.
<b>-u</b> <Username>	Username for the PortMaster. The default is <b>!root</b> .
<b>-version</b>	Displays the version and date.
<b>-help</b>	Displays a list of options and a description of each.
<b>-f</b> <Filename>	Name of the file to store the backup. If you do not specify a file, the backup information is displayed on standard output.
<b>-bgp</b>	Saves the BGP configuration. Requires ComOS 3.9 or later.
<b>-boards</b>	Saves the board configurations on a PortMaster 4.
<b>-choicenet</b>	Saves the ChoiceNet® configuration.
<b>-ethernets</b>	Saves the Ethernet configuration.
<b>-filters</b>	Saves the filter table.
<b>-global</b>	Saves the global configuration.
<b>-hosts</b>	Saves the host table.
<b>-lines</b>	Saves the line configurations.
<b>-locations</b>	Saves the location table.
<b>-maps</b>	Saves the network address translator (NAT) map table. Requires ComOS 3.9 or later.
<b>-ospf</b>	Saves the OSPF configuration.
<b>-ports</b>	Saves the port configurations.
<b>-radius</b>	Saves the RADIUS configuration.
<b>-snmp</b>	Saves the SNMP configuration.
<b>-subinterfaces</b>	Saves the subinterface table.
<b>-users</b>	Saves the user table.

## pmcommand

<b>-h</b> <Hostname>	PortMaster address.
<b>-p</b> <Password>	Password for the PortMaster.
<b>-u</b> <Username>	Username for the PortMaster. The default is <b>!root</b> .
<b>-version</b>	Displays the build version and date.
<b>-help</b>	Displays a list of options and a description of each.
<b>-f</b> <Filename>	Name of a file with a list of commands to send to the PortMaster.

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<b>-v</b>	When used with <b>-f</b> , displays verbose output to standard output, echoing each command.
<b>-nostop</b>	When used with <b>-f</b> , specifies that errors caused by a command do not stop the other commands from being carried out.
<b>-noreboot</b>	When used with <b>-f</b> , instructs <b>pmcommand</b> to ignore any <b>reboot</b> commands. Setting this option might cause some commands to fail.
<b>-prompt</b>	When used with <b>-f</b> , instructs <b>pmcommand</b> to prompt you when it encounters a <b>reboot</b> command.
<Command>	A single command to be sent to the PortMaster. If you are running from Microsoft Windows, you must enclose the command in quotation marks.

If you do not specify a file or command, **pmcommand** enters interactive mode, allowing you to type commands at a prompt.

## pmdial

<b>-h</b> <Hostname>	PortMaster address.
<b>-p</b> <Password>	Password for the PortMaster.
<b>-u</b> <Username>	Username for the PortMaster. The default is <b>!root</b> .
<b>-version</b>	Displays the build version and date.
<b>-help</b>	Displays a list of options and a description of each.
<b>-t</b> <Minutes>	Idle timeout for the current session.
<b>-x</b>	Displays the dial debug messages.
<b>-f</b> <Filename>	Specifies a file of locations.
<Location>	Name of the location to dial.

**pmdial** now returns a dial status: **0** indicates that the location was dialed successfully, and **-1** means that the dial failed.

## pmreset

<b>-h</b> <Hostname>	PortMaster address.
<b>-p</b> <Password>	Password for the PortMaster.
<b>-u</b> <Username>	Username for the PortMaster. The default is <b>!root</b> .
<b>-version</b>	Displays the build version and date.
<b>-help</b>	Displays a list of options and a description of each.
<b>-slot</b>	Specifies a slot number in a PortMaster 4.
"<Ports>"	Ports to reset. A single port can be specified ("s1"), a comma-separated list can be specified ("s1,s2"), a range can be specified ("s1-s4"), or any combination ("s1,s4,s8-s12").

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## pmupgrade

<b>-h</b> <Hostname>	PortMaster address.
<b>-p</b> <Password>	Password for the PortMaster.
<b>-u</b> <Username>	Username for the PortMaster. The default is <b>!root</b> .
<b>-version</b>	Displays the build version and date.
<b>-help</b>	Displays a list of options and a description of each.
<b>-r</b>	Reboots the PortMaster after a successful upgrade.
<b>-f</b> <Filename>	ComOS image file to be used for the upgrade.
<b>-at</b> " <Mon>/<Day> /<Year><Hour>: <Min>AM PM"	Date and time at which you want the PortMaster to be upgraded. Enclose the entire date and time in quotation marks. Enter this option last if you include it.

## Limitations

The following is a list of known limitations of PMTools 4.1:

- **pmdial** does not work with ComOS 4.0 or later because the idle timeout flag and some error messages are incompatible.
- **pmbackup** puts the **set isdn-msn off** command in the backup file. The command produces an error on the PortMaster 3 and PortMaster 4 that causes **pmcommand** to stop running. Use the **-nostop** flag with **pmcommand** to prevent this problem.
- If you use **pmbackup** on a PortMaster running ComOS 3.7.2 or earlier, it incorrectly generates the following backup commands, which cause errors when the backup file is sent to a PortMaster:

```
set call-check off
set arp-proxy enable
set reported-ip 0.0.0.0
set C0 dtr_idle on
```

The errors do not affect the rest of the commands or the PortMaster and can be ignored.

- If you are running **pmcommand**, you cannot use the **version** option when sending commands to a PortMaster.
- If you are running **pmcommand** on a Microsoft Windows system, you must enclose any multiword command in double quotation marks—for example, **show table locations**.
- If you are running **pmupgrade** on a Windows system, the **-at** flag must have the time enclosed in double quotation marks—for example,  
**-at "4/30/98 10:00 AM"**
- **Back up/Restore** of BGP peers does not work. Replace **set** with **add** in the configuration file to fix problem.

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## System Requirements

The PMTools are Java-based products that run on any system with Java Development Kit (JDK) or Java Runtime Environment (JRE) 1.1.6 or later installed. Nondevelopers can use the JRE rather than the JDK. Currently, JDK 1.1 and JRE 1.1 are available on the following platforms:

Windows NT 4.0	<a href="http://www.javasoft.com/products/jdk/1.1/">http://www.javasoft.com/products/jdk/1.1/</a>
Windows 95	<a href="http://www.javasoft.com/products/jdk/1.1/">http://www.javasoft.com/products/jdk/1.1/</a>
Solaris 2.5.1	<a href="http://www.javasoft.com/products/jdk/1.1/">http://www.javasoft.com/products/jdk/1.1/</a>
Solaris x86 2.5.1	<a href="http://www.javasoft.com/products/jdk/1.1/">http://www.javasoft.com/products/jdk/1.1/</a>
Linux 2.x	<a href="ftp://lagrange.la.asu.edu/pub/Linux_jdk/">ftp://lagrange.la.asu.edu/pub/Linux_jdk/</a>
FreeBSD	<a href="http://www.freebsd.org/java/">http://www.freebsd.org/java/</a>
SGI IRIX 6.3	<a href="http://www.sgi.com/developers/devtools">http://www.sgi.com/developers/devtools</a>
HP-UX 10.02	<a href="http://www.hp.com/esy/go/java.html">http://www.hp.com/esy/go/java.html</a>
Digital Alpha UNIX 4.0	<a href="http://www.digital.com/java/download/">http://www.digital.com/java/download/</a>
IBM AIX 4.1	<a href="http://www.ibm.com/java/tools/jdk.html">http://www.ibm.com/java/tools/jdk.html</a>
Other Platforms	<a href="http://java.sun.com/cgi-bin/java-ports.cgi">http://java.sun.com/cgi-bin/java-ports.cgi</a>

## Installation

1. Download files from **ftp.livingston.com** as follows:

```
ftp ftp.livingston.com
```

```
(Enter anonymous.)
```

```
(Enter your email address; it will not echo.)
```

```
binary
```

```
cd pub/le/software/java
```

```
- For Solaris (other than x86), enter
```

```
get pmtools41_solaris.tar
```

```
- For other UNIX systems, enter
```

```
get pmtools41_unix.tar
```

```
- For Windows, enter
```

```
get pmtools41.zip
```

```
quit
```

2. For UNIX systems only, define the path for **jre/bin** in your **.cshrc** file. For example, if you install the JRE in the **/usr/local/lib** directory, your **.cshrc** file must have the following entry:

```
set path=( /usr/local/lib/jre/bin $path )
```

If the JDK is installed, change the **pmtools** scripts to use the **java** command instead of **jre**.

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3. Run the installation.

For Solaris, enter the following command:

```
tar xvf pmtools41_solaris.tar  
./pmtools_install.bin
```

For other UNIX systems, enter the following commands. You can replace **/usr/local/lucent** with any directory, which you should then add to your path.

```
mkdir <bin>/lucent  
mkdir <bin>/lucent/pmtools  
mv pmtools41_unix.tar <bin>/lucent/pmtools  
cd <bin>/lucent/pmtools  
tar xvf pmtools41_unix.tar  
rm pmtools41_unix.tar  
./setbits # This command sets the executable bits on the shell scripts.
```

For Windows, unzip the **pmtools41.zip** file, run the **pmtools\_install.exe** program, and follow its instructions.

## ***Deinstallation***

On a Solaris or Windows system, an application called **Uninstall\_PMTools** is placed in the Lucent/PMTools directory. Run this application to remove PMTools from your system.

On other UNIX systems, remove the shell scripts and **jar** files to remove PMTools from your system.

## ***Running the PMTools***

For all platforms, to refer to the tools from outside their installation directory, edit the scripts and insert the full path to the **jar** file. For example:

```
jre -cp /usr/local/lucent/pmtools/pmtools.jar \  
-cp /usr/local/lucent/pmtools/oromatcher.jar PMCommand $*
```

For UNIX systems (including Solaris), the installation creates a set of shell script files to run the PMTools. Use these shell scripts to run the different applications of PMTools.

For Windows users, the installation creates a set of batch files to run the PMTools. If you reference these batch files in any other scripts, make sure that you use the **CALL** command. For example, the following command calls the file **version.bat**:

```
CALL pmcommand -h Hostname -p Password "version"
```



**Note** – If you are using a ChoiceNet server, make sure to increase the maximum number of **pmconsole** ports to at least **2** and preferably **10** with the **set maximum pmconsole** command. PMVision uses this port for communication, and if only one port is available then ChoiceNet cannot send filters to the PortMaster. To increase the

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number of **pmconsole** ports, log in to your PortMaster through the console or a Telnet session and type the following command:

**set maximum pmconsole 10**

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## ***Contacting Lucent Remote Access Technical Support***

Lucent Technologies Remote Access Business Unit (previously Livingston Enterprises) provides technical support via voice, fax, electronic mail, or through the World Wide Web at **<http://www.livingston.com/>**. Mention that you are running PMTools 4.1, and include the version of JDK or JRE that you are running, the operating system version (**uname -a** output), and the version of ComOS on the PortMaster.

Internet service providers (ISPs) and other end users in Europe, the Middle East, Africa, India, and Pakistan should contact their authorized Lucent Remote Access sales channel partner for technical support; see

**<http://www.livingston.com/International/EMEA/distributors.html>**.

For North and South America and Asia Pacific customers, technical support is available Monday through Friday from 7 a.m. to 5 p.m. U.S. Pacific Time (GMT -8). Dial 1-800-458-9966 within the United States (including Alaska and Hawaii), Canada, and the Caribbean, or 1-925-737-2100 from elsewhere, for voice support. Otherwise, fax to 1-925-737-2110, or send email to **[support@livingston.com](mailto:support@livingston.com)** (**[asia-support@livingston.com](mailto:asia-support@livingston.com)** for Asia Pacific customers).