Lucent Technologies
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PMTools 4.3 Release Note

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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 4.3 is available to Lucent customers at no charge.

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About PMTools

pmbackup	Backs up a PortMaster configuration to an ASCII file.
pmcommand	Sends commands to a PortMaster.
pmdial	Dials a location on a PortMaster.
pmreset	Resets a port on a PortMaster.
pmupgrade	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**.

pmbackup

-h \<Hostname\>	PortMaster address.
-p \<Password\>	Password for the PortMaster.
-u \<Username\>	Username for the PortMaster. The default is **!root**.
-version	Displays the version and date.
-help	Displays a list of options and a description of each.
-f \<Filename\>	Name of the file to store the backup. If you do not specify a file, the backup information is displayed on standard output.
-bgp	Saves the BGP configuration. Requires ComOS 3.9 or later.
-choicenet	Saves the ChoiceNet® configuration.
-ethernets	Saves the Ethernet configuration.
-filters	Saves the filter table.
-global	Saves the global configuration.
-hosts	Saves the host table.
-imt	Saves the IMT configuration.
-ippool	Saves the IP pool table.
-lines	Saves the line configurations.
-localip	Saves the local IP addresses.
-locations	Saves the location table.
-l2tp	Saves the L2TP configuration.
-maps	Saves the network address translator (NAT) map table. Requires ComOS 3.9 or later.
-ospf	Saves the OSPF configuration.
-ports	Saves the port configurations.
-radius	Saves the RADIUS configuration.
-sa	Saves the security associations.
-secprof	Saves the security profiles.
-snmp	Saves the SNMP configuration.
-subinterfaces	Saves the subinterface table.
-users	Saves the user table.

pmcommand

-h <Hostname>	PortMaster address.
-p <Password>	Password for the PortMaster.
-u <Username>	Username for the PortMaster. The default is **!root**.
-version	Displays the build version and date.
-help	Displays a list of options and a description of each.
-f <Filename>	Name of a file with a list of commands to send to the PortMaster.
-v	When used with **-f**, displays verbose output to standard output, echoing each command.
-nostop	When used with **-f**, specifies that errors caused by a command do not stop the other commands from being carried out.
-noreboot	When used with **-f**, instructs **pmcommand** to ignore any **reboot** commands. Setting this option might cause some commands to fail.
-prompt	When used with **-f**, instructs **pmcommand** to prompt you when it encounters a **reboot** 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

-h <Hostname>	PortMaster address.
-p <Password>	Password for the PortMaster.
-u <Username>	Username for the PortMaster. The default is **!root.**
-version	Displays the build version and date.
-help	Displays a list of options and a description of each.
-t <Minutes>	Idle timeout for the current session.
-x	Displays the dial debug messages.
-f <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

-h <Hostname>	PortMaster address.
-p <Password>	Password for the PortMaster.
-u <Username>	Username for the PortMaster. The default is **!root**.
-version	Displays the build version and date.
-help	Displays a list of options and a description of each.
-slot	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").

pmupgrade

-h <Hostname>	PortMaster address.
-p <Password>	Password for the PortMaster.
-u <Username>	Username for the PortMaster. The default is **!root**.
-version	Displays the build version and date.
-help	Displays a list of options and a description of each.
-r	Reboots the PortMaster after a successful upgrade.
-f <Filename>	ComOS image file to be used for the upgrade.
-at **"**<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.

New Features

PMTools 4.3 have the following new features:

- **pmbackup** adds a **reset** <port> command if the port protocol is saved.

- **pmbackup** adds a **reset ippool** command if the IP pool configuration is saved.

- **pmbackup** now includes options **-imt**, **-ippool**, **-localip**, **-l2tp**, **-sa**, **-secprof**. Refer to the description of **pmbackup** above for a description of each option.

Limitations

PMTools 4.3 have the following known limitations:

- **pmdial** does not work with ComOS 4.0 or later because the idle timeout option 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** option with **pmcommand** to prevent this problem, or delete the command from the file.

- 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** option must have the time enclosed in double quotation marks—for example:

  > **-at "4/30/98 10:00 AM"**

System Requirements

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 for the following platforms at **http://www.javasoft.com/products/jdk/1.1/**:

Windows NT 4.0

Windows 95

Solaris 2.5.1

Solaris x86 2.5.1

Linux 2.x

FreeBSD

SGI IRIX 6.3

HP-UX 10.02

Digital Alpha UNIX 4.0

IBM AIX 4.1

Other Platforms

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 pmtools43_solaris.tar

    - For other UNIX systems, enter
      get pmtools43_unix.tar

    - For Windows, enter
      get pmtools43.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**.

3. Run the installation.

    For Solaris, enter the following command:

    tar xvf pmtools43_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 </usr/local/lucent**>**
    mkdir </usr/local/lucent**>/pmtools**
    mv pmtools43_unix.tar </usr/local/lucent**>/pmtools**
    cd </usr/local/lucent**>/pmtools**
    tar xvf pmtools43_unix.tar
    rm pmtools41_unix.tar
    ./setbits # This command sets the executable bits on the shell scripts.

    For Windows, unzip the **pmtools43.zip** file, run the **pmtools_install.exe** program, and follow its instructions.

4. If you are using a ChoiceNet server, increase to at least 2 and preferably 10 the maximum number of **pmconsole** connections allowed into the PortMaster. PMTools and ChoiceNet both use TCP port 1643 for communication. If only one port is available, ChoiceNet cannot send filters to the PortMaster while PMTools are connected.

    To increase the number of connections allowed through this port, log in to your PortMaster through the console or a Telnet session and type the following command:

    set maximum pmconsole 10

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"

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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 4.3, 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** (**asia-support@livingston.com** for Asia Pacific customers).