



# PM for Power Systems Linux frequently asked questions

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## General

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### What is IBM Performance Management for IBM PowerLinux?

The IBM Performance Management (PM) for PowerLinux is a dynamic, easy to use, performance and capacity planning function that is specifically designed to address the challenges of systems management.

PM for PowerLinux automates many of the functions associated with capacity planning and performance analysis for IBM PowerLinux Systems, and for the IBM Power Systems™, IBM System i and IBM System p models running Linux. It's simple, there's nothing that you need to do other than activate the PM Agent for PowerLinux and periodically check that data is being collected and transmitted to IBM.

The PM Agent for PowerLinux collects performance metrics from the server or partition and sends the data to IBM using either the electronic Service agent or via the Hardware Monitor Console (HMC).

Detailed information is available at: <http://www.ibm.com/systems/power/support/perfmgmt/>

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### How do I get the IBM Performance Management Agent for IBM PowerLinux (PM Agent)?

For new Linux customers who are ordering Linux from IBM, the PM Agent is distributed as part of the IBM Installation ToolKit. Please use version 5.4.1 or later of the ToolKit.

For existing Linux users, the PM Agent can be downloaded/installed from the YUM repository.

Here are the two equivalent commands:

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# <b>yum</b> install ibmPMLinux	# on REDHAT etc., "--downloadonly" is optional and needs yum-downloadonly package
# <b>zypper</b> install ibmPMLinux	# on SUSE, "--download-only" is optional and needs a newer zypper version
# <b>apt</b> install ibmpmlinux	# on Ubuntu (with lower-case name), "download" is another option

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If the command reports "**package 'ibmPMLinux' not found**", your YUM repository configuration for "IBM Power Tools" is probably not done yet, and need to set an appropriate repository first.

ibmPMLinux is one of those tool packages that are periodically upgraded/uploaded to:

<http://public.dhe.ibm.com/software/server/POWER/Linux/yum/OSS/RHEL/6/ppc64>

<http://public.dhe.ibm.com/software/server/POWER/Linux/yum/OSS/SLES/11/ppc64le>

<http://public.dhe.ibm.com/software/server/POWER/Linux/yum/OSS/Fedora/ppc64le>

<http://public.dhe.ibm.com/software/server/POWER/Linux/powerkvm/release/3.1.0/updates>

<https://launchpad.net/~ibmpackages/+archive/ubuntu/pmlinux>

For installation by yum/zypper commands. ibmPMLinux is compatible with all IBM Linux releases of the same Endian.

Setting the repository can be done by installing the "ibm-power-repo" package (under URL: <http://public.dhe.ibm.com/software/server/POWER/Linux/yum/download/>) on the system:

```
# yum install ibm-power-repo # on REDHAT/Fedora/CentOS
```

```
# zypper install ibm-power-repo # on SUSE
```

Alternatively, you may manually set it up with:

```
1) "yast"(or yast2) tool # on SUSE
```

```
# yast # then select:
```

```
Software -> Software Repository -> Repositories -> Add # for SLES11, or  
Software -> Installation Source -> Add # for SLES10
```

to configure a line of repository like:

```
(Priority | Enabled | Autorefresh | Name | URL)
```

```
99 (Default) | x | x | IBM Power SDK Tools |
```

```
http://public.dhe.ibm.com/software/server/POWER/Linux/yum/OSS/SLES/11/ppc64
```

or

```
(Status | Refresh | Name | URL)
```

```
On | On | YUM |
```

```
http://public.dhe.ibm.com/software/server/POWER/Linux/yum/OSS/SLES/10/ppc64
```

```
2) An editor to add a .repo file under /etc/yum.repos.d # on REDHAT
```

```
# vi /etc/yum.repos.d/ibm_power_tools.repo # as a template
```

```
[IBM_Power_Tools]
```

```
name=IBM Power Tools
```

```
baseurl=http://public.dhe.ibm.com/software/server/POWER/Linux/yum/IBM/RHEL/6/ppc64
```

```
enabled=1
```

```
gpgcheck=1
```

```
... ..
```

**Note:** For SUSE systems, repository files are in different directories upon releases. It is way simpler to configure the "IBM Power Tools" repository with "yast" tool because the detail statements inside may be uneasy:

```
# cat /etc/zypp/repos.d/"IBM Power Tools.repo" # on SLES11
```

```
[IBM Power Tools]
```

```
name=IBM Power Tools
```

```
enabled=1
```

```

autorefresh=1
baseurl= http://public.dhe.ibm.com/software/server/POWER/Linux/yum/OSS/SLES/11/ppc64
type=rpm-md
keeppackages=0

# cat /var/lib/zypp/db/sources/<RandomFileName>          # on SLES10

<?xml version="1.0" encoding="UTF-8"?>                # xml format!
<source version="2.0" xmlns="http://www.novell.com/metadata/zypp/xml-store">
  <enabled>true</enabled>
  <auto-refresh>true</auto-refresh>
  <product-dir></product-dir>
  <cache-dir>/var/lib/zypp/cache/Source.EO8042</cache-dir>
  <type>YUM</type>
  <url>http://public.dhe.ibm.com/software/server/POWER/Linux/yum/OSS/SLES/10/ppc64</url>
  <alias>IBM Power Tools</alias>
</source>

# vi /etc/apt/sources.list          # on Ubuntu 14.04 and up, insert 4 lines (keep other entries
unchanged):

# PMUbuntu PPA, using the following commands to refresh the configuration:

# apt-key adv --keyserver keyserver.ubuntu.com --recv-key F4ADEBB2E7D1FA0C; apt-get update
deb http://ppa.launchpad.net/ibmpackages/pmlinux/ubuntu trusty main
deb-src http://ppa.launchpad.net/ibmpackages/pmlinux/ubuntu trusty main

For more detail, please read the manual documents of rpm, yum, zypper, and yast, dpkg on
Linux. In addition, information about them is also available on their websites:

http://www.rpm.org
http://yum.baseurl.org
http://en.opensuse.org/Portal:Libzypp
http://en.opensuse.org/Portal:YaST
https://help.ubuntu.com/community/AptGet/Howto

```

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### **My server is running RHEL 6.3, are there any critical fixes?**

RedHat has posted a zstream kernel fix for the RHEL 6.3 base where CPU utilization metrics (top, vmstat, mpstat, etc) were showing strange and incorrect values.

This behavior is easily seen on an idle system. The updated kernel is easy to install.

See the latest [blog post](#) for details.

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## **Setup**

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### **What are my options for performance (PM) data transmission in a Linux environment?**

- Please refer to the README in the Getting Started Set Up instructions.
- PM data can be transmitted via the HMC, or stand alone ESA

For HMC: install the latest version of:

- RedHat 6: # yum install ibm-power-managed-rhel6
- Suse 11: # zypper install ibm-power-managed-sles11

**Note:** This action will force the respective required installation of src, rsct, librtas, DynamicRM, ServiceRM, etc. on a partition so as to support communications with the HMC

For stand alone ESA: (ie HMC or FSM not used for transmission)

Install (from the ToolKit) and configure the latest ESA package ‘esagent.pLinux-3.4.0-3’ on each

partition where the PM collection agent is installed and running

**Note:** this is in addition to the installation of the respective PM collection agent for RedHat or Suse (see above) on each partition

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## How do I update my Customer Information?

Filling out customer information, such as Company Name, Contact Name & e-mail address, is part of PMLinux configuration. It's the only **mandatory** setting required to be done at the beginning because there is no default input! PMLinux needs to identify the ownership of incoming data and assign the online performance reports to you.

To enter/change any of your customer information, please login on each server (with telnet, ssh, or putty etc. if from remote) to run the "cuinfo.PMLnx" command and type in your contact info similar as below:

```
# ssh <hostname>                                # Putty to login as root
# /var/perf/pm/bin/cuinfo.PMLnx
#21: Company_Name = "" : IBM Corp.
#22: Address = "" : 3605 HWY 52 North
#23: Address1 = "" :
#24: City = "" : Rochester
#25: State = "" : MN
#26: Zip = "" : 55901
#27: Country = "" : United States
#28: Country_Code = "" : 1
#29: Contact_Person_Name = "" : John Sams
#30: Contact_Phone_Number = "" : 5072530000
#31: Email_Address = "" : john.sams@company.com
```

**Note:** If you previously entered the contact info when activating the stand-alone ESA transmission, then you may simply copy from ESA to PMLinux with the “-E” command option:

```
# /var/perf/pm/bin/cuinfo.PMLnx -E
```

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## Data collection

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### What does IBM do with the data I send?

IBM uses the hardware problem reporting data to help reduce problem analysis and improve systems availability. The PM for Power Systems performance and capacity data is processed, and used to create the reports you see on the secure web site.

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### I have been asked by my Business Partner to authorize him/her to see my data. What does this mean and how do I do it?

- This authorization allows the respective Business Partner(s) you authorized to have access to your PM for Power Systems reports stored in IBM's servers. The end user also can 'remove' a customer from authorization to access their reports.

For more information: [Business Partner data release form instructions](#)

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## Transmission

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### What do I have to do to transmit my performance data to IBM?

Once you install and activate both the Electronic Service Agent and PM for Power Systems code, data transmission will be done automatically on the schedule you establish in the Electronic Service Agent set up. Normally this data transmission is done daily.

The PM Linux Collection Agent generates the previous day's performance file just before midnight. So it is recommended that you set ESA or HMC to send the performance file after the file is created. Example: 01:00 am.

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### Security of my data is of great concern. What steps has IBM taken to ensure that my data cannot be seen by unauthorized persons?

Of key importance here is that neither the IBM Electronic Service Agent code nor the PM for Power Systems (including the PM for Power Systems: no charge service level) transmit any customer proprietary information (e.g. data files, internal user-ids, passwords, etc.).

#### *Electronic Service Agent*

With Electronic Service Agent you have the ability to manage data sensitivity concerns and have direct control over the transmission of sensitive data. You have the ability to review the actual data prior to shipment to IBM and if after reviewing it, determine you do not want it sent, you can turn off the transmission.

Secure communications use restricted dial-out, strong TTY and modem security and are performed using and IBM Confidential AT&T network. TTY and modem security are both configured not to auto-answer the modem or allow logic access from the TTY port. Electronic Service Agent only allows outbound calls to be created from the customer location. Electronic Service Agent logs the results of each Electronic Service Agent transmissions made on your system. It records the time of the transmission and whether the transmission completed successfully or resulted in an error. You also have the ability to have Electronic Service Agent send an E-mail message or page notification to contacts relating to all or limited machine problem information.

Electronic Service Agent (ESA) will be updated to include direct Internet connectivity (including encryption) as well as a 16 digit registration ID that will be used to verify authorized customer contacts.

- PM for Power Systems: no charge service level
- PM for Power Systems (Full Service)

Like Electronic Service Agent, PM for Power Systems does not transmit any customer proprietary data. It collects and transmits, through the Electronic Service Agent, performance and capacity tracking data.

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## Reports

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### What should I do if I'm having trouble opening the 6 month .pdf using FireFox when viewing / printing my reports?

#### *Troubleshooting - opening the .pdf in FireFox:*

If you are having trouble with the .pdf not opening after clicking the .pdf icon in "Server Information" page, there are 2 things to try.

- 1) Press CTRL + F5 at the same time to clear you cache, or clear the cache using the menu option Tools > Options > and click on Advanced the choose the "Network" tab. Click on the "Clear Now" buttons for "Cached Web Content" and "Offline Web Content and User Data".
- 2) Exempt the PM website if you are using a pop-up blocker. If the PM pop-up window is being blocked you will get the warning bar at the top of the page. Choose Options and always allow. Or, go to the menu option Tools > Options > and click on "Content". To the right of "Block pop-up windows" you can see a button for Exemptions. Click on the button and add the website URL you want to exempt--enter [pmeserver.rochester.ibm.com](http://pmeserver.rochester.ibm.com) and click to close.

If you are having issues with Firefox opening the same month no matter what month you have chosen then you will need to either:

- a) Upgrade Firefox version



b) go to the “Tools” drop down menu click on “Options” and then on “Applications”, where you see under “Content Type” the “Adobe Acrobat Document” may use the default option “Use Adobe Acrobat (in Firefox)” under “Action”. Change this option to be “Use Adobe Acrobat (default)”.

This will allow opening the PM reports in Adobe Reader for different months.

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**Once the PM Linux reports are available you will be sent a registration key for each server and instructions on how to access the reports.**

*PM for Power Systems reports*

- **Customer access:** Customer reports are only viewable by authorized customer personnel through an online Internet secure site.
- **IBM access:** Internal IBM marketing personnel have access to your performance/capacity reports, and may contact you regarding marginal performance conditions.
- **Business Partner access:** You may submit an authorization form where you identify specific IBM Business Partners that you authorize to have access to your performance data. IBM Business Partners, not identified by you, will not be given access to your data.

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Information concerning non-IBM products was obtained from the suppliers of these products or other public sources. Questions on the capabilities of the non-IBM products should be addressed with those suppliers.

When referring to storage capacity, 1 TB equals total GB divided by 1000; accessible capacity may be less.

The IBM home page on the Internet can be found at: <http://www.ibm.com>.

The IBM Power Systems home page on the Internet can be found at: <http://www.ibm.com/systems/power/>

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