

Quick Start Guide for Lenovo XClarity Energy Manager

Lenovo® XClarity® Energy Manager (hereafter called Energy Manager) is a power and temperature management solution for data centers. It enables you to monitor and manage power consumption and temperature in your data center, and improve energy efficiency.

Installing Energy Manager

Before installing Energy Manager, ensure that your server complies with the following system requirements:

- Hardware requirements:
 - A dual-core processor of 2.6 GHz or higher
 - At least 8 GB RAM
 - At least 80 GB of hard drive space
- Operating systems:
 - Microsoft Windows Server 2012
 - Microsoft Windows Server 2012 R2
 - Microsoft Windows Server 2016
 - Microsoft Windows Server 2019
 - Microsoft Windows Server 2022
 - Microsoft Windows 10
 - Microsoft Windows 11
 - Red Hat® Enterprise Linux 7 (RHEL7) Server x86_64
 - Red Hat Enterprise Linux 8 (RHEL8) Server x86_64
 - Red Hat Enterprise Linux 9 (RHEL9) Server x86_64
 - Novell SUSE Linux Enterprise Server 12 (SLES 12) x86_64
 - Novell SUSE Linux Enterprise Server 15 (SLES 15) x86_64
- Web browsers:
 - Mozilla Firefox
 - Google® Chrome®
 - Microsoft Edge®
- Network configuration:

Energy Manager communicates with devices through multiple protocols, including IPMI, SSH, SNMP, WSMAN, HTTPS, and DCOM (WMI). These protocols should be allowed by the network firewall and the operating system firewall so that Energy Manager can communicate with managed devices through the protocols.

To install Energy Manager, complete the following steps:

1. Go to <http://datacentersupport.lenovo.com/solutions/Invo-lxem> and download Energy Manager.
2. Depending on your operating system (OS), install Energy Manager on your server:
 - For a Windows OS, run the installer directly and follow the graphic user interface (GUI) wizard to complete installation.
 - For a Linux OS, unzip the package and then launch the EXE file to complete installation.

Activating the License

The license mechanism for Energy Manager limits the number of managed devices in the data center hierarchy. You can check the number of available licenses and used licenses by clicking **About** in the banner area of Energy Manager.

By default, Energy Manager can manage Lenovo ThinkServer servers with Lenovo ThinkServer System Manager Premium (TSMP). It can also manage ThinkSystem® servers with XClarity Controller Enterprise licenses. To manage servers without TSMP or XClarity Controller Enterprise licenses, you have to purchase a Node License Pack.

Get the Node License Pack and activate your license, depending on your Energy Manager version and your needs:

- [“Energy Manager of v2.0.0 or later version” on page 2](#)
- [“Energy Manager of v1.3.2 or earlier version” on page 2](#)
- [“Energy Manager upgrade” on page 2](#)

Energy Manager of v2.0.0 or later version

For a newly installed Energy Manager of v2.0.0 or later version, you may manage a maximum of 500 nodes for 90 days with a trial license. If this trial license expires and some managed devices do not have hardware licenses, Energy Manager will stop working until a valid license is imported. In that case, you have to purchase the Node License Pack to manage the devices.

Follow the following steps to get the Node License Pack:

1. Purchase the Node License Pack from Lenovo Support. Then, You will get a license key.
2. Import the license key by clicking **Import new licenses** in the **About** dialog box. Then, you can check the **Purchased License Count** to see whether the license has been activated successfully.

Energy Manager of v1.3.2 or earlier version

Follow the following steps to get the Node License Pack:

1. Purchase the Node License Pack from Lenovo. Then, you will get Token(s) from Lenovo. A Token is a series of numbers that represents management capability for 1 node, 5 nodes, or 50 nodes.
2. Request a license key by submitting the information in the following table to the Lenovo Support.

*Root Key	*Token(s)	Company Name	PO Number	Tel Number

Note: The Root Key can be retrieved by clicking **About** in the banner area of Energy Manager. Root Key and Token(s) are mandatory items. Company Name, PO Number, and Tel Number will assist us to locate your Token(s) number in case they are lost.

3. Get the license key from the Lenovo License Support Center.
4. Import the license key by clicking **Import new licenses** in the **About** dialog box. Then, you can check the **Purchased License Count** to see whether the license has been activated successfully.

Energy Manager upgrade

When you upgrade Energy Manager from v1.3.2 or earlier version to v2.0.0 or later version, the license file would be automatically upgraded to the target version if your existing license file has been imported and is valid. The upgraded license will allow for management of multiple of 500 nodes.

Note: A license file of v1.3.2 or earlier version cannot be directly imported to Energy Manager of v2.0.0 or later version. If your existing license file is valid, you can apply for a new license of the target version from Lenovo by providing previous purchasing information.

Using Energy Manager

To use Energy Manager to manage devices, refer to *Lenovo XClarity Energy Manager User Guide*. The user guide is available at:

<http://datacentersupport.lenovo.com/solutions/Invo-lxem>

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Lenovo XClarity Energy Manager快速入门指南

安装Energy Manager

Lenovo® XClarity® Energy Manager是数据中心功耗及温度管理解决方案。您可以安装Energy Manager来监控和管理数据中心设备的功耗和温度，并使用Energy Manager提高能源效率。

在安装Energy Manager前，请确保您的服务器遵循以下系统要求：

- 硬件要求
 - 双核处理器，主频大于或等于2.6GHz
 - 至少8GB内存
 - 至少80GB硬盘空间
- 操作系统：
 - Microsoft Windows Server 2012
 - Microsoft Windows Server 2012 R2
 - Microsoft Windows Server 2016
 - Microsoft Windows Server 2019
 - Microsoft Windows Server 2022
 - Microsoft Windows 10
 - Microsoft Windows 11
 - Red Hat Enterprise Linux 7 (RHEL7) Server x86_64
 - Red Hat Enterprise Linux 8 (RHEL8) Server x86_64
 - Red Hat Enterprise Linux 9 (RHEL9) Server x86_64
 - Novell SUSE Linux Enterprise Server 12 (SLES 12) x86_64
 - Novell SUSE Linux Enterprise Server 15 (SLES 15) x86_64
- 浏览器：
 - Mozilla Firefox
 - Google® Chrome®
 - Microsoft Edge®
- 网络配置

Energy Manager使用多种协议与被管设备通讯，包括IPMI，SSH，SNMP，WAMAN，HTTPS以及DCOM（WMI）。网络及操作系统防火墙应允许Energy Manager通过这些协议与被管设备通讯。

要安装Energy Manager，请完成如下步骤：

1. 从Lenovo网站下载Energy Manager：<http://datacentersupport.lenovo.com/solutions/lnvo-lxem>。
2. 根据您的操作系统来完成Energy Manager的安装：
 - 对于Windows操作系统，请直接运行安装程序并按照图形界面指示完成安装。
 - 对于Linux操作系统，请解开压缩包并运行可执行文件完成安装。

激活许可证

Energy Manager许可证会限制数据中心结构中设备的数量。通过点击Energy Manager右上角“关于”图标，您可以在“关于”对话框查看已用和可用的许可设备数量。

默认情况下，Energy Manager可直接管理Lenovo ThinkServer with TSMP（带有Lenovo ThinkServer System Manager Premium的Lenovo ThinkServer服务器）。并且也能管理Lenovo带有XClarity Controller Enterprise license的服务器。除Lenovo带有TSMP和XClarity Controller Enterprise license的服务器外，要管理其他设备必须购买Lenovo软件许可证。

您可以根据您使用的Energy Manager版本和使用需要获取相应的软件许可证：

- [“Energy Manager v2.0.0及以上版本” on page 5](#)
- [“Energy Manager v1.3.2及以下版本” on page 5](#)
- [“Energy Manager升级” on page 5](#)

Energy Manager v2.0.0及以上版本

新装的Energy Manager，您可以管理500个除含有硬件许可证的联想服务器和未托管设备之外的设备，有效时间为90天。当许可证过期并且当前管理设备包括除含有硬件许可证的Lenovo服务器及未托管设备之外的设备，Energy Manager会停止工作。您需要购买Lenovo软件许可证才可以继续使用Energy Manager。

您可以按以下步骤获取软件许可证：

1. 联系联想支持 购买许可证。购买许可证后，你将获得许可证文件。
2. 点击“关于”对话框中“导入许可证”链接，导入许可证文件。
您可以通过查看“许可管理设备个数”以确定许可证是否被真正激活。

Energy Manager v1.3.2及以下版本

您可以按以下步骤获取软件许可证：

1. 向联想购买许可证，获取一个或者多个电子凭证。电子凭证是一个序列号，它代表Energy Manager可以管理1个设备，5个设备或者50个设备。
2. 提交以下表格到联想支持申请许可证文件。

*Root Key	*电子凭证	公司名称	订单号	电话号码

Note: 在Energy Manager的“关于”对话框中可以获得Root Key。Root Key和电子凭证是表格必填项。如果电子凭证遗失，公司名，订单号以及电话号码可以帮助我们找到您的电子凭证。

3. 从联想许可证支持中心获取许可证文件。
4. 点击“关于”对话框中“导入许可证”链接，导入许可证文件。您可以通过查看“许可管理设备个数”以确定许可证是否被真正激活。

Energy Manager升级

对于从Energy Manager v1.3.2或v1.3.2以下的版本升级到v2.0.0或v2.0.0以上的版本，如果您的老版本的Energy Manager含有许可证文件并且许可证有效，升级后该许可证文件会自动升级到新的版本。许可管理设备个数会是基于您以前的设备个数的500的整数倍。

Note: Energy Manager v1.3.2或者更老的许可证文件不能导入Energy Manager v2.0 或者更新的版本。请使用老的许可证文件向联想申请新的许可证文件。

使用Energy Manager

请参考*Lenovo ThinkServer Energy Manager*用户手册使用Energy Manager管理设备。用户手册可以从联想网站下载:

<http://datacentersupport.lenovo.com/solutions/Invo-lxem>

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