Installing up.time

Installation Plan

Before installing *up.time* you must:

- identify the system that will act as a central Monitoring Station
- ensure that all client systems that you want to monitor are accessible over the network

All communication with client systems is over TCP using port 9998. However, you can specify a different port during the installation process. All communication originates from the Monitoring Station. When a host that is being monitored is outside a firewall, you only need to configure outbound port access.

The installation procedure creates the user ID *uptime* on the Monitoring Station. The *uptime* user ID should also exist on all of the clients, as using this ID will minimize any security risks by not running the agents as a privileged process.

Wherever possible, do not use the root account to run the Monitoring Station or any up.time agents.

You can use other existing user accounts for the agent, such as *nobody* , *bin* , or *adm* . However, using these accounts may pose security risks depending on other system processes that run under these accounts.

> ⓘ *On HP/UX, you cannot start processes, such as agents, using the   nobody user ID. Also, on Windows operating systems, the agent must be running with Administrator privileges. If it is not, the agent will not be able to access the system performance counters.*

Installation Requirements

This section describes the system requirements for the *up.time* Monitoring Station and *up.time* Agents.

Minimum Hardware Configuration

The hardware configurations for a Monitoring Station can change depending on the number of agents that you want to monitor, the reports that you want to generate, and the amount of data that in the *up.time* DataStore.

> ⓘ *Contact uptime software Client Care if you are monitoring more than 50 nodes.*

The following is the recommended minimum hardware:

- 2.4 GHz dual-core processor
- 2 GB of memory
- 80 GB of disk storage
- 100 Mbps network interface

up.time Agents

You can install and use *up.time* agents to collect data from a number of operating systems. Check the uptime software Client Care Web site for the most up-to-date list of supported platforms and architectures.

> ⓘ *up.time can monitor Novell NetWare NRM version 6.5. Earlier versions of NRM are not supported.*

up.time also supports agentless monitors on any operating system, which do not require you to install software on a system or device. See Using Agentless Monitors.

up.time Monitoring Station

The *up.time* Monitoring Station is a system running the core *up.time* software that retrieves information from client systems, either through agents installed on the system or by monitoring services running on the system. The Monitoring Station has a self-contained Web server and database that enables easy access to the application and data.

Before installation, refer to the uptime software support portal (*http://support.uptimesoftware.com*) for the most up-to-date platform lists:

- supported Monitoring Station platforms
- supported browsers
- supported databases

Installing the up.time Monitoring Station

The Monitoring Station is installed a single directory:

- */usr/local/uptime* on Linux
- */opt/uptime* on Solaris
- *C:\Program Files\uptime software\uptime* on Windows

ⓘ

On Windows, the *up.time* Monitoring Station is installed using a graphical installer that guides you through the steps of the installation process. On Solaris or Linux, the installer is a console application.

> ⓘ *Before installing up.time, you must be logged in as a local (i.e., non-domain) administrator (in Windows) or as root (in Solaris or Linux).*

In addition to the (included) MySQL database, *up.time* can also use either an Oracle or MS SQL Server database as its DataStore. If you plan to use either of these databases, refer to our Knowledge Base for the additional steps required to enable *up.time* to work with these databases.

Before You Begin

There are twoways in which to install the *up.time* Monitoring Station:

1. From an archive downloaded from the uptime software Web site.

If you have downloaded the *up.time* distribution from the uptime software Web site, copy the archive to a temporary directory on the system that will host the Monitoring Station. For the Windows installer, extract the contents of the archive using a utility like WinZip.

1. Imported as a VMware Virtual Appliance.

If you are installing *up.time* as an appliance on an ESX server, you can download the package from the uptime software web site, either directly or through the VMware Virtual Appliance Marketplace. Unarchive the Virtual Appliance package and note its location; you will need to locate the *.ovf* file during the import procedure.

Once preparations have been made, refer to the appropriate procedure below for details on completing the installation for your platform:

- Installing the Monitoring Station on Windows
- Installing the Monitoring Station on Solaris or Linux
- Installing the Monitoring Station as a Virtual Appliance

Installing the Monitoring Station on Windows

To install the *up.time* Monitoring Station on Windows, do the following:

1. If you are upgrading, ensure you have logged out of the *up.time* Web application by clicking the *Logout* button.
2. Ensure you are logged in to the Monitoring Station system as the local administrator.

up.time may not function properly if the Monitoring Station is installed when you are logged in as a domain or non-local administrator.

1. Double click the following file:

up.time-<version#>.<build#>-win32-x86.exe

Where *<build#>* is the number of the *up.time* build that you are installing. For example:

up.time-<version#>.<build#>-win32-x86.exe

1. On the Introduction screen, click *Next* .
2. On the *License Agreement* screen, carefully read the *up.time* end user license agreement, and then click the *I accept the terms of the license agreement* option.
3. Click *Next* .
4. Do one of the following to set the location where *up.time* will be installed:
5. Click *Next* to accept the default location (*C:\Program Files\uptime software\uptime*).
6. In the *Please Choose a Folder* field, type the name of the directory where you want to install the application and then click *Next* .
7. Click *Choose* and select a directory from the *Browse for Folder* window.
8. To recover the default directory, click *Restore Default Folder* .
9. Do one of the following to set the location where the *up.time* DataStore will be installed:
10. Click *Next* to accept the default location (*C:\Program Files\uptime software\uptime\DataStore*).
11. In the *Please Choose a Folder* field, type the name of the directory where you want to install the DataStore and then click *Next* . This should be the full path to the DataStore.

> ⓘ *Because the DataStore can grow very large (in excess of 100 GB), you can install the DataStore in another folder on the file system if you are monitoring a large number of systems and retaining data for extended periods.*

1. Click *Choose* and select a directory from the *Browse for Folder* window.
2. Do one of the following to specify the basic *up.time* configuration information:
3. Click *Next* to accept the defaults.
4. Enter information in the following fields:

Email address

The email address from which the Monitoring Station will send alerts and reports to users.
DataStore Port

The number of the port on which the DataStore (the *up.time* database) will listen for requests. The port number is written to the file *uptime.conf* .
Web Server Name

The name of the computer that is hosting the Web server. This name is written to the file *httpd.conf* , which contains configuration information for the Web server used by *up.time* .
Web Server Port

The number of the port on which the Web server for the Monitoring Station will listen for requests. The port number is written to the file *httpd.conf* .

1. Select an option for setting up icons in the Windows *Start* menu and then click *Next* .
2. On the *Install Summary* screen, review the installation options that you selected and then do one of the following:
3. Click *Previous* to change the settings.
4. Click *Install* to begin the installation process.

The installation process will take several minutes.

1. When the software is installed, click *Next* .

The following occurs:

- The Web server, DataStore and Data Collector are installed.
- The Web server and DataStore are started.
- The DataStore is populated with default data.
- The Data Collector is started.
- On the Install Complete screen, click *Next* .
- Click *Finish* .

Installing the Monitoring Station on Solaris or Linux

Installation on Solaris or Linux is done at the command line. In addition to installing the *up.time* application, the installation process attempts to create the *uptime* user ID (which run applications in non-privileged mode). If it already exists, then the installer will use that account.

Installing the Monitoring Station

To install the *up.time* Monitoring Station on Solaris or Linux, do the following:

1. If you are upgrading, ensure you have logged out of the *up.time* Web application by clicking the *Logout* button.
2. Ensure you have logged in to the Monitoring Station system as root.

up.time may not function properly if the Monitoring Station is installed when you are logged in as a domain or non-local administrator.

1. Type the following command:

sh up.time-<version#>.<build#>-<platform>.bin

where *<build#>* is the number of the *up.time* build that you are installing, and *<platform>* is the operating system on which you are installing *up.time* . For example:

- Linux: *up.time-<version#>.<build#>-rhes4-x86.bin* or *up.time-<version#>.<build#>-sles9-x86-upgrade.bin*
- Solaris: *up.time-<version#>.<build#>-solaris-sparc.bin*

It can take up to several minutes for the components of the installer to be extracted from the *.bin* file. Wait while this process completes.

1. On the Introduction page, press Enter to continue.
2. On the *License Agreement* page, carefully read the *up.time* end user license agreement. Press Enter to scroll through the agreement.
3. At the *DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT? (Y/N)* prompt, type *y* and press Enter.
4. Do one of the following to set the directory in which *up.time* will be installed:
5. Press Enter to accept the default location (*/opt/uptime* on Solaris, and */usr/local/uptime/* on Red Hat and SLES)
6. Type a new location at the command prompt (for example,
   /opt/uptime on Solaris), then press Enter.

ⓘ *The uptime user account must be able to access the directory that you specify.*

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1.   a. Do one of the following to set the location where the *up.time* DataStore will be installed:
      b. Press Enter to accept the default location (for example,
         /usr/local/uptime/datastore on Red Hat and SLES).
      c. Type a new location at the command prompt (for example,
         /opt/uptime/datastore) then press Enter. This should be the full path to the DataStore.

ⓘ *Because the DataStore can grow very large (in excess of 100 GB), you can install the DataStore in another folder on the file system if you are monitoring a large number of systems and retaining data for extended periods.*

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1. Do one of the following to specify the basic *up.time* configuration information:

ⓘ

2. Press Enter to accept the default for each option that is listed below.
3. Type new information for each of the following options:

Web Server Name

The name of the computer that is hosting the Web server. This name is written to the file *httpd.conf* , which contains configuration information for the Web server used by *up.time* .

Web Server Port

The number of the port on which the Web server for the Monitoring Station will listen for requests. The port number is written to the file *httpd.conf* .

up.time email address

The email address from which the Monitoring Station will send alerts and reports to users.

DataStore Port

The number of the port on which the DataStore (the *up.time* database) will listen for requests. The port number is written to the file *uptime.conf* .

1. On the Install Summary page, review the installation options and then do one of the following:
2. Type *back* and then press Enter to change any of the settings.
3. Press Enter begin the installation process.

The installation process will take several minutes.

1. When the software is installed, press Enter.

The following occurs:

- the Web server, DataStore and Data Collector are installed
- the Web server and DataStore are started
- the DataStore is populated with default data
- the Data Collector is started
- On the Install Complete page, press Enter.

ⓘ   *It can take up to a minute for the   up.time services to start. Wait before attempting to log into the Monitoring Station*

Installing the Monitoring Station as a Virtual Appliance

To install the *up.time* Monitoring Station as a Virtual Appliance, do the following:

1. In the Virtual Infrastructure Client, start the procedure to import a virtual appliance.
2. Select the *Import from file* option, and locate the *up.time.ovf* file you downloaded from the uptime software web site. Click *Next* .
3. After viewing the Virtual Appliance Details, click *Next* .
4. On the *License Agreement* screen, review the *up.time* end user license agreement, click the *Accept all license* option, then click *Next* .
5. Provide configuration information for install:
6. the name and location of the *up.time* Virtual Appliance
7. the host or cluster on which the Virtual Appliance will run
8. the resource pool within which it will be run
9. the datastore in which the appliance's data will be kept
10. the network the appliance will use
11. Review your selections, then click *Finish* .

Wait for the import process to complete.

1. In the Virtual Infrastructure Client, navigate to, select the *up.time* appliance, and power it on.
2. Click the *Console* tab for the appliance.
3. After initialization, ensure the appliance time is correct.

The default time zone is PST. The appliance time zone must match that of your monitored infrastructure in order to correctly collect and report performance data.

1. After the appliance configuration has been completed, you can log in to the Monitoring Station to begin setting up your monitored environment.

ⓘ   *It can take up to a minute for the   up.time services to start. Wait before attempting to log into the Monitoring Station.*

Post-Installation Tasks

After installing *up.time* , you will need to do the following:

- set up the administrator account when you first log in (see)
- provide the host name of the SMTP server when you first log in (see SMTP Server)

- install the license for *up.time* (see License Information)
- add users and systems (see Configuring Users and Defining and Managing Your Infrastructure)

Configuring the Monitoring Station to Use Oracle

If this Monitoring Station installation is for a standalone up.time instance that is not part of a multi-datacenter deployment, skip this section and use the default bundled MySQL implementation; otherwise, you must configure the Monitoring Station to write to an Oracle database instance instead of MySQL. To switch the database used by the Monitoring Station, edit the *uptime.conf* file.

To edit the *uptime.conf* file to use an Oracle database instance instead of MySQL, do the following:

1. Remove or comment out the default MySQL settings, as shown below:

dbDriver=com.mysql.jdbc.Driver
dbType=mysql
dbHostname=localhost
dbPort=3308
dbName=uptime
dbUsername=uptime
dbPassword=uptime

1. Show (i.e., uncomment) the Oracle database settings.
2. For the dbHostname and dbPort settings, enter the address and port for your Oracle database server.
3. For the dbName setting, provide a name for the Enterprise Monitoring Station's Oracle database instance.
4. In the dbUsername and dbPassword fields, enter the authentication details to access and write to the database.
5. Save your changes.
6. Use the *resetdb* utility with the *really* option to delete, then recreate the database structure that is used by *up.time* by running the appropriate command:
7. Linux: */usr/local/uptime/resetdb really*
8. Solaris: */opt/uptime/resetdb really*
9. Windows: *C:\Program Files\uptime software\uptime\resetdb really*

Upgrading to up.time 7.0

If you are using a previous version of *up.time* and intend to upgrade to version 7.0, you can find detailed information about the upgrade process at the Client Care Web site (http://support.uptimesoftware.com/upgrade.php).

Installing Agents

up.time agents are used to retrieve detailed performance statistics - such as CPU, memory, process, disk, and network usage - from the hosts that you are monitoring. The agents can also securely and remotely execute programs. The Windows agent can start and stop services, and reboot the machine.

The installation process for agents varies by operating system. On UNIX, Linux, and IBM pSeries systems installation is done at the command line using a script. On Windows, installation is done using a graphical utility.

> ⓘ All client systems must be accessible via a name. This name should exist in either the /etc/hosts table on the Monitoring Station, or be accessible via a nameserver - for example files, NIS, or DNS. If the host IP is changed then the Monitoring Station may send requests to the incorrect machine.

Installing Agents on SolarisInstalling Agents on Windows

The installer for Windows *up.time* agents uses a wizard that guides you through the installation process.

> ⓘ If the Windows installer requires unavailable service packs - for example, SiteServer or Terminal Server - send an email to support@uptimesoftware.com and request the extracted agent which can be installed without using the Windows installer.

> ⓘ Note - If the Windows installer requires unavailable service packs - for example, SiteServer or Terminal Server - send an email to support@uptimesoftware.com and request the extracted agent which can be installed without using the Windows installer.

To install an agent on Windows, do the following:

1. Copy the installer (*setup.exe*) for the Windows agent to the system on which you want to install the agent.
2. Log in to the Monitoring Station as the local administrator.

up.time may not function properly if the Monitoring Station is installed when you are logged in as a domain or non-local administrator.

1. In Windows Explorer, double click the file *setup.exe* .
2. On the installer *Welcome* screen, click *Next* .
3. On the *Select Installation Folder* screen, type the path to the folder in which you want to install the agent in the *Folder* field.

Alternatively, click the *Browse* button and use the dialog box that appears to search for the folder.

1. Select the checkbox *Make available for Everyone* option.

2. Click *Next* .
3. On the *Confirm Installation* dialog screen, click *Next* .

You install *up.time* agents for Solaris at the command line.

To install an agent on Solaris, do the following:

1. Log into the system as user *root* .
2. Using telnet or FTP, transfer the archive containing the agent to the system on which you want to install the agent.

You should copy the archive to a temporary directory on the system.

1. Extract the archive using the following command:

tar -xvf uptmagnt-<version>.tar

Where *<version>* is the version of the agent, for example *solaris-4.0* .

1. Run the following command:

pkgadd -d

1. Follow the prompts from the *pkgadd* utility to select the agent package and install it.

Installing Agents on UNIX

You install *up.time* agents for various UNIX platforms at the command line using a shell script.

To install an agent on a UNIX system, do the following:

1. Log into the system as user *root* .
2. Using telnet or FTP, transfer the archive containing the agent to the system on which you want to install the agent.

You should copy the archive to a temporary directory on the system.

1. Extract the archive.

Depending on the version of UNIX, you will need to extract the archive using either the tar command or a combination of the gzip and tar commands. For example, to extract the agent for AIX use the following command:

tar -xvf uptmagnt-AIX-<version>.tar

1. Type the following command at the command line:

./INSTALL.sh

1. Follow the prompts to complete the installation.

Installing Agents on Linux

You can install *up.time* agents for Linux using the RPM utility or the Debian package management utility (dpkg). This enables you to easily update and perform mass installations of agents.

> ⓘ   *Before trying to install an agent, ensure that the RPM or dpkg utilities are installed and are in the path by typing one of the following commands at the command line:*
>
> *which rpm*
> *which dpkg*

To install an agent on a Linux system, do the following:

1. Log into the system as user *root* .
2. Using telnet or FTP, transfer the *.rpm* or *.deb* file containing the agent to the system.
3. If you are installing the agent using the RPM utility, type the following at the command line:

rpm -i <agent name>

Where *<agent name>* is the name of the *.rpm* file for the agent that you are installing. For example, *uptimeagent-4.0.rpm* .

1. If you are installing the agent using the dpkg utility, type the following at the command line:

dpkg -i <agent name>

Where *<agent name>* is the name of the *.deb* file for the agent that you are installing. For example, *uptimeagent-4.0.deb* .

Installing Agents on IBM pSeries Servers

up.time can collect workload information from IBM pSeries servers that have logical partitions (LPARs). To have *up.time* collect this information, you must install the latest AIX or Linux agents on the on the LPARs whose workloads you want to profile.

There are two options for installing agents on IBM pSeries servers with logical partitions (LPARs):

In both cases, you will need to install the agent on each LPAR; whether you use an HMC determines how the agent is installed on the Virtual I/O (VIO) partition.

Installing the agent on a pSeries server with an HMC

Before you can monitor the logical partitions on an IBM pSeries server, you must install an agent on each LPAR and on the VIO. Use the following instructions to install the agent on an IBM pSeries server that is managed by an HMC.

To install an agent on an LPAR that is on IBM pSeries server with an HMC, do the following:

1. Ensure you are logged in to the HMC as a super-administrator-level user.

up.time communicates with the HMC to acquire LPAR information.

1. If Linux is running on the LPAR, do the following:
2. Log into the LPAR as root.
3. Copy the RPM file containing the Linux agent to the LPAR.
4. Run the following command:

rpm -i <agent name>.rpm

Where *<agent name>* is the name of the *.rpm* file for the agent that you are installing (e.g., *UptimeAgent-Linux-<version>.rpm*).

1. *tar -xvf <agent name>*If AIX is running on the LPAR, do the following:
2. Log into the LPAR as root.
3. Copy the archive containing the agent to the LPAR.
4. Extract the contents of the archive using the following command:

Where *<agent name>* is the name of the archive that contains the agent that you are installing (e.g., *uptmagnt-AIX-<version>.tar*).

- Run the following command to install the agent:

./INSTALL.sh

> ⓘ If you are using an HMC, do not install the agent as a Virtual I/O Server by using the "-vio" attribute with the install command. Doing so may lead to conflicts with HMC-managed systems, and can result in incorrect performance statistics.

1. Do the following to install the agent on the VIO:
2. Log into the VIO as root.
3. Run the following command.

oem_setup_env

- Copy the archive containing the agent to the LPAR.
- Extract the contents of the archive using the following command:

tar -xvf <agent name>

Where *<agent name>* is the name of the archive that contains the agent that you are installing (e.g., *uptmagnt-AIX-<version>.tar*).

- Run the following command to install the agent:

./INSTALL.sh
Installing the agent on a pSeries server without an HMC

Before you can monitor the logical partitions on an IBM pSeries server, you must install an agent on each partition. Use the following instructions to install the agent on an IBM pSeries LPAR that is not managed by an HMC, but whose partitions are managed by the Integrated Virtual Manager (IVM).

To install the agent, do the following:

If Linux is running on the LPAR, do the following:

- Log into the LPAR as root.
- Copy the RPM file containing the agent to the LPAR.
- Run the following command:

rpm -i <agent name>.rpm

Where *<agent name>* is the name of the *.rpm* file for the agent that you are installing (e.g., *UptimeAgent-Linux-<version>.rpm*).

1. If AIX is running on the LPAR, do the following:
2. Log into the LPAR as root.
3. Copy the archive containing the agent to the LPAR.

4. Extract the contents of the archive using the following command:

tar -xvf <agent name>

Where *<agent name>* is the name of the archive that contains the agent that you are installing. For example, *uptmagnt-AIX-<version>.tar* .

- Run the following command to install the agent as a Virtual I/O Server:

./INSTALL.sh -vio

1. Do the following to install the agent on the VIO:
2. Log into the VIO as root.
3. Copy the archive containing the agent to the LPAR.
4. Extract the contents of the archive using the following command:

tar -xvf <agent name>

Where *<agent name>* is the name of the archive that contains the agent that you are installing. For example, *uptmagnt-AIX-<version>.tar* .

- Run the following command to install the agent:

./INSTALL.sh -vio