



# Installation



From:

<https://pandorafms.com/manual/!775/>

Permanent link:

[https://pandorafms.com/manual/!775/en/documentation/pandorafms/installation/01\\_installing](https://pandorafms.com/manual/!775/en/documentation/pandorafms/installation/01_installing)

2024/03/18 21:03



# Installation

We are working on the translation of the Pandora FMS documentation. Sorry for any inconvenience.

## Pandora FMS Console and Server Installation

### On which operating systems does Pandora FMS work?

Pandora FMS needs GNU/Linux for the server and the Console. It is not officially supported on MS Windows® or any other operating system.

Monitoring agents are supported for any platform:

- Microsoft Windows® (all versions from NT4 to 11).
- Different GNU/Linux distributions (Debian, RedHat, Fedora, CentOS, CentOS Stream, Mint, SUSE, etc.).
- Unix® (Solaris®, HPUNIX, AIX, BSD, etc.).
- There is also an agent for the Android mobile operating system.

### Minimum hardware requirements

The requirements set out in this table are the minimum recommendations for different installations. These recommendations are calculated assuming that 80% of the Modules have historical data and the average sampling time is five minutes. These recommendations are specified for an environment where Pandora FMS Server and Web Console are installed on the same database server.

Hardware	<b>SMALL: Up to 5,000 modules</b>	<b>MEDIUM: Up to 15,000 modules</b>	<b>LARGE*: Up to 30,000 modules</b>	<b>Extra LARGE*: Up to 80,000 modules</b>
<b>CPU</b>	2 cores at 2 GHz	4 cores at 2.5GHz	6 cores at 3GHz	10 cores at 3GHz
<b>RAM</b>	4GB	8GB	16GB	32GB
<b>Storage speed</b>	7200rpm	15Krpm or SSD	SSD	SSD
<b>Minimum Space</b>	40GB minimum 60 GB recommended	60GB minimum 150 GB recommended	120GB minimum 250 GB recommended	250GB minimum 400 GB recommended

These values are approximate and taking as reference an environment with mixed monitoring (software and remote agent) with the default interval of 5 minutes and default data storage. If these values are altered, the requirements may vary.

\*\* For environments that exceed 80 thousand metrics, a distributed monitoring system using

multiple nodes should be chosen.

(\*) In the case of requiring higher performance per node, there is the possibility of deploying the database in another instance or even configuring the node to connect to an xtradb database cluster.

In case of installing Pandora FMS in a virtual environment, make sure to allocate an independent disk with reserved space and high access speed. The use of SSD type storage devices is recommended, due to the high impact they have on improving performance.

If you need to save information that is older than a month, you will need to create a [historic database](#). For the sizing of the machine, see the hardware requirements in the previous table.

## Minimum software requirements

Software	Requirements
<b>Operating System</b>	RedHat Enterprise (RHEL) 8 (recommended). Rocky Linux 8. RedHat Enterprise (RHEL) 7.X (Enterprise version only). Ubuntu Server 22.04 (version 766 or later): in Enterprise version for stand alone nodes only, Metaconsole environments must be fully installed on RHEL 8 / Rocky Linux 8 (recommended) or failing that, RHEL 7. In Ubuntu Server 22.04 installations on servers without internet connection are not supported.
	Windows Server (2003 or higher) SLES 11 SP1 or higher OpenSUSE 11.X or higher Debian 5, 6, 7 or higher Ubuntu Server 21 or higher Ubuntu Desktop FreeBSD 9.X or higher Solaris 10/OpenSolaris
	Pandora FMS does not officially support these platforms.
<b>Permissions</b>	Server The Pandora FMS Server service must be executed as root permissions. It is possible to run as a non-root user, being a special and different procedure, more information in this <a href="#">link</a> . Console In order to use the console from any web browser, Apache must have read and execute permissions on the Console files. Additionally, the config.php file must have 600 permissions (read and write for administrator/root). In turn, it is necessary to have write permissions in the server directory: /var/spool/pandora/ Software Agent -Linux®: The Pandora FMS Server Software Agent must be executed as permissions as root in order to have all the agent's functionalities, although it is also possible to run it with other permissions. -MS Windows®: The Pandora FMS Server Software Agent must be executed with administrator permissions.
<b>Console</b>	PHP 8 → For versions of Pandora FMS 760 or later (since version 766 uses PHP 8 by default). PHP 7.4 → For Pandora FMS versions 759 to 767. PHP 7.2 → For Pandora FMS versions from 729 to 758. PHP 5 → For Pandora FMS versions 728 or earlier.
<b>Browsers</b>	Microsoft Edge®. Opera web browser®. Google Chrome®. Mozilla Firefox®
	Mozilla Firefox® and Google Chrome® are recommended to make use of interactive graphics and network maps.

For Pandora FMS (server level) the term EL8 is used to denote the set of recommended operating systems, which is made up of Rocky Linux 8™, AlmaLinux 8® and RedHat 8®.

## Database Requirements

BBDD	Details
<b>MySQL Standard</b>	Version 5.7 by default, as of version 760 it has support for MySQL version 8. For the standard installation, a user with creation privileges in the Pandora FMS database is required. If you do not have that user, you can perform a manual installation.
<b>Percona Server for MySQL</b>	The installation of Percona Server for MySQL is recommended for large Pandora FMS environments where more than 4000 agents are going to be created. Version 5.7 by default, from version 760 it has support for MySQL version 8. For the standard installation, a user with creation privileges in the Pandora FMS database is required. If you do not have that user, you can perform a manual installation.

## Satellite Server Requirements

Satellite	Details
<b>Hardware</b>	The hardware requirements of the system that will host the Satellite server will depend on the volume of monitoring that it must carry out. For environments with fewer than 1,000 agents, a minimum of 1 core at 2GHz and 1 GB of RAM is recommended.
<b>Operating system</b>	Linux® 32 or 64 Bits MS Windows® 32 or 64 Bits Raspberry Pi OS
<b>Dependencies</b>	The fundamental dependencies are: fping, nmap, perl, pandorawmic (NG 762 version and later) and libnsl. If you are using Rocky Linux 8 or later, also <a href="#">configure the EPEL repository</a> . if you are using MS Windows®, depending on the OS version, install <a href="#">Microsoft Visual C++ Redistributable®</a> .

## Port Requirements

Port	Protocol	Service/Process	Description	Address
<b>80</b>	TCP	Pandora FMS Console	IP address management	Browser → Server Pandora FMS Console
<b>80</b>	TCP	Pandora FMS Console (API Communication)	Use of API/CLI functionality	Browser/Server that initiates the query → Pandora FMS Console Server
<b>80</b>	TCP	Metaconsole	Communication between Metaconsole and Nodes	Metaconsole Server → Node Server Node Server → Metaconsole Server
<b>162</b>	UDP	Pandora FMS Server	Reception of traps	Device generated from traps → Pandora FMS Server
<b>443</b>	TCP	Pandora FMS Console (API Communication)	Use of API/CLI functionality	Browser/Server that initiates the query → Pandora FMS Console Server
<b>443</b>	TCP	Metaconsole	Communication between Metaconsole and Nodes	Metaconsole Server → Node Server Node Server → Metaconsole Server

Port	Protocol	Service/Process	Description	Address
3306	TCP	Pandora FMS Console and Server	Connection to the BBDD	Pandora FMS Console Server → Pandora FMS DB Server Pandora FMS Server → Pandora FMS DB Server
3306	TCP	Metaconsole	Communication between Metaconsole and DB Nodes	Metaconsole Server → DB Server Nodes Node Server → DB Server Metaconsole
4444	TCP	Pandora FMS Server	Connection with Selenium GRID	Pandora FMS Server → Selenium Server
9995	UDP	Pandora FMS Server	Reception of NetFlow probes	nfcapd Server → Pandora FMS Server
9200	TCP	Pandora FMS Server and Console	Log storage management with Elasticsearch	Elasticsearch Server → Pandora FMS Server
41121	TCP	Pandora FMS Agents	Tentacle Communication	Software Agent Server → Pandora FMS Server
<b>It is recommended to facilitate communication from the Pandora FMS server and console to your entire network. For standard monitoring you would need at least:</b>				
80	TCP	Pandora FMS Server	Web monitoring for WUX server	Pandora FMS Server → Server to monitor
161	UDP	Pandora FMS Server and Console	Monitoring through SNMP Polling	Pandora FMS Server → Server to monitor
443	TCP	Pandora FMS Server	Web monitoring for WUX server	Pandora FMS Server → Server to monitor
ICMP	ICMP	Pandora FMS Server and Console	Network monitoring with ICMP checks	Pandora FMS Server → Server to monitor

## Package dependencies

Pandora FMS depends to a large extent on the Linux® operating system, but it also requires additional packages that are often not installed by default.

## Pre-Installation Questions

### MySQL

You need a working MySQL server before instalalar Pandora FMS. If you are installing PFMS at the same time as the MySQL server you have to start it and configure MySQL root access:

1. Start with systemd: `systemctl start mysql` (alternatively you can use `/etc/init.d/mysql start`).
2. Set the password for the admin user root: `mysqladmin password < password >`. This password will be requested throughout the installation process.

### Pandora FMS installation order

1. Install the Web Console.
2. Install the PFMS server.

The reason is that the MySQL database used by the server is created in the initial configuration process of the console and therefore, to ensure the proper functioning of the server, it is recommended to perform the complete installation process of the console first.

It is unnecessary for the console and the server to be hosted on the same machine. It is possible to indicate to both where the MySQL database is located through the corresponding configuration files, although in Enterprise environments when carrying out a distributed installation, more factors must be taken into account for the installation.

The installation of the Software Agent on the server is done without any problem before or after installing the server and the console, since it is independent of them.

### **Installation of the Enterprise version of Pandora FMS**

**E** The proper order to perform an Enterprise installation is as follows:

- Install the Open Source Console.
- Install the Console of the Enterprise version.
- Install the Enterprise version server.
- When accessing the Console, boxes will appear requiring you to enter your Enterprise license code.

License validation is only done in the Console, not on the server.

### **Enterprise Alternative Server packages**

**E** You can also choose to download and install the Enterprise version in a novel alternative package.

It is a set of binary files available in `.tar.gz` and `.rpm` formats, it is a different binary compilation than usual, in experimental phase.

Its advantages are the implementation of the encrypted connection to the MySQL® database as well as the option to use MS SQL Server®.

From the [technical support section](#) you can request access to said resource.

### **Online Installation Tool**

If you have Internet access it is recommended that you perform the online installation using this useful tool.

## Pandora FMS monolith environment (server/console/database)

This method of installation is especially useful when the environment is hosted by cloud providers, although it is not exclusive to these types of environments.

The term “Cloud provider” (or simply “Cloud”) is used to describe the hosting of virtual machines, either exclusively or shared, in specialized providers with hardware, hypervisors and web customer service systems for their configuration. and administration.

For any of them you can install Pandora FMS Community edition. Red Hat (RHEL) 8.x is recommended as the operating system although it is also officially supported by Rocky Linux 8.x, AlmaLinux 8.x and Ubuntu 22.x .

The minimum hardware requirements for this installation are: 1 core, 2 gigabytes of RAM and 20 gigabytes of free disk space, preferably a Solid State Drive (SSD).

These requirements are the minimum installation requirements, to properly size the monitoring environment we recommend going to the [section of minimum hardware requirements](#).

### Requirements for the use of the online installation tool ( online )

- Have internet access ([URL necessary](#)). In addition to these URLs, it is necessary to have access to the official repositories of the distribution used (RHEL / Rocky Linux / Ubuntu Server).
- Have curl installed (it comes by default on most distributions)
- Meet the requirements [minimum hardware](#).
- Be an administrator user root.
- Have a compatible OS.
- In the case of using RHEL 8, it will be necessary to previously activate it with a license and subscribe to the standard repositories.

To use the online installation tool, simply access the command line provided by your Cloud provider, with the administrator user root, and execute:

In the case of using RHEL 8.x and Rocky Linux 8.x:

```
curl -sSL https://pfms.me/deploy-pandora-el8 | bash
```

If you use Ubuntu Server 22.04 to install the version:

```
curl -sSL https://pfms.me/deploy-pandora-ubuntu | bash
```

There is a similar online installation tool for the Enterprise version of Pandora FMS that can be requested if you are already a user of this version through the



support portal or [through from this link](#) get a free trial (demo).

In addition, for [Satellite server installation](#), it also has an online installer.

With this execution, the entire necessary set (stack) of Pandora FMS will be installed, leaving a fully functional instance to start monitoring.

### Custom installation using online installation tool

Although the above run does a full installation of the environment, it is possible to define different switches via environment variables to customize the installation.

### Custom parameters for RHEL 8.x and Rocky Linux 8.x

- TZ: Defines the time zone (time zone) of the machine, by default it is Europe/Madrid.
- DBHOST: The host of the database, by default DBHOST=127.0.0.1 .
- DBNAME: The name of the database to create, by default DBNAME=pandora.
- DBUSER: The database user to be created, by default DBUSER=pandora .
- DBPASS: The password (password) for the user that will be created, by default DBPASS= ' Pandor4! ' .
- DBPORT: Port number of the database to connect, by default DBPORT=3306.
- DBROOTPASS: Password of the root user of the database, by default DBROOTPASS= ' Pandor4! ' .
- SKIP\_PRECHECK: Skip the check if there is already a previous installation of Pandora FMS, useful to create a new database and point the installation to it; by default SKIP\_PRECHECK=0.
- SKIP\_DATABASE\_INSTALL: Skip the database installation, useful when you already have a database installed, either local or remote, and use its credentials to create the Pandora FMS database; defaults to SKIP\_DATABASE\_INSTALL=0.
- SKIP\_KERNEL\_OPTIMIZATIONS: Skip recommended kernel optimization, for advanced users only. By default SKIP\_KERNEL\_OPTIMIZATIONS=0.
- MYVER: Defines the version of MySQL to install, if 80 is defined MySQL 8 will be installed. By default MYVER=80 (deploys MySQL 8.0).
- PHPVER: Defines the version of PHP to install, by default PHPVER=8 (displays PHP 8).
- PANDORA\_SERVER\_PACKAGE: Defines the URL of the RPM package of the Pandora FMS server that you want to install. By default, the latest available version is defined.
- PANDORA\_CONSOLE\_PACKAGE: Defines the URL of the Pandora FMS Web Console RPM package that you want to install. By default, the latest available version is defined.
- PANDORA\_AGENT\_PACKAGE: Defines the URL of the RPM package of the Pandora FMS Software Agent that you want to install. By default, the latest available version is defined.
- PANDORA\_BETA: If it is set to 1 the packages of the latest available beta version will be installed (only for test environments). By default PANDORA\_BETA=0 (if specific packages are defined, this option is ignored).
- PANDORA\_LTS: Installs the latest version of Long Term Support (LTS), a version with maximum stability that incorporates major bug fixes. By default it is active (PANDORA\_LTS=1), if it is set to zero it installs the latest regular version, Regular Rolling Release (RRR).

To use these environment variables, it is enough to define them before executing the installation script, for example, in an installation in RHEL 8 with defined variables, execute the block:

```

env TZ='Europe/Madrid' \
  DBHOST='127.0.0.1' \
  DBNAME='pandora' \
  DBUSER='pandora' \
  DBPASS='Pandor4!' \
  DBPORT='3306' \
  DBROOTPASS='Pandor4!' \
  MYVER=80 \
  PHPVER=8 \
  SKIP_PRECHECK=0 \
  SKIP_DATABASE_INSTALL=0 \
  SKIP_KERNEL_OPTIMIZATIONS=0 \
  PANDORA_SERVER_PACKAGE="https://firefly.pandorafms.com/pandorafms/latest/RHEL_Ce
ntOS/pandorafms_server-7.0NG.noarch.rpm" \
  PANDORA_CONSOLE_PACKAGE="https://firefly.pandorafms.com/pandorafms/latest/RHEL_C
entOS/pandorafms_console-7.0NG.noarch.rpm" \
  PANDORA_AGENT_PACKAGE="https://firefly.pandorafms.com/pandorafms/latest/RHEL_Cen
tOS/pandorafms_agent_linux-7.0NG.noarch.rpm" \
  PANDORA_BETA=0 \
  PANDORA_LTS=1 \
  sh -c "$(curl -fsSL https://pfms.me/deploy-pandora-el8)"

```

#### Custom parameters for Ubuntu Server 22.04

- TZ: Defines the time zone of the machine, by default it is Europe/Madrid.
- PHPVER: Defines the version of PHP to install. Default PHPVER=8 (displays PHP 8).
- DBHOST: The host of the database, by default DBHOST=127.0.0.1 .
- DBNAME: The name of the database to create, by default DBNAME=pandora.
- DBUSER: The database user to be created, by default DBUSER=pandora .
- DBPASS: The password (password) for the user that will be created, by default DBPASS= 'Pandor4!' .
- DBPORT: Port number of the database to connect, by default DBPORT=3306.
- DBROOTPASS: Password of the root user of the database, by default DBROOTPASS= 'Pandor4!' .
- SKIP\_PRECHECK: Skip the check if there is already a previous installation of Pandora FMS, useful to create a new database and point the installation to it; by default SKIP\_PRECHECK=0.
- SKIP\_DATABASE\_INSTALL: Skip the database installation, useful when you already have a database installed, either local or remote, and use its credentials to create the Pandora FMS database; defaults to SKIP\_DATABASE\_INSTALL=0.
- SKIP\_KERNEL\_OPTIMIZATIONS: Skip recommended kernel optimization, for advanced users only. By default SKIP\_KERNEL\_OPTIMIZATIONS=0.
- POOL\_SIZE: Specifies a value of memory to use, by default it is done automatically.
- PANDORA\_BETA: If it is set to 1 the packages of the latest available beta version will be installed (only for test environments). By default PANDORA\_BETA=0 .
- PANDORA\_LTS: Installs the latest version of Long Term Support (LTS), a version with maximum stability that incorporates major bug fixes. By default it is active (PANDORA\_LTS=1), if it is set to zero it installs the latest regular version, Regular Rolling Release (RRR).

To use these environment variables, it is enough to define them before executing the installation script, for example, in an installation on Ubuntu Server 22.04 with defined variables, execute the block:

```
env TZ='Europe/Madrid' \  
DBHOST='127.0.0.1' \  
DBNAME='pandora' \  
DBUSER='pandora' \  
DBPASS='Pandor4!' \  
DBPORT='3306' \  
DBROOTPASS='Pandor4!' \  
PHPVER='8.0' \  
SKIP_PRECHECK=0 \  
SKIP_DATABASE_INSTALL=0 \  
SKIP_KERNEL_OPTIMIZATIONS=0 \  
PANDORA_BETA=0 \  
PANDORA_LTS=1 \  
bash -c "$(curl -sS https://pfms.me/deploy-pandora-ubuntu)"
```

### Values that change on kernel optimization

The following changes are made by the `SKIP_KERNEL_OPTIMIZATIONS=1` parameter:

```
#default=5  
net.ipv4.tcp_syn_retries = 3
```

This setting specifies the number of retries the operating system kernel will make when sending a TCP connection request packet before the connection is considered to have failed. The default value is 5, but with the specified settings, it will be set to 3.

```
#default=5  
net.ipv4.tcp_synack_retries = 3
```

Similar to the previous configuration, this option sets the number of retries the kernel will perform when receiving an acknowledgment response packet from a TCP connection. The default value is 5, but with the specified settings, it will be set to 3.

```
#default=1024  
net.ipv4.tcp_max_syn_backlog = 65536
```

This setting sets the maximum size of the queue for TCP connections pending acceptance. In other words, it determines the maximum number of connection requests that the operating system can handle simultaneously. The default value is 1024, but with the specified settings, it will be set to 65536.

```
#default=124928  
net.core.wmem_max = 8388608
```

This option sets the maximum size of the memory buffer for sending data over network connections. Controls the maximum amount of memory that can be allocated to store data before

sending it. The default value is 124928, but with the specified settings, it will be set to 8388608.

```
#default=131071
net.core.rmem_max = 8388608
```

Like the previous setting, but to receive data instead of sending it, this option sets the maximum memory buffer size for receiving data over network connections. Controls the maximum amount of memory that can be allocated to store received data. The default value is 131071, but with the specified settings, it will be set to 8388608.

```
#default = 128
net.core.somaxconn = 1024
```

This option specifies the maximum number of connections pending in the operating system's socket listening queue. Controls the maximum number of incoming connections that can be in a waiting state before being accepted. The default value is 128, but with the specified settings, it will be set to 1024.

```
#default = 20480
net.core.optmem_max = 81920
```

This setting sets the maximum memory buffer size for socket options. Controls the maximum amount of memory that can be allocated to store settings options.socket before they are used. The default value is 20480, but with the specified settings, it will be set to 81920.

## Installation of Pandora FMS with an external database

Version 765 or later.

If there is a powerful exclusive server to host the database (DB) for Pandora FMS, there is another [customization](#) for [online installation](#).

First you should take into account, roughly, how you should plan the installation so that both the PFMS server and its Web Console (PANDORA FMS SERVER+CONSOLE) connect to a remote database (DB) :

- Connect to the server that hosts the database engine, take note of its exact URL or its IP address (DBHOST).
- The default port number (DBPORT) is 3306, take note if you use a different one.
- You must create the database, write down the exact name used (it is recommended to use pandora as DBNAME).
- You must create the user to use to connect to the database (it is recommended to use pandora as DBUSER).
- Assign a password for the user created in the previous step (DBPASS).

To comply with the **Security Architecture** of Pandora FMS, use a password other than the one established by default.

- Assign all permissions on the created database to the created user.

To comply with the **Security Architecture** of Pandora FMS, establish limit the connection to the IP address or URL of the future PFMS server and for the user created. This will ensure that if the passwords are compromised, they will be useless if used from a device other than the PFMS server to be created.

- With all this established, make a test connection by **command line** from the future PFMS server to the created database, this will guarantee that there is communication verified and ready to work.
- The installation parameter that allows connecting to a remote database during online installation is `SKIP_DATABASE_INSTALL` and its value must be set to 1.
- Proceed with the actual installation using the online installation tool. A simplified example is shown below, with the default values (always remember to use a user password other than the one established by default).

```
send \  
DBHOST='192.168.1.107' \  
DBNAME='pandora' \  
DBUSER='pandora' \  
DBPASS='pandora' \  
DBPORT='3306' \  
SKIP_DATABASE_INSTALL=1 \  
sh -c "$(curl -fsSL https://pfms.me/deploy-pandora-el8)"
```

## Online installation of Pandora FMS Software Agent

To install only the Software Agent there is also an online installation tool via BASH command.

- It is compatible with the GNU/Linux® operating systems based on RedHat (Fedora, CentOS, etc.) and Debian (Ubuntu Server, Devuan, Lubuntu, etc.).
- Available on MS Windows® using PowerShell® technology.

### For GNU/Linux

Requirements for using the online installation tool:

- Have internet access.
- Have curl installed (it comes by default in most installations).
- Be an administrator user root.
- Have a compatible OS.

The script supports a number of environment variables to customize the installation. Only one of

them is mandatory: `$PANDORA_SERVER_IP` , so to carry out a standard installation in a single line, it is enough to execute:

```
export PANDORA_SERVER_IP=<PandoraServer IP or FQDN> && curl -Ls  
https://pfms.me/agent-deploy | bash
```

These environment variables are used only in the installation process, they can be destroyed or changed after the installation without altering the behavior of the Pandora FMS software agent.

Optionally it is possible to use other env variables to customize the installation:

- `$PANDORA_REMOTE_CONFIG`: Configure the remote configuration in the Enterprise version. Zero ( 0 ) by default, disabled.
- `$PANDORA_AGENT_NAME`: Sets the name of the agent. Autogenerated by default.
- `$PANDORA_AGENT_ALIAS`: Configures the alias of the Software Agent. By default the hostname.
- `$PANDORA_GROUP`: Sets the group of Software Agent. By default Servers.
- `$PANDORA_SECONDARY_GROUPS`: Configures the secondary groups of the Software Agent. empty by default
- `$PANDORA_DEBUG`: Configure the debug setting. Zero ( 0 ) by default, disabled.
- `$TIMEZONE` : Sets the system time zone.
- `$PANDORA_AGENT_SSL`: Allows you to configure encrypted communications between the Software Agent and the corresponding PFMS server. By default not enabled (no), to enable it use yes (this will also install software dependencies to encrypt such communications). Use single quotes to delimit the value, see the following example:

```
env \  
PANDORA_SERVER_IP='192.168.10.245' \  
PANDORA_REMOTE_CONFIG=1 \  
PANDORA_AGENT_NAME='pandora_agent_name' \  
PANDORA_AGENT_ALIAS='pandora_AGENT_ALIAS' \  
PANDORA_GROUP='Servers' \  
PANDORA_SECONDARY_GROUPS='VMware,Web' \  
PANDORA_AGENT_SSL='yes' \  
bash -c "$(curl -Ls https://pfms.me/agent-deploy)"
```

Keep in mind that in order to encrypt communications through the Tentacle protocol between the software agents and their respective PFMS servers, it will be necessary to previously have SSL certificates and keys. Visit the section “[Encryption of communication](#)” in the Tentacle protocol technical reference.

**For MS Windows**

Requirements for using the online installation tool:

- Have internet access.
- Have PowerShell installed.

Run the following commands in a terminal window with PowerShell and with administrator permissions (administrator):

```
Invoke-WebRequest -Uri  
https://firefly.pandorafms.com/pandorafms/latest/Windows/Pandora%20FMS%20Windows  
%20Agent%20v7.0NG.x86_64.exe -OutFile ${env:tmp}\pandora-agent-windows .exe; &  
${env:tmp}\pandora-agent-windows.exe /S --ip [PANDORASERVER IP or NAME] --group  
[GROUPNAME] --remote_config 1
```

Then:

```
NET START Pandora FMSAgent
```

## Installation by packages

This section is referential as it saves time and effort [when using the online installation tool](#). It is strongly recommended to use this option to install the PFMS server.

- [Pandora FMS installation guide on Ubuntu server](#)
- [Pandora FMS installation guide on Rocky Linux](#)

## Installation by packages in RHEL 7/8

The installation of Pandora FMS in RHEL 7 and RHEL 8 systems is an Enterprise service. You can check how to install these systems by contacting your trusted salesperson or by filling out the following [contact form](#).

## Installation under Docker

This resource is only intended for test, learning and even pre-production environments.

We have an entry on the Docker Hub website that explains step by step how to mount a Pandora FMS stack, currently based on Rocky Linux™ 8, at the following link:

<https://hub.docker.com/r/pandorafms/pandorafms-open-stack-el8>

Installation via a `yaml` file is also possible, as a quick installation method. The following explains how to perform this deployment using `docker-compose`.

First, you need to have Docker and Docker Compose installed on your system. You can check how to install through the official Docker documentation:

<https://docs.docker.com/get-docker/>

Once installed, use the `yaml` file from the official Pandora FMS repository:

```
mkdir $HOME/pandorafms; cd $HOME/pandorafms
wget
https://raw.githubusercontent.com/pandorafms/pandorafms/develop/extras/docker/centos8/docker-compose.yml
docker-compose -f $HOME/pandorafms/docker-compose.yml up
```

Wait a few seconds for the download and environment setup. Once finished, you will be able to access the Pandora FMS console through the URL:

```
http://127.0.0.1:8080/pandora_console
```

Use `admin` as username and `pandora` as password.

## Uninstalling Pandora FMS

### Uninstalling Pandora FMS in RHEL

They are executed with the command:

```
yum remove pandorafms_console pandorafms_server
```

If version 761 or later is uninstalled:

```
yum remove pandorawmic
```

If you have installed MySQL and it is no longer needed:

```
yum remove Percona-Server*
```

## Custom Installation



## Manual installation from sources on Linux / Unix / MacOS

It will be necessary to have all the [necessary dependencies installed according to the operating system](#), download the files in tarball format (.tar.gz, .tgz or .tar.bz2) and unzip it. To do this, locate the latest version of Pandora FMS:

<https://sourceforge.net/projects/pandora/files/>

### Console Installation

Once you have the compressed file in the Console, through a terminal window:

1. Elevate privileges to root. You are solely responsible for said key.

```
his -
```

2. Copy to a directory where you can unzip the file (/tmp is used in this example) and inside that directory run:

```
tar xvzf pandorafms_console-X.Y.tar.gz
cd pandora_console
./pandora_console_install --install
```

### Server Installation

Once the server has the compressed file, which will have a similar name:

pandorafms\_server-7.0NG.7xx.tar.gz

1. Elevate privileges to root. You are solely responsible for said key.

```
his -
```

2. Copy to a directory where you can unzip the file (/tmp is used again in this example) and inside that directory run:

```
tar xvzf pandorafms_server-7.0NG.7xx.tar.gz
cd pandora_server
./pandora_server_installer --install
```

If there are dependency issues, you should resolve them before attempting the installation. You can force the installation by ignoring the dependency problem, but it is very possible that Pandora

FMS will not work correctly.

### Manual installation (from source code) of the server

As an alternative to the generic installation script, the Pandora FMS code can be compiled using the Perl interpreter of your system. This process simply installs the minimal libraries and executables, but does not touch the system startup scripts, maintenance scripts, configuration, or anything else but strictly the application and its libraries. This process is the one to use when you need to update your server code, but without overwriting your configuration.

To do this, unzip your server's code into a directory (/tmp in this example) and as indicated in the previous section:

1. Elevate privileges to root. You are solely responsible for said key.

```
his -
```

2. Copy to the directory where you are unzipping the files (/tmp in this example) and inside that directory run:

```
tar xvzf pandorafms_server-X.Y.tar.gz
cd pandora_server
perl Makefile.PL
make
make install
```

If there is a missing dependency or other problem, the system will warn you about it. If you see a message similar to:

```
Warning: prerequisite Mail::Sendmail 0 not found
Warning: prerequisite Net::Traceroute::PurePerl 0 not found
```

It means that there are some Perl packages that Pandora FMS needs and that the system does not have installed. [Revise the previous paragraphs to know how to install the necessary dependencies prior to installing Pandora FMS.](#) However you can temporarily ignore these notices (they are warnings and not errors) and thus force the installation. It will surely have problems at one time or another as it will be missing some component necessary to function. However, if the component that is not installed and is not going to be used is known (for example: traceroute is used exclusively for Pandora FMS Recon Server), you can safely continue.

After this process, the files are automatically copied

```
/usr/local/bin/pandora_server
/usr/local/bin/pandora_exec
```

And several .pm files (Perl libraries) that Pandora FMS needs. Those .pm libraries are copied to different directories, depending on the version of your distribution and your distribution. Examples:

```
/usr/local/share/perl/5.10.0/PandoraFMS/
```

```
/usr/lib/perl5/site_perl/5.10.0/PandoraFMS/
```

## Enterprise Version Installation

**E** For the installation of the Enterprise version of Pandora FMS, you must install the Open packages of the Console and the server, and then add the Enterprise packages of each one. In the case of the Console we will use some packages or others depending on the distribution we have installed.

### Enterprise Console Installation

If you want to install the Enterprise Console through the source:

Once we have the compressed file with the console, it will have the name pandorafms\_console\_enterprise-X.X.tar.gz or similar:

1. Elevate privileges to root. You are solely responsible for said key.

```
his -
```

2. Copy to a directory where you can unzip the file (/tmp is used for this example) and run:

```
tar xvzf pandorafms_console-X.Xtar.gz
```

3. Copy to the directory where the Pandora FMS Open Source Console is installed:

```
cp -R enterprise /var/www/html/pandora_console
```

4. Change the permissions so that the files are owned by the web server user, for example:

```
chown -R apache /var/www/html/pandora_console/enterprise
```

### Enterprise Server Installation

An experimental version is in the works that will include improvements to the Enterprise server. As of update 738, you should preferably use version E7 of the Pandora FMS

Enterprise server. You should only use version E6 in case of compatibility issues.

To install the Enterprise server, first you have to **make sure the Open version of the server is installed** and then proceed to install the Enterprise version.

Once you have the compressed file on the server, it will be called `pandorafms_server_enterprise-X.X.tar.gz` or similar:

1. Elevate privileges to root. You are solely responsible for said key:

```
his -
```

2. Copy to the directory to unzip the files (`/tmp` in the following example) and inside that directory run:

```
tar xvzf pandorafms_server_enterprise-X.X.tar.gz
cd pandora_server/
# ./pandora_server_installer --install
```

In the event that the Pandora FMS server binary is not found in the default directory (`/usr/bin`), the directory must be indicated as follows:

```
# PREFIX=/usr/local ./pandora_server_installer --install
```

After installation, restart the server:

```
/etc/init.d/pandora_server restart
```

Enterprise servers should appear enabled.

Do not restart the server until the installation of the Pandora FMS Enterprise license key is complete, otherwise the server will not start and its monitoring service will be interrupted.

As of version NG 754, it has **additional options in manual startup and shutdown** of High Availability Environments (HA).

### Installation in a different path

To install the Pandora FMS server in a different path, use the option:

```
./pandora_server_installer --install --destdir <path >
```

After the installation, you must configure the Pandora FMS server so that it starts automatically during startup and configure the database maintenance script, `pandora_db`, so that it runs periodically. For example, on GNU/Linux (replace `<destdir>` with the path you passed to the `destdir` option):

```
ln -s <destdir>/etc/init.d/pandora_server /etc/init.d/  
echo "\"<destdir>/usr/share/pandora_server/util/pandora_db\" \"  
  \"<destdir>/etc/pandora/pandora_server.conf\">/dev/null 2>&1\">  
/etc/cron.hourly/pandora_db
```

### Installation with a non-privileged user

To install the Pandora FMS server with a non-privileged user, launch the following command with the user with whom you want to perform the installation:

```
./pandora_server_installer --install --no-root --destdir /opt/pandora
```

This user must have write permissions to the path passed to `destdir`.

## Installation of Pandora FMS Agents

For the online installation of the Pandora FMS Software Agent, see the section "[Online installation of the Pandora FMS Software Agent](#)".

- [Installing PFMS Software Agents](#).

[Back to Pandora FMS documentation index](#)