



# Pandora FMS Installation Guide on Rocky Linux



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# Pandora FMS Installation Guide on Rocky Linux

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

## Prerequisites

- Rocky Linux 8 with root. user rights
- Internet connection.

## Repository Settings

```
dnf install -y \  
  epel-release \  
  tar \  
  dnf-utils \  
  http://rpms.remirepo.net/enterprise/remi-release-8.rpm
```

```
dnf module reset php  
  
dnf module install -y php:remi-8.0  
  
dnf config-manager --set-enabled powertools
```

## Percona Database Installation

```
dnf install -y https://repo.percona.com/yum/percona-release-latest.noarch.rpm  
  
dnf module disable -y mysql  
  
rm -rf /etc/my.cnf  
  
percona-release setup ps80 -y  
  
dnf install -y percona-server-server percona-xtrabackup-80
```

## Installing Web Console dependencies

```
dnf install -y \  
  httpd
```

```
php \  
postfix \  
php-mcrypt \  
php-cli \  
php-gd \  
php-curl \  
php-session \  
php-mysqlnd \  
php-ldap \  
php-zip \  
php-zlib \  
php-fileinfo \  
php-gettext \  
php-snmp \  
php-mbstring \  
php-pecl-zip \  
php-xmlrpc \  
libxslt \  
wget \  
php-xml \  
httpd \  
mod_php \  
atk \  
avahi-libs \  
cairo \  
cups-libs \  
fribidi \  
gd \  
gdk-pixbuf2 \  
ghostscript \  
graphite2 \  
graphviz \  
gtk2 \  
harfbuzz \  
hicolor-icon-theme \  
hwdata \  
jasper-libs \  
lcms2 \  
libICE \  
libSM \  
libXaw \  
libXcomposite \  
libXcursor \  
libXdamage \  
libXext \  
libXfixes \  
libXft \  
libXi \  
libXinerama \  
libXmu \  
libXrandr \  
libXrender \  

```

```

libXt \
libXxf86vm \
libcroco \
libdrm \
libfontenc \
libglvnd \
libglvnd-egl \
libglvnd-glx \
libpciaccess \
librsvg2 \
libthai \
libtool-ltdl \
libwayland-client \
libwayland-server \
libxshmfence \
table-libEGL \
table-libGL \
table-libgbm \
table-libglapi \
pango \
pixman \
xorg-x11-fonts-75dpi \
xorg-x11-fonts-misc \
poppler-data \
php-yaml \
mod_ssl \
libzstd \
openldap-clients \
http://firefly.pandorafms.com/centos8/chromium-110.0.5481.177-1.el7.x86_64.rpm \
http://firefly.pandorafms.com/centos8/chromium-common-110.0.5481.177-1.el7.x86_64.rpm \
    http://firefly.pandorafms.com/centos8/perl-Net-Telnet-3.04-1.el8.noarch.rpm \
    http://firefly.pandorafms.com/centos7/wmic-1.4-1.el7.x86_64.rpm

```

## Installation of PFMS server dependencies

```

dnf install -y \
    perl \
    vim \
    fping \
    perl-IO-Compress \
    nmap \
    sudo \
    perl-Time-HiRes \
    nfdump \
    net-snmp-utils \
    perl(NetAddr::IP) \
    perl(Sys::Syslog) \
    perl(DBI) \

```

```
perl(XML::Simple) \  
perl(Geo::IP) \  
perl(IO::Socket::INET6) \  
perl(XML::Twig) \  
expect \  
openssh-clients\  
java \  
bind-utils \  
whois \  
http://firefly.pandorafms.com/centos7/xprobe2-0.3-12.2.x86\_64.rpm \  
http://firefly.pandorafms.com/centos7/wmic-1.4-1.el7.x86\_64.rpm \  
https://firefly.pandorafms.com/centos8/pandorawmic-1.0.0-1.x86\_64.rpm
```

## Perl and VMware Dependencies

```
dnf install -y \  
perl-Net-HTTP \  
perl-libwww-perl \  
openssl-devel \  
perl-crypt-cbc \  
perl-Bytes-Random-Secure \  
perl-Crypt-Random-Seed \  
perl-Math-Random-ISAAC \  
perl-json \  
perl-Crypt-SSLeay \  
http://firefly.pandorafms.com/centos8/perl-Crypt-OpenSSL-AES-0.02-1.el8.x86\_64.r  
pm \  
http://firefly.pandorafms.com/centos8/VMware-vSphere-Perl-SDK-6.5.0-4566394.x86\_64.rpm
```

## Oracle Client Installation

```
dnf install -y \  
https://download.oracle.com/otn\_software/linux/instantclient/19800/oracle-instantclient19.8-basic-19.8.0.0.0-1.x86\_64.rpm \  
https://download.oracle.com/otn\_software/linux/instantclient/19800/oracle-instantclient19.8-sqlplus-19.8.0.0.0-1.x86\_64.rpm
```

## Installing dependencies for Discovery PFMS

```
curl https://packages.microsoft.com/config/rhel/8/prod.repo -o  
/etc/yum.repos.d/mssql-release.repo  
  
dnf remove unixODBC-utf16 unixODBC-utf16-devel  
  
env ACCEPT_EULA=Y dnf install -y msodbcsql17
```

## Operating system settings and database creation

```
setenforce 0

sed -i -e "s/^SELINUX=.*SELINUX=disabled/g" /etc/selinux/config

systemctl disable firewalld --now
```

```
cat> /etc/my.cnf <<EO_CONFIG_TMP
[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
symbolic-links=0
log-error=/var/log/mysqld.log
pid-file=/var/run/mysqld/mysqld.pid
EO_CONFIG_TMP
```

```
systemctl start mysqld

grep "temporary password" /var/log/mysqld.log | rev | cut -d' ' -f1 | rev
mysql -uroot -p"password";

SET PASSWORD FOR 'root'@'localhost' = 'Pandor4!';

UNINSTALL COMPONENT 'file://component_validate_password';

SET PASSWORD FOR 'root'@'localhost' = 'pandora';

CREATE DATABASE pandora;

CREATE USER 'pandora'@'%' IDENTIFIED BY 'pandora';

ALTER USER 'pandora'@'%' IDENTIFIED WITH mysql_native_password BY 'pandora';
GRANT ALL PRIVILEGES ON pandora.* TO 'pandora'@'%';

exit
```

```
POOL_SIZE=$(grep -i total /proc/meminfo | head -1 | awk '{printf "%.2f \n",
$(NF-1)*0.4/1024}') | sed "s/\\.. *$/M/g")
```

```
cat> /etc/my.cnf <<EO_CONFIG_F
```

```
[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
user=mysql
character-set-server=utf8mb4
skip-character-set-client-handshake
# Disabling symbolic-links is recommended to prevent assorted security risks
symbolic-links=0
# Mysql optimizations for Pandora FMS
# Please check the documentation in http://pandorafms.com for better results

max_allowed_packet = 64M
innodb_buffer_pool_size = $POOL_SIZE
innodb_lock_wait_timeout = 90
innodb_file_per_table
innodb_flush_log_at_trx_commit = 0
innodb_flush_method = O_DIRECT
innodb_log_file_size = 64M
innodb_log_buffer_size = 16M
innodb_io_capacity = 300
thread_cache_size = 8
thread_stack = 256K
max_connections = 100

key_buffer_size=4M
read_buffer_size=128K
read_rnd_buffer_size=128K
sort_buffer_size=128K
join_buffer_size=4M

skip-log-bin

sql_mode=""

[mysqld_safe]
log-error=/var/log/mysql.log
pid-file=/var/run/mysql/mysql.pid

EO_CONFIG_F
```

```
systemctl restart mysql
systemctl enable mysql --now
```

## Installation of the Console and Pandora FMS server

```
wget
```



```
https://firefly.pandorafms.com/pandorafms/latest/RHEL_CentOS/pandorafms_agent_linux-7.0NG.noarch.rpm
```

```
wget  
https://firefly.pandorafms.com/pandorafms/latest/RHEL_CentOS/pandorafms_console-7.0NG.noarch.rpm
```

```
wget  
https://firefly.pandorafms.com/pandorafms/latest/RHEL_CentOS/pandorafms_server-7.0NG.noarch.rpm
```

---

```
dnf install -y ./pandorafms*.rpm
```

---

```
wget https://firefly.pandorafms.com/pandorafms/utils/gotty_linux_amd64.tar.gz  
tar xvzf gotty_linux_amd64.tar.gz  
mv gotty /usr/bin/
```

---

```
systemctl enable mysqld --now  
systemctl enable httpd --now
```

---

```
mysql -upandora -ppandora
```

```
wear pandora;  
source /var/www/html/pandora_console/pandoradb.sql;  
source /var/www/html/pandora_console/pandoradb_data.sql;  
exit;
```

---

```
cat> /var/www/html/pandora_console/include/config.php <<EO_CONFIG_F  
<?php  
\$config["dbtype"] = "mysql";  
\$config["dbname"]="pandora";  
\$config["dbuser"]="pandora";  
\$config["dbpass"]="pandora";  
\$config["dbhost"]="127.0.0.1";  
\$config["homedir"]="/var/www/html/pandora_console";  
\$config["homeurl"]="/pandora_console";
```

```
error_reporting(0);
\ $ownDir = dirname(__FILE__) . '/';
include (\ $ownDir . "config_process.php");
EO_CONFIG_F
```

---

```
cat> /etc/httpd/conf.d/pandora.conf <<EO_CONFIG_F
<Directory "/var/www/html">
Options Indexes FollowSymLinks
Allow Override All
Require all granted
</Directory>
EO_CONFIG_F
```

---

```
cat>> /etc/httpd/conf.modules.d/00-proxy.conf <<'EO_HTTPD_MOD'
LoadModule proxy_wstunnel_module modules/mod_proxy_wstunnel.so

EO_HTTPD_MOD
```

---

```
cat>> /etc/httpd/conf.d/wstunnel.conf <<'EO_HTTPD_WSTUNNEL'
Proxy Requests Off
<Proxy *>
    Require all granted
</Proxy>

ProxyPass /ws ws://127.0.0.1:8080
ProxyPassReverse /ws ws://127.0.0.1:8080

EO_HTTPD_WSTUNNEL
```

---

```
sed -i -e "s/php_flag engine off//g"
/var/www/html/pandora_console/images/.htaccess

sed -i -e "s/php_flag engine off//g"
/var/www/html/pandora_console/attachment/.htaccess
```

---

```
chmod 600 /var/www/html/pandora_console/include/config.php

chown apache. /var/www/html/pandora_console/include/config.php

mv /var/www/html/pandora_console/install.php
/var/www/html/pandora_console/install.done
```

```
sed -i -e "s/^max_input_time.*/max_input_time = -1/g" /etc/php.ini
sed -i -e "s/^max_execution_time.*/max_execution_time = 0/g" /etc/php.ini
sed -i -e "s/^upload_max_filesize.*/upload_max_filesize = 800M/g" /etc/php.ini
sed -i -e "s/^memory_limit.*/memory_limit = 800M/g" /etc/php.ini
sed -i -e "s/. *post_max_size = .*/post_max_size = 800M/" /etc/php.ini
```

```
echo 'Timeout 900'> /etc/httpd/conf.d/timeout.conf
```

```
cat> /var/www/html/index.html <<EOF_INDEX
<meta HTTP-EQUIV="REFRESH" content="0; url=/pandora_console/">
EOF_INDEX
```

```
systemctl restart httpd
```

```
systemctl restart php-fpm
```

```
cat> /etc/snmp/snmptrapd.conf <<EOF
authCommunity log public
disableAuthorization yes
EOF
```

```
sed -i -e "s/^dbhost.*/dbhost 127.0.0.1/g" /etc/pandora/pandora_server.conf
sed -i -e "s/^dbname.*/dbname pandora/g" /etc/pandora/pandora_server.conf
sed -i -e "s/^dbuser.*/dbuser pandora/g" /etc/pandora/pandora_server.conf
sed -i -e "s|^dbpass.*|dbpass pandora|g" /etc/pandora/pandora_server.conf
sed -i -e "s/^dbport.*/dbport 3306/g" /etc/pandora/pandora_server.conf
sed -i -e "s/^#.mssql_driver.*/mssql_driver ODBC Driver 17 forSQL Server/g"
/etc/pandora/pandora_server.conf
```

```
sed -i -e "s|^fping.*|fping /usr/sbin/fping|g" /etc/pandora/pandora_server.conf
```

```
sed -i "s/^remote_config.*$/remote_config 1/g" /etc/pandora/pandora_server.conf
```

```
cat> /etc/pandora/pandora_server.env <<'EOF_ENV'  
#!/bin/bash  
VERSION=19.8  
export PATH=$PATH:$HOME/bin:/usr/lib/oracle/$VERSION/client64/bin  
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/lib/oracle/$VERSION/client64/lib  
export ORACLE_HOME=/usr/lib/oracle/$VERSION/client64  
EOF_ENV
```

```
cat>> /etc/sysctl.conf <<EO_KO  
# Pandora FMS Optimization  
  
#default=5  
net.ipv4.tcp_syn_retries = 3  
  
#default=5  
net.ipv4.tcp_synack_retries = 3  
  
#default=1024  
net.ipv4.tcp_max_syn_backlog = 65536  
  
#default=124928  
net.core.wmem_max = 8388608  
  
#default=131071  
net.core.rmem_max = 8388608  
  
#default = 128  
net.core.somaxconn = 1024  
  
#default = 20480  
net.core.optmem_max = 81920  
  
EO_KO
```

```
sysctl --system
```

```
chown pandora:apache /var/log/pandora
```

```
chmod g+s /var/log/pandora
```

```
cat> /etc/logrotate.d/pandora_server <<EO_LR
/var/log/pandora/pandora_server.log
/var/log/pandora/web_socket.log
/var/log/pandora/pandora_server.error {
    your apache root
    weekly
    missingok
    size 300000
    rotate 3
    max age 90
    compress
    notifempty
    copytruncate
    create 660 pandora apache
}

/var/log/pandora/pandora_snmptrap.log {
    your apache root
    weekly
    missingok
    size 500000
    rotate 1
    max age 30
    notifempty
    copytruncate
    create 660 pandora apache
}

EO_LR

cat> /etc/logrotate.d/pandora_agent <<EO_LRA
/var/log/pandora/pandora_agent.log {
    your apache root
    weekly
    missingok
    size 300000
    rotate 3
    max age 90
    compress
    notifempty
    copytruncate
}

EO_LRA
```

```
chmod 0644 /etc/logrotate.d/pandora_server
```

```
chmod 0644 /etc/logrotate.d/pandora_agent
```

```
systemctl enable pandora_server --now  
  
/etc/init.d/pandora_server start  
  
systemctl enable tentacle_server  
  
service tentacle_server start
```

```
echo \"* * * * * root wget -q -O - --no-check-certificate --load-cookies  
/tmp/cron-session-cookies --save-cookies /tmp/cron-session-cookies -- keep  
session-cookies http://127.0.0.1/pandora_console/enterprise/cron.php>>  
/var/www/html/pandora_console/log/cron.log\">> /etc/crontab
```

```
systemctl enable pandora_agent_daemon  
  
systemctl start pandora_agent_daemon
```

## Login to PFMS

To access the Web Console, type the IP address (or URL) of the device followed by `/pandora_console/`.

The default login credentials are:

- user: admin
- password: pandora

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