

# OpenSIPS

## Installation on Debian 10

- [OpenSIPS v3 with GUI on Debian v10 MariaDB Apache install guide](#)
- [Quick Start to OpenSIPS Training 3.2](#)

## OpenSIPS 3.3

```
apt install gnupg2
apt-key adv --keyserver keyserver.ubuntu.com --recv-keys 049AD65B

# For Debian 10
echo "deb https://apt.opensips.org buster 3.3-releases" >/etc/apt/sources.list.d/opensips.list
echo "deb https://apt.opensips.org buster cli-nightly" >/etc/apt/sources.list.d/opensips-cli.list
# For Ubuntu 20
echo "deb https://apt.opensips.org focal 3.3-releases" >/etc/apt/sources.list.d/opensips.list
echo "deb https://apt.opensips.org focal cli-nightly" >/etc/apt/sources.list.d/opensips-cli.list

apt update
apt install opensips
apt install opensips-cli

# Install all other modules
apt install opensips-*

# Start opensips and check the status
systemctl start opensips
systemctl status opensips
```

## OpenSIPS Database Support (MySQL)

```
# Install MySQL Server (MariaDB on Debian 10)
apt install mariadb-server

# Create the database opensips using the OpenSIPS command line interface
```

```
opensips-cli -x database create opensips
```

```
# Verify if the tables were created
```

```
mysql opensips -e "show tables"
```

```
# Set the root's password for MariaDB and complete a few secure steps.
```

```
MariaDB> alter user 'root'@'localhost' identified by 'newpassword';
```

```
MariaDB> flush privileges;
```

```
MariaDB> exit
```

## OpenSIPS Control Panel 9.3.3

- [OpenSIPS Control Panel version class 9 \(9.3.2, 9.3.3\) documentation](#)

```
# Install Apache, PHP and other dependencies
```

```
apt-get install apache2 libapache2-mod-php php-curl php php-mysql php-gd php-pear php-cli php-apcu git
```

```
# Download the OCP 9.3.3
```

```
git clone -b 9.3.3 https://github.com/OpenSIPS/opensips-cp.git /var/www/opensips-cp
```

## Configure Apache

```
# Remove the default configuration
```

```
rm /etc/apache2/sites-enabled/000-default.conf
```

Edit: /etc/apache2/sites-enabled/opensips.conf

```
<VirtualHost *:80>
```

```
    <Directory /var/www/opensips-cp/web>
```

```
        Options Indexes FollowSymLinks MultiViews
```

```
        AllowOverride None
```

```
        Require all granted
```

```
    </Directory>
```

```
    <Directory /var/www/opensips-cp>
```

```
        Options Indexes FollowSymLinks MultiViews
```

```
        AllowOverride None
```

```
        Require all denied
```

```
    </Directory>
```

```
Alias /cp /var/www/opensips-cp/web
```

```
<DirectoryMatch "/var/www/opensips-cp/web/tools/.*/.*/(template|custom_actions|lib)/">  
    Require all denied  
</DirectoryMatch>
```

```
ErrorLog ${APACHE_LOG_DIR}/error.log  
CustomLog ${APACHE_LOG_DIR}/access.log combined
```

```
</VirtualHost>
```

## Set the permissions of directories

```
chown -R www-data:www-data /var/www/opensips-cp/
```

## Creating the OCP tables

```
# This will create the OCP specific tables into the opensips database and add a first access user,  
# the admin user with the opensips password.  
mysql -uroot -p opensips < /var/www/opensips-cp/config/db_schema.mysql
```

## set Cron jobs

```
cp /var/www/opensips-cp/config/tools/system/smonitor/opensips_stats_cron /etc/cron.d  
sed -i 's/\var/www/html/opensips-cp/\var/www/opensips-cp/g' /etc/cron.d/opensips_stats_cron
```

## Restart Apache

```
systemctl restart apache2
```

Visit the OCP Web site: <http://server-ip-address/cp> , admin / opensips

## RTPProxy

```
apt install build-essential  
apt install libucl-dev  
cd /usr/src  
git clone -b master https://github.com/sippy/rtpproxy.git  
git -C rtpproxy submodule update --init --recursive  
cd rtpproxy  
./configure
```

```
make clean all
make install
```

## Configure the systemd

Edit: `/etc/systemd/system/rtpproxy.service`

```
[Unit]
Description=RTPProxy media server
After=network.target
Requires=network.target

[Service]
Type=simple
PIDFile=/var/run/rtpproxy/rtpproxy.pid
Environment='OPTIONS= -I 172.16.0.67 -A 154.19.187.227 -m 10000 -M 20000 -d INFO:LOG_LOCAL5'

Restart=always
RestartSec=5

ExecStartPre=/bin/mkdir /var/run/rtpproxy
ExecStartPre=/bin/chown opensips:opensips /var/run/rtpproxy

ExecStart=/usr/local/bin/rtpproxy -p /var/run/rtpproxy/rtpproxy.pid -s unix:/var/run/rtpproxy/rtpproxy.sock \
-u opensips:opensips $OPTIONS
ExecStop=/usr/bin/pkill -F /var/run/rtpproxy/rtpproxy.pid

ExecStopPost=/bin/rm -R /var/run/rtpproxy

StandardOutput=syslog
StandardError=syslog
SyslogIdentifier=rtpproxy
SyslogFacility=local5

TimeoutStartSec=10
TimeoutStopSec=10

[Install]
WantedBy=multi-user.target
```

## Start the service

```
systemctl daemon-reload
systemctl start rtproxy
systemctl enable rtproxy
```

# Configuration

## OpenSIPS

### Generate config file

```
# Install the package required
apt install m4

# -> Residential Script
# --> Configure Residential Script
# ---> Select all options except for TLS, VM_DIVERSION, PRESENCE
/usr/sbin/osipsconfig

mv /etc/opensips/opensips.cfg /etc/opensips/opensips.cfg.orig
mv /etc/opensips/opensips_residential_2023-3-19_6:6:6.cfg /etc/opensips/opensips.cfg
chmod 0644 /etc/opensips/opensips.cfg

# Restart OpenSIPS
systemctl restart opensips
```

### opensips.cfg for server behind the firewall

```
/* For AWS and OpenStack Environment */
/* WAN IP: 123.123.123.123 */
/* LAN IP: 172.16.0.67
advertised_address="123.123.123.123"
alias="123.123.123.123"

socket=udp:172.16.0.67:5060
socket=tcp:172.16.0.67:5060
```

## opensips.cfg for RTPProxy

```
### RTPProxy module ###  
loadmodule "rtpproxy.so"  
## Fixed for ERROR:rtpproxy:send_rtp_command: proxy <udp:localhost:7890> does not respond, disable it  
#modparam("rtpproxy", "rtpproxy_sock", "udp:localhost:7890")  
modparam("rtpproxy", "rtpproxy_sock", "unix:/var/run/rtpproxy/rtpproxy.sock")
```

## opensips.cfg for dispatcher

```
### Dispatcher modules ###  
loadmodule "dispatcher.so"  
modparam("dispatcher", "db_url", "mysql://opensips:opensipsrw@localhost/opensips")  
modparam("dispatcher", "dst_avp", "$avp(271)")  
modparam("dispatcher", "attrs_avp", "$avp(272)")  
modparam("dispatcher", "grp_avp", "$avp(273)")  
modparam("dispatcher", "cnt_avp", "$avp(274)")  
modparam("dispatcher", "hash_pvar", "$avp(273)")  
modparam("dispatcher", "ds_ping_method", "OPTIONS")  
modparam("dispatcher", "ds_ping_from", "sip:sipcheck@outbound_IP:5060")  
modparam("dispatcher", "ds_ping_interval", 10)  
modparam("dispatcher", "ds_probing_threshold", 3)  
modparam("dispatcher", "ds_probing_mode", 1)  
modparam("dispatcher", "options_reply_codes", "501,403,404,400,200")
```

## OpenSIPS Control Panel (OCP)

OCP ??????????

?: config/modules.inc.php

???????

?: config/db.inc.php

## Log file

Edit: /etc/rsyslog.d/opensips.conf

```
local0.*                -/var/log/opensips.log
```

## Restart rsyslog

```
touch /var/log/opensips.log
systemctl restart rsyslog
```

## OpenSIPS CLI

```
# opensips-cli -x mi version
{
  "Server": "OpenSIPS (3.1.14 (x86_64/linux))"
}
```

## FAQ

### OCP ? dispatcher ??????

Solution: ?? dispatcher ? mi\_http ?????????????????? OCP ? MI Commands ?? [ds\\_list](#)  
????????????????????

## Links

- <https://opensips.org/>
- <https://www.rtpproxy.org/>
- [Quick Start to OpenSIPS Training 3.2](#)
- [opensips ?? 1/2](#)

### Dispatcher

- [OpenSIPS + FreeSWITCH ???????](#)
- [OpenSIPS????-dispatcher?????-????????????????](#)

### CGRateS

- [Installation](#)
  - [CGRateS Usage](#)
  - <https://fossies.org/linux/opensips/modules/cgrates/README>
  - <https://nickvsnetworking.com/category/voip/cgrates/>
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