

Install Observium on Debian 11

Learn how to install Observium, a powerful network monitoring platform, on Debian 11. Follow our step-by-step guide for a successful setup and configuration.

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Introduction

Observium is a free network monitoring and management platform that supports a wide range of operating systems, devices, and other platforms. Its auto-discovering feature collects data from network devices using Simple Network Management Protocol (SNMP) and stores it in a MySQL database. Furthermore, being a PHP-based platform, it offers an easy-to-use web interface to allow you to monitor the network devices. Some supported platforms and devices are Linux, Cisco, FreeBSD, Windows, Juniper, Brocade, Netscaler, and NetApp. In this article, you will learn how to install Observium on Debian 11 server.

Prerequisites

- Deploy a [fully updated](#) Vultr Debian 11 Server.
- Create a non-root user with sudo access.

1. Install and Configure Observium

Update the system packages.

```
$ sudo apt update
```

Install all the required packages needed to run Observium.

```
$ sudo apt install -y libapache2-mod-php7.4 php7.4-cli php7.4-mysql php7.4-gd php7.4-  
json php7.4-bcmath \  
php7.4-mbstring php7.4-opcache php7.4-apcu php7.4-curl php-pear snmp fping rrdtool  
whois \  
mariadb-server mariadb-client subversion mtr-tiny ipmitool graphviz imagemagick apache2  
\  
python3-mysqldb python3-pymysql python-is-python3
```

Add Observium system user.

```
$ sudo useradd -r -M -d /opt/observium observium
```

Add the user to group `www-data`.

```
$ sudo usermod -a -G observium www-data
```

Download the latest Observium Community Edition installation files.

```
$ sudo wget http://www.observium.org/observium-community-latest.tar.gz
```

Unpack the downloaded files.

```
$ sudo tar zxvf observium-community-latest.tar.gz
```

Move the extracted files into the `/opt` directory.

```
$ sudo mv observium /opt
```

Copy the default configuration file.

```
$ sudo cp /opt/observium/config.php.default /opt/observium/config.php
```

Edit the file for your system.

```
$ sudo nano /opt/observium/config.php
```

Modify the file as shown bellow, save and close the file:

```
// Database config --- This MUST be configured
$config['db_extension'] = 'mysqli';
$config['db_host']      = 'localhost';
$config['db_user']      = 'observium';
$config['db_pass']      = 'StrongPassword';
$config['db_name']      = 'observium';
```

Create `rrd` and `logs` directory.

```
$ sudo mkdir /opt/observium/{rrd,logs}
```

Change the permissions of the directory.

```
$ sudo chown -R observium:observium /opt/observium/
```

```
$ sudo chmod -R 775 /opt/observium/
```

Edit `snmp.conf` configuration file to direct the SNMP utilities to use Observium's MIBs.

```
$ sudo nano /etc/snmp/snmp.conf
```

Modify the line as shown below, save and close the file:

```
mibs : /opt/observium/mibs/rfc:/opt/observium/mibs/net-snmp
```

2. Configure MySQL Database

Log in to the MySQL shell. Then, at the password prompt, just press Enter to continue.

```
$ sudo mysql -u root -p
```

Create a database named `observium`.

```
CREATE DATABASE observium DEFAULT CHARACTER SET utf8 COLLATE utf8_general_ci;
```

Create a user named `observium`. Modify the `StrongPassword` value with your secure password.

```
CREATE USER 'observium'@'localhost' identified by 'StrongPassword';
```

Grant all database privileges to the user.

```
GRANT ALL ON observium.* TO 'observium'@'localhost';
```

Reload the changes.

```
FLUSH PRIVILEGES;
```

Exit MySQL shell.

```
exit
```

Insert the default MySQL database schema.

```
$ cd /opt/observium
```

```
$ sudo ./discovery.php -u
```

4. Configure Apache

Edit the default Apache configuration file.

```
$ sudo nano /etc/apache2/sites-available/000-default.conf
```

The final content should be similar to the one below, save and close the file:

```
<VirtualHost *:80>
    ServerAdmin webmaster@localhost
    DocumentRoot /opt/observium/html

    <FilesMatch \.php$>
        SetHandler application/x-httpd-php
    </FilesMatch>

    <Directory />
        Options FollowSymLinks
        AllowOverride None
    </Directory>
```

```
<Directory /opt/observium/html/>
  DirectoryIndex index.php
  Options Indexes FollowSymLinks MultiViews
  AllowOverride All
  Require all granted
</Directory>

ErrorLog  ${APACHE_LOG_DIR}/error.log
LogLevel warn
CustomLog  ${APACHE_LOG_DIR}/access.log combined
ServerSignature On
</VirtualHost>
```

Change the global server name.

```
$ sudo nano /etc/apache2/apache2.conf
```

Add the code below at the end of the file, save and close the file:

```
ServerName localhost
```

Enable `mpm_prefork` module.

```
$ sudo a2enmod mpm_prefork
```

Enable `mod_rewrite`.

```
$ sudo a2enmod rewrite
```

Restart the Apache service.

```
$ sudo systemctl restart apache2
```

5. Configure Admin Account

Add an initial user with access level 10 for administration. Modify the

`AdminPassword` value with your secure password.

```
$ cd /opt/observium

$ sudo ./adduser.php admin AdminPassword 10
```

Create a new file `/etc/cron.d/observium` to add cron jobs.

```
$ sudo nano /etc/cron.d/observium
```

Add the following contents, save and close the file:

```
# Run a complete discovery of all devices once every 6 hours
33 */6 * * * root /opt/observium/discovery.php -h all >> /dev/null 2>&1

# Run automated discovery of newly added devices every 5 minutes
*/5 * * * * root /opt/observium/discovery.php -h new >> /dev/null 2>&1

# Run multithreaded poller wrapper every 5 minutes
*/5 * * * * root /opt/observium/poller-wrapper.py >> /dev/null 2>&1

# Run housekeeping script daily for syslog, eventlog and alert log
13 5 * * * root /opt/observium/housekeeping.php -ysel >> /dev/null 2>&1

# Run housekeeping script daily for rrd, ports, orphaned entries in the database and
performance data
47 4 * * * root /opt/observium/housekeeping.php -yrptb >> /dev/null 2>&1
```

6. Access Observium Web Interface

Install UFW.

```
$ sudo apt-get install ufw -y
```

Enable UFW.

```
$ sudo ufw enable
```

Allow port 80 and ssh through UFW firewall.

```
$ sudo ufw allow 80
```

```
$ sudo ufw allow ssh
```

To access the Observium Web Interface, go to your browser and visit `http://Server_IP/`. For example:

```
http://192.0.2.10/
```

Conclusion

You have successfully installed Observium on your server. You will get a log-in screen; use **admin** as your username and **AdminPassword** as your password. Modify the AdminPassword value with the secure password you entered during setup. You can now access the Dashboard and configure it to begin managing your network.

More Information

To learn more about Observium, go to the [official documentation](#) page.



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