

Installing Mosquitto on Amazon Linux 2023



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Amazon Linux 2023, the latest release of Amazon's Linux distribution, brings with it enhanced features and improvements. However, one notable absence from the default package repositories is the Mosquitto MQTT broker. Mosquitto is a widely used and robust open-source MQTT broker that facilitates communication between IoT devices. In this article, we will guide you through the process of installing Mosquitto on Amazon Linux 2023 using the source code.

While some Linux distributions provide pre-built packages for Mosquitto, Amazon Linux 2023 does not include it by default in its repositories. This necessitates the installation from the source code, ensuring that you have the latest version and full control over the configuration options.

— Prerequisites —

Before proceeding with the Mosquitto installation, it is essential to confirm the prerequisites listed below.

- Let's first check our OS

```
cat /etc/os-release
```

```
[root@ip-172-31-5-11 ec2-user]# cat /etc/os-release
NAME="Amazon Linux"
VERSION="2023"
ID="amzn"
ID_LIKE="fedora"
VERSION_ID="2023"
PLATFORM_ID="platform:al2023"
PRETTY_NAME="Amazon Linux 2023"
ANSI_COLOR="0;33"
CPE_NAME="cpe:2.3:o:amazon:amazon_linux:2023"
HOME_URL="https://aws.amazon.com/linux/"
BUG_REPORT_URL="https://github.com/amazonlinux/amazon-linux-2023"
SUPPORT_END="2028-03-15"
[root@ip-172-31-5-11 ec2-user]#
```

- Install the packages below

```
sudo su
yum install -y cmake openssl-devel libxslt
yum groupinstall -y "Development Tools"
```

```
git clone https://github.com/DaveGamble/cJSON.git
cd cJSON
cmake .
make
make install
```

Make sure that the `cJSON` is installed correctly

```
Consolidate compiler generated dependencies of target compare_tests
[ 80%] Built target compare_tests
Consolidate compiler generated dependencies of target cJSON_add
[ 84%] Built target cJSON_add
Consolidate compiler generated dependencies of target readme_examples
[ 88%] Built target readme_examples
Consolidate compiler generated dependencies of target minify_tests
[ 93%] Built target minify_tests
Consolidate compiler generated dependencies of target fuzz_main
[100%] Built target fuzz_main
Install the project...
-- Install configuration: ""
-- Installing: /usr/local/include/cjson/cJSON.h
-- Installing: /usr/local/lib64/pkgconfig/libcjson.pc
-- Installing: /usr/local/lib64/libcjson.so.1.7.17
-- Installing: /usr/local/lib64/libcjson.so.1
-- Installing: /usr/local/lib64/libcjson.so
-- Installing: /usr/local/lib64/cmake/cJSON/cjson.cmake
-- Installing: /usr/local/lib64/cmake/cJSON/cjson-noconfig.cmake
-- Installing: /usr/local/lib64/cmake/cJSON/cJSONConfig.cmake
-- Installing: /usr/local/lib64/cmake/cJSON/cJSONConfigVersion.cmake
[root@ip-172-31-5-11 cJSON]#
```

- Add the user that will be used by mosquitto

```
useradd -r -U mosquitto
```

— Downloading Mosquitto Source Code —

```
cd ..
mkdir mosquitto && cd mosquitto
wget https://mosquitto.org/files/source/mosquitto-2.0.18.tar.gz
tar -xvzf mosquitto-2.0.18.tar.gz
cd mosquitto-2.0.18
```

NOTE : If you intend to install the most recent version of Mosquitto, verify the latest release on the provided link. Afterwards, ensure to adjust the version in the `wget` command mentioned above accordingly.

<https://mosquitto.org/files/source/>

— Installing Mosquitto —

```
cmake .  
make  
make install
```

```
-- Set runtime path of "/usr/local/bin/mosquitto_ctrl" to  
-- Installing: /usr/local/bin/mosquitto_passwd  
-- Installing: /usr/local/lib64/mosquitto_dynamic_security.so  
-- Set runtime path of "/usr/local/lib64/mosquitto_dynamic_security.so" to ""  
-- Installing: /usr/local/share/man/man1/mosquitto_ctrl.1  
-- Installing: /usr/local/share/man/man1/mosquitto_ctrl_dynsec.1  
-- Installing: /usr/local/share/man/man1/mosquitto_passwd.1  
-- Installing: /usr/local/share/man/man1/mosquitto_pub.1  
-- Installing: /usr/local/share/man/man1/mosquitto_sub.1  
-- Installing: /usr/local/share/man/man1/mosquitto_rr.1  
-- Installing: /usr/local/share/man/man3/libmosquitto.3  
-- Installing: /usr/local/share/man/man5/mosquitto.conf.5  
-- Installing: /usr/local/share/man/man7/mosquitto-tls.7  
-- Installing: /usr/local/share/man/man7/mqtt.7
```

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process .

— Starting and Verifying Mosquitto —

- Specify the desired user for running Mosquitto in the configuration file as follows:

```
vi /usr/local/etc/mosquitto/mosquitto.conf
```

For our case , I'm using the user `mosquitto` created before

Uncomment the entry for user `mosquitto`

```
# then it will drop privileges to the "nobody" user instead.  
# If run as a non-root user, this setting has no effect.  
# Note that on Windows this has no effect and so mosquitto should be started by  
# the user you wish it to run as.  
user mosquitto  
  
# =====  
# Listeners  
# =====
```

- Let's start `mosquitto`

```
[root@ip-172-31-5-11 mosquitto-2.0.18]# mosquitto
1706104144: mosquitto version 2.0.18 starting
1706104144: Using default config.
1706104144: Starting in local only mode. Connections will only be possible from clients running on this machine.
1706104144: Create a configuration file which defines a listener to allow remote access.
1706104144: For more details see https://mosquitto.org/documentation/authentication-methods/
1706104144: Opening ipv4 listen socket on port 1883.
1706104144: Opening ipv6 listen socket on port 1883.
1706104144: mosquitto version 2.0.18 running
```

==> `mosquitto` is operating successfully on port `1883` with the latest version, `2.0.18`, as of the article's creation.

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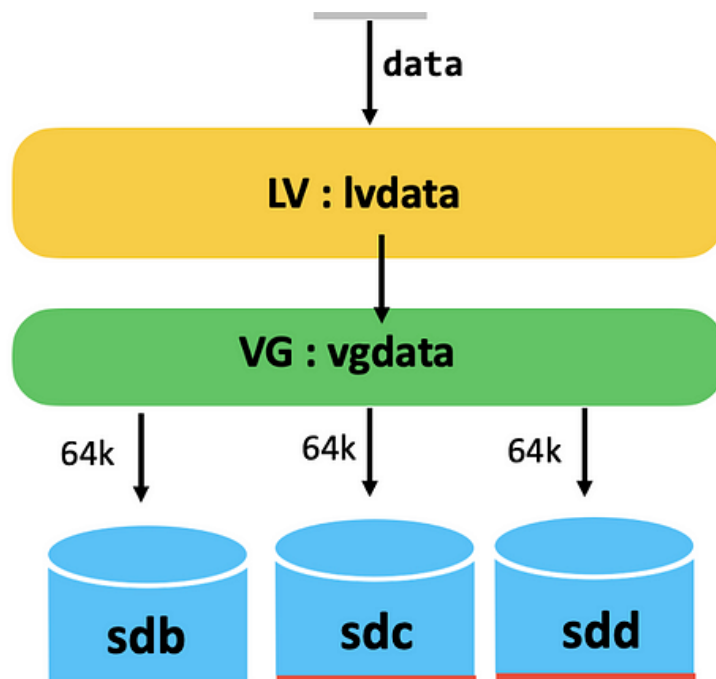
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```
[ 184.729919] dracut-initqueue[340]: Warning: /dev/mapper/UGSYS-lvroot does not exist
[ 184.729919] dracut-initqueue[340]: Warning: /dev/mapper/UGSYS-lvusr does not exist
Starting Dracut Emergency Shell...
Warning: /dev/UGSYS/lvroot does not exist
Warning: /dev/UGSYS/lvusr does not exist
Warning: /dev/mapper/UGSYS-lvroot does not exist
Warning: /dev/mapper/UGSYS-lvusr does not exist

Generating "/run/initramfs/rdsosreport.txt"

Entering emergency mode. Exit the shell to continue.
Type "journalctl" to view system logs.
You might want to save "/run/initramfs/rdsosreport.txt" to a USB stick or /boot
after mounting them and attach it to a bug report.

dracut:/#
```



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