

# Docker Run

Docker runs processes in isolated containers. A container is a process which runs on a host. The host may be local or remote. When an operator executes docker run, the container process that runs is isolated in that it has its own file system, its own networking, and its own isolated process tree separate from the host.

- [Guacamole Remote Desktop Client](#)
- [Matomo](#)
- [Install Watchtower with E-Mail \(Gmail\) Notifications](#)
- [Install Glances to Monitor Docker Containers \(with web interface\)](#)
- [Install AzuraCast](#)

# Guacamole Remote Desktop Client

Use this command to install Guacamole Remote Desktop Client. Change the port and volume bind location if needed.

```
docker run \
-p 8080: 8080 \
-v /guacamole: /config \
oznu/guacamole
```

# Matomo

Take back control with Matomo – a powerful web analytics platform that gives you 100% data ownership.

Matomo is used to gather analytics on The Homelab Wiki

See the [official GitHub repo](#) for more information.

Use the following command to install Matomo. Change the port and volume as needed.

```
docker run -d -p 8000:8000 --name matomo \
-v /home/usr/matomo/data:/data \
crazymax/matomo:latest
```

The screenshot shows the Matomo web interface. On the left, a sidebar navigation includes 'Dashboard', 'Visitors', 'Behaviour', 'Acquisition', 'Goals', and 'Marketplace'. The main area features several widgets:

- Visits in Real-time**: Shows data for the last 24 hours (30 visits, 128 actions) and the last 30 minutes (1 visit, 1 action). It lists visitors from Monday, September 21, at 09:11:09, including 'www.bateria2x100.com' (Spain, iOS, mobile), 'Direct Entry' (Actions: 1), and other visitors from YouTube, Google, and Microsoft.
- Visits Over Time**: A line chart titled 'Visits' showing traffic trends from Saturday, August 22, to Saturday, September 12. The traffic remains low until late August, then rises sharply to around 25 visits per day starting early September.
- Premium Features & Services for Matomo**: An 'Enterprise' section with a note about server setup and a 'READ MORE' button.
- Visits Overview**: Statistics including 45 visits, 39 unique visitors, 5 min 19s average visit duration, and 53% visits having bounced.
- Become a Matomo Expert**: A section with a 5-star rating, a welcome message for 'Matomo geeked', and a note that the user is currently a 'Matomo Beginner' and can become an 'Intermediate'. It includes links for tracking code, goals, logo upload, and user management.
- Visitor Map**: A world map showing 39 unique visitors across various countries.

# Install Watchtower with E-Mail (Gmail) Notifications

Use the following code to install watchtower with gmail notifications. See more information and [documentation here](#).

```
sudo docker run -d \
--name watchtower \
-v /var/run/docker.sock: /var/run/docker.sock \
-e WATCHTOWER_NOTIFICATIONS=email \
-e WATCHTOWER_NOTIFICATION_EMAIL_FROM=youremail@gmail.com \
-e WATCHTOWER_NOTIFICATION_EMAIL_TO=youremail@gmail.com \
-e WATCHTOWER_NOTIFICATION_EMAIL_SERVER=smtp.gmail.com \
-e WATCHTOWER_NOTIFICATION_EMAIL_SERVER_USER=youremail@gmail.com \
-e WATCHTOWER_NOTIFICATION_EMAIL_SERVER_PASSWORD=your_email_password \
-e WATCHTOWER_NOTIFICATION_EMAIL_DELAY=2 \
containrrr/watchtower
```

Without email notifications

```
sudo docker run -d \
--name watchtower \
-v /var/run/docker.sock: /var/run/docker.sock \
containrrr/watchtower
```

# Install Glances to Monitor Docker Containers (with web interface)

Glances can be installed through Docker, allowing you to run it without installing all the python dependencies directly on your system. Once you have Docker installed you can run the following command to install Glances with a web interface. [See more information here](#).

```
sudo docker run -d --restart="always" -p 61208-61209:61208-61209 -e GLANCES_OPT="-w" -v /var/run/docker.sock:/var/run/docker.sock:ro --pid host docker.io/nicolargo/glances
```

```
xps (Ubuntu 14.04 64bit / Linux 3.13.0-85-generic) - IP 192.168.0.6/24
Uptime: 1 day, 20:23:55

1.80GHz CPU 100.0% nice: 0.0% ctx_sw: 7605 MEM 26.8% active: 878M SWAP 7.6% LOAD 4-core
CPU [|||||] 100% user: 97.9% irq: 0.0% inter: 5015 total: 7.71G inactive: 1.58G total: 7.91G 1 min: 3.21
MEM [|||||] 26.8% system: 2.1% iowait: 0.0% sw_int: 1273 used: 2.06G buffers: 5.73M used: 612M 5 min: 1.86
SWAP [||] 7.6% idle: 0.0% steal: 0.0% free: 5.64G cached: 645M free: 7.31G 15 min: 1.17

NETWORK Rx/s Tx/s CONTAINERS 2 (served by Docker 1.11.1)
docker0 0b 0b
lo 392b 392b Name Status CPU% MEM /MAX IOR/s IOW/s Rx/s Tx/s Command
_h2c39a99 0b 0b _dbgrafana_grafana_1 Up 2 mins 0.0 5.94M 7.71G 0b 0b 0b /run.sh
_h610b701 0b 0b _bgrafana_influxdb_1 Up 2 mins 0.1 8.60M 7.71G 0b 0b 0b /run.sh
wlan0 10.5Mb 860Kb

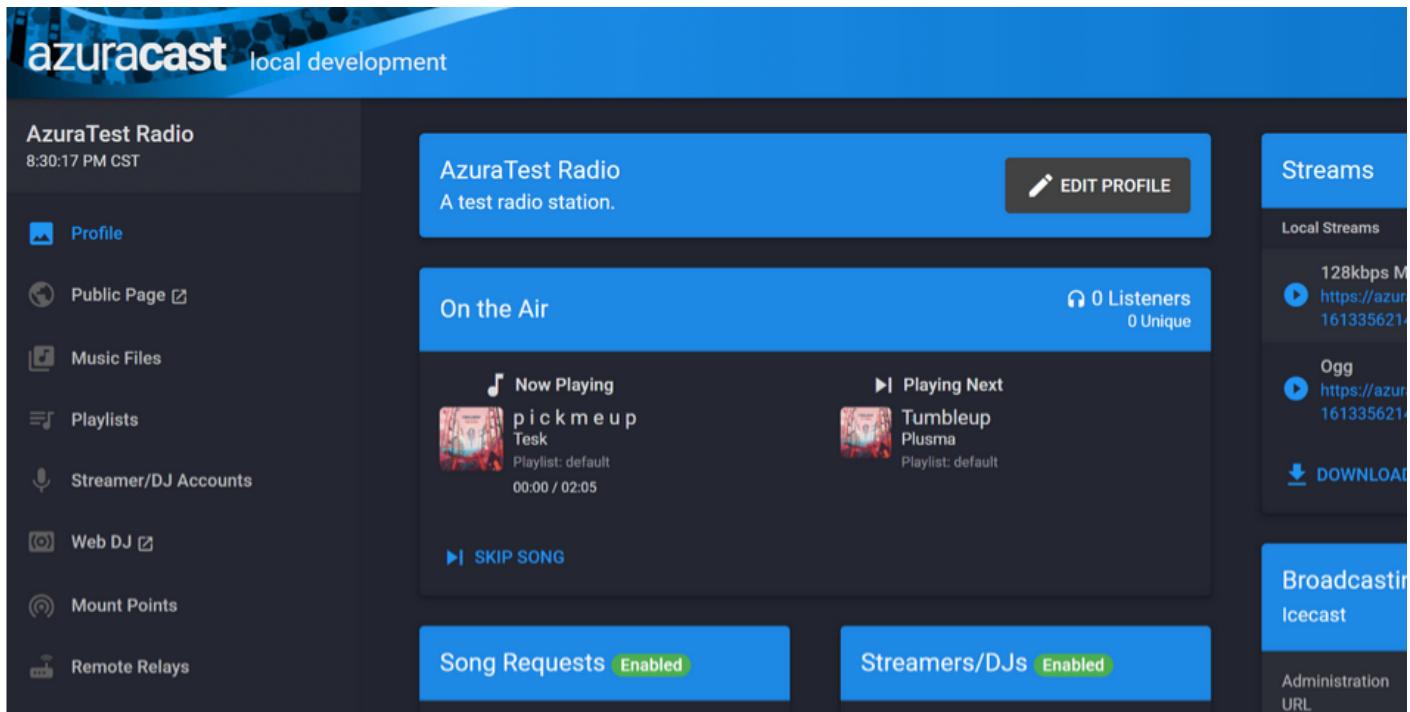
TASKS 257 (780 thr), 5 run, 252 slp, 0 oth sorted automatically by cpu_percent, flat view
DISK I/O R/s W/s CPU% MEM% VIRT RES PID USER NI S TIME+ R/s W/s Command
sda1 0 0 96.0 0.0 7.13M 100K 20889 nicolargo 0 R 0:03.50 0 0 stress --cpu 4 -t 30
sda2 78K 2K 91.8 0.0 7.13M 100K 20890 nicolargo 0 R 0:03.33 0 0 stress --cpu 4 -t 30
sda3 66K 0 91.5 0.0 7.13M 100K 20891 nicolargo 0 R 0:03.26 0 0 stress --cpu 4 -t 30
FILE SYS Used Total 86.4 0.0 7.13M 100K 20889 nicolargo 0 R 0:03.19 0 0 stress --cpu 4 -t 30
/ (sda2) 71.2G 226G 12.7 11.8 2.50G 933M 11378 nicolargo 0 S 2h21:43 0 1M /usr/lib/firefox/firefox
/boot/efi 3.38M 511M 5.1 0.3 548M 23.4M 19899 nicolargo 0 R 0:07.27 0 0 python -m glances
4.3 2.1 2.04G 163M 3278 nicolargo 0 S 36:17.83 0 0 /usr/bin/gnome-shell
SENSORS 2.7 0.0 0 0 577 root 0 S 1:36.94 0 0 irq59-ivwlwifi
temp1 27C 1.5 1.3 477M 100M 2141 root 0 S 17:18.96 0 0 /usr/bin/X :0 -background none -verbose -auth /var/run/gdm/auth
temp2 29C 1.5 1.5 1.18G 122M 23657 nicolargo 0 S 0:07.93 0 0 /usr/bin/perl /usr/bin/shutter
Physical id 0 74C 0.6 0.2 914M 19.2M 19237 nicolargo 0 S 0:33.56 0 0 /usr/bin/python /usr/bin/terminator
Core 0 74C 0.6 0.3 606M 20.8M 2870 root 0 S 0:30.96 0 0 /usr/bin/docker daemon --raw-logs
Core 1 74C 0.6 0.1 358M 6.70M 3142 nicolargo 0 S 1:14.27 20K 0 /usr/bin/ibus-daemon --daemonize --xim
Battery 33% 0.3 0.1 612M 11.1M 3381 nicolargo 19 S 0:44.80 0 0 /usr/lib/tracker/tracker-miner-fs
0.3 0.0 201M 1.16M 3227 nicolargo 0 S 0:19.28 2K 0 0 /usr/lib/ibus/ibus-engine-simple
0.3 0.3 1.18G 22.2M 4835 nicolargo 0 S 0:23.10 0 0 nautilus --new-window
0.3 0.0 410M 2.81M 1112 root 0 S 0:07.11 0 0 NetworkManager
0.3 0.3 649M 27.3M 3099 nicolargo 0 S 0:08.46 0 0 /usr/lib/x86_64-linux-gnu/bamf/bamfdaemon
0.3 0.0 0 0 79 root 0 S 0:20.63 0 0 kworker/3:1
0.3 0.0 88.4M 240K 2083 www-data 0 S 0:02.72 0 0 nginx: worker process
0.3 0.3 2.07G 25.6M 2194 rabbitmq 0 S 5:41.18 0 0 /usr/lib/erlang/erts-5.10.4/bin/beam.smp -W w -K true -A30 -P
0.3 0.0 0 0 16492 root 0 S 0:01.94 0 0 kworker/2:2
0.0 0.0 0 0 18 root 0 S 0:00.00 0 0 rcuob/1
0.0 0.1 999M 10.0M 3315 nicolargo 0 S 0:09.78 0 0 /usr/lib/gnome-online-accounts/goa-daemon
0.0 0.0 0 0 27916 root 0 S 0:00.00 0 0 irq61-me1_me
0.0 0.0 0 0 39 root 0 S 0:00.70 0 0 ksoftirqd/3

Warning or critical alerts (last 4 entries)
2016-05-16 16:53:12 (ongoing) - CPU_USER (97.6): stress, stress, stress
2016-05-16 16:52:41 (0:00:18) - WARNING on MEM (76.0)
2016-05-16 16:52:01 (0:00:33) - CRITICAL on CPU_IOWAIT (Min:51.9 Mean:63.4 Max:77.1): bash, stress, firefox
2016-05-16 16:51:31 (0:00:30) - CRITICAL on CPU_USER (Min:80.5 Mean:95.8 Max:98.3): stress, stress, stress

2016-05-16 16:53:15
```

# Install AzuraCast

Use these commands to install AzuraCast on your host machine. This will install Docker in the process.



```
sudo su
```

```
apt-get upgrade
```

```
apt-get update
```

```
mkdir -p /var/azuracast
```

```
cd /var/azuracast
```

```
curl -fsSL https://raw.githubusercontent.com/AzuraCast/AzuraCast/main/docker.sh docker.sh
```

```
chmod a+x docker.sh
```

```
./docker.sh install
```