

Running ntopng from Source on Raspberry Pi 5 (ARM64)

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Category: Network/Security

Backlink: [LibreNMS Docker Deployment on Raspberry Pi 5](#)

Overview

This guide details how I installed and configured the open-source network traffic monitor **ntopng** on my **Raspberry Pi 5 (ARM64)**. The goal was to gain full LAN visibility using packet inspection via the Pi's wireless interface. LibreNMS is already in place for SNMP-based metrics, and ntopng complements it by showing real-time traffic flows and bandwidth usage.

Why Build from Source?

The official Docker images for `ntop/ntopng` were built for `amd64`, which is incompatible with the Pi 5's `arm64` architecture. Since no prebuilt stable ARM image was available, I opted to build ntopng from source.

Install Prerequisites

```
sudo apt update && sudo apt upgrade -y
sudo apt install -y \
  build-essential cmake libtool autoconf automake pkg-config \
  libzmq3-dev libsqli3-dev libhiredis-dev libmaxminddb-dev \
  libpcap-dev libcurl4-openssl-dev libssl-dev libnghttp2-dev \
  libmariadb-dev-compat libmariadb-dev libnats-dev libcap-dev \
  redis git
```

Clone and Build nDPI

```
cd ~
git clone https://github.com/ntop/nDPI.git
cd nDPI
./autogen.sh
make
```

Clone and Build ntopng

```
cd ~
git clone https://github.com/ntop/ntopng.git
cd ntopng
./configure
make
sudo make install
```

Create Systemd Service File

```
# /etc/systemd/system/ntopng.service

[Unit]
Description=NtopNG Community Edition (custom build)
After=network.target

[Service]
ExecStart=/usr/local/bin/ntopng --dont-change-user --interface=wlan0 --http-port=3000
WorkingDirectory=/var/lib/ntopng
User=root
Restart=on-failure

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

Enable and Start Service

```
sudo mkdir -p /var/lib/ntopng
sudo systemctl daemon-reload
sudo systemctl enable ntopng
```

```
sudo systemctl start ntopng
```

Web Access

- Open your browser to:

```
http://<Pi5-IP>:3000
```

In my case:

```
http://192.168.1.174:3000
```

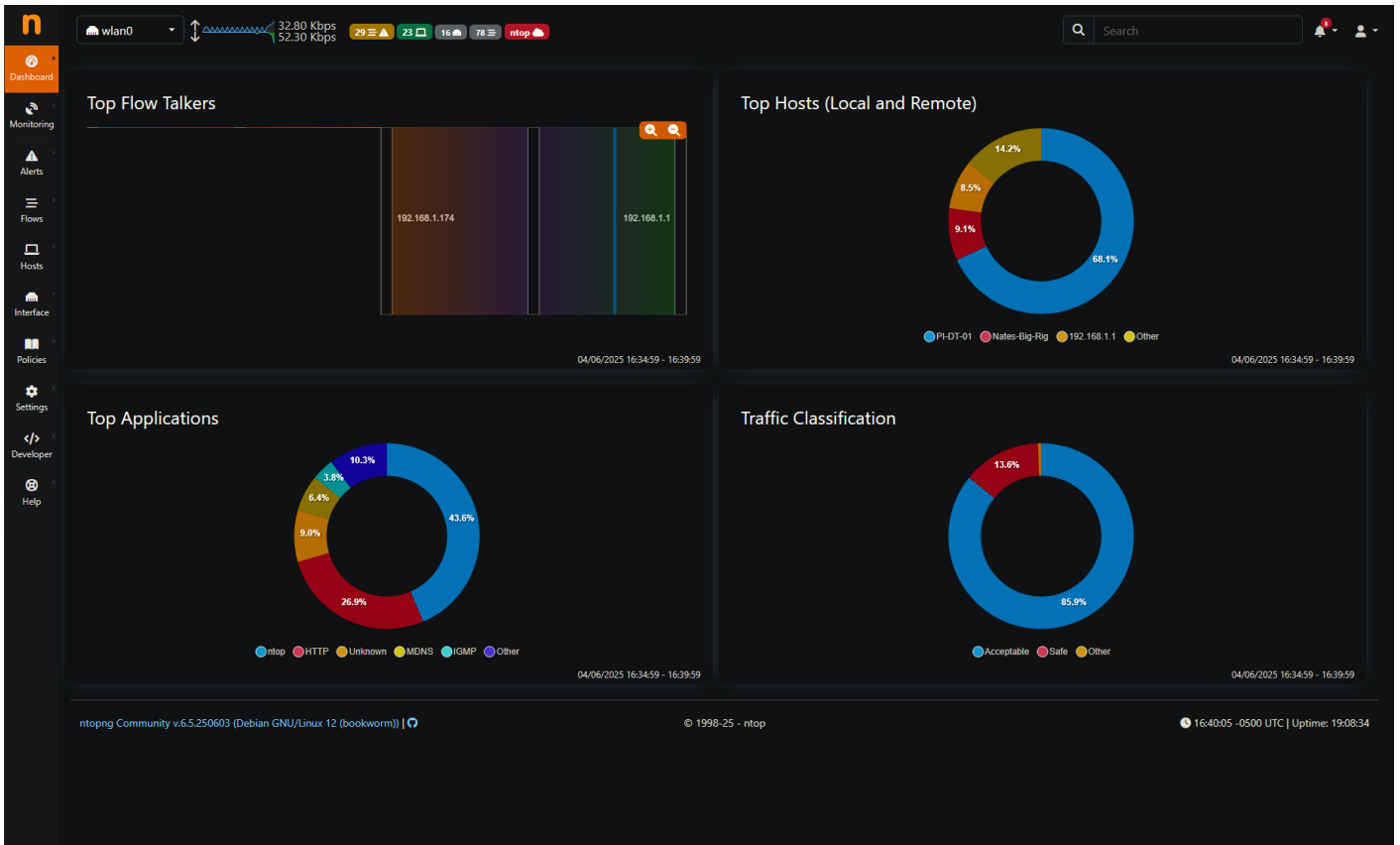
If the page doesn't load, check:

```
sudo systemctl status ntopng
```

```
sudo journalctl -u ntopng --no-pager
```

The screenshot shows the ntopng 'Live Flows' analysis interface. The top status bar indicates network activity on wlan0 with 30.30 Kbps down and 5.60 Kbps up. The interface includes a search bar, a sidebar with navigation options (Dashboard, Monitoring, Alerts, Hosts, Interface, Policies, Settings, Developer, Help), and a main table of network flows. The table columns are: Actions, Last Seen, Duration, Protocol, Quality, TCP Flow State, DSCP, Traffic Type, Host Pools, Networks, Actual Thpt, Total Bytes, and Info. The table lists various flows, including broadcast traffic, IGMP, and multiple TCP-HTTP flows to the local host (192.168.1.174) from various external hosts.

| Actions | Last Seen | Duration | Protocol | Quality | TCP Flow State | DSCP | Traffic Type | Host Pools | Networks | Actual Thpt | Total Bytes | Info |
|---------|-----------|----------|---------------|---------|----------------|------|----------------|---------------|---------------------|--------------|-------------|--|
| | 00:01 | 19:08:40 | UDP:TuyaLP | | | | broadcast | 192.168.1.189 | 49155 → 6667 | 553.14 bps ↓ | 2.62 MB | |
| | 00:16 | 19:08:34 | IGMP | | | | igmp.mcast.net | PI-DT-01 | | 141.66 bps ↑ | 181.72 KB | |
| | 00:17 | 19:08:38 | IGMP | | | | | 192.168.1.1 | PI-DT-01 | 186.92 bps ↑ | 168.26 KB | |
| | < 1 sec | < 1 sec | TCP:HTTP.ntop | | | | | Nates-Big-Rig | 51809 → 3000 | | 58.58 KB | GET OK 192.168.1.174:3000/ua/flows_stats.lua |
| | 00:26 | 00:26 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51767 → 3000 | | 57.26 KB | GET OK 192.168.1.174:3000/ua/index.lua |
| | < 1 sec | 18:00 | UDP:Synching | | | | | Nates-Big-Rig | 56783 → 21027 | 1.23 Kbps ↑ | 16.65 KB | |
| | 00:16 | 00:16 | UDP:SNMP | | | | snmp | PI-DT-01 | 56445 → 192.168.1.1 | | 16.62 KB | |
| | 00:05 | 00:05 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51799 → 3000 | | 14.90 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/flow/graph.lua?fid=1 |
| | 00:35 | 00:35 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51761 → 3000 | | 12.45 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/host/active_list.lua?st |
| | 00:56 | 00:56 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51749 → 3000 | | 12.40 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/host/active_list.lua?st |
| | 00:45 | 00:45 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51756 → 3000 | | 12.37 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/host/active_list.lua?st |
| | 00:25 | 00:25 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51778 → 3000 | | 7.68 KB | GET OK 192.168.1.174:3000/ua/login.lua?referer=192.168.1.174% |
| | 00:15 | 00:15 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51789 → 3000 | | 7.63 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/flow/graph.lua?fid=1 |
| | < 1 sec | < 1 sec | TCP:HTTP.ntop | | | | | Nates-Big-Rig | 51816 → 3000 | | 7.24 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/flow/flow_filters.lua? |
| | 00:25 | 00:25 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51779 → 3000 | | 5.12 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/flow/graph.lua?fid=1 |
| | < 1 sec | < 1 sec | TCP:HTTP.ntop | | | | | Nates-Big-Rig | 51817 → 3000 | | 4.09 KB | GET OK 192.168.1.174:3000/tables_config/flows_list.json?epoch_ei |
| | 00:25 | 00:25 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51776 → 3000 | | 3.06 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/dashboard/template/ |
| | 00:32 | 00:32 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51763 → 3000 | | 2.98 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/interface/data.lua?fid |
| | 00:38 | 00:38 | TCP:HTTP.ntop | 60 | | | | Nates-Big-Rig | 51758 → 3000 | | 2.98 KB | GET OK 192.168.1.174:3000/ua/rest/v2/get/interface/data.lua?fid |



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