**sFlow Guide**

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# **Revision History**

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| --- | --- | --- |
| **Version** | **Date** | **Changes** |
| 1.0 | 3/25/2018 | Initial Version |

NOTE: sFlow is already installed in open vSwitch. No need for separate installation

# **~~sFlow Installation~~**

1. ~~On Ubuntu VM with Mininet, download sFlow.~~
   1. [~~https://sflow.net/downloads.php~~](https://sflow.net/downloads.php)
   2. ~~On that page, click the link that says: hsflow-ubuntu16\_<version>\_amd64.deb~~
      1. ~~The latest version for me is the following:~~
      2. [~~https://github.com/sflow/host-sflow/releases/download/v2.0.15/hsflowd-ubuntu16\_2.0.15-1\_amd64.deb~~](https://github.com/sflow/host-sflow/releases/download/v2.0.15/hsflowd-ubuntu16_2.0.15-1_amd64.deb)
   3. ~~Run the following commands:~~
      1. ~~sudo dpkg -I hsflowd\_2.0.15.amd64.deb~~
      2. ~~sudo systemctl enable hsflowd~~
      3. ~~sudo vi /etc/hsflowd.conf~~
      4. ~~sudo service hsflowd start~~

# **sFlow on Open vSwitch**

1. <http://docs.openvswitch.org/en/latest/howto/sflow/>
2. Launch mininet
3. In another terminal window, run the following command. The highlighted parameters may change based on your VM’s values:

sudo ovs-vsctl -- --id=@sflow create sflow agent=enp0s3 target=\”10.28.34.14:6343\” sampling=2 polling=20 -- set bridge s1 sflow=@sflow

enp0s3 = The interface on your VM toward the collector.

10.28.34.14 = IP address of sFlow collector

6343 = Port of sFlow collector

2 = sFlow should sample 1 out of every 2 packets.

20 = Periodic sampling or polling of counters.

s1 = switch to apply to.

# **Installing the sFlow Collector**

1. <https://sflow-rt.com/download.php>
2. Install JAVA:
   * + - 1. Java8 commands:

sudo apt-get install software-properties-common -y && \

sudo add-apt-repository ppa:webupd8team/java -y && \

sudo apt-get update && \

echo "oracle-java8-installer shared/accepted-oracle-license-v1-1 select true" | sudo debconf-set-selections && \

sudo apt-get install oracle-java8-installer oracle-java8-set-default -y

1. Add JAVA\_HOME to your .profile file and to PATH

vi ~/.profile

JAVA\_HOME=/usr/lib/jvm/java-8-oracle

PATH=$PATH:$JAVA\_HOME

1. Log out and back in to enable the changes.
2. Download sFlow-RT

wget <https://inmon.com/products/sFlow-RT/sflow-rt.tar.gz>

tar -xvzf sflow-rt.tar.gz

# **Running sFlow Collector**

1. Run the following commands:

cd ~/sflow-rt

./start.sh

1. In web browser open “localhost:8008”

# **Python Code to Extract sFlow data from received UDP Message**

1. <https://github.com/Practical-Code/sflow-collector/blob/master/sflow-collector.py>
2. Above link has at least a partial implementation of sFlow protocol.
3. sFlow version 5 RFC is at <https://sflow.org/sflow_version_5.txt>
   1. sFlow datagram is specified using XDR standard
      1. XDR Standard RFC at <https://tools.ietf.org/html/rfc4506>
   2. Sends UDP messages to port 6343

TODO: Figure out if we can extract raw data from sFlow-RT. If not, then need to find alternative solution.