ipktgen Documentation

Release 1.0

UH Networking Lab

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Contents

Overview

Ipktgen is a realistic packet generator. It uses ML algorithms and statistical distributions to create a model for network traffic seen in an input pcap file. The model generated, can then taken to a different network and be used to generate traffic that is very similar to what was seen in the original capture file.

Getting Started

2.1 Installing Ipktgen

2.1.1 Requirements

Before downloading and using ipktgen, ensure that you have the following python libraries installed on the device on which you intend to run ipktgen: dpkt, numpy, pandas, scipy, scikit-learn and matplotlib.

all these can be installed fom pip using the command:

```
# pip install dpkt numpy pandas scipy scikit-learn matplotlib
```

2.1.2 Downloading Ipktgen

Ipktgen sources can be downloaded from bitbucket using:

```
# hg clone https://bitbucket.org/oadele3/ipktgen/
```

Once downloaded, Ipktgen can be used as demonstrated in *Quickstart Tutorial*

2.2 Quickstart Tutorial

2.2.1 sas. . .

sas. . .

Further Usage and Implementation Details

3.1 Dataset Extraction From Tracefiles

3.1.1 Dataset Description

sas. . .

3.1.2 Dataset Generation Process

sas. . .

3.2 Traffic Model Creation

3.2.1 sas. . .

sas. . .

3.3 Packet Generation using Model

3.3.1 sas. . .

sas. . .

3.4 Evaluating Generated Traffic

3.4.1 sas...

sas...

Sample Experiments

4.1 Sample Experiments

4.1.1 VTS - Experiment 1

The ipktgen app is . . . .

4.1.2 VTS - Experiment2

trtrt

Install Tools

rfgrt