

UNIVERSITY OF ZAGREB
FACULTY OF ELECTRICAL ENGINEERING AND COMPUTING

SEMINAR

iproute2 and iptables packet

Neven Miculinić

Mentor:

Zagreb, January 2018.

CONTENTS

1. Introduction	1
2. Brief overview of Linux kernel network stack	2
2.1. iptables	2
2.2. Routing tables	3
2.3. Network namespaces	3
3. Example usecases	3
3.1. OpenVPN on Google cloud platform	3
3.2. Isolating process in its own network namespace	3
4. Bibliography	3

1. Introduction

Networking is one of the most important topic in everyday computer use. Every day you send and recieve thousand IP packages. Every facebook like, youtube video view or application download utilized world wide web, that is the Internet. Overwhelming majority of the Internet infrastucture Linux, 98.3%...check data

Therefore, it's more than likely you'd come into contact with linux networking stack and tooling. Since this topic is masively broad and complex, this paper is focusing on following two components:

- Netfilter/iptables — framework for various network related operations for packet filtering, NAT and port translation

- iproute2 — usespace utilies for controlling and monitoring various networking options in Linux kernel

2. Brief overview of Linux kernel network stack

pass

Links: <https://www.privateinternetaccess.com/blog/2016/01/linux-networking-stack-from-the-ground-up-part-1/>

2.1. iptables

Netfilter is a framework provided by Linux that allows various networking-related operations to be implemented in the form of customized handlers. Netfilter offers various functions and operations for packet filtering, network address translation, and port translation, which provide the functionality required for directing packets through a network, as well as for providing ability to prohibit packets from reaching sensitive locations within a computer network.

Wikipedia

This section focuses on the iptables,

2.2. Routing tables

2.3. Network namespaces

3. Example usecases

pass

3.1. OpenVPN on Google cloud platform

pass

3.2. Isolating process in its own network namespace

4. Bibliography