AINFV: Analysis of Isolation (memory/packet) in Network Function Virtualization

Abdul Ahad Ayaz*,

*Paderborn University (ahad@mail.upb.de)

Abstract—

I. INTRODUCTION

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B. Available Solutions

II. BACKGROUND

A. NFV

B. VNF

C. NF Chains

D. Programming VNF

E. Isolation

1) Memory Isolation: VMs/Containers

2) Packet Isolation: High Performance I/O libraries for Packet Processing Zero Copy Isolation

III. PROPOSED FRAMEWORK

A. Overview

B. Main Components

C. Framework

1) Development Model:
2) Execution model:

D. Testing

E. Analysis Tool

F. Testbed

G. Achieved Results

H. Overheads

IV. FRAMEWORK EVALUATION

A. Performance analysis of framework based different NFs

1) Throughput/mpps:

B. Security Analysis

1) NF vs NF Chains Isolation:

V. COMPARISON OF FRAMEWORKS

A. Based on Packet/Memory Isolation

B. Discuss new and old Frameworks Introduced

C. Conclusion Drawn

VI. FUTURE WORK

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