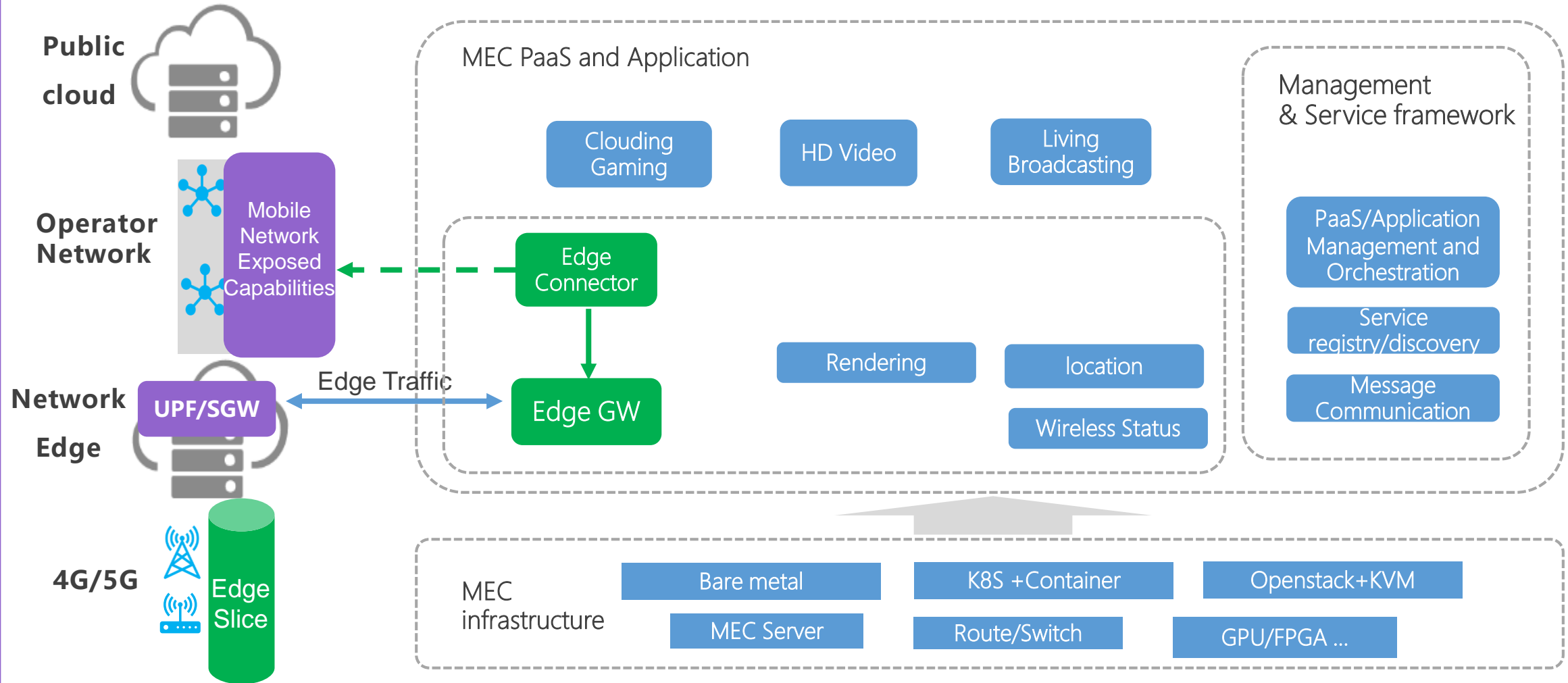# BP Updates: 5G MEC/Slice System to Support Cloud Gaming, HD Video and Live Broadcasting

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Tencent

AKRAINO
EDGE STACK

Agenda

› Release 3 summary

› Release 4 & beyond plan

Architecture Overview

Public cloud

Operator Network

Mobile Network Exposed Capabilities

Network Edge

UPF/SGW

4G/5G

Edge Slice

AKRAINO EDGE STACK

MEC PaaS and Application

| Clouding Gaming | HD Video | Living Broadcasting |

Edge Connector

Edge Traffic

Edge GW

Rendering   location

Wireless Status

Management & Service framework

PaaS/Application Management and Orchestration

Service registry/discovery

Message Communication

MEC infrastructure

| Bare metal | K8S +Container | Openstack+KVM |
| MEC Server | Route/Switch | GPU/FPGA ... |

- Edge connector: enable flexible traffic offloading from the aspects of control interaction with mobile network exposed capabilities, and subscribe the edge slice between UE and edge application
- Edge GW: enable the traffic offloading from the aspects of data plane with local traffic routing, traffic management and so on.

3

List of key feature of R3

openNESS

BP proprietary

5GC Emulator
- NEF Container
- User plane emulator (script)

Edge GW
- LDNS Container
- cAdvisor Container
- EAA Container

Edge Connector
- DNS-CLI
- Prometheus Container
- Grafana Container
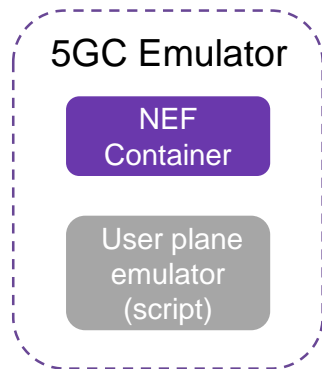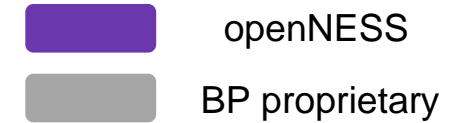
- Provides traffic influence APIs to the edge connector
- Performs signaling and data exchange with the Edge GW during traffic offloading
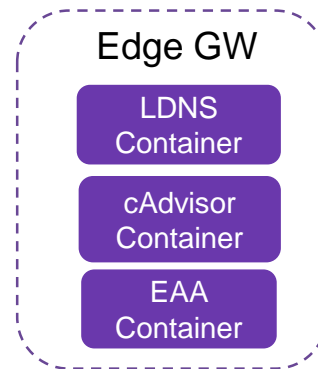
- LDNS, acting as a DNS server
- cAdvisor, provisioning pod-level rx/tx statistics
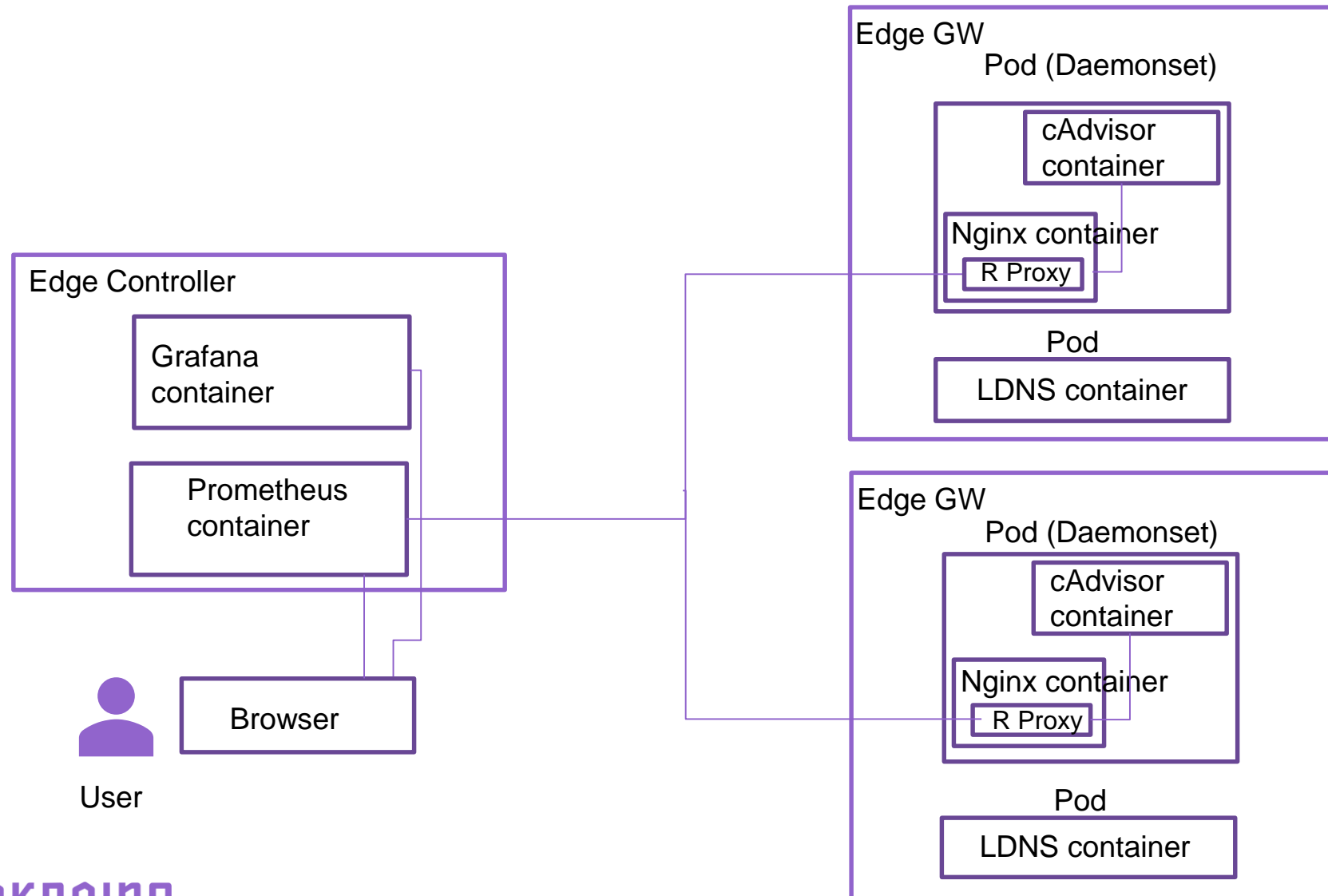- EAA，edge application registration
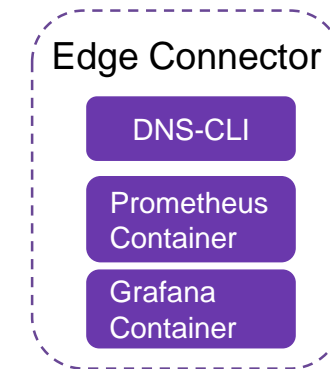
- DNS CLI，configuring DNS rules enforced by the LDNS hosted on each Edge GW
- Prometheus, collecting and visualizing rx/tx statistics
- Grafana, visualizing rx/tx statistics

Local DNS design and implementation
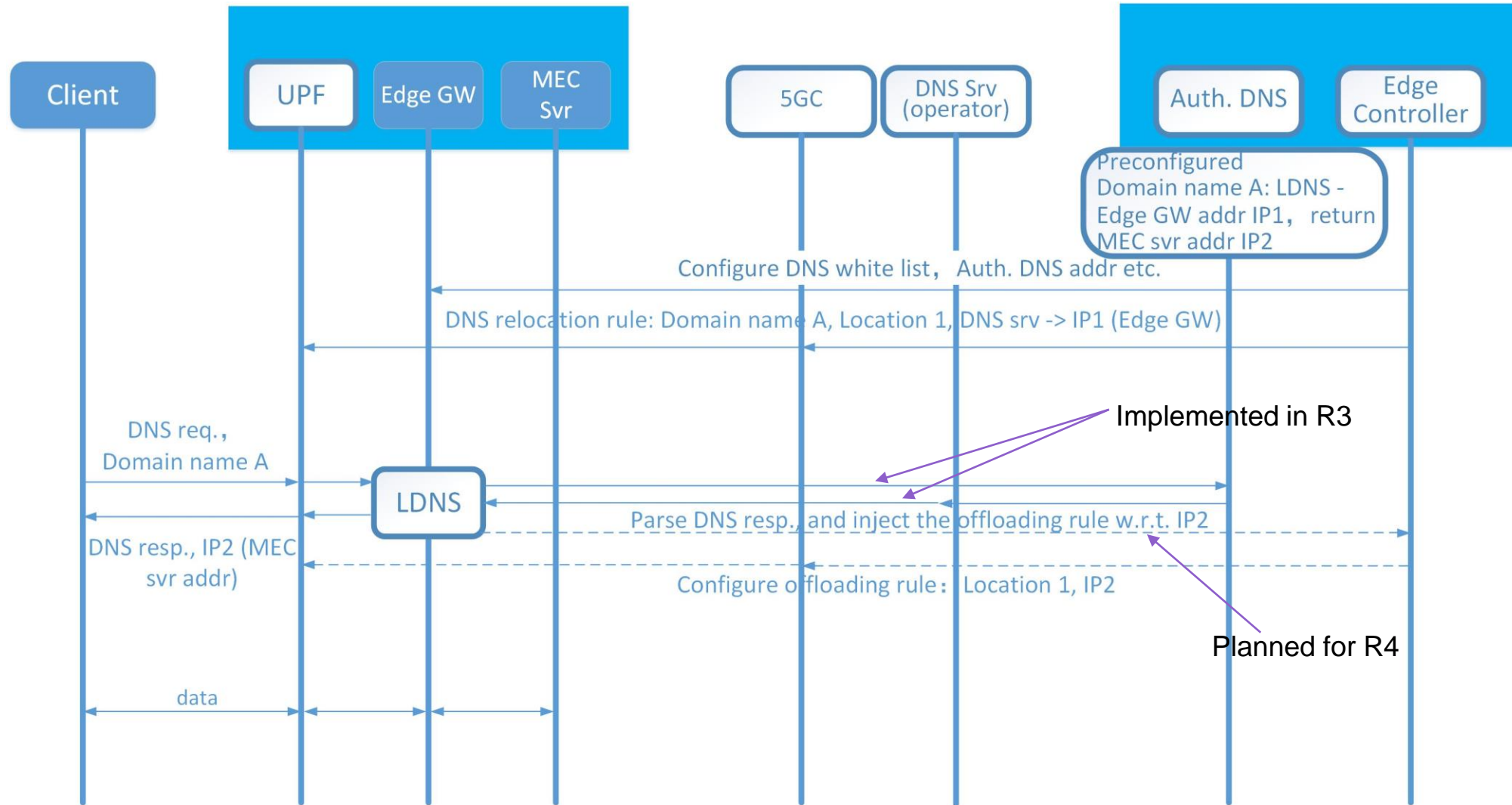
- UPF able to perform dynamic offloading, with the addition/remove of items to the IP list
- Forwarding of DNS req/resp included in Release 3
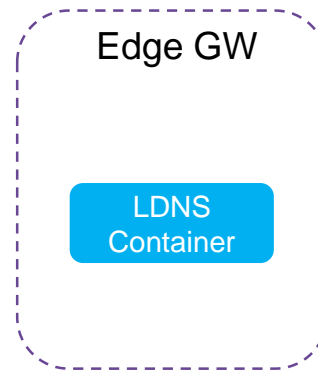
Traffic management

- Pod-level traffic statistics collection

Agenda

› Release 3 summary

› **Release 4 & beyond plan**

Next step

R4

Beyond R4

5GC Emulator

NW Slicing emulator

Edge GW

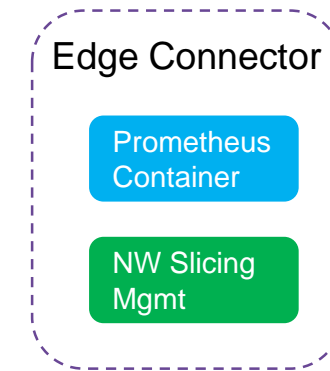LDNS Container

Edge Connector

Prometheus Container

NW Slicing Mgmt

- NW slicing emulator, enforcement of network slicing policy

- LDNS, parsing of DNS resp. and injection of offloading rule

- Prometheus, application level (sum of replicas) traffic statistics

Thank you!