UNIVERSITÄT PADERBORN

Future Internet - SS19

Complex Service Orchestration with OSM and OpenStack

Mini-Project Final Presentation

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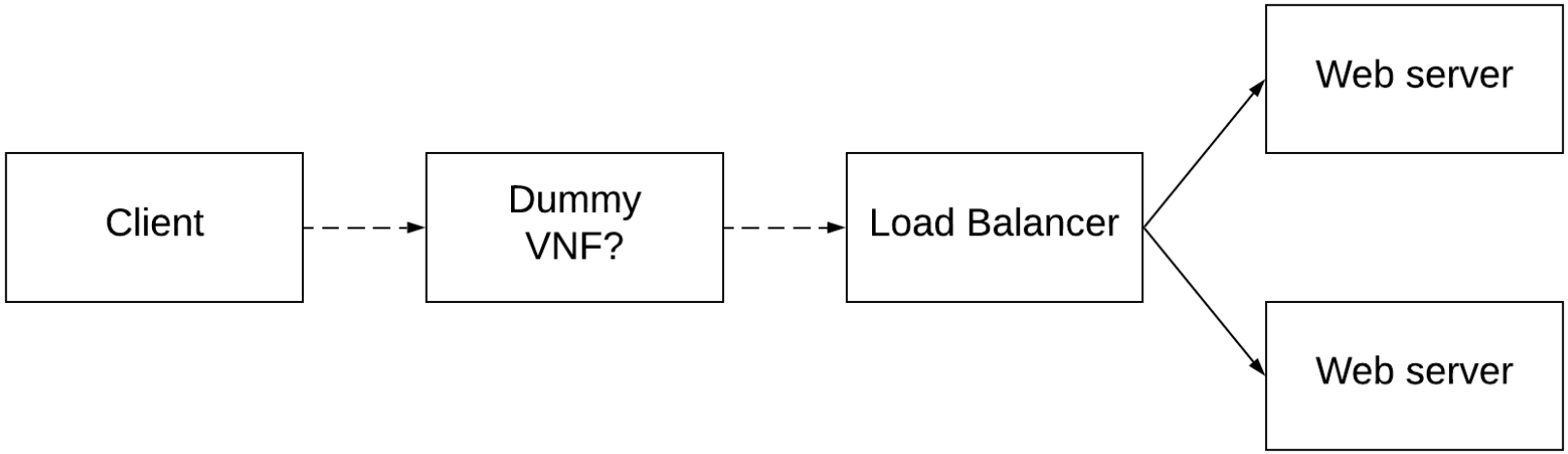
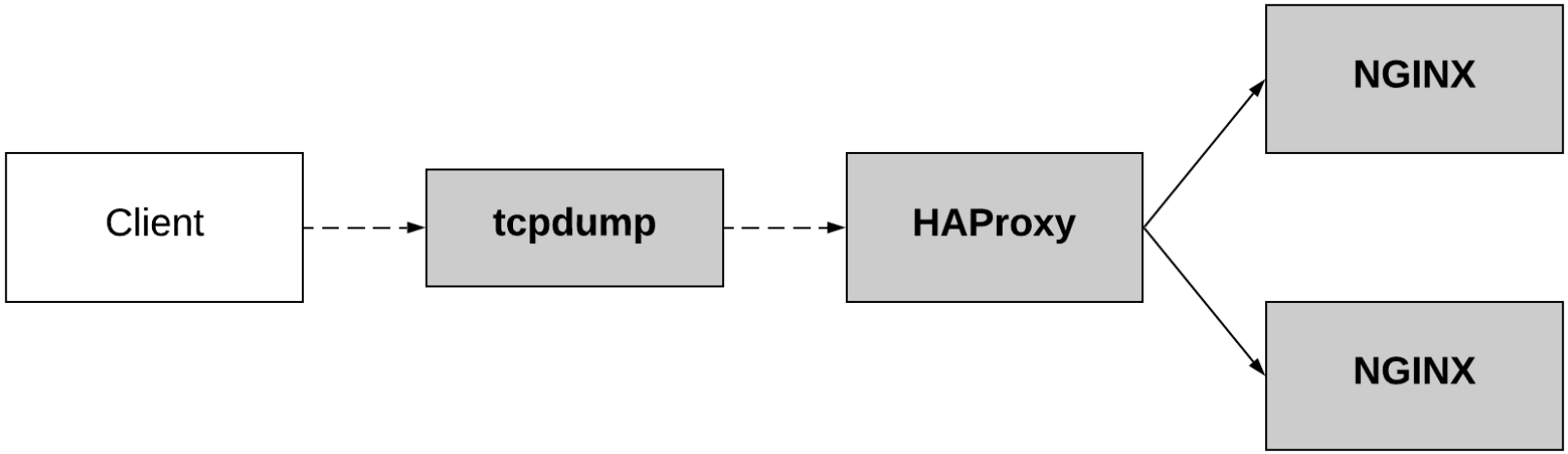
Goals

- Build and deploy a complex service in virtual environment using...
  - Open Source MANO (OSM)
  - OpenStack
  - Ubuntu Cloud Image
  - Cloud-init
- Experiment with **Servce Function Chaining:** VNF Forwarding Graph

Scenario


Client
Dummy
VNF?
Load Balancer
Web server
Web server


Client
tcpdump
HAProxy
NGINX
NGINX

Demo

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Demo

1. **OSM Dashboard** (Orchestrator)
    - Descriptors, Graphs
    - Service instantiation workflow

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2. **OpenStack Dashboard** (Infrastructure Manager)
   - Running instances, Logs
   - IP of instances

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1. **OSM Dashboard** (Orchestrator)
   - Descriptors, Graphs
   - Service instantiation workflow
2. **OpenStack Dashboard** (Infrastructure Manager)
   - Running instances, Logs
   - IP of instances
3. **Testing Scenario**
   - SSH into running instances
   - curl the load balancer
   - **SFC Demo:** tcpdump

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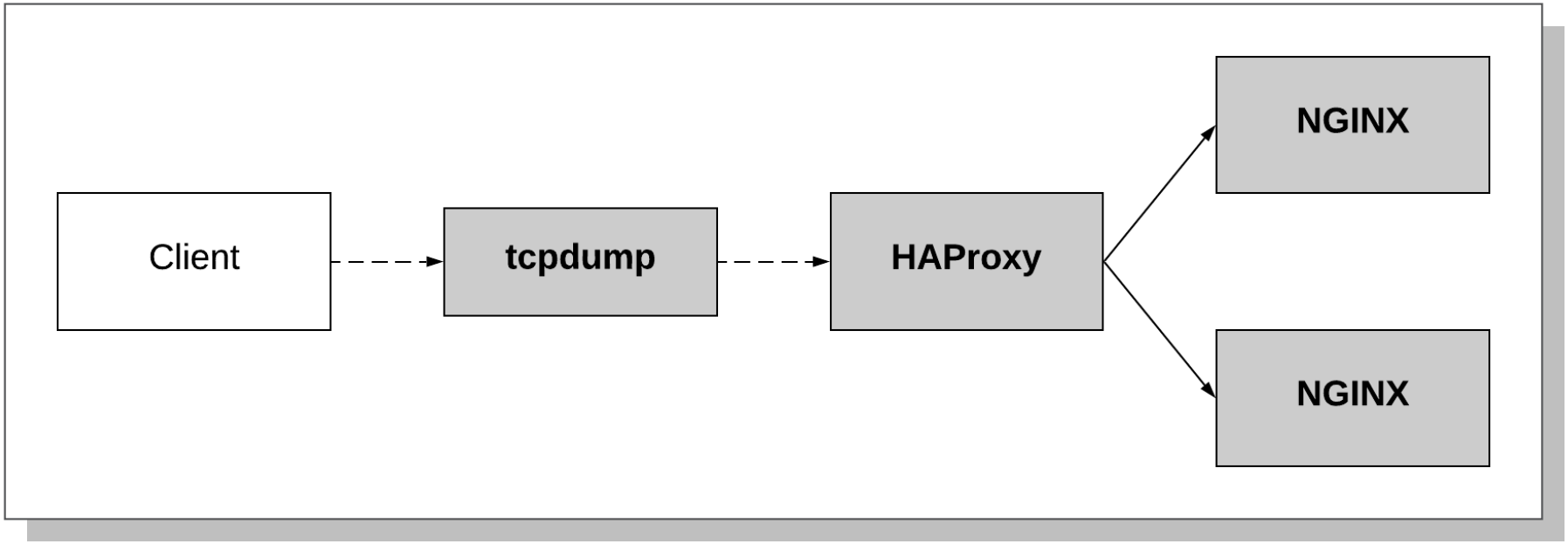
Demo



- SSH into running instances
- curl the load balancer
- **SFC Demo:** tcpdump

Issues?

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Issues

1. **SFC chaining not working from OSM**
   - VNFFG description not stable in OSM
   - What I tried
     - OSM Release 5, 6, Master
     - OpenStack newton, ocata, queens
     - Different NSD, VNFD (Intern Project)

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Issues

1. **SFC chaining not working from OSM**
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2. **VNF Configuration using “Charms”**
   - OSM Provides post instantiation configuration
   - Node IP configuration on HAProxy is now static

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GitHub

ashwinprasadme/Future-Internet-SS19-Mini-Project