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UPB — Computer Networks Group

Management of ServiCes Across MultipLE clouds

SCrAMbLE — Work Packages Demo

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Agenda

1. Introduction
2. Adaptor Demo
   - Test cases
   - Front End
   - MANO Scalability Investigation
3. Translator Demo
4. Splitter Demo
5. Conclusion

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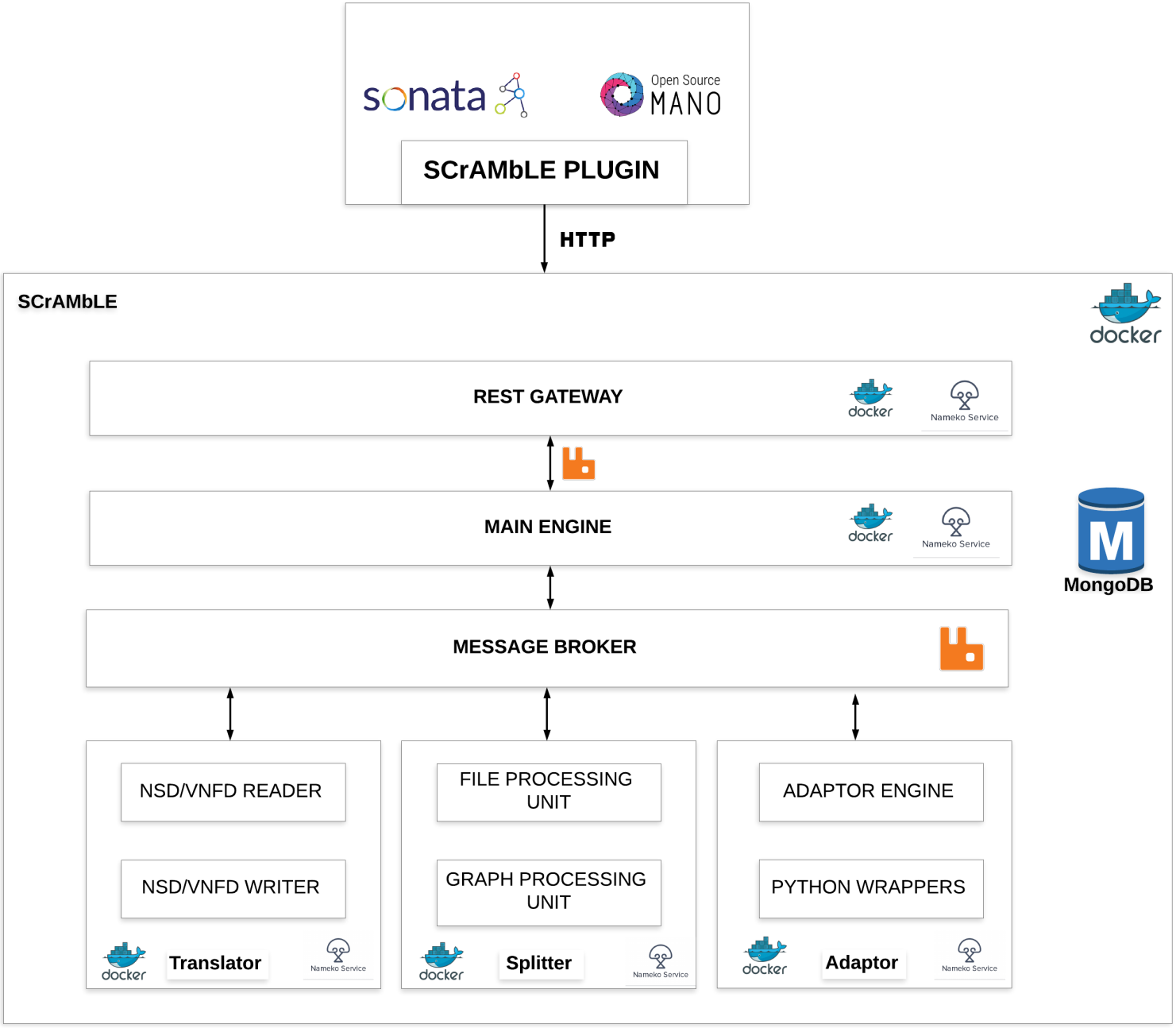
SCrAMbLE - Requirements and Architecture

Three work packages:

- SDT
- SDS
- MA


sonata
Open Source MANO
SCrAMbLE PLUGIN
HTTP
SCrAMbLE
docker
REST GATEWAY
docker
Nameko Service
MAIN ENGINE
docker
Nameko Service
MongoDB
MESSAGE BROKER
NSD/VNFD READER
NSD/VNFD WRITER
docker
Translator
Nameko Service
FILE PROCESSING UNIT
GRAPH PROCESSING UNIT
docker
Splitter
Nameko Service
ADAPTOR ENGINE
PYTHON WRAPPERS
docker
Adaptor
Nameko Service

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Adaptor Demo

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Front end

- A sneak peek of how SCrAMbLE plug in looks like
- Simple html for uploading VNFD , NSD and instantiating a Network Service(NS).
- Termination of NS
- In this way, adaptor installed in OSM communicates with another OSM or SONATA MANO

DEMO —>

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Test cases

- Test-driven development carried out for wrapping SONATA and OSM APIs
- Around 60+ test cases are running

DEMO —>

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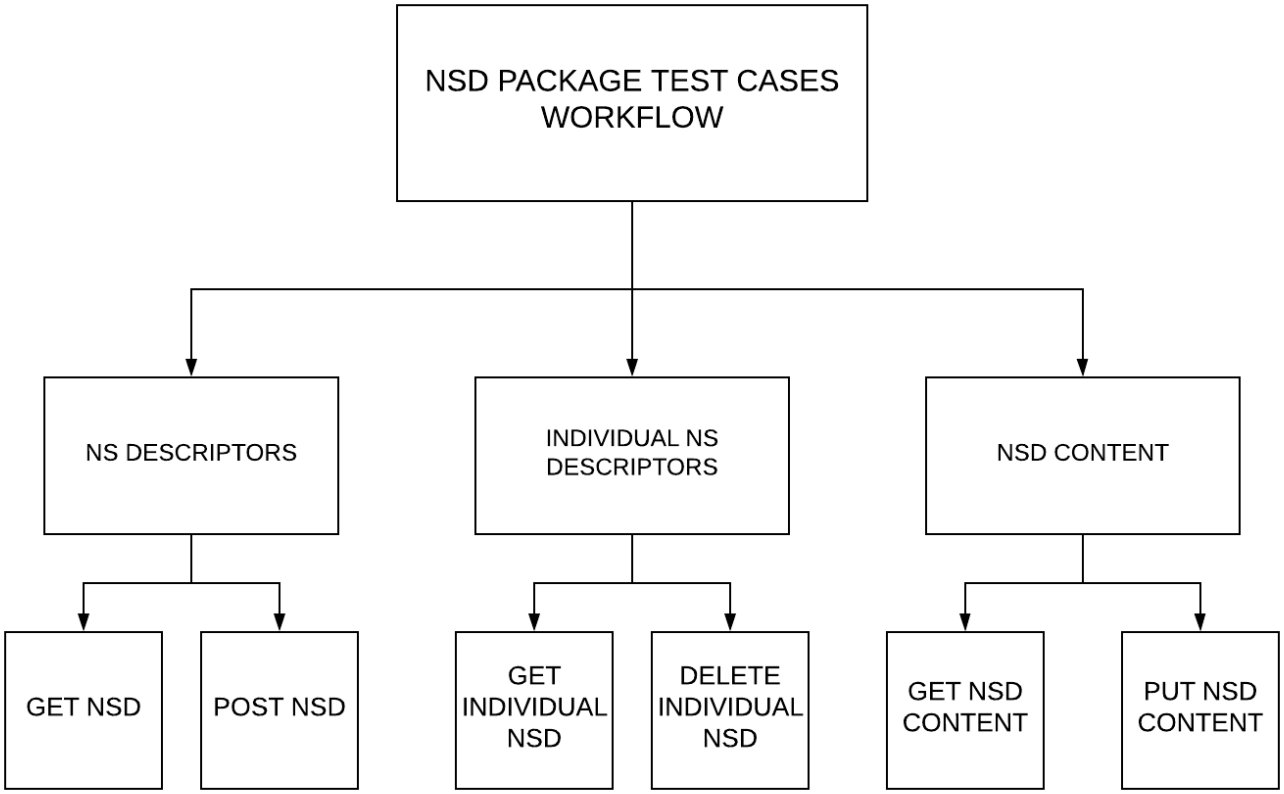
NSD package test cases



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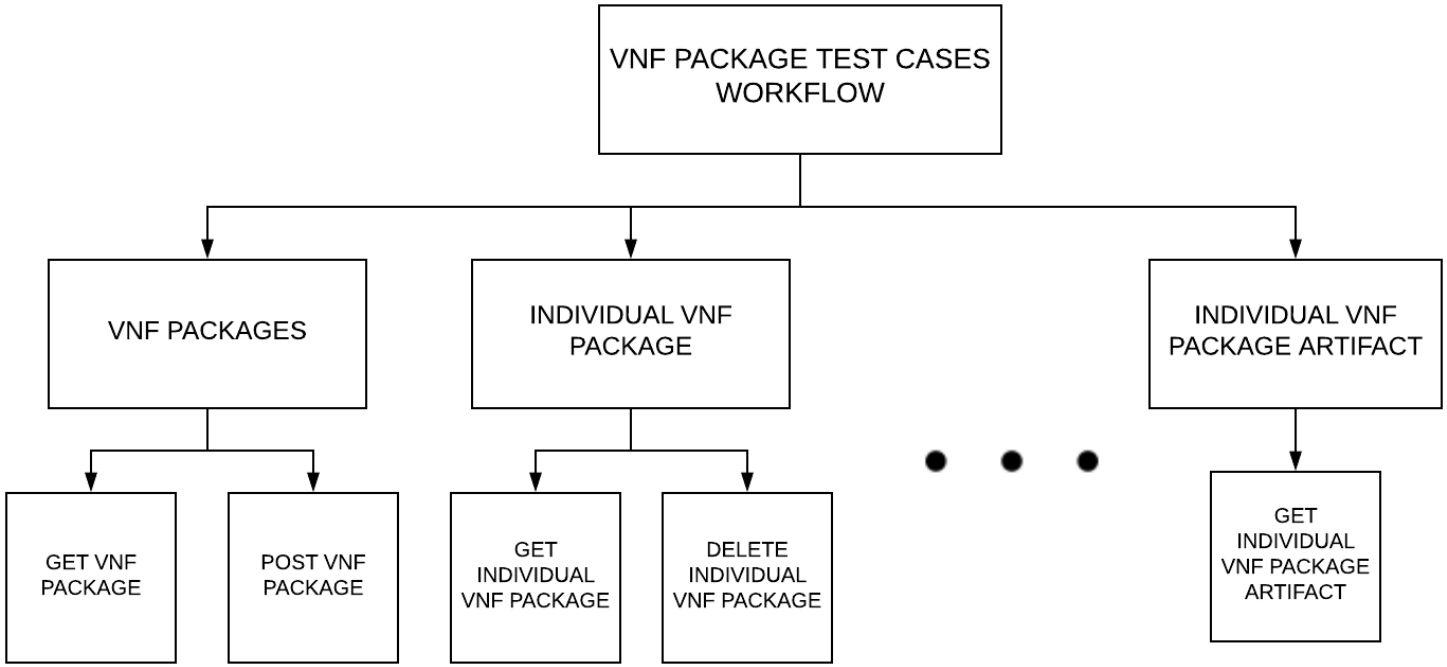
VNF package test cases



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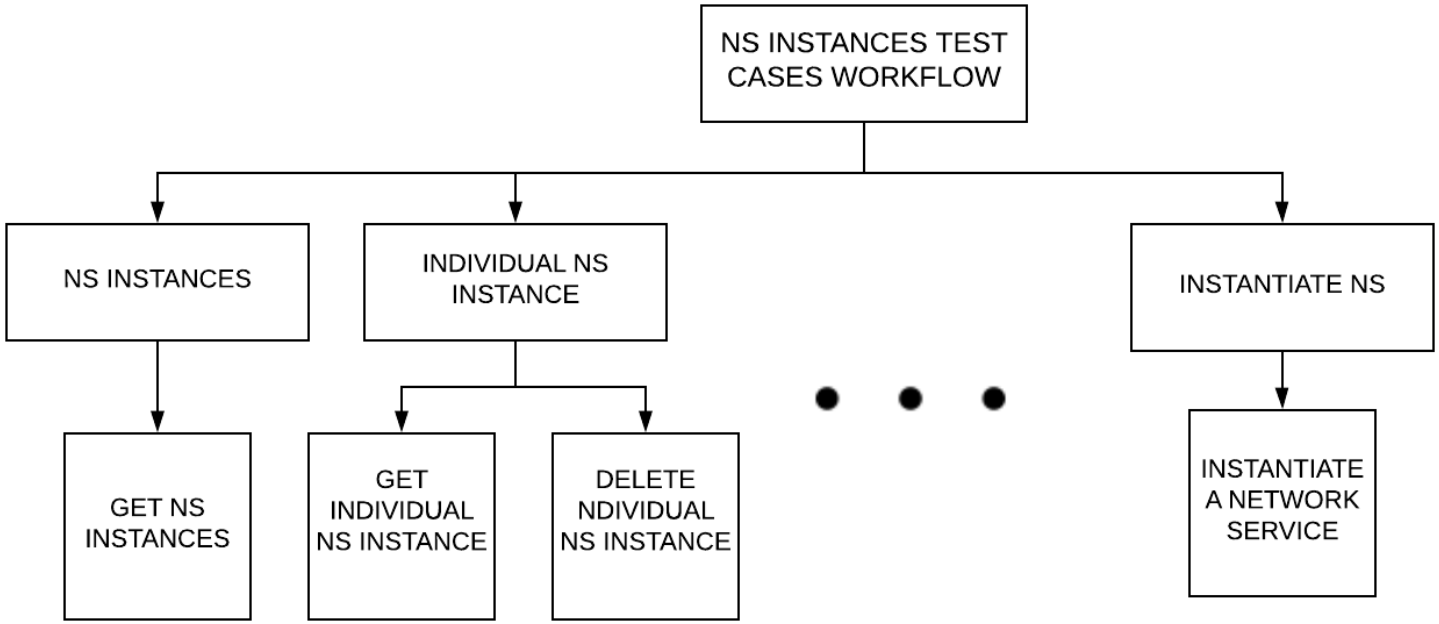
NS test cases



MANO Scalability Investigation

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Scalability of a system

Investigated the following for a system/server in general

- Scaling Approaches
  - Service Replication
  - Proactive and Reactive Scaling
  - Heirarchical scaling
- Scaling effects
  - Reliability, Availability and Heterogeneity of a server

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Goals for the coming semester

- Identify the right approach to scale a MANO taking into account all the effects of scaling
- Implement —— ?

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Translator Demo

TRANSLATOR

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Splitter Demo

Splitter

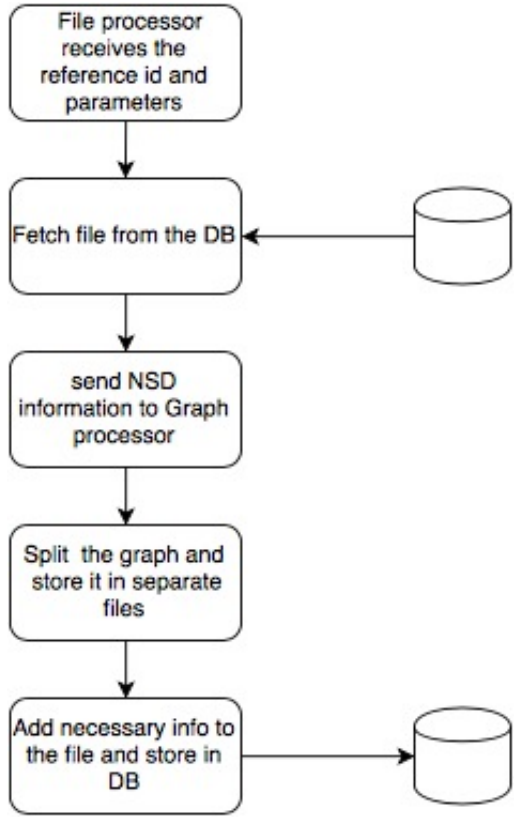

Figure: Work-flow of Service Descriptor Splitter

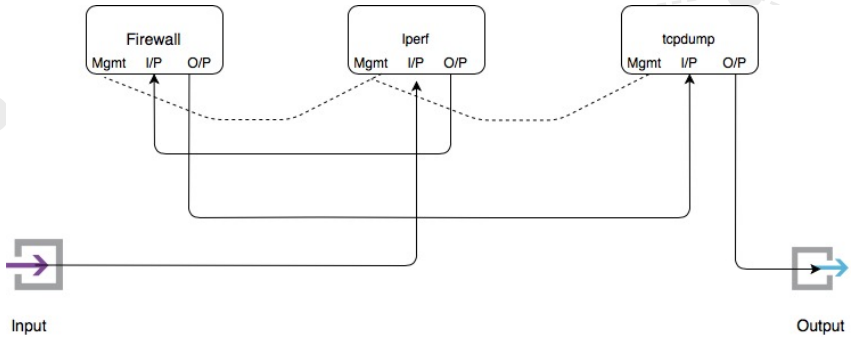

Figure: Forwarding-Graph of Sonata NSD

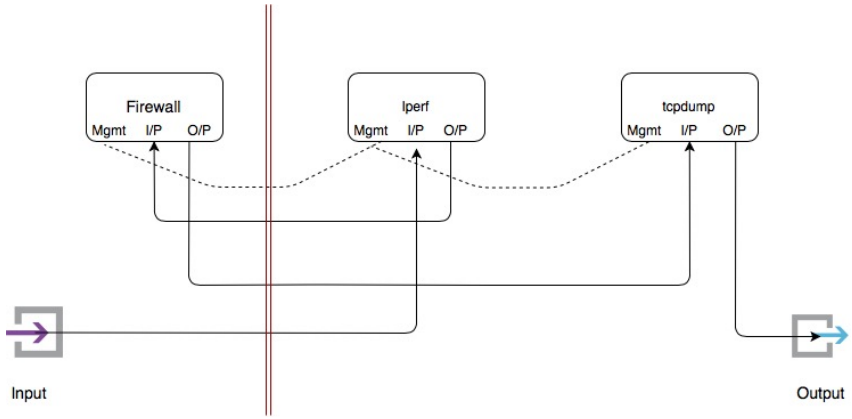

Figure: Splitting criteria

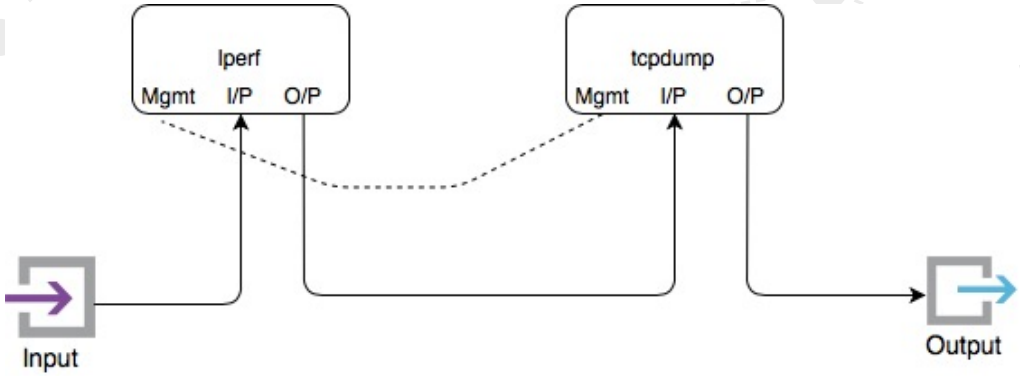

Figure: Graph of iperf and tcpdump NSD

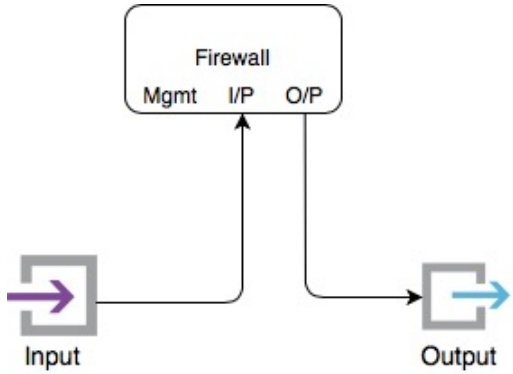

Figure: Graph of Firewall NSD

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Conclusion

THE END