

Service function chaining + group based policy integration

IETF-93

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Summary

- What is it?

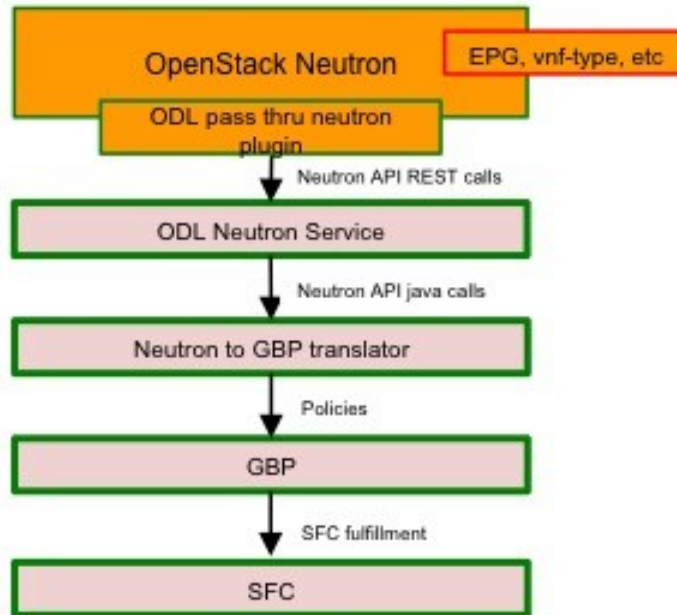
Integration of two important and popular Opendaylight projects.

- GBP: Policy abstraction. Allows users to express network configuration in a declarative versus imperative way.
- SFC: The WG Session you are attending now...hopefully this one is clear

- Why should you care?

- Running code (open-source and multi-vendor)
- Cornerstone of NFV “whole stack” solution
- Opendaylight Neutron Integration (GBP)

Top-Down View

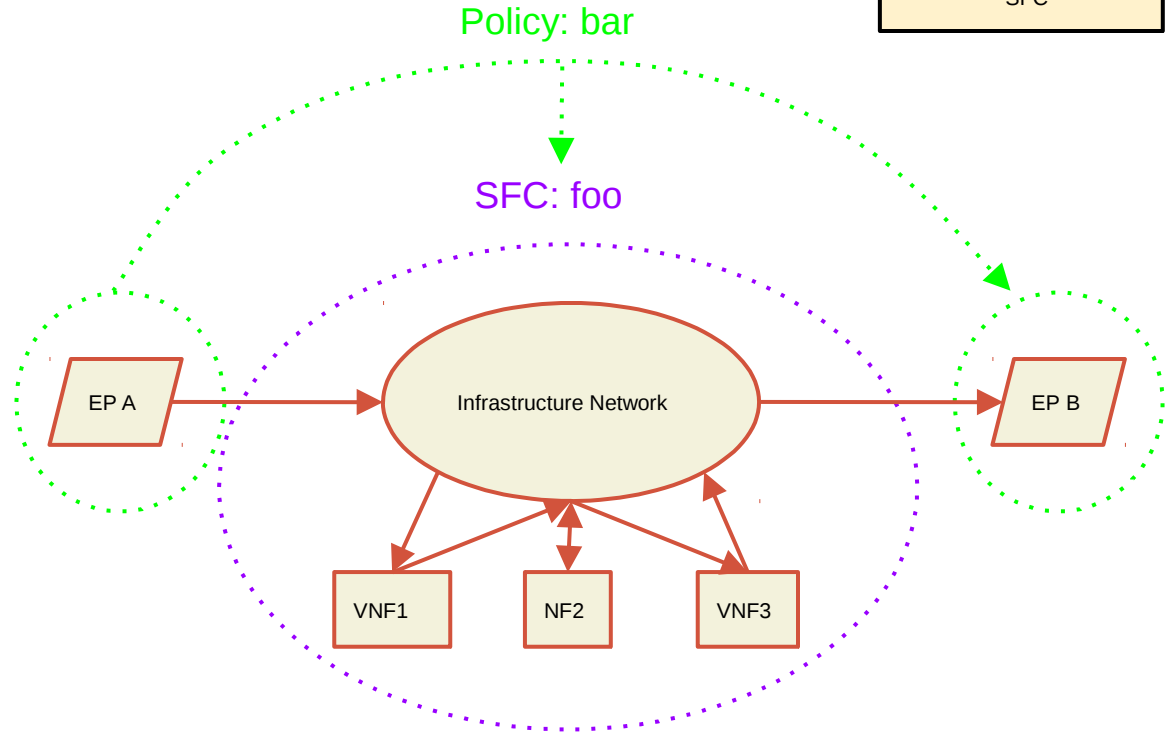


Network Integration Primer

1. SFF and classifier are OpenvSwitches
2. Encapsulation is VXLAN+NSH+ Ethernet
3. Dummy Service Functions

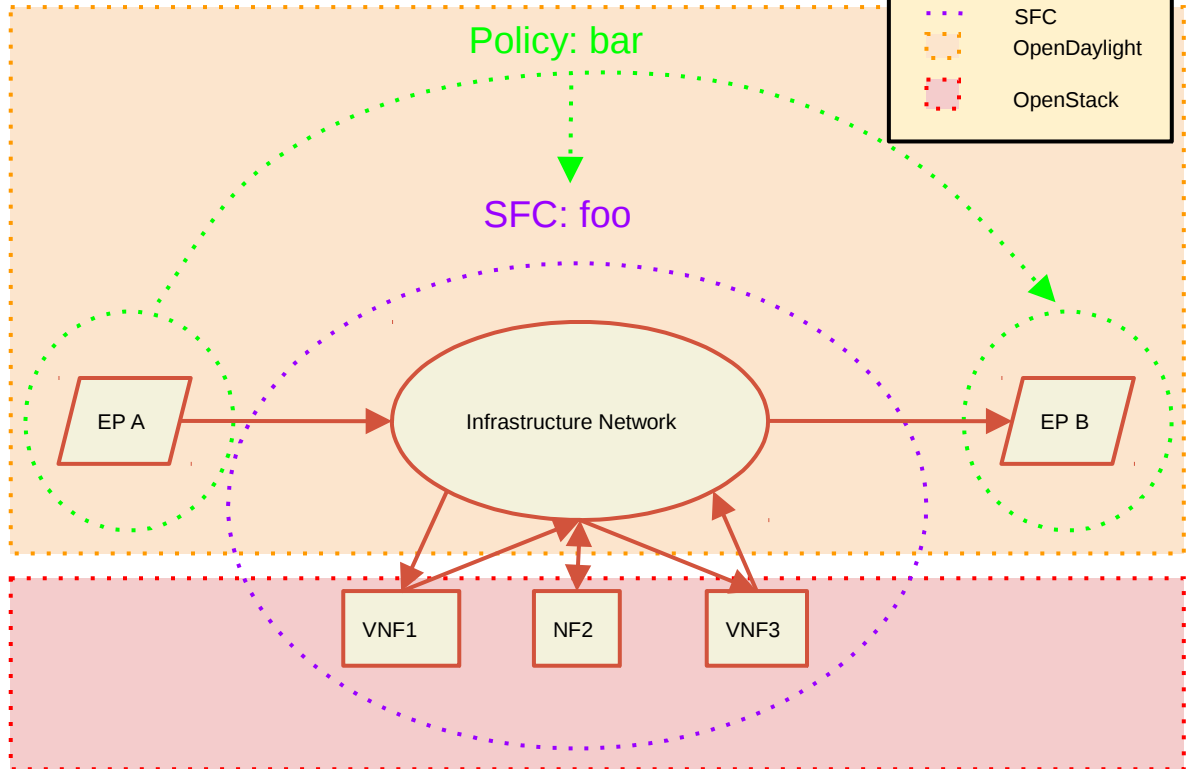
Glossary

EP - Endpoint
VNF - Network Function
..... Policy
..... SFC



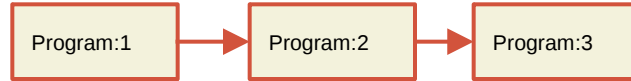
Integration Details

1. **GBP defines policy:bar and actions. One of the actions is “chain:foo”**
2. **GBP calls into SFC and asks for chain:foo**
3. **SFC creates the needed topology: OVS bridges and forwarding rules**
4. **SFC returns path-ID, starting index, first hop IP:port, and encapsulation to GBP**
5. **GBP creates the necessary classifier rules to direct packets to the path and attach context headers (metadata)**



Why this design? Unix philosophy

- “Write programs that do one thing and do it well” - Doug McIlroy
- “Write programs that work well together” - Doug McIlroy
- “Write programs to handle text streams, because that is the universal interface” - Doug McIlroy
 - Rethink this as “Text names for things you don’t understand or need to understand”



References

- GBPSFC demo: <https://github.com/alagalah/gbpsfc-env>
- Hackathon Document: [SFC hackathon Document](#)
- NFV Whole Stack: <https://www.sdxcentral.com/articles/contributed/adopt-a-whole-stack-view-to-nfv-david-ward/2015/05/>

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