



ONAP
OPEN NETWORK AUTOMATION PLATFORM

NS Model Design and Orchestration

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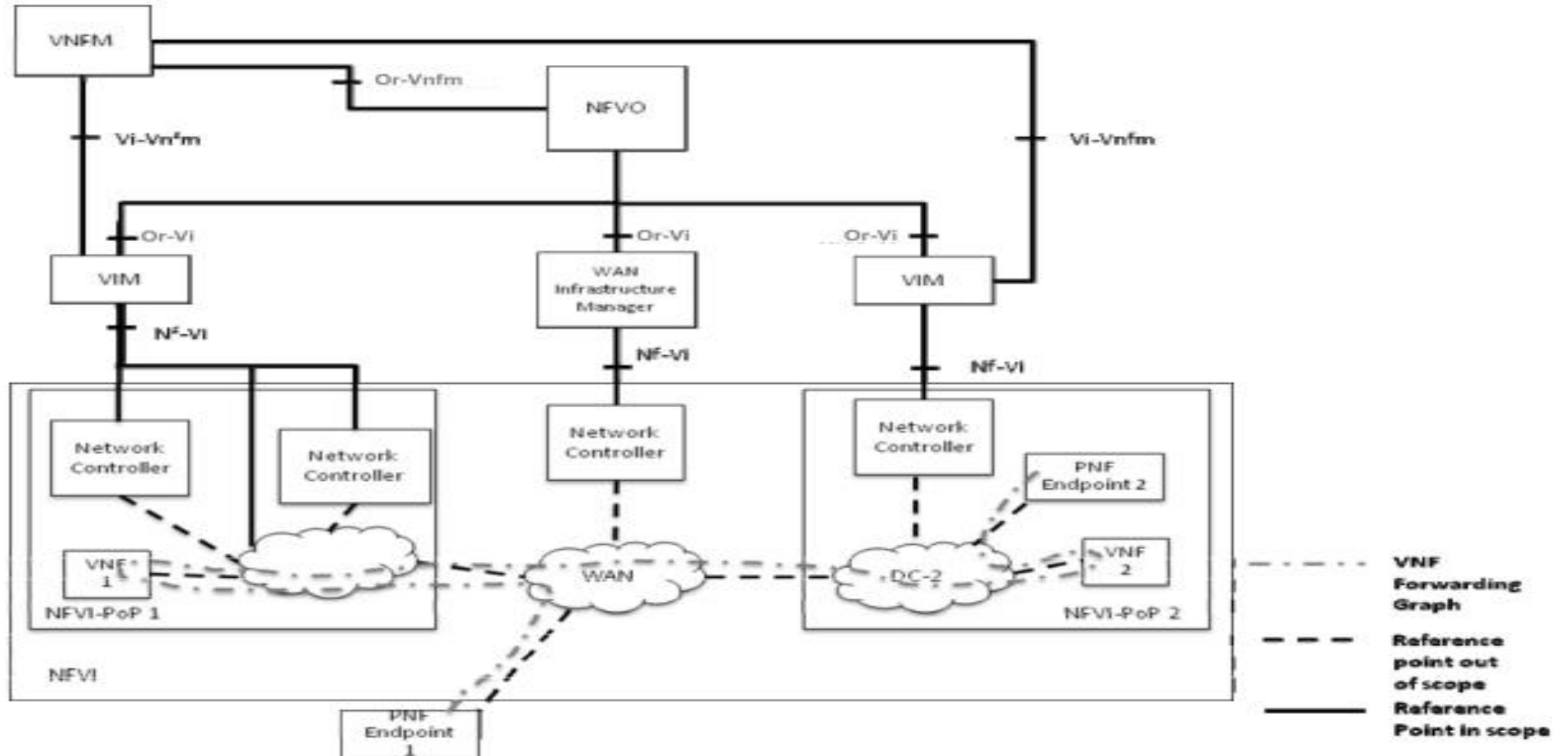
Agenda

- Network Service Introduction
- NS Design Model
- NS Runtime Orchestration



Network Service Introduction

How is Network Service Managed?

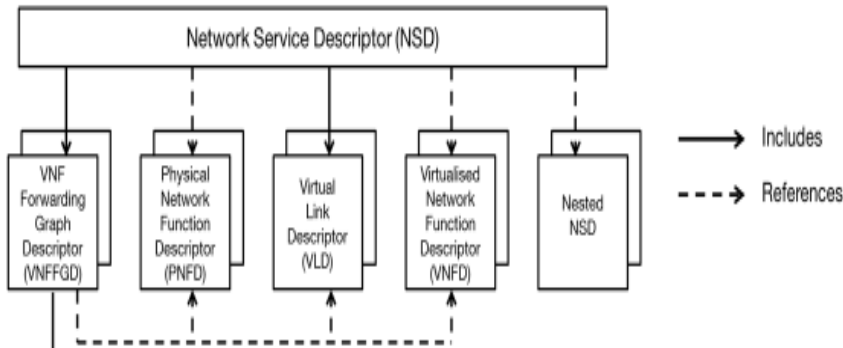




NS Model

NSD in ETSI

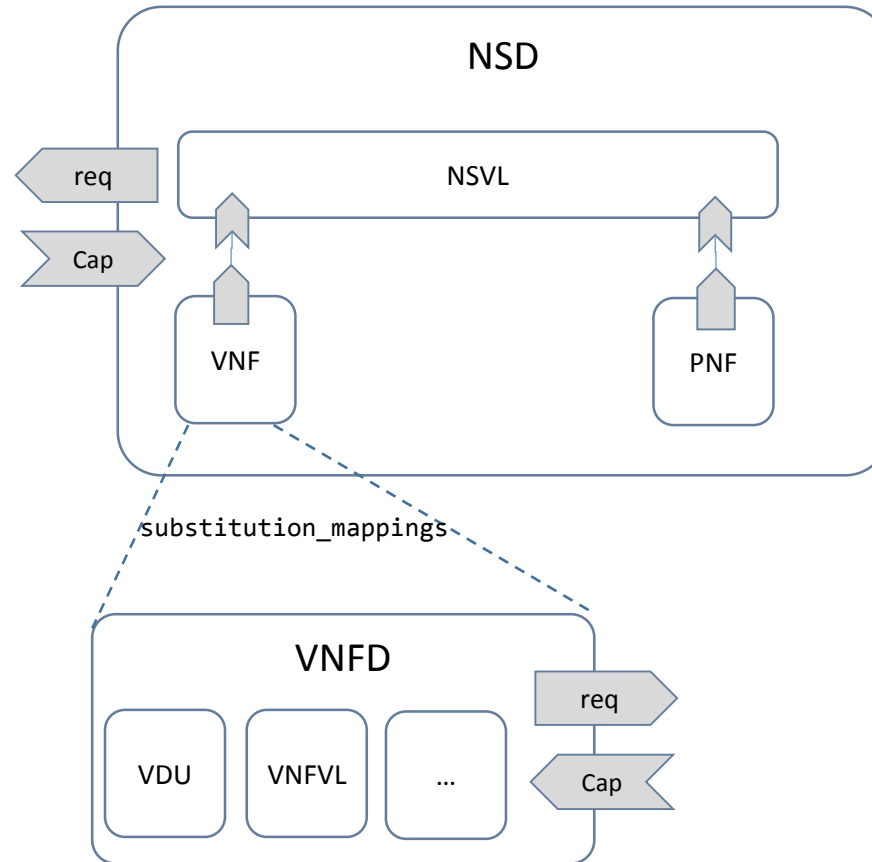
Network Service Descriptor (NSD)



- The **Network Service Descriptor (NSD)** is defined in ETSI GS NFV-IFA 014 and contains:
 - References to **VNF Descriptor (VNFD)** for the VNFs that are part of this NS,
 - References to **PNF Descriptor (PNFD)** for the PNFs that are part of this NS,
 - References to **NSD for the nested NS** of this NS,
 - VNF Forwarding Graph Descriptor (VNFFGD)** and **Network Forwarding Path Descriptor (NFPD)** describing the topology of the NS,
 - Virtual Link Descriptor (VLD)** used by NFVO to deploy Virtual Links.
- The NS Descriptor is stored by the NFVO and can be accessed by OSS/BSS.

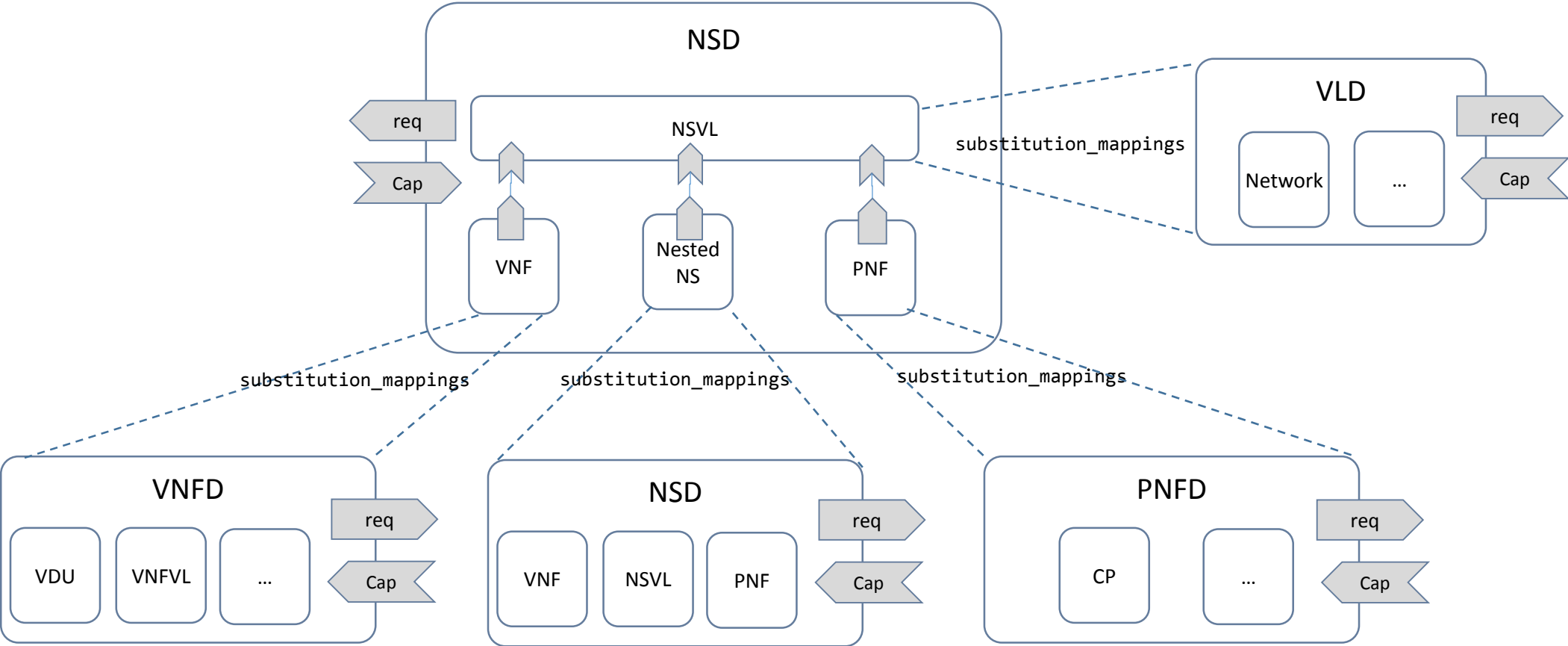


Simple Network Service via TOSCA



<https://wiki.onap.org/display/DW/ZTE+Proposal+for+Network+Service+Descriptor>

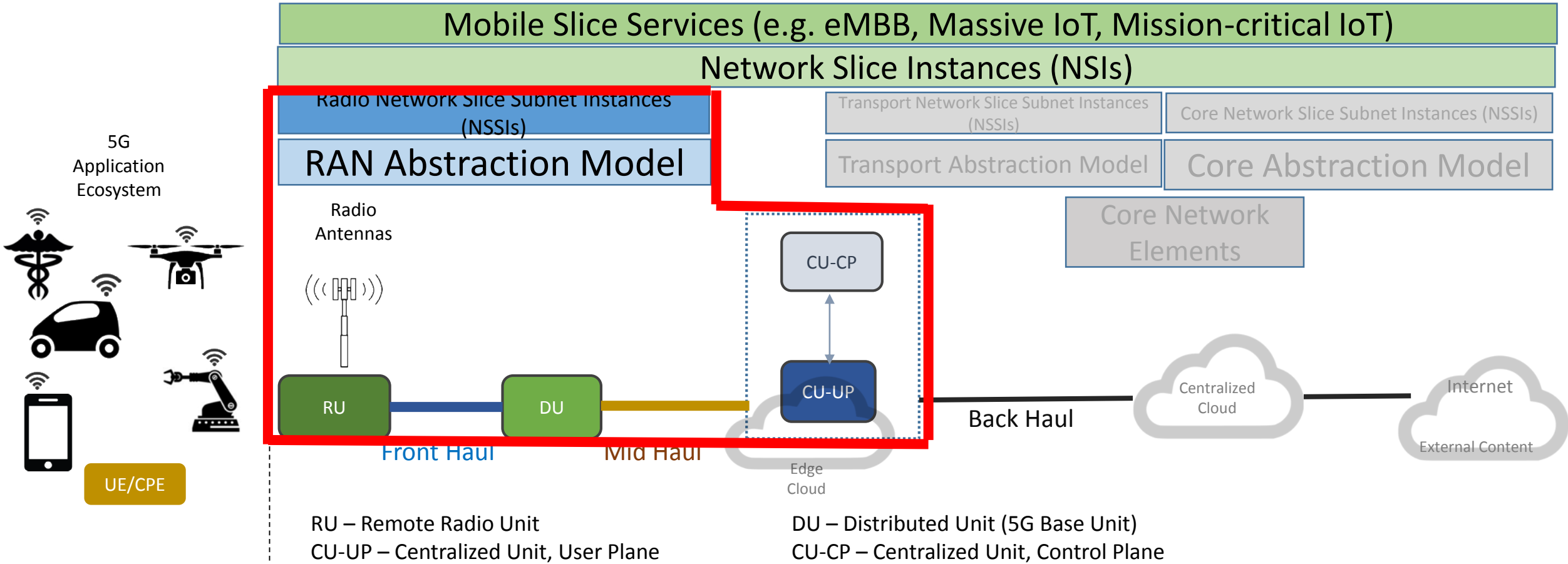
Complex Network Service via TOSCA





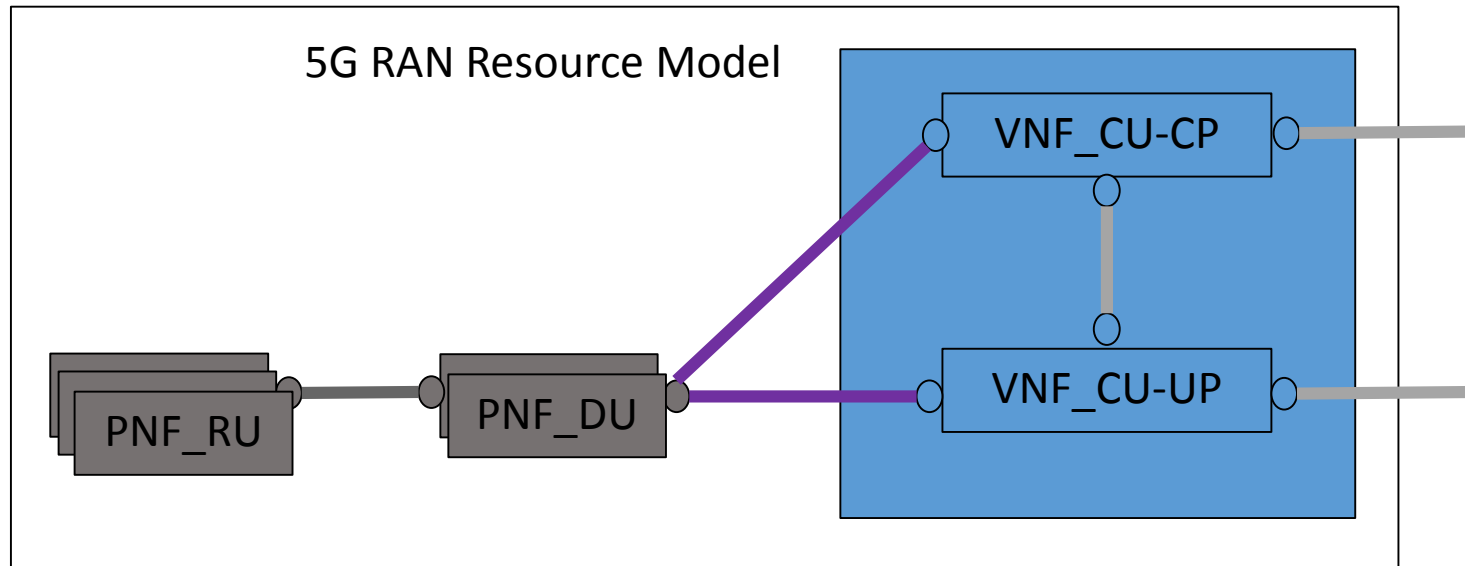
NS Orchestration

ONAP 5G RAN Usecase

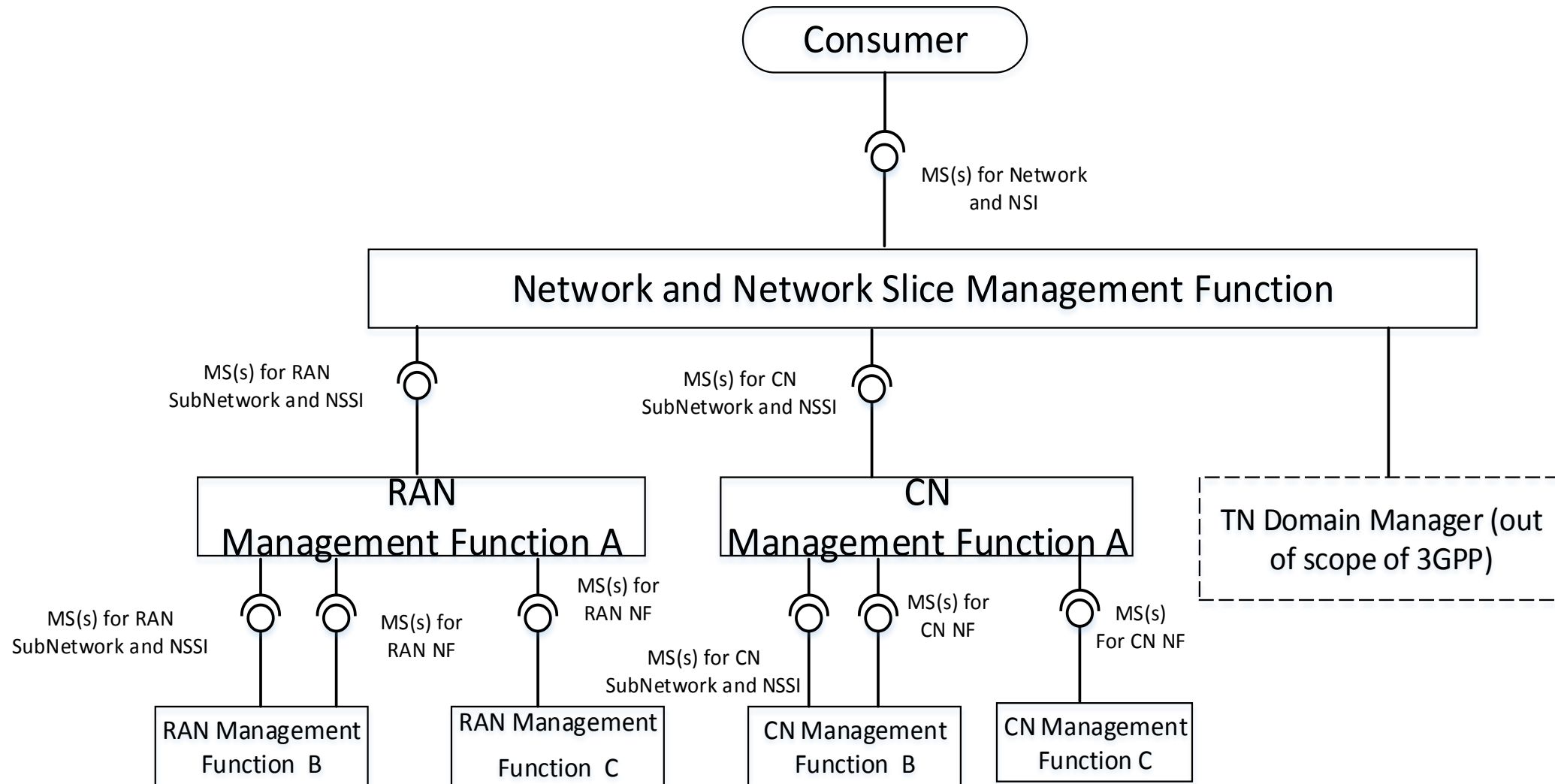


A single vendor delivers RAN equipment and software

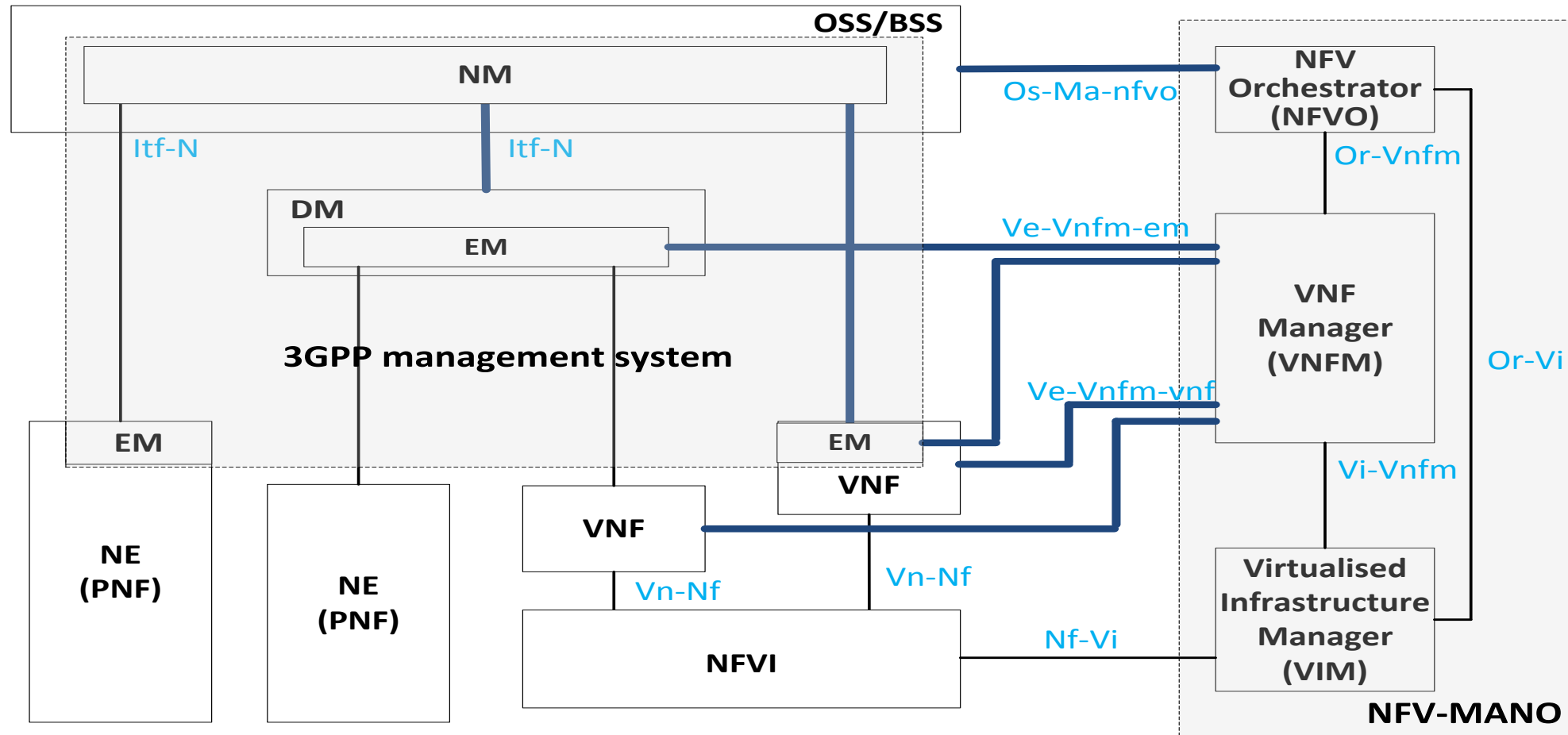
5G RAN NS Basic Model



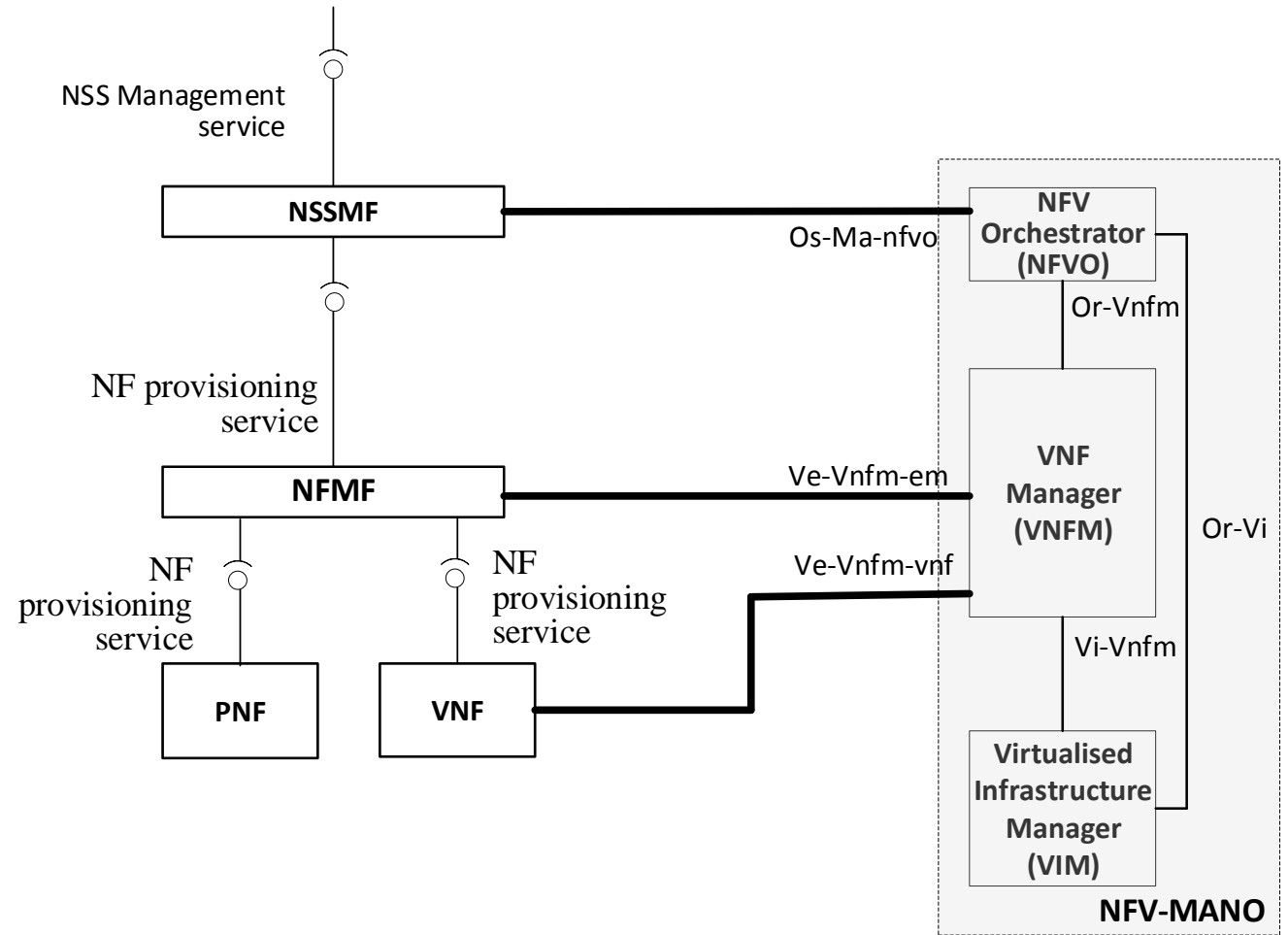
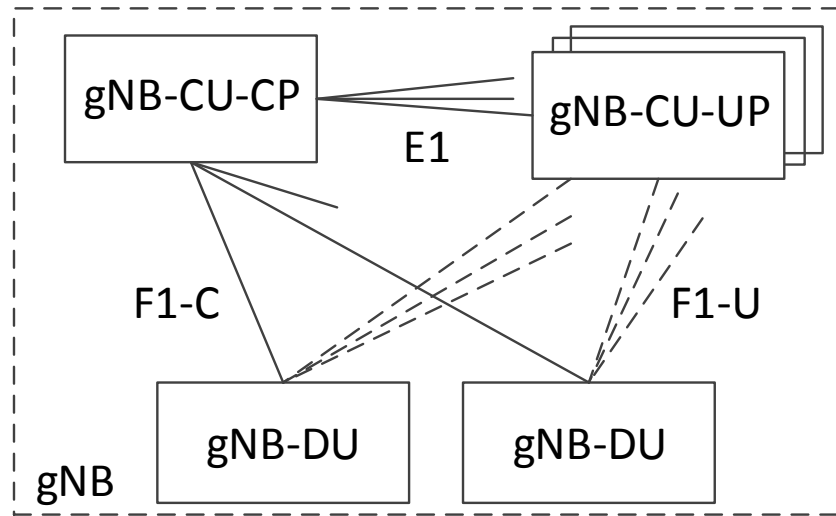
3GPP Management Scope



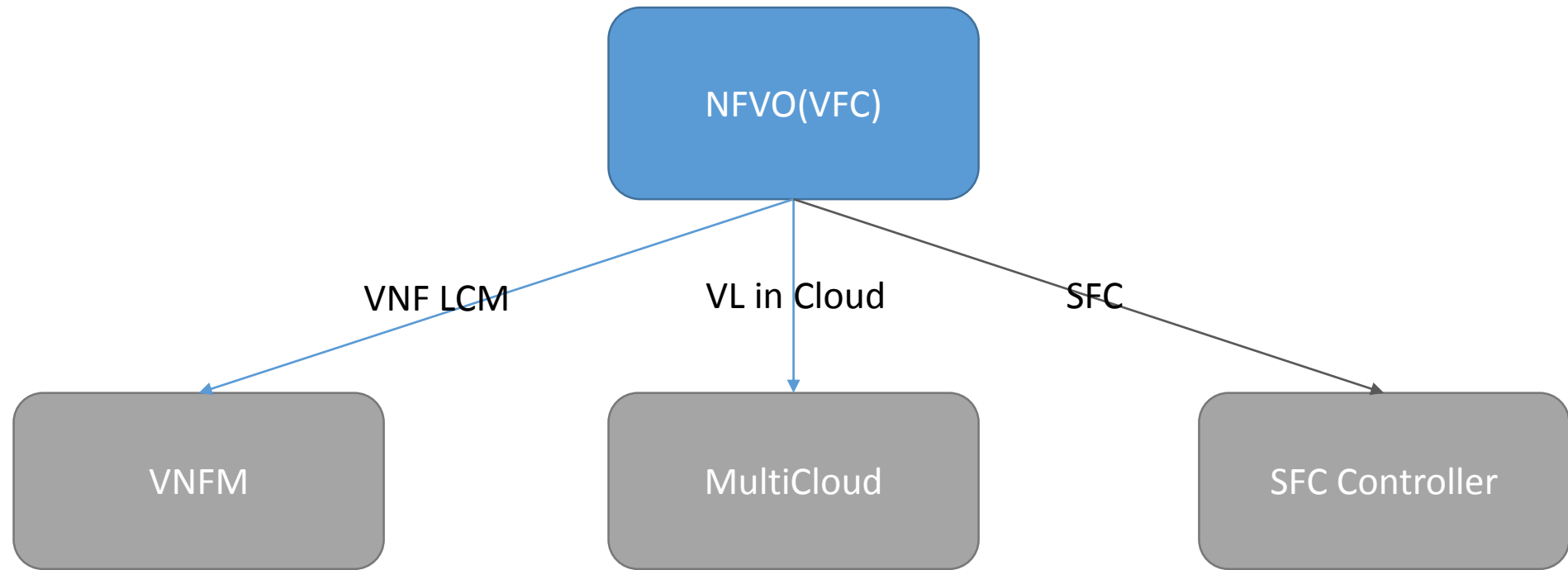
3GPP Management System and ETSI MANO



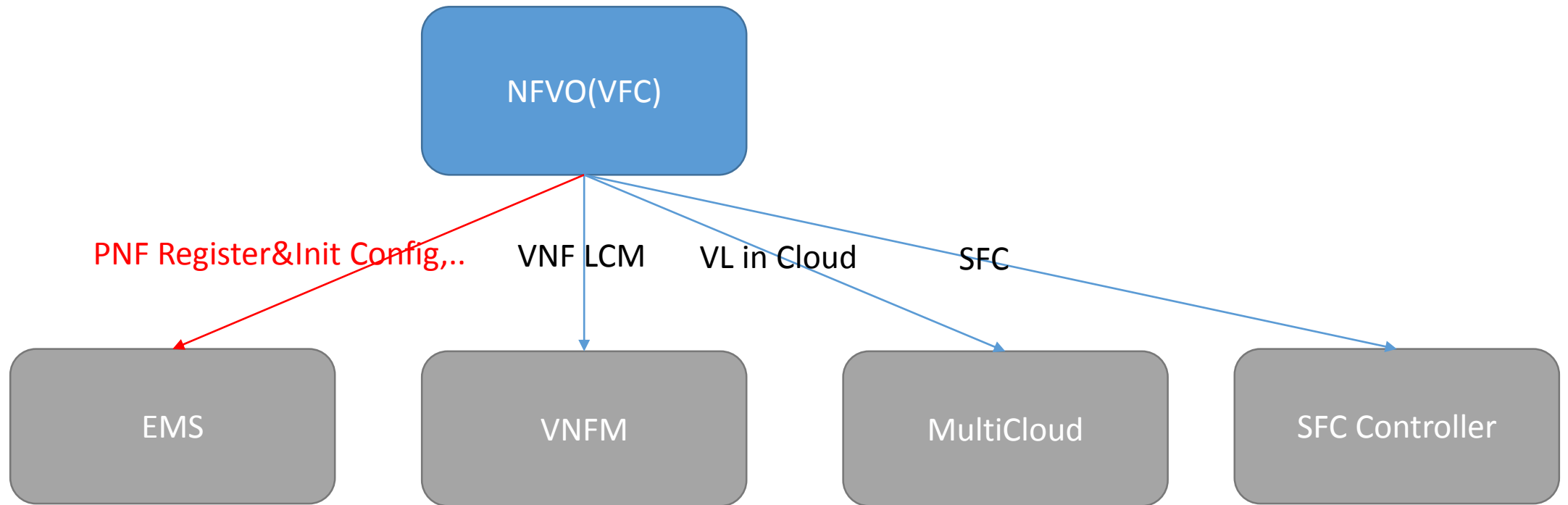
3GPP 5G Management



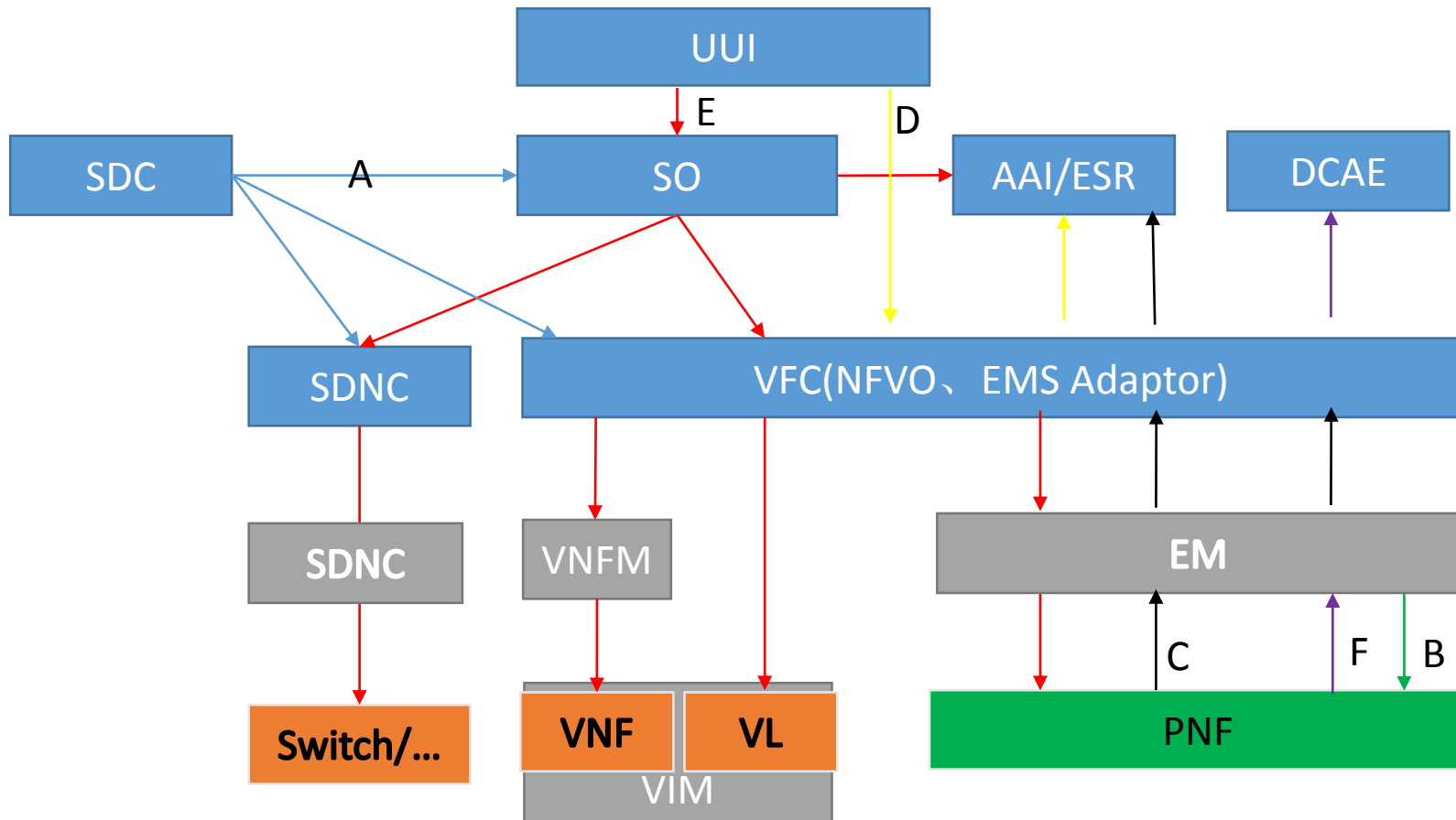
NS Orchestration In R1&R2 VFC



Enhance VFC to Support PNF



5G Usecase with VFC



- A: Model design & dispatch
- B: EMS deploys PNF
- C: PNF register to EM
EMS register to VFC
- D: UI config PNFD parameter via AAI
- E: UI invoke 5G NS via VFC
VFC decomposes the NS
VFC invokes VNFM to create VNF
VFC invokes EM to init config PNF
VFC invokes Multivim to create VL
- F: PNF report alarm/performance to ONAP



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Thanks