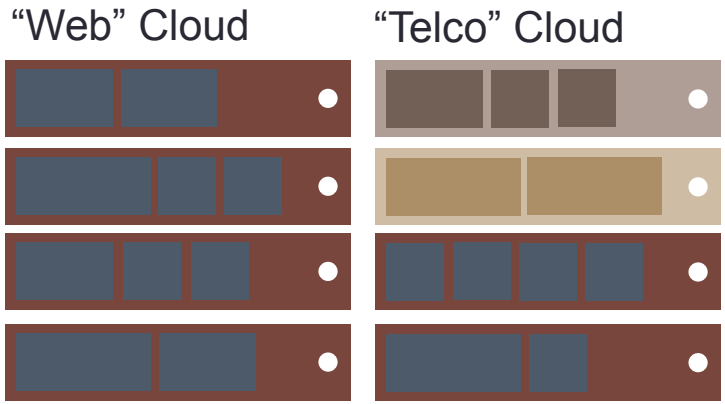
Orchestration Interactions with VNFM and VIM

Agenda

- **Resource Orchestration**: Telco-cloud Needs
- **Sizing v. Scaling**: Managing the VNFM envelope
- **Dynamic Orchestration**: VNFM & NFV-O Conversations
- **Service Orchestration**: The Forgotten Need
- Oracle **Solution**

End-to-End Resource Orchestration

Managing Heterogeneous Data Centers



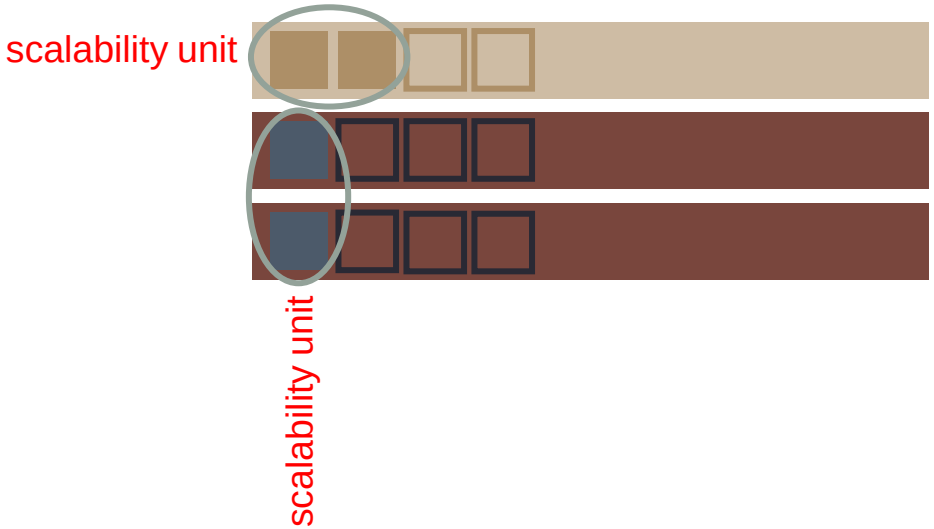
Optimizing Utilization Across DC

Optimizing Demand by Application

Telco cloud resource requirements:	**End-to-End Resource Orchestration provides:**
☐ Media rich, continuous real-time, I/O intensive application require hardware configuration optimized for performance	☑ *Optimal matching of application resource needs through enhanced NFVI platform awareness*
☐ Meeting application resource requirements imperative for meeting SLA and CX objectives	☑ *Multi-dimensional optimization*

Sizing Concepts

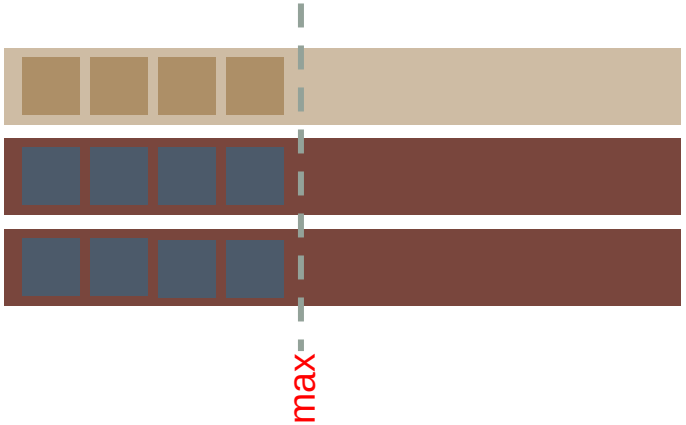
Initial Request on Instantiation



- AO Calculates based on Criteria
- Colors indicate scalability group
  - HA pairing
  - Affinity/Anti-affinity policy
- Solid indicates minimum
  - Resource reserved for allocation
  - Configuration calculated
- Outline indicates maximum
  - Resource soft reserved
  - No configuration

Sizing Concepts

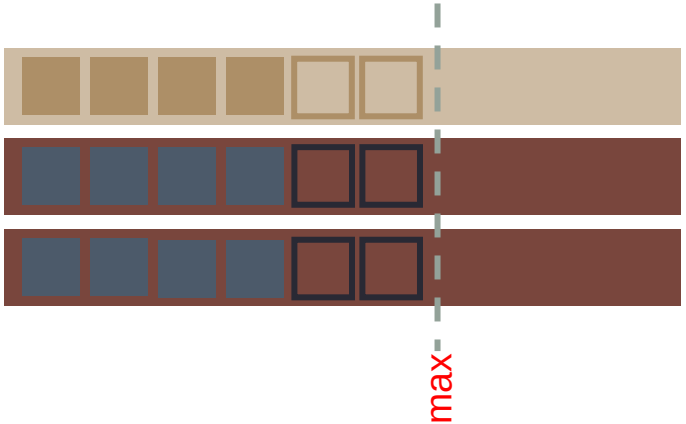
Elasticity based on KPI



- AO deploys scalability units
  - Resources reserved for allocation
  - Configuration calculated
- AO cannot deploy past max

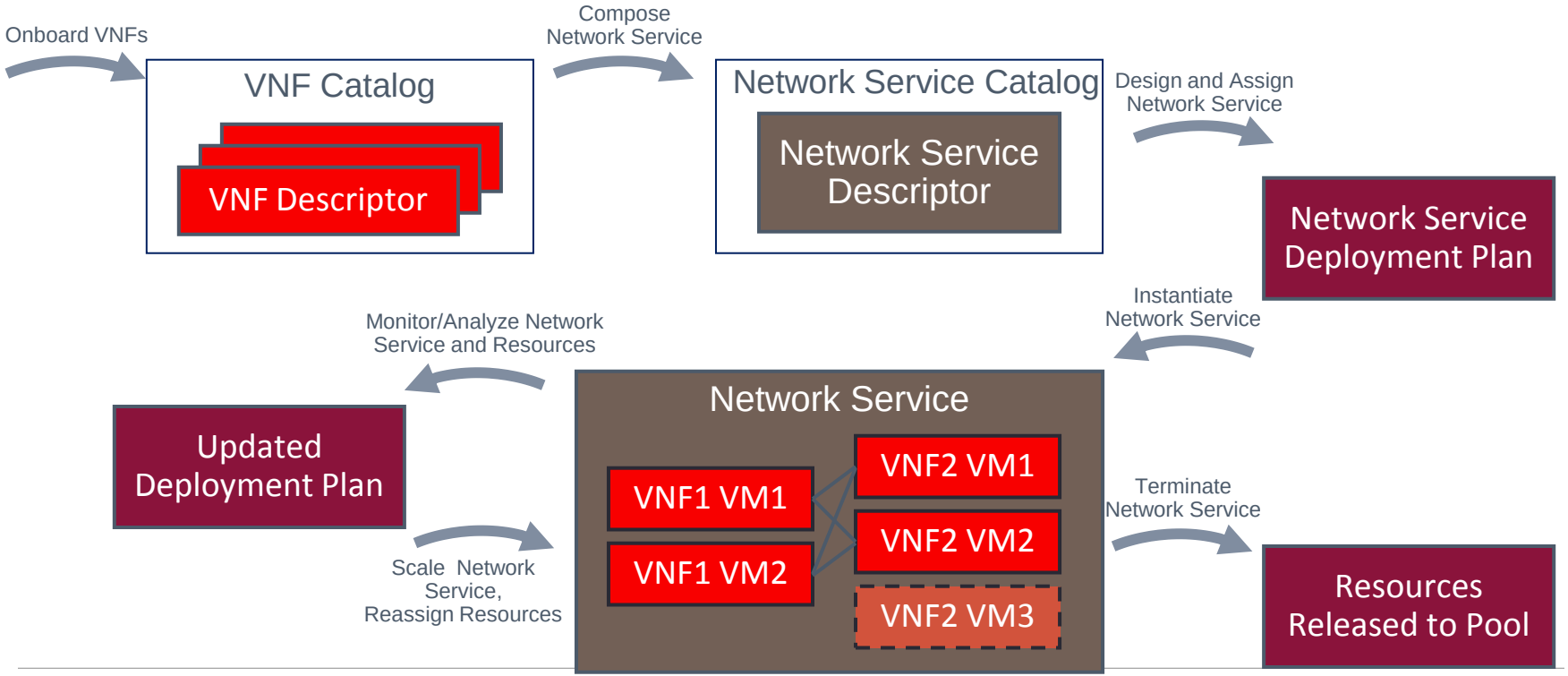
Sizing Concepts

Re-size based on new Criteria

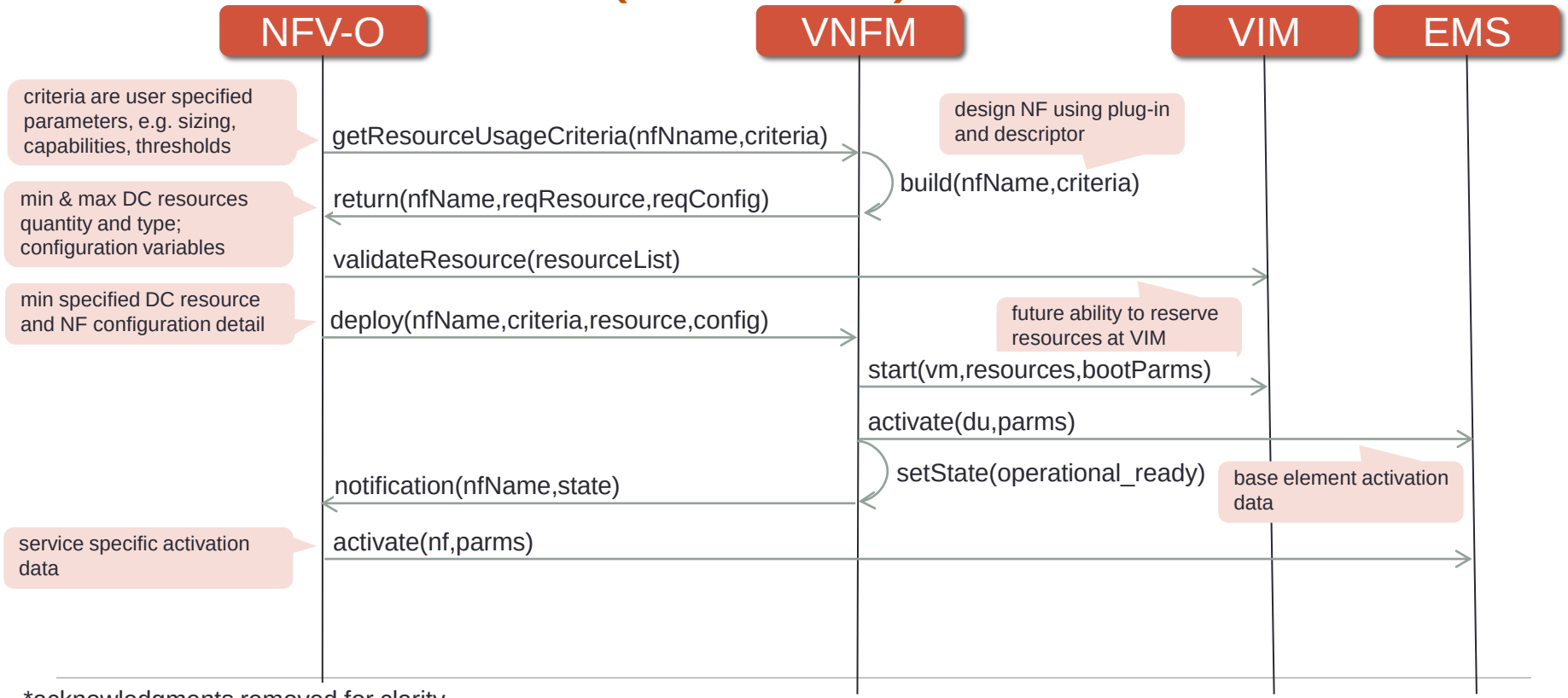


- NSO request new sizing
  - Can shrink or grow
  - Resources soft reserved
- Can trigger elasticity if under capacity stress

Network Service Orchestration Flows



Instantiate VNF (idealized)



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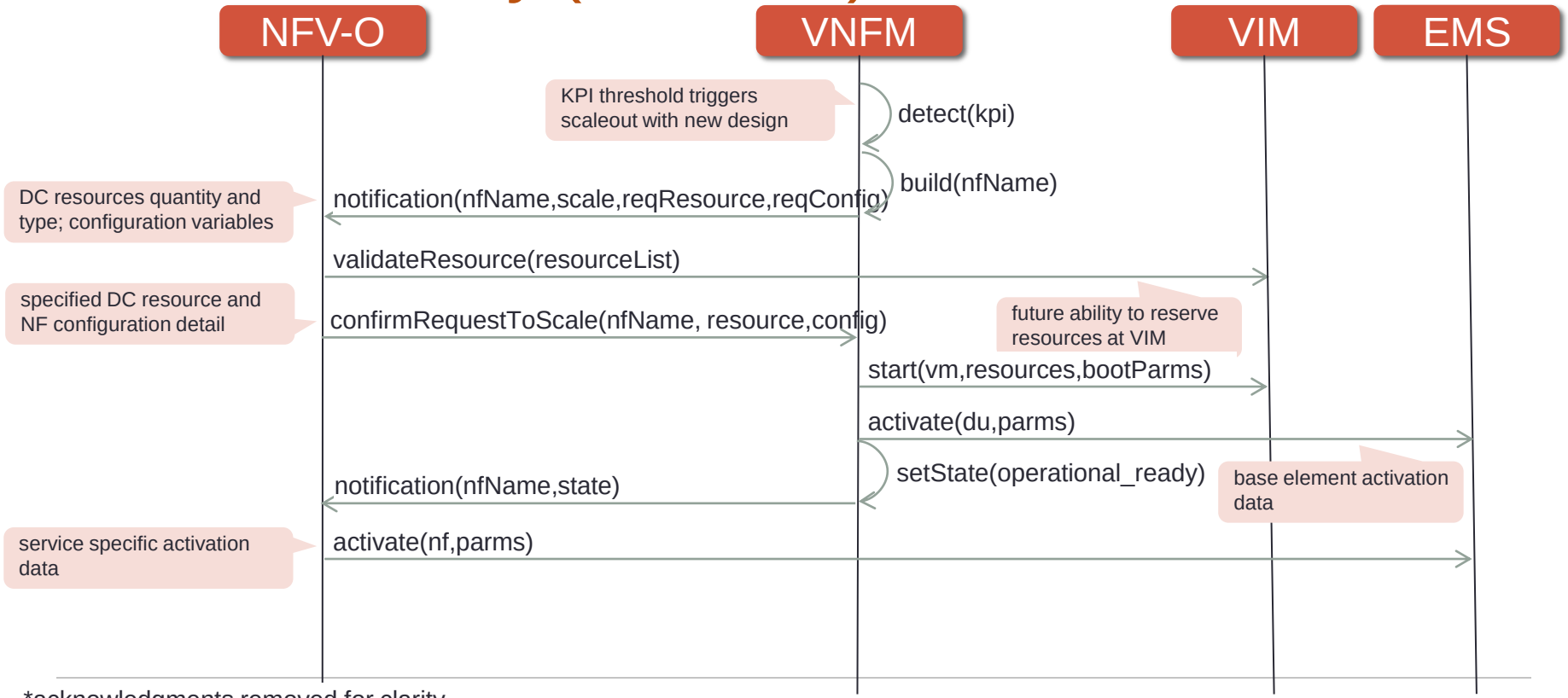
VNF Elasticity (idealized)



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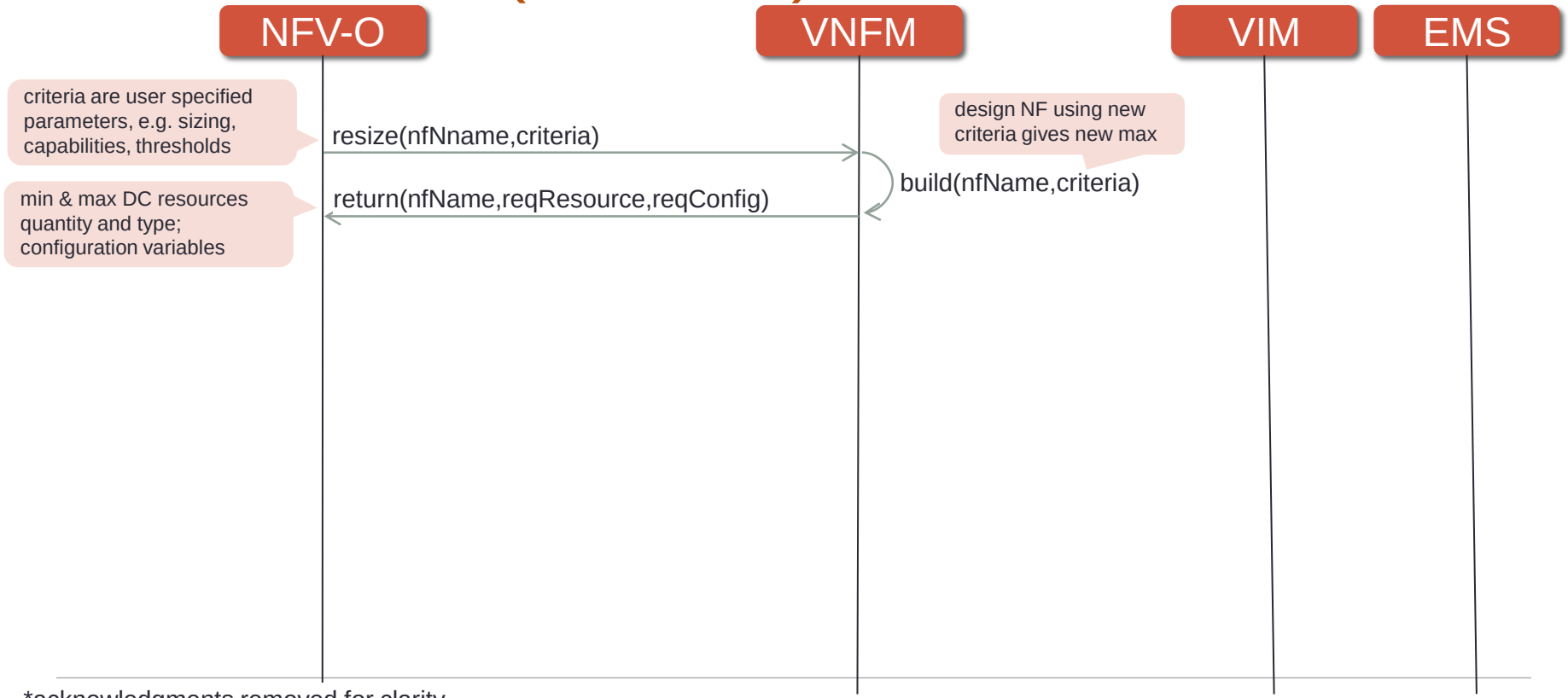
Resize VNF (idealized)



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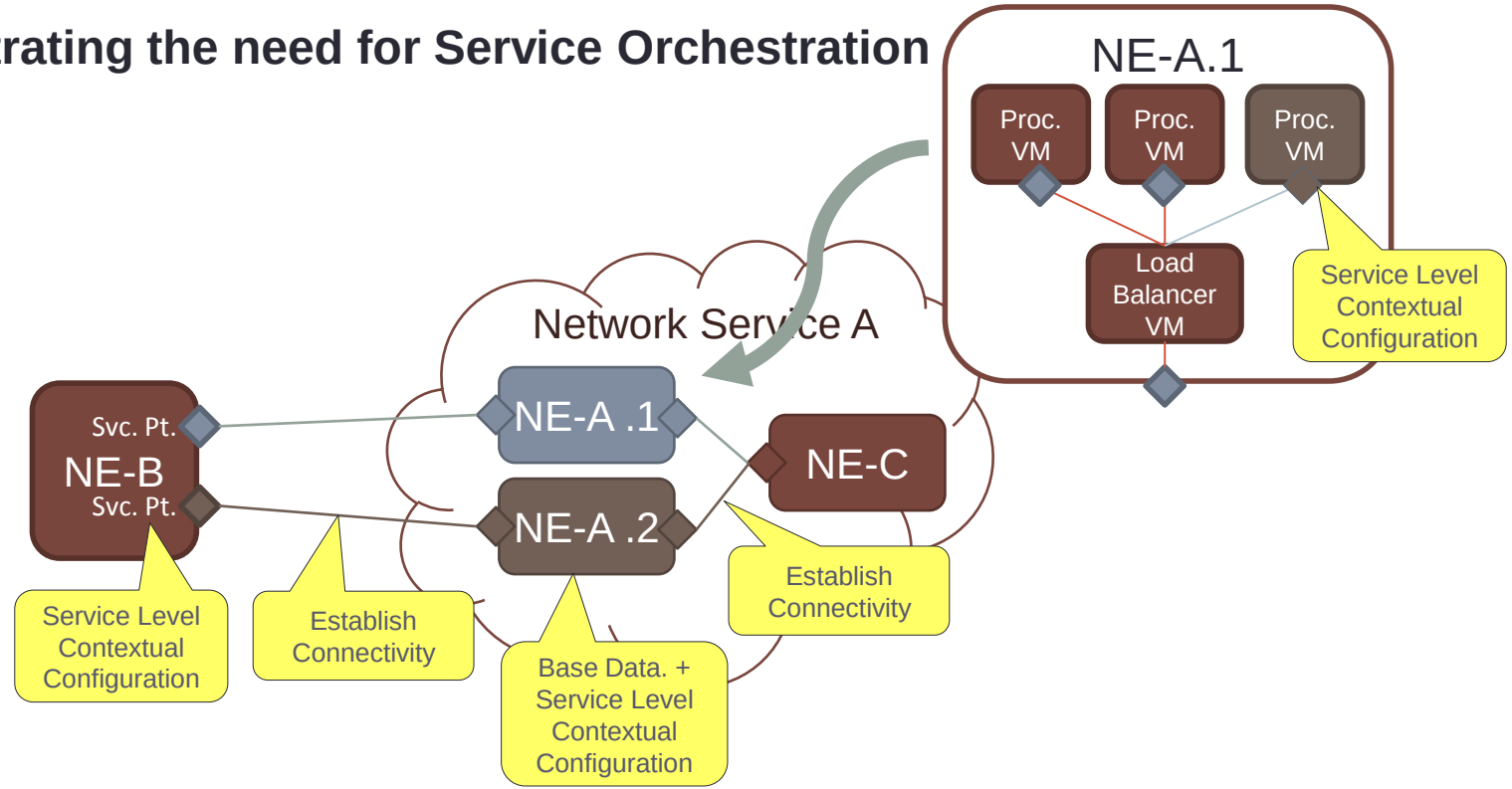
Network Function Virtualization

Illustrating the need for Service Orchestration



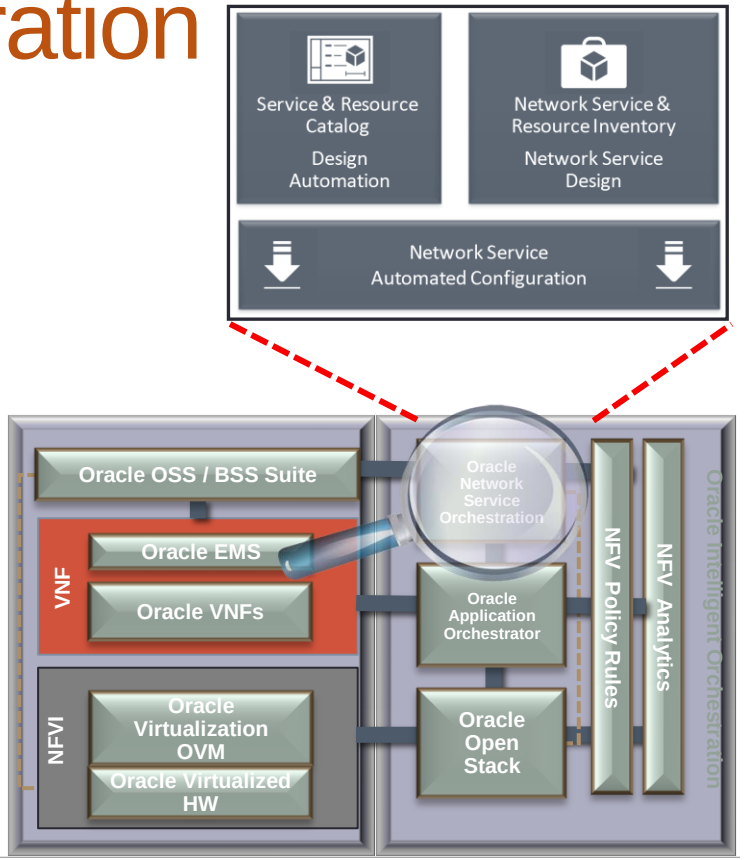
Network Service Orchestration

Oversees the entire NFV architecture

- Rapidly introduce new network services for consumer and enterprise customers
- Flexibly deploy and scale network services in response to demand
- Integrate with 3rd party VNF Managers and Virtual Infrastructure Managers using open interfaces
- Seamlessly extend Oracle Communications OSS solutions to support virtual networks

Facilitates dynamic network operations

Enables the transformation of the business, not just the network



Q&A