OSS for Digital Services
From evolution to revolution

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The world is changing, everything is becoming connected.

Technology will be embedded everywhere.

Everyone & everything will be connected.

Everything will be understood.
Digital transformation is disrupting every industry

Transformed
- Newspapers & magazines
- Books
- Music
- Video
- Retail
- Travel

Transforming
- Communications
- Retail banking
- Transportation
- Government
- Farming
- Buildings

Soon to be transformed
- Manufacturing
- Insurance
- Utilities
- Legal
- Education
- Construction
Creating opportunity for those that focus customer needs

Customer experiences

Products & services

Core business operations
CSPs’ transformation journey

Independent, but converging transformations

Connectivity Provider

- On-demand Services
- Automated Operations
- Programmable Infrastructure

Digital Service Provider

SDN & NFV

Digital Services are Dynamic
Customers can add/delete/modify services on-the-fly
Addressing The Agility Question

...A new End to End Service Operations approach

<table>
<thead>
<tr>
<th>Goal</th>
<th>KPI</th>
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<tbody>
<tr>
<td>Time to Market for new Services</td>
<td>9 months → weeks</td>
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<tr>
<td>Service Instantiation</td>
<td>30 days → 5 minutes</td>
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Inhibitors:
- Siloed / fragmented OSS and Business Processes
- Solution complexity grows exponentially
- Too many manual activities & exceptions
- Waterfall slows time-to-market, does not address risks
- Systems are not open, nor flexible enough

A new approach to End-to-End Service Operations
HPE OSS answers to the Digital challenges

- Workflow complexity
  - Removed with Intent-based service modeling

- Operational processes
  - Automation
    - Openness
    - Security

- Delivery approach
  - Agile / DevOps
WHAT, not HOW

Intelligent software determines how to translate Intent into an infrastructure-specific “prescription” that enables the network to behave in the desired manner.
Swisscom - Development and deployment of a Business Network Service for SMB customers

**THE CHALLENGE**

Swisscom Business Drivers

- Co-development (prototyping) with a partner / supplier on SCRUM based methodology
- Develop experience for the future Telco Cloud @ Swisscom
- Holistic and open solution as framework to scale into additional NFV business cases in the future
- Maintaining technology and thought leadership in the Telco Industry
- RFP run as Prototype Industry Consultation (PIC)

**THE SOLUTION**

HPE vCPE

- Orchestrator based on HPE Service Director
- Functions based on Virtual service Router with Routing, Network Address Translation and Firewall.
- Interoperation with other vendors & Integration to existing systems
- Agile cooperation Model, with integrated Scrum of Scrums

**THE RESULT**

Service Agility, Efficiency

- Fully automated service, feature development within 1 sprint
- Reducing the time for new service design from 9 months to 4 weeks
- Reducing provisioning time from 30 days to 5 minutes
HPE OSS Solutions Overview

Managing Standard Resources, NFV Resources and E2E Services

End-to-end Service Operations across PNFs and VNFs

Operation of PNFs and Logical Resources

Standard Operations
IT / Networks / Applications
Fullfillment – Assurance – Data Center Mgt.

NFV Operations
Fullfillment – Common Data – Assurance Analytics

Common Model / Data / Analytics

Operation of VNFs and NFV Infrastructures

Customers / CSRs / Sales
Operations / Planning

E2E Service Operations
HPE SD-WAN Service Orchestration

- Faster delivery of services to the business
- Reduced complexity to configure Branch offices devices
- Service orchestration for a hybrid WAN topology, to support public cloud services
- Management of the E2E service, not just connectivity
- Multi SD-WAN controller support
- Seamless integration with customer portals
- Flexibility to support the transformation of traditional application architectures and traffic patterns
- Non disruptive integration with legacy systems
- Management and migration of legacy sites
HPE launches new Virtualized OSS

**HPE vTeMIP** orchestrated as a Virtualized Management Function!

**HPE vTeMIP: what is it?**

- Fault Management at the core of our Automated NOC Solution
- New HTML5 single pane of glass console
- Micro service architecture
- Deployment in NFV environment as a Virtual Management Function (VMF)
- Application elasticity\(^{(1)}\)
- Built-in High Availability and Disaster Recovery
- A library of 400+ Telco Network & EMS adapters

**HPE vTeMIP benefits**

- Aligns with CSPs’ emerging interest in integrating VNF and VMF orchestration
- Digital-ready scalability, flexibility and high availability thanks to micro service architecture
- Lower platform costs thanks to virtualized micro services, optimizing use of hardware and software, and built-in HA/DR
- Lower TCO due to simplified operations, administration and maintenance
- Smoother transitions from development and test to production with DevOps

Analysys Mason: "**Fault and event management (FM): Communications service providers (CSPs) are increasingly focused on business services that can be delivered by cloud and virtualized data centers, and this will require investment in FM software**"

\(^{(1)}\) dynamic scale-out scale-in operations
At HPE, we believe that CSPs have a unique opportunity to embark on a successful journey to becoming DSPs.

It is what drives us everyday to build Self-Driven, Zero Touch OSS for today’s and tomorrow’s Operations.

The Digital Operations: Efficiency, Quality, Agility
Thank you!