

Colt Network On Demand

@SwiNOG #32

Andreas Glag





- Metropolitan Area Network
- Colt connected city
- Operational network managed end-to-end

187k+

LDN, metro fibre and subsea and terrestrial leased capacity



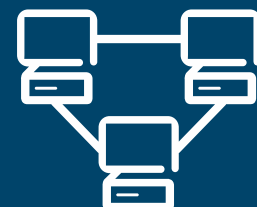
25k+

Buildings directly connected



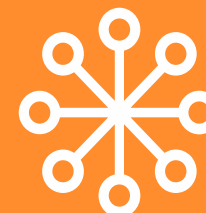
900+

Network to network interfaces



200+

Cities connected across 28 countries



800+

Key data centres, clouds and carrier hotels connected

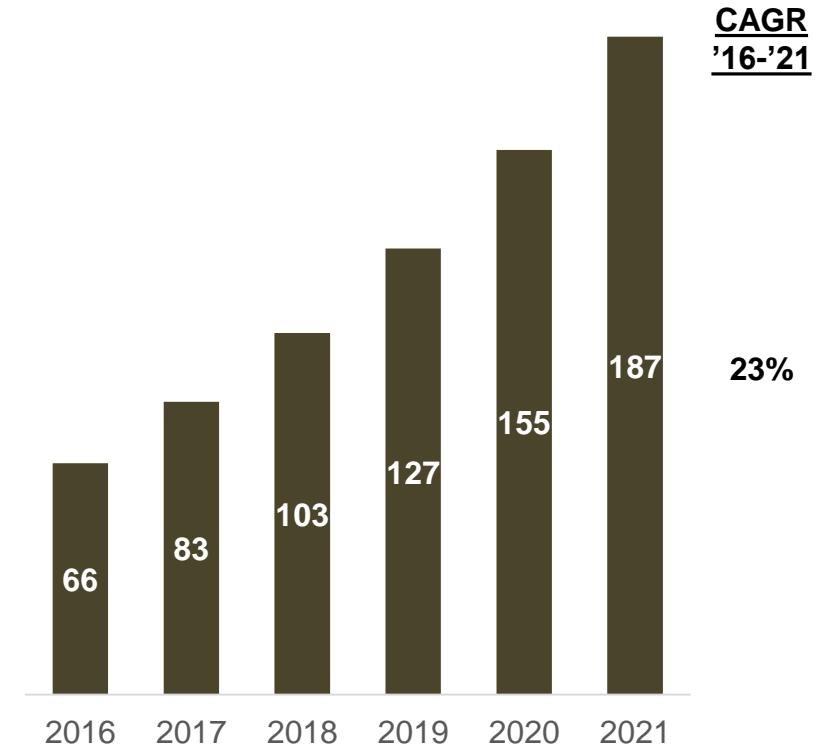


- **Digitalization of all industries**
 - e.g. Disruption of legacy business models by internet-based commerce and information distribution
- **Business process automation**
 - Software replacing existing manual processes, improving agility, efficiency, security etc.
- **Shift to subscription and cloud-based delivery models**
 - Substituting on-premise, perpetual licence-based software
- **Data-driven decision making**
 - Aggregation and processing of data to generate insight and drive differentiation (leveraging emerging technologies, e.g. Machine learning/AI)



Fixed Internet traffic

(EB per year; '16-'21, Global)



Sources: Cisco VNI Forecast Highlights

our customers are facing a new set of challenges



Need for higher bandwidth

Customer demand has a strong growth: WAN bandwidth requirements are increasing above 30% per annum every year (Gartner). SD-WAN traffic will grow at a CAGR of 44% compared to 5% for traditional WAN (Cisco VNI)

Cost efficient scaling

Since 65% of WAN budgets are flat or declining, cost efficient scaling of bandwidth is crucial.

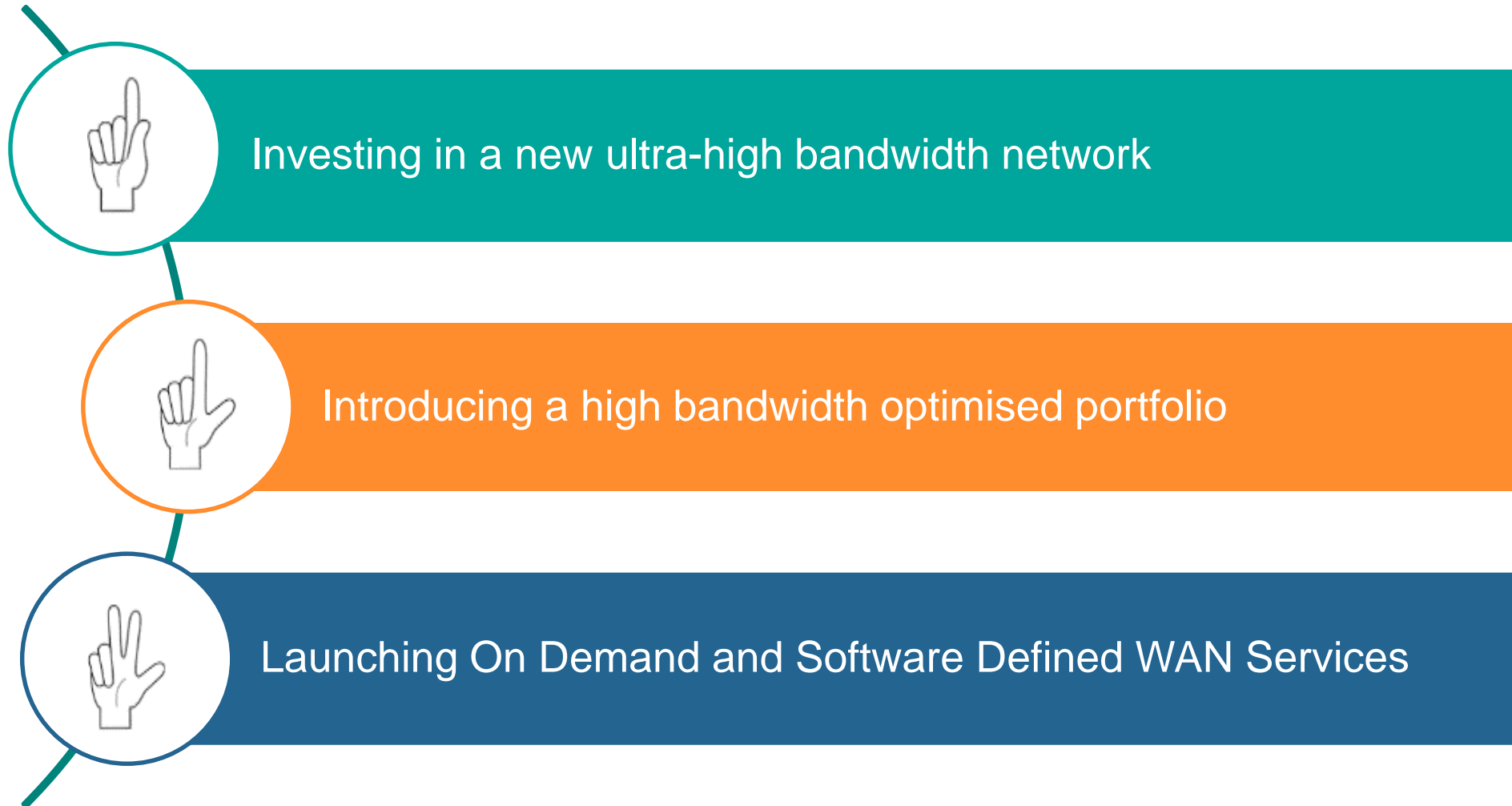
Radically faster network delivery

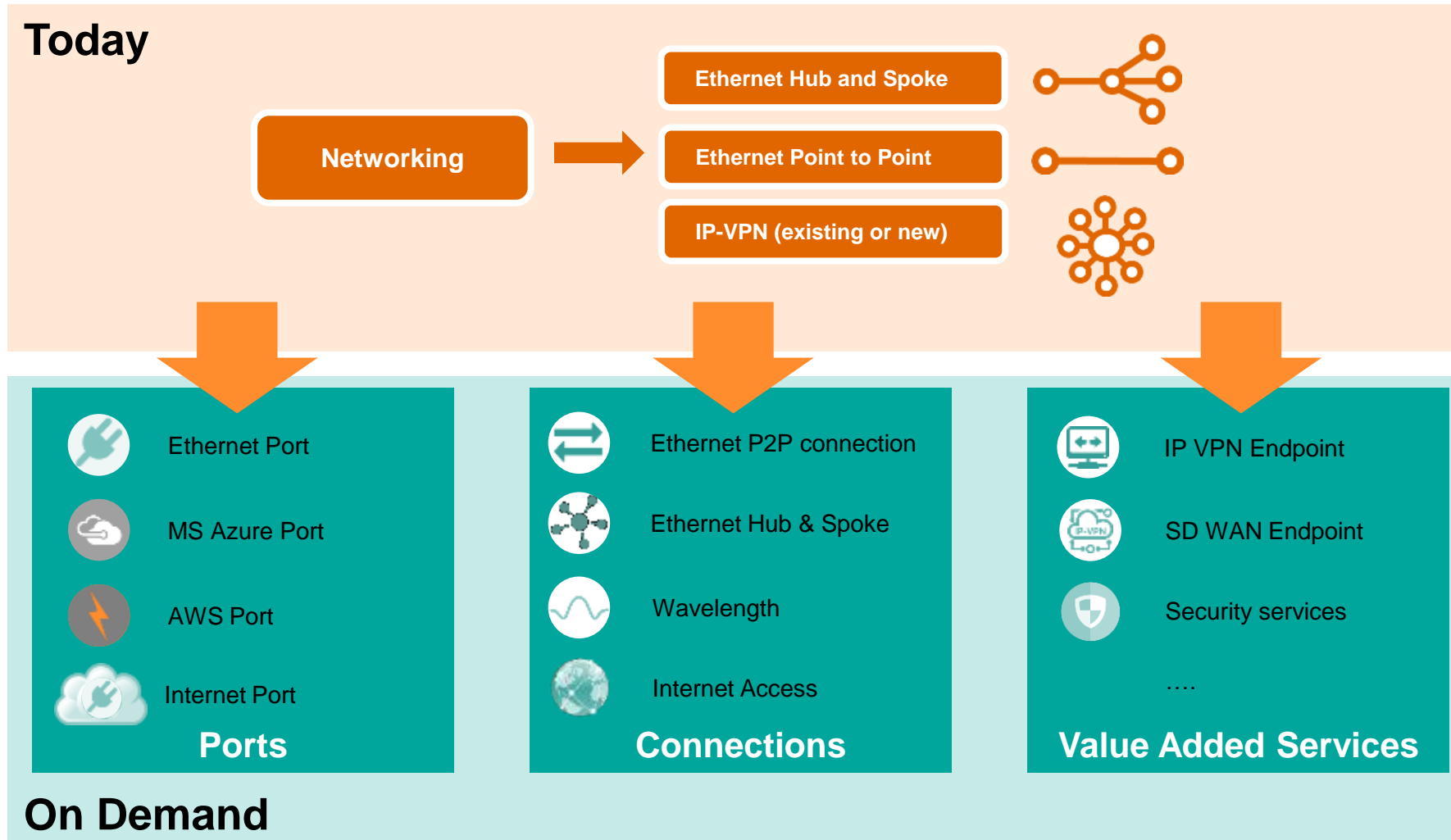
Customers can set up new cloud services in minutes, yet delivery times for new VPN sites and Ethernet connections are still measured in **weeks and months.**

Need for more in-life agility

Cloud services can be scaled up and down on demand, while bandwidth upgrades and feature changes for the network are traditionally **manually requested** and take days/weeks to deliver

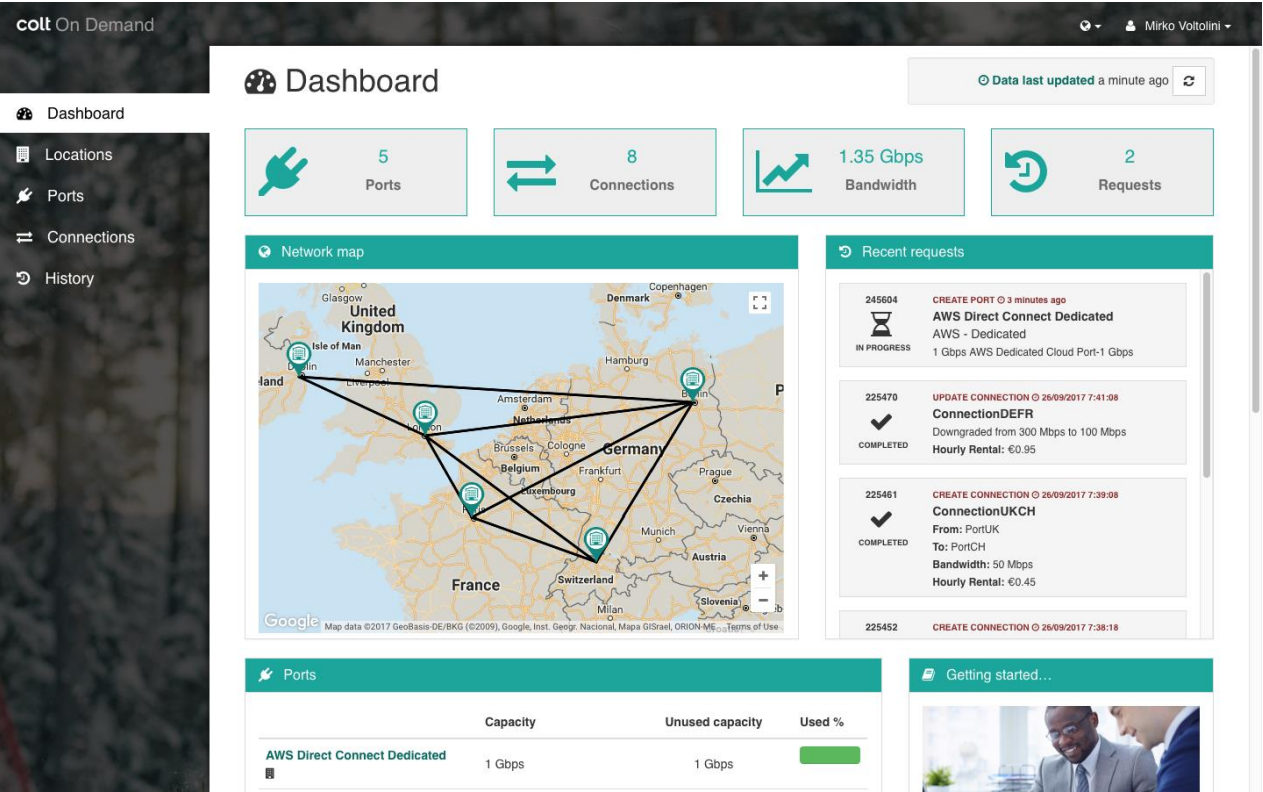
what have we been busy with ?





- Transforming our services from end to end products to components
- Enabling customers to build their own service and increasing our ability to innovate
- Fixed commitment or flexible per hour rental commercial model
- Portal or API based consumption

Colt on Demand consumption models



Standard HTTP based
RESTful API delivered
with TLS over the internet

Object	Create	Read	Update	Delete
Port	✓	✓	✓	✓
Connection	✓	✓	✓	✓
Request	✓	✓		
Product / Price		✓		



1. Reserve / release
ports

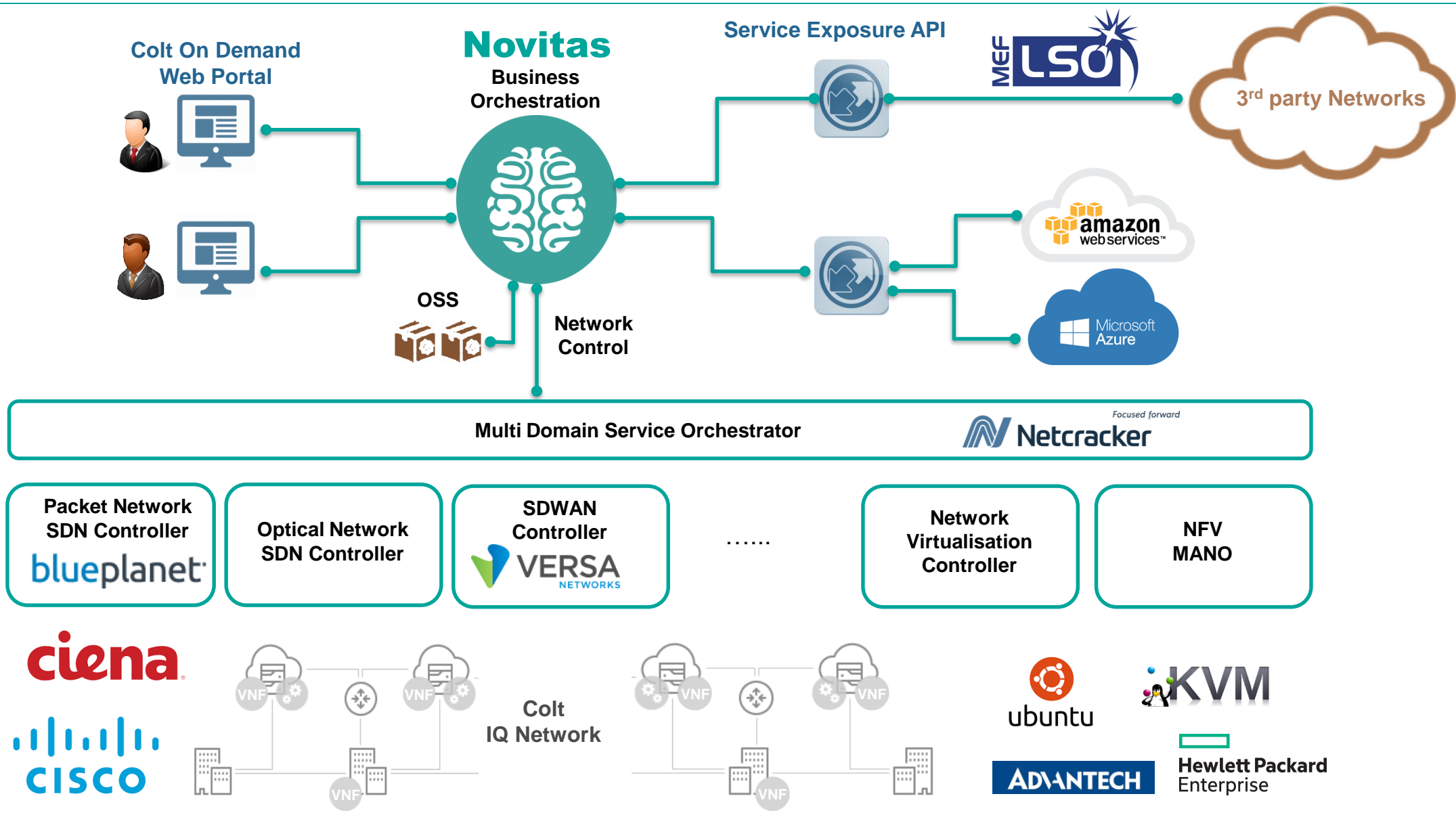


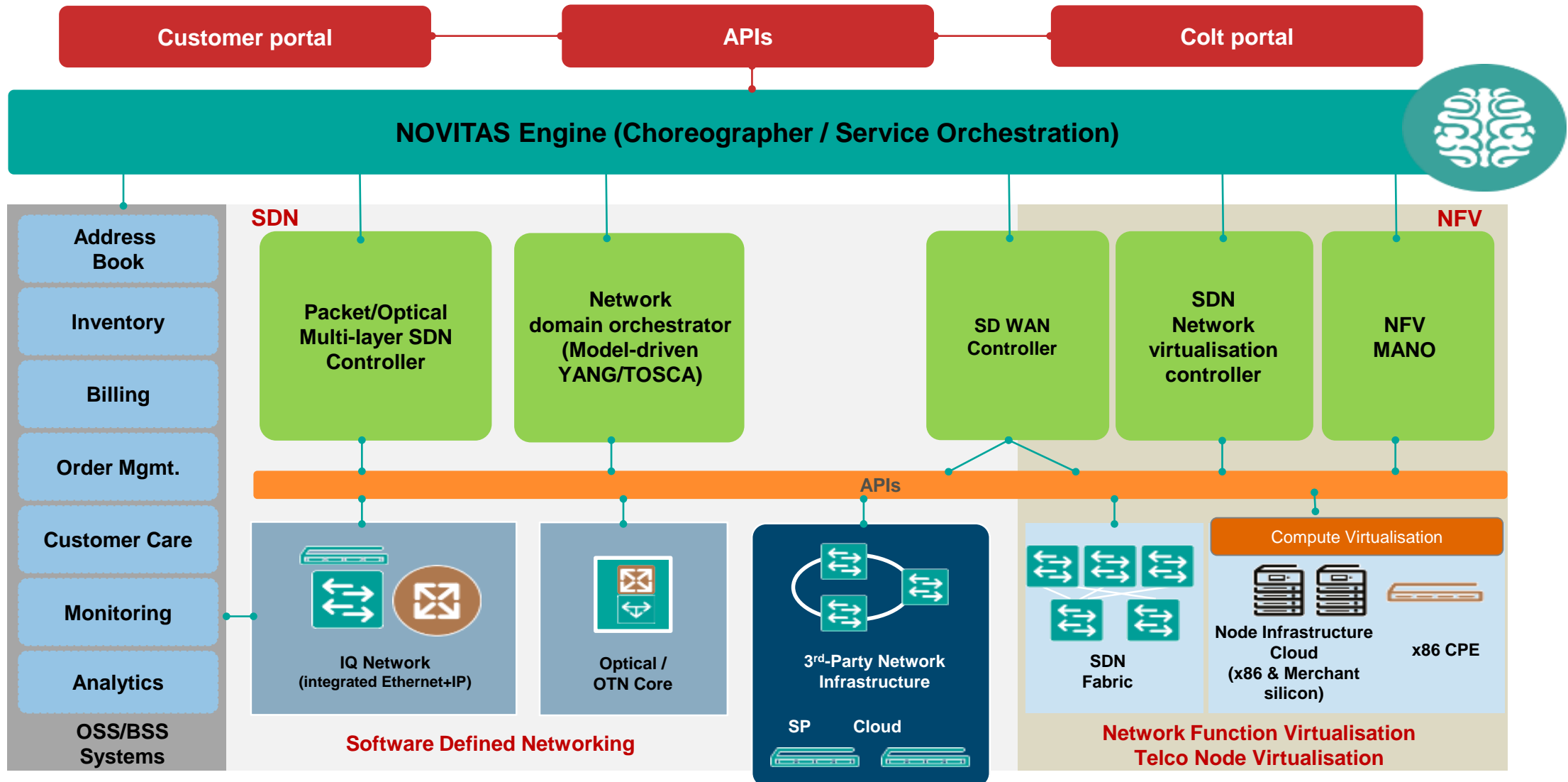
2. Create / delete a
connection between
user-reserved ports



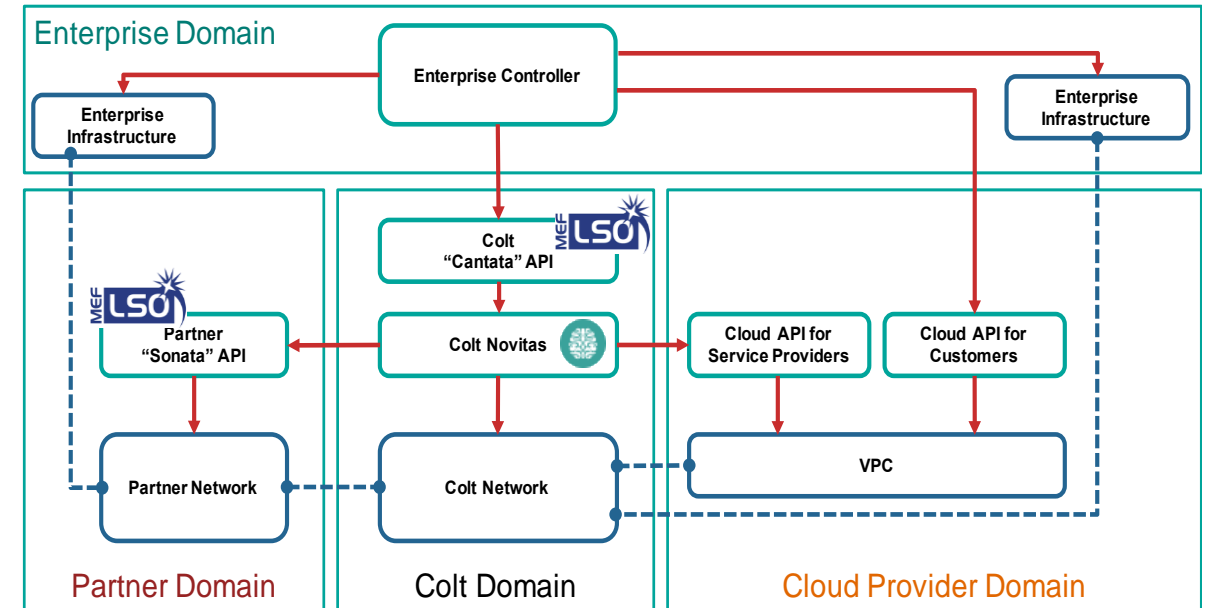
3. Modify in real time
the bandwidth of a
connection

Colt on Demand platform

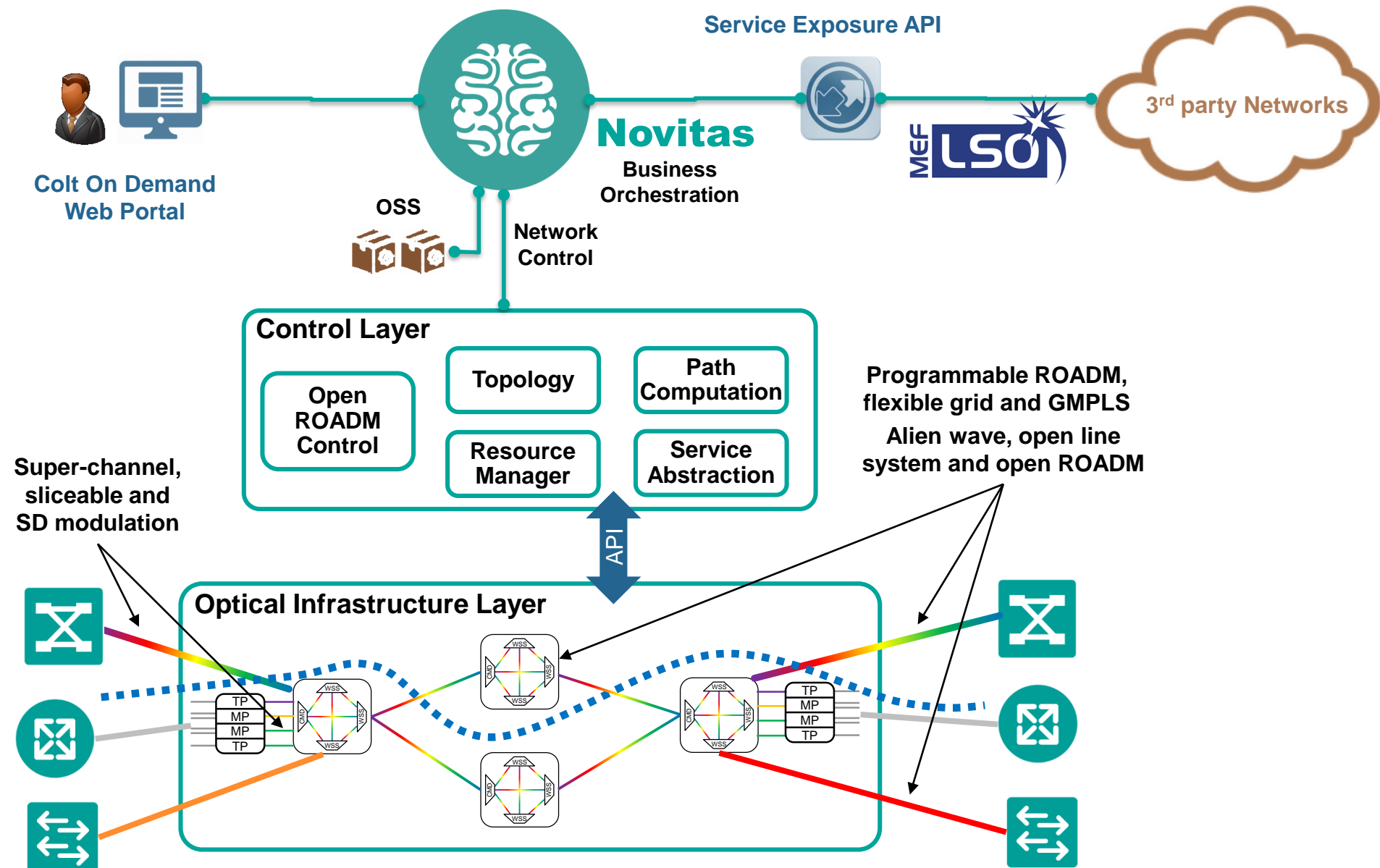




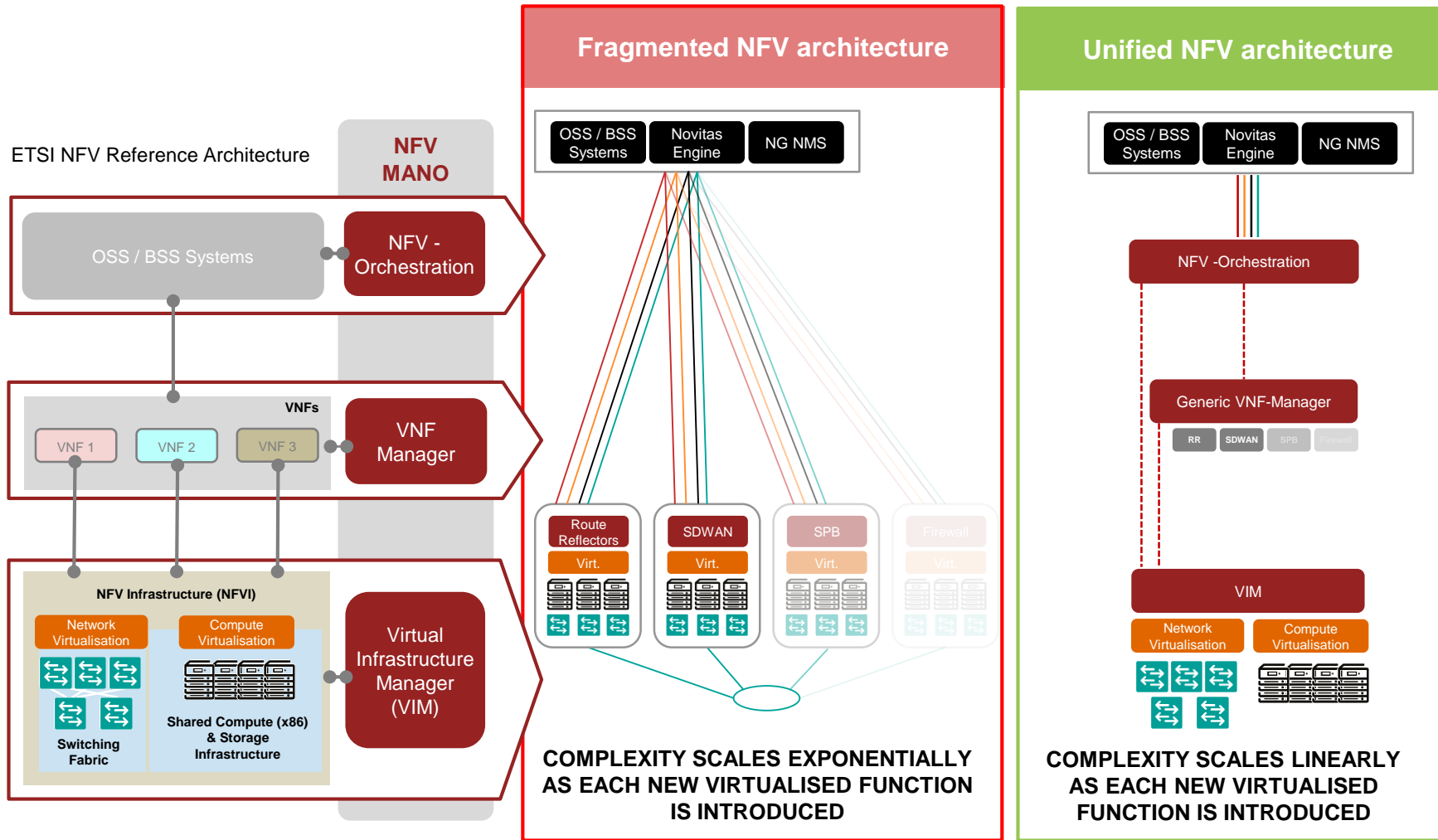
colt



What's new – Optical SDN



What's new – Unified NFV architecture



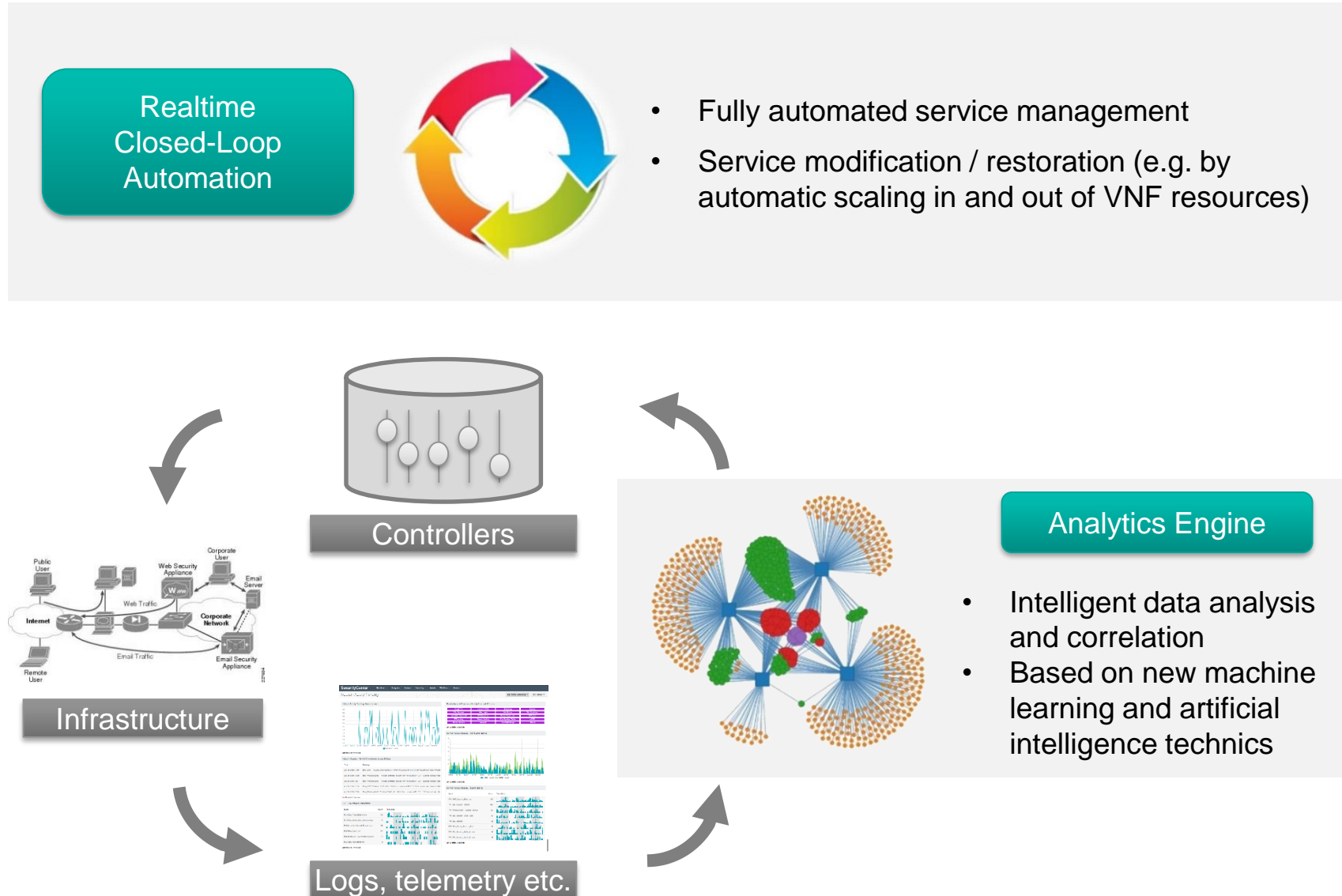
Fragmented NFV architecture

- Inefficient use of compute and networking infra
- Operational complexity due to multiple HW stacks
- Long and complex introduction of new VNFs
- Parallel and fragmented service mgmt and orch

Unified NFV architecture

- Automation and shared infrastructure management
- Cost efficiency
- Rapid VNF on-boarding
- E2e service lifecycle management
- Service Catalogue offering
- Reduction of operational overheads and dev cycles

What's new – AI driven networking (project Sentic)



Traffic flow classification

WAN path optimisation

Fault prediction

QoE modelling

Network security

Service restoration

Network scaling

Intelligent BW on demand

Learning so far

- Networking as an application
- Embrace agile development
- Open networks – work with partners and competition
- Manage software complexity
- Focus on the customer experience
- Redesign organisation and processes
- Product simplification
- Engage customers on product requirements



Thank you

Colt on Demand demo
goo.gl/ZEdwYK

