Agenda

1. Edge Working Group and Activities
2. The Vision thing - Product goals and objects.
3. The Secret Sauce: Tools and Automation
4. Pain Points and the Ask

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17.05.2018

OSF Edge Computing Group

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History of Edge Activities

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- OpenStack Summit, Boston, 2017 May
  - Verizon keynote on Taking OpenStack out to the Network Edges
- OpenDev, San Francisco, 2017 September
  - Presentations and working sessions with ~200 participants
  - Steps towards identifying ‘edge computing’ and initial use cases
- Sydney Summit, 2017 November
  - Edge related presentations and Forum sessions with discussions on the term ‘edge computing’
- PTG, Dublin, 2018 February
  - Detailed discussions on use cases and requirements
  - Focus on synchronization and transaction management

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Edge Computing Whitepaper

- https://www.openstack.org/assets/edge/OpenStack-EdgeWhitepaper-v3-online.pdf
- Defining the basics starting from Cloud Edge Computing
- Sample scenarios
  - Cloud in a box
  - Mobile connectivity
  - Network-as-a-Service
  - Universal Customer Premises Equipment (uCPE)
  - Satellite enabled communication
- Common requirements

Scope for the Edge Computing Group

- Identify use cases and scenarios related to edge computing
- Focus on challenges and solutions in the IaaS layer
  - Find common requirements
  - Define common edge computing architectures
  - Design and implement
    - Enhancements to existing projects and services to provide a better fit for edge
    - New projects and services to implement missing functionality
- Emphasize the importance of open infrastructure
- Encourage industry-wide collaboration

1

Current Activities

- Continuation of the Dublin PTG discussions
  - https://wiki.openstack.org/wiki/OpenStack_Edge_Discussions_Dublin_PTG
  - More detailed description of the layered edge architecture
  - More specific descriptions of requirements and available HW options
- Weekly sessions
  - https://etherpad.openstack.org/p/2017_edge_computing_working_sessions
  - Cross-community collaboration
  - Sync service deep dives

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Collaboration

- weekly calls
  - Zoom calls in alternating time slots
  - https://etherpad.openstack.org/p/2017_edge_computing_working_sessions
- mailing list
- IRC - #edge-computing-group on Freenode

https://www.openstack.org/edge-computing/

Delivering Network Services at the Edge with Open Source

Verizon Product Case Study

17 May 2018

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Virtual Network Services vision.

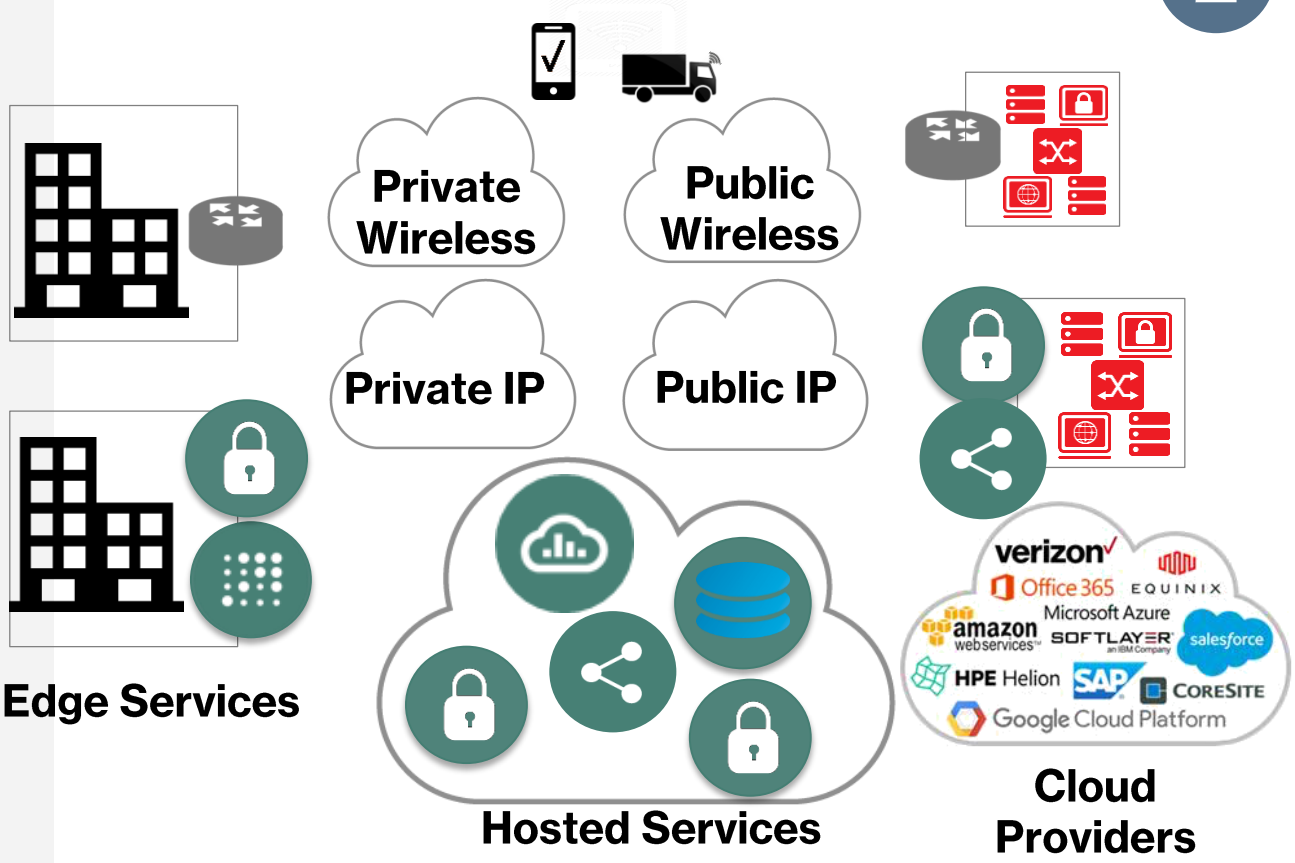
2

Challenge:

- Cloud and mobile first strategies
- Complex networking environments
- Global deployments

Value:

- Transport agnostic allows network flexibility
- Fast on-demand service delivery
- Usage based consumption model



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Open hardware, open software, open network

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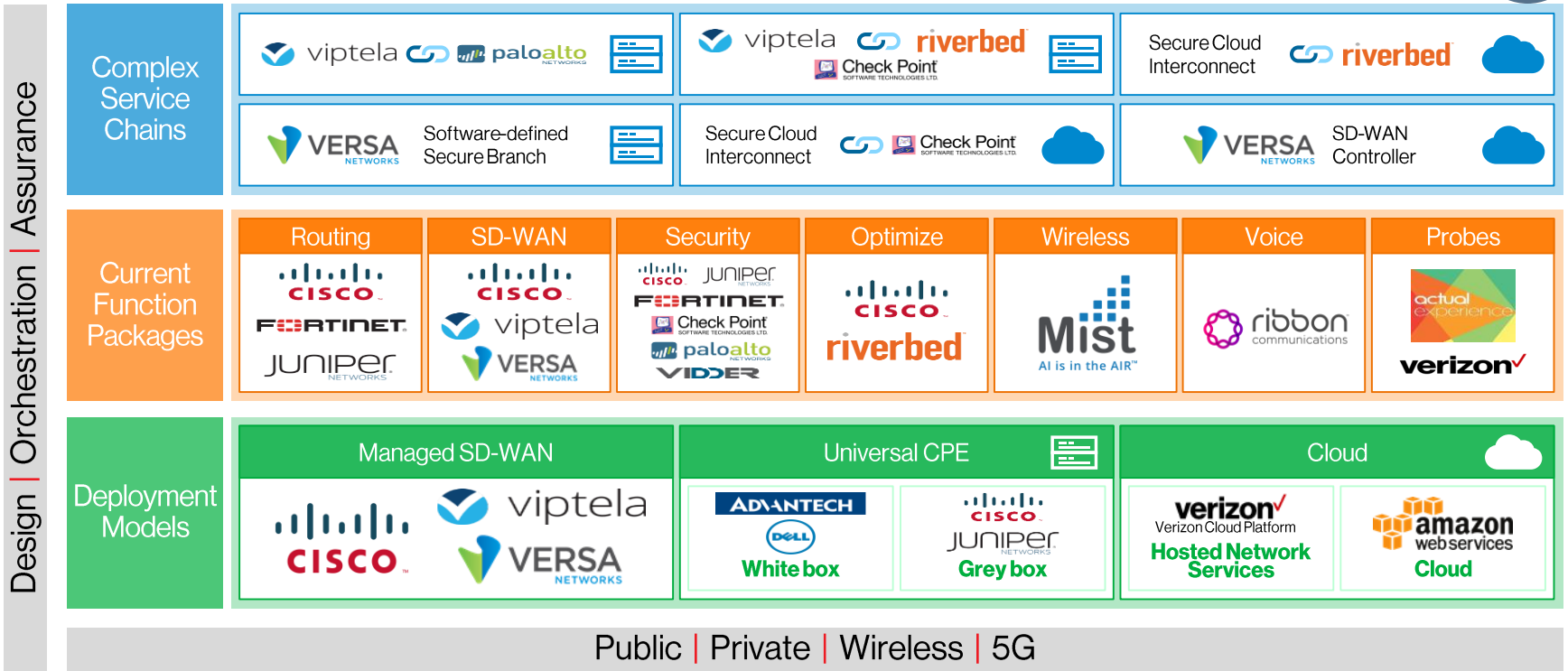

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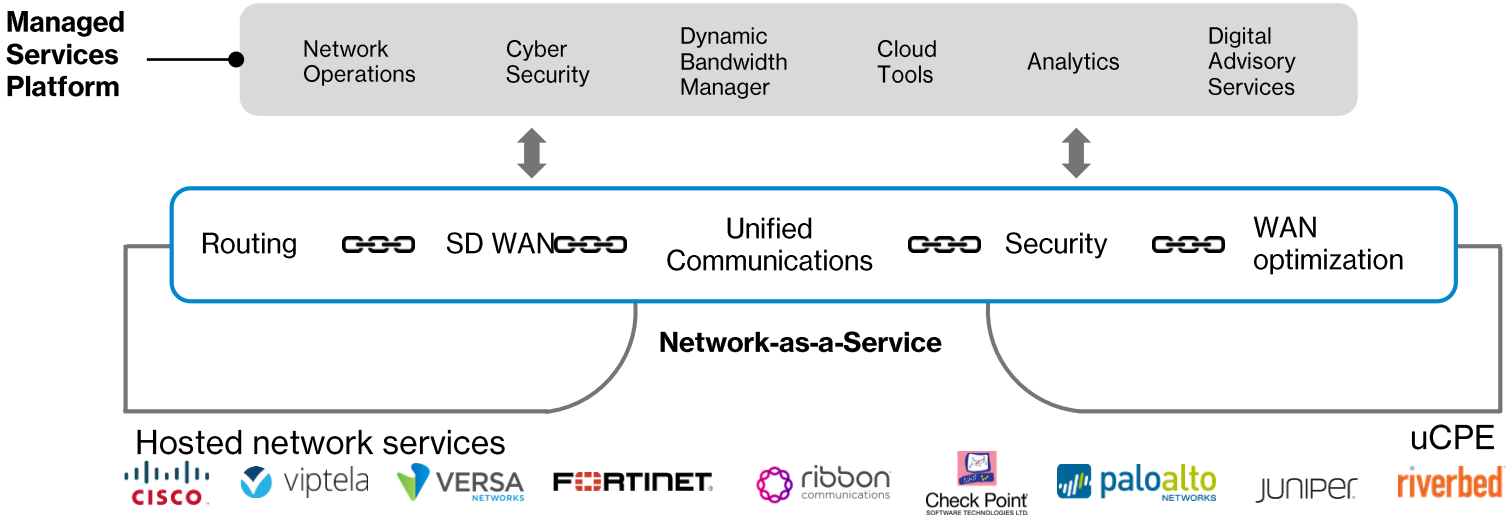
Verizon Virtual Network Service Portfolio.

2



Certified multi-vendor ecosystem of Managed Network Services.	Replaces expensive customer premises equipment.	Global enterprise grade private cloud.	Usage based pricing w/o separate license investment.

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Virtual Network Services delivery options.

2

Premises* | **Hybrid** | **Hosted**

Managed Service Delivery

- **WAN Optimization**
- **Unified Communications**
- **Security**
- **Software Defined WAN**
- **Routing**

Hardware Options

Traditional WAN

Dedicated Hardware SD WAN

NFX 250

JUNIPER

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uCPE*

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Hosted Network Services

Universal CPE (uCPE)

* Planned future release

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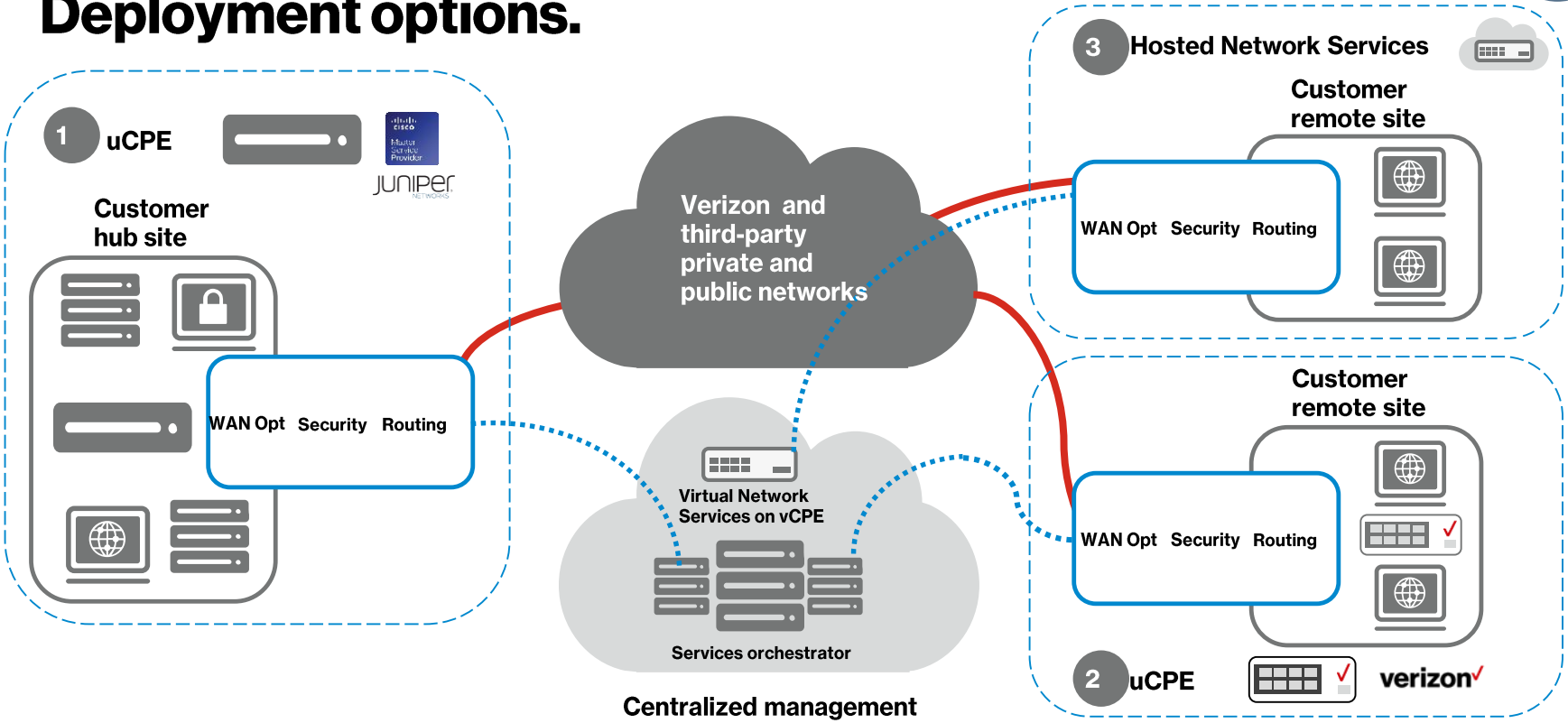
Deployment options.



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The Secret Sauce: Tools and Automation

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- Vendor integration and standards across platforms
- Micro service consumption model
- Tools need to support intermittent network access to the site
- More automation, rapid service deployment services, near real time changes.
- Efficient use and management of physical resources.
- Closed loop assurance promoting self healing
- Advanced analytics drives machine learning and automation

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SDN Orchestration

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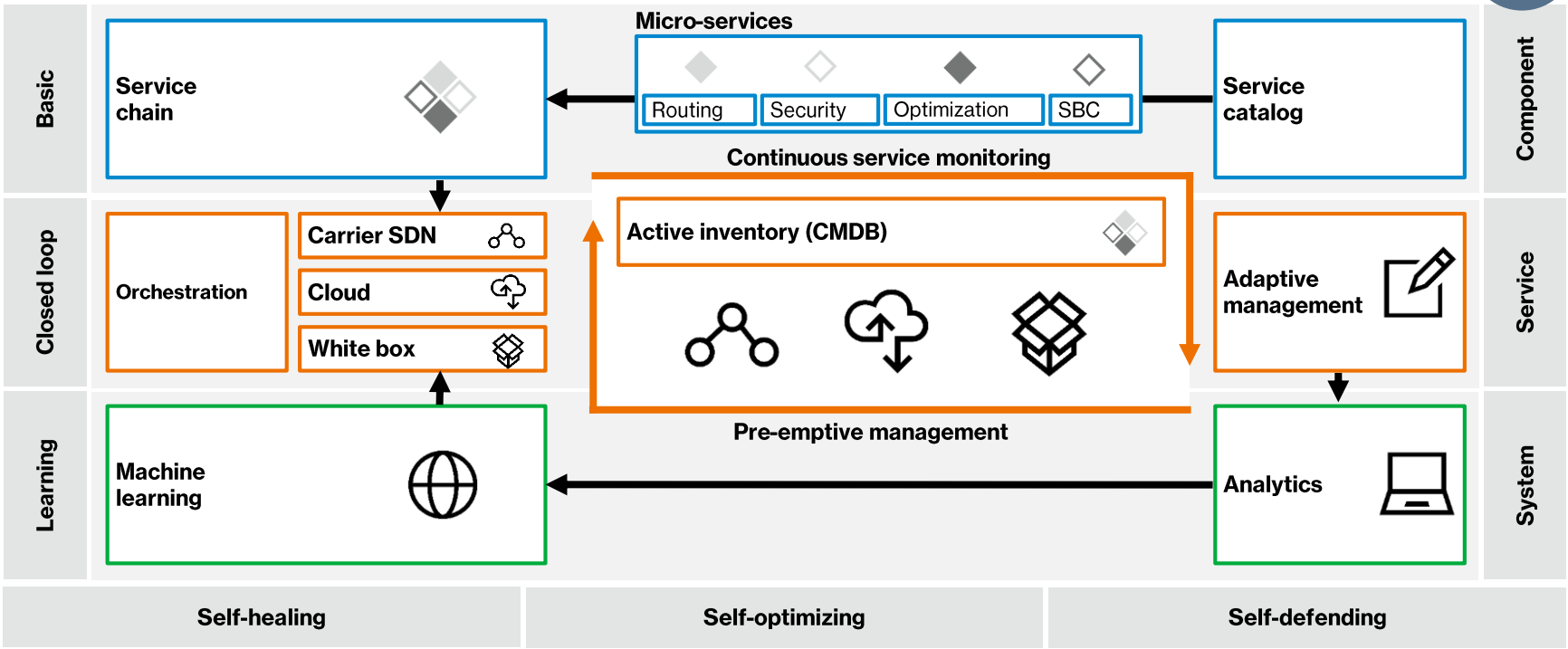

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Pain Points and the Asks.

Synergies: How can we work together?

Better tools for better automation

Vender certification and integration

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Pain Points

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- Lack of automation tools, rapid service deployment services, near real time changes.
- Vendor integration and standards across platforms
- Tools need to support intermittent network access to the site
- Efficient use and management of physical resources.

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The Asks

4

- Set standards to allow vendor integration across platforms
- Provide guidance for tools to edge computing use cases
- More automation, rapid service deployment services, near real time changes.
- Develop standards and analytics for measurement of use and management of physical resources.

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Thank you.

Questions?

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