

### WHAT'S THE PROBLEM?

Legacy network infrastructure is too complex, too brittle, and too closed

### INFORMATION TECHNOLOGY HAS EVOLVED ...BUT THE LEGACY NETWORK HAS NOT

	From	То	
Rigid, Legacy Model of IT	Applications Storage Network	"Efficiency is at the forefront. Networks must evolve with the IT focus on virtualization, consolidation and standardization." - Cindy Borovick, Program VP Enterprise and Datacenter Networks IDC	Flexible, Dynamic, Workload Management

### THE LEGACY NETWORK CAN'T KEEP PACE WITH LEADING EDGE COMPANIES



#### Enterprise Challenges

- Agility, responsiveness
- BYOD growth



"arrowhead' responses in 5 milli seconds for order"

#### Service Provider Challenges

- Service differentiation
- Rapid service creation and delivery

"4G Is Going Fast"

kity, cost and risk of k infrastructure

# WE NEED TO CREATE THE NEW NETWORK TO ADDRESS THESE CHALLENGES



# THE INDUSTRY EMBRACES THESE GOALS WITH SOFTWARE DEFINED NETWORKING



#### BROWDERWIGNEDEDARPIPROACH

Applications	5		
	INDUSTR	Y OBJECTIVE: Increase bi-directional communication between applications and underlying infrastructure	
Business Process/Workflow	4		
Network Management Control	3	Network Mgmt System	
On-device configuration & Trouble-shooting Interface	<sub>s</sub> 2	BGP-TE BCE PCE ALTO	
Switching & Routing Infrastructure	1		
		Future SDN Focus SDN Focus	

#### SDN ENHANCES OPERATOR AND APPLICATION EXPERIENCE



### SDN-BASED NETWORK APPLICATIONS



#### SDN LEADERSHIP REQUIRES

#### Network Domain Breadth













CAMPUS



CONSUMER & BUSINESS DEVICE

CCESS & REGATION

EDGE

CORE

DATA CENTER

WAN

AND

### **Embracing Disruption**

#### THE IDEAL ARCHITECTURE

	Core Attributes	SDN Capabilities	Customer Benefits
Software	<ul><li>Visibility/Control</li><li>Programmability</li><li>Dynamic provisioning</li></ul>	<ul> <li>Junos Automation</li> <li>SRC (externalized controller)</li> <li>Interoperability with Floodlight, Nox, and Trema</li> </ul>	
			Rate of innovation
Systems	<ul> <li>Disruptive architecture</li> <li>Separation of control plane and data plane</li> <li>SDKs with north/south APIs</li> </ul>	<ul> <li>OF-client on Junos SDK</li> <li>OF1.0 on MX/EX today</li> <li>OF1.3 on MX/EX/QFX(2013)</li> <li>Production support of PCE &amp; BGP-TE/ALTO (2013)</li> </ul>	<ul> <li>Service &amp; application agility</li> <li>Capital Efficiency</li> <li>Operational Scale</li> </ul>
Silicon	<ul> <li>Flexible instruction set</li> <li>Performance</li> <li>Scale</li> <li>Instrumentation</li> </ul>	<ul> <li>Flexible overlay network support</li> <li>High logical state scale</li> </ul>	

#### THE OPPORTUNITY FOR YOU



- Join industry dialogue
- Help advance protocol standards, use cases and industry best practices
- Get started with SDN on JUNOS TODAY

#### JUNIPER LEADS SDN



