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Borderless Networks Team
Emerging Central

Enabling the Borderless Organization
Agenda

- Why Borderless Networks?
- Cisco’s Architectural Approach
- Delivering Business Value
Market Transitions

**Mobility**
- 1.3 Billion new networked mobile devices in next three years

**Workplace Experience**
- Blurring the borders: Consumer ↔ Workforce; Employee ↔ Partner

**Video**
- 50% of all Cisco network traffic today is video

Mobile Devices
IT Resources

Anyone, Anything, Anywhere, Anytime
Changing Environment; Shifting Borders

- Mobile Worker
- Location Border
- Device Border
- Application Border
- IaaS, SaaS
- Video/Cloud
- IT Consumerization
- External-Facing Apps
- Internal Apps
Same Challenges, Increasing Complexity

Scalability, Availability, Performance, Security, Manageability

Linear

Multi-Dimensional

Location

Device

Application

Scalability, Availability, Performance, Security and Manageability

Across Non-IT-Controlled Environments
The New Borderless Organization

Borderless Experience

Anyone

Anything

Anywhere

Anytime

Securely, Reliably, Seamlessly
Cisco’s Architectural Approach

Collaboration

Virtualization

Borderless Networks

Technology Portfolio

Switching

Security

Routing

Wireless

WAAS

Routing

Security

Switching

Virtualization

Collaboration

Borderless Networks

Technology Portfolio
### Borderless Networks

**Architecture for Agile Delivery of the Borderless Experience**

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| 1 | Do I Have a Consistent Access Policy Architecture Across My Network for all Users and Devices? |
| 2 | Can Mobile Devices Access My Network Seamlessly and Securely? |
| 3 | Can My Network Deliver Real Time Collaboration Experiences? |
| 4 | Can My Network Deliver Protection From the Premise to the Cloud? |
| 5 | Can My Network Optimize Performance of Applications Anytime, Anywhere? |
| 6 | Am I Using My Network to Reduce My Energy Costs? |
| 7 | Is My Network Ready for Current and Future Regulatory Requirements? |
| 8 | Where Am I Now? Where Do I Start? |
Do I Have a Consistent Access Policy Architecture Across My Network for All Users and Devices?
Access Policy Challenges

**Authorized Access**
- Who is on my network?
- Can I manage the risk of using personal PCs?
- Common access rights when on-premise, at home, on the road?
- Endpoints are healthy?

**Guest/Contractor Access**
- Can I allow guests Internet-only access?
- How do I manage guest access?
- Can this work in wireless and wired?
- How do I monitor guest activities?

**Non-User Devices**
- How do I discover non-user devices?
- Can I determine what they are?
- Can I control their access?
- Are they being spoofed?
Cisco Solution: TrustSec

Cisco TrustSec is a security solution that provides policy-based access control, identity-aware networking, and data integrity and confidentiality services.

- Enables secure communication with dynamic policy enforcement
- Provides data confidentiality with MACsec
- Supports compliance with visibility and controls
Can Mobile Devices Access My Network Seamlessly and Securely?
Mobility Challenges

- **Improve Wireless Experience**
  - Unifying Wired, Wireless and Remote User Experience

- **Always-on Security and Protection**
  - Extending Security, Policy and Applications to Wireless Users

- **Consumerization**
  - Mandate for User Choice in Device
  - Scaling Support for Mobile Devices
Cisco Solution: Enabling a Borderless Mobility Experience

Cisco Borderless Mobility with Clean Air Technology Provides Anywhere, Anytime Access to Information with the Same Quality Of Experience Whether Physically in or out the Office

- Broad Device Support with Cisco AnyConnect
- Improved Mobility User Experience with Motion Network Service
- Borderless Access with Wired + Wireless + VPN
Can My Network Deliver Real Time Collaboration Experiences?
Real-time Collaboration Challenges

Managing Video Deployments
- Multiple video applications over same IP infrastructure?
- Automatically recognize media applications?
- Manual configuration of new media end points?

Prioritizing Business Communications
- Network set and enforce policies for different applications, users and devices?
- How do you prioritize traffic when majority of it is Video?

Seamless User Experience
- Employees access voice and video services through multiple disparate devices?
- Access to rich media services limited by device type or location?
Cisco Solution: Medianet

Medianet Provides Video-enabled Real-time Collaboration Network Solutions That Combine Intelligent Video Technologies in the Home, Business, and Service Provider Networks

Deliver New Rich Media Services with VideoStream, WebEx node on ASR 1000

Manage Growing Complexity of Multimedia Traffic with PfR, ISR G2, ASR 1000, Cat 3k, 4k

Scale Video Offerings to More Users/Devices with Media Experience Engine, WAAS
Medianet: Key Functions

No Resource Reservation, Degraded Video

Context-Aware, Prioritized, High Quality Video

CEO Meeting, M&A Negotiation, Sports Event

Global Business, WW Offices

Resource Reservation, Guaranteed Quality of Service, Optimized Routing, Video Monitoring, Auto Config
Can My Network Optimize Performance of Applications Anytime, Anywhere?
Application Performance Challenges

**Application Delivery**
- Ensure performance consistency of any business application, on any device, anywhere across the Enterprise
  - Performance Degradation
  - Application Prioritization

**Resource Optimization**
- Optimize bandwidth resources at different points in the enterprise infrastructure (Branch, WAN Edge, Data Center)
  - WAN Congestion
  - Server Load Balancing

**End User Satisfaction**
- Improve collaborative performance (On-premise, Off-premise and cloud based services)
  - High performance web 2.0 and Cloud Services
Cisco Solution: Application Performance

Performance Elements Are Embedded Across Cisco’s Routing and Switching Infrastructure That Help Organizations Deliver Consistent and Superior Application Performance

- Consistent End User Experience
  - WAAS, WAAS Mobile, ScanSafe

- Accelerate Application Delivery
  - WAAS, NBAR, PfR

- Virtualization and Cloud Services Optimization
  - WebEx Node on ASR, Virtualized Services on SRE (ISR G2)
SBA
A Blueprint for Midsize Organizations

Lower Total Cost of Ownership
- Improved network performance with a pre-tested architecture

Prescriptive Solutions
- Pre-selected Cisco solutions provide the right functionality for customers

Modular Design for the Future
- Build a network platform ready to support future deployments of UC, switching, wireless, routing, video, and data center

SBA for Midsize Organizations
Release 2 for Borderless Networks
New Data Center and Collaboration Modules Extend Your Network Further

Best of Breed Products Working Together
Architectural Design
Comprehensive Solution
Systematic Approach
In Conclusion

1. The Borderless Organization needs a Borderless Network Architecture

2. Cisco is uniquely equipped to deliver that architecture with “broad and deep” network innovation

3. The platform for your business innovations