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Networkers 2011

May 19, Toronto, Canada

Knowledge
Is Power.
Learn. Share. Collaborate.



Borderless Networks. Enabling the Borderless Organization.

Maciej Kranz
Vice President, Borderless Networks



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Proliferation of Wireless Devices – Consumerization

7 Billion

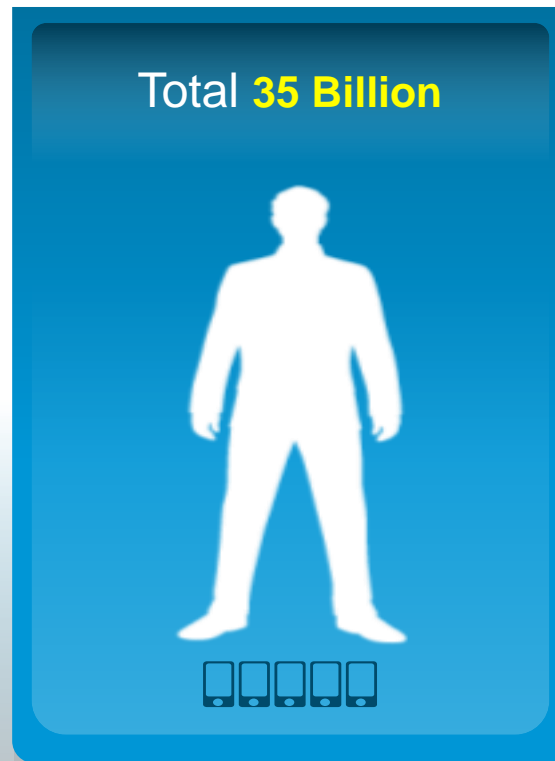
New Wireless Devices by 2015



Growth of Connected Devices



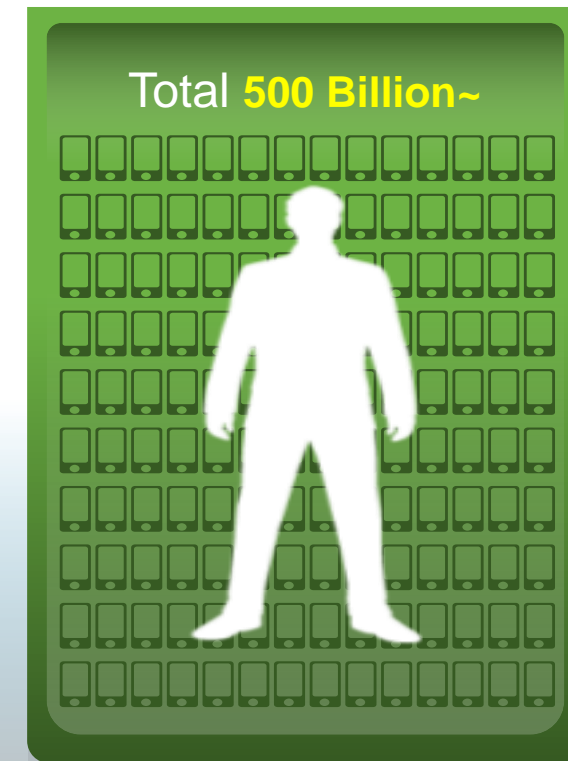
1/10th of a Device per
Person on Earth
2007



5 Devices per
Person on Earth
2010



7 Devices per
Person on Earth
2013



70~ Devices per
Person on Earth
2020



World of Applications

3,000



Total Mobile Apps
2007

160,000



iPhone Apps Alone
2010

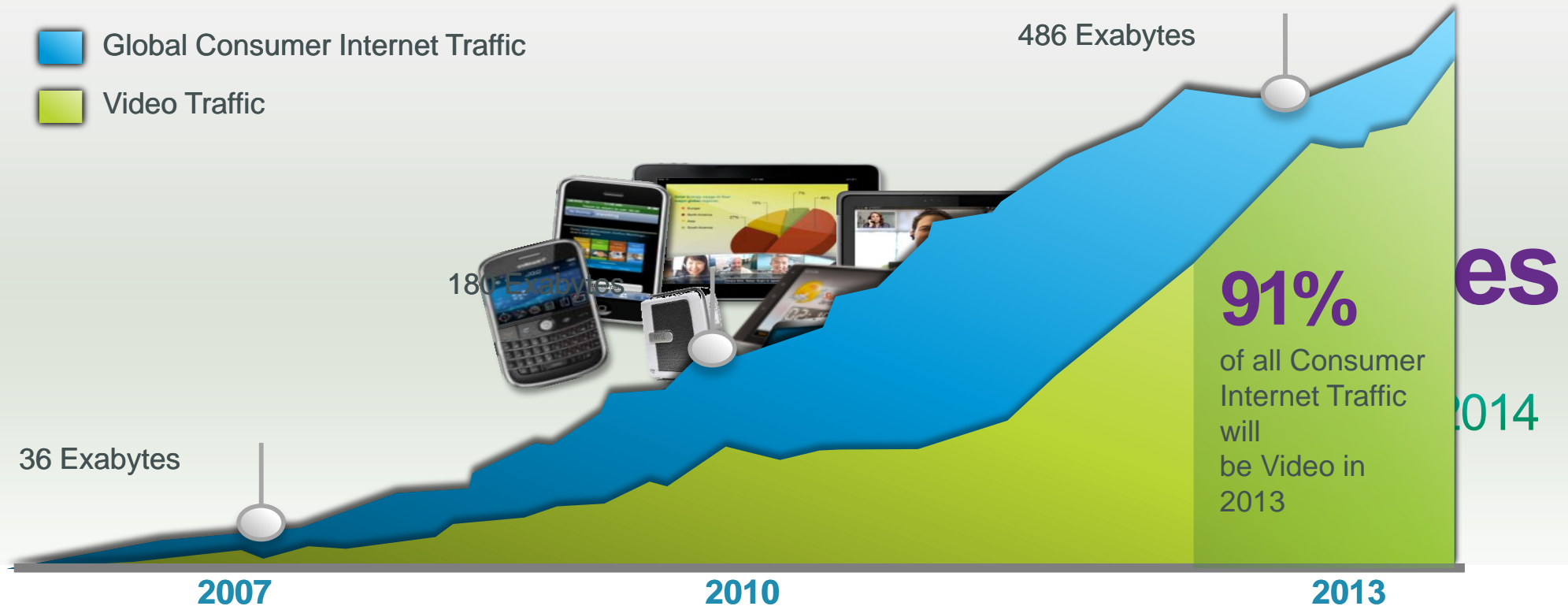
1,500,000



Apps Worldwide
2013



Growth of Video

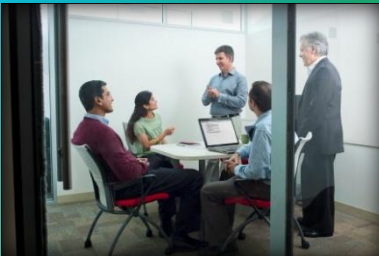




Adoption of Public, Private, Hybrid Clouds

“More than **50%**
of customers moving
to private clouds”

Mobility



- Dynamic workloads
- Provider choice
- Enhanced SLAs

Business Agility



- New commercial models
- Rapid prototype, development, change

Operational Simplicity



- Variable operational cost structure
- Lower change costs
- Service elasticity



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The New Borderless Organization

Borderless Experiences



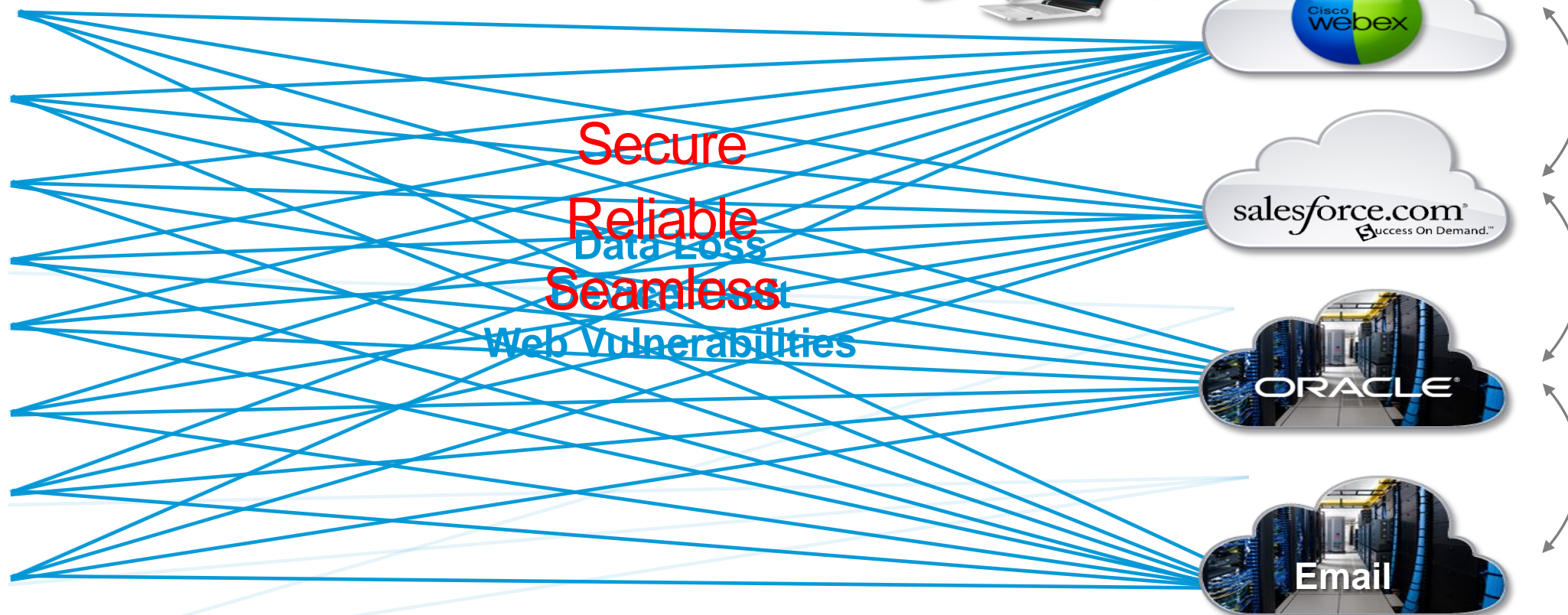
Securely, Reliably, Seamlessly

Borderless Organization Introduces Opportunities, But Complexities

Workloads Must Maintain Integrity, Security

Devices

Applications





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Traditional Way





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Traditional Way



Per device CLIs

Borderless Network Architecture

Architecture for Agile Delivery of the Borderless Experience



POLICY

MANAGEMENT

CISCO SMART SERVICES

CISCO LIFECYCLE SERVICES



BORDERLESS END-POINT/USER SERVICES



Securely, Reliably, Seamlessly: [AnyConnect](#)

BORDERLESS NETWORK SERVICES

Mobility:
[Motion](#)

Energy Management:
[EnergyWise](#)

Security:
[TrustSec](#)

App Performance:
[App Velocity](#)

Multimedia Optimization:
[Medianet](#)

BORDERLESS NETWORK SYSTEMS

Unified Access

Campus Core

Unified Fabric

Extended Edge

Extended Cloud

BORDERLESS INFRASTRUCTURE

Wireless

Routing

Switching

Application Networking/
Optimization

Security



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Borderless Networks: Simplify



CENTRALIZED
POLICY



UNIFIED
MANAGEMENT &
DEPLOYMENT



COMPREHENSIVE
SECURITY



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**CENTRALIZED
POLICY**

Policy Impact on the Organization

Business Goals and Objectives Executed Through Company Policies



Example: Shared Corporate Policy

“Protect Intellectual Property While Providing Anytime, Anywhere Access.”

Network Policy

“Control access to networks with sensitive assets.”

Application Policy

“Identify applications that access sensitive data and control access.”

Security Policy

“Control access to users and prevent data leakage”

Compliance Policy

“Audit to ensure IP protection and compliance to regulations”

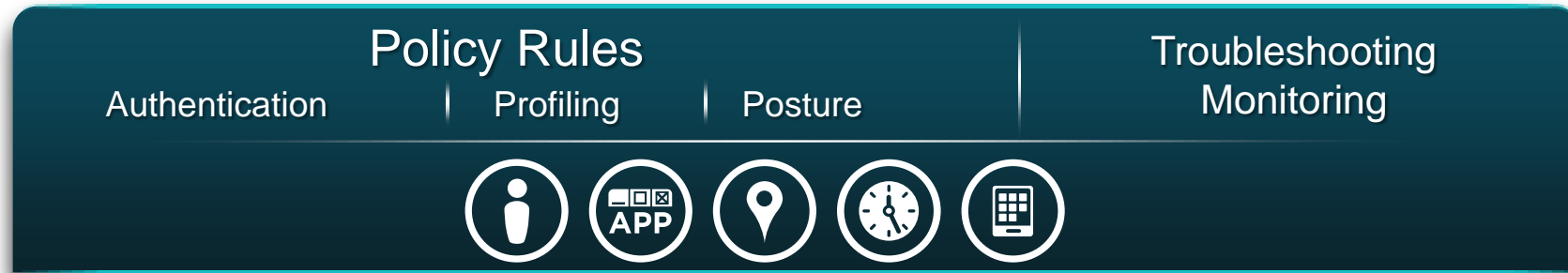


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Centralized Policy Engine - All Access to the Network



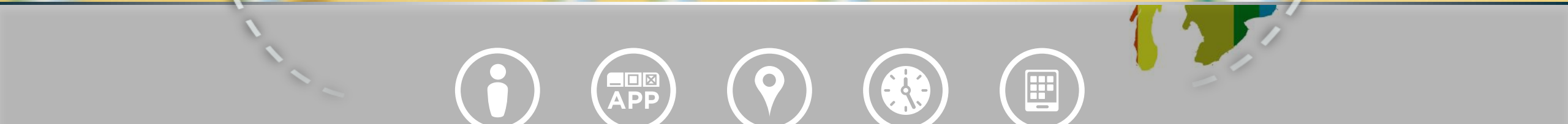
Network Enforcement

Endpoints



TrustSec Planning and Design Service

Centralized Policy in Action





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Policy Governed Networks in Action

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Corporate Laptop



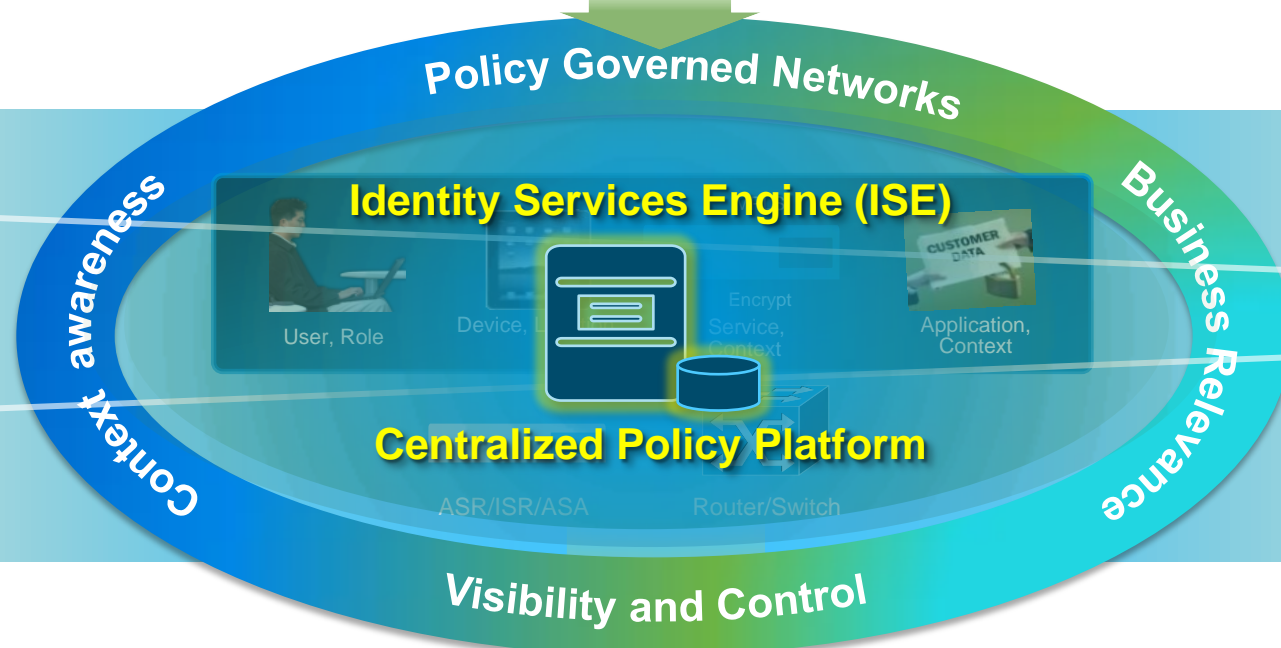
Full



iPad



Restricted



Product Bookings



Customer Data



SalesForce.com

Applications in Data Center or Cloud

Third-Party Applications



Central Dashboard, Reports,
 Measurements, Troubleshooting



Centralized Policy: Benefits

Improve Security and
Compliance

Permit or deny access to any
resource based on granular rules

Employee
Satisfaction

Flexibility to support any device or
application dynamically with
consistent policies

Reduce Time
to Deployment

Single IT interface for policy
creation and scaled enforcement



**CENTRALIZED
POLICY**



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Borderless Networks: Simplify



CENTRALIZED
POLICY



UNIFIED
MANAGEMENT &
DEPLOYMENT



COMPREHENSIVE
SECURITY

Unified Management for Architectures, Services

Cisco Prime for Enterprise



Wireless LAN Planning and Design Service


- NCS 1.0: Unified access management for wired and wireless networks
- LMS 4.1: Enhanced Borderless Networks services management and Smart Interactions
- NAM 5.1: Integrated application and performance visibility across the network
- Collaboration Manager 1.0: Medianet monitoring and troubleshooting







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 | NCS 1.0

User Search: **Amy Glodde**

			
Physical Wired / Wireless	IP Address Assignment	802.1X Authentication	Policy Enforcement



The tech searches on her name and immediately can see full diagnostics.

Automated Video and Voice

Quality of Experience

Planning

Auto
Configuration

Visibility and
Monitoring

Rapid
Problem Resolution

Optimization

Any to Any
Video Adaptation

Automation and rapid problem resolution in the network to deliver application quality of experience, particularly video



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Automated Video and Voice

Endpoints / Users



Network Management



Cisco Prime:
 Collaboration Manager 1.0
 LAN Management Solution 4.1
 Network Analysis Module 5.1



Cisco Developer Network Tools

Medianet and Collaboration Manager

Hmmm... Mediatrace identifies the bottleneck to be between New York and Toronto

The screenshot shows the Cisco Prime Collaboration Manager interface. At the top, it says "Cisco Prime Collaboration Manager". Below that is a "Session Monitoring" window with a table of sessions:

Subject	Scheduler	Start Time
Telepresence	julalvar	12:18:08
Youtube	witean	11:43:41
ERP	xuyleman	09:51:14

Below the table is a network diagram showing a central server icon with a red warning triangle, connected to two groups of user icons. The right group has a red warning triangle above it. To the right of the diagram is a vertical list of session details:

- Sales VP
- Telepresence
- New York
- 12:42pm
- Telepresence 1300

A remote expert joins a TelePresence session between the VP of sales and the customer ad-hoc via TelePresence



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Unified Management: Benefits

Management for the
modern workplace

Expanded from box-level to
user and endpoint management

Faster time to
problem resolution

Single interface for solving wired and
wireless connectivity and policy issues

Increasing IT efficiency and
reducing training

Intuitive, consistent user interface with
automated tools for problem resolution



**UNIFIED
MANAGEMENT &
DEPLOYMENT**



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Borderless Networks: Simplify



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COMPREHENSIVE
SECURITY



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anti-spam

anti-bot

anti-virus





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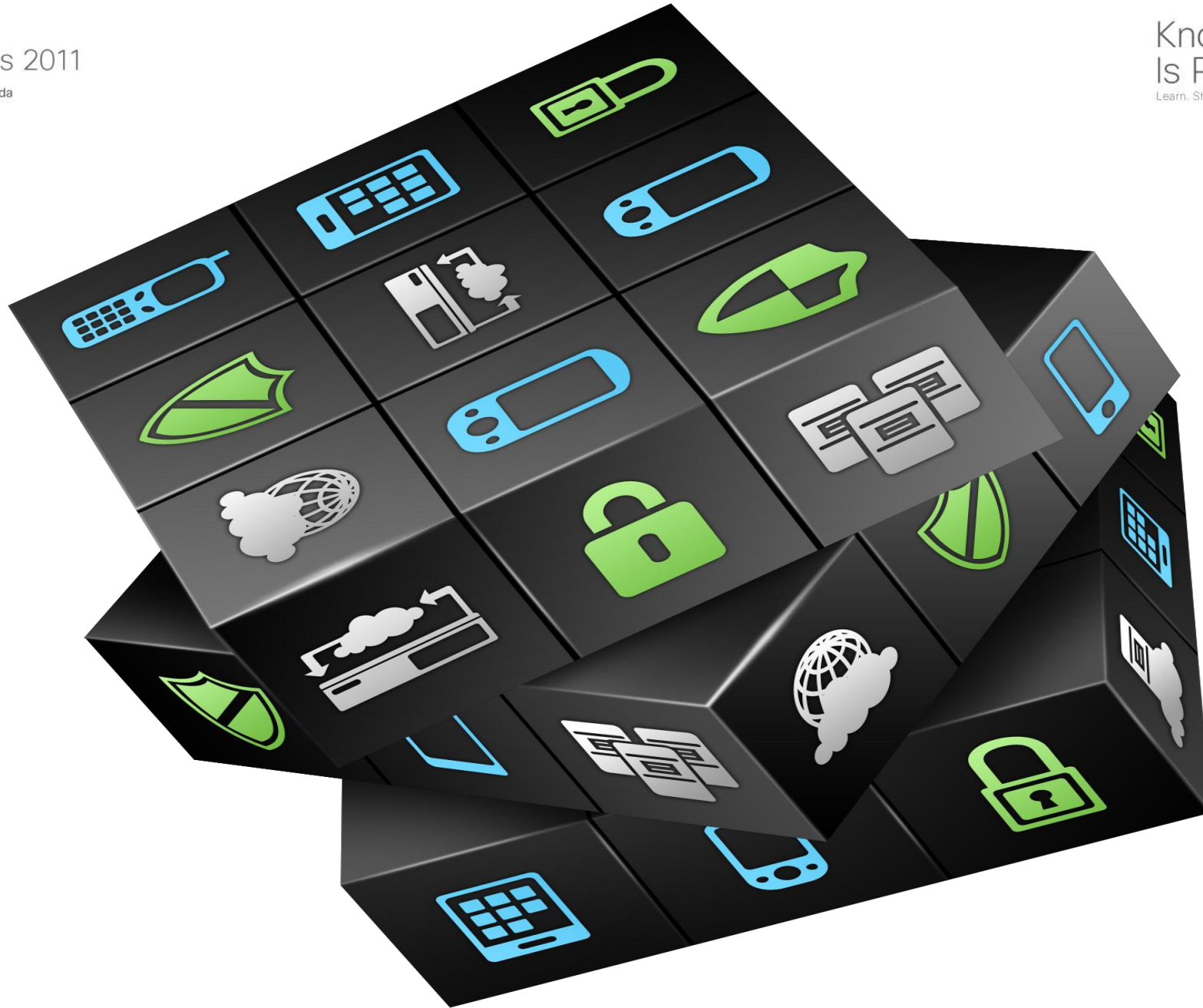


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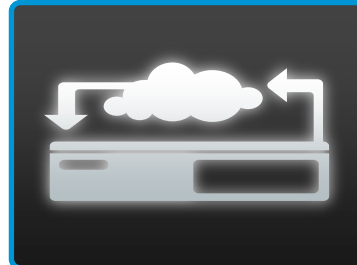
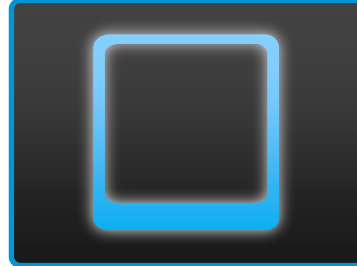




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The Network



The Network



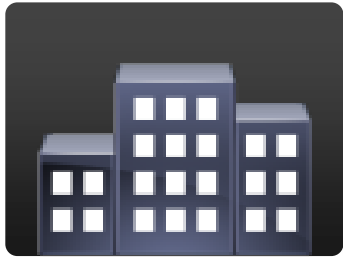
Cisco SIO





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Branch Office



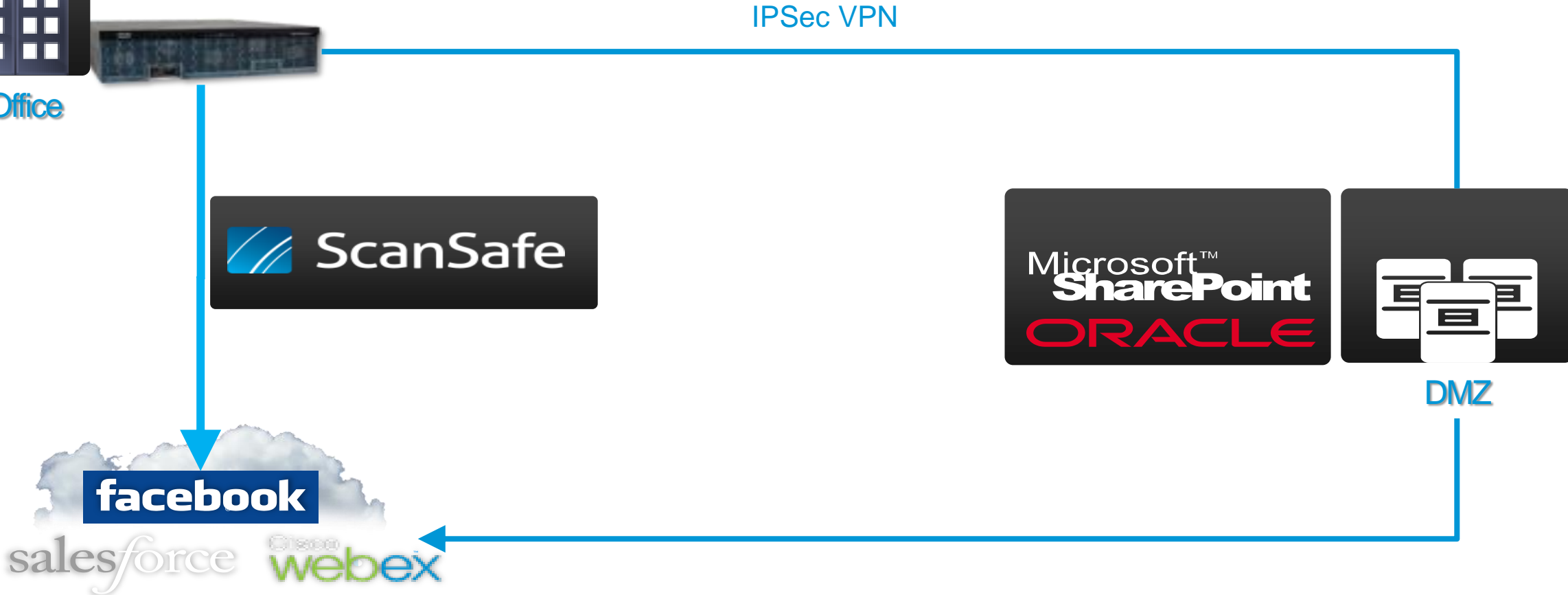
IPSec VPN



DMZ

facebook

salesforce Cisco webex





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Critical Questions to Consider

Do I have a consistent Access Policy Architecture across my network for all users and devices?

Can mobile devices access my network securely, reliably and seamlessly?

Can my network deliver real-time collaboration experiences?

Can my network deliver protection from the premises to the Cloud?

Can my network optimize performance of applications anytime, anywhere?

Am I using my network to reduce my energy costs?

Is my network ready for current and future regulatory requirements?

Where am I now? Where do I start?





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SBA Designs and Cisco Validated Designs

Lower Total Cost of Ownership

Prescriptive Solutions

Modular Design for the Future

70%



Comprehensive designs with deployment guides

http://www.cisco.com/en/US/partner/netsol/ns982/networking_solutions_program_home.html

http://www.cisco.com/web/CA/solutions/strategy/government/networking_solutions_sub_program_home_fr.html



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Go Borderless

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Cloud and Mobility Driving
Enterprise Network
Transformation

Cisco Delivers Policy, Management,
Security to Simplify this
Transformation

Cisco Borderless Networks Is Your
Platform for Next Gen Network





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Q & A

#CNSF2011



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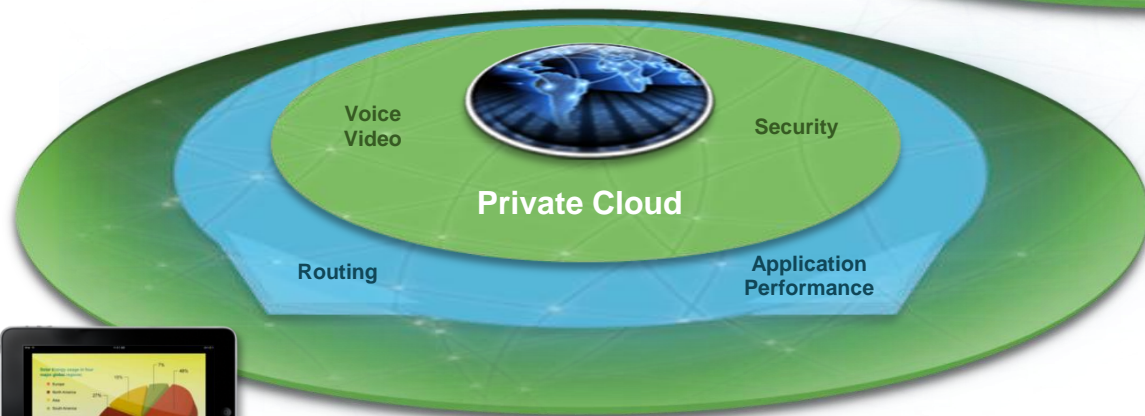
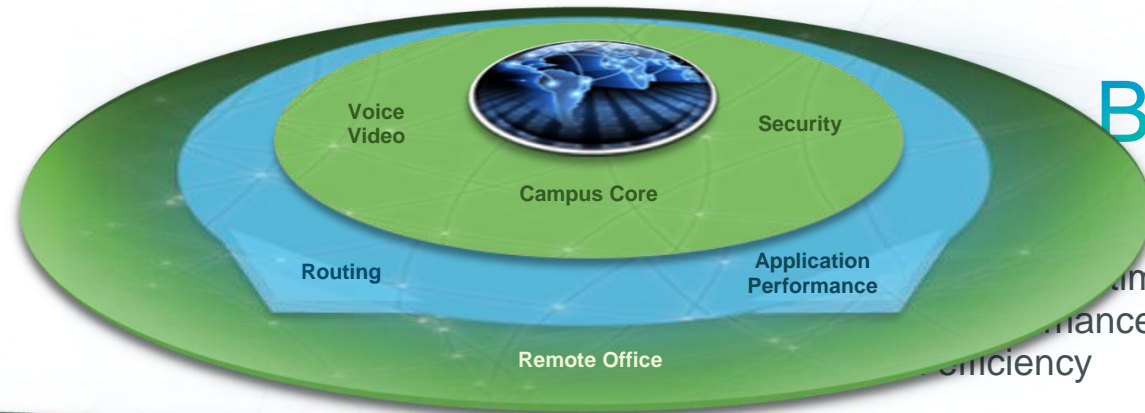
Thank you.





Borderless Networks Enables Private Cloud

Embedded Network Services Optimize the Experience




Benefits

- **Secure Data, Devices, Workloads**
 Device, application choice with IT control
- **Optimize Applications**
 Rich media applications prioritized by network
 Applications routed to best public, private cloud resource
 Visibility and predictability

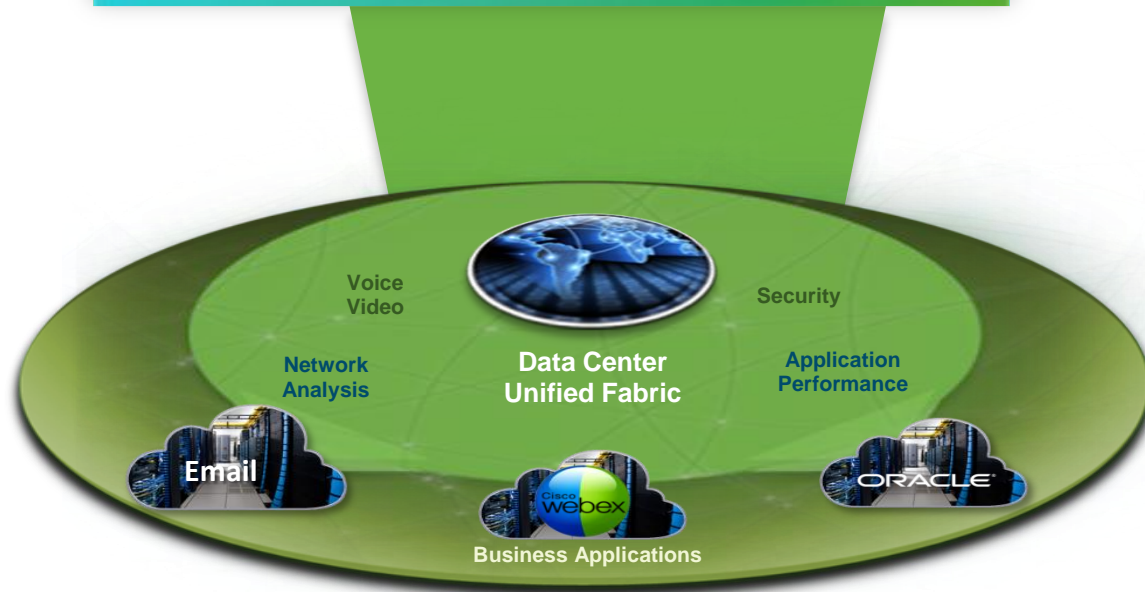


Borderless Networks with Unified Network Services

Embedded Network Services Balance Cloud Workloads



Optimal user experience
based on location



Benefits

- **Maximize IT Investment**
DC services extended to Campus Core
Virtualized services provide scale, rapid ROI
- **Secure Data, Devices, Workloads**
Device, application choice with IT control
- **Optimize Applications**
Rich-media, business applications prioritized by network
Applications routed to best public, private cloud resource
Visibility and predictability



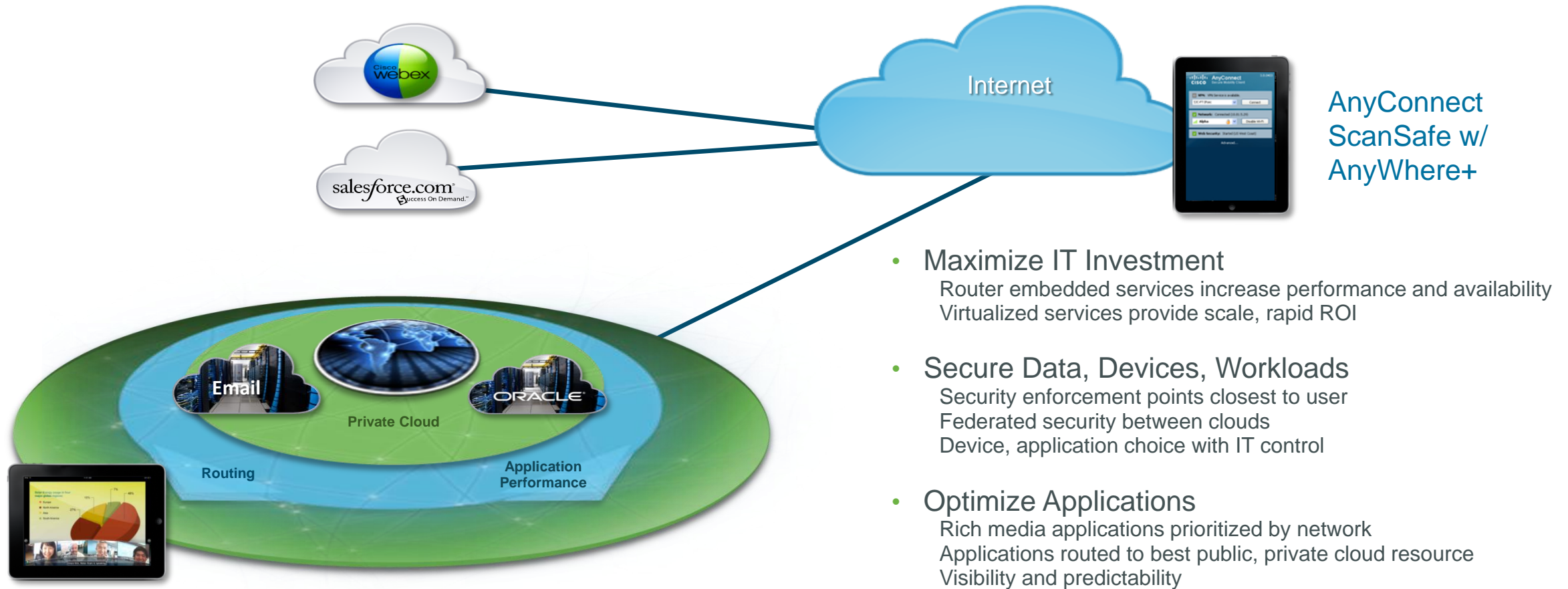
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Borderless Networks Enables Public, Hybrid Cloud

Embedded Network Optimize the Mobile Experience



AnyConnect
 ScanSafe w/
 AnyWhere+



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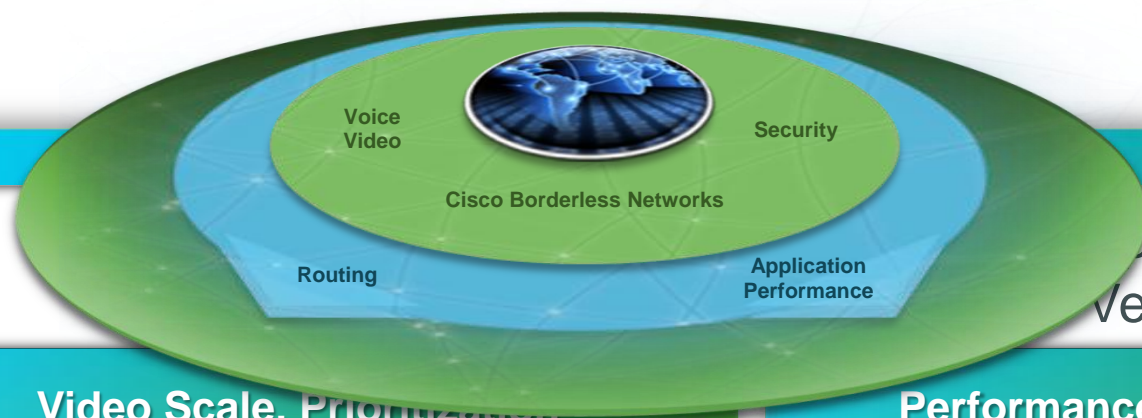
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Cisco Borderless Networks

Routing, Application Performance, and Security Innovations Enable Cloud



Application
Velocity

Video Scale, Prioritization

- Medianet
- ISR G2 Integrated Video Conferencing
- WebEx Node for ASR 1000
- PfR, NBAR

Performance Optimized WAN

- WAAS on ISR/SRE
- vWAAS
- UCS Express
- NAM



SecureX

Secure Cloud Infrastructure Services and Access

- ASA/ASA SM
- AnyConnect
- ScanSafe (ISR G2)
- IronPort, SIO