



Cisco Collaboration Cloud

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Title: Technical Marketing Engineer

Agenda

- Then and Now – New needs for collaboration
- WebEx Architecture overview
- High Availability and Performance
- Flexible Integrations
- Security overview
- Q & A



The Need for a New Approach

Traditional tools do not address these challenges

Market Trends

- Dispersed Workforces
- Video Proliferation
- Content/Device Explosion
- Social Media
- Cloud Services

Business Impact

- Opex/Capex Management
- Heterogeneous Environment
- Complex Deployments
- Soloed Tools, Applications & Organizations

Personal Factors

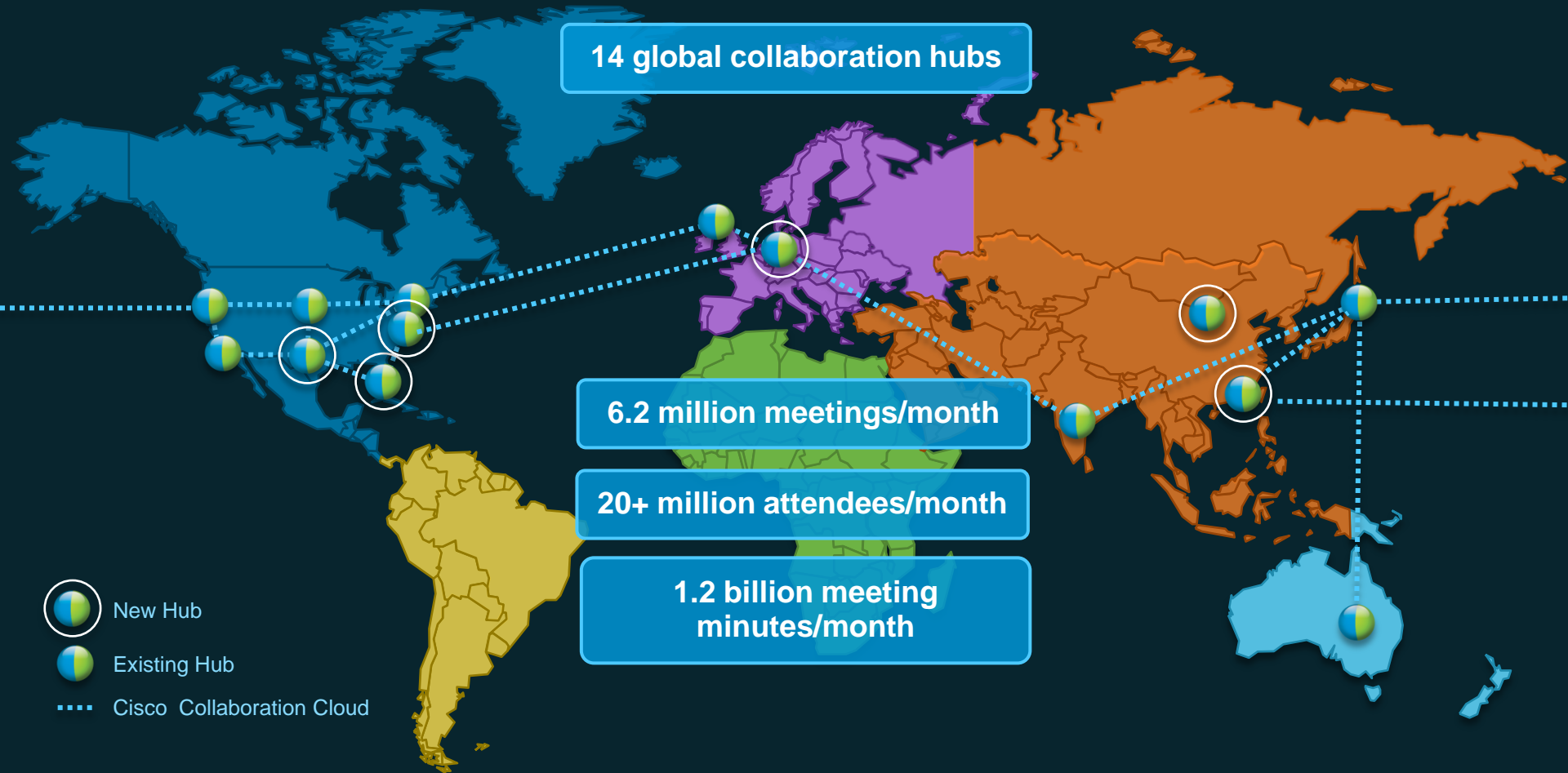
- Work Anywhere
- Device Flexibility
- Trust at a Distance
- Expertise/Info on Demand



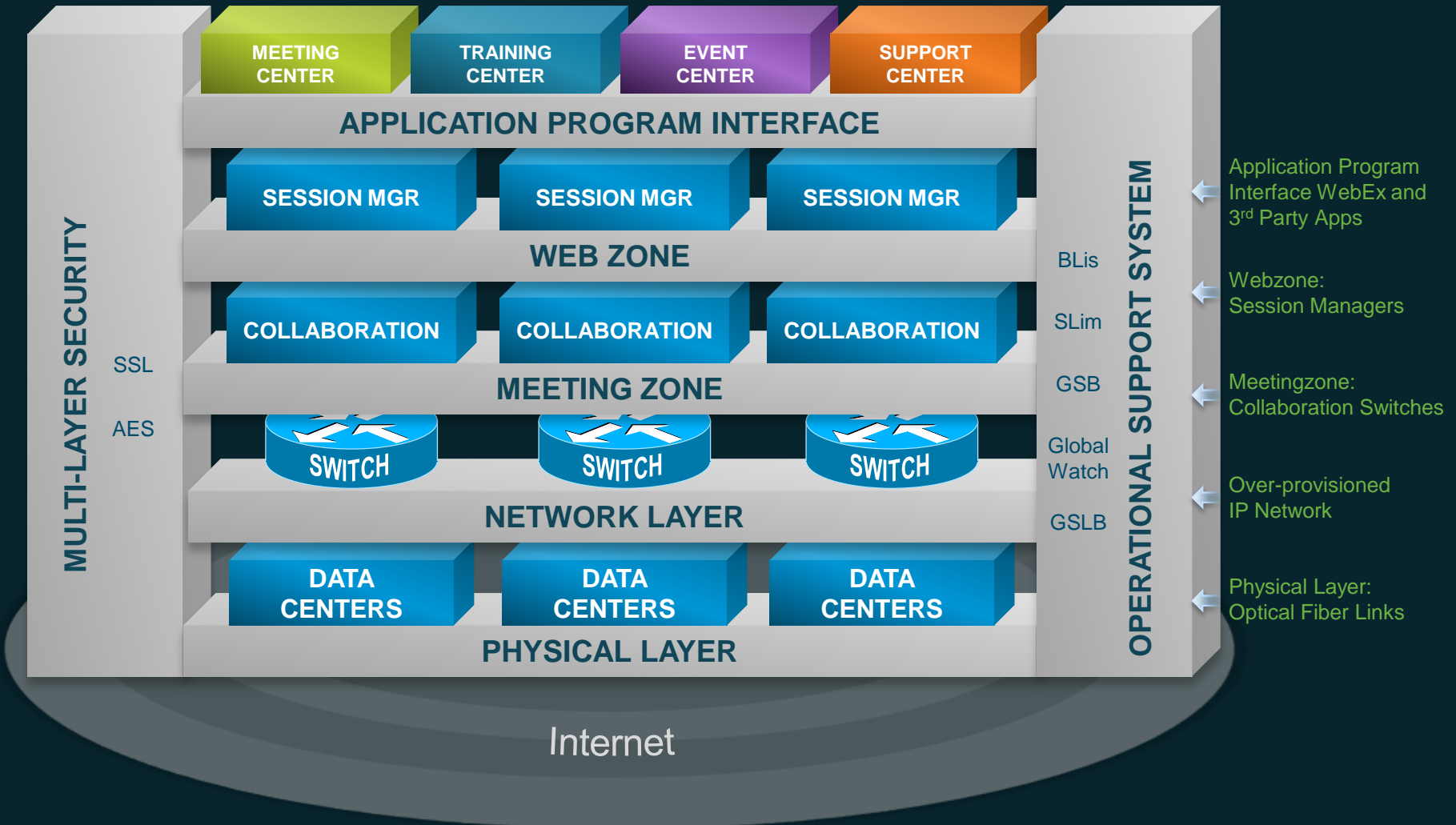
Essential Elements of Collaboration

	THEN	NOW
PEOPLE	Inside my organization	Dispersed mobile teams, outside my organization
COMMUNITIES	Defined by organizational hierarchy	Self-organizing
CONTENT	Primarily single source	Multiple sources & applications, mobile and fixed devices
	Largely asynchronous; text, email and voicemail	Non real-time and real time, interactive; video
CONTEXT	You find information, people	Right time, right people, right resource
SECURITY	Inside the firewall, walled off	Selective, policy-based, inter-company
DEPLOYMENT	Departmental, on premises	Enterprise-wide, choice of on premises or cloud-based

Cisco Collaboration Cloud



Cisco WebEx Architecture Overview



Cisco Collaboration Cloud Differentiators



High Availability

- 99.99% historical uptime
- Seamless global failover for service continuity



Scalability and Performance

- Service oriented architecture
- Core-edge design
- Global Distributed Meeting (GDM) and Content Delivery Network (CDN)



Integration Flexibility

- High quality video/TelePresence
- Mobile devices and IP phone
- Meeting Place/WebEx node
- Client extensibility



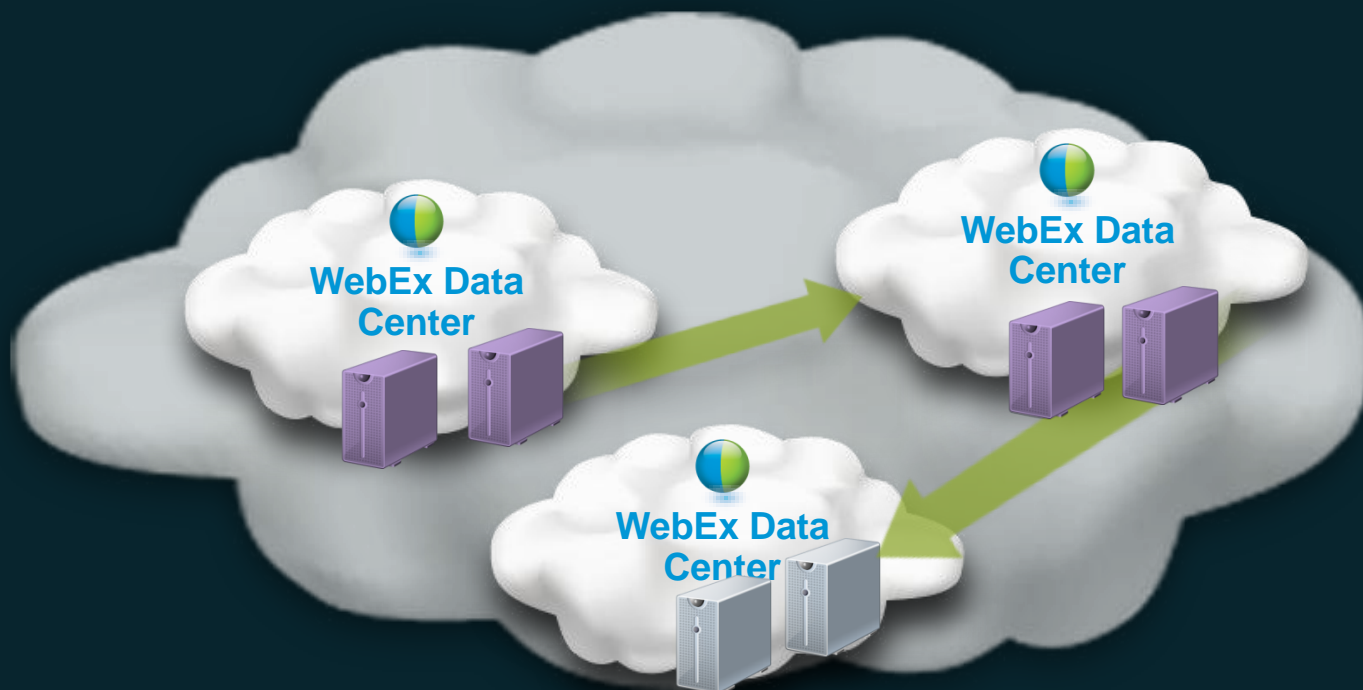
Multi-Layer Security

- Secure in-meeting experience
- Encrypted data transport
- Data center security
- Rigorous 3rdparty audits

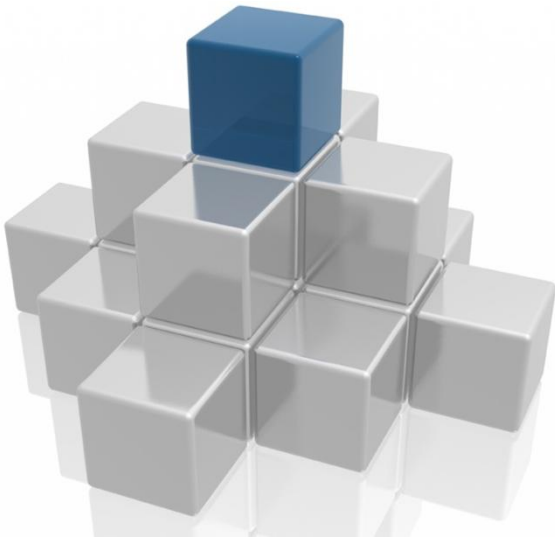
High Availability, Scalability, and Optimized Performance

Highly Resilient Infrastructure

- 100% redundancy for all clusters
- Real time data replication
- Seamless global failover – Global Site Backup

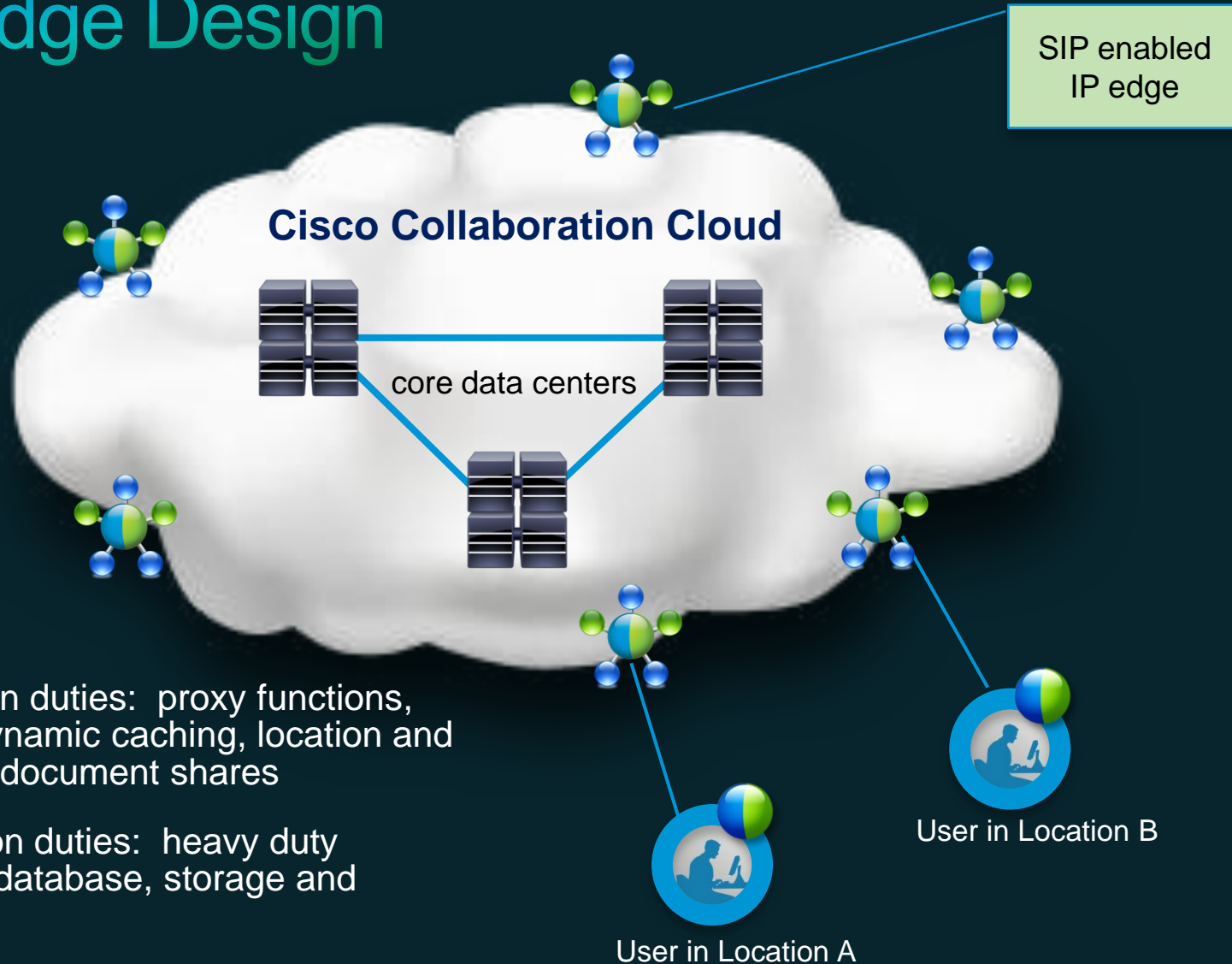


Service Level Architecture



- **Scalable from single account to dedicated high volume clusters**
- **Up to 1,000 (Training Center) or 3,000 (Event Center) participants**
- **Up to 500 participants in a single HQ video meeting**
- **Service customization with branding**

Core-Edge Design

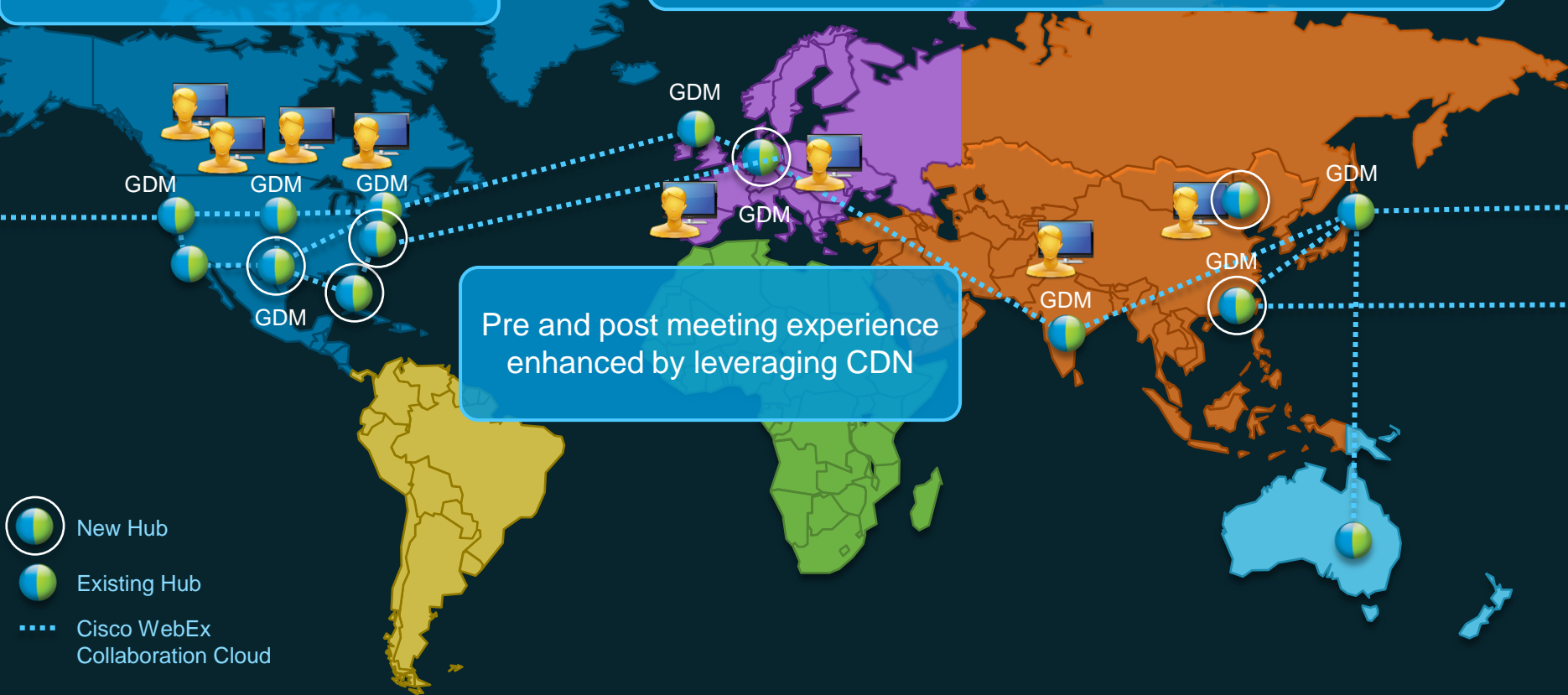


- Edge location duties: proxy functions, static and dynamic caching, location and user aware, document shares
- Core location duties: heavy duty workloads , database, storage and analytics




Global Distribution Meeting (GDM) and Content Delivery Network (CDN) optimize user experience

Closest hub is selected with Global Distributed Meeting

GDM local switching eliminates traffic congestion to a single hub. Provides optimal in-meeting experience with low round trip time/latency and high bandwidth



Pre and post meeting experience enhanced by leveraging CDN

-  New Hub
-  Existing Hub
-  Cisco WebEx Collaboration Cloud

CDN enables WebEx to offer the fast join times

East Coast



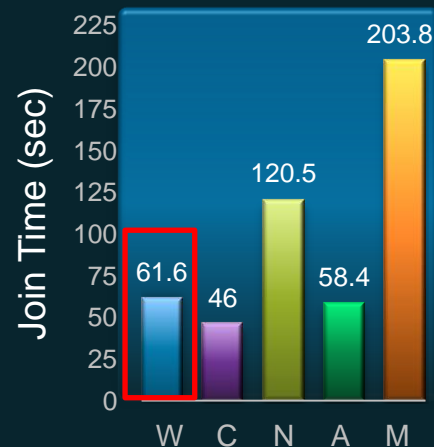
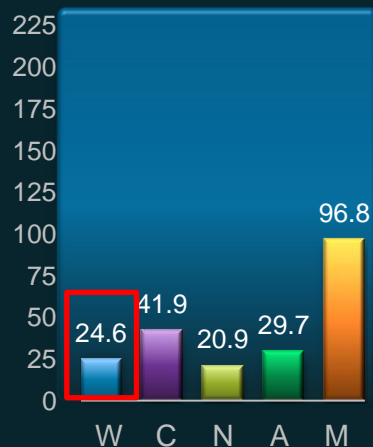
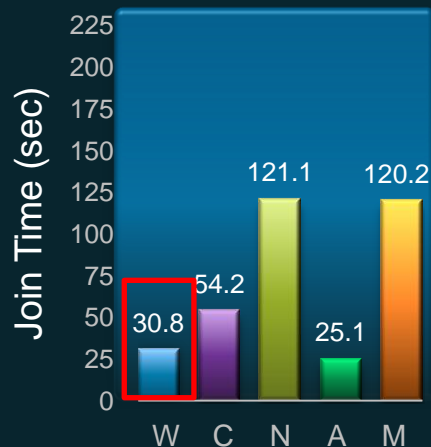
West Coast

First-time Presenter

First-time Attendee

First-time Presenter

First-time Attendee

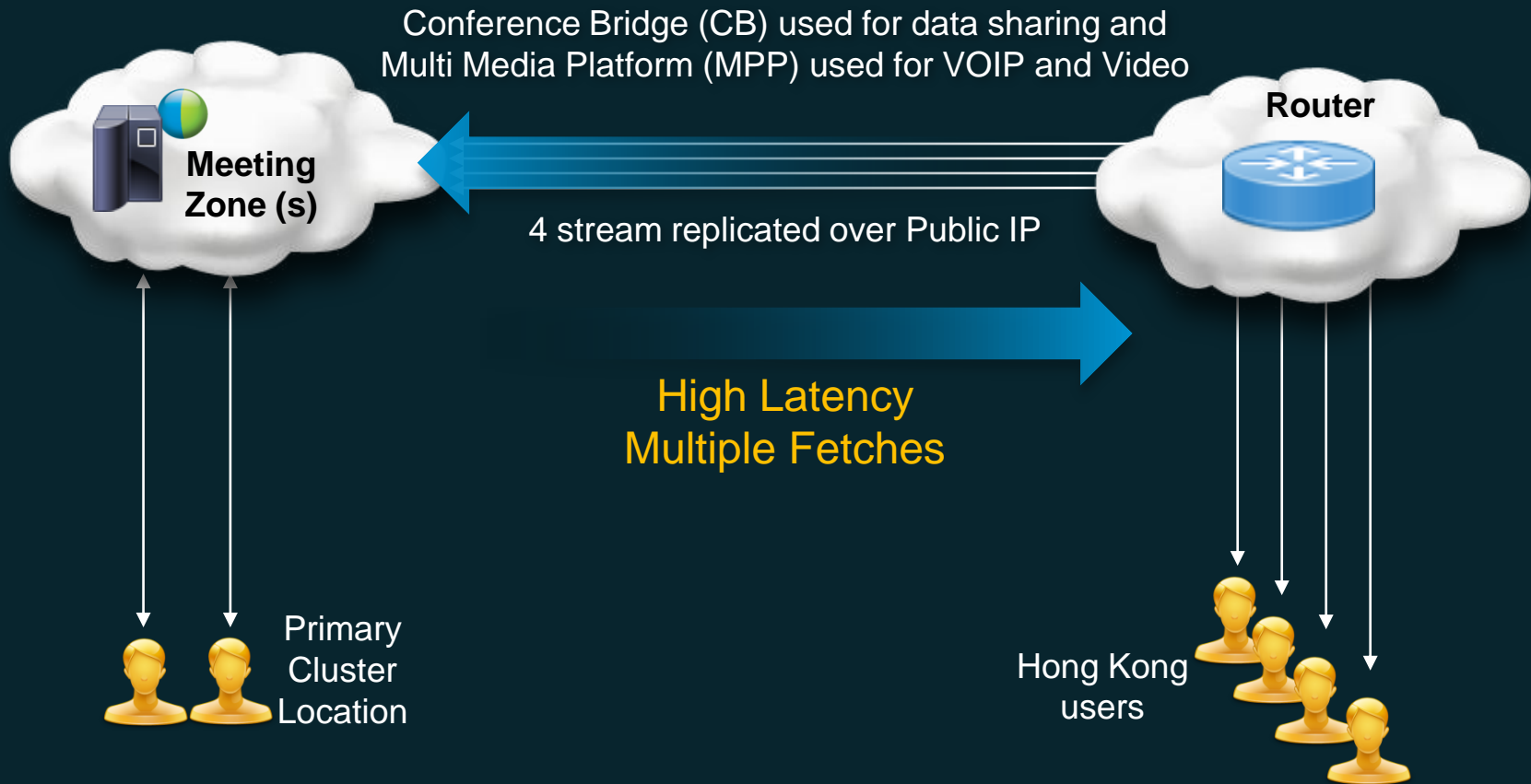


■ WebEx
 ■ Citrix
 ■ Netviewer
 ■ Adobe
 ■ Microsoft

Source: Lab Testing Summary Report- Web Conferencing, Report # 100716, Miercom Sept 2010

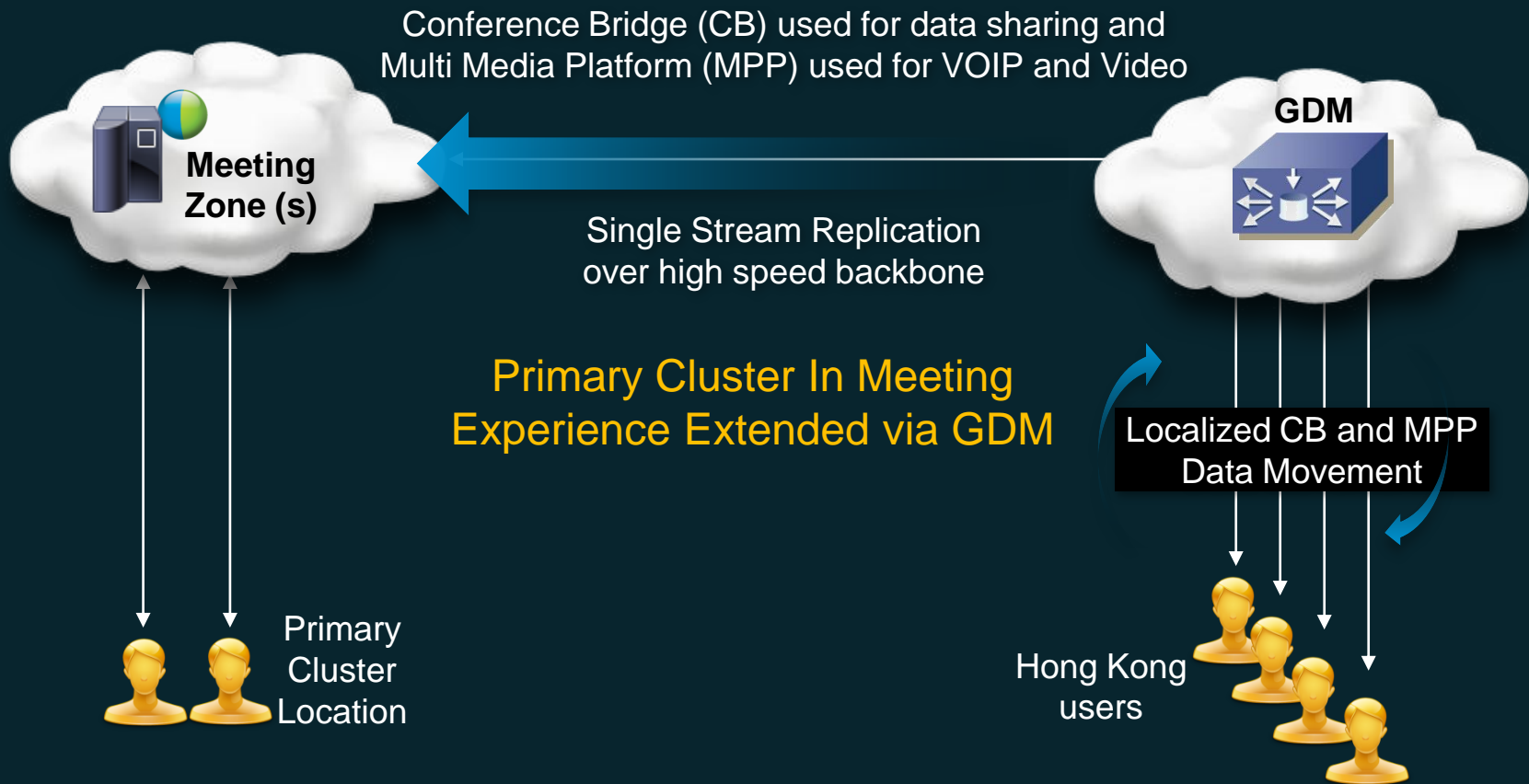
Non GDM Meeting Experience

All Users Connect to Primary Cluster Location in the region

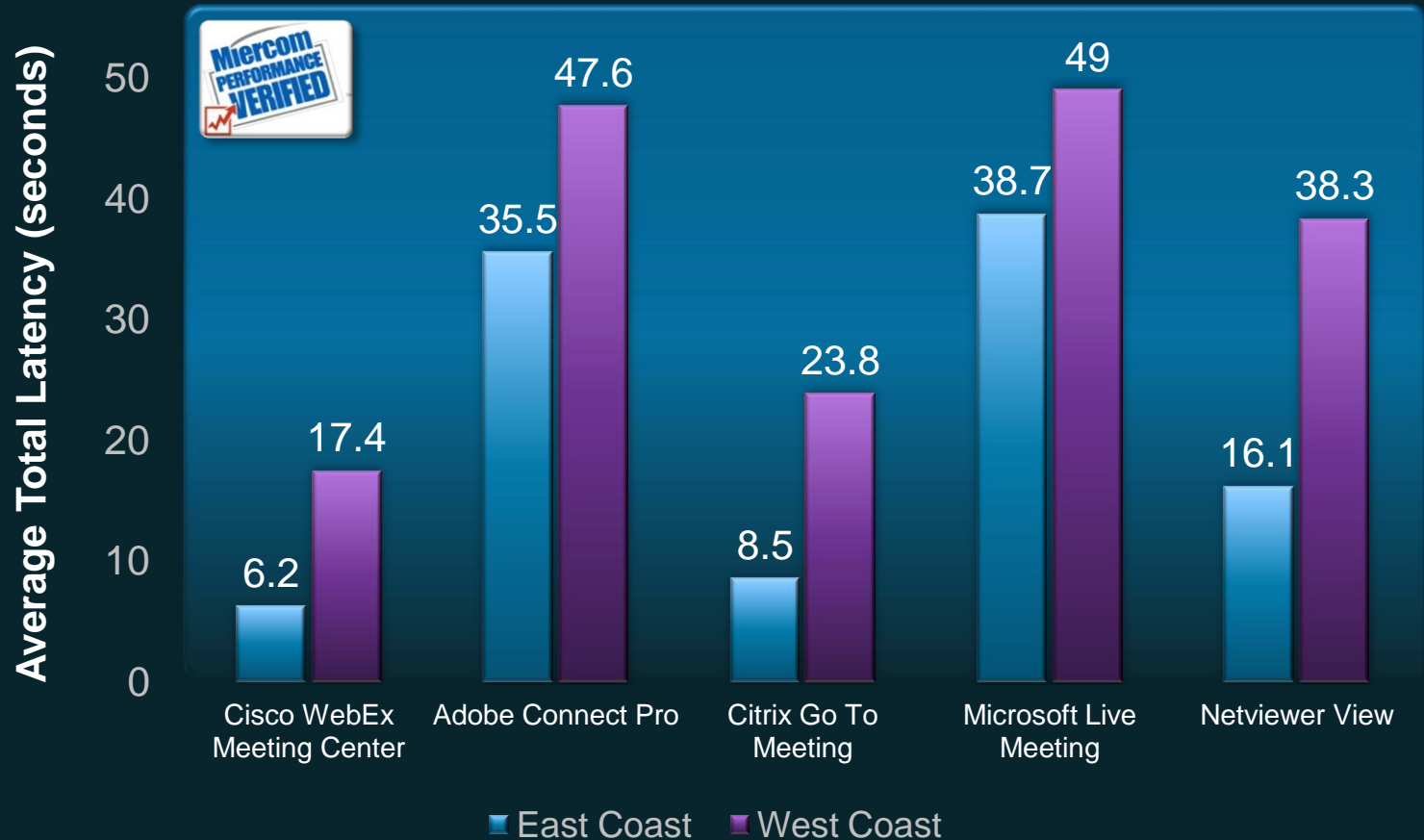


GDM Optimized Meeting Experience

Users Connect to Closest GDM nodes in the region



GDM enables lowest desktop sharing latency



Source: Lab Testing Summary Report- Web Conferencing, Report # 100716, Miercom Sept 2010 . Tests were conducted in 2 different locations with different network access points. Total latency was calculated over a 13 slide PPT deck with various animations and transitions.

Flexible Integration

Integration Flexibility

Collaboration Solutions



Video/TelePresence/Jabber for enhanced collaboration

Mobile Devices/IP Phones



Mobile/IP phones for ubiquitous access

On-Prem Audio and Cisco Network Devices



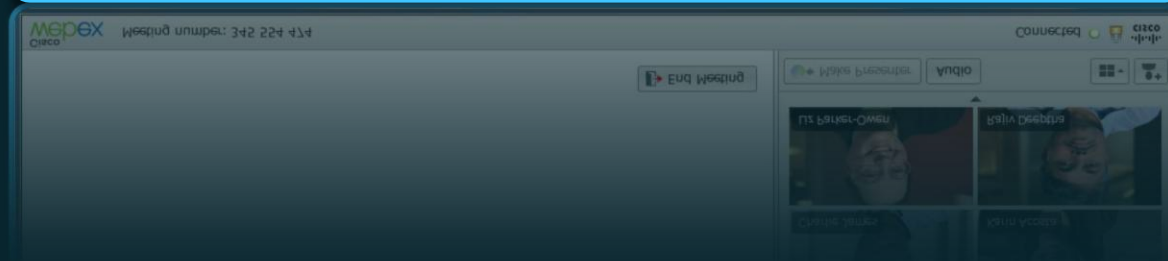
ASR/Third Party Audio/Medianet for lower TCO

Introducing High Quality Video



- Active speaker main video area – up to 360p (640x360 quality)
- Active speaker switching
- See up to 5 other participants at a time. Scroll to see more.

New UI with High Quality video



Two powerful solutions for compelling collaboration



Cisco TelePresence

- Live, face-to-face communication experience over the network
- Share content, create high-quality video recordings and events
- Connect up to 48 locations in one meeting



Cisco WebEx

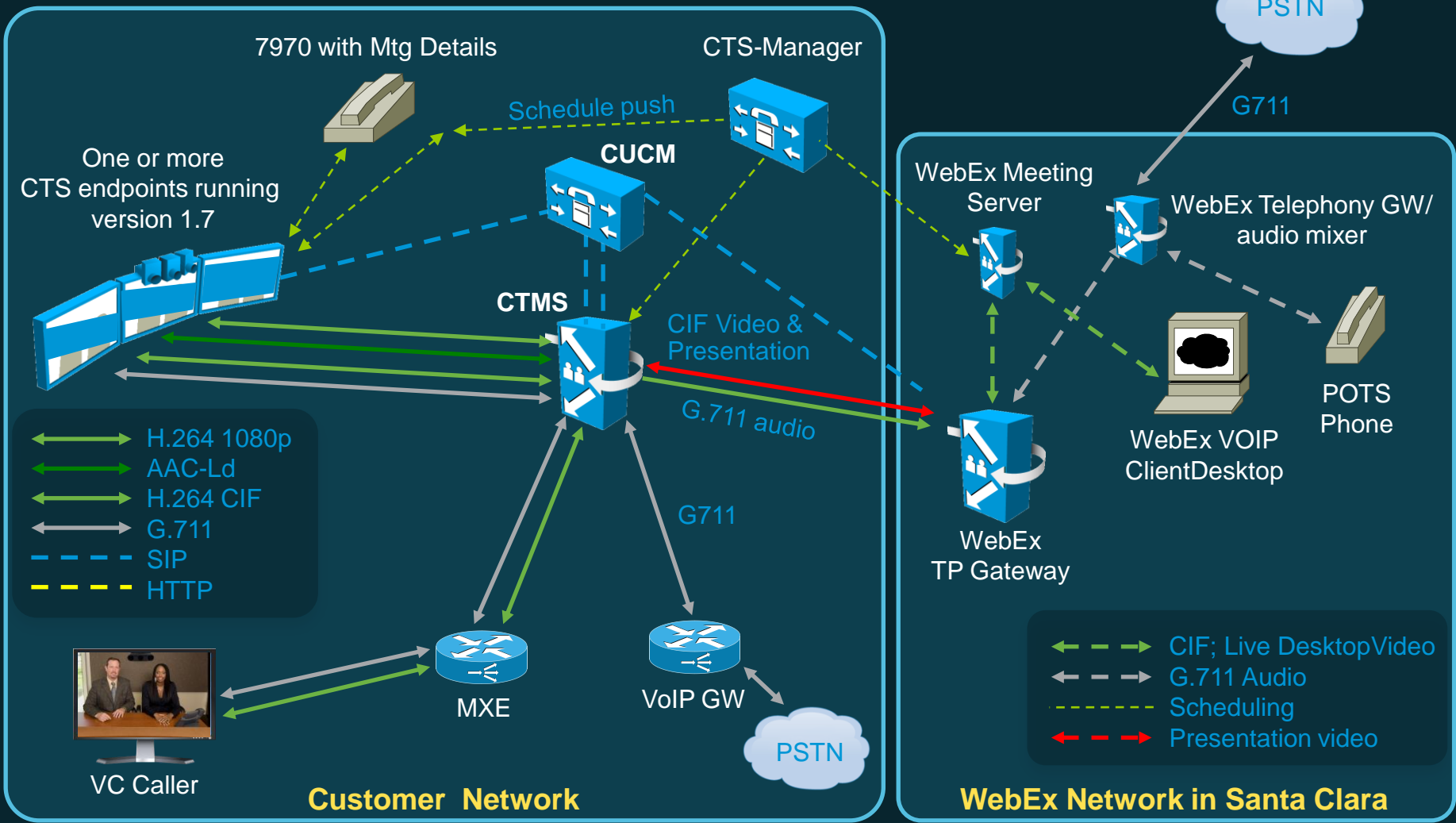
- Meet anytime on virtually any computer or device
- Deliver presentations, share documents and videos, and demonstrate applications
- Add up to 1,000 meeting attendees

Cisco TelePresence One Touch

- Pushing one button on the Cisco IP phone simultaneously starts both Cisco TelePresence and the WebEx meeting
- Both the Cisco TelePresence room and WebEx attendees are connected to the WebEx audio bridge
- The Cisco WebEx web client is launched in the Cisco TelePresence Auto Collaborate presentation screen



Cisco TelePresence / WebEx interoperability topology

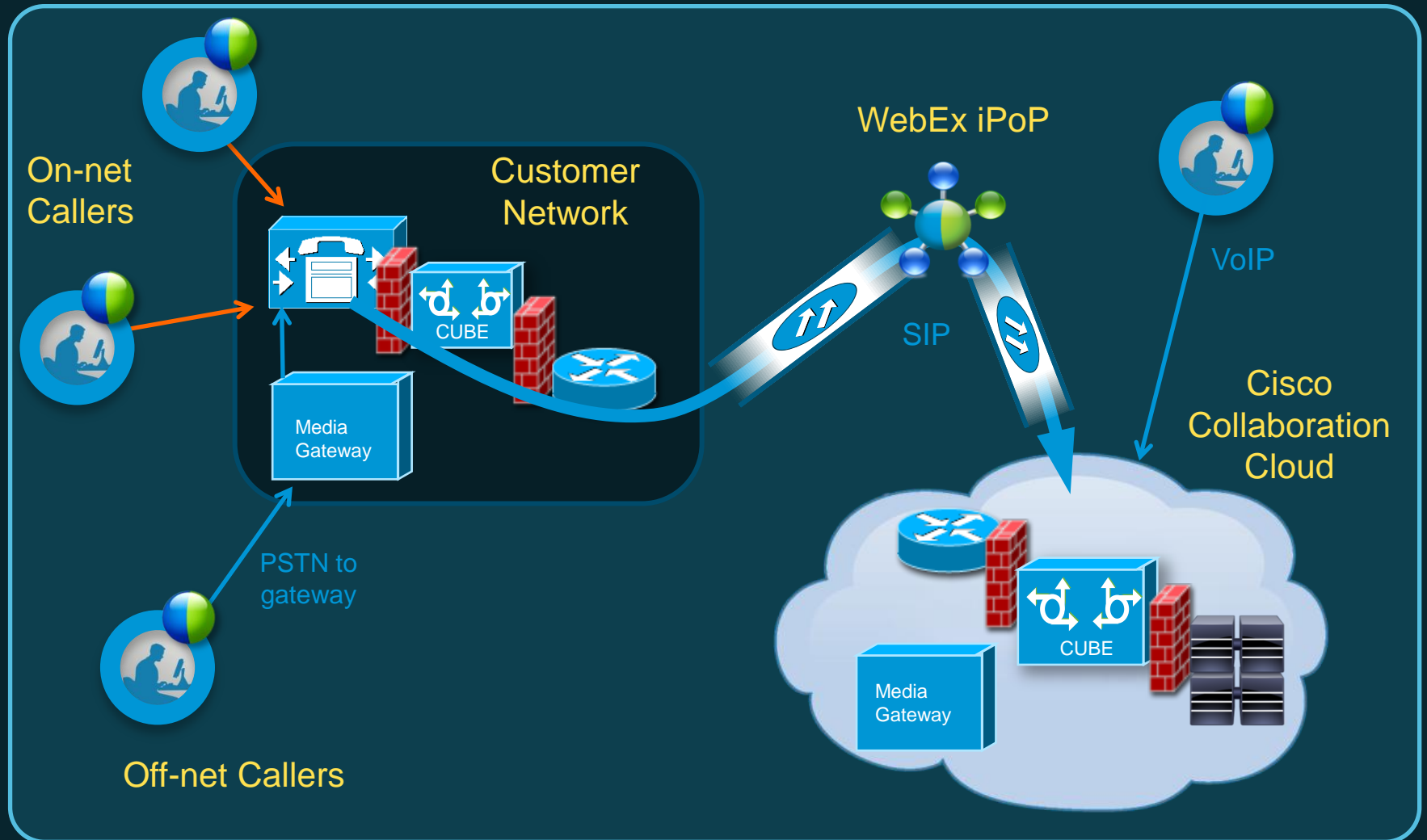


Mobile client integration



- Audio-only or full voice and data
- iPhone, iPad, Blackberry & Windows Mobile
- Cius and Android support

Cloud Connected Audio for Enterprises

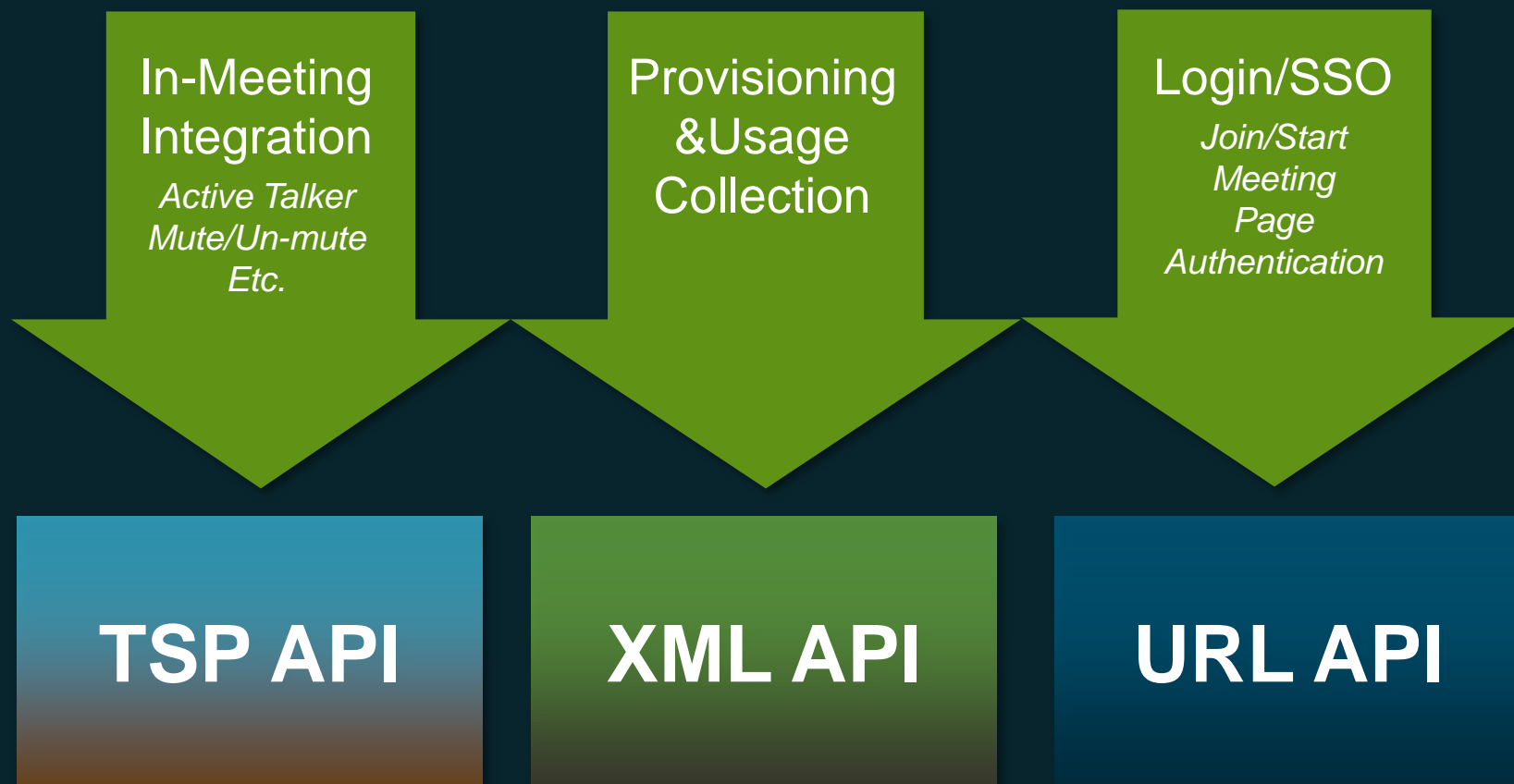


WebEx IP phone integration



- Start/join meetings from IP Phone
 - Joins WebEx audio with one touch – no passcodes to type
 - Automatically Launches WebEx session on PC
 - Integrated audio and data experience
- Calendar view of WebEx scheduled meetings

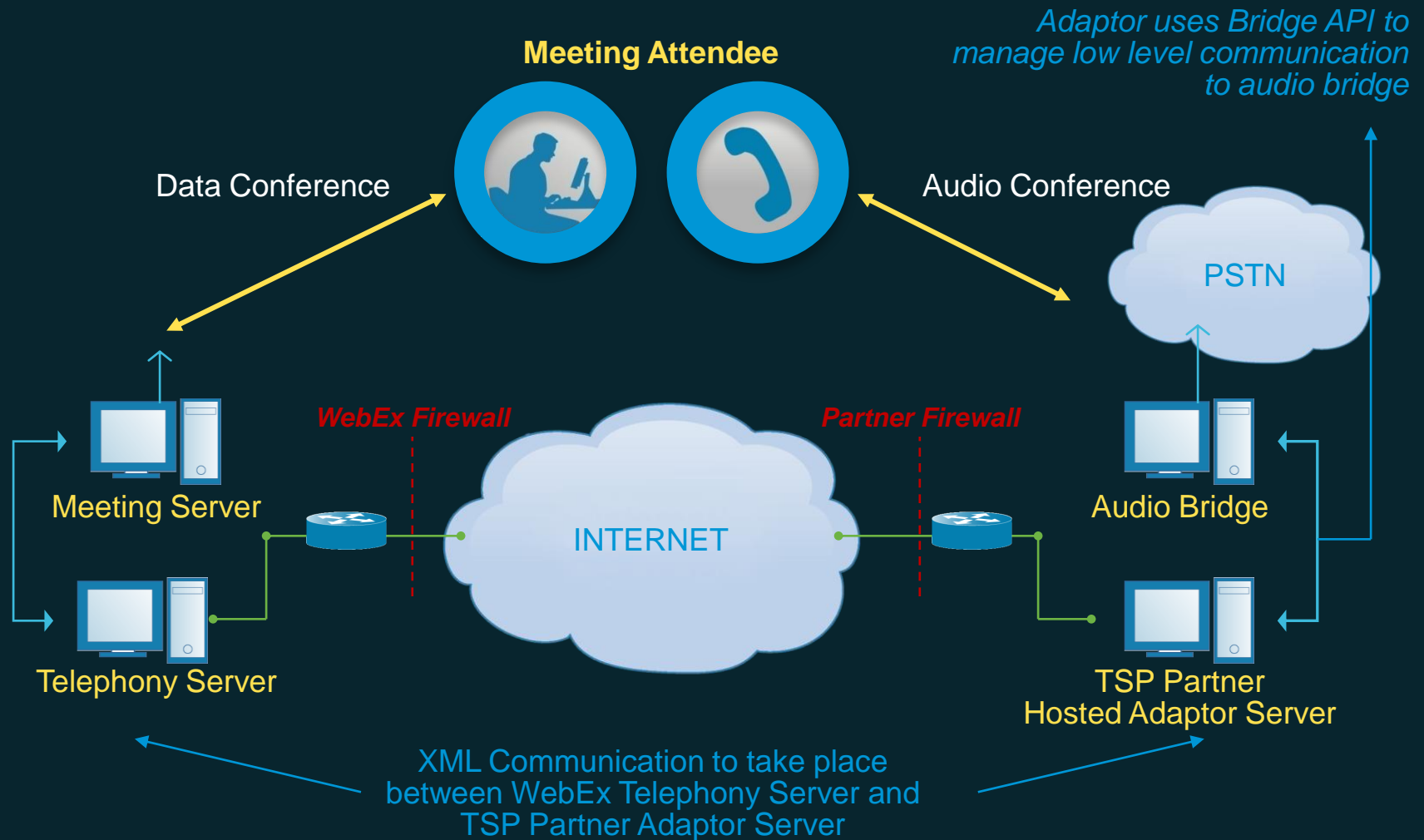
Integration points



For more information
<http://developer.webex.com>

SAML is also available

In-Meeting integration TSP API architecture



WebEx with Unified MeetingPlace

On-premises standards-based audio/video for WebEx meetings

Simple

- Integrated setup and attend
- Single sign-on
- Integrated controls

Savings

- Leverage internal VoIP architecture
- Reduce voice conferencing toll and services fees

Flexible Deployment Options

- Unified MeetingPlace or WebEx setup & attend
- Audio/video-only or Audio/video & Web

Combine on-premises audio for cost savings with SaaS Web for global reach and deployment ease

WebEx Node for ASR 1000

Bandwidth

Cuts web meeting traffic on WAN, proxies and firewalls

Performance

Improves user experience for WebEx web meetings, VoIP, and Video

- Shared port adapter for Cisco ASR router
- Extends the Cisco Collaboration cloud on-premise
- Not a full SaaS replacement: meeting front-end continues to reside in cloud
- Also in cloud: NBR, billing, reporting, and site administration

Cisco ASR 1000 Series Routers

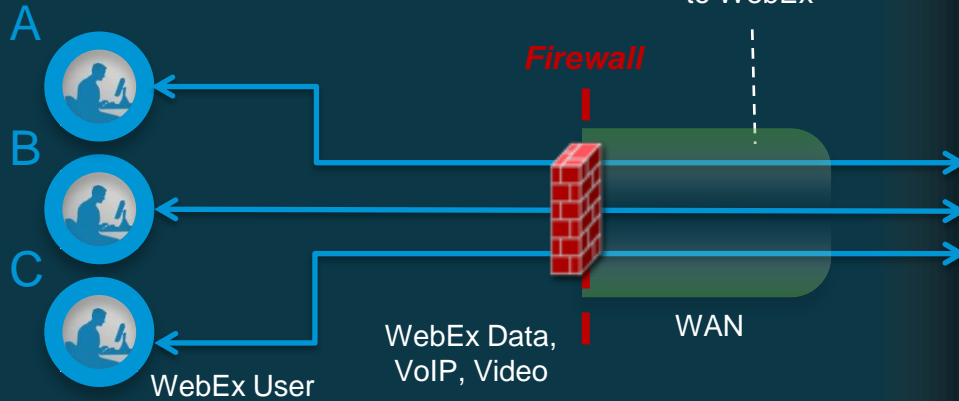


Accelerate services by offering outstanding performance and resiliency with optimized, intelligent services

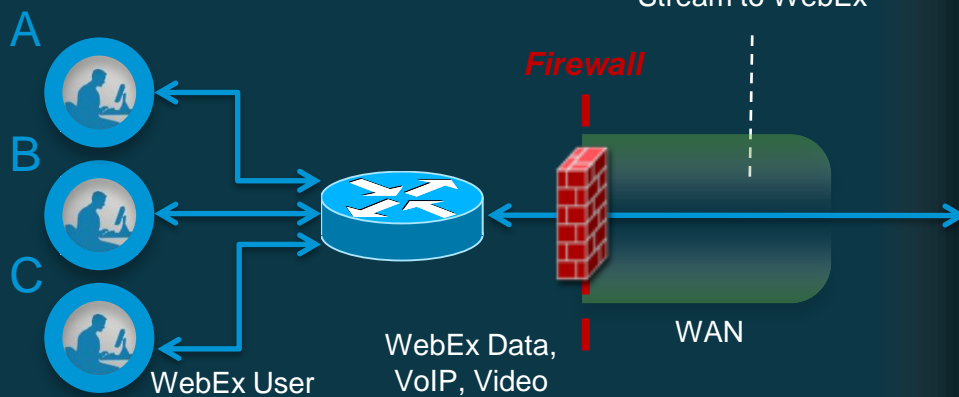
Before and After WebEx Node

ENTERPRISE

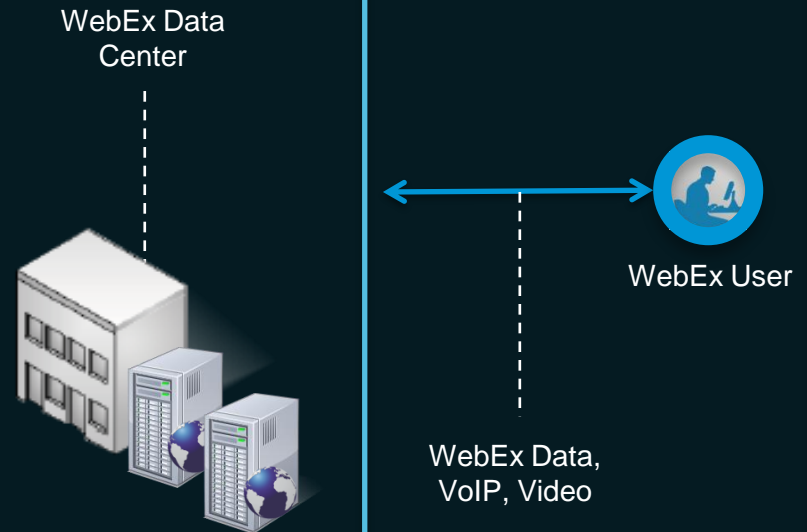
Before WebEx Node



After with WebEx Node

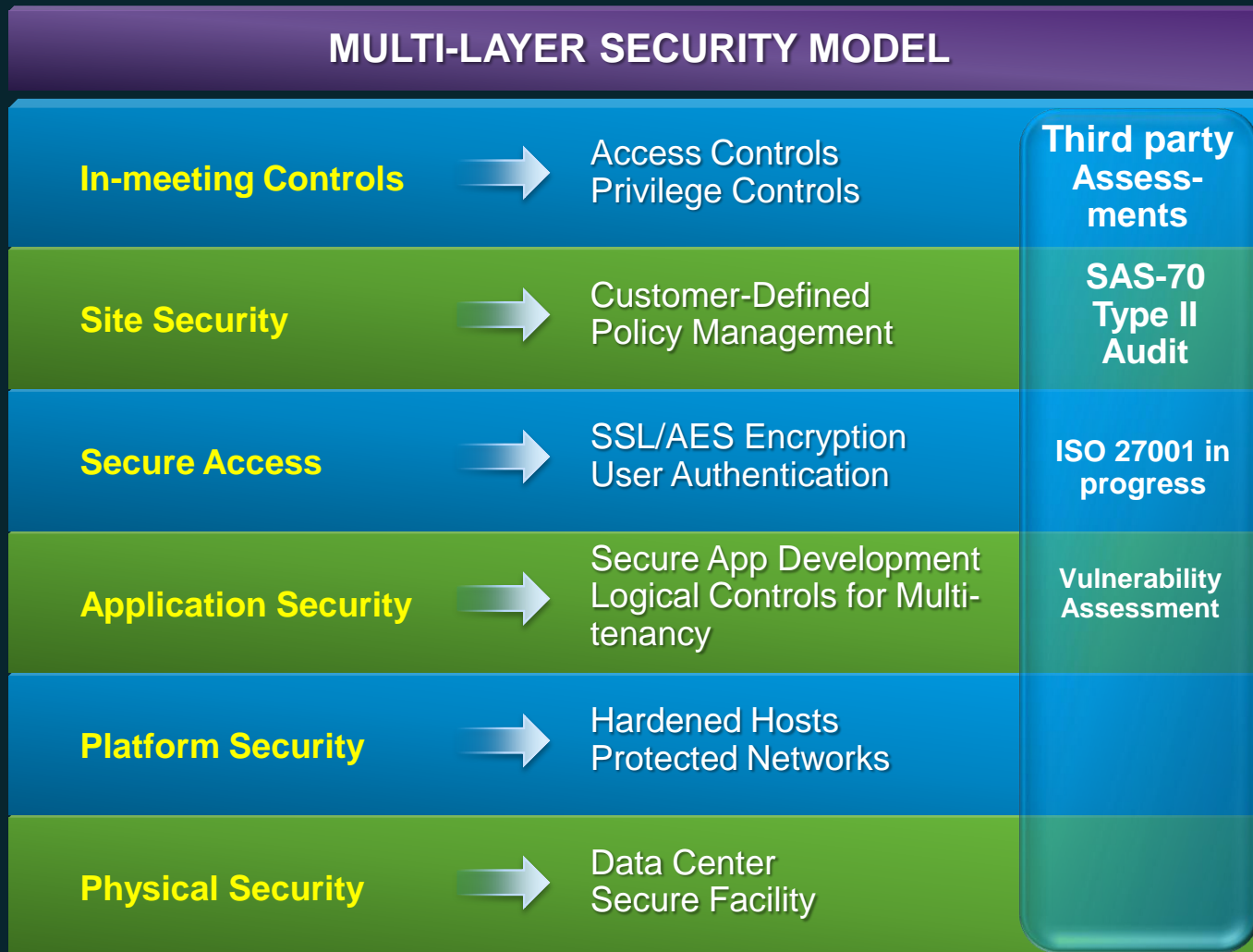


INTERNET



Multi-Layer Security

Cisco multi-layer security model



Rigorous Audits by Independent Parties

- Customer/Site audits
On an “as needed” basis
- Internal audits
Performed “as needed” for Cisco’s internal audit group
- SAS70 Type II annual audit
Report available upon request
Moving to SSAE-16 this year
- ISO27001 compliance
Targeted for completion end of 2011
- Application security assessments
Code-assisted Pen tests by iSec Partners



Multi-tenancy isolation

Data in meetings are not persistent*

- The meeting experience consist of a series of separate, ephemeral streams (send/receive)
 - Voice stream
 - Video stream
 - Data stream
 - Graphic stream
- Shared documents and whiteboard exist from upload until un-share/clean or meeting end
 - Uploaded shared documents are encrypted with unique key generated for meeting
- IM exists for the duration of the meeting
- Upon meeting termination, all data are removed

**Unless a recording is created.*

User Authentication

- Authentication required to use WebEx services
 - User ID for starting and scheduling meetings
 - Passwords for joining meetings
 - User ID for using Connect IM and Spaces
- Administrators can manage accounts and password requirements
 - Password strength
 - Password aging
 - Deactivate accounts
- Single Sign-On can be used to integrate corporate authentication processes with WebEx services

Secure Access

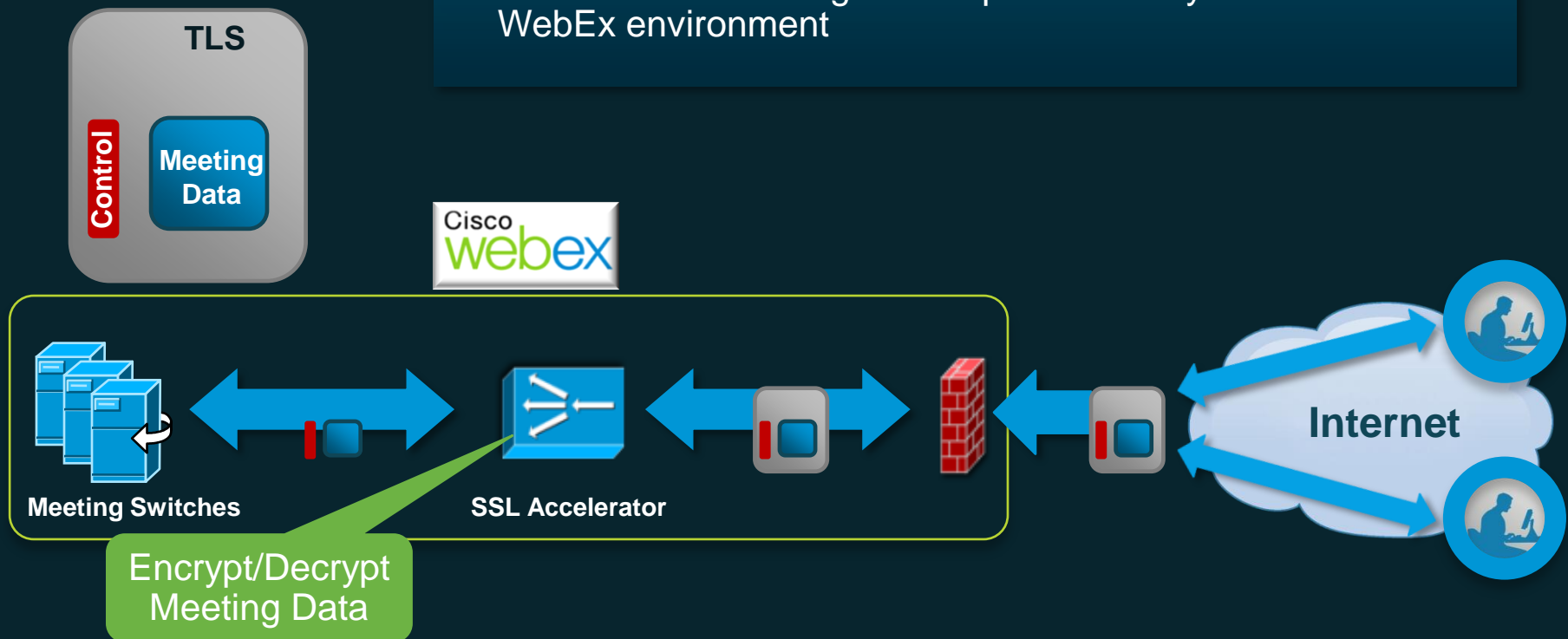
Data in Motion Protection for Conferencing and IM

- 128-bit TLS encryption standard
- 256-bit AES end-to-end encryption
- Support for customer PKI



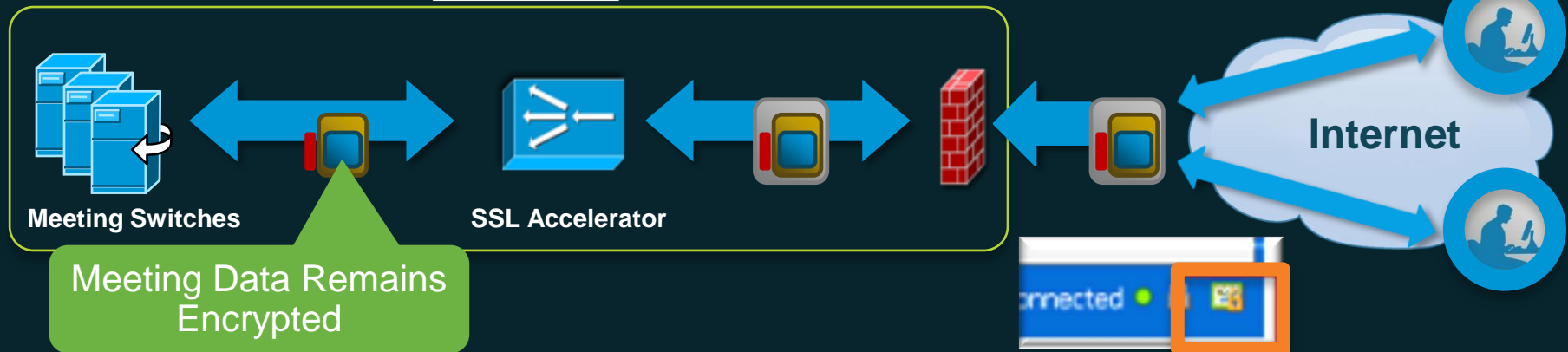
Default TLS Encryption

- All WebEx meeting traffic is encrypted with 128-bit TLS encryption
- All traffic is secured and transported over HTTPS (port 443) while on the public network
- TLS-enabled meetings are implemented by default in the WebEx environment



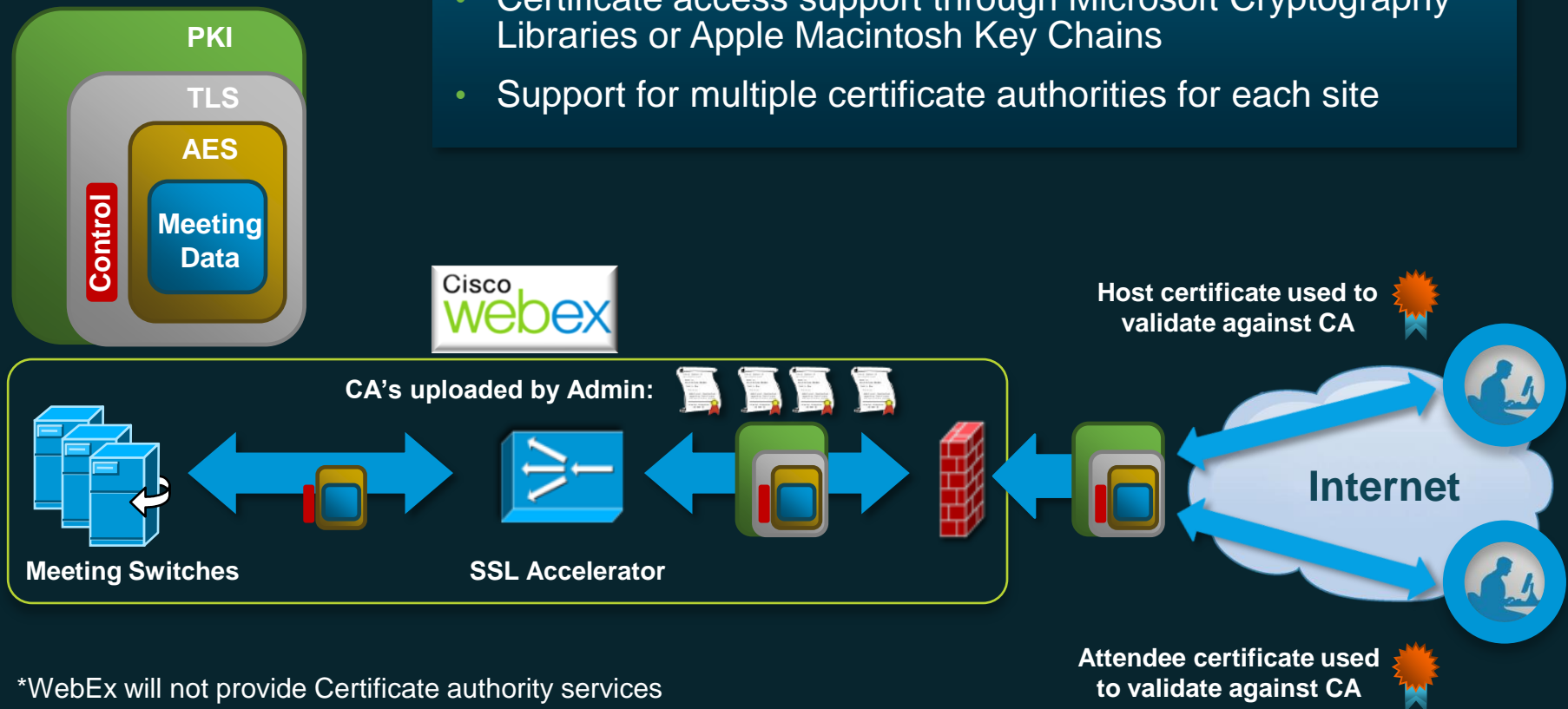
End to end encryption

- Meeting data is encrypted using AES at the client
- Meeting data remains encrypted over the entire network
- 256 bit cipher strength
- High entropy key generation
- Key retained by endpoints
- Control data remains unencrypted to optimize switching of meeting traffic between attendees



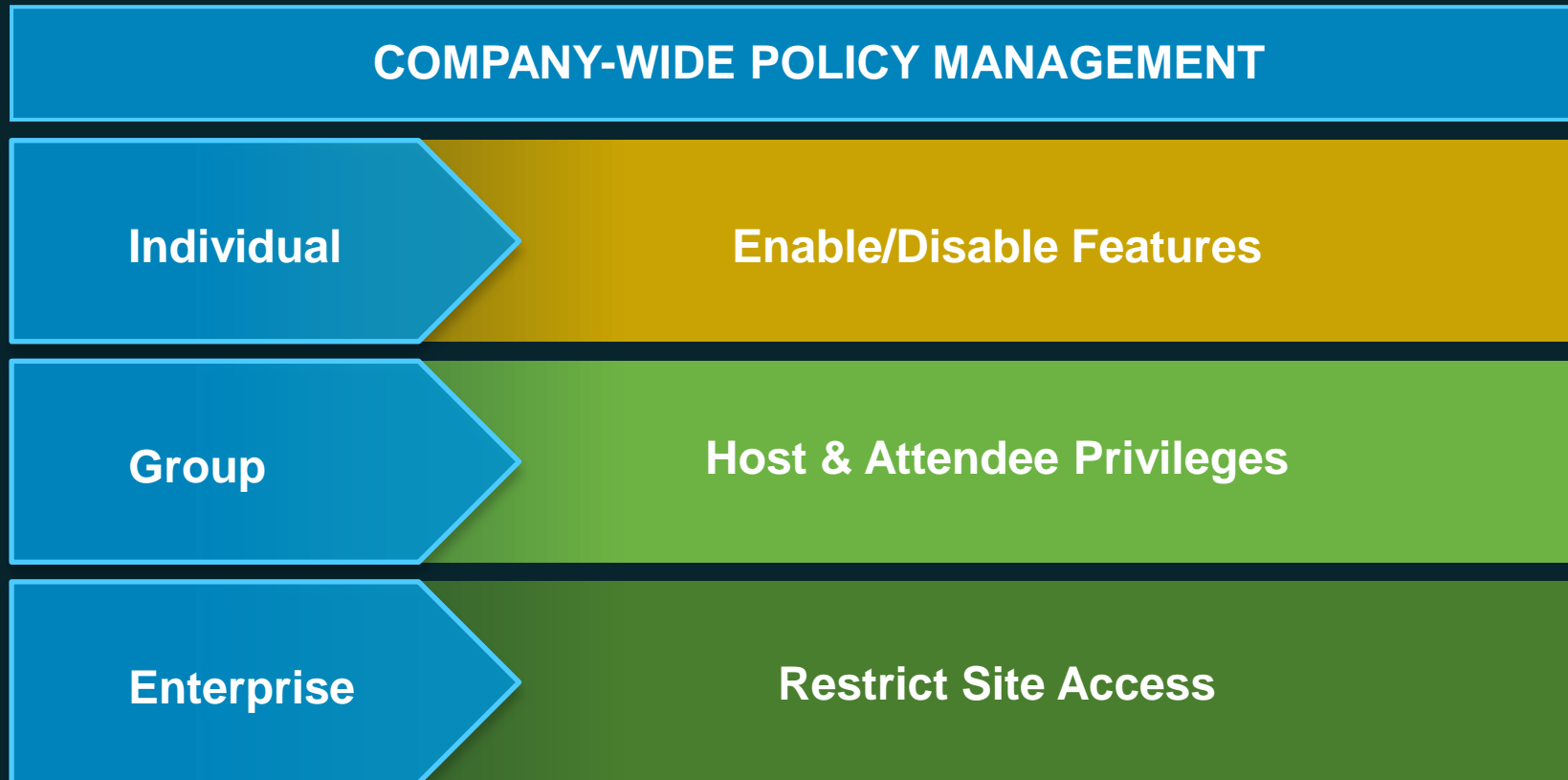
PKI identity validation

- Use of PKI provides identify validation and authorization of attendees*
- AES encryption keys secured by digital certificates
- Certificate access support through Microsoft Cryptography Libraries or Apple Macintosh Key Chains
- Support for multiple certificate authorities for each site

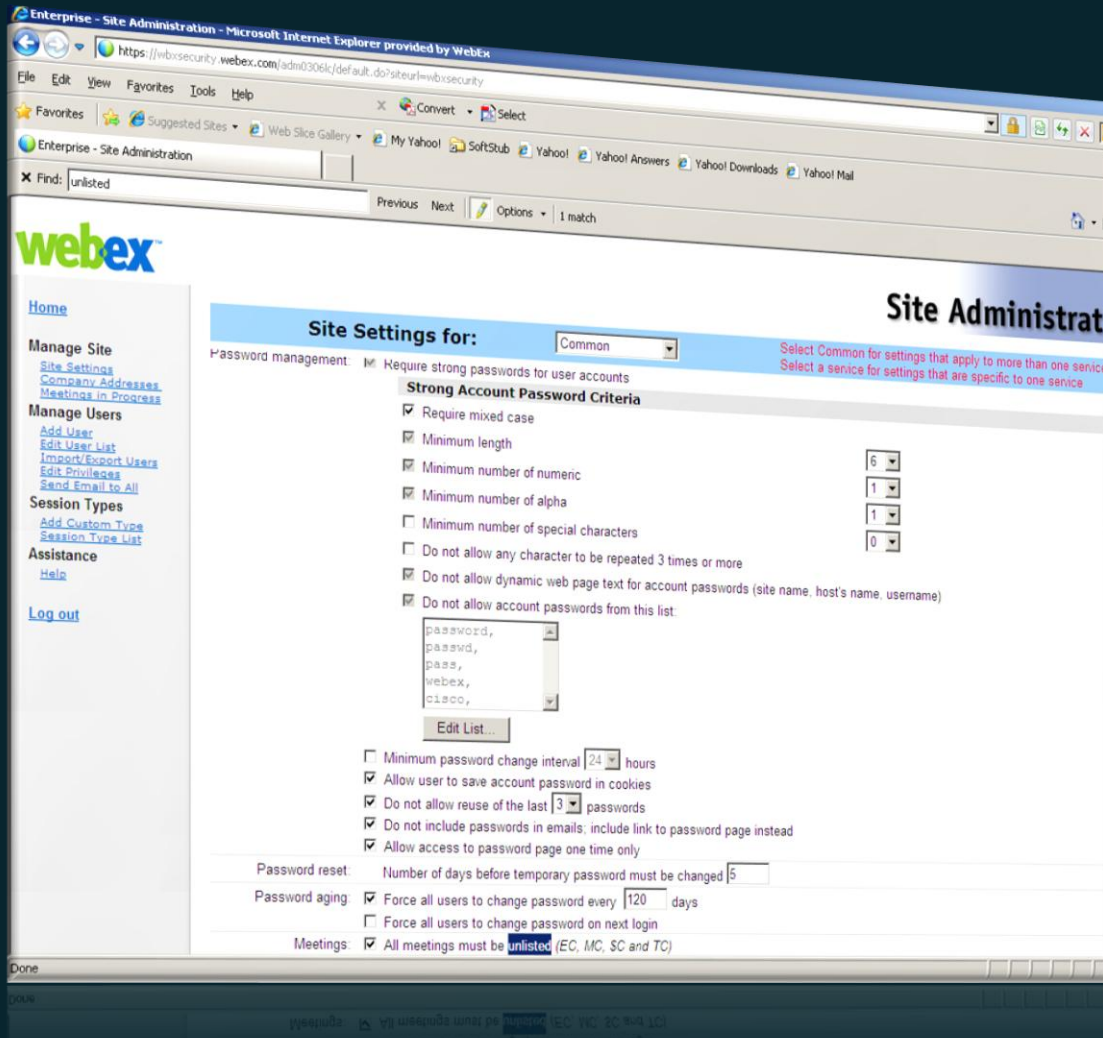


*WebEx will not provide Certificate authority services

Site Security

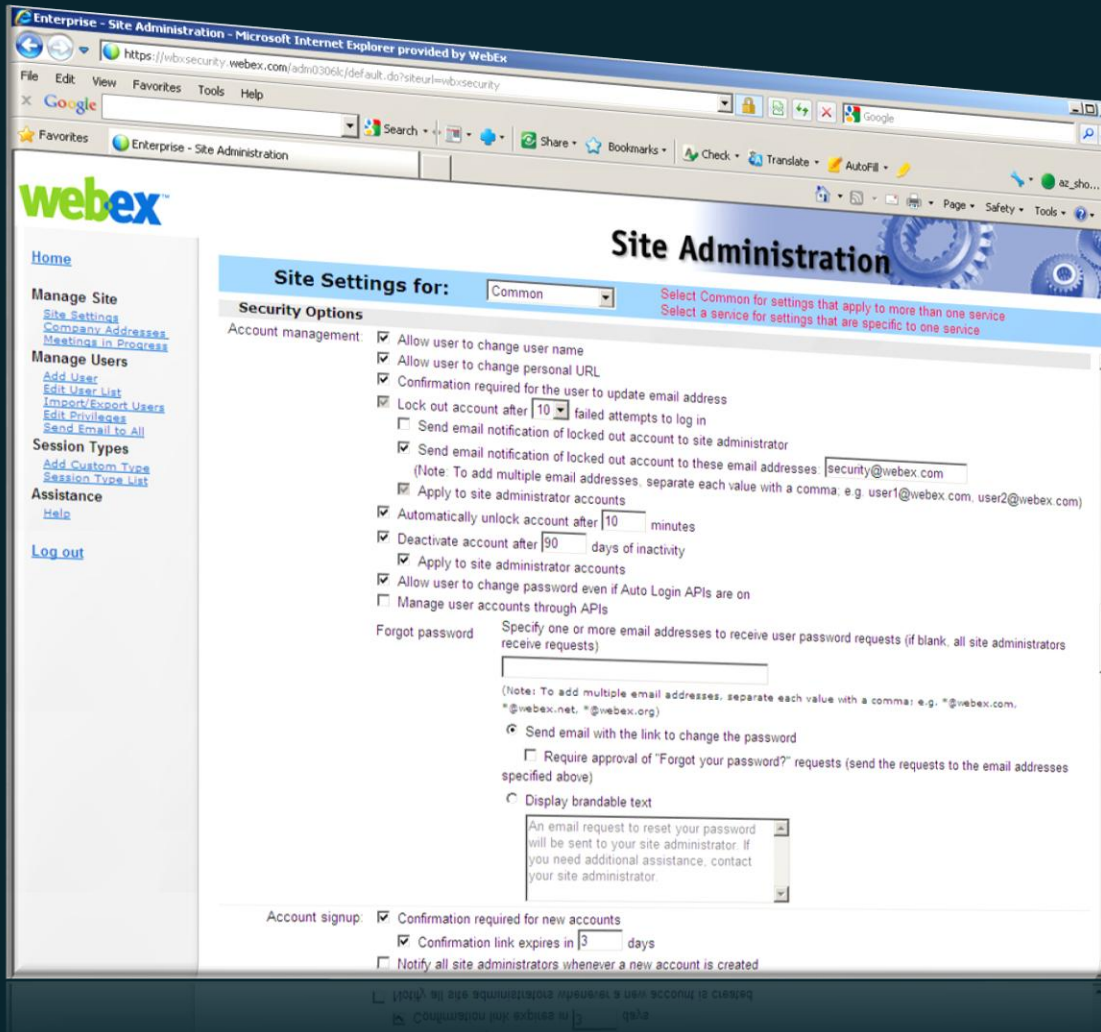


Flexible Site Security Policies Meeting Example



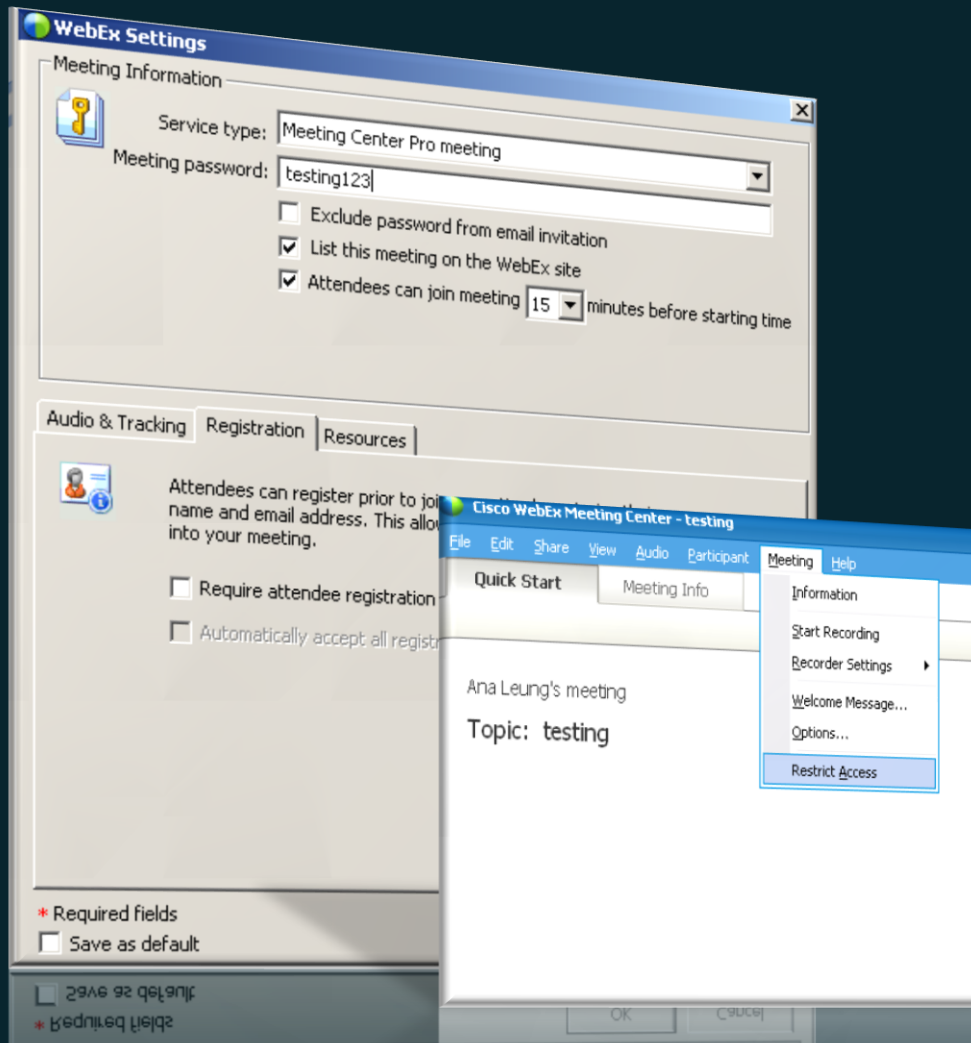
- Un-list meetings
- Meeting calendar access
- Set meeting password criteria
- Require accounts for attendees
- In-meeting features
- Site / content access control

Flexible Site Security Policies User Management Example



- Self registration
- Password strength, aging & lockout
- User profile management
- Secure password reset & dissemination
- Configurable roles & meeting privileges
- SSO/SAML federation
- Awareness tools

In-Meeting Controls



- Set meeting password
- Lock down meeting
- Eject attendees
- Disable share
- Participant list view
- Assign presenter and annotation privileges
- Re-assign host role
- Audio dial-in/dial-out control

Key Takeaways

- Cisco is a Collaboration market leader
- Making Strong Investment in our Infrastructure for global scale
- We are committed to operational and service excellence



