Cisco live!

What You Make Possible

TOMORROW starts here.

CISCO

Designing and Deploying Cisco Contact Centre Express

BRKUCC-2059

Cisco live!

TOMORROW starts here.

CISCO

Agenda

- Customer Collaboration of the future
- Customer Collaboration Product Overview
- What's New - Version 9.0 features
- Design Best Practices
- Deployment Best Practices

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Traditional Customer Communication Channels

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Customer Communication Channels

Anywhere, Anytime, Any Device

Google™ +

Video Web Chat SMS Kiosk

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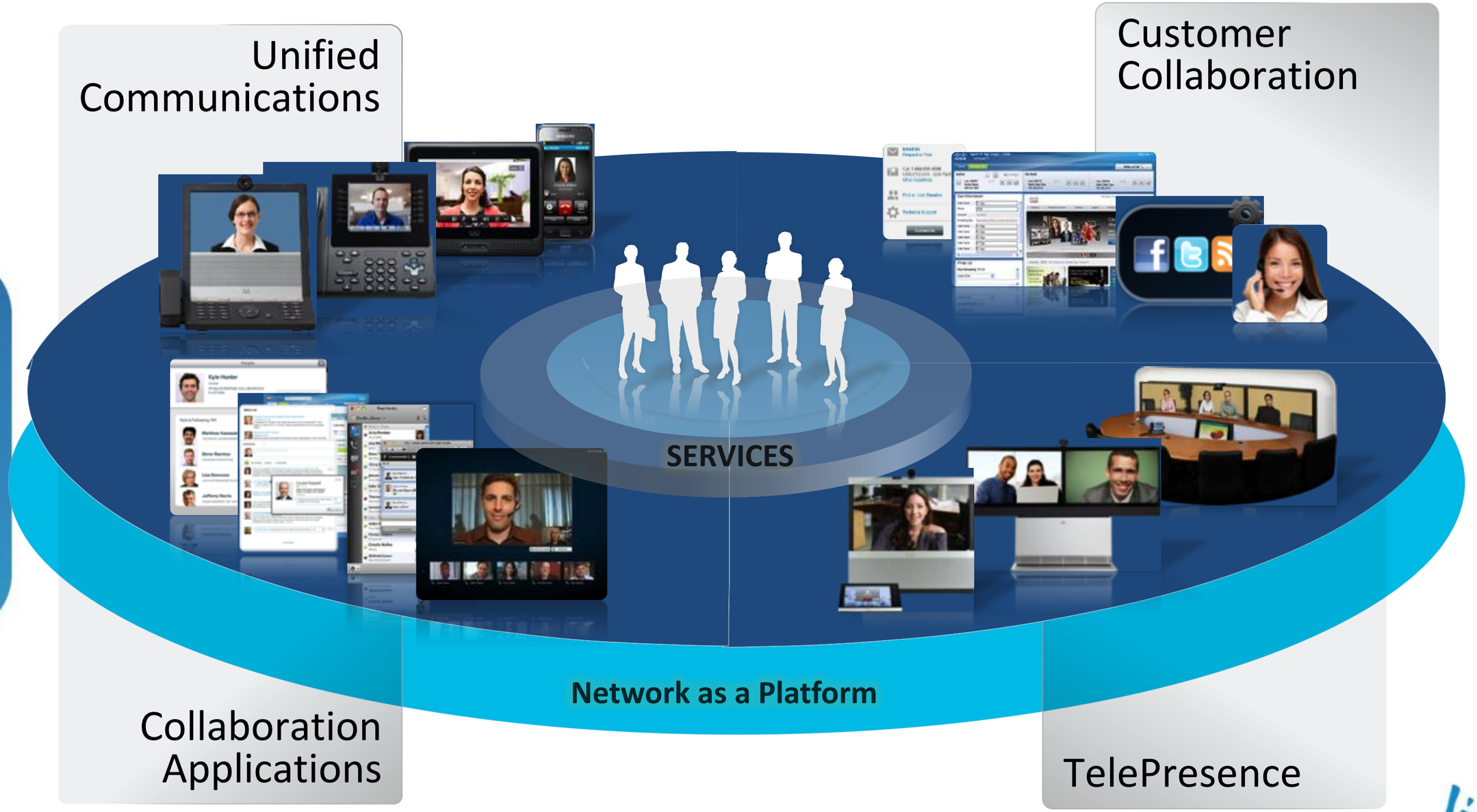
Cisco Collaboration Portfolio



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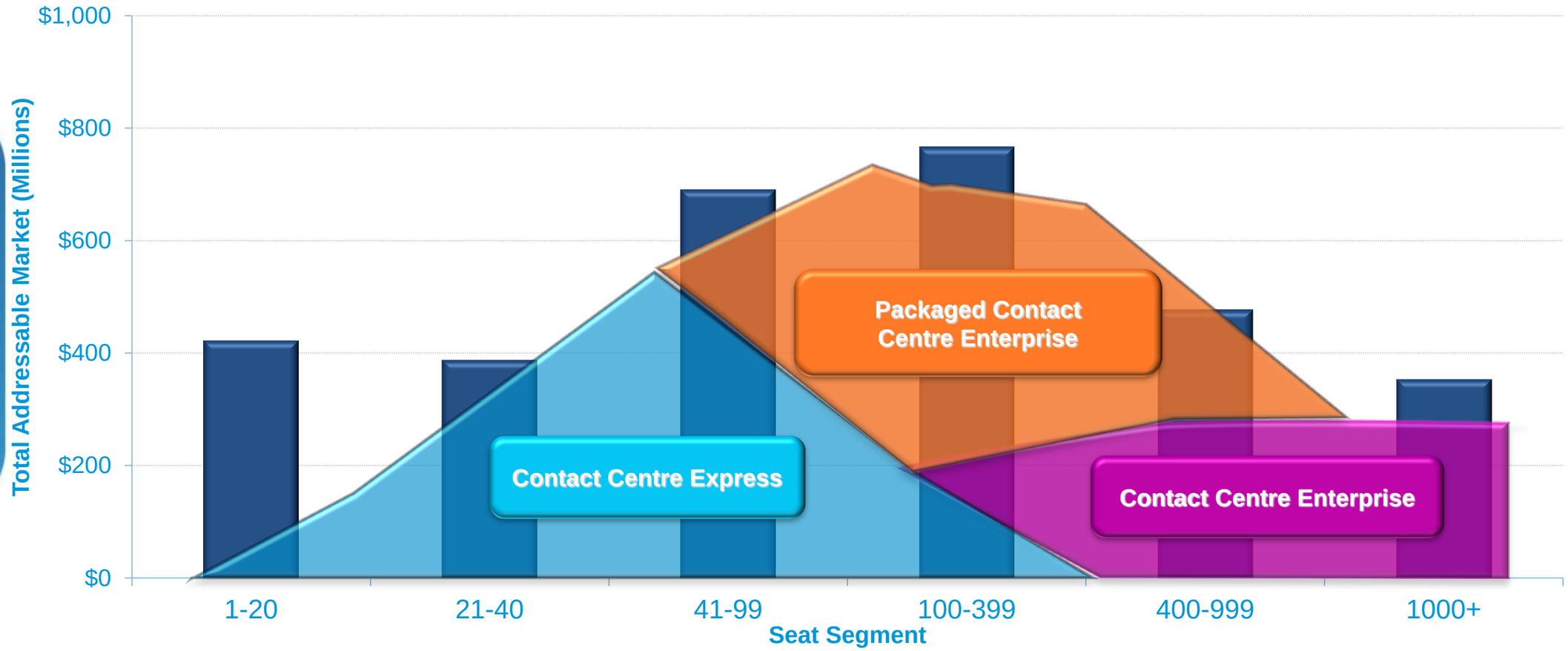
Contact Centre Portfolio Overview

Contact Centre: Portfolio Coverage



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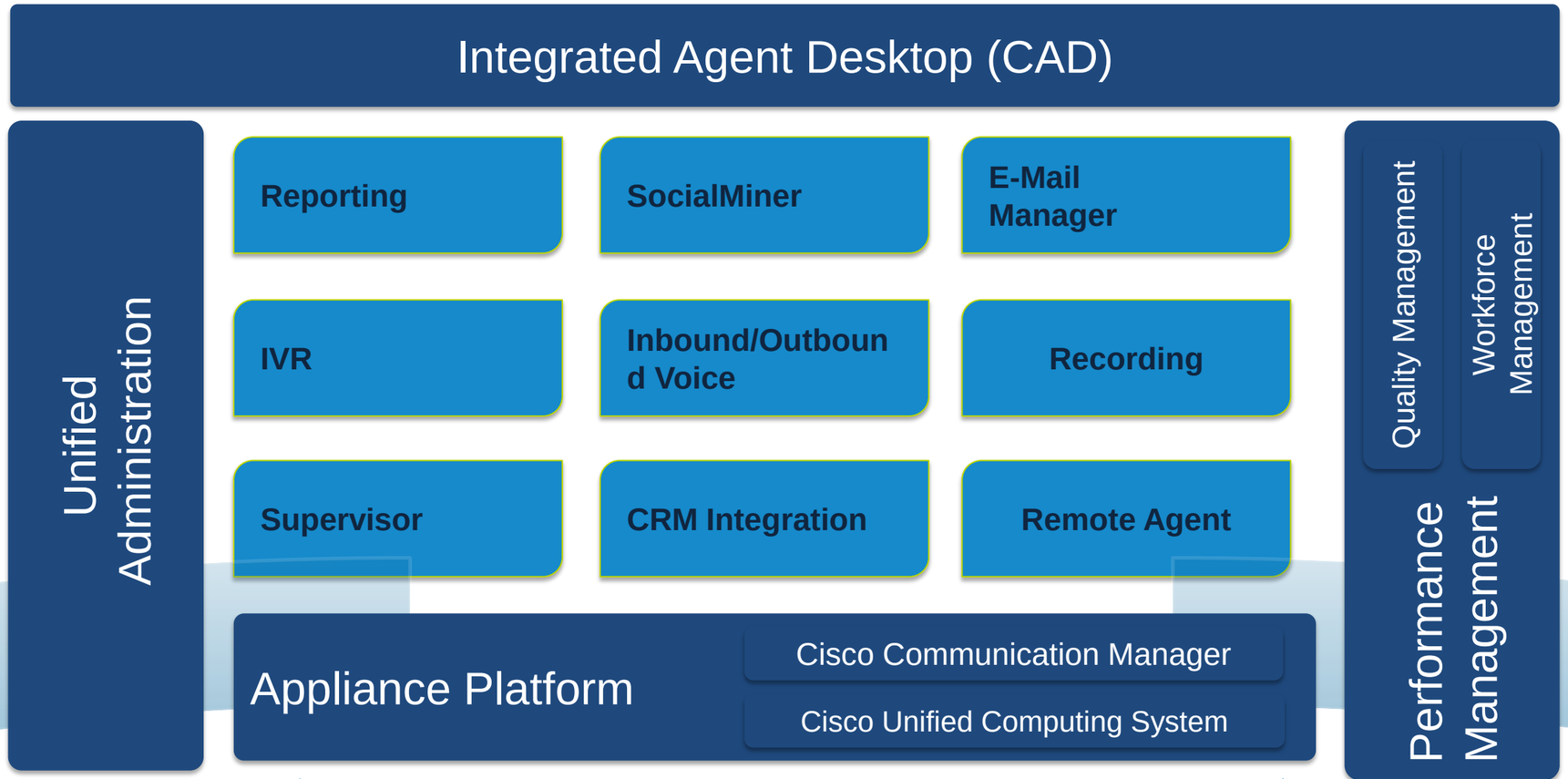
Cisco Unified Contact Centre Express



Powerful Solution Capabilities
Easy to Use
Easy to Maintain

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UCCX Package Options

Standard

- IP Phone Agent
- ACD
- Reporting
- Reason Codes

Enhanced

- Cisco Agent Desktop
- IVR (Basic)
- Workflow
- Agent Chat
- Wrap Up Codes
- Real Time Reports

Premium

- IVR (Advanced)
- Outbound
- Agent Email
- Integrated Browser
- Database Integration
- Java Integration
- SocialMiner

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Cisco SocialMiner with UCCX

Social Media Engagement

Customer

1. Capture
2. Analyse & Prioritise
3. Communication Workflow
4. Assign & Engage
5. Continuous Refined Search

Cisco SocialMiner

Cisco Unified Contact Center

Customer Care Agent

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Workforce Optimisation (WFO)

- Call / Screen Recording
- Quality Management
- Workforce Planning

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Call Recording and Quality Management

Compliance Recording

- 100% Voice Recording
- Powerful Search Utility
- Desktop or Server recording
- Speech Energy Bar

Quality Management

- Workflow based recording
- Quality Evaluation forms
- Energy Analytics – Talk Over and Silence
- PCI Compliance

Advanced Quality Management

- Screen Recording

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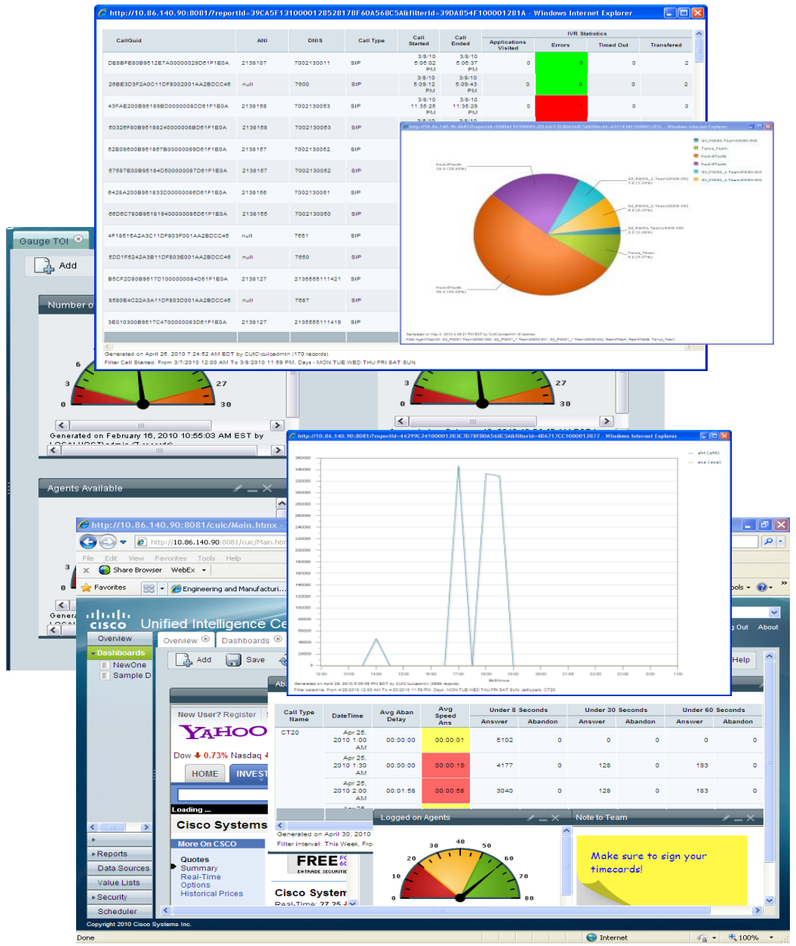
What's New

Version 9.0 Features

Cisco Unified Intelligence Centre (CUIC)

Next Generation Web 2.0 Reporting

- CUIC Standard included on-box
- Web 2.0 – No client
- Historical Reports
- No additional cost
- Choice of HRC or CUIC



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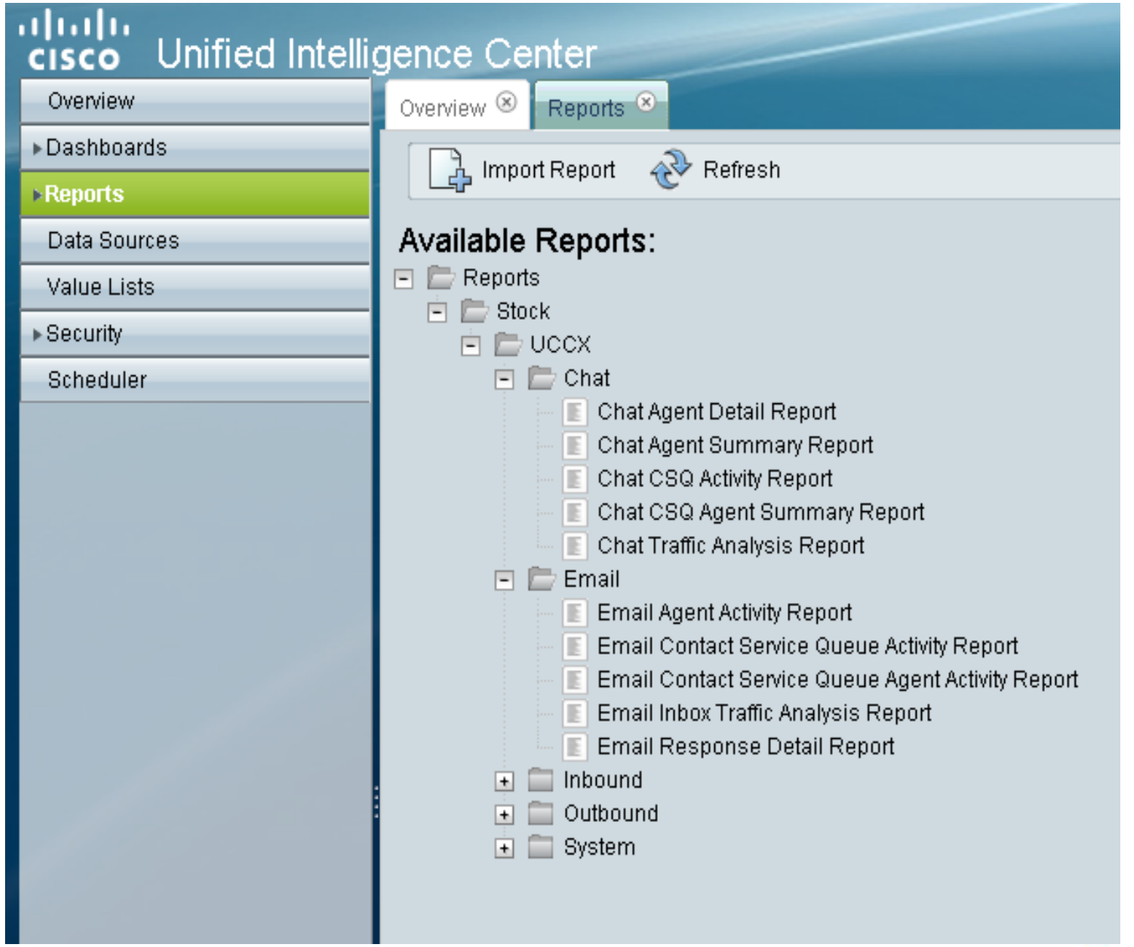
Cisco Unified Intelligence Centre

Next Generation Web 2.0 Reporting

- Stock Reports
- Schedule reports to email
- Customised views and thresholds
- Modification of stock reports
- Permalinks



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Cisco Unified Intelligence Centre

Custom Reporting

- Intelligence Centre Standard version in Unified CCX
  - Allows visual customisation
  - Does not allow report definition customisation
- Intelligence Centre Premium version for Lab and NFR system
  - Create new reports from scratch
  - Create drill-downs
  - Export reports to be imported into a Standard system
  - Change refresh intervals
  - White paper on custom reporting available on CCO

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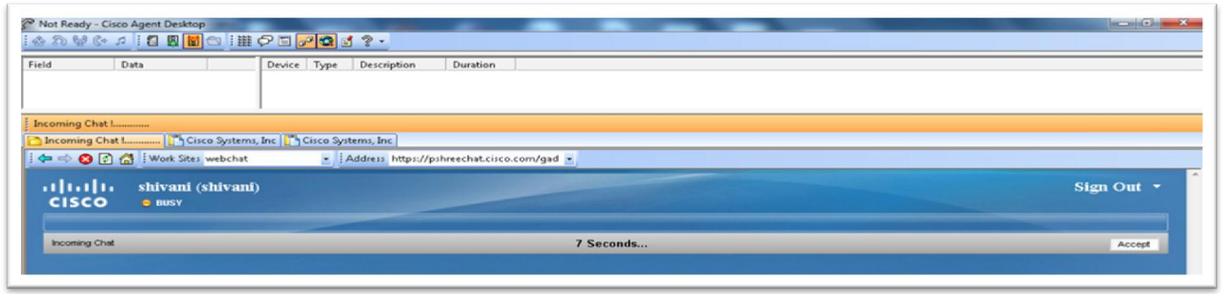
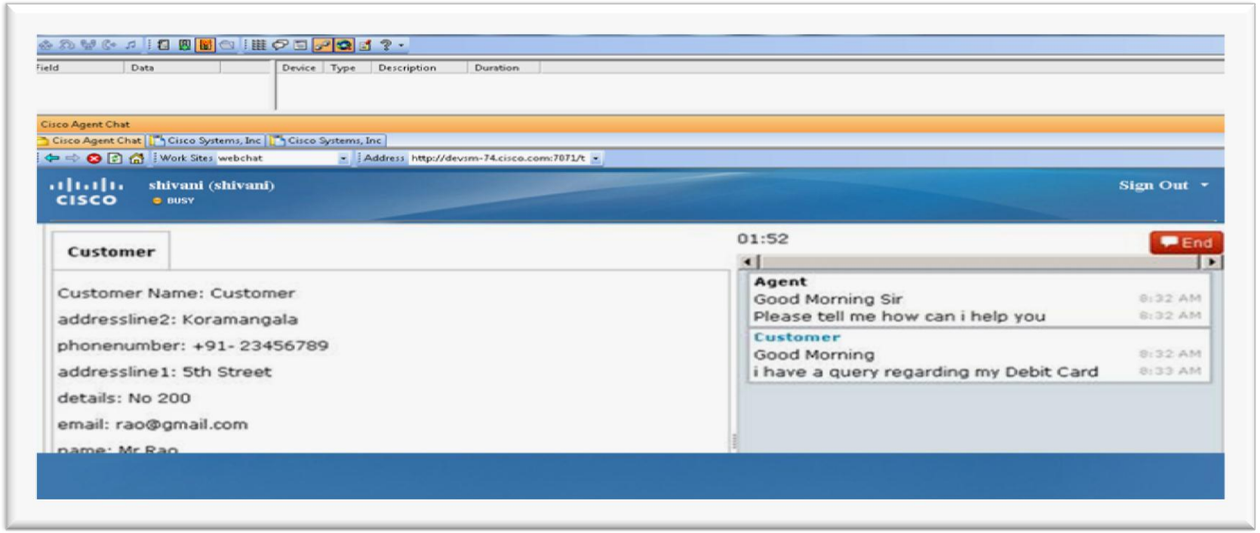
Web Chat

Powered by Cisco SocialMiner

- Integrated into CAD
- Routing
  - Most Skilled Agent
  - Most Idle Agent
- Transcript retention
- Chat time out / no answer
- Consistent Reporting





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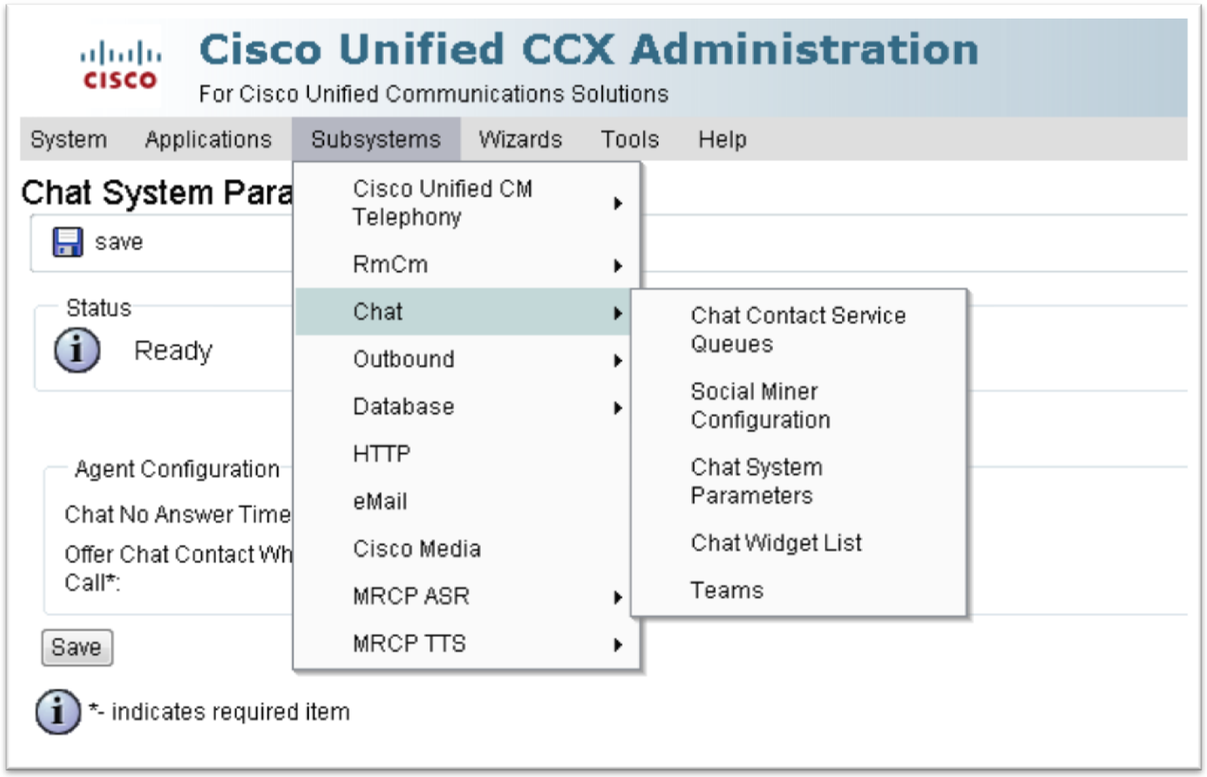
WebChat
Configuration

- 5 step configuration
- Sample HTML code produced for customer facing website



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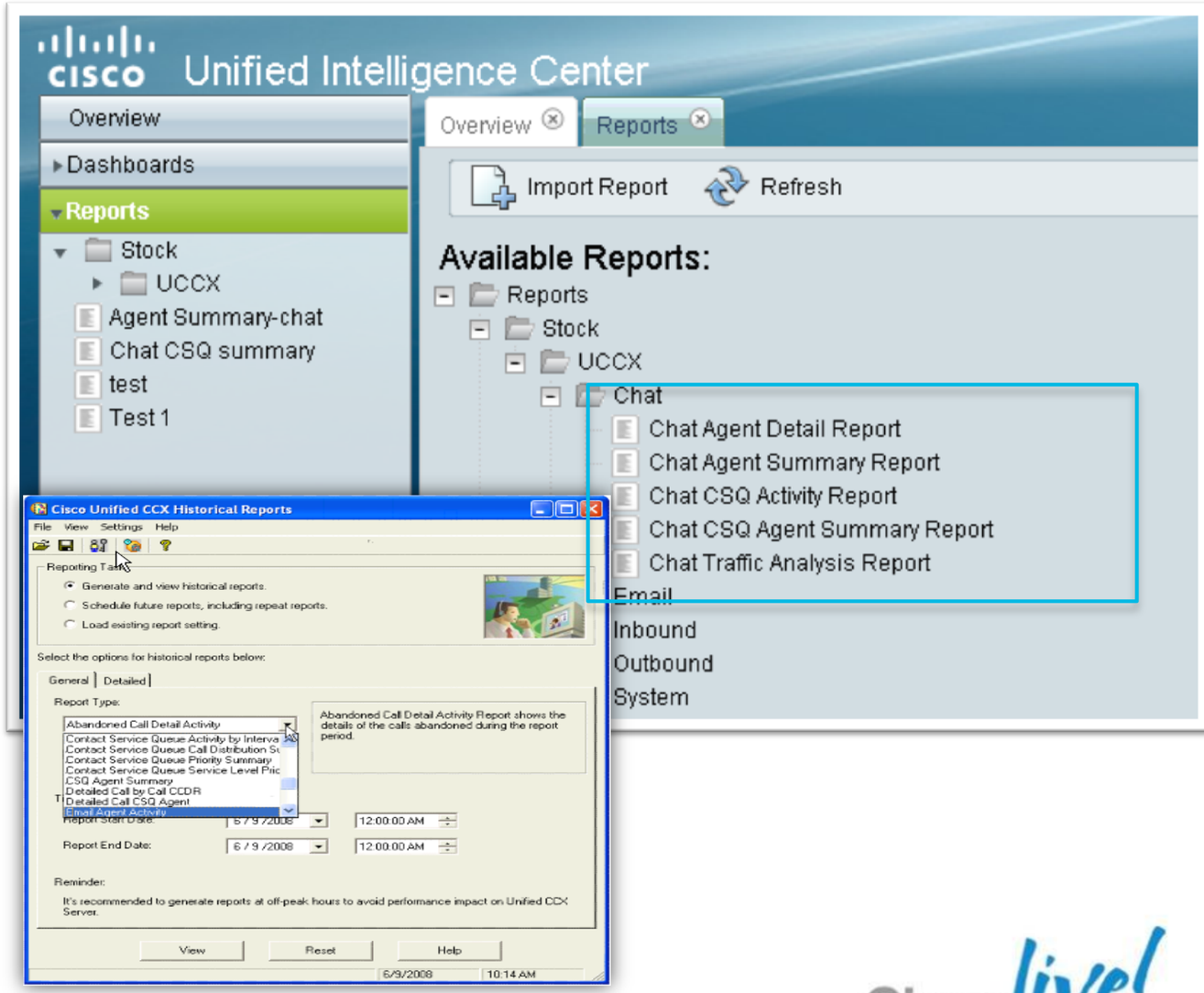
Web Chat

Historical Reports in HRC and CUIC

- Web Chat historical reports
  - Chat Agent Detail
  - Chat Agent Summary
  - Chat CSQ Activity
  - Chat CSQ Agent Summary
  - Chat Traffic Analysis
- Available in HRC and CUIC



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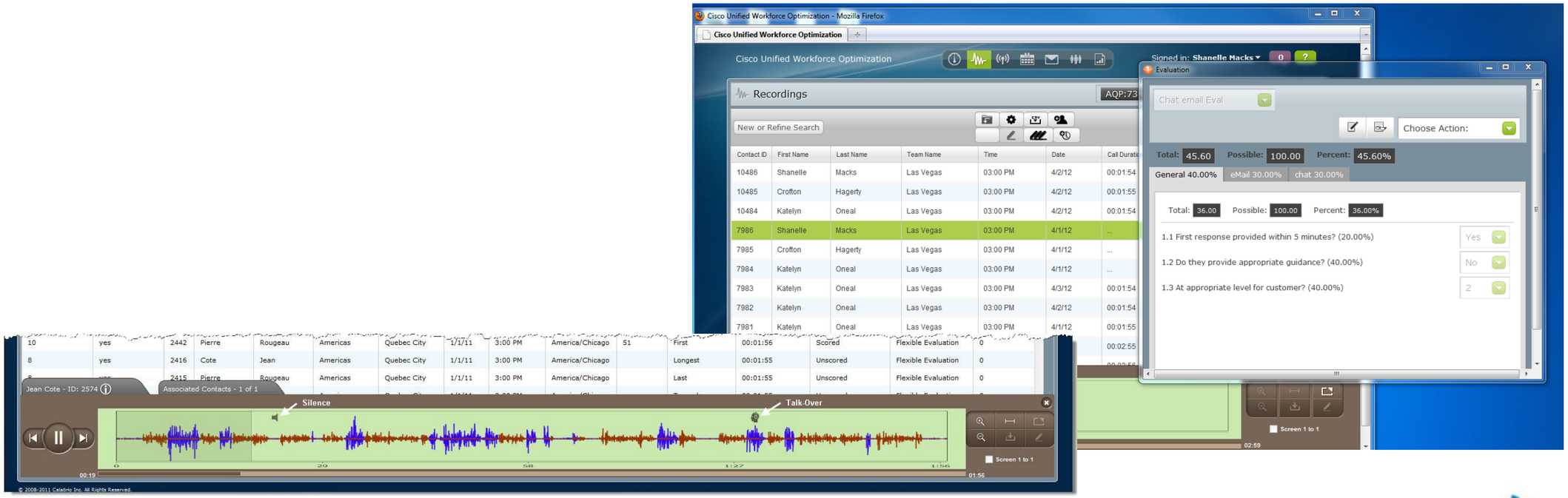
Workforce Optimisation

Quality Management – Call Recording

- Chat and Email Evaluations
- Configurable and lockable dashboards
- Speech energy event markers



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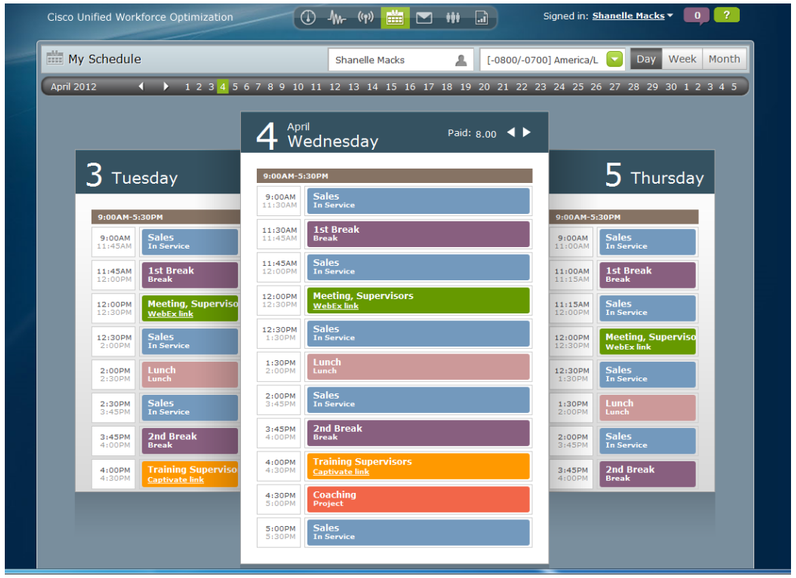
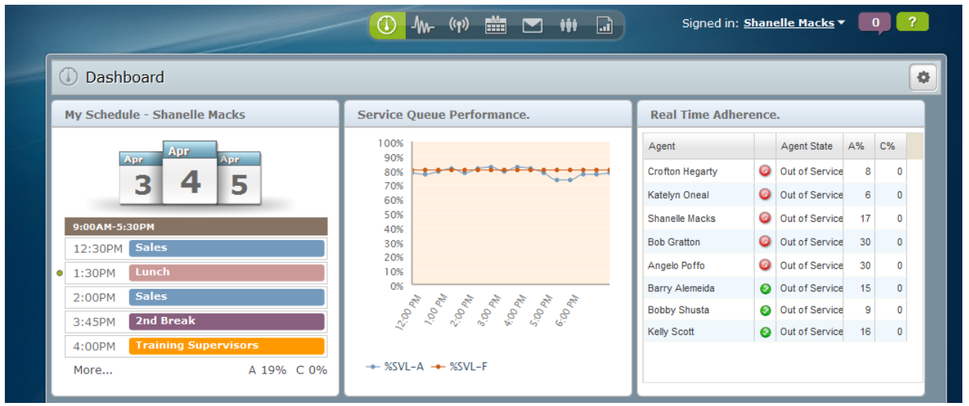
Workforce Optimisation

Workforce Management

- New Supervisor Experience
- Unified Schedules
- Drag and Drop Schedule Editing
- Adherence and Conformance





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Workforce Management

Unified Schedule, Adherence, Coverage View

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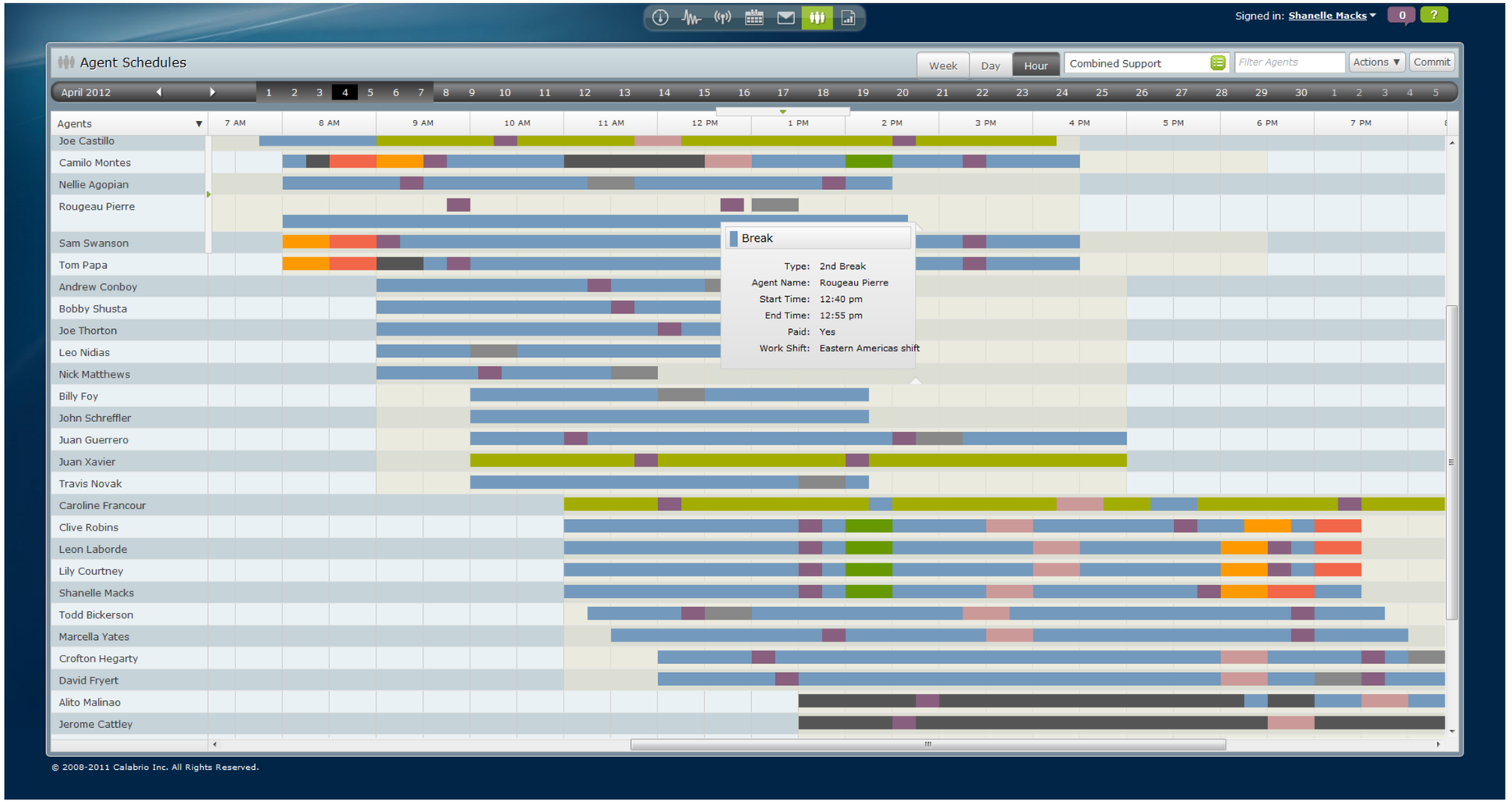
Workforce Management

Drag and Drop Schedule Editing



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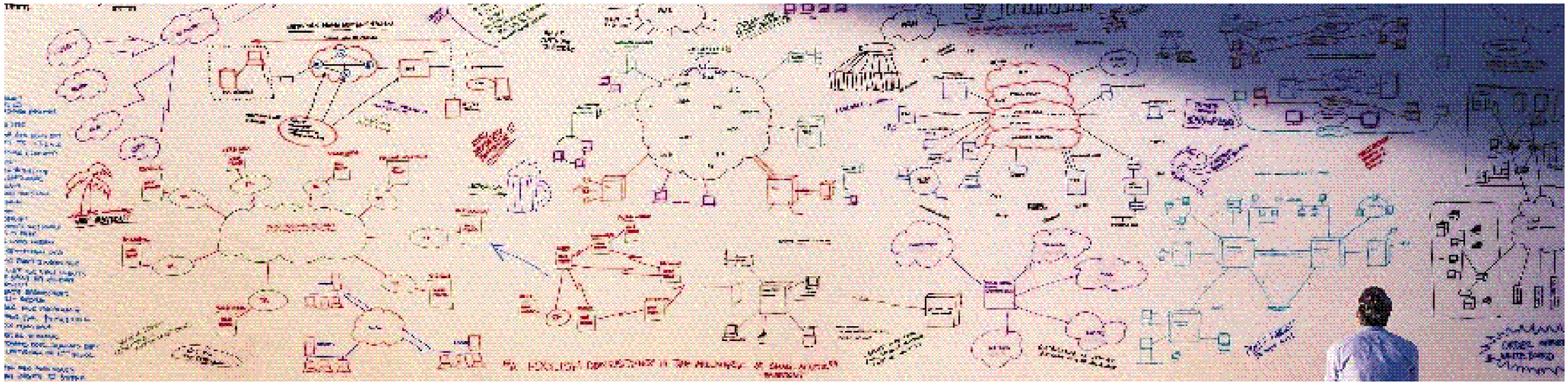
Design

Best Practices

What Should I Be Asking?

- Why?
- Who?
- Outcomes?
- When?



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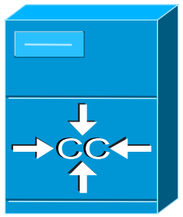
Solution Components

- Voice Gateway (VG)
  - SIP, MGCP or H.323 voice gateway
  - Allows incoming/outgoing calls from public switched telephony network (PSTN)

- Communications Manager (CM)
  - Responsible for call control and agent users



- Contact Centre Express (CCX)
  - Workflows play prompts and collect digits from callers
  - Queues calls for delivery to available agents

- Cisco Agent Desktop (CAD)
  - IP Phones and PC's running CAD client

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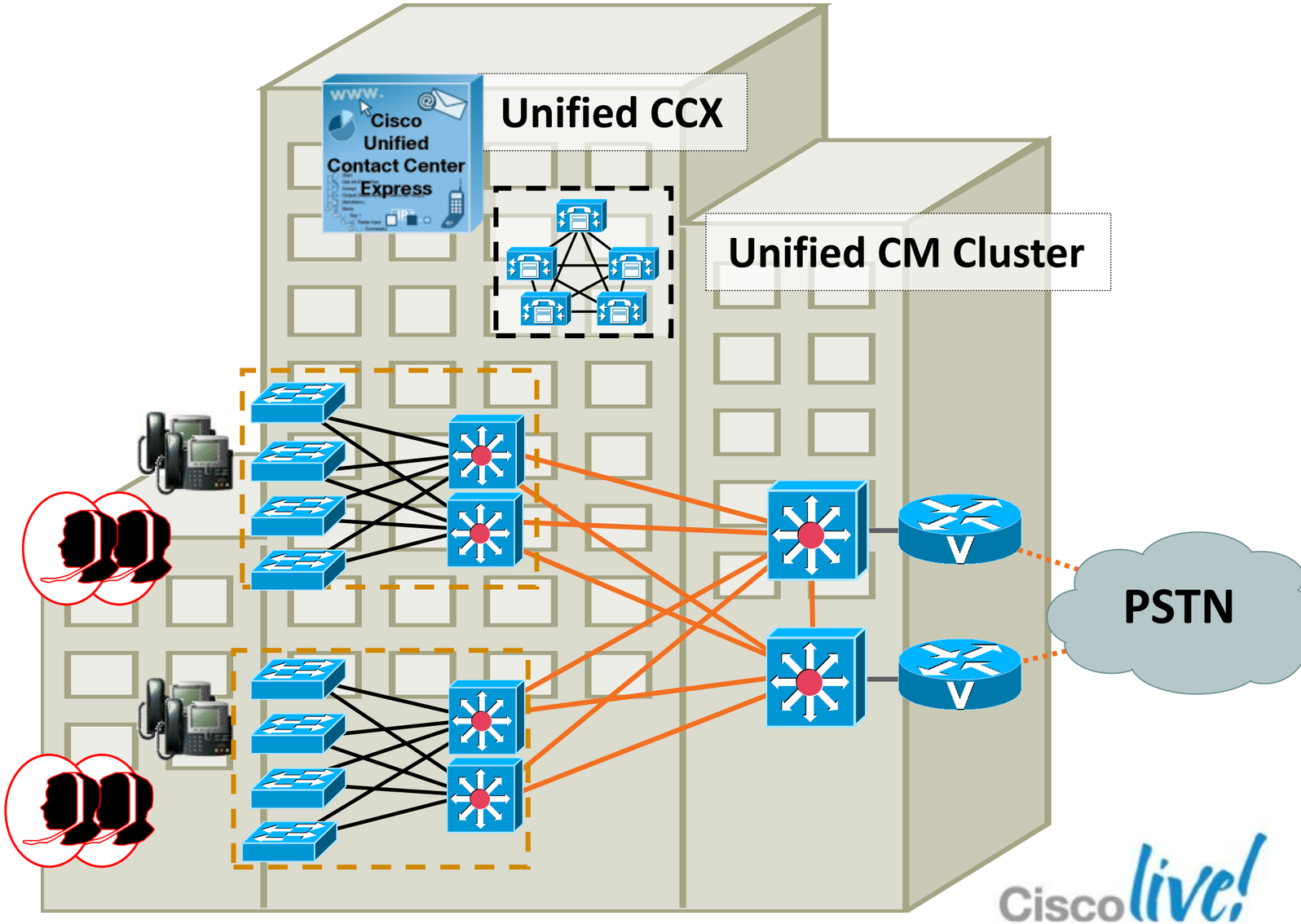
Deployment Models

Single Site Deployment

Deployment Models

- All agents and supervisors are in the same location
- Single node Unified CCX with no redundancy
- Two nodes Unified CCX for HA with server redundancy
- Bandwidth consideration: None



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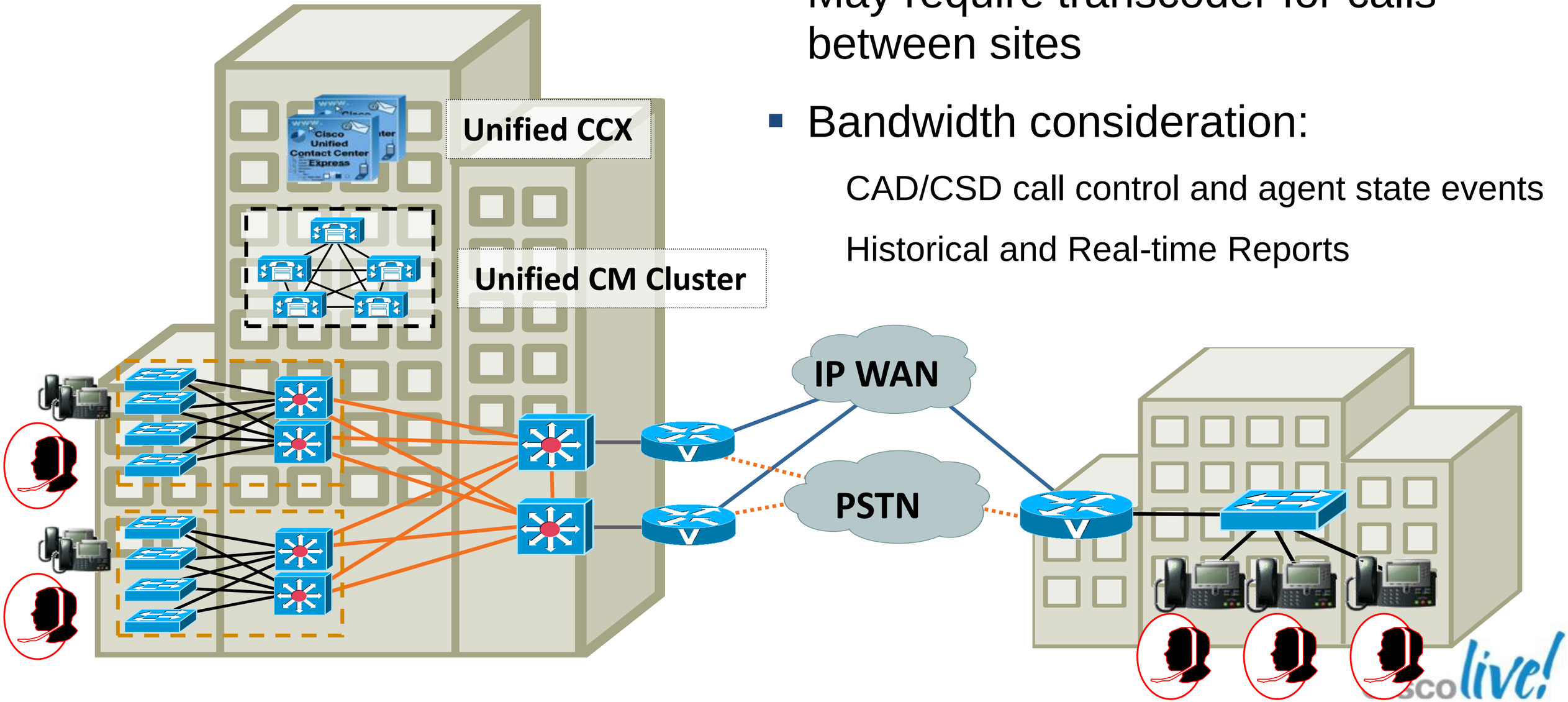
Remote Branch Agent

Deployment Models

- May require transcoder for calls between sites
- Bandwidth consideration:
  - CAD/CSD call control and agent state events
  - Historical and Real-time Reports



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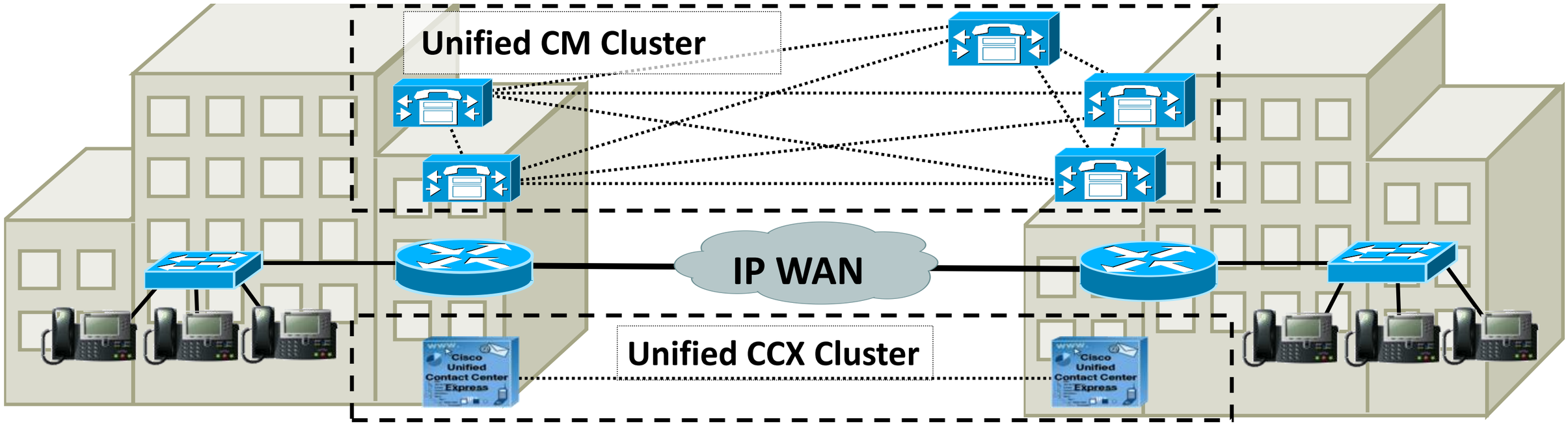
Unified CCX HA over WAN

Deployment Models



- Provide site redundancy for disaster recovery
- Latency: 80 ms RTT between Unified CCX nodes (same as CUCM CoW)
- HA over WAN bandwidth consideration

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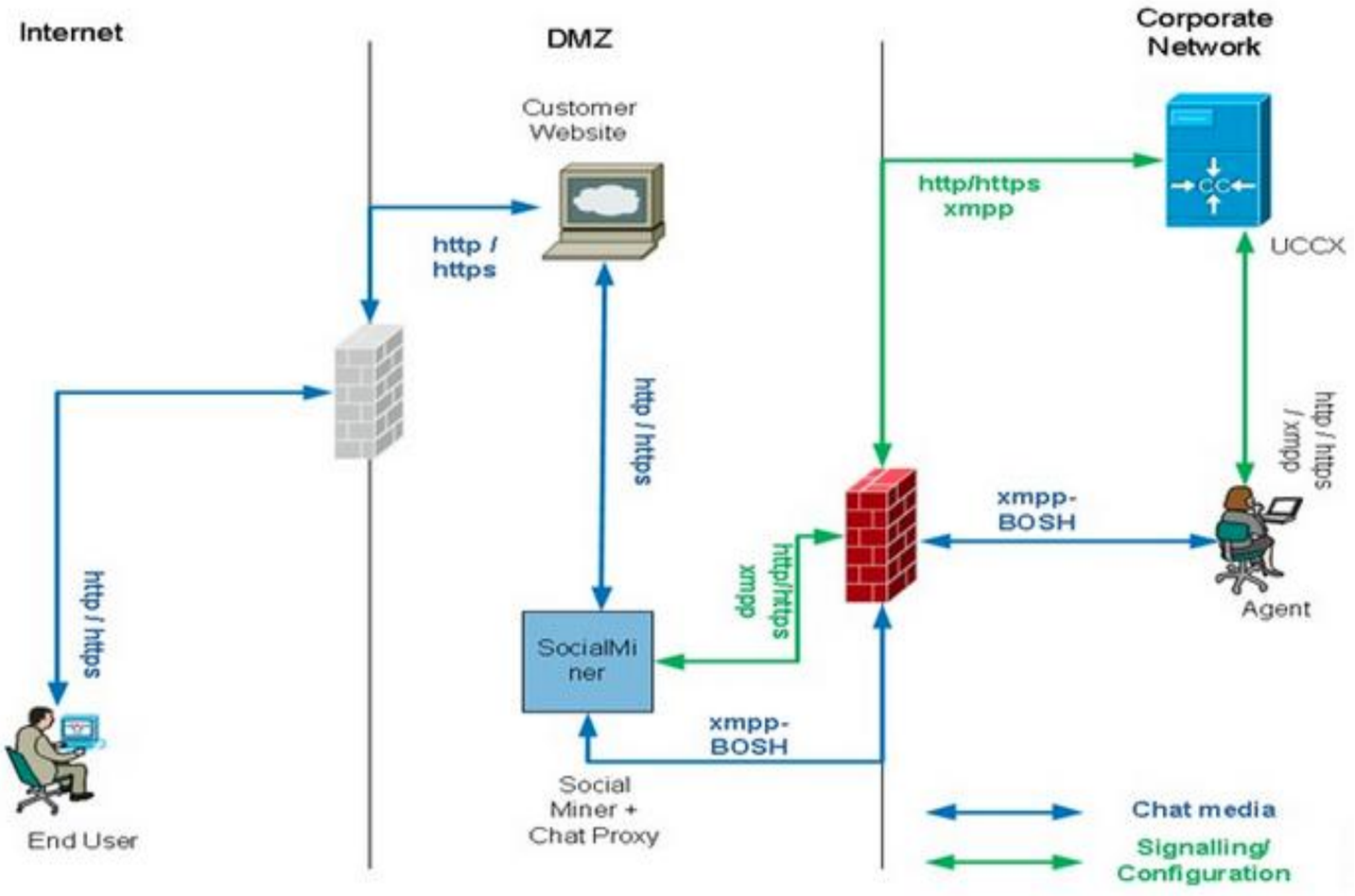
WebChat – Customer Hosted Website

Deployment Models

- Website hosted internally
- No proxy requirement
- SocialMiner



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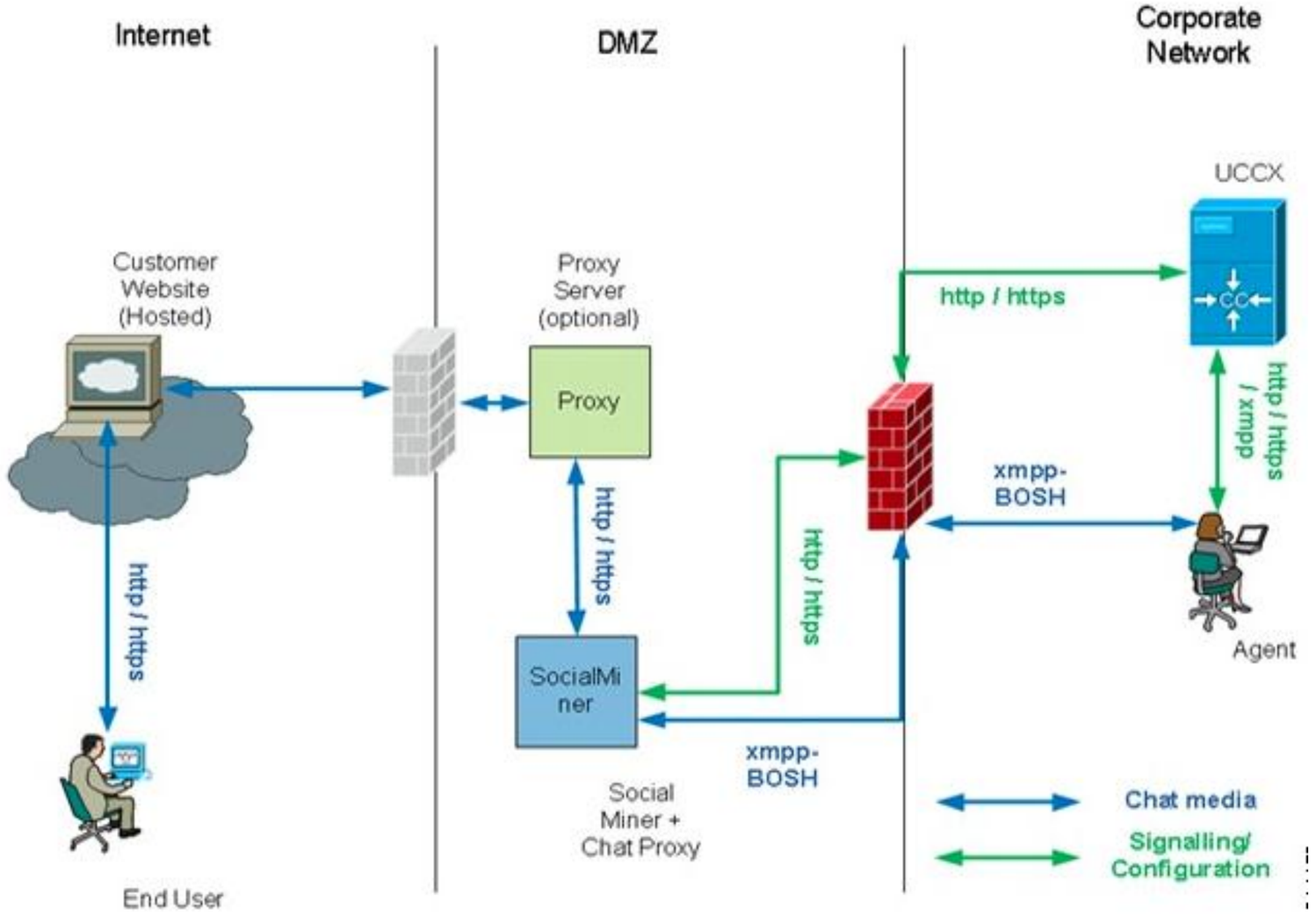
WebChat – Hosted Website

Deployment Models

- Website externally hosted
- Proxy Server (optional)
- SocialMiner



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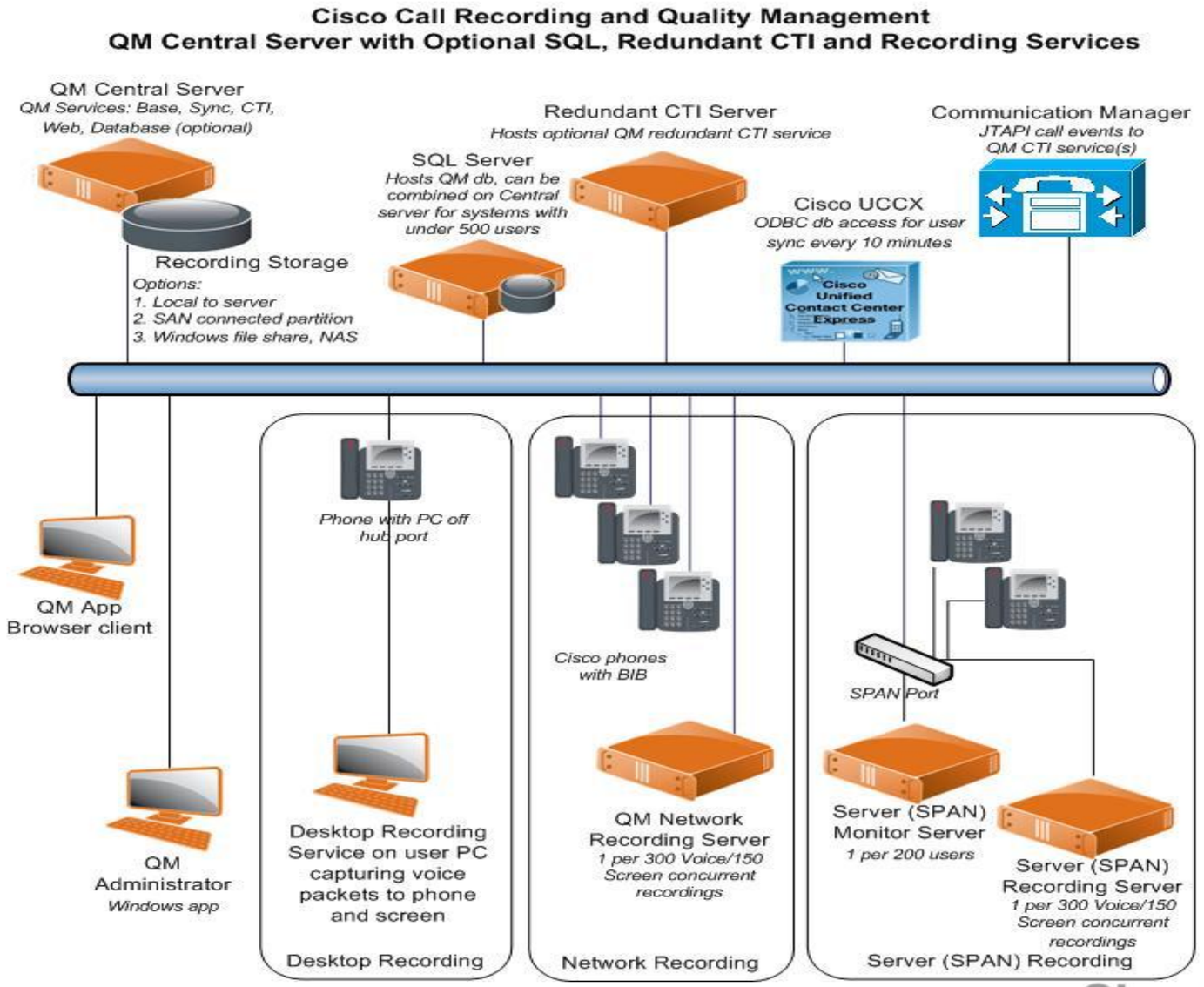
Cisco Call Recording

Deployment Models

- Desktop
- Network
- Server (SPAN)



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High Availability

High Availability over the WAN

Designed to Provide Disaster Recovery Protection

- Active and Secondary servers are geographically deployed in separate Data Centres
- 1 ms heartbeats and 10 missed heartbeats initiates failover
- 3 Key WAN based failover scenarios are detected and recovered from
  - –Active server or services in primary data centre fail
  - –The entire data centre containing the Master fails
  - –The WAN link between the two data centres becomes unavailable (island mode)

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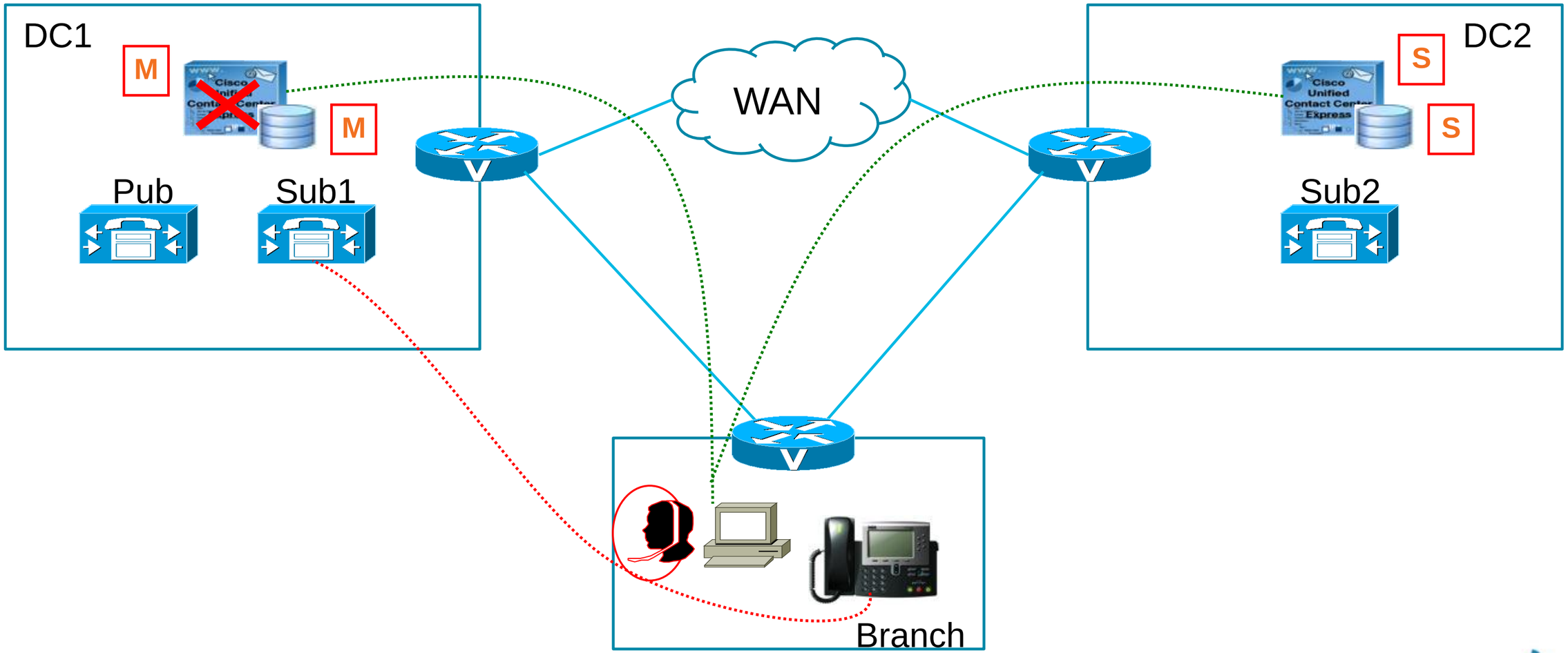
Unified CCX Engine Failover

High Availability



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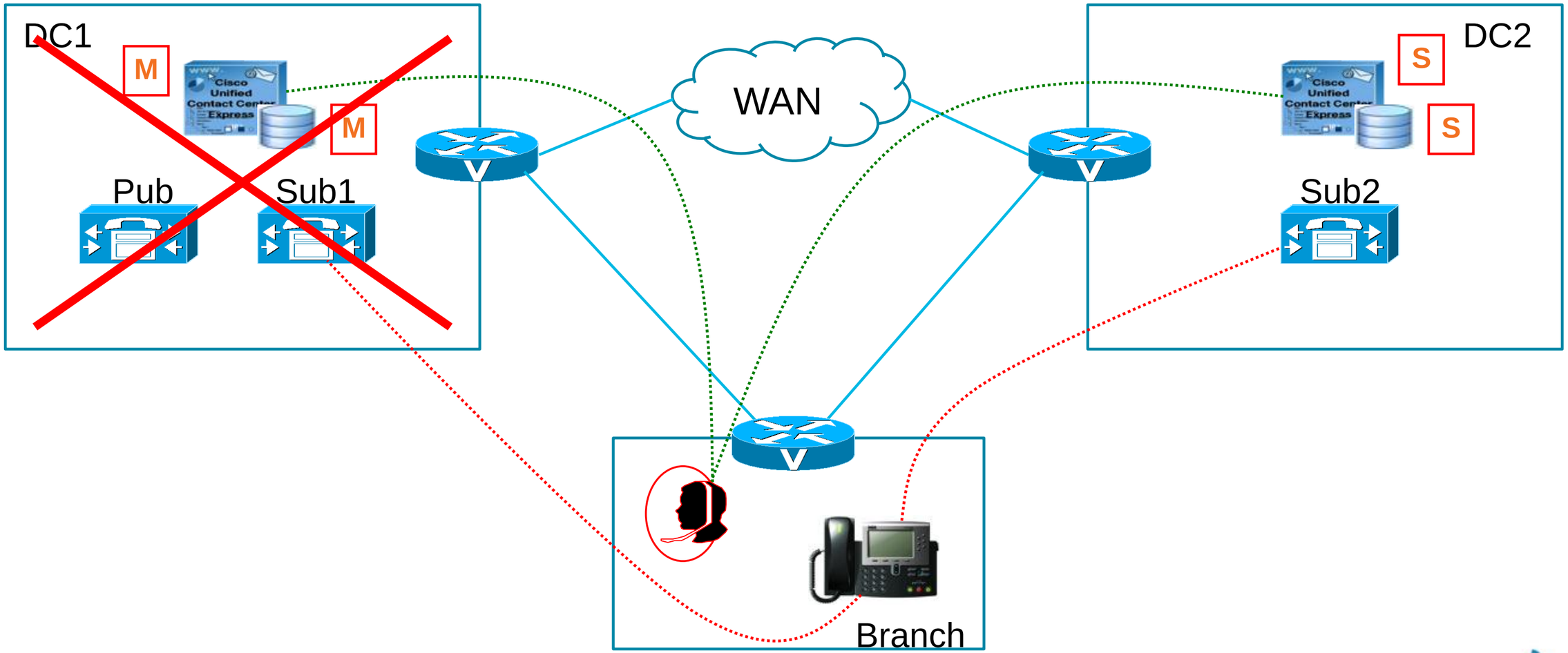
Data Centre Failure

High Availability



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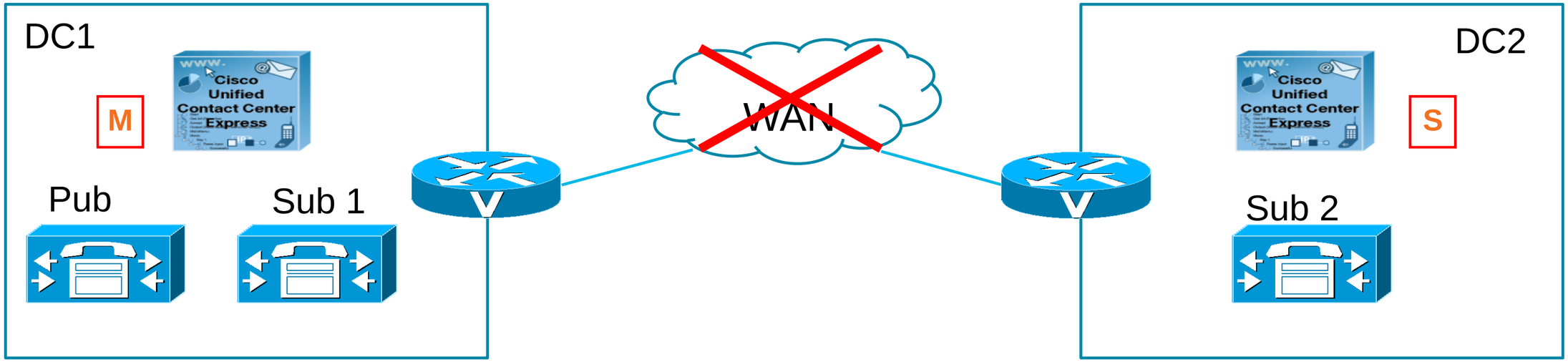
WAN Link Failure – Island Mode

High Availability



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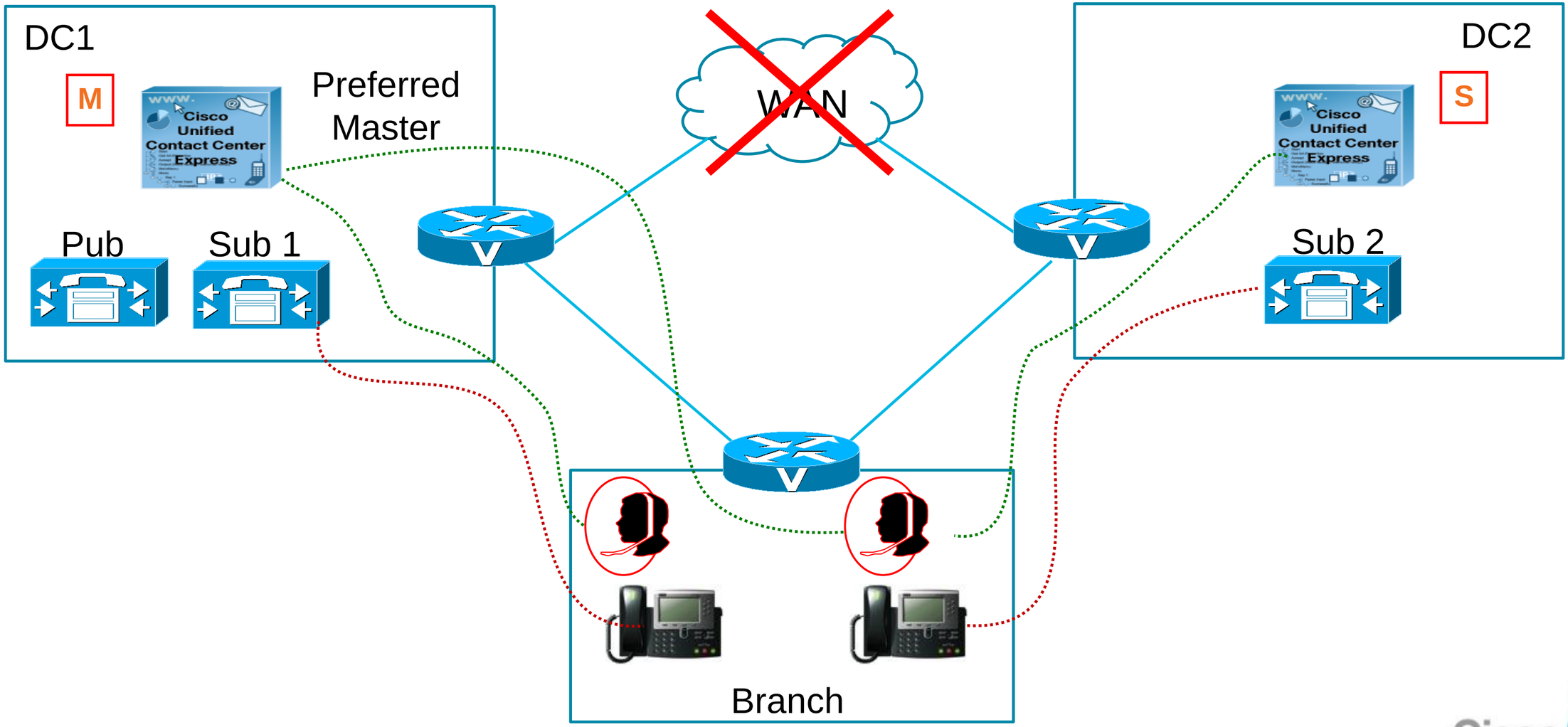
Island Mode Recovery

Automatic Master Re-election



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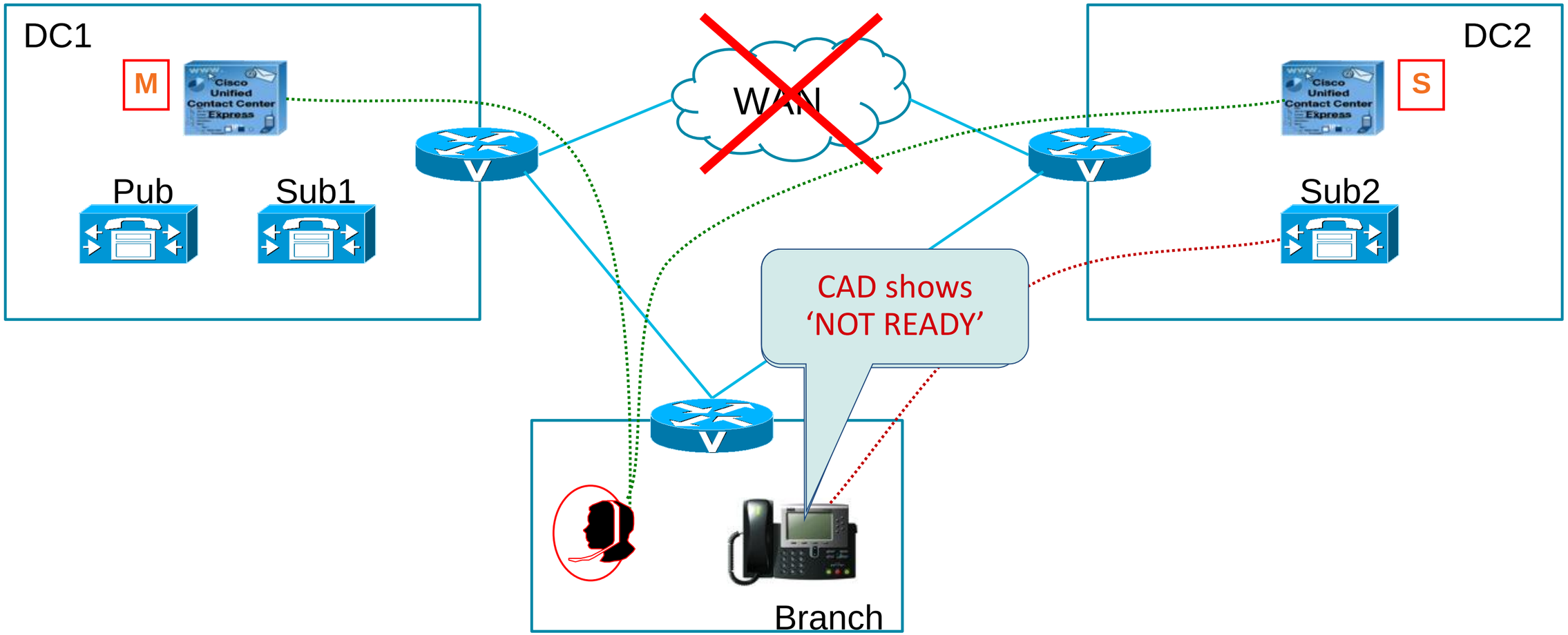
Agent Failover in Island Mode

High Availability



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Solution Sizing

UCCX Thresholds

- 400 Maximum logged in agents or inbound IVR Ports (UCS only, MCS = 300)
- UCS – XL Profile -> 5 CPU Core + 8 Gig memory
- 6000 Maximum BHCC
- 42 Maximum Supervisors
- 100 Preview Outbound Agents
- 150 Outbound IVR ports

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Unified CCX Solution Sizing Tool

- Provides sizing for all solution components including CUCM and gateways
- Takes a variety of UCCX specific inputs
  - Agent License Package
  - Amount of Agents/Supervisors
  - WFO requirements
- Creates a solution sizing report complete with server sizing
  - Server Types and capacities
  - IVR ports / Gateway capacities

http://tools.cisco.com/cucst/

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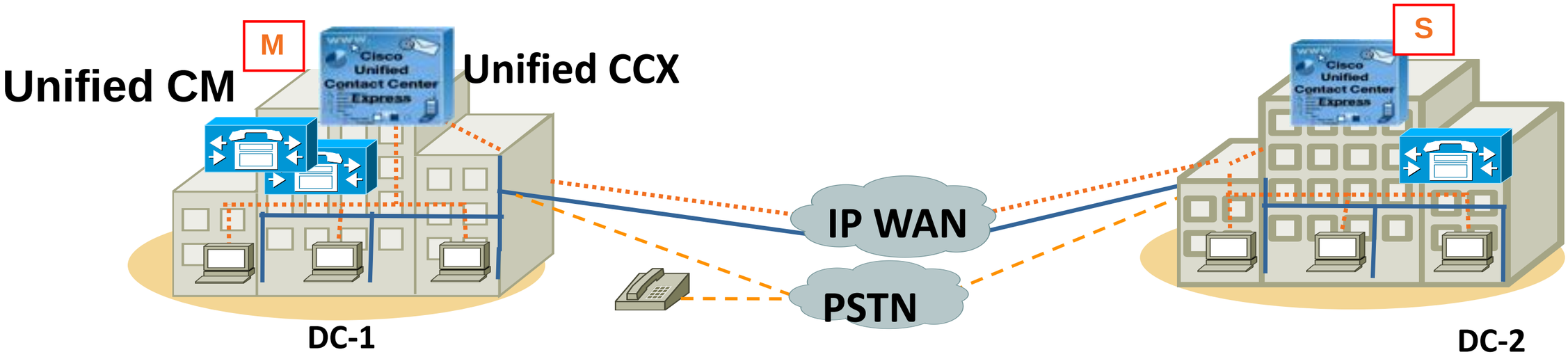
Primary Bandwidth Considerations

- Signalling and Call Control
  - –IP Phone / Gateway
  - –Agent Desktop
- Voice Codec
- Desktop Monitoring
- HAoWAN



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HAoWAN Bandwidth

- Delay: Maximum round-trip time = 80ms
- Minimal bandwidth requirement -

Cisco Unified CCX Cluster			Cisco Unified CM Cluster	
Deployment Type	Between Unified UCCX server	Between Unified CCX and Remote Unified CM Servers	Database	ICSS
ACD	1.2 Mbps	800 kbps	1.544 Mbps (T1)	70 kbps per 100 BHCA
IP-IVR	1.2 Mbps	200 kbps	1.544 Mbps (T1)	25 kbps per 100 BHCA

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Additional Bandwidth Considerations

- Historical Report
- Wallboard
- Enterprise Database
- Email traffic for SMTP Server
- WFO

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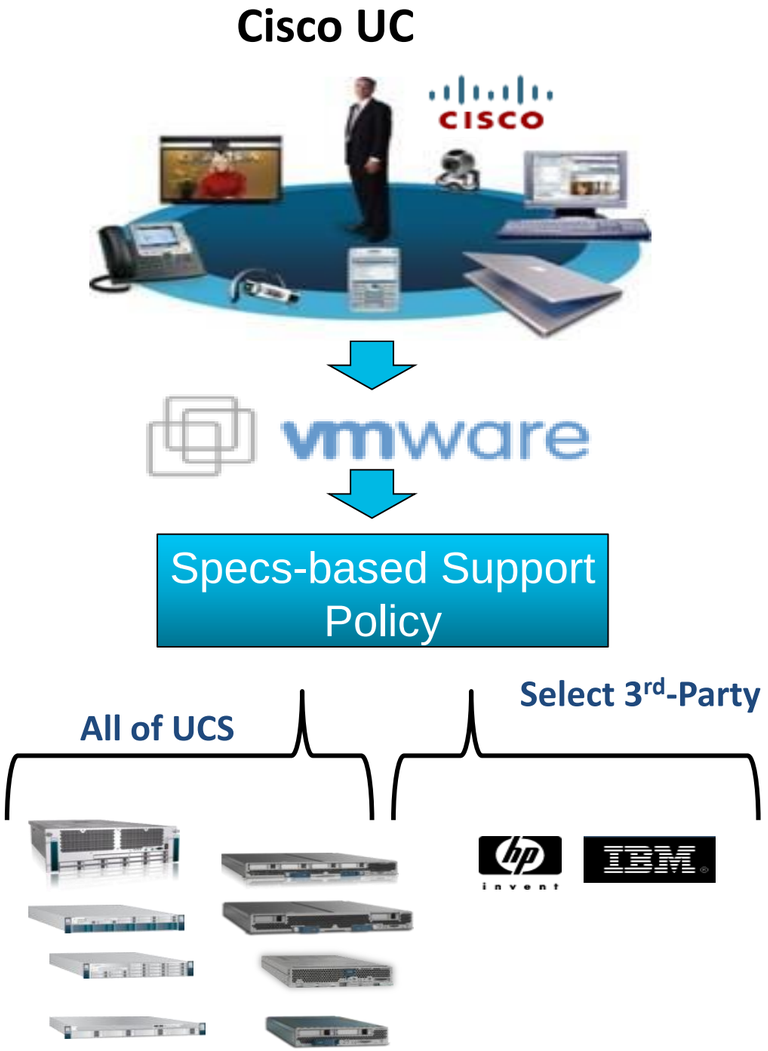
Platform Selection

Specs-based Virtualisation Support

- Provide choice in virtualised server models and hardware configuration
- Support more deployment models
- Tested Reference Configurations and supported select 3rd party servers are provided on: http://docwiki.cisco.com/wiki/Specification-Based_Hardware_Support#Servers
- Resource reservation enabled for UCCX Profiles
- Available in CCX 8.5(1) SU1 and above



Capacity (agents)	VM vCPU Cores	VM RAM	VM vDisk	VM vNICs	CPU Reservation
100	2	4 GB	1 x 146 GB	1	Yes
300	2	4 GB	2 x 146 GB	1	Yes
400	4	8 GB	2 x 146 GB	1	Yes

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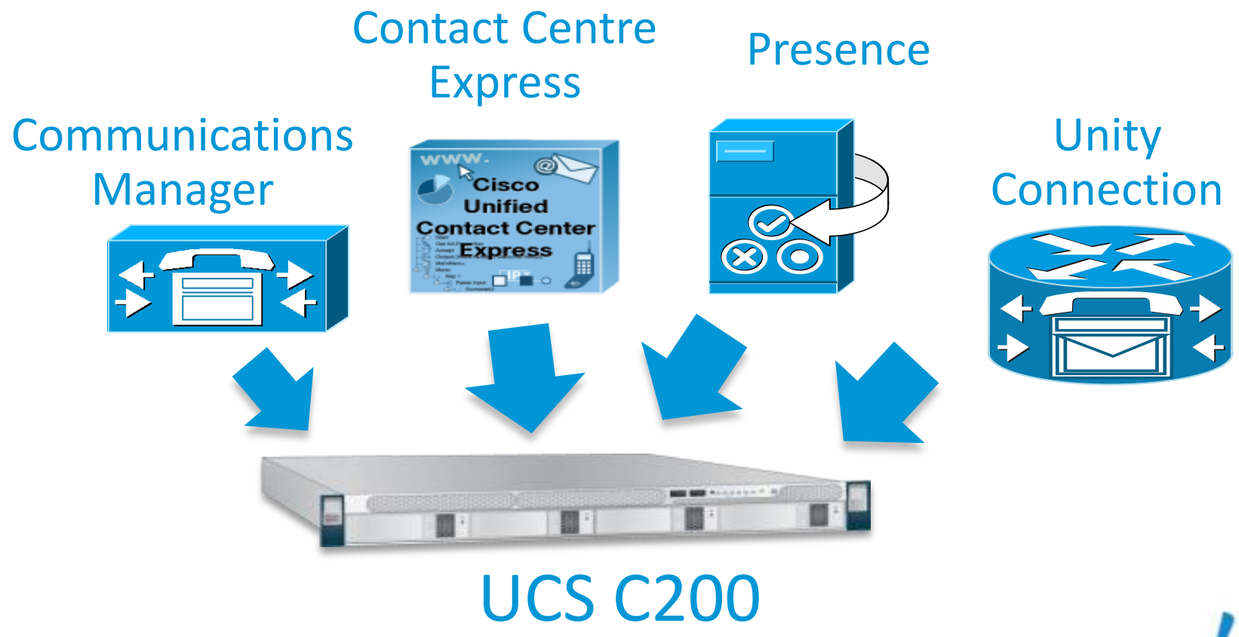
Business Edition 6000

With UCCX

- Integrated single server solution for 100-1000 users
- Including
  - Voice
  - Unified Messaging
  - Mobility
  - Presence
  - Contact Centre
  - Video Capabilities



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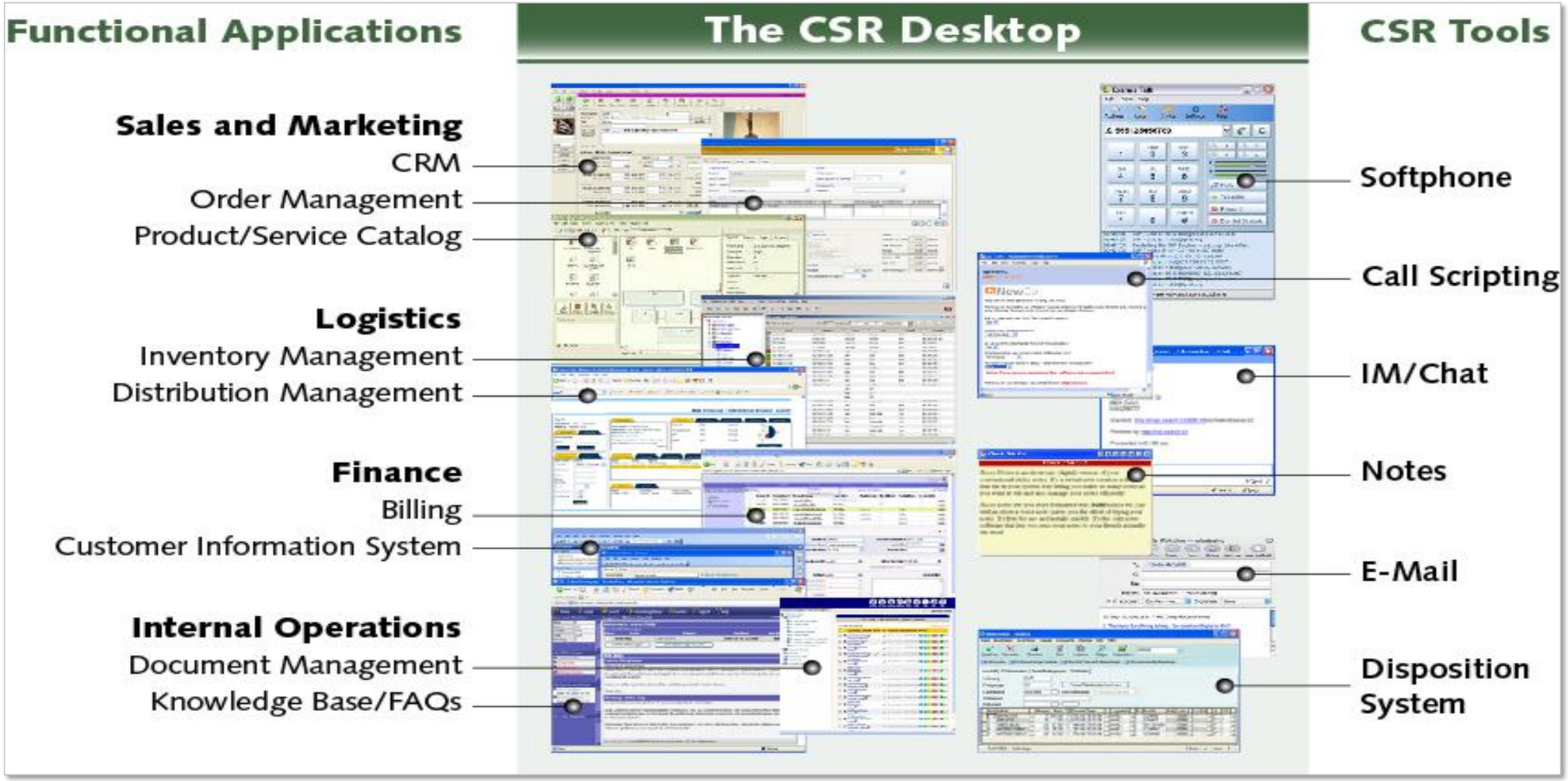
UCCX Integration

Application Integration



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Cisco Agent Desktop's Work Flow Paradigm

Work Flows Follow an Event / Rule / Action Behaviour

- Ringing
- Answered
- Dropped
- Not Ready / Ready

- Calling Number is / is not
- Variable is / is not

- Submit HTTP request
- launch .exe and pass value
- Deliver IPC Message
- Execute macro

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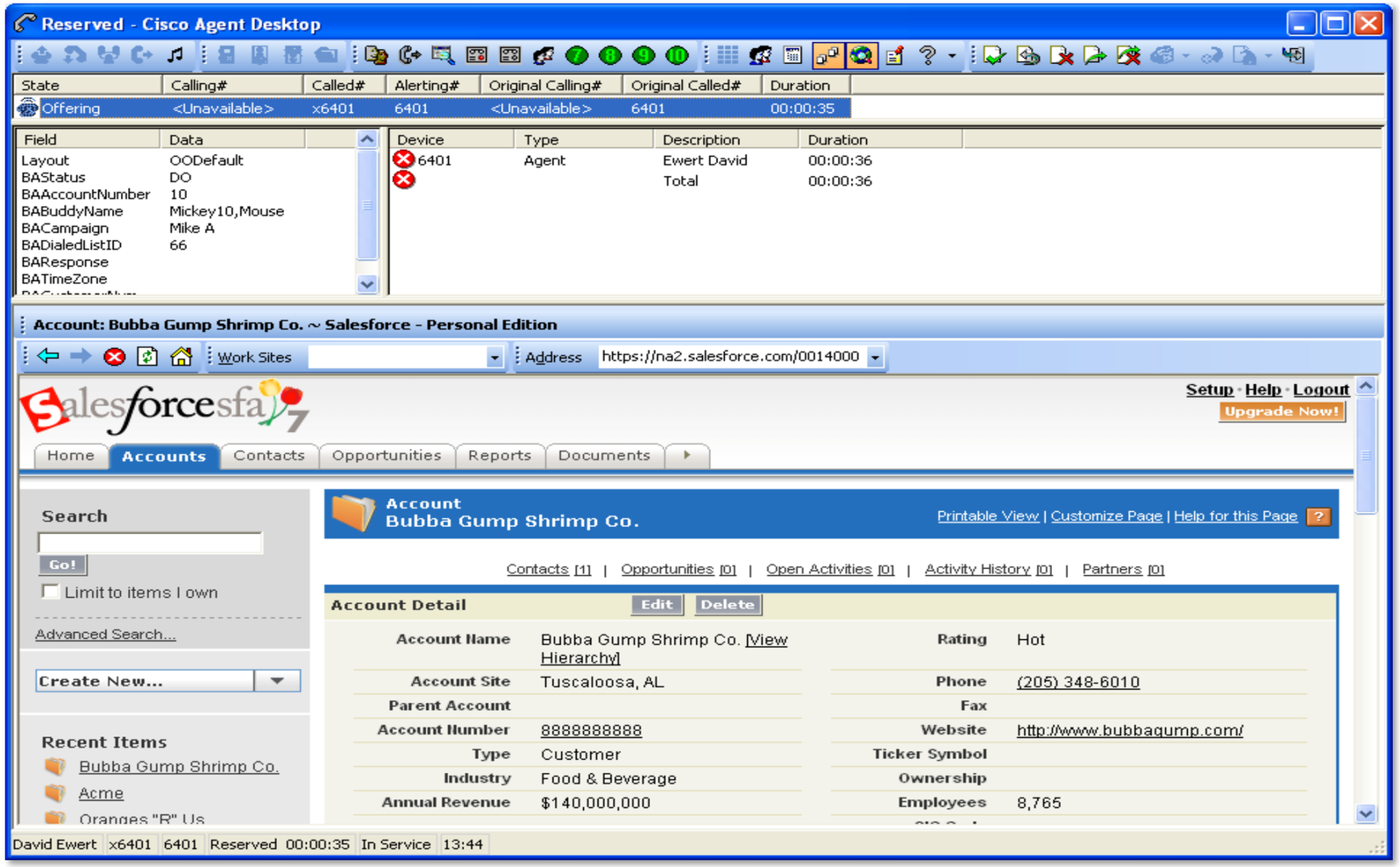
Cisco Agent Desktop – Screen Pop



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Deployment

Best Practices

Before You Deploy UCCX

- UCCX 8.x and above are appliance based products running on Linux
- Installing UCCX 8.x will format the hard drive (upgrade)
- In HA mode, always install the primary node first, followed by the secondary node
- Ensure your server hardware is supported
- Supported browsers –
  - Internet Explorer 6.0 and later,
  - Firefox 2.0 and later

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Installation Configuration Information

- DNS Enable
- DNS Primary/Secondary
- Domain
- Gateway Address
- Hostname
- IP Address and Mask
- MTU Size
- NIC Duplex
- NIC Speed
- NTP Server
- SMTP Location
- Time Zone

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Licensing

Licensing UCCX

- Node locked licenses
- Based on the “license” MAC, not physical MAC
- License MAC is derived by deployment information, IP Address, host name, NTP server etc
- License MAC can be obtained before or after install
  - After install – Run CLI command “show status”
  - Before install – Use the Answer File Generator

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Licensing Process

- Re-host a license – licensing@cisco.com
- Demo License available on installation DVD

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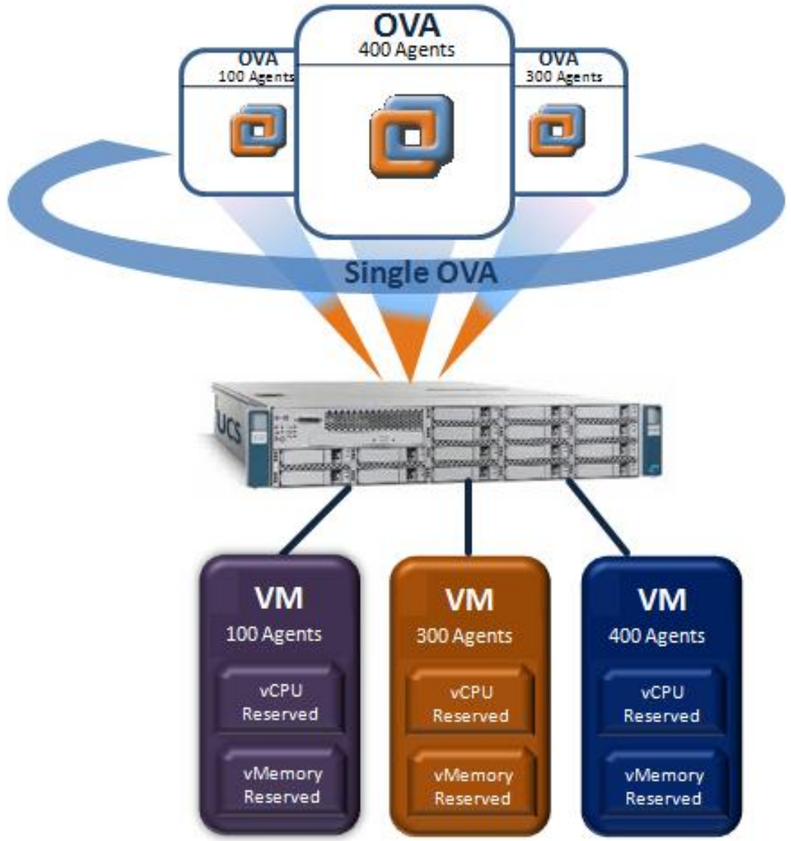
Deployment Tools

UCS OVA Templates

- Predefined hardware allocations
- User profile sizes
- OVA's available –
  - UCCX 100 Agents
  - UCCX 300 Agents
  - UCCX 400 Agents
  - WFM
  - Recording and Quality Management
  - SocialMiner – Small and Large



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Script Repository

- Downloadable script repository
- Range of basic to advance scripts
- Documented feature list and code explanation
- Customise for specific requirements
- Scripts include
  - Call Back in Queue, Web Call Back, Database Dips and many more

Download Repository - https://communities.cisco.com/docs/DOC-25504

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Demo License

- UCCX installation DVD comes with 4 demo licenses -
  - Standard, Enhanced, Premium and IPIVR
- Premium license includes WFO licenses
- All licenses valid for 30 days
- UCCX will continue to function after 30 days until a restart of the system is performed

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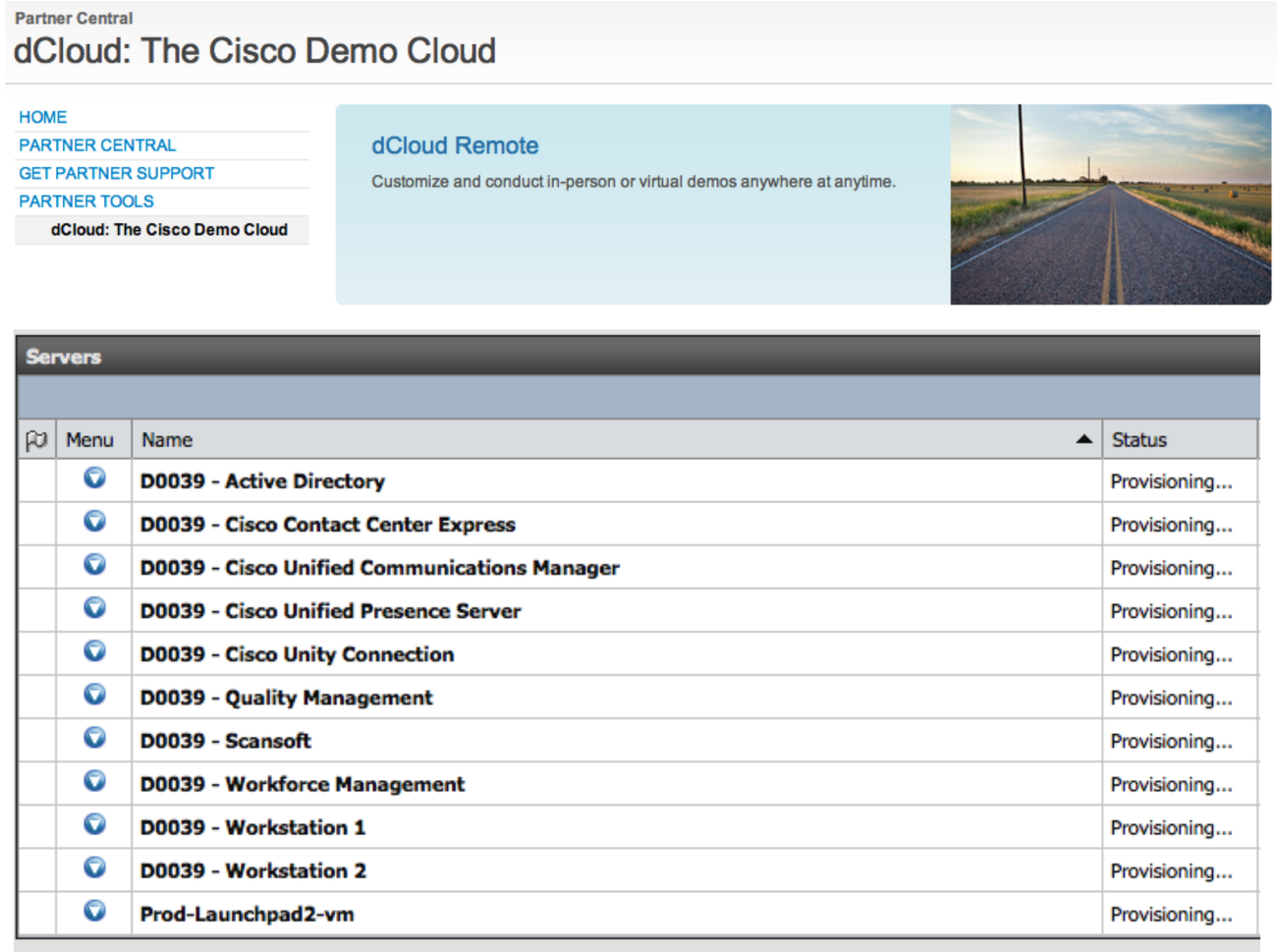
dCloud

Cloud Demonstrations

- Virtual Demonstration Service
- Fully customisable
- Demo scripts available
- Full UCCX demo available, complete with WFO
- Soft clients provided, with the option to use hard phones
- Fully supported environment
- demos.cisco.com



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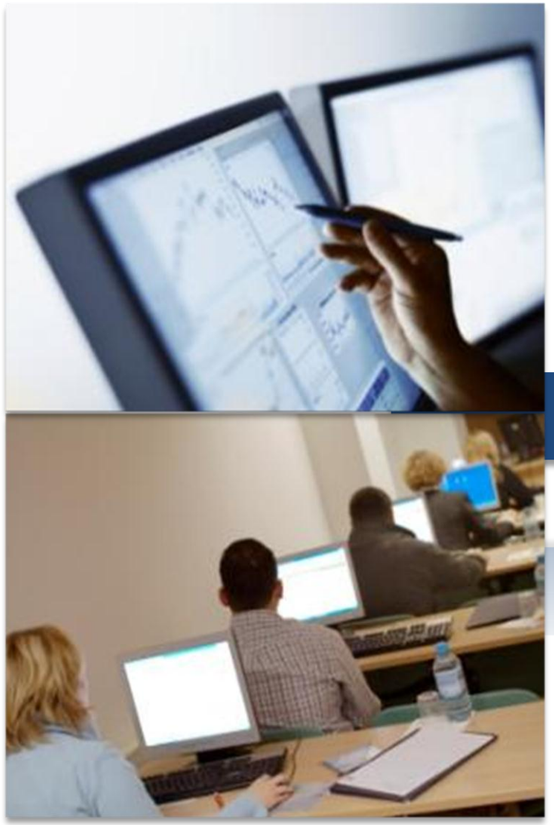
Workforce Optimisation

Plan Design and Implement services



Plan, Design & Implement
+1 (763) 592-4600
8:00 AM - 5:00 PM CST M-F
pdihelpdesk@calabrio.com

- Design Validation
- Project Plan Review
- Test Environment Consulting
- Architectural Requirements Consulting
- Design and Configuration Consulting
- Functional Support: "How do I...?"
- Installations *
- Upgrades *
- Training, Train-the-Trainer, End-User Training *

* For Fee Services

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Summary

- New in version 9.0 – CUIC, WebChat, WFM
- Customers want to communicate in a variety of new ways, at any time
- Application integration is key to customer care success
- Design solutions to meet customer needs
- Solution sizing tool for accurate sizing and growth
- Use deployment tools to accelerate deployment

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Q & A

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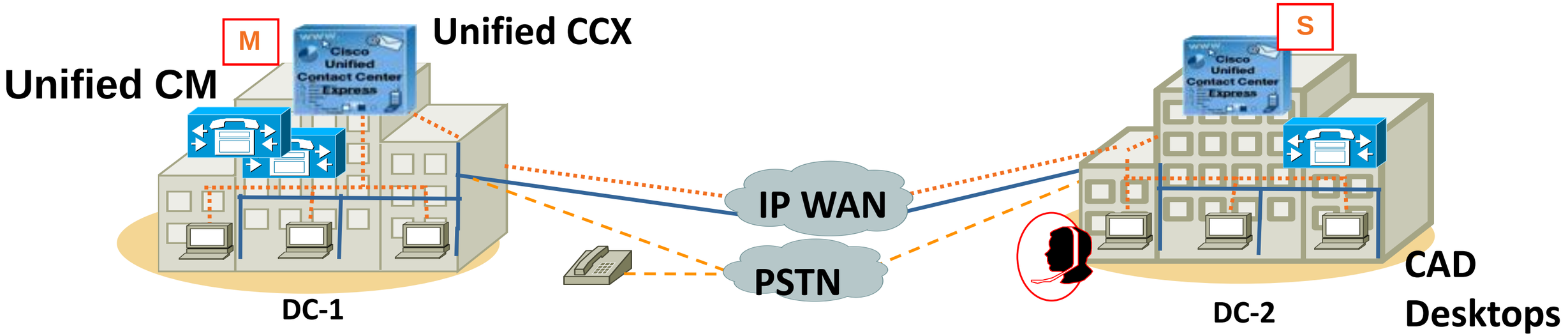
Appendix

Bandwidth Sizing

Agent Bandwidth

Signalling/Call Control for IP Phone and GW



Voice Signalling Bandwidth (SCCP)			
# of IP Phones	10 Calls	20 Calls	30 Calls
1 to 10	3 Kbps*	5 Kbps*	7 Kbps*
20	6 Kbps*	10 Kbps	14 Kbps
30	8 Kbps	15 Kbps	21 Kbps
50	14 Kbps	24 Kbps	35 Kbps

IP Voice

TDM Voice

Call Control and CTI Data

***Minimum queue BW = 8 kbps**

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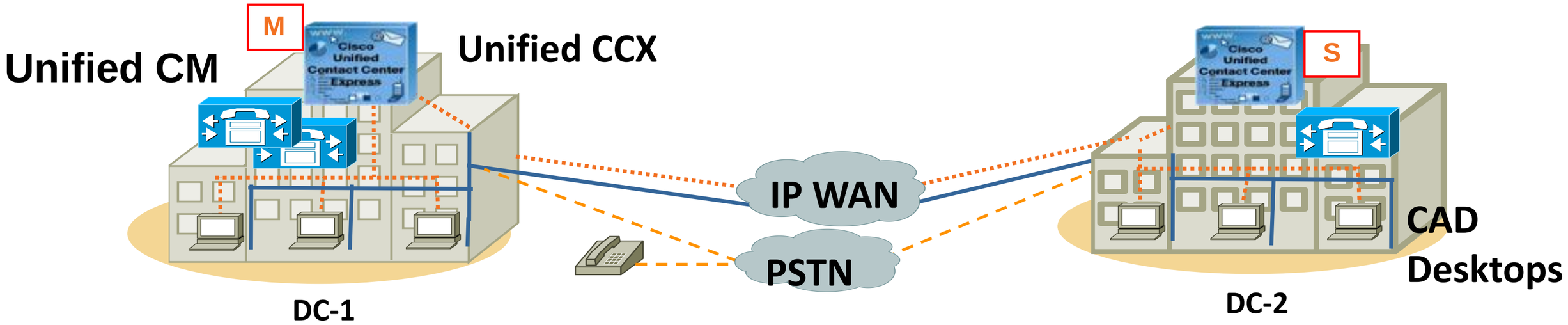
Agent Bandwidth

Signalling/Call Control for CAD Desktop



CAD Desktop Bandwidth			
# of IP Phones	10 Calls	20 Calls	30 Calls
1 to 10	1.6 Kbps	1.6 Kbps	1.6 Kbps
20	3.2 Kbps	3.2 Kbps	4.0 Kbps
30	4.0 Kbps	4.8 Kbps	5.6 Kbps
50	7.2 Kbps	8.0 Kbps	9.6 Kbps

IP Voice

TDM Voice

Call Control and CTI Data

CAD bandwidth calculator:

http://www.cisco.com/en/US/products/sw/custcosw/ps427/prod_technical_reference_list.html

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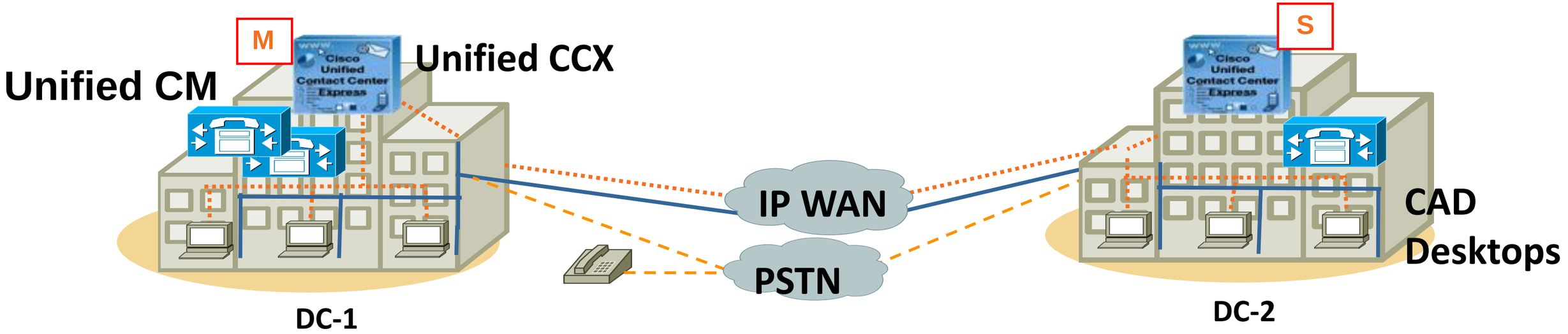
Agent Bandwidth

Voice Codec



CODEC	Sampling Rate	Voice Payload in Bytes	Bandwidth w/o Layer 2	Bandwidth with Ethernet (14 Bytes of Header)	Bandwidth with Frame Relay (4 Bytes of Header)
G.711	20 Msec	160	80 Kbps	85.6 Kbps	81.6 Kbps
G.711	30 Msec	240	74 Kbps	78.4 Kbps	75.7 Kbps
G.729A	20 Msec	20	24 Kbps	29.6 Kbps	25.6 Kbps
G.729A	30 Msec	30	18 Kbps	22.4 Kbps	19.7 Kbps

IP Voice

TDM Voice

Call Control and CTI Data

Voice Codec Bandwidth Calculator: http://tools.cisco.com/Support/VBC/do/CodecCalc2.do

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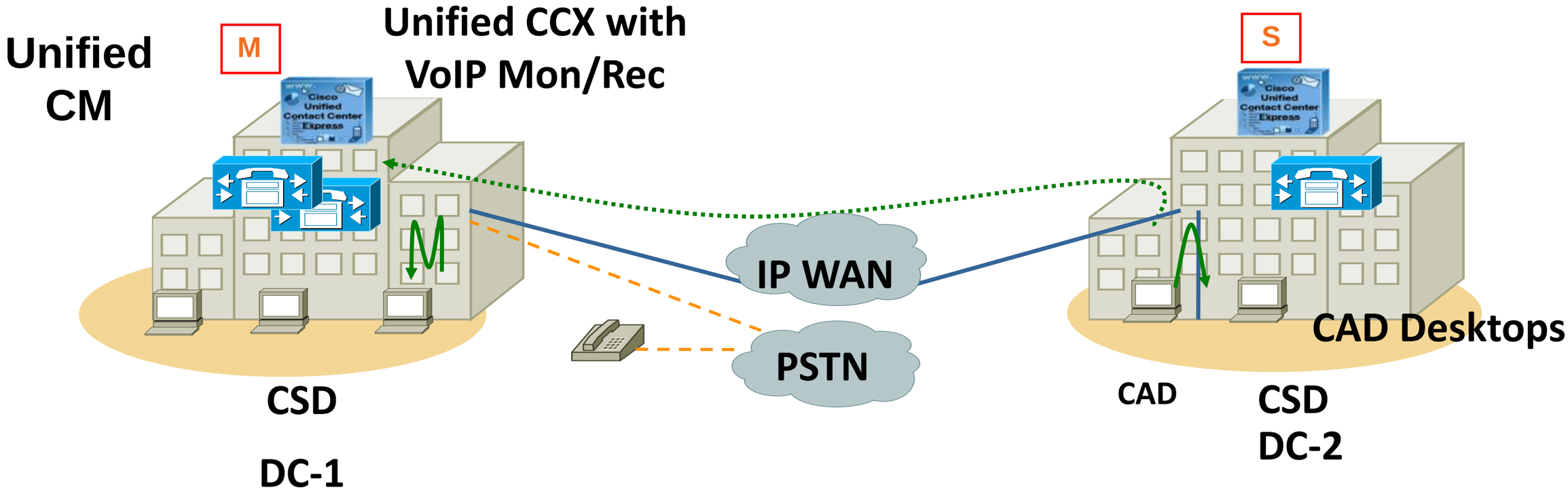
Agent Bandwidth

Desktop Monitoring



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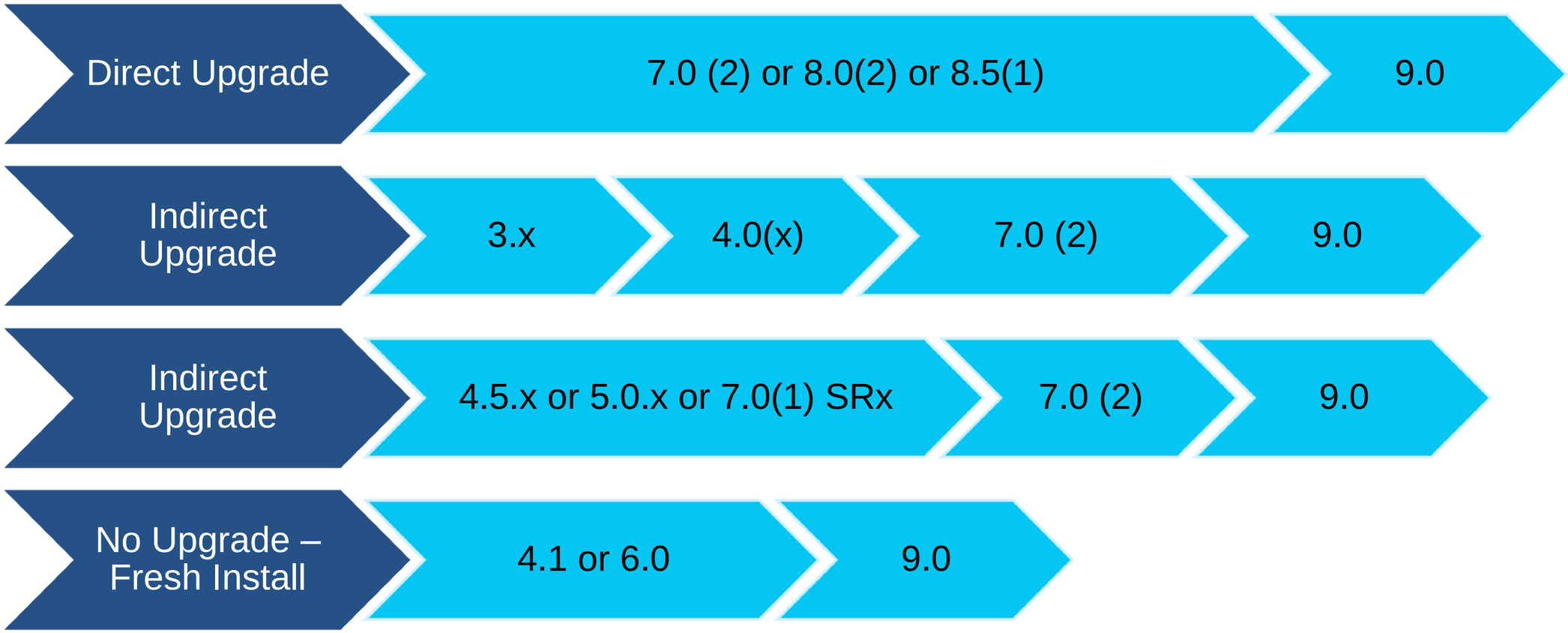
Upgrade Paths to Version 9.0

Unified CCX 9.0 Platform Changes

Upgrade to Unified CCX 9.0



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Version Compatibility

- Cisco Unified Communications Manager 9.0(1), 8.5 (1) SUx, 8.6xSUx
- Cisco Unified Communications Manager Business Edition 6000 - 9.0(1), 8.5 (1) SUx, 8.6xSUx
- CUP 8.5 (4), 8.6 (1), 9.0(1)
- SocialMiner (9.0)

See Unified CCX Compatibility Matrix for complete list:
http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/crs/express_compatibility/matrix/crscomtx.pdf

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Links

Key URLs

- Release notes for Unified CCX 9.0 –
  - http://www.cisco.com/en/US/products/sw/custcosw/ps1846/prod_release_notes_list.html
- EZ Express - A Partner Guide to Cisco UCCX Practice Growth
  - https://communities.cisco.com/docs/DOC-28258
- Partner TOI for Unified CCX 9.0
  - https://communities.cisco.com/docs/DOC-30159
- All Aboard Express V (provides good foundation knowledge)
  - https://communities.cisco.com/docs/DOC-29397
- Partner Community Central (contains useful VODs, presentation and discussion forum)
  - –https://www.myciscocommunity.com/community/partner/collaboration/contactcenter
- User Guides
  - –http://www.cisco.com/go/uccx

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