Avaya Integration with Microsoft Unified Communications

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November 17, 2010
Agenda

• Microsoft and Avaya Interoperability Status
• Avaya/Microsoft UC Project Considerations
• Microsoft Lync Overview
• Microsoft Lync Demo
Microsoft and Avaya Interoperability Status

• Neither Microsoft or Avaya have released any official supportability statements regarding integration with Microsoft Lync Server 2010
• Current Avaya Application Notes and White Papers center around integration with Microsoft OCS 2007
Avaya/Microsoft UC Project Considerations

• Identify Business Requirements
  – End User
  – Operational

• Infrastructure Assessment
  – Review core communications infrastructure critical to UC deployments

• Architectural Considerations
  – Consider various topologies that can achieve business requirements, given existing infrastructure and financial constraints
  – Determine strengths and weaknesses of each topology

• Financial Analysis
  – Perform a high level financial analysis of the various architectures put forward for consideration
Identify Business Requirements

• End user population considerations
  – What is the level demand for Collaboration?
  – What percentage of PCs are desktop?
  – What is the mobile phone population?

• Who in the organization will be responsible for Unified Communications?
  – Data teams?
  – Voice teams?
  – Combination? (Critical to have the solution supported in this manner)

• Identify the decision makers across both Data and Voice teams
Infrastructure Assessment

• Will the voice infrastructure need any additional components for Unified Communications?
• Has the WAN/LAN been studied/validated to support voice/video/collaboration?
• What is the current state of the Active Directory infrastructure?
  – Implemented with consistency?
  – Servers at 2003 or later?
• Are the end user PCs capable of handling voice/video/collaboration?
• Will the current Voicemail environment fit with Unified Communications?
Architectural Considerations

- Parallel Infrastructures
- Remote Call Control
  - OCS Tabbed Interface for Avaya one-X
- Enterprise Voice (EV) Direct SIP with Presence Subscription
- Homogenous Avaya UC Environment
Architectural Considerations

- Configuration 1 – Parallel Infrastructures
  - Core Avaya Aura for Voice Transport
  - Avaya Aura Conferencing
  - Modular Messaging provides voicemail
  - OCS provides IM and Presence
  - OCS provides Web Collaboration (LiveMeeting)

Strength
- Mature telephony platform
- Clear delineation of operational responsibility
- Extend IM, Presence, Web Collaboration to users quickly

Concern
- Non-integrated end user experience
- Cost – does not leverage in place capabilities of OCS or Microsoft Exchange 2007/2010
- OCS feature support – PC-to-PC calling, conferencing, etc.
Architectural Considerations

- Configuration 2 – Remote Call Control
  - Core Avaya Aura for Voice Transport
  - Avaya Aura Conferencing
  - Modular Messaging provides voicemail
  - OCS configured to control Avaya IP softphone or Handset through SIP CTI (TR87)
  - Optional Avaya one-X tabbed interface on OCS
  - OCS provides IM and Presence
  - OCS provides Web Collaboration (LiveMeeting)

**Strength**
- Mature telephony platform
- Clear delineation of operational responsibility
- MOC can be used to control Avaya phone
- Single dial plan

**Concern**
- Stranded OCS/Exchange investment
- Additional desktop support
- End user experience
- Remote soft client performance
- Cost – Avaya Aura Application Enablement Services req’d
- Vendor support in split environment
- On-going vendor support for RCC

Transforming Technology into Solutions

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Remote Call Control Interface

Office Communicator with Avaya one-X tabbed interface
Remote Call Control

- XBAP over HTTP (Tabbed one-X)
- Avaya Aura Communication Manager
- Avaya Aura Presence Services
- Avaya Aura Application Enablement Services
- OCS Front-End
- CTI
- SIP CTI (TR87)
- SIP
- one-X Portal Server
- one-X Portal Server

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Remote Call Control - Benefits

- Leverage existing investment in Avaya handsets
  - Existing Call Control and CAC
  - Existing gateways and dial plan rules
- Integration with AD for dial by name and reverse number lookup (RNL)
- Extends telephony presence to the desktop
  - Manage telephony device from MOC
    - Call forwarding
    - DTMF tones
    - Click to Call
    - Transfers
- Microsoft Office Communicator still leveraged for PC to PC audio and video calls
- Single Call control engine and dial plan
Remote Call Control - Limitations

- Potentially confusing end user experience
  - Peer to peer communications in MOC must be disabled
- Avaya one-X Tabbed Interface is not aligned with LiveMeeting collaboration strategy
- No single sign on/AD authentication
- Avaya Ad-hoc conferencing cannot be initiated from Microsoft Office Communicator
- Inability to leverage Microsoft Office Communicator as softphone for Avaya anchored calls
- Licensing costs (req’d Microsoft Enterprise CAL and Avaya Licensing)
- Unable to leverage Enterprise Voice telephony features
  - DND
  - Schedule based routing
Architectural Considerations

- Configuration 3 - EV Direct SIP with Presence Subscription
  - Voice Transport shared between Core Avaya and OCS
  - User can place and receive calls on Avaya or OCS
  - OCS replaces current audio conferencing
  - Exchange 2010 provides centralized voicemail for OCS
  - OCS provides IM and Presence
  - OCS provides Web Collaboration (LiveMeeting)

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<thead>
<tr>
<th>Strength</th>
<th>Concern</th>
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<tr>
<td>• Mature telephony platform</td>
<td>• Supportability, operational costs</td>
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<tr>
<td>• Capital cost - leverage in place systems</td>
<td>• Complexity – multiple dial plans</td>
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<tr>
<td>• Accelerate PBX replacement</td>
<td>• Organizational responsibilities</td>
</tr>
<tr>
<td>• Unified soft client with handset</td>
<td>• Vendor support in split environment</td>
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<td>• Flexibility</td>
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EV Direct SIP with Presence Subscription

SIP
OCS Front-End

SIP
Mediation Server

SIP
Avaya Aura Communication Manager

Avaya Aura Presence Services
PERSON “A”

- On a Change of status the PRESENTITY will be updated on Avaya Aura Presence Services.

- The Presence Services will Notify the WATCHER via Web Service

- WATCHER updates OCS/Lync via UCMA.

Off-Hook Status Event
EV Direct SIP with Presence Subscription - Benefits

- User can choose to answer using Avaya handset or Microsoft Office Communicator (MOC)
- Anywhere access (superior performance, no need for VPN)
- Integration with AD for dial by name and reverse number lookup
- Extends telephony presence to the desktop (when using EV)
- MOC may be leveraged for audio and video calls
- Ad-hoc conferencing can be initiated from MOC
- Can leverage Avaya telephony investment, gateways, and least cost routing
- Microsoft Adaptive Codec for low bandwidth conditions
- Can utilize Avaya Modular Messaging as voicemail platform
- Leverage Avaya telephony for common area phones
- Consistent presence state
EV Direct SIP with Presence Subscription - Limitations

• End user confusion
  – Calls to DID ring Microsoft Office Communicator (MOC) only when MOC is selected in Avaya simultaneous ring
  – MOC to MOC calls ring Avaya handset only when DID is selected in MOC simultaneous ring

• Dual call control engine and dial plan

• Requires additional Avaya licensing – Avaya Aura Presence Services
Microsoft Lync Overview
Microsoft Lync Overview

- Microsoft has rebranded Office Communications Server to Lync Server
- Next version is known as Lync Server 2010
- During beta the product was referred to as:
  - Wave 14
  - Communications Server 14
  - Communications Server 2010
- Why did Microsoft rebrand to Lync?
  - Office Communications Server 2007 R2 doesn’t exactly roll off the tongue
  - Lync is a unique product name
  - Wanted to reinforce the user perspective
  - Microsoft suggests that “lync” can be used as a verb
Microsoft Lync New Features

- Enhanced 911 for North America
- Branch Resiliency
- Datacenter Resiliency
- Call Admission Control
- Call park
- Unassigned number handling
- Private line
- Malicious Call Trace
- Media bypass (Mediation Server not required for most PSTN calls)
- Analog devices
- Common area phones
- PSTN re-route (WAN failure)
- Additional Audio Devices (Including lower cost IP phones)
- Support for Virtualization
Microsoft Lync Virtualization

• What’s supported?
  – Virtualization of specific Lync Server 2010 roles
  – SQL, Exchange, Active Directory Domain Services virtualization (as per guidelines)
  – Hyper-V R2 (2008 not supported), VM Ware (per SVVP)
  – Client virtualization (except Audio/video – use IP phone)

• Not Supported
  – Branch office/Gateway only/Mediation server + gateway
  – Standard Edition (single server deployed as “Datacenter” site)
  – LIVE migration of VMs via SCVMM (ongoing calls/sessions will be dropped)

• Virtual Deployment (~500 users)
  – 4 VMs – Front end, back end+ file store, A/V Conferencing, Edge
  – 1 Physical machine – 16 cores, 16GB, 50 GB SAS drive, Dual NIC, Intel Xeon E7450 procs. Dedicated to Lync Server 2010 only
Microsoft Lync 2010 Client

- Converged Communication Experience
- Available across PC, Web, Mobile
- Powered by a single extensible Platform
IM, Presence & People
Experience Lync

- Find and communicate with the right people
  - Locate someone on Microsoft Lync using incomplete information

- Connect with your Social Network
  - People are easy to get in touch with. Share where you are and what you are doing

- Manage your Communications
  - Easily manage your day to day communication using Microsoft Lync

- Communicate within Context
  - Communicate and collaborate from within office applications
Find & Communicate with the Right People

Consistent People Experience
- Picture
- Presence with Status & Location
- Access to Multiple Modalities

Live Contact card
- Presence
- Active Directory® Domain Services
- Exchange Personal Contacts
Integration with SharePoint Profile Search

- Enabled using in-band settings
- Client connects directly to SharePoint Profile service
- Requires SharePoint 2007 or Later
Connect with your Social Network

**Frequent Contacts**
- Pre-populated with your Team from AD DS
- Top 10 frequent Contacts
- Pinned contacts

**Access to Contact list in Outlook 2010**
- Avoid context switching
- Easier to find and start conversation
Manage your Communications

Conversation Environment

- Manage multiple Active Conversations in one place
- Redial list for all your conversations (IM, Calls, Conferences or Collaborative Conversations)
- Access to Conversation History (via EWS)
- Missed IMs & Calls
Efficient Voice Mail

- Automatic indexed transcription
- Multiple language support
- Callback or send message
Share Video in Calls and Conferences

• Alpha-blended on-hover video controls make it easy and intuitive to share video.

• Name of participant indicates who is sharing video in the conference

• Panorama video from RoundTable device makes it easy to share video of the room in room-to-room calls and multi-party conferences
Device Selection

- Device Selection makes it easy to switch between telephony devices without having to launch advanced A/V tuning settings.
- Devices can be changed before or during a phone conversation.
Easy Scheduled Online Meetings

- Meeting invite is a clean and clear message
- Simple join link emphasizes joining via Lync but allows to join from just a phone as well
Easy Online Meetings

• Content is king (when present)
• Presenters are informed and in control
• Social context is important; know who is “in the room” and who is making changes
Attendees to Online meetings do not need Lync, they do not even need Windows. If they have a browser, they can attend (and even present).
Demo
Microsoft Lync Demo

Additional Slides
Simple, Direct Collaboration

- Transition from talking to working
- Easily add Desktop Sharing, a PowerPoint presentation, or a whiteboard to your conversations.
Location

- Auto-detected or user entered
- Visible by others unless disabled via privacy settings
- Used for Enhanced 9-1-1
Manage your Communications

Visual Toast
- Know the person & context of conversation before you join

Win 7 SuperBar Notification
- The SuperBar makes your communication activity quickly glance

Communication Dashboard
- Information on what you have missed (Calls, IMs, Conferences or Voicemails)
Communicate within Context

Backstage
- Click to communicate directly from Word, PowerPoint and Excel

Co-authoring
- Author documents together with IM, voice and video
Connect with your Social Network

**Me Area**
- Share where you are and what you are doing
  - Personal Note, Location, Presence
- Change your Picture

**Activity Feed**
- Know what your network is doing
- Know who is working on what
- Know who has a change in Role
- And more…
Sources

Presence (Web Picture)
- Web URL published via Presence
- Need open/un-authenticated URL
- Available for federated contacts

Active Directory (Corporate Picture)
- Synced from SharePoint MySite
- Using ABS-WQ Web Service
- Cached on the Local Client
Live Contact Card

- Aggregated Data from Multiple Sources
  - Presence
  - AD DS
  - Exchange Personal Contacts

- Access control Information
  - Colleagues -> Work Phone number
  - Workgroup -> Mobile Phone number, Current meeting Subject & Location
  - Family & Friends -> All Phone numbers

- Federated Information over Presence
- Organization information to find alternate Contacts