The audio portion of today’s program is available via your PC speakers/headphones or by dialing: +1-719-457-6443, passcode: 679799

Session #1
Implementing IM, Presence, Voice and Video

Migrating to Unified Communications with Microsoft Lync

February 2012
Housekeeping….

The audio portion of today’s program is available via your **PC speakers/headphones** or by dialing: +1-719-457-6443, passcode: 679799

- To reduce interrupts and noise, all lines will remain on mute
- To pose a question/comment, please use the Q/A menu
- A link to the recording of today’s presentation and the slide deck will be sent in a few days via email.
- Want early access to the slides? Follow @AudioCodes on Twitter or LinkedIn
Great Drawings!
Nine opportunities to win!

8 x iPad 2

$2,000 Vacation Voucher!

- To enter the drawing, you must complete the survey to be presented at the end of today’s session (on-demand viewers too!)
- Drawing for Vacation Voucher will occur after the last session and be based on all survey responses collected during the webinar series
- Up to eight chances per person to win with the Vacation Voucher
- Drawing for iPad 2 will be from survey responses for the month & held at the end of each month
- One chance per person per month for the iPad drawing
- Winners will be notified via email
- Only US Legal Residents are eligible
- Complete drawing rules can be found at: http://www.audiocodes.com/uc-migration-series
Today's Presenters

Alan D. Percy
Sr. Director, Marketing NA

Thomas Binder
Voice Architect
Voice Center of Excellence

Michael Nelson
Vice President, Co-Founder
Today’s Agenda

- Introductions and Housekeeping
- Series Overview and Mission
- Getting Started with Lync - Microsoft
- A Customer Experience - IAS
- Connecting the Dots - AudioCodes
- What’s Next?
- Survey / Feedback
- Q/A
What is Microsoft Lync?

The biggest thing to hit the office since Microsoft Office.

- IM & Presence
- Video Conferencing
- Enterprise Voice
- Office Integration
- Mobile apps

www.microsoft.com/lync
Series Background

• Started with “UC with Microsoft Lync – Migration Strategies”
  • June 6, 2011
  • Market analysis, migration strategy and case study
  • All “crammed” into one hour

• Webinar Feedback:
  • Need more “How to” content
  • Want more details on each step
  • More Case Studies
  • Wanted more opportunities to ask questions

• If you missed it, you can view the recording at:
  www.audiocodes.com/events/recorded-webinars
UC Migration with Microsoft Lync Sessions

Implementing IM/Presence/Voice & Video
Emergency Services and E911 with UC
Moving off the PBX / Moving SIP Phones to Lync
SIP Trunking – Turning on the Cost Savings
UC Mobility - Taking it on the Road
Branch Office Deployments and Survivability
Call Recording and Compliance with UC
Unified Messaging - Integrating the Desktop
Migrating to UC with Microsoft Lync
Implementing IM/Presence/Voice & Video
Thomas Binder, UC Voice Architect
tbinder@microsoft.com
Agenda

- About me
- Terms
- Building a Lync environment
- Connecting to the PSTN
- Resources
- Q&A
Thomas Binder

- Thomas Binder
- Austria, Vienna
- Working on OCS/Lync since 2007
- MCS Voice CoE
Terms

- Front End Server
  - SIP registrar
- Pool
  - A cluster
- SIP Trunk
  - Connection to a SIP Trunking provider
- Conference
  - A conversation with more than two users
- PBX
  - Private Branch Exchange
- PSTN
  - Public Switched Telephony Network
Requirements

- **Active Directory**
  - Forest/Domain functional Level
    - Windows Server 2003 native mode
    - Windows Server 2008
    - Windows Server 2008 R2
  - Lync will require a Schema Update

- **Certification Authority**
  - Certificates for all servers

- **DNS**
  - A records and SRV records
Building a Lync environment

Front End Server
- SIP Registrar
- IM/Presence
- Can collocate
  - AV Conferencing Server
  - Mediation Server

Dedicated SQL backend
- Only required for EE
- Active/passive cluster

Enterprise vs. Standard Edition
- Same functionality
- Standard Edition
  - Single box solution
  - Includes also back end database
  - 5,000 users
- Enterprise Edition
  - High Availability
  - Requires dedicated SQL server and Hardware Load Balancer
  - Up to 80,000 users
Building a Lync environment

AV Conferencing Server
- Can be collocated with Front End
- Dedicated Server recommended for scalability
- For pools with 10,000+ users
- Each supports 20,000 users
Building a Lync environment

- Front End Server
- Backend Database
- AV Conferencing Server
- Monitoring Server

Monitoring Server
- Call Detail records
  - Who, when, how long
  - Usage information
- Quality metrics
  - Endpoint information
  - Network
- Out-of-the-box reports using SQL Server reporting services
- Can be collocated with Archiving Server
- Stores data in SQL Server
Building a Lync environment

- Front End Server
- Backend Database
- AV Conferencing Server
- Monitoring Server
- Archiving Server

Archiving Server
- Archives Instant Message
- Full content
- Privacy vs. compliance
- Can be collocated with Monitoring Server
- Stores data in SQL Server
Building a Lync environment

- Front End Server
- Backend Database
- PSTN
- AV Conferencing Server
- Monitoring Server
- Archiving Server
- Exchange UM
  - Provides Voice Mail for users
- Mediation Server
  - Can be collocated with Front End Server
  - Connects Lync to PBX or PSTN
  - Different integration options
Building a Lync environment

Reverse Proxy
- Used for https traffic
- Can reuse existing Reverse Proxy
- Any Reverse Proxy can be used

Edge Server
- Relays SIP, Conferencing and Media traffic
- Enables remote users, Federation and PIC
- Can use DNS Load Balancing or Hardware Load Balancing

Director
- Optional component
- Can redirect users
- Can function as next hop for all external traffic
  - Recommended if Edge Server is deployed
Building a Lync environment
Enterprise Voice

Direct SIP to IP PBX

Mediation Server  ---  IP PBX

Gateway to PBX

Mediation Server  ---  Gateway  ---  PBX

Gateway to PSTN

Mediation Server  ---  Gateway  ---  PSTN

SIP Trunking

Mediation Server  ---  SIP Trunking
Lessons learned

- Know your deployment goal
- Network
- Open Interoperability Program
- Devices
- Phased approach
  - Internal
  - External
  - PSTN
- User Training
Resource

- Public documentation
- Open Interoperability Program
- Phones and Devices Qualified for Microsoft Lync
- NextHop: Microsoft Lync Server Documentation Hub
- Lync.com
  - [http://lync.com](http://lync.com)
Thank You

tbinder@microsoft.com
Integrated Access Solutions

Unified Communications Specialists
Integrated Access Solutions

- UC Experts - Everything UC
- 10+ years in Business
- Gray hair and scar tissue
- Legacy TDM through the evolution of VOIP to IP Telephony to Unified Communications
- Thousands and thousands of Digital AND IP endpoints deployed
Integrated Access Solutions

- Mid-Market to Enterprise Focus
- Over 100 Years of Experience
- Subject Matter Experts
- Legacy, Digital and IP PBX Platforms
- Advanced Communications Applications
Case Study - OC Technology Company

- **Situation**
  - Dying PBX
  - Obsolete communications methods
  - Global foot print
  - Major corporate relocation
  - Changing business needs
  - Distributed work force
  - Outsourced conferencing and collaboration services costly

Orange County based with 450 employees worldwide
Solution-Consulting

- Deep needs analysis
  - Workflow
  - Customer interaction
  - Employee efficacy

- Infrastructure evaluation
  - Data Network – WAN/LAN
  - Messaging
  - Enterprise applications

- UC impact study
  - Voice and Video capacity assessment
  - Enterprise application integration

- Generate Design Options
Solution - New Economy Approach

- **Foundation**
  - HP Networking
  - Microsoft EA
  - Audiocodes
  - Polycom
  - Intelepeer

- **End User Experience**
  - Teaming
  - Collaboration
  - Mobility
  - Adaptability
Platform for a Global Solution

- HP Networking
- Core Switching and Routing
- Distribution and Access
- Security
- Microsoft Enterprise
  - Servers and Storage
  - Exchange – Outlook – Active Directory
  - Unified Communications
    - Voice – Video – Secure IM - Collaboration
  - Security
  - Distribution and Access
  - Servers and Storage
- HP Networking
Empowering a Global Team

Global Communications Network

California
Irvine

United Kingdom
Basingstoke

Israel
Netanya

Taipei
Taiwan

New Zealand
Auckland

Any Time Anywhere
Voice
Video
Secure IM
Collaboration
Presence

AudioCodes  Microsoft Lync  HP Networking
Economic Overview - Cisco versus Audiocodes MSFT HP

<table>
<thead>
<tr>
<th>Category</th>
<th>Cisco</th>
<th>Audiocodes MSFT/HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Equipment</td>
<td>$250,000.00</td>
<td>$215,000.00</td>
</tr>
<tr>
<td>UC Software Licensing</td>
<td>$200,000.00</td>
<td>$150,000.00</td>
</tr>
<tr>
<td>IP Phones</td>
<td>$100,000.00</td>
<td>$75,000.00</td>
</tr>
<tr>
<td>Optimized Phones</td>
<td>$50,000.00</td>
<td>$25,000.00</td>
</tr>
<tr>
<td>Installation Services</td>
<td>$25,000.00</td>
<td>$20,000.00</td>
</tr>
<tr>
<td>Annual Maintenance and Support</td>
<td>$15,000.00</td>
<td>$10,000.00</td>
</tr>
</tbody>
</table>

Total Cisco: $420,000.00
Total Audiocodes MSFT/HP: $215,000.00
Migrating to Unified Communications with Microsoft Lync

February 2012
What AudioCodes Does...

The Communications World:

- Communications - world is shifting towards an all IP infrastructure
- Growth driven by desire for unified communications, cloud computing and mobility
- Incumbent vendors struggle to adapt to demands of newly emerging software applications

AudioCodes innovative, interoperable and diverse portfolio of solutions are uniquely positioned to enable this transition
Media Gateway Market Share

Low Density Market Share – Q4 2010

- AudioCodes 46%
- Dialogic 22%
- Cisco 8%
- GENBAND 8%
- Others 16%

Mid Density Market Share – Q4 2010

- AudioCodes 37%
- GENBAND 20%
- Metaswitch 10%
- Others 16%
- Huawei 5%
- Cisco 12%

- Ranked #1 in VoIP chips (1997-2000)
- Ranked #1 in VoIP communications blades (1998-2006)
- Ranked #1 in VoIP Medium Density & Low Density media gateways (2008-2010)
- Focused on Enterprise Voice

Source: Infonetics, 4Q10 SP VoIP Equipment & Subscribers
Starting Point: Businesses Today

Internet

Firewall

Router

LAN

Outlook Clients

PSTN

T1/E1 or Analog Trunks

TDM

IP

IP-PBX or PBX

SIP or Digital Phones

Analog Phones

Fax

Starting Point: Businesses Today.
Implementing Lync without Voice Integration

![Diagram showing network connections and devices including Internet, Firewall, Router, Lync Server, PSTN, T1/E1 or Analog Trunks, IP-PBX or PBX, SIP or Digital Phones, Analog Phones, Fax, Outlook and Lync Clients.]
Behind the PBX

Internet

Firewall

Router

AudioCodes Media Gateway

LAN

PSTN

555-1xxx

AudioCodes Media Gateway

555-2xxx

SIP or Digital Phones

Analog Phones

Fax

555-2xxx

IP

TDM

Outlook and Lync Clients
Drop and Insert

Internet

Firewall

Router

Lync Server 2010

LAN

Outlook and Lync Clients

PSTN

AudioCodes Media Gateway

555-1xxx

555-2xxx

IP-PBX or PBX

SIP or Digital Phones

Analog Phones

Fax

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SIP with IP-PBX

- Internet
- Firewall
- Router
- AudioCodes E-SBC
- PSTN
- T1/E1 or Analog Trunks
- LAN
- 555-1xxx
- TP-PBX
- SIP or Digital Phones
- 555-2xxx
- Analog Phones
- Fax
- Outlook and Lync Clients
- SIP with IP-PBX

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## Unified Communications Building Blocks from AudioCodes

<table>
<thead>
<tr>
<th>Features</th>
<th>MediaPack 1xx</th>
<th>Mediant 800</th>
<th>Mediant 1000</th>
<th>Mediant 2000</th>
<th>Mediant 3000</th>
<th>Mediant 8000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office Communications Server 2007 R1/R2 (Gateway Type)</strong></td>
<td>Basic</td>
<td>Basic</td>
<td>Basic-Hybrid</td>
<td>Basic-Hybrid</td>
<td>Basic</td>
<td>Basic</td>
</tr>
<tr>
<td><strong>Lync Server 2010 (Gateway Type)</strong></td>
<td>Analog Device</td>
<td>Enhanced</td>
<td>SBA SPS</td>
<td>Enhanced</td>
<td>Enhanced</td>
<td>Enhanced</td>
</tr>
<tr>
<td><strong>Filed Upgradable - Firmware upgrade</strong></td>
<td>IP Gateway</td>
<td>IP Gateway</td>
<td>IP Gateway</td>
<td>IP Gateway</td>
<td>IP Gateway</td>
<td>IP Gateway</td>
</tr>
<tr>
<td><strong>Microsoft Exchange Server 2007 &amp; 2010 (Gateway Type)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Max PSTN Channels</strong></td>
<td>2/4/8/24</td>
<td>30</td>
<td>120</td>
<td>480</td>
<td>2,016</td>
<td>16,000</td>
</tr>
<tr>
<td><strong>PSTN Interfaces</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FXS/FXO Up to 24 FXS or 8 FXO ports</td>
<td></td>
<td></td>
<td>Up to: 1 E1/T1 4 BRI ports 12 FXS/FXO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mix of: 1 - 4 E1/T1 1-20 BRI 4-24 FXS/FXO</td>
<td></td>
<td></td>
<td>1 -16 E1/T1 trunks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 63/84 E1/T1 trunks</td>
<td></td>
<td></td>
<td></td>
<td>Up to 8xOC-3 (STM-1) ports, Up to 24xT3 (DS-3) ports Up to 252 E1/T1/J1 trunks</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Modularity</strong></td>
<td>Fixed configuration analog gateway</td>
<td>Fixed configuration gateway</td>
<td>Full Modularity</td>
<td>Fixed configuration digital gateway</td>
<td>Fixed configuration digital gateway</td>
<td>Full Modularity</td>
</tr>
<tr>
<td><strong>SBC / IP to IP</strong></td>
<td>N/A</td>
<td>Full E-SBC Up to 24 concurrent Sessions</td>
<td>Full E-SBC Up to 150 concurrent Sessions</td>
<td>IP to IP Up to 240 concurrent Sessions</td>
<td>Full E-SBC Up to 1000 concurrent Sessions</td>
<td>B2BUA Transcoding Application</td>
</tr>
</tbody>
</table>
AudioCodes 360 Support

- Targeted for MSFT Channels and VSPs
- Utilizes the PDI services Framework

Planning & Design
- Planning Assessment
- High Level Design
- Migration Planning
- Detailed Design
- Staging plan
- Implementation Plan

Implementation
- Media GW’s Configuration & Deployment
- VOIP Deployment and Acceptance
- PSTN and PBX telephony integration
- Installation Services
- Integration and migration between current & target voice infrastructures

Microsoft Unified Communications

Deploy & Installation
- Media Gateway
- E1/T1/BRI/FXO/FXS

Optimization
- Period Support
- Quality Analysis
- Fault Analysis

Design & Planning
- Enterprise
- PSTN

Post Sales Support

Project Management
Our Next Session

Emergency Services and E911 with UC

• Discussing the challenges and requirements
• Introduce ELIN
• Special handling for E-911 calls
• Cost-saving techniques
• Review a customer case study
• Presenters:
  Pascal Menezes, Senior Program Manager, Microsoft
  Chris Sheridan, Solutions Architect, Sentri and a vTSP for Microsoft
Year of the Lync Webinar

AudioCodes and Infonetics Research Webinar

Year of the Lync
Migration to Microsoft Lync Voice Solutions

Wednesday
February 22, 2012
11:00am EST
(5:00pm CET)
Duration: 1 hour

AudioCodes

Infonetics Research

Register at: www.audiocodes.com/events/live-webinars
Survey Time!

8 x iPad 2

$2,000 Vacation Voucher!

We appreciate your feedback!
Please complete the short survey
http://www.surveymonkey.com/s/UCMIGRATION
Q/A and To Learn More:

• Questions: Use the Q/A menu on Live Meeting

• More on Lync solutions at: www.audiocodes.com/Lync
  • Whitepapers
  • Recorded webinars
  • Videos
  • Datasheets/Brochures

• Social Media
  • Twitter – @AudioCodes or @AlanDPerce
  • LinkedIn
    – AudioCodes
    – AudioCodes / Lync Resource Center Group

See us at:

Booth #1136
More on Lync solutions at: www.audiocodes.com/Lync

Thanks!

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AudioCodes