What is the IBM/Cisco Unified Communications Solution?

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IBM’s definition of Unified Communications

IBM defines Unified Communications & Collaboration as the deep integration of rich presence, instant messaging, email, unified messaging, telephony, web, audio and video conferencing…

…delivered through a unified user experience

… and available as a set of contextual services which can be accessed from and integrated with applications and business processes
IBM’s Unified Communications and Collaboration Strategy

**Vision:** Foster innovation and business agility by making it easier for people to find, reach and collaborate through a unified user experience

### Software platform
- Open & Extensible
- Intelligent Integration
- Unified experience
- Multi-vendor support

### Integration services
- Plan, Deploy, Manage
- Reduce Risk
- Faster Time to Value

### Business Partners
- Broad ecosystem
- Customer Choice
- Leverage existing investments

### Industry expertise
- Business Process Optimization
- Responsiveness & Agility
- Competitive Advantage
IBM Lotus Sametime Product Family

Three tiers of capability

Sametime.wmv
IBM Lotus Sametime Product Family

- Persistent Chat Rooms
- Social Networking Tools
- Instant Screen Share
- Location Services

- VoIP chat, Video
- Telephony Integration
- File Transfer, Screen Capture
- Web Conferencing
- Mobile Clients
- Enterprise & Public IM Federation
- Extensible Eclipse client & SDKs

- Presence Awareness
- Secure IM with Rich text, emoticons
- Integration with Office
Integrating telephony with Lotus Sametime

IBM Lotus Sametime Standard & Advanced

Integration with Cisco
Cisco & IBM Sametime Integration Features

phone control

softphone

phone presence

voicemail

click to conference
Cisco & IBM Sametime Integration Interaction

Communication Applications
- Lotus Quickr - Team collaboration
- Lotus Connections - Social networking
- WebSphere Portal - Web portal
- WebSphere Application Server - Applications

Communication Application Services
- Cisco MeetingPlace
  - Click-to-conference
- Lotus Sametime
- UM message store

Call Control
- Click-to-call / conference
- Cisco Unified Presence

Unified Messaging
- Cisco Unity and Unity Connections

Network Layer

Endpoints
- Hardphone control
- IP Phones
- Softphone
- Phone status

Integration
- Sametime
- Sametime Mobile
- Notes client

Blue Icons = Cisco Products
White Icons = IBM Products

IBM Services
- Strategy and Assessment services
- Architecture and Design Services
- Integration and Deployment Services
- Outsourcing and out tasking services
- Maintenance services

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Click to Call & Conference with Lotus Sametime

- **Native Sametime controls to start a call from buddy list or IM session**
  - Sametime server sends call requests to Unified Communications Manager, which sets up the call between the initiator’s and buddy’s phones

- **Point-to-point and conference calling**

- **Requirements** (see slide notes for doc info)
  - Sametime server plug-in
  - Unified Communications Manager 6.0 or later
  - Sametime 7.5.1 CF1 or later
IP Communicator Click to Call with Lotus Sametime

- Start IP Communicator calls from Sametime buddy list or IM session
  - Passes phone number from Sametime to IP Communicator
  - Use default phone # or add others
  - Start multiples calls & conference in CIPC

- Include video with Unified Video Advantage

- Requirements
  - IP Communicator 2.1.3 or later with Sametime client plug-in *
  - Unified Communications Manager 4.1.3 or later
  - Sametime 7.5.1 CF1 or later
Cisco Phone Control with Lotus Sametime

- Control Cisco IP Phone from Lotus Sametime
- Start call, conference from buddy list
- Escalate IM session to phone call
- Answer or redirect incoming call
- Have multiple calls active simultaneously
- Control active call
  - hang up, hold/resume, merge, dial pad
- Requirements
  - Sametime client plug-in
  - Unified Communications Manager 4.1.3 or later
  - Sametime 7.5.1 CF1 or later

* target plug-in availability is June 2008, as free download from Cisco.com

NOTE: Interface subject to change before final release.
Cisco Unified Messaging with Lotus Sametime

- View, play & manage Cisco voicemail from Sametime
- Filter by Inbox, Deleted, Heard, Unheard
- Presence shown with messages (Sametime & phone, if enabled)
- From voicemail entries, activate other Cisco plug-ins (e.g. click to call or MeetingPlace conference)

Requirements (doc info in slide notes)
  - Unity 4.2 or later, OR Unity Connection 2.0 or later
  - Sametime client plug-in
  - Sametime 7.5.1 CF1 or later
Cisco Phone Presence with Lotus Sametime

- Phone presence info visible from Sametime
  - Displays next to Sametime presence indicator
- See if a person you need to reach is on the phone or not
- Requirements
  - Cisco client plug-in
  - Unified Presence 6.0.2 or later
  - Unified Communications Manager 5.1 or later
  - Sametime 7.5.1 CF1 or later
Unified MeetingPlace Click to Conference with Lotus Sametime

- **Click to MeetingPlace conference from Sametime buddy list or IM**
  - Controls integrated with IM window for users with plug-in
  - All users receive attend link in IM
- **Voice, video and web conferencing**
  - Configurable to use MeetingPlace or WebEx web conferencing
- **Requirements**
  - Sametime client plug-in
  - Unified MeetingPlace 6.0.2 or later
  - Sametime 7.5.1 CF1 or later
Unified MeetingPlace Audio with Lotus Sametime Web

- Control MeetingPlace audio/video from Sametime web meeting room
- Native Sametime web controls
  - Dial out to self, other users
  - Current speaker indications
  - Mute/unmute from web
  - Lock/unlock from web
- Start meetings from Sametime client (“instant meeting”) or Sametime web meeting center

- Requirements
  - Sametime server plug-in
  - Unified MeetingPlace 7.0 or later
  - Sametime 7.5.1 CF1 or later
IBM Lotus Unified Sametime telephony

IBM Unique Approach to UC2
IT and communications industries are moving to real-time collaboration

Telecommunications vendors
adding collaboration, presence and mobility capabilities

Software vendors
adding voice, presence, video and mobility capabilities

- Alcatel-Lucent
- AVAYA
- CISCO
- NORTEL NETWORKS
- SIEMENS

IBM Lotus Domino / Notes
IBM Lotus Sametime

IBM follows a partnership strategy. Partner and integrate with leading telecommunications vendors.

IBM follows a partnership strategy. Partner and integrate with leading telecommunications vendors.

Exchange / Outlook
Office
Office Communications Server
IBM Lotus Sametime Unified Telephony
Why Lotus Sametime Unified Telephony?

- IBM's unique approach to Unified Communications and Collaboration (UC²)
  - Start from Presence
    - Find ▶ Reach ▶ Collaborate
    - From a Unified Experience
  - Leverage your collaboration and communication infrastructures
Why Lotus Sametime Unified Telephony?

- A Middleware approach to Unified Communications
  - Leveraging and simplifying the communications infrastructure
  - No rip-and-replace...not waiting for upgrades to the entire infrastructure to get benefits
Why Lotus Sametime Unified Telephony?

- Making Users and organizations more productive/responsive
  - Unified Experience for users
  - More effective communication and collaboration
Lotus Sametime Unified Telephony Features

- Telephony presence
- Click-to-call & click-to-conference
- Embedded Softphone
- Incoming call management
- Integrates with YOUR(Cisco) telephony environment
Telephony Presence

Users can see Sametime IM availability status

Users can see if contacts are 'On the Phone'
Click-to-Call

Select a name in the contact list and select 'Call Selected Contact' from the call options.

Click 'call a Phone Number' to access the dialpad.

Enter a name or number in the QuickFind.

Right-click on a name in the contact list and select 'Call' from the menu.

Start an IM session with a contact and click on the 'Call' icon from within the chat window.
Making an external call

Start typing a name or number – select from results or 'Call Phone Number'

Select 'Call a Phone Number...' and type a number into the phone keypad
Embedded Softphone

![Embedded Softphone](image)
Call Window

Call window displays for when using SUT soft phone or other phone device designated by user

Consistent call window regardless of:
- number of people (1-1 or conference call)
- device (phone, computer, etc)

Participant List
- Connection status
- Business card
- Context menu

Participant Call Controls
- Mute/unmute
- Hold/resume
- Disconnect
- Call transfer to another device
- Call forward to another person
- Call merge
- Invite others
- Show call-in numbers

Moderator Call Controls
- Mute one or all participants
- Drop participant from call
- End call for everyone
- Adjust microphone volume for any participant
Video Call Window

You can show/hide your own video as picture-in-picture
Incoming Call Management

- Rules for routing calls
- Preferred number/device setting
- Incoming call notification
Rules for Routing Calls

Rules can be set according to IBM Lotus Sametime IM status, dynamic location, and caller, date & time.

Calls can target a sequence of numbers.
Setting your Preferred Number

Which phone do I want to use to make and receive calls?
Incoming Call Notification

You can choose to be notified of incoming calls via Sametime incoming call notification, which provides:
- caller ID
- target device/number for that call
- flexible options for accepting/declining the call
## Phone contacts

Allow phone contacts to appear on your contact list for easy click to call action.

Anyone you add to your phonebook will turn up in Quickfind results, making it easy to type their name into the Quickfind and click to call.
Solution Components

IBM Software, Hardware and Services
Lotus Sametime Unified Telephony – Solution components

**Software:**
- Lotus Sametime Unified Telephony software
  - Lotus Sametime Unified Telephony Call
  - Lotus Sametime Unified Telephony Connect
- Pre-req: Lotus Sametime Standard or Advanced *(Sametime Server 8.0 and Sametime Client 8.0.2)*

**Hardware (IBM System xSeries) and OS – “appliance like”**
- Minimum of four servers; 2 of each for failover and support
  - x3550 TAS server supports up to 15,000 users; additional TAS server for failover; running SuSE Linux Enterprise Server (version 10)
  - x3650T TCS server supports up to 100,000 users; additional TCS server for failover; running SuSE Linux Enterprise Server (version 9)
    - x3650T supports 5-9’s of availability
- Minimum of three servers for PoC (1) x3550 TAS and (2) x3650T TCS
  - Will not have full failover capability

**Services:**
- IBM Global Technology Services (IBM Converged Communications Services for Lotus Sametime Unified Telephony)
SUT supported integration with Cisco UCM and Gateways

Integration with following Cisco Call Managers
- Working with following SIP RFCs: 3261, 3264, 4566
- Cisco Call Manager 4/5 – IP-IP gateway
- Cisco Call Manager 7 – direct SIP trunk

Tested interoperability with the following gateways:
- Cisco 3745 – MGCP gateway
- Cisco 3825 – MGCP gateway
Lotus Sametime Unified Telephony Architecture
Sametime Unified Telephony High-level architecture

Lotus Sametime Unified Telephony Call
Telephony Application Server
Delivers user capabilities
Application layer: workflows, rules, call routing, etc

Lotus Sametime Unified Telephony Connect
Telephony Control Server
Manages connections to PBXs

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Existing ST Components
New SUT Components
Existing SIP PBX
Existing non-SIP PBX
Minimum deployment architecture with Cisco

- Sametime Connect
- Telephony Plug-ins
- Softphone
- VP
- SIP
- Telephony Application Server
- Telephony Control Server
- 2 x IBM System x3550
- 2 x IBM System x3650T Model: 7980PBC
- PSTN Gateway
- PSTN

Existing ST Components
New SUT Components
Existing SIP PBX
Existing non-SIP PBX
Sample Incoming Call Flow via IP-PBX

1. Incoming call to user's Unified Number.
2. Call routed to SUT for processing.
3. TCS asks TAS how to route call.
4. User has requested softphone.
5. User is alerted, and requests to join on desk phone, instead of softphone.
6. Decision is returned to TAS.
7. TAS tells TCS how to route call.
8. Call is linked between desk phone and PSTN.
9. Media flows between phone and PSTN.

* - Signaling simplified
** - Flows 4 and 7 could be concurrent, if desired.
Initiate a call to PSTN number using your softphone

Sametime opens your softphone and dials the called person / number

- Your phone presence is changed to “off-hook”
  - other Sametime users can see that you are on the phone
  - phone presence changes back when the call is terminated
- If the called party is a PSTN number, the RTP media flows through PSTN gateway
- Disallowed numbers and toll restrictions need to be configured in SUT and PBX

1. You initiate a phone call
2. SUT dials your softphone
3. Softphone appears, but does not ring
4. Your phone presence is changed to off-hook
5. SUT dials PSTN number
6. PSTN phone rings, when answered, call is connected through the PSTN gateway
7. Media flows through PSTN gateway into the enterprise IP network
8. User ends the call
9. Call is torn down and phone presence reverted
Initiate a call from Sametime using mobile phone

SUT dials your mobile phone and when you answer, the desk phone

- If the called party is IP phone, the call flows in through gateway and over the IP network
- Your phone presence is changed to “off-hook”
Incoming call to your mobile phone

You have selected a mobile phone as your preferred device

- Incoming call to unified number is routed to Sametime by the IP PBX
- SUT will call your preferred device – mobile phone
- If you answer with your mobile phone, the RTP media flows in and out through the gateway taking up two media channels
Initiate a call directly from your mobile phone

A direct call from your mobile phone to PTSN number does not involve SUT

- If you call somebody’s PSTN or mobile phone number from your mobile phone, the call flows directly through cellular and PSTN networks
  - Sametime Unified Telephony can not detect your mobile phone’s presence
- Your mobile phone presence is not visible unless you initiate the call from Sametime
Notes on Deployment Scenarios

- **Acronyms in use**
  - TCS = Telephony Control Server
  - TAS = Telephony Application Server

- TCSs must always be deployed in pairs
  - Required to achieve 5 9’s of reliability

- The capacity of a TCS server pair is 100,000 users
  - Each server in pair is capable of handling all users if the other server fails

- The capacity of a TAS is 15,000 users
  - Each user is assigned to a TAS
  - If a TAS fails, the TCS will revert to default call routing for all affected users until the TAS is re-started (i.e. no failover)
IBM Global Services

Faster time to value
Converged communications services from IBM – help clients to move towards new innovative solutions

Organizations will derive increasingly greater value as their implementation of converged communications evolves

Converged communications enabled network and IP switching capability providing:
Lower TCO, increased flexibility and resiliency

Powerful collaboration capabilities, built on integrated voice, data and video applications delivering improvements in employee effectiveness and productivity

Advanced contacts centers helping to deliver improved customer service

More competitive business models enabled through the integration of new converged communications capabilities leveraging all forms of information for anytime, anywhere decisions

Innovation

Industry solutions

IP Contact Center

Collaboration solutions

Unified Messaging

IP telephony solutions

Network convergence

IP telephony
Unified messaging
Real-time collaboration
IP contact center
Business applications integration

Converged communications

WebSphere
Lotus
DB2
Tivoli
Why IBM?

- Deep experience in design and deployment of IP telephony and real-time collaboration solutions
- Experience in deploying very large-scale solutions
- Ability to offer end-to-end infrastructure and software solutions
- Integration experience with Cisco
- Proven global delivery method and IBM Reference Architecture
- Delivers strategic and operational resilience and security with its services
- Analyst-recognized marketplace leadership in network consulting and IP telephony services
# IBM Lotus Sametime Unified Telephony – Services

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<th>Engagement management</th>
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<td><strong>Strategy and assessment services</strong></td>
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<td>Helps you to create scope, objectives, requirements and strategy for your Lotus® Sametime® Unified Telephony solution</td>
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<tr>
<td><strong>Architecture and design services</strong></td>
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<td>Helps you to create a Lotus Sametime Unified Telephony architecture and design that meets your solution requirements and identified business objectives</td>
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<tr>
<td><strong>Integration and deployment services</strong></td>
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<td>Provides planning, integration and deployment services to implement the Lotus Sametime Unified Telephony solution</td>
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Conclusion

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