



# Deploying Sametime 8.5.x

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# Agenda

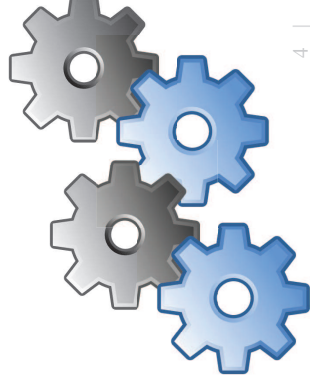
- Modeling Sametime to your business
- Planning the Sametime community
- Sametime components
  - System Console
  - LDAP
  - Community Server
  - Meeting Server
  - Media Server
  - Proxy Server
  - Advanced Server
  - Gateway Server
  - Unified Telephony
- Pilot / Proof of concept installation





# Modeling Sametime To Your Business

- Know your users
  - Desktop clients?
  - Web clients?
  - Lotus Notes integrated clients?
  - Mobile devices?
    - BlackBerry?
    - iOS/Android?
- Know your geography
- Know your business processes

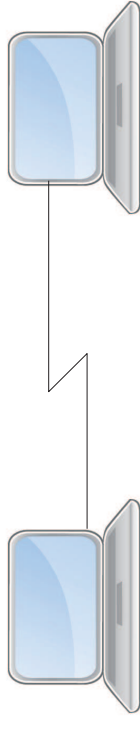
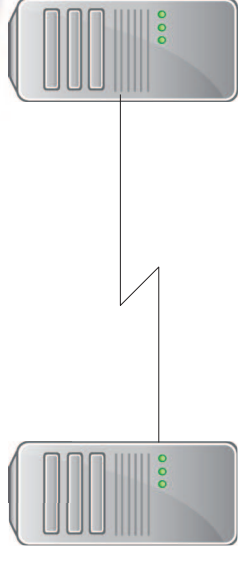


# Deployment Planning – Points to Ponder

- Number of concurrent users
  - 30,000 concurrent IM/awareness connections per server
  - 100s of concurrent meetings per server
  - 100s of concurrent meeting participants per server
- Locations
  - Regional deployments (i.e. Europe/Asia/Americas)
  - Centralized deployments
- Rate of use
  - For most customers, six months after deployment:
  - 97% of potential IM/awareness users logged in at any given time
  - 3-5% of potential meeting users participating at any given time
  - Note that this “follows the sun” ...
- Technical hurdles
  - Firewalls/proxies?
  - Network hotspots?

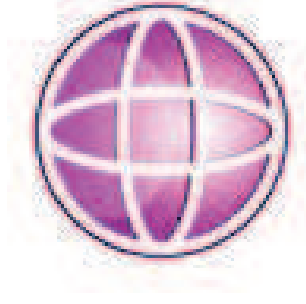
# Connectivity Requirements

- Client-to-server
  - Community Services (tcp/1533)
  - Meeting Services (tcp/80)
  - SIP (5060/5061)
  - Plugins may have their own requirements...
- Server-to-server
  - DB2 (user-defined – default tcp/50000)
  - LDAP (tcp/389 or tcp/636)
  - Community Services (tcp/1516)
  - SOAP (user-defined)
- Peer-to-peer?
- Consider prioritizing network traffic
  - No need for Samesite to be “top dog”!



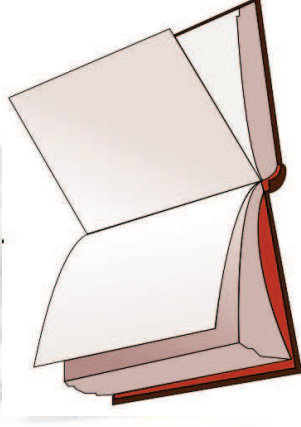
# Community and Meetings – New Paths

- **Sametime 8.5.x Community Services**
  - Same concepts/notions as previous versions
  - Based on Domino 8.5.x
- **Sametime 8.5.x Meeting Services**
  - New path
  - WebSphere-based technology
  - Independent of Community Servers



# Sametime Community

- The Sametime Community is defined by its directory
- Directory choice – Domino Directory or LDAP – must be consistent
  - Same directory configuration
  - Same search filters
  - Same ACLs
- Consultation of multiple directories is possible
  - Federated identity
  - Directory Assistance
  - Consolidated LDAP
- All Community servers work from common view of directory and share information in that context



# Major Concept – Home Sametime Server

- The notion of “home server” becomes important in multiple-server Community deployments
- The home server is the base of one’s awareness in the community
  - Contact list storage
  - Logical “home”
- Users can log into any server, but:
  - Awareness is maintained on home server
  - Contact List retrieved/managed on home server
- Map users to home servers by geography, not job function!
- LDAP Note: This attribute must be added/exposed in LDAP schema

# Installation – Sametime System Console

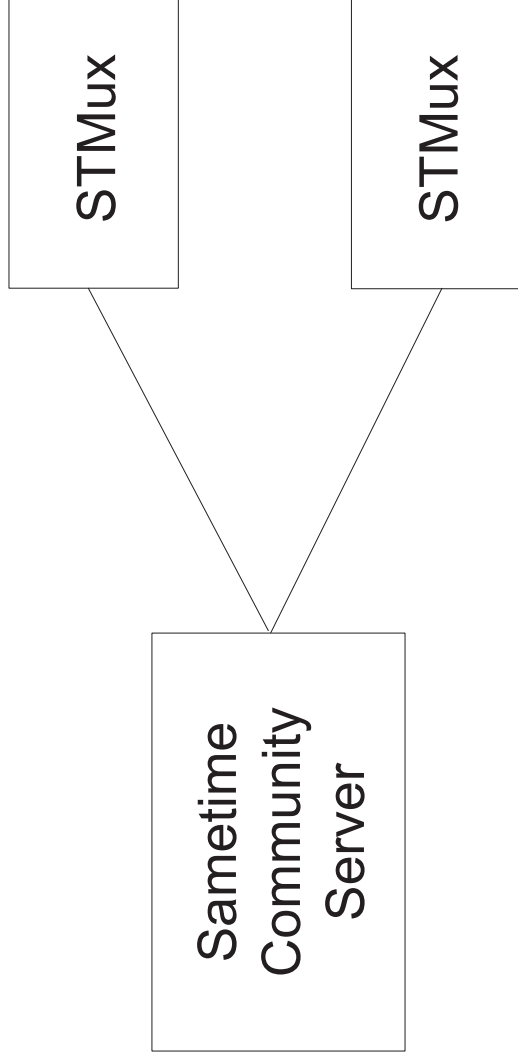
- **Manage prerequisites.**
  - System console manages all info needed for prerequisite components
  - No install/reinstall of IBM DB2 (for example) for each separate offering
- **Centralize configuration.**
  - Setup & testing of things like LDAP centralized in a single location, instead of various wizards in different installers
- **Facilitate deployment planning.**
  - Mechanism to plan the Sametime server deployment
  - Installation of server nodes is simpler, as the shared configuration already exists.
- **Single point of action for administrative tasks**
  - Example: Policies are managed from a single place for all components

# Installation – LDAP

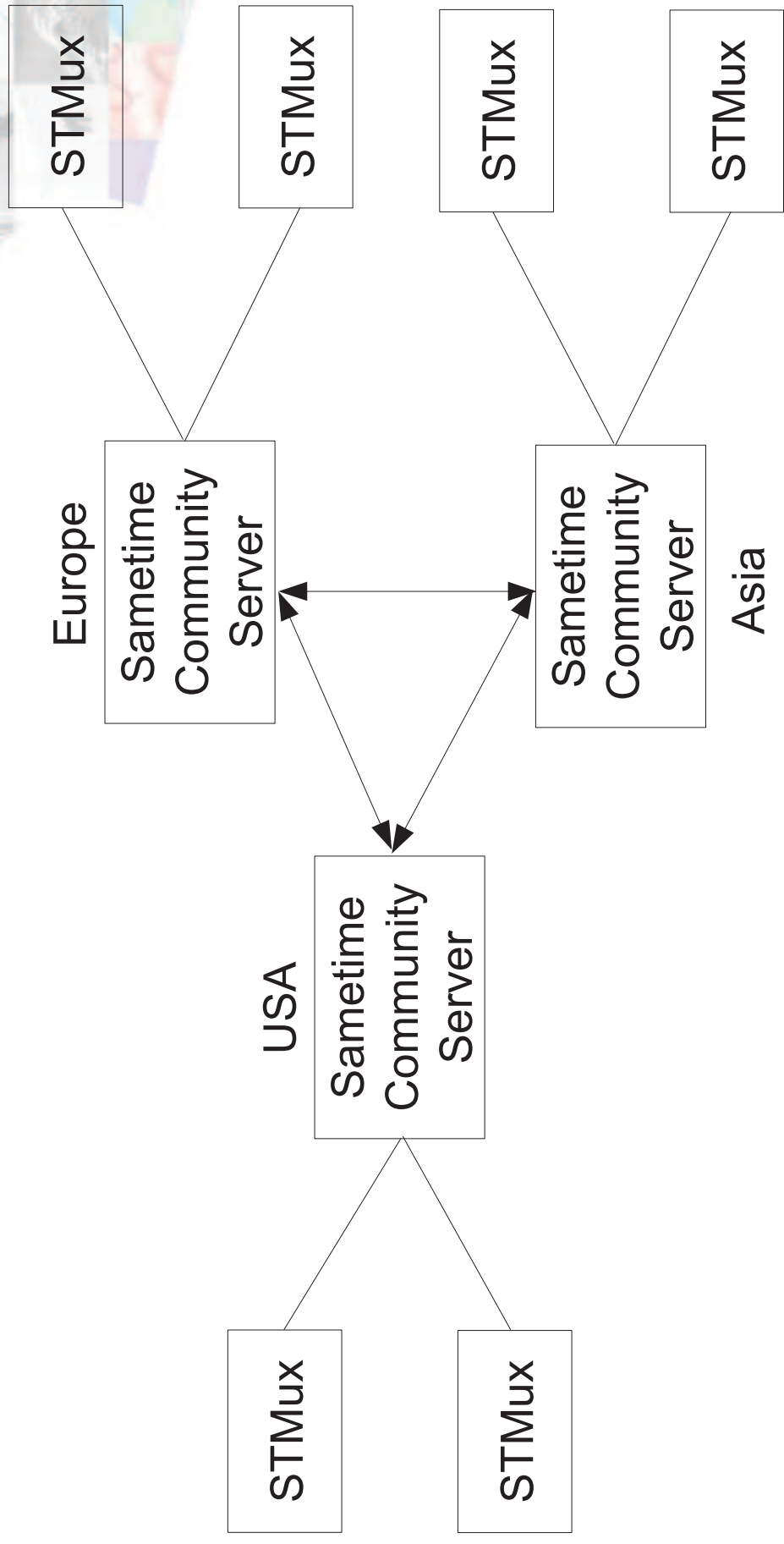
- **Absolutely critical!**
- **Consider ALL your LDAP load**
  - Client lookups
  - Authentication
  - Contact lists
  - Business card features
  - Mobile clients
- **Use standard search filters wherever possible**
  - Configure all your applications to use the same attributes for identity/authentication purposes
- **Use minimal search filters wherever possible**
  - More login choices = longer search filters = greater load on LDAP servers
- **Single sign-on**

# Community Deployment – Single Server

- Domino-based installation
- Can be expanded for IM/awareness users via STMux deployment

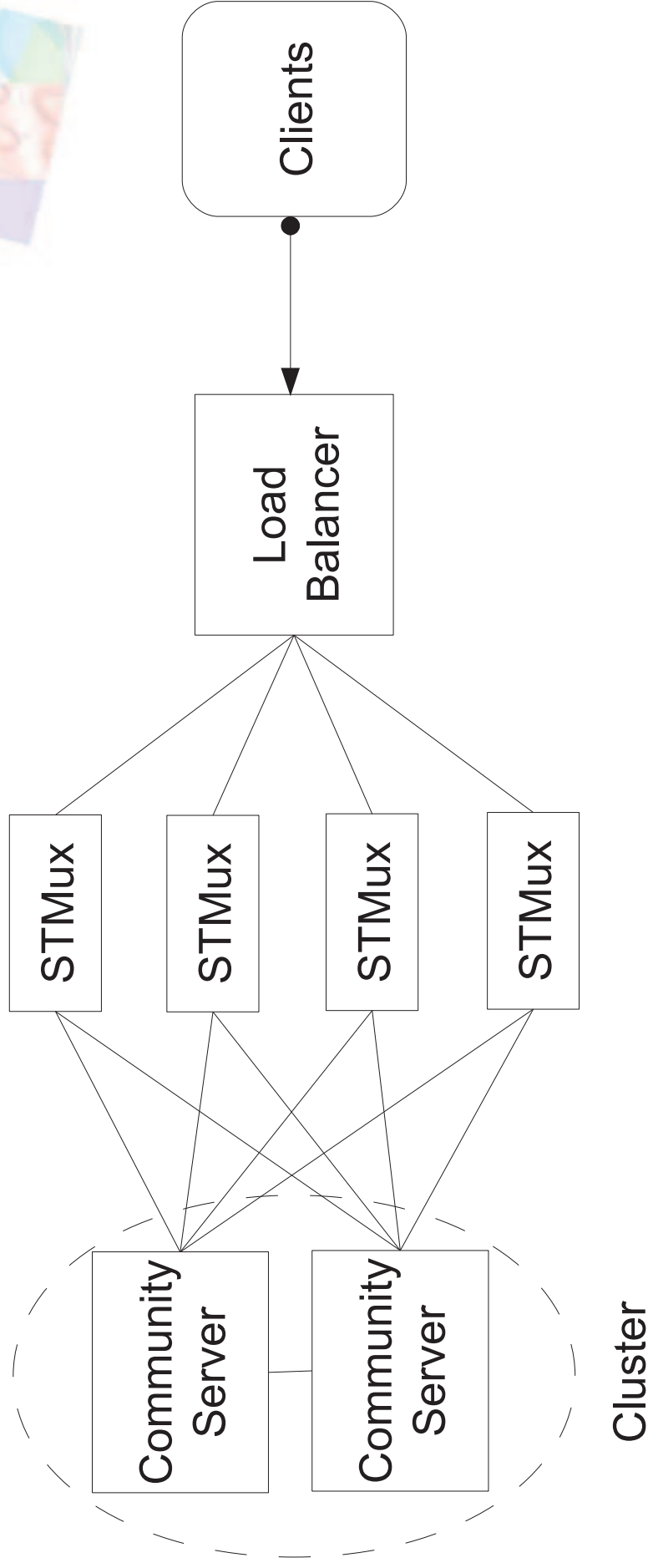


# Community Deployment – Multiple Servers

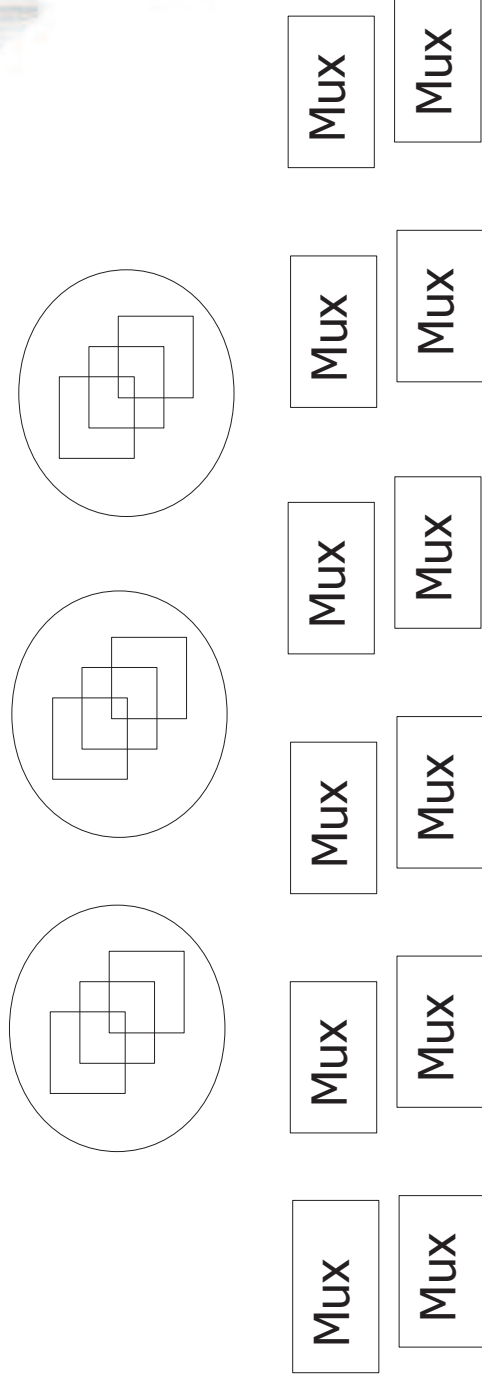


# Community Deployment – Community Clusters

- Straightforward Domino cluster
- “Home Sametime Server” becomes “Home Cluster”



# Community Deployment – How Large?

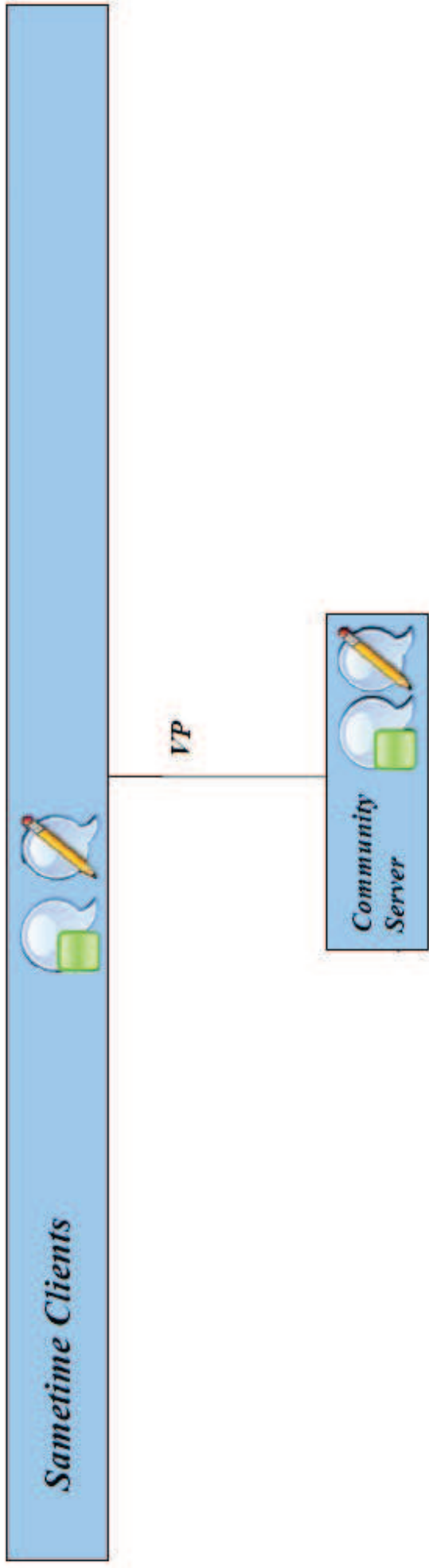


messaging.ibm.com  
(round-robin DNS)

~400,000 in  
community

Peak concurrency  
~270,000 users

# Your Deployment So Far...



*Logical servers shown – may be combined physically depending on user workload*

## SUPPORTING

- **Sametime Connect IM**
- **Lotus Notes Embedded**
- **2-way Audio/Video Chat**

# Sametime 8.5 Meetings – A New Approach

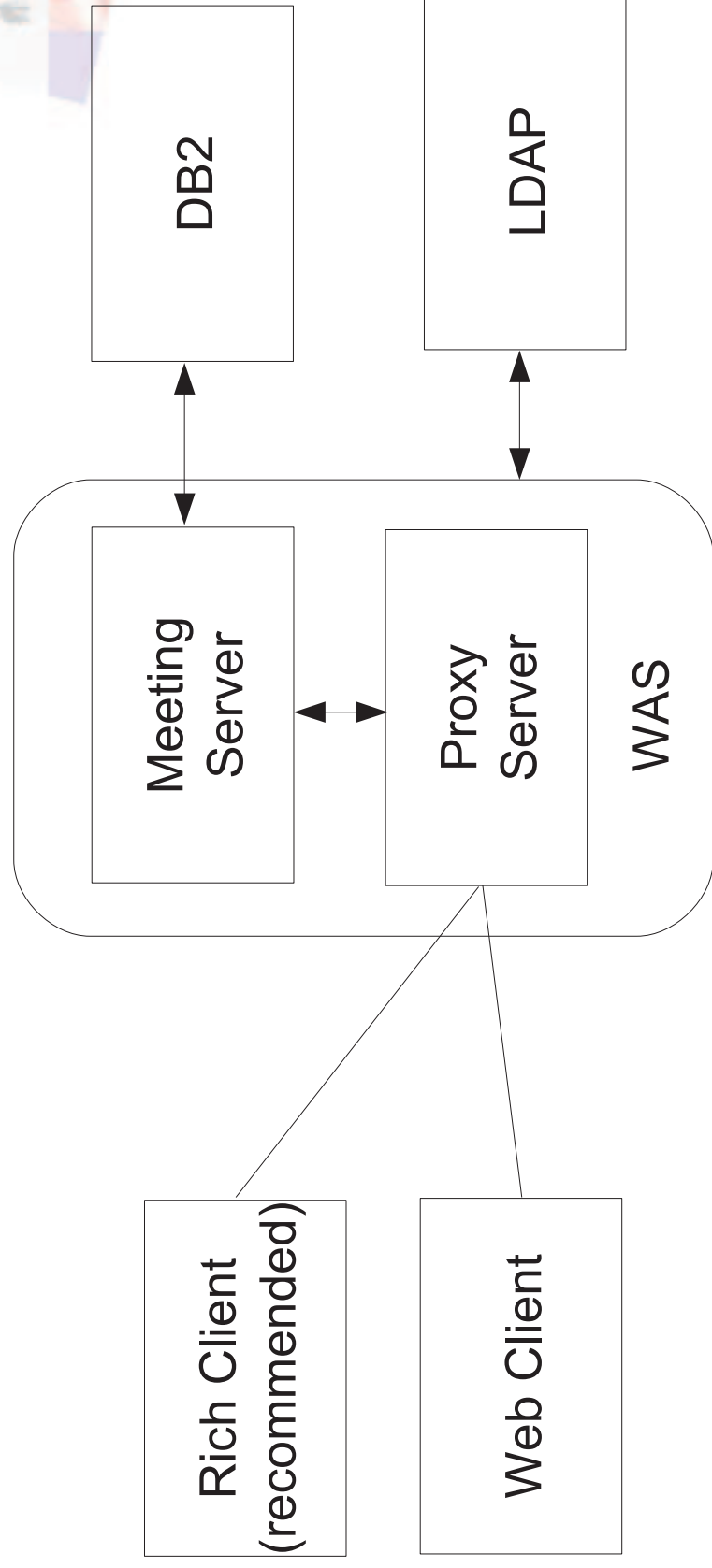
- Meeting Services now WebSphere-based
- Leverages WebSphere technology at all levels
- Uses DB2 for meeting storage
- Meetings now effectively separated from Community (in most cases)
  - LDAP directory required
  - Other directories accessible via Websphere Member Manager (e.g. Federated repositories)
- No more:
  - “meetings going active”
  - “invited servers”
  - Wasted meeting capacity without attendees

# The Sametime 8.5 Meeting Room

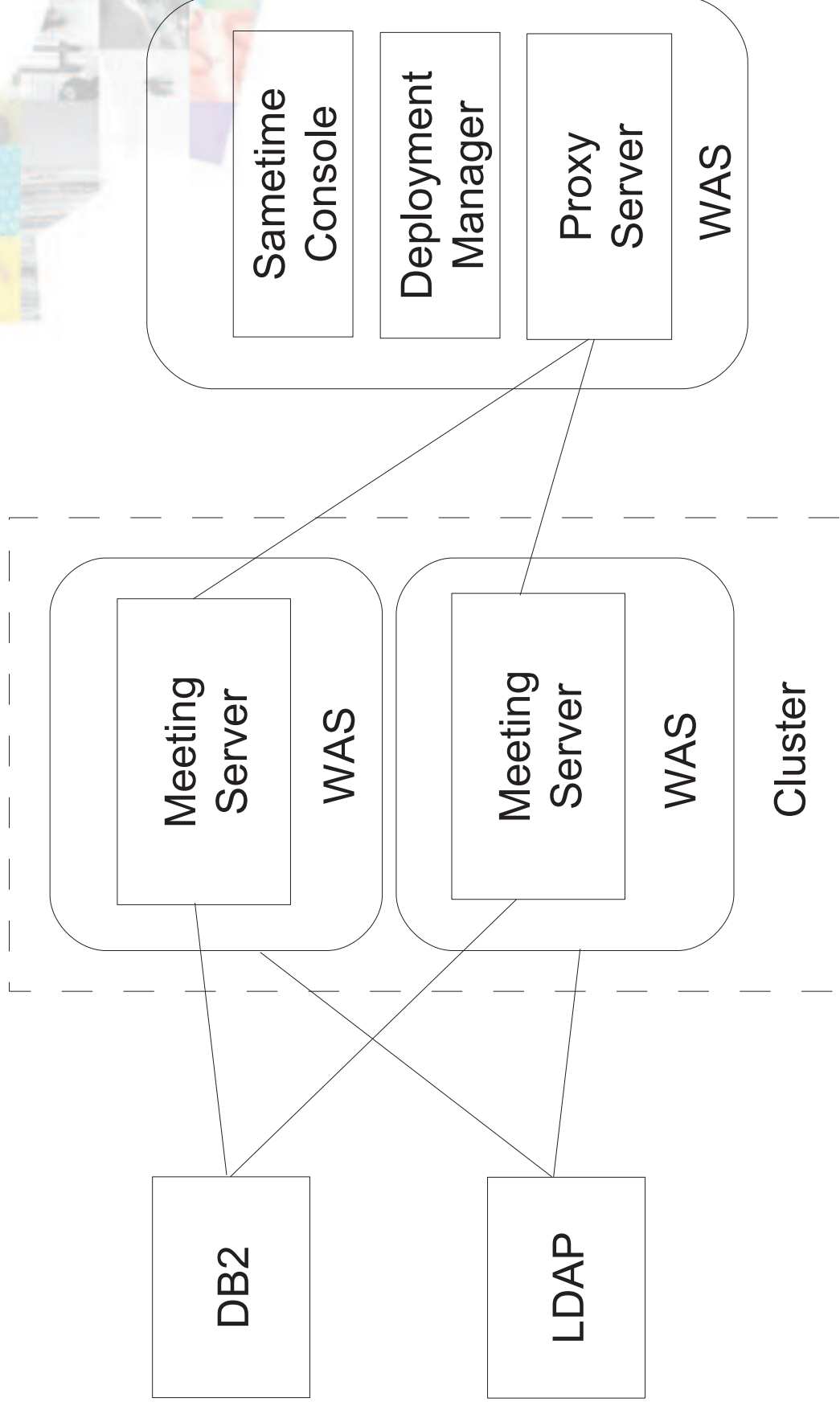
- No longer a Community Place
- Meeting Room is a database construct
  - All aspects stored in DB2
- Meeting Rooms, once created, are permanent
  - Loaded on demand
  - One URL
  - “Your” meeting room
- Can be manually cleared of content
- **ALL CLIENT CONNECTIONS (except AV) ARE HTTP!**
- “Last state” stored in DB2 with meeting content
  - Important for security/compliance concerns



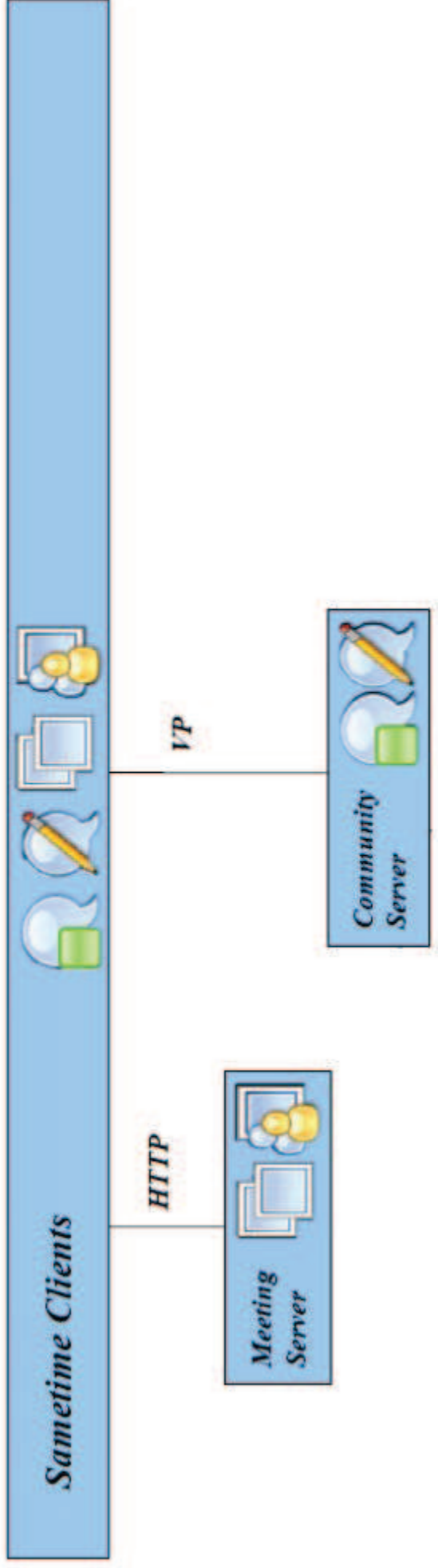
# Sametime 8.5 Meeting – Single Server



# Sametime 8.5 Meetings – High Availability



# Your Deployment So Far...



*Logical servers shown – may be combined physically depending on user workload*

## SUPPORTING

- Sametime Connect IM
- Lotus Notes Embedded
- 2-way Audio/Video Chat
- **Rich Client Meetings**
- **Browser Meetings**
- **Blackberry Meetings**

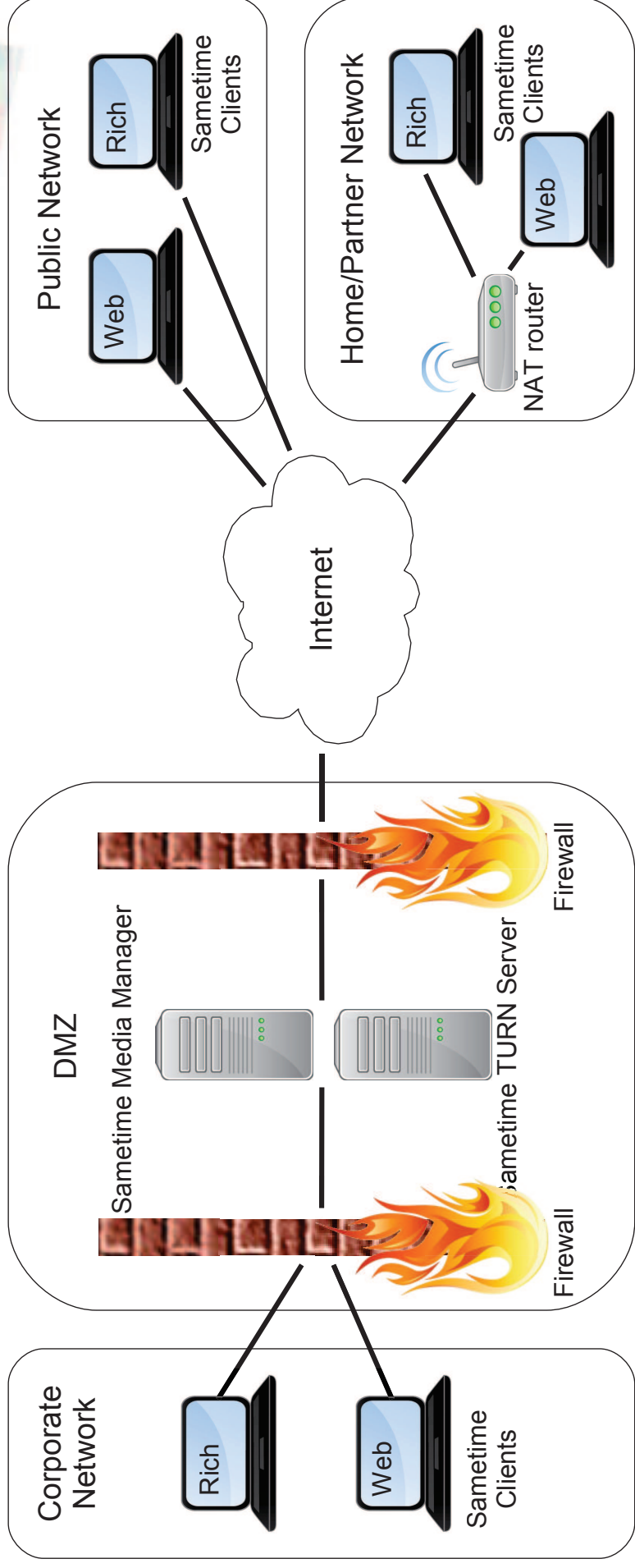
# Meeting Audio/Video – Media Manager

- Bridges to Sametime Community (as another Sametime server)
- SIP Proxy Registrar – effective digital PBX
- Packet-switching MCU – handles A/V streams
- Supports GIPS iSAC, H.263, H.264, G.722 and G.711
- Clients connect via SIP and stream data via UDP



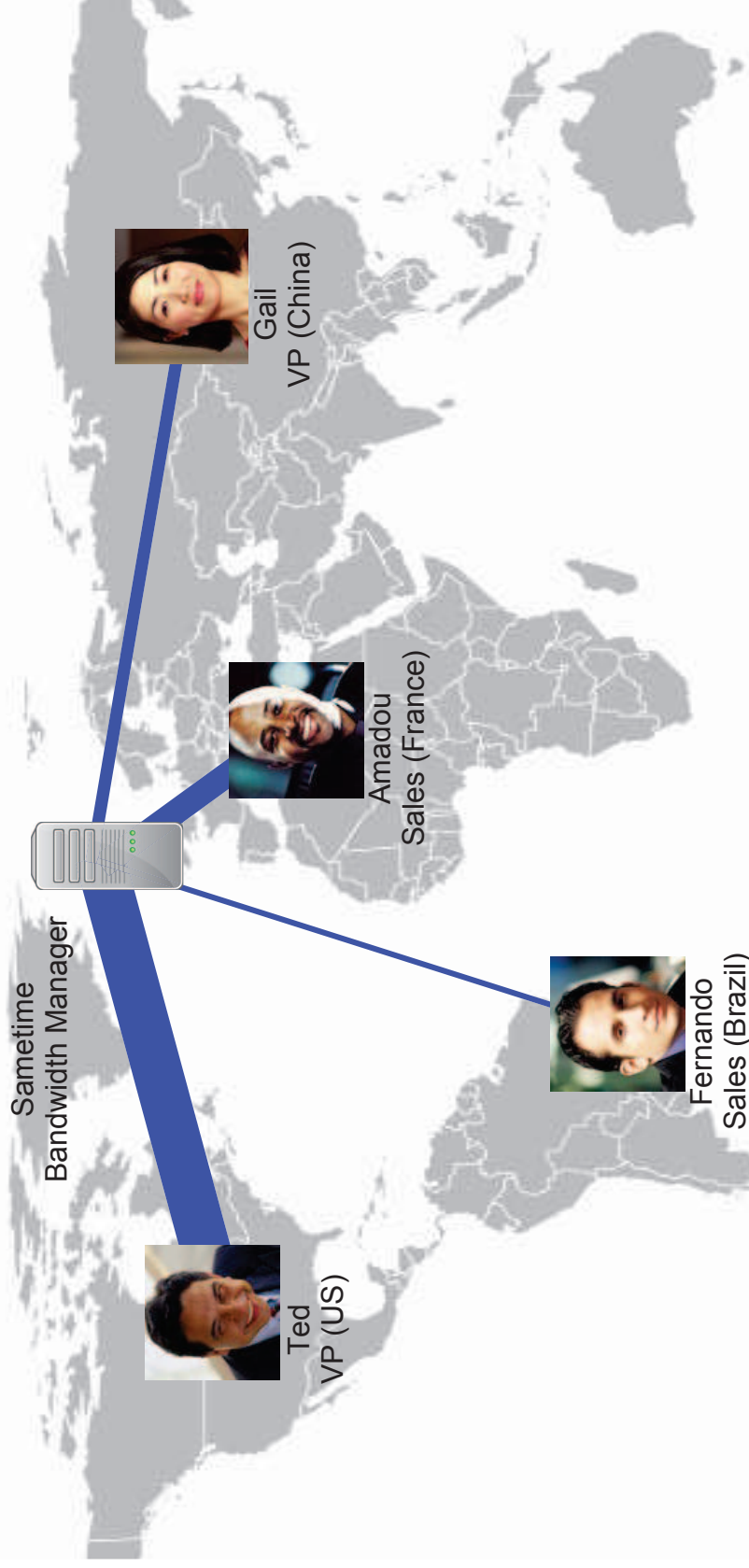
# Sametime 8.5.2 TURN Server

- Simplifies audio and video connectivity across firewalls by using NAT traversal

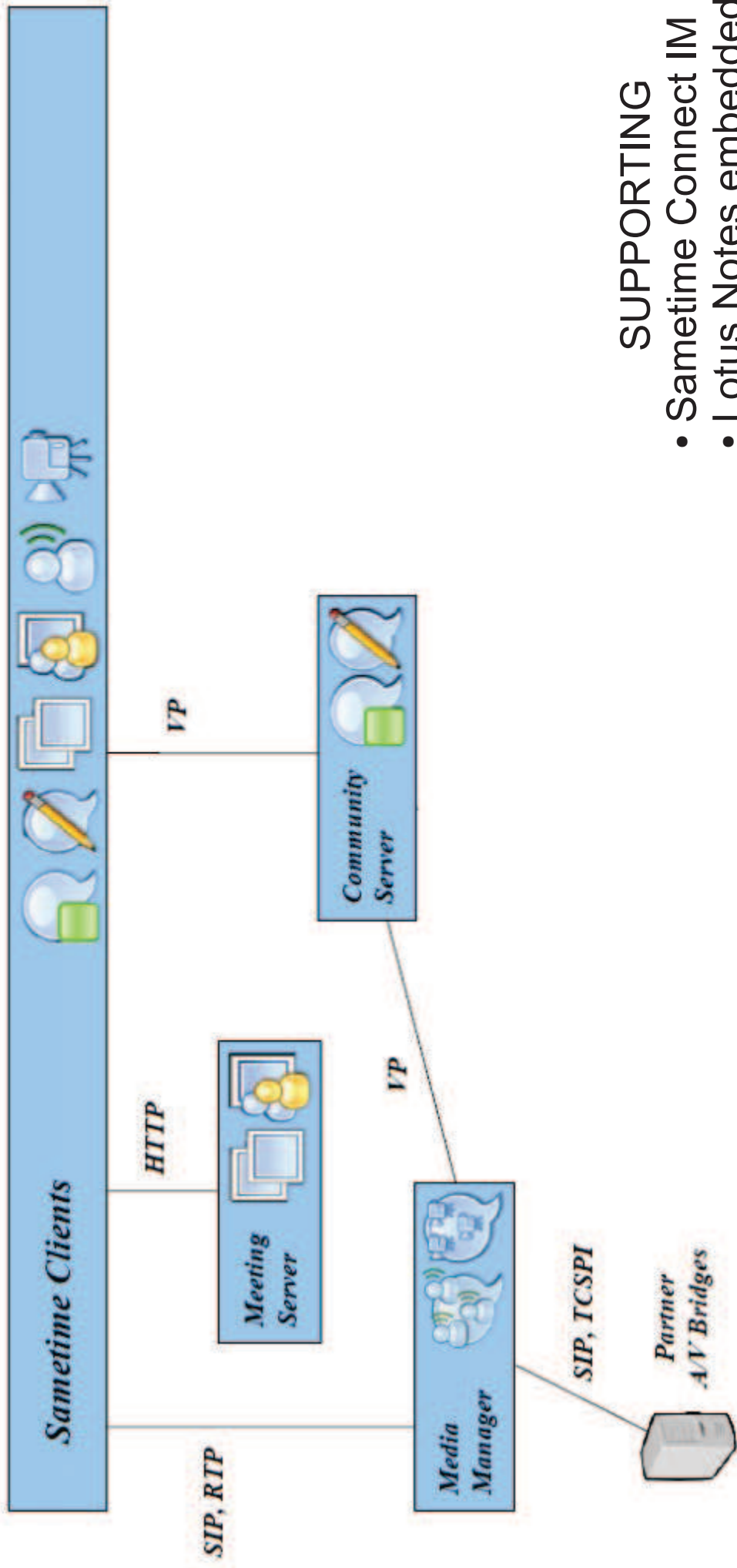


# Sametime 8.5.2 Bandwidth Manager

- Protects mission-critical applications on the network by restricting bandwidth uses for Sametime audio and video
- Administrators set policies based on classes of users and locations
- Can connect and reject calls, limit calls to voice only and reduce voice and video quality



# Your Deployment So Far...



*Logical servers shown – may be combined physically depending on user workload*

## SUPPORTING

- Sametime Connect IM
- Lotus Notes embedded
- 2-way Audio/Video Chat
- Rich client meetings
- Browser meetings
- Blackberry meetings
- **N-way audio/video chat**
- **Meeting audio/video**

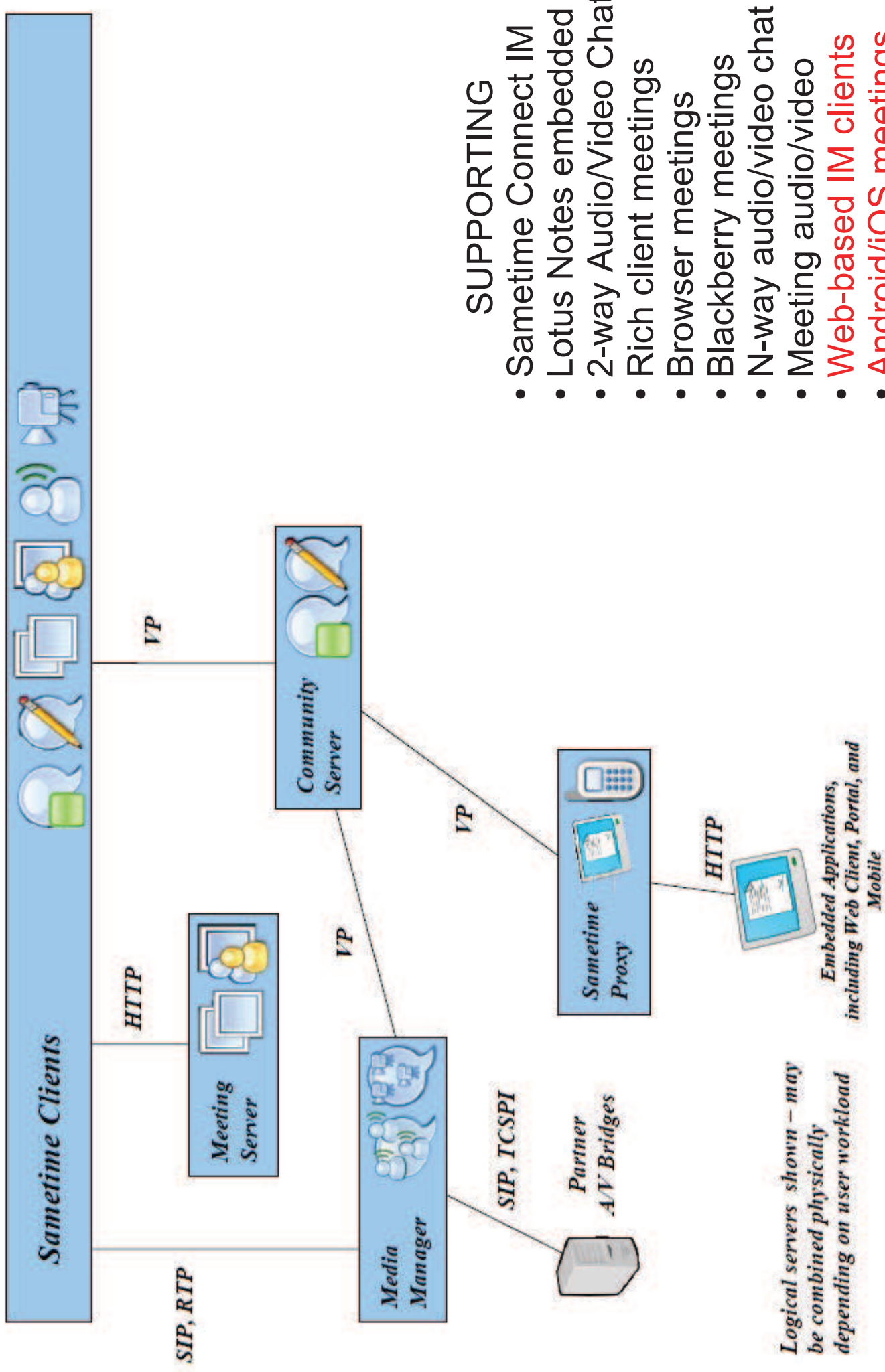
# Sametime Proxy Server

- HTTP-only interface to Community
- Most of the rich client's features, customizable
- Contained within browser
- Replaces STLinks – no Java/Javascript – offers REST API

WebSphere Application Server

Sametime Proxy  
Server

# Your Deployment So Far...



## SUPPORTING

- Samesite Connect IM
- Lotus Notes embedded
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- Rich client meetings
- Browser meetings
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- N-way audio/video chat
- Meeting audio/video
- **Web-based IM clients**
- **Android/iOS meetings**

# Pilot deployment

- Sample configuration
  - Existing LDAP server
  - Server 1 (single CPU, at least 2Gb RAM, at least 10Gb disk space, 32 or 64 bit OS)
    - Sametime Community server
  - Server 2 (quad CPU, at least 8Gb RAM, at least 100Gb disk space, 64-bit OS)
    - DB2 Database server
    - Sametime System Console
    - Sametime Meeting server
    - Sametime Media manager
    - Sametime Proxy server
- With such a configuration you can host up to
  - 500 concurrent Meeting Participants \*
  - 10.000 concurrent Sametime Clients \*
  - 300 concurrent Media Streams \*
  - 3000 concurrent Proxy web client users \*
- \* Ask your IBM representative for detailed sizing information for a defined environment

# Sametime-in-a-box

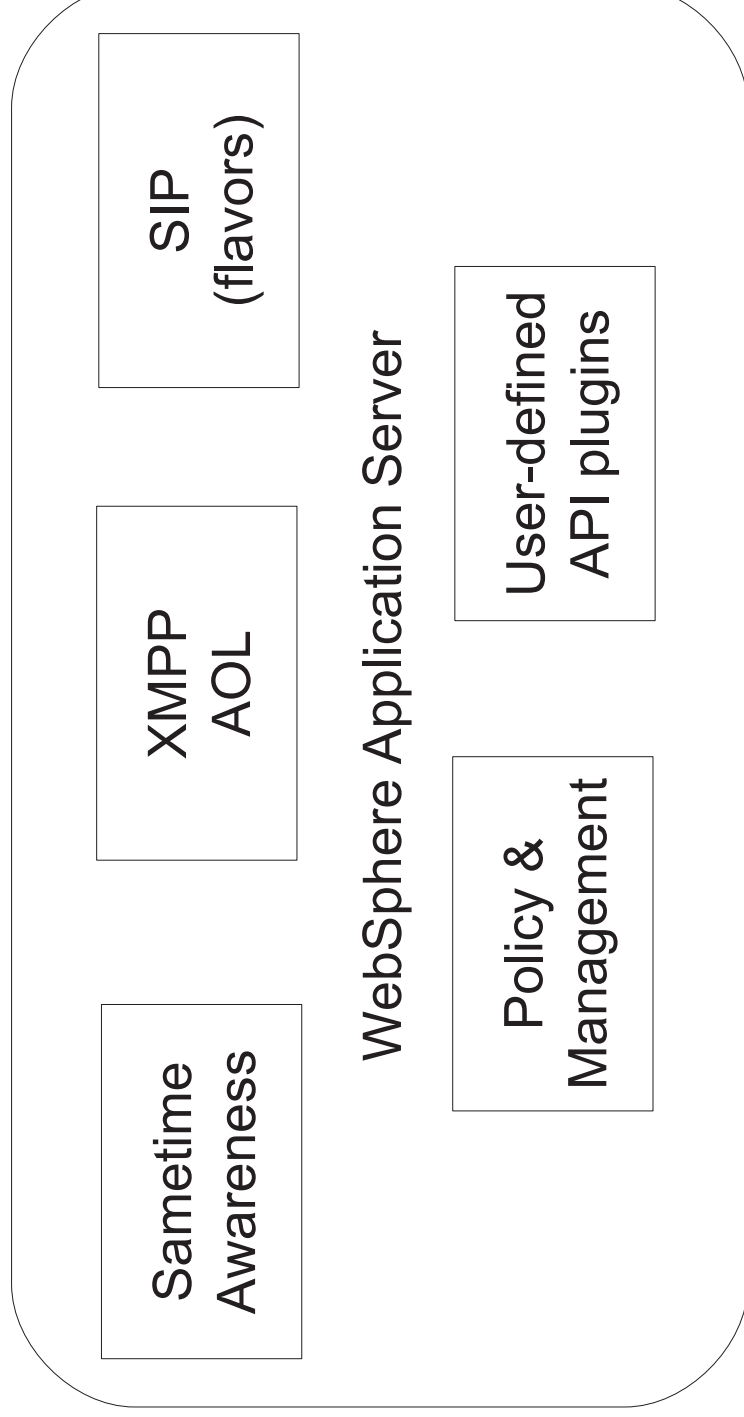
- Production environment for numerous companies
  - From 400 to 8,000 users.
- Test servers for business partners
  - Ex.: Audio/video providers
- POC/POT for organizations up to 20,000 users
  - Testing integration into Video systems and/or IP Telephony
  - POC/POT → Test/Development server



Sametime LDAP (Domino) Windows 2008 64 bit 4 GB RAM 1 CPU	Sametime System Console Meeting server DB2 Windows 2008 64 bit 4 GB RAM 2 CPU	Sametime Community (Domino) Windows 2008 64 bit 4 GB RAM 1 CPU	Sametime Media Manager Proxy Server Windows 2008 64 bit 4 GB RAM 2 CPU
<b>ESXi, 24Gb RAM, 8 CPU, 4 NIC</b>			

# Sametime Gateway – Bridging to the Public

- Recommended placement – extranet
- Must have “real” IP addresses (no NAT or PAT!)
- Connect to
  - Google Talk, Jabber (XMPP)
  - AOL Clearinghouse, AIM (pick one)
  - Microsoft OCS
  - External Sametime communities



# Your Deployment So Far...



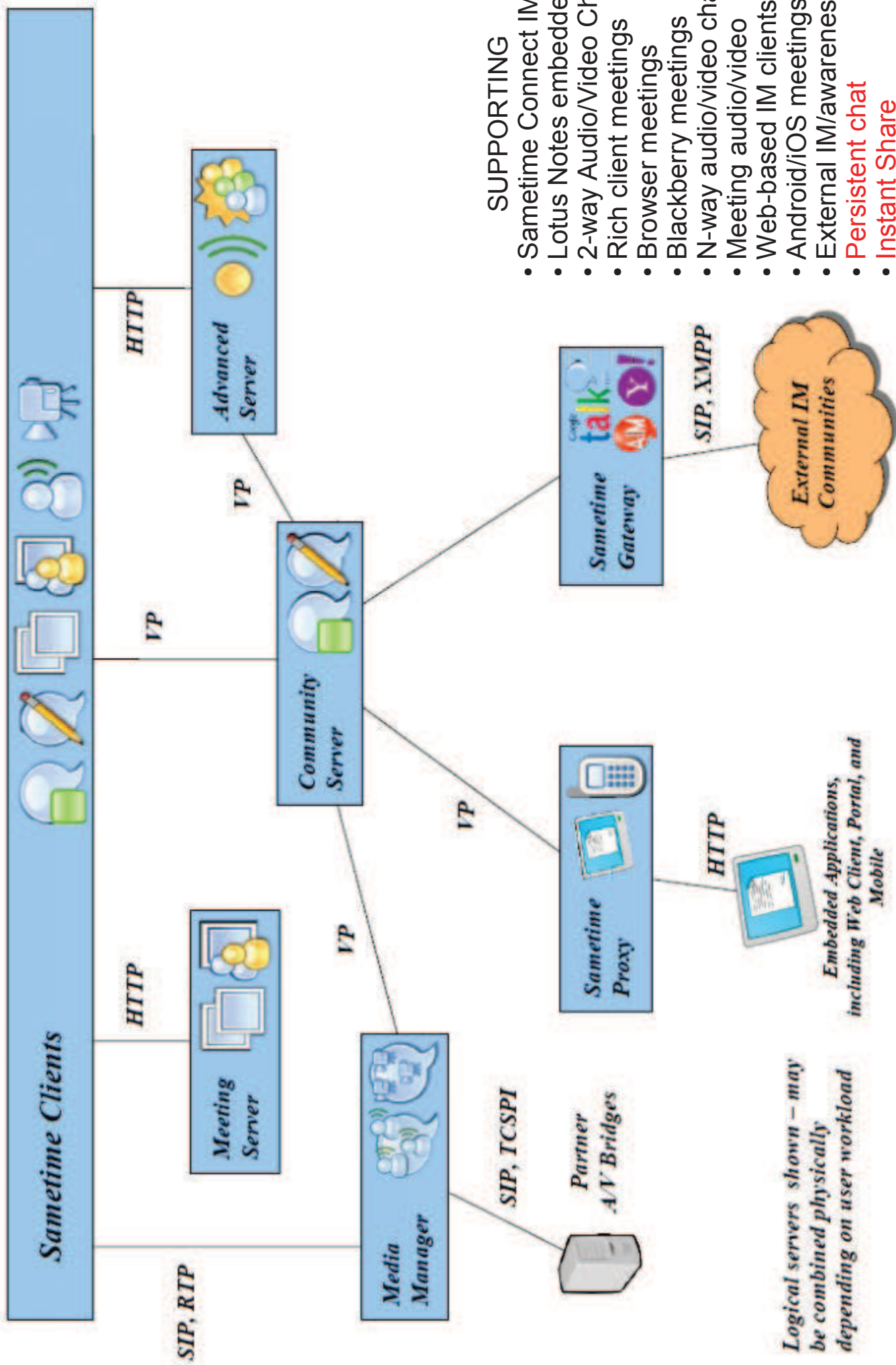
- SUPPORTING**
- Sametime Connect IM
  - Lotus Notes embedded
  - 2-way Audio/Video Chat
  - Rich client meetings
  - Browser meetings
  - Blackberry meetings
  - N-way audio/video chat
  - Meeting audio/video
  - Web-based IM clients
  - Android/iOS meetings
  - **External IM/awareness**

# Sametime Advanced – More Tools

- Runs under Websphere Application Server
- Provides:
  - Persistent Group Chat Rooms (with alerts!)
  - Real-Time Broadcast Channels
    - SkillTap
    - Instant Polling
    - Announcements
    - Broadcast Chat
  - Location Services
  - Instant Share (share/control remote applications/screen)
- Requires Sametime Connect or Notes-embedded Sametime



# Your Deployment So Far...



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- Sametime Connect IM
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- Rich client meetings
- Browser meetings
- Blackberry meetings
- N-way audio/video chat
- Meeting audio/video
- Web-based IM clients
- Android/iOS meetings
- External IM/awareness
- **Persistent chat**
- **Instant Share**

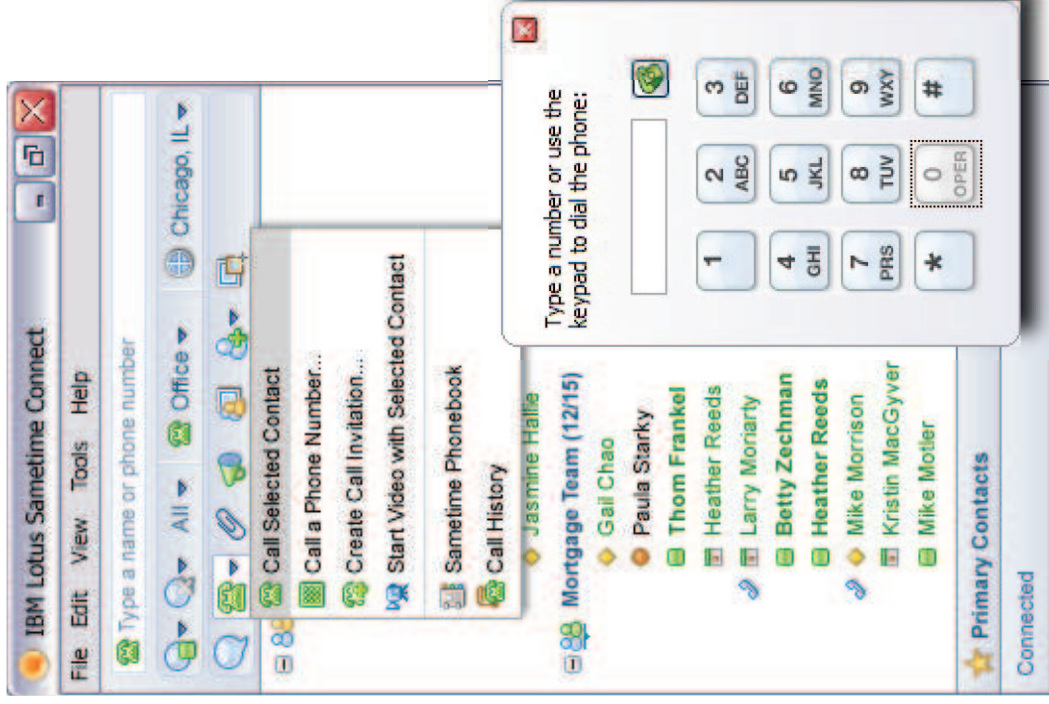
Logical servers shown - may be combined physically depending on user workload

Embedded Applications, including Web Client, Portal, and Mobile

# Sametime Unified Telephony – Phones in the Mix

- Provides:
  - Aggregate phone/IM presence
  - Click-to-call and Click-to-conference
  - Incoming call management
  - Embedded softphone
    - Sametime client
    - Lotus Notes client
  - SIP Proxy/registrar
- Requirements:
  - Websphere Application Server for Telephony Application Server/Media Server
  - Dedicated hardware (IBM xSeries 3650T) for Telephony Control Server

# SUT Lite client license



- Use your Sametime Connect Client to make and receive voice and video calls
- Minimal infrastructure, simple configuration
  - Set up a SIP trunk between the Sametime Media Manager and a certified 3<sup>rd</sup> party system
- Certified vendors
  - Avaya
  - Cisco/Tandberg
  - Polycom
  - Radvision
- Preferred solution for Tandberg video integration
- Requires Sametime Standard or Advanced
- <http://www.youtube.com/watch?v=KgRwSGdRuX8>

# Difference between SUT Lite and full SUT

## Sametime Unified Telephony Lite

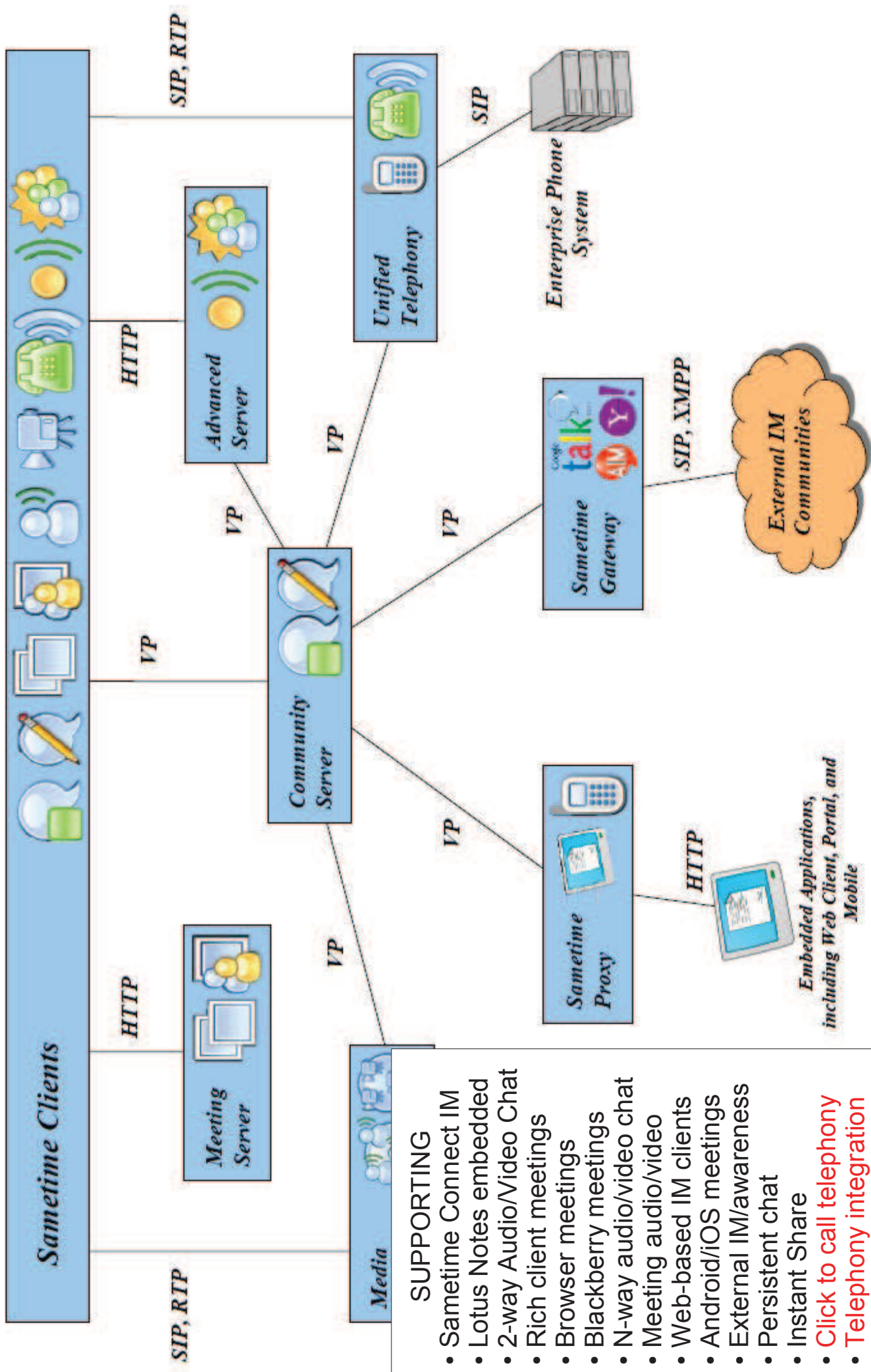
- Place/receive calls from ST 8.5.2 Connect Client
- Call video endpoints of video MCUs
- Call telephone numbers or conference bridges
- Within a call: mute/unmute, raise/lower volume, start/stop video, leave call
- Other features: Click to call, dial through Quickfind or Dial Pad, view call history

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- Single number service
- “Off hook” presence status
- Intelligent incoming call rules & routing
- Multiple device support
- Transfer calls between devices
- Visual audio conferencing
- Moderator conference controls
- Hold, transfer, merge calls
- Works with multiple PBXs to create a seamless UC environment

# Your Deployment So Far...

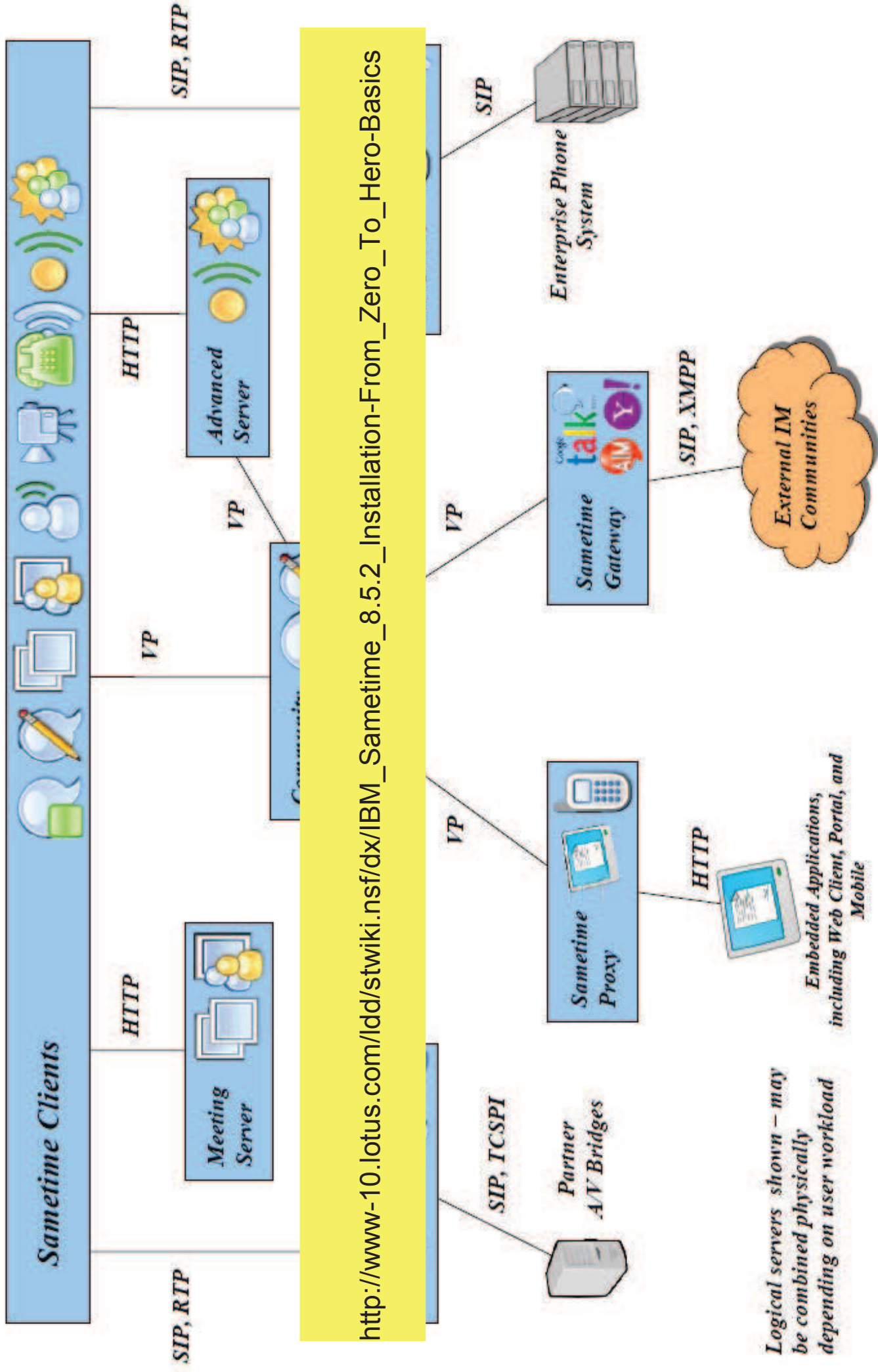


## SUPPORTING

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- Rich client meetings
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- N-way audio/video chat
- Meeting audio/video
- Web-based IM clients
- Android/iOS meetings
- External IM/awareness
- Persistent chat
- Instant Share
- **Click to call telephony**
- **Telephony integration**

*Embedded Applications, including Web Client, Portal, and Mobile*

# Sametime 8.5.x Deployment



# Sametime Clients

- Sametime Connect
- Lotus Notes-embedded Sametime
- Rich meeting client (within Sametime Connect)
- Browser-based meeting client (requires applet download if hosting application sharing)
- Meeting client for Blackberry
- Meeting and chat clients for Android/iOS (requires Sametime Proxy Server)
- Browser-based IM client (requires Sametime Proxy Server)

# Labs available

- Explore Sametime from...
  - Sametime Connect client
    - Instant Messaging
    - Web Conferences
  - Sametime Web clients
    - Instant Messaging
    - Web Conferences
  - Mobile Devices
    - Native Instant Messaging and Meetings clients (Android and Blackberry)
    - Web Instant Messaging client (iOS device)



Questions?

