



# 动力创新 协作无限

2007 IBM 协作创新深潜营

如何部署企业统一通信及协作平台

IBM软件部Lotus 刘小平



## 内容安排

- 统一通信
- IBM Sametime 7.5
- 企业应用场景
- 部署建议



## 2007 IBM 协作创新深潜营



数据，语音，视频分离的系统使企业面临多个系统的管理，花费了更多的时间和金钱，而员工也必须要对付多种通信工具。

**数据**



协同工作



日历



Email



即时消息



Web 应用

**语音**



语音消息



语音电话



电话会议

**视频**



视频会议

**移动通信**





## 2007 IBM 协作创新深潜营



统一通信将语音，数据和视频整合在同一个系统，终端设备可以同时支持多种通信方式，通信应用可以相互整合



基于开放的工业标准



## 超越 Lotus Sametime: IBM 统一通信与协作前景展望

IBM 的目标：让人们轻松地通过**统一通信**来**查询、联系和协作**，促进创新，提高业务灵活性。

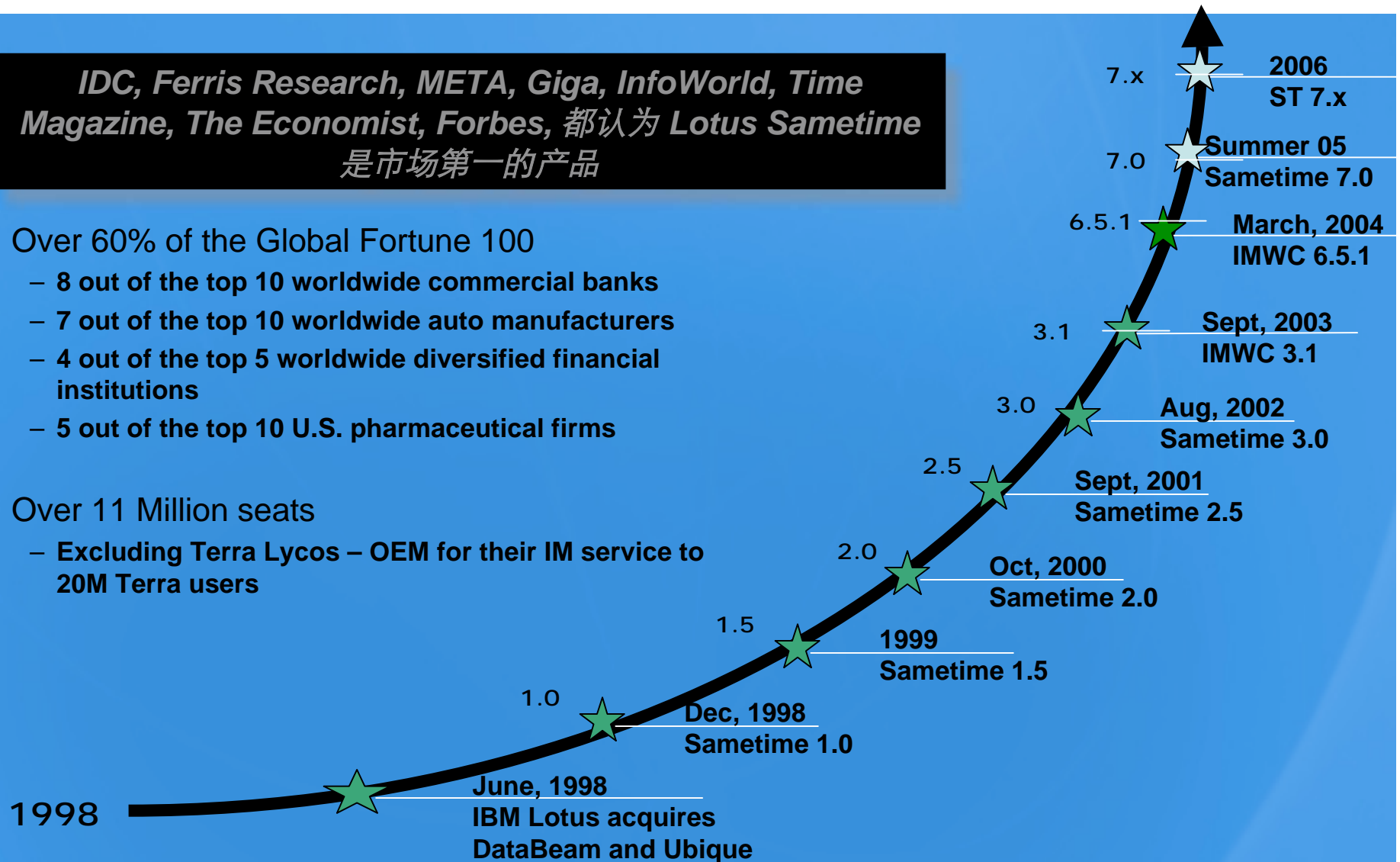
我们通过提供**开放的、可扩展的**软件平台,完善的解决方案,丰富的行业知识,强大的系统集成能力,对**跨企业间**的在线感知、即时消息、电子邮件、统一消息、web、语音、视频、电话和商业应用进行整合,实现此目标。



## Sametime 的发展历史

*IDC, Ferris Research, META, Giga, InfoWorld, Time Magazine, The Economist, Forbes, 都认为 Lotus Sametime 是市场第一的产品*

- Over 60% of the Global Fortune 100
  - 8 out of the top 10 worldwide commercial banks
  - 7 out of the top 10 worldwide auto manufacturers
  - 4 out of the top 5 worldwide diversified financial institutions
  - 5 out of the top 10 U.S. pharmaceutical firms
- Over 11 Million seats
  - Excluding Terra Lycos – OEM for their IM service to 20M Terra users



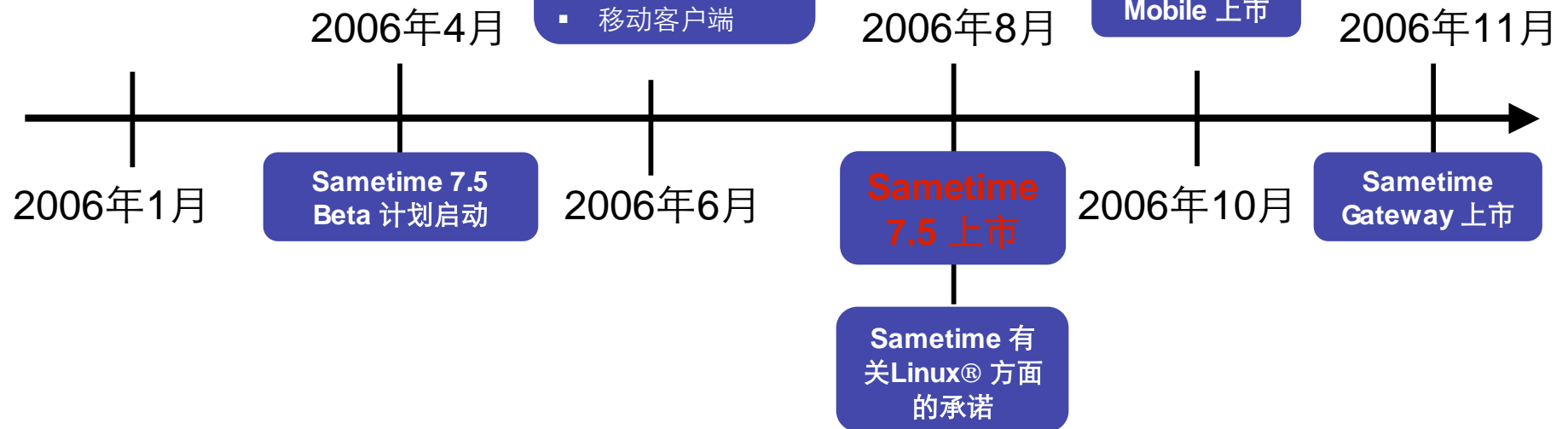
# Sametime 年....

## Lotusphere 2006

- Sametime 7.5 计划对外公布
- 公共即时消息服务
- 电话/视频合作关系
- Sametime 作为平台

## 新闻稿:

- Microsoft® 集成
- 移动客户端



# IBM Lotus Sametime 7.5

The screenshot shows a Microsoft Internet Explorer browser window displaying the IBM Lotus Sametime 7.5 web interface. The browser's address bar shows the URL <http://stsvr.cmccclub.com>. The page title is "Sametime 7.5产品培训 - 会议室 - IBM Lotus Sametime". The interface includes a menu bar with options like "文件(F)", "编辑(E)", "查看(V)", "操作(A)", "工具(T)", and "帮助(H)". Below the menu is a toolbar with buttons for "停止演示(P)", "添加幻灯片(S)...", "设置权限(N)...", and "会议信息(M)". The main content area is divided into several sections: a "与会者(3)" sidebar on the left listing participants (Liu Xiaoping/cmccclub, chen ping/cmccclub, Guo Wenwei/cmccclub), a "Web 页面" section with input fields for "新 Web 页面:" and "可用 Web 页面:", and a "群组交谈" section with a text input field and a "发送" button. The central display area shows a slide titled "Sametime 7.5产品培训" with the following text: "2006-10-14 17:15:55", "主持人: Liu Xiaoping", "面向全国工程师的Sametime 7.5产品新功能介绍", and "正在记录会议。". At the bottom of the browser window, a status bar indicates "已连接" and "会议已用时间: 00:02:01". The Windows taskbar at the bottom shows the "开始" button, several open applications including "MeetingRoomClient started", and the system tray displaying the time "5:17 下午", date "星期六 10/14/2006", and language "EN".





# IBM Lotus Sametime Mobile



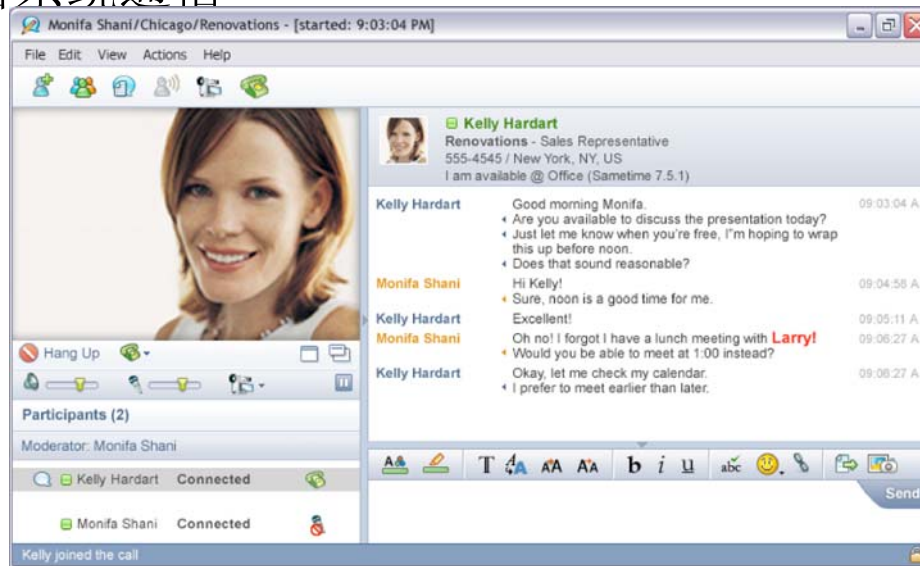
# IBM Lotus Sametime 7.5.1

演示



# 统一通信集成

- 为 Lotus Sametime 用户实现单一 UC<sup>2</sup> (Unified Communications and Collaboration) 体验
- 内置与主流电话系统(如CISCO, AVAYA)的连接
- 与视频通信系统集成
- 通过扩展 API 和相关标准协议 (SIP、CSTA), PC可以直接与PBX或公共电话系统通信



## 统一通信合作伙伴解决方案

功能	在 Lotusphere 上演示解决方案的合作伙伴
点击呼叫、点击会议	
集中电话话席	
呼叫管理	
多点视频集成	
软电话集成	
网络会议音频集成	
网络会议音频/会议时序安排	
N/D 统一消息	
Sametime 统一消息	





## 企业应用场景一：组织协作

- Lotus Sametime 7.5 作为组织中实时协作功能的基础
- 向专家社区求助
  - 立即找到答案
  - 产品即时投票
  - 在开放的实时论坛中探讨问题





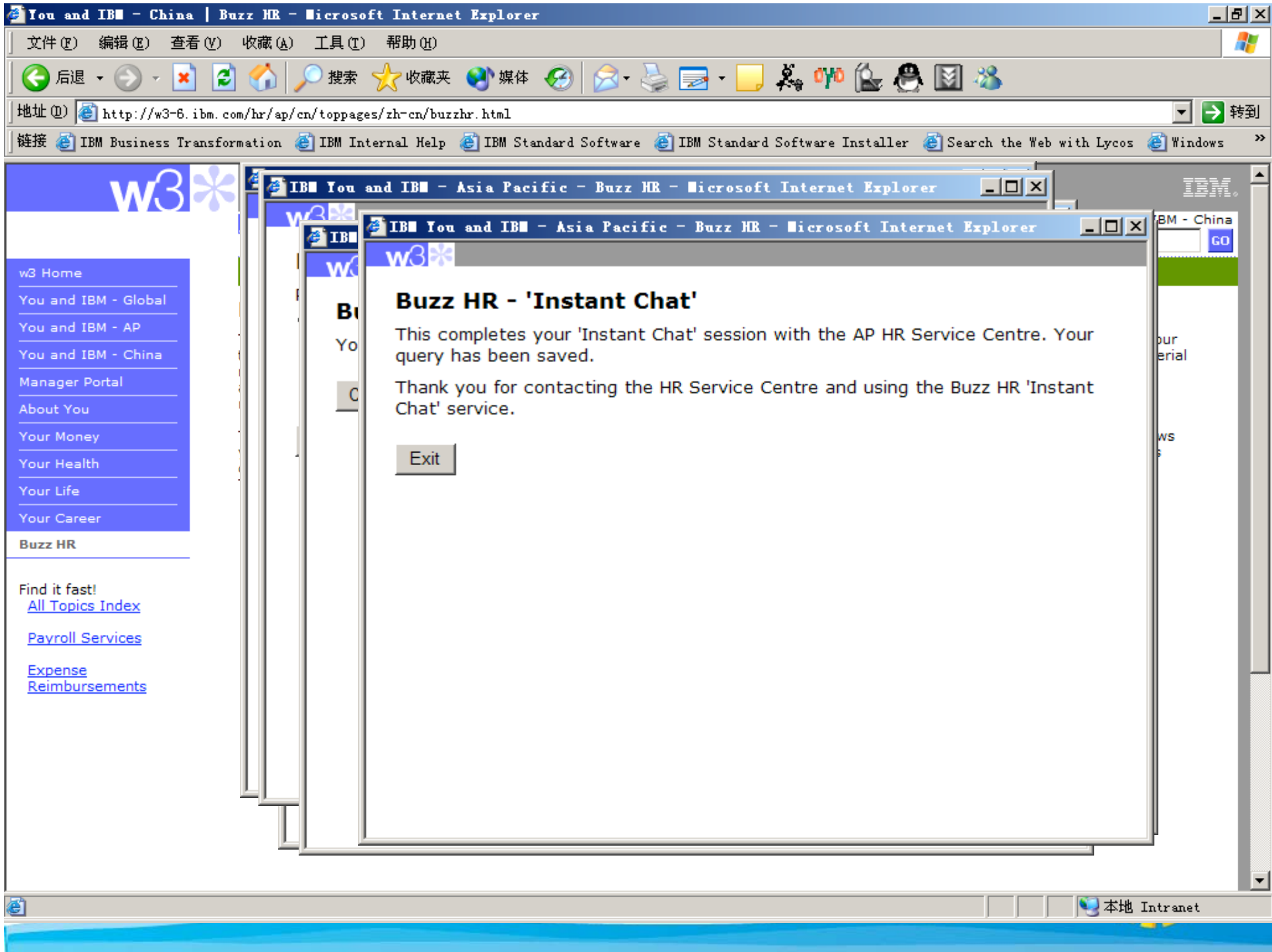
## 找人、找专家

The screenshot displays the IBM Lotus Sametime Connect interface. On the left, a 'Contacts' list shows various teams and individuals, with a red circle '1' highlighting the 'Marketing Team' section. The main chat window, titled 'Kelly Hardart [started: 9:03:06 AM]', shows a conversation between Kelly Hardart and Sam Curman. Kelly Hardart asks how to add billing information to a database, and Sam Curman provides instructions. Kelly Hardart thanks Sam and says 'Bye!'. Below the chat window, a feedback dialog box is open, showing a red circle '5' and a downward arrow. The dialog box contains the text: 'Thank you for helping your colleague through SkillTap! Please help us by filling in the information below.' and a list of radio button options: 'Assistance was provided' (selected), 'Add to SkillTap EAQ' (checked), 'Offer to assist withdrawn after further clarification', 'Requester acknowledged problem already answered', 'Requester did not respond to feedback', and 'Deemed inappropriate use of SkillTap'. At the bottom, another dialog box shows a rating scale: '3 - Pretty good', '4 - Just what I wanted', and '5 - Awesome!', with '5' selected. The background shows a 'Sales and Marketing' window with a message from Sam Curman: 'How do I credit a customer in the billing system for something bought last year'.

## 企业应用场景二：HelpDesk

- 取代或部分取代热线电话
  - 永不占线
  - 沟通更通畅：
    - 文字
    - 语音
    - 视频
    - 图片、截屏
  - 自动生成知识库





## 企业应用场景三：HR应用

- 功能集成
- 快速沟通
- 多渠道接入



**Essential links** | Edit | - | ?

- lotus sales tools
- 报销
- 出差
- GCG Home
- China Home
- China HR
- Lotus Software Intranet
- WW Technical Sales
- Collaboration Central
- Customer Reference Materials
- Global Technical Sales Support
- Government Industry
- IBM Global Campus
- IBM Standard Software Installer
- IBM Travel
- Selling for IBM
- Software Home
- Project Management Institute (PMI)
- e-business@IBM
- Employee Purchase Program

**News** | - | ?

**Top stories** [Past 7 days >](#)



### Empowering IBMers to seize growth

IBM transforms to drive productivity and improve responsiveness. [Profiled for all IBM]



#### IBM推出全球顶尖产品设计规划服务

产品设计问鼎IDEA大奖，蓝色巨人向高价值业务阔步迈进 [Profiled for CN]



#### IBM announces global transformation

Globally integrated business functions create a more on demand IBM. [Profiled for all IBM]



#### IBM宣布推出可显著简化信息集成的新软件

新的信息管理中间件可帮助企业提高数据质量和实现随需应变的信息访问 [Profiled for CN SWG]

#### IBM in the cockpit with Malaysia Airlines

Hear from Gerry Stasiuk and others in the MAS Strategic IT Outsourcing team two years in. [Profiled for AP]

#### Hundred Percent Club

2005 criteria announced for induction to Hundred Percent Club and eligibility for attending HPC events. [Profiled for AP]

**Search** | Edit | - | ?

**BluePages**

Search type: Name

Search for: liu xiao ping

[Advanced search](#)

**Other searches**

- w3 intranet
- IBM discussion forums
- IBM news articles
- ibm.com Internet
- IBM Learning (site search)

[Advanced search](#)

**Market report** | Edit | - | ?

Quoted at 4:10 PM, EDT on 1 Jul.  
[Refresh](#)

Symbol	Current	+/-
--------	---------	-----






### My profile

[Edit my profile](#) [BluePages wizard](#)

**Search type**  
Name

**My BluePages lists**  
Create lists of profiles you view often.  
To get started, use the **Add to My BluePages** links on the search results page and when viewing an employee's profile.



My preferred c  
Phone:  
Mobile:  
E-mail:  
Notes mail:  
Sametime status: [Liu, Xiao Ping](#) [Sign out](#)

Add to: [Notes address book](#) [Sametime list](#) [My BluePages list](#)

**Report to chain**  
...  
[Liu, Sheng Li](#)  
[Chen, Qiao Ming](#)  
**Liu, Xiao Ping**

**Other reporting views**

- [Full report to chain](#)
- [Same manager](#)

**Jobs & contact info** Experience & qualifications Projects & teams Communities & interests Reporting structure Summary

**Important contact information**  
No information provided

liuxp@cn.ibm.com - Xiao Ping Liu/China/IBM [sta...]

liuxp@cn.ibm.com ... Hi

Type your text

[Send](#) [Invite Others...](#) [Close](#)

Waiting for response...

Microsoft PowerPoint - [Bluepage Plugin.ppt]

文件(F) 编辑(E) 视图(V) 插入(I) 格式(O) 工具(T) 幻灯片放映(D) 窗口(W) 帮助(H) Adobe PDF(P)

Arial 24 B I U S

大纲 幻灯片

1

Page 1 | IBM Lotus Sametime

单击此处添加标题

- 单击此处添加文本

绘图(E) 自选图形(O) 幻灯片 1 / 1 Blue Pearl Basic 中文(中国)

 **Xiao Ping Liu**  
 SENIOR I/T SPECIALIST - SOFTWA  
 86-10-65391188 x3478  
 我已入座 (Sametime 7.5.1)

IBM Lotus Sametime...

文件(F) 编辑(E) 查看(V) 工具(T) 帮助(H)

联系人

全部 Home

输入要查找的姓名

- LotusSphere (2/8)
- Lotus (2/23)
  - Ai Ping Hu  
caojun@cn.ibm.com - Jun SW C
  - chenyuan@cn.ibm.com - Yuan C
  - fenglei@cn.ibm.com - Lei Feng
  - gaos@cn.ibm.com - Shuang GS
  - guolei@cn.ibm.com - Lei Guo
  - guowenw@cn.ibm.com - Wen V
  - huangym@cn.ibm.com - Yun Mir
  - ◆ huesc@cn.ibm.com - Ernie SC H
  - lixh@cn.ibm.com - Xiaohui XH Li
  - luchen@cn.ibm.com - Lu Chen
  - Qiao Ming Chen
  - secguo@cn.ibm.com - SEC Wen
  - tanghao@cn.ibm.com - Hao Tan
  - TSADJ@tw.ibm.com - JJ Tsai
  - wujianj@cn.ibm.com - Jian Jun V
- Xiao Ping Liu**
  - 陈爱武(4418-13701059284)che
  - 顾小云(4524-13601086189)guxi
  - 李杰(3553-13701169208)lijie@c
  - 刘广(4753-13701339850)liugu
  - 刘颖丰(4670-13910635645)liuyir
  - 姚亚非(4303-13701071756)yaoy

Sametime News

主要联系人

Lotus Sametime 7.5.1 IBM

已连接

开始

Windows Explorer C:\AWI... 12452... 15:27... 需求... 招商...

Messa... about... Samet... Micro... IBM L...

9:52 下午 星期四 05/24/2007

Microsoft PowerPoint - [Bluepage Plugin.ppt]

文件(F) 编辑(E) 视图(V) 插入(I) 格式(O) 工具(T) 幻灯片放映(D) 窗口(W) 帮助(H) Adobe PDF(E)

Arial 24 B I U

大纲 幻灯片

1  
2

Page 2 | IBM Lotus Sametime

单击此处添加标题

- 单击此处添加文本

© 2006 IBM C

IBM Lotus Sametime...

文件(F) 编辑(E) 查看(V) 工具(T)

帮助(H)

联系人

全部 | Home

的姓名

phere (2/8)

2/23)

ng Hu

Jun@cn.ibm.com - Jun SW C

yuan@cn.ibm.com - Yuan C

lei@cn.ibm.com - Lei Feng

@cn.ibm.com - Shuang GS

ei@cn.ibm.com - Lei Guo

wenw@cn.ibm.com - Wen V

ngym@cn.ibm.com - Yun Mir

sc@cn.ibm.com - Ernie SC H

cn.ibm.com - Xiaohui XH Li

en@cn.ibm.com - Lu Chen

Ming Chen

uo@cn.ibm.com - SEC Wen

hao@cn.ibm.com - Hao Tan

DJ@tw.ibm.com - JJ Tsai

anj@cn.ibm.com - Jian Jun V

Ping Liu

陈爱武(4418-13701059284)cher

顾小云(4524-13601086189)guxi

李杰(3553-13701169208)lijie@c

刘广(4753-13701339850)liugu

刘颖丰(4670-13910635645)liuyir

姚亚非(4303-13701071756)yao

Sametime News

主要联系人

Lotus Sametime 7.5.1 IBM

已连接

- 交谈(C)...
- 可用工具(T)...
- 即时会议(I)...
- 发送(S)
  - 入座时提醒我(M)
  - 在下列情况下提醒我(W)...
  - 删除警报(D)
- 编辑昵称(N)...
- 刷新人员信息(R)
- 查看名片(C)
- 私人信息列表(L)...
- 显示交谈历史记录(H)...
- 添加到主要联系人(A)
- BluePages
- 从联系人列表中删除(D)

绘图(R) 自选图形(U)

幻灯片 2 / 2

Blue Pearl Basic

中文(中国)

开始

Windo... C:\WI... 12452... 15:58... 需求... 招商...

Messa... about... Samet... Micro... IBM L...

9:52 下午 星期四 05/24/2007



Microsoft PowerPoint - [Bluepage Plugin.ppt]

### BluePages - Search

File

Search For

Name


Advanced... Search

Search Results

Org Chart Show Details

Status	Callup Name	Tieline	Job Respons...
Online	Liu, Xiao Ping	900-3478	SENIOR I/T ...

Back Forward Close Detail Open Full Record Assistant Details



**Xiao Ping Liu**  
 SENIOR I/T SPECIALIST - SOFTWA  
 Employee Type: Regular

Address not available  
 Building: N/A | Floor: N/A | Office: N/A

Phone: 86-10-65391188 x3478  
 Tieline: 900-3478  
 E-mail: [liuxp@cn.ibm.com](mailto:liuxp@cn.ibm.com)  
 Notes mail: Xiao Ping Liu/China/IBM@IBMCN

Organizational Chart

- D.C. Chien
  - Bete Demeke
    - Hie-Ping Chan
      - Sheng Li Liu
        - Qiao Ming Chen
          - Xiao Ping Liu

绘图 (R) 自选图形 (U)

幻灯片 3 / 3

Blue Pearl Basic

中文 (中国)

05/24/2007

9:54 下午 星期四 05/24/2007

开始

Win... C:\... 124... 17... 需... 招... Mes...

abo... Sam... Mic... IBM... Li... Blu...

EN ?

## 企业应用场景四：电话系统集成

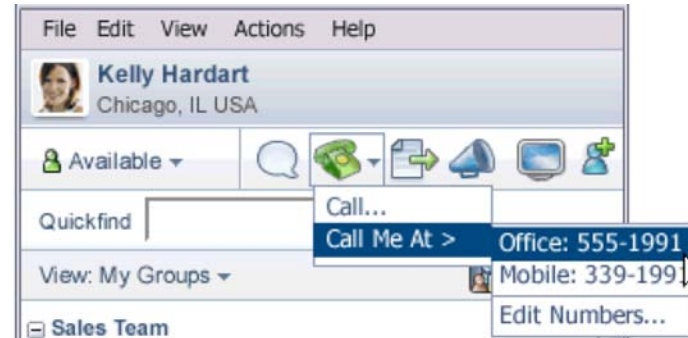
- Click to Call
- 电话会议和Web会议集成





## 从联系人列表开始一个电话呼叫

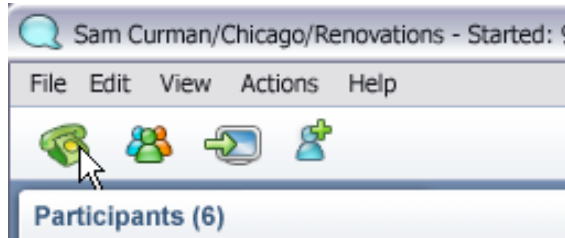
点击用户名，然后选择Call... 或 Call me At



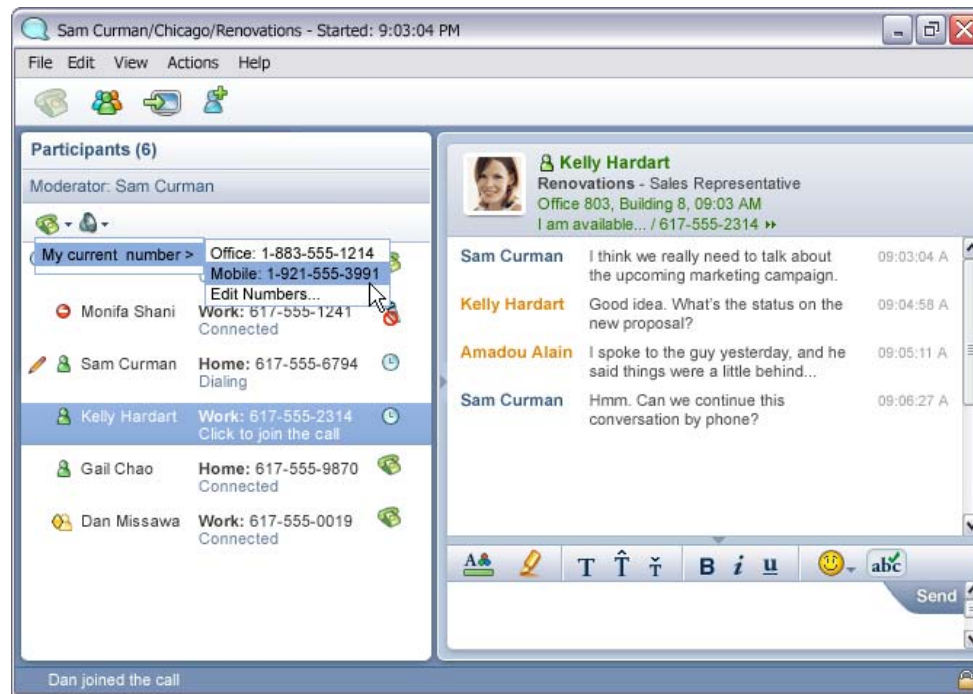
被邀请用户可以选择是否接通电话



## 从对话窗口开始一个电话呼叫



任何一个会话参与者可以将文字对话切换为电话交流

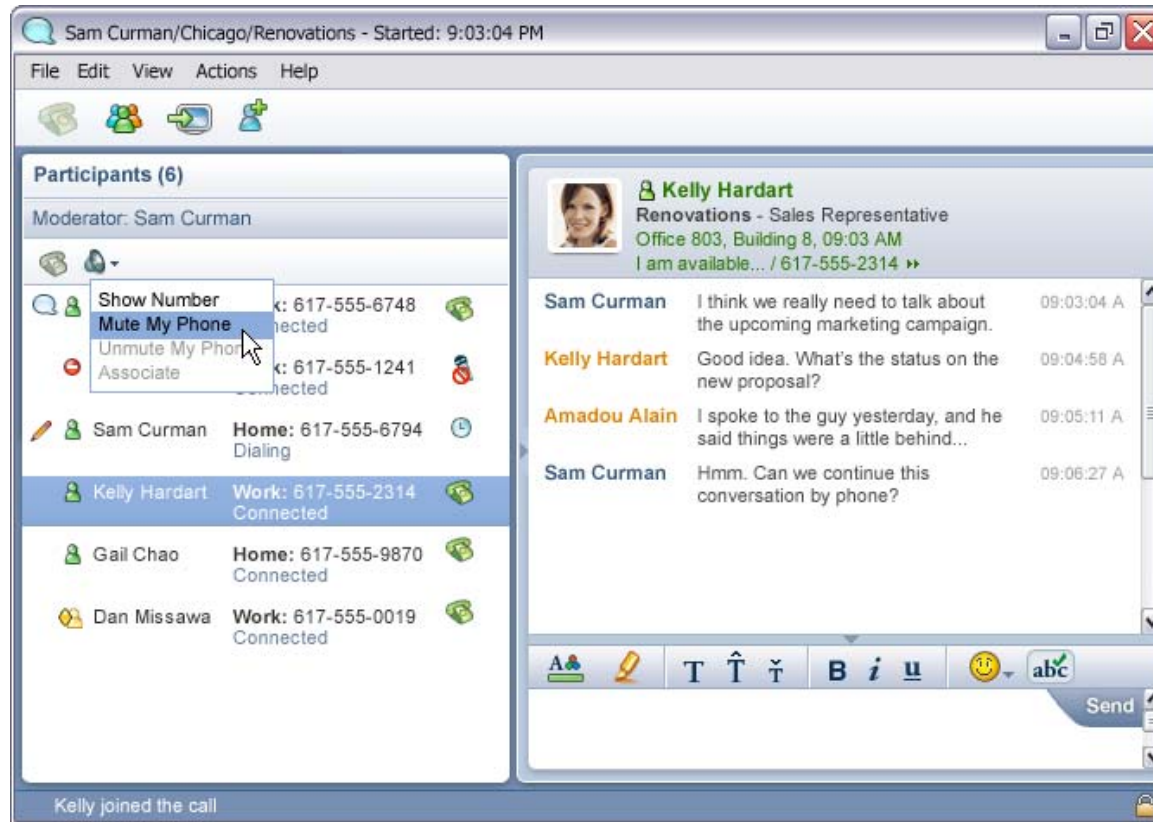


电话控制窗口打开，每个用户可以选择希望被叫的号码



## 电话控制窗口

用户可以看到谁正在说话、谁是静音

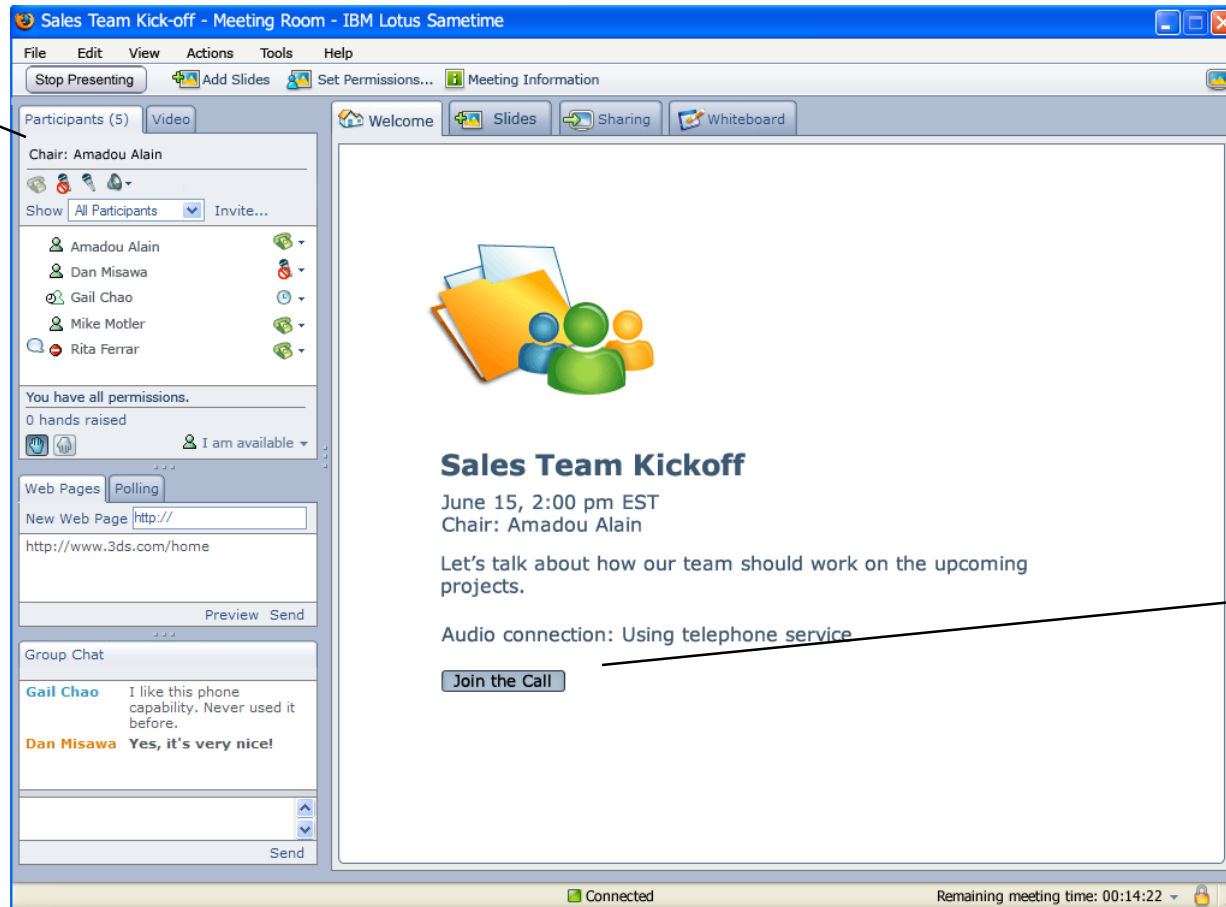


开启电话交谈的用户有更多的权限，如全部静音

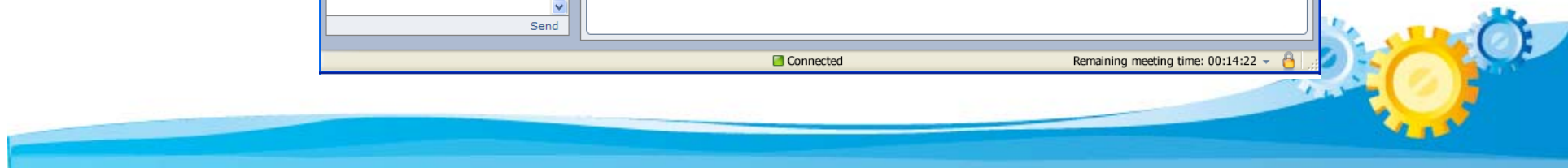


# Web会议与电话会议系统集成

在联系人列表窗口管理电话接入



点击欢迎页面的按钮，用户可以快速加入电话会议



## 部署建议

- 主要部件：
  - MUX
  - BUDDY STORE
  - COMMUNITY
  - MEETING
  - LOCATION / NEW 7.5 FEATURES
  - LDAP





# STMUX

- **Sametime** 通过多路复用服务器(**STMUX**) 减少客户端到 **STCommunity**服务器的连接
- **STMUX**服务在连接数上有一定的限制 **LIMITATIONS**
- 在一台服务器上，一个 **STMUX** 大约可以处理**3万**用户 (这是实际可到达的用户数，某些测试，包括后面会提到的测试结果，表明这个数据可能更高)
- 如果在同一台服务器上安装**MUX** 和**community server**，反而会降低服务器处理能力
- 实际部署时需要考虑一定的余量和冗余
- 单独的**STMUX** 服务器可以运行在低端的服务器上，但是网络带宽要足够



# STCommunity

- 一台Community Server 服务器可以接受10万用户的请求 (不安装MUX)
- 如果一台服务器上即安装Community,又安装MUX, 这个限制将变成3万, 这是MUX的限制
- 如果使用Sametime 7.5的富文本、文件传输、位置服务等新功能, 将使每台服务器能够处理的用户数减少至5万左右。



# Meetings

- 一台Community 服务器在不启用会议、屏幕共享等功能时，可以支持10万用户。
- 如果启用这些功能，大约需要占用20%的服务器性能

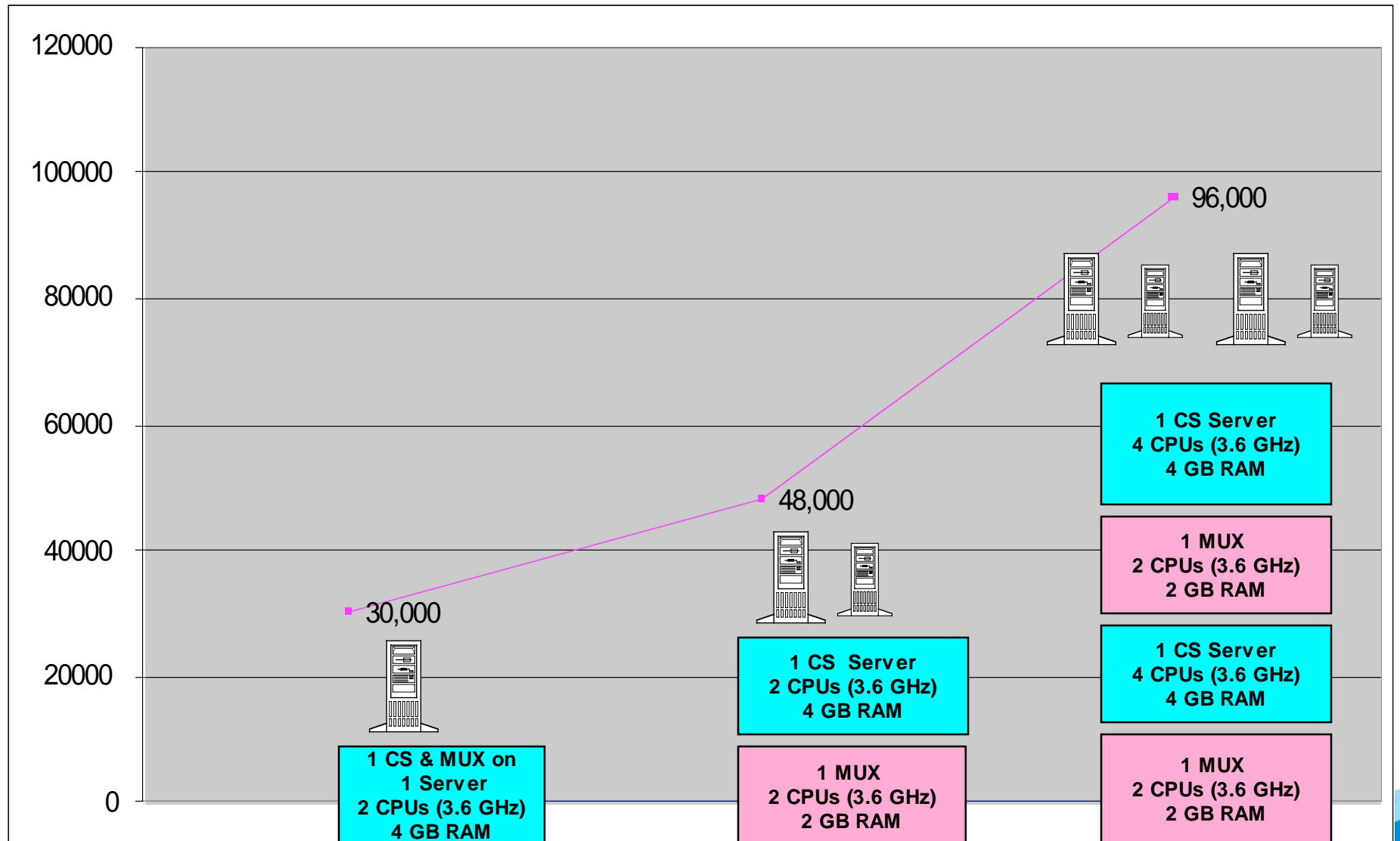


# LDAP

- Sametime 对 LDAP 服务器的性能要求比较高
  - 早上上班大家同时登录
  - 联系人列表信息更新
- 如果LDAP性能不够，可能导致LDAP服务器崩溃
- 不仅仅是Sametime，所有即时通讯产品基本都相同
- 禁用STBrowse

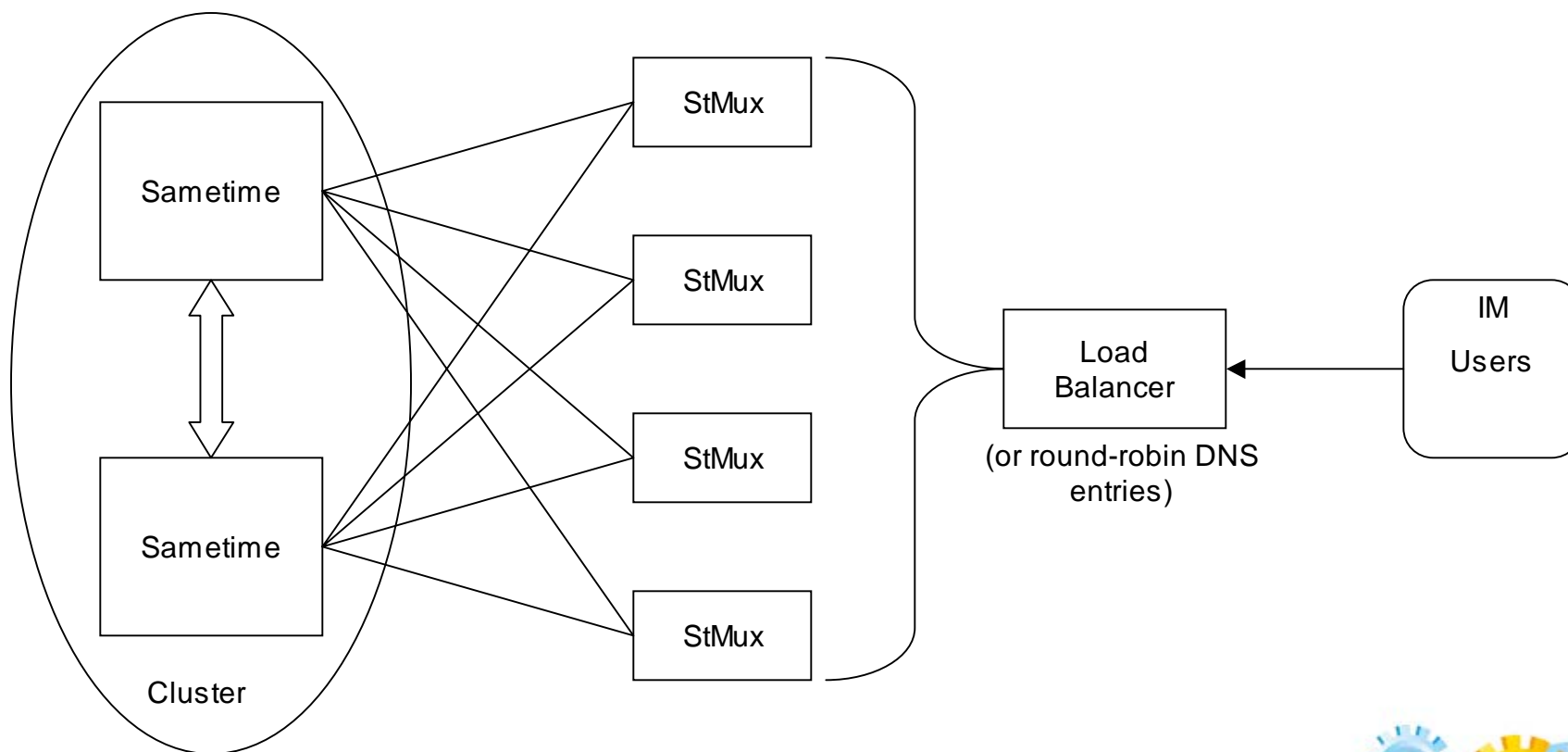


# Sametime 7.5 即时消息性能





# 常见部署架构

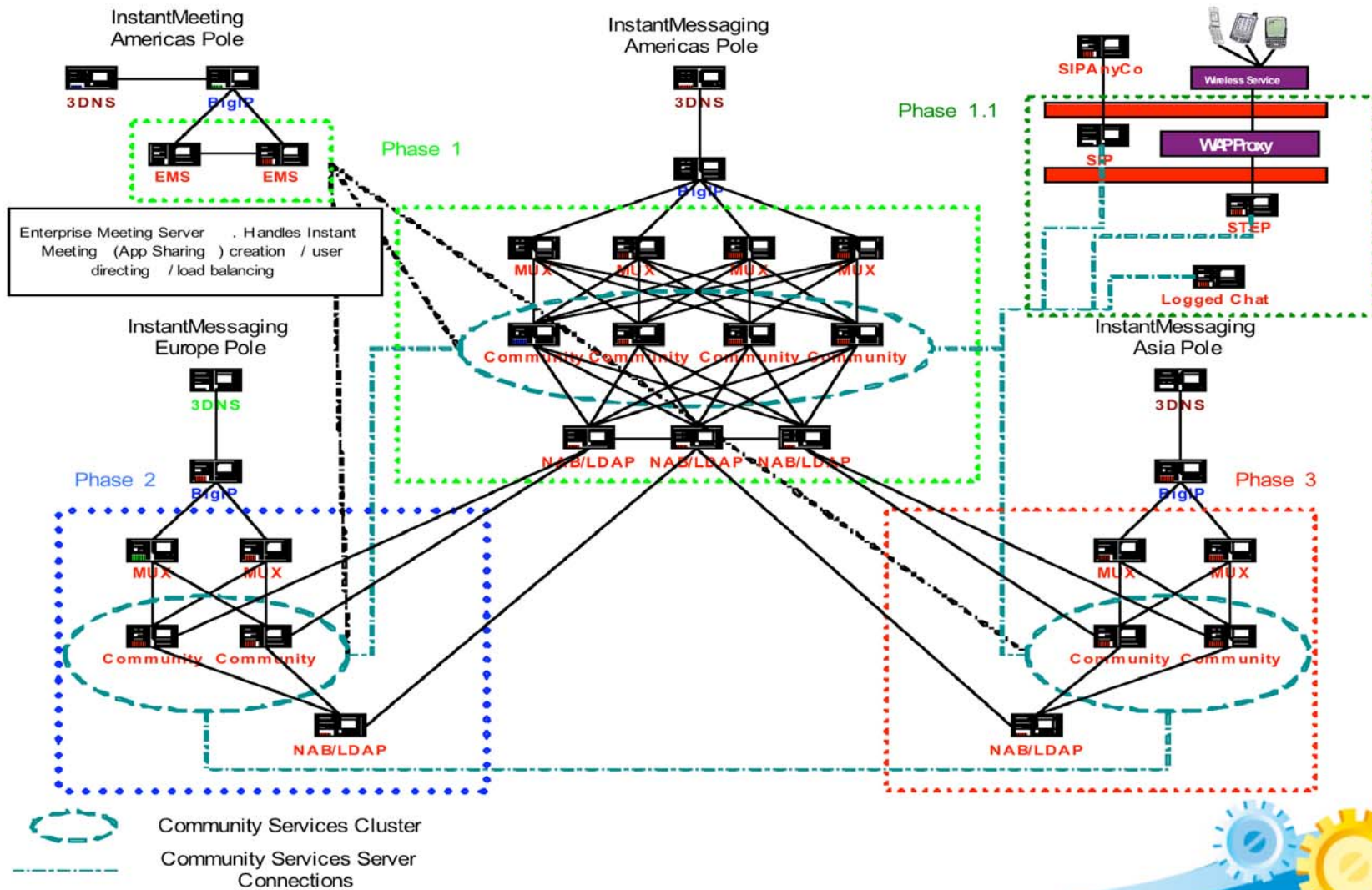


## GE's Sametime

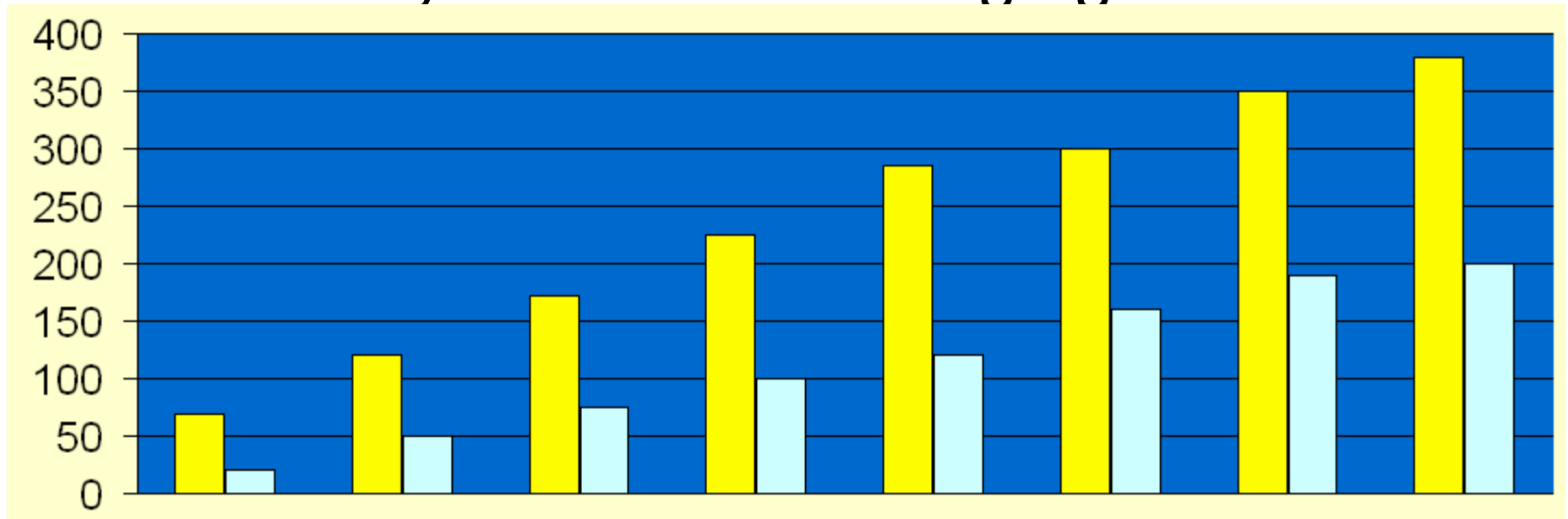
- 支撑240,000 并发用户和1,600 并发应用共享/即时会议
- 高可用性
- SIP 和移动接入
- EMS for Instant Meeting 负载均衡
- Baseline Architecture for Sametime 7.5



# GE Deployment of Sametime



# History – Instant Messaging at IBM



1998

1999

2000

2001

2002

2003

2004

2005

2006

VP Buddy  
69k total users  
20k concurrent

ST 1.5  
225k total users  
100k concurrent

ST 3.1  
300k total users  
160k concurrent

ST 6.5 Server  
380k total users  
200k concurrent

Ubique &  
Databeam

ST 1.5  
120k total users  
50k concurrent

ST 3.0  
285k total users  
120k concurrent

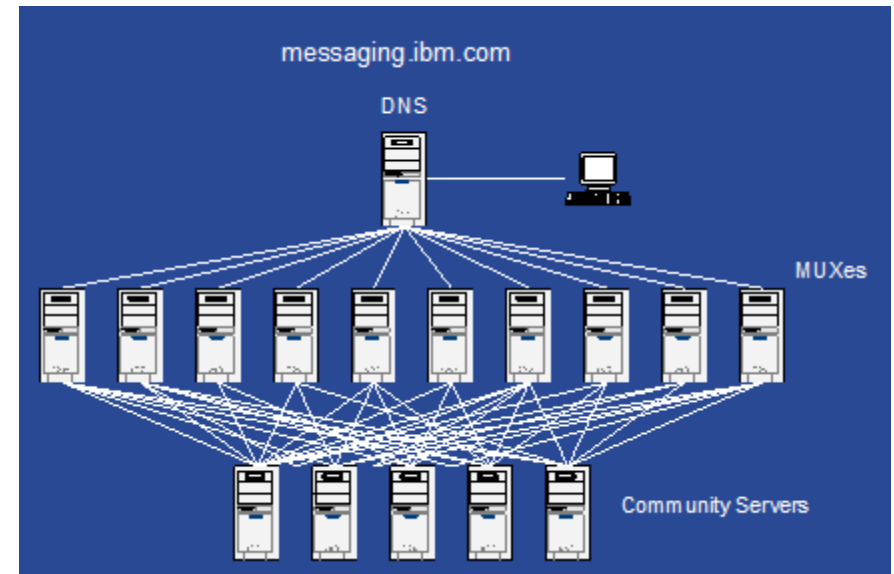
ST 6.5 Server  
350k total users  
190k concurrent

NotesBuddy  
IBM Community Tools



# IBM's Sametime IM Architecture

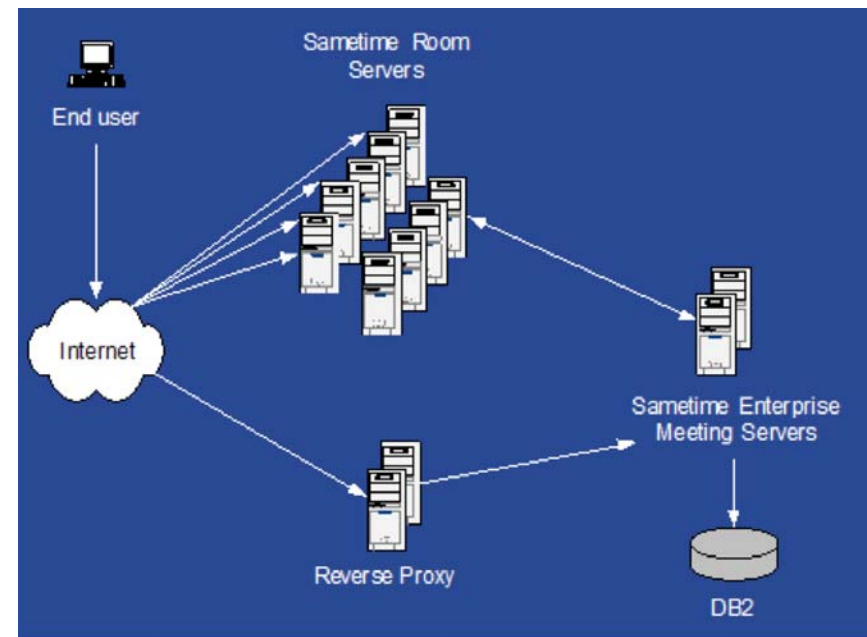
- IBM xSeries Blades (15) running Windows 2003 server
  - 10 Multiplexers (MUXes)
  - 5 Community Servers
- Sametime 6.5.1 server infrastructure
  - 7.5 server upgrade in progress
- Client plug-in and feature provisioning infrastructure
- Websphere Message Broker infrastructure (i.e. “Pub/sub”)
- Separate from web conferencing infrastructure
- Secondary disaster recovery infrastructure
- Pre-production, test environment





# IBM's Web Conference Architecture

- IBM xSeries Blades (8) running Windows 2003 server and shared AIX-based DB2
  - 6 Room Servers
  - 2 Enterprise Meeting Servers
- Sametime 3.1 server infrastructure
  - 7.5 upgrade in progress
- Separate from instant messaging infrastructure
- Single data center deployment servicing users world-wide
- Separate pre-production, test environment



## 一般性建议

- 架构部署形式取决于实际网络拓扑和对即时消息的使用规划；
- 集中式的好处在于便于管理，统一控制，实施和维护的总体成本低；
- 分布的好处可以减小网络的压力
- 网络允许的情况下，建议使用集中式部署的方式。
- 考虑LDAP压力



## 推荐资料

- [Sametime 7.5.1 - Best Practices for Enterprise Scale Deployment](#), SG24-7410-00  
*Draft Redbooks*, last update 30 May 2007, Rating: (based on 1 review)
- [Lotus Instant Messaging/Web Conferencing \(Sametime\): Building Sametime Enabled Applications](#), SG24-7037-00  
*Redbooks*, published 17 November 2003, Rating: (based on 5 reviews)
- [Extending Sametime 7.5 Building Plug-ins for Sametime](#), SG24-7346-00  
*Redbooks*, published 5 January 2007, last updated 12 January 2007, Rating: (based on 5 reviews)



谢谢!

