SIP.edu Project

Internet2 VoIP Workshop

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October 1, 2004
SIP.edu

• Goals
  – Grow SIP connectivity in Internet2
  – Increase value proposition for end-user SIP adoption
  – Promote convergence of voice and email identity
  – Low entry-cost means for campuses to...
    • Provide a useful service
    • Get their feet wet with SIP

• Means
  – Publishing “cookbook” with several alternative “recipes”
  – Obtaining corporate sponsorship and promotional pricing
Why Phone NUMBERS?

- Users should not be burdened with device addresses, when it’s people they really care about
- Addresses should be mnemonic and empower enterprises to manage the identities of their users
  
  \texttt{sip:dbaron@mit.edu}

- It’s time to put E.164 phone numbers behind us!
- A.G. Bell did not say:

  “+1-617-252-1232, come here. I need you!”
SIP.edu Architecture (Phase 1)

SIP User Agent

DNS SRV query
sip.udp.bigu.edu

INVITE
(sip:bob@bigu.edu)

DNS

SIP Proxy

INVITE
(sip:12345@gw.bigu.edu)

telephoneNumber
where mail="bob"

Campus Directory

SIP-PBX Gateway

PRI / CAS

bigu.edu

PBX

Bob's Phone

SIP.edu Architecture (Phase 1)
DNS INVITE (sip:bob@bigu.edu)

If Bob has registered, ring his SIP phone; Else, call his extension through the PBX.

REGISTER (Contact: 207.75.164.131)
SIP.edu Call Flow Example

- SIP DNS lookup for MIT.EDU points to SIP proxy
  - Sends INVITE to bob@mit.edu to proxy
- SIP proxy checks MIT directory
  - Maps call to PBX extension – eg. 37669@mit.edu
- SIP proxy checks dial plan
  - Routes call to PBX gateway
- PBX rings phone
# SIP.edu Installations

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<tr>
<th><a href="mailto:SIP@mit.edu">SIP@mit.edu</a></th>
<th><a href="mailto:SIP@upenn.edu">SIP@upenn.edu</a></th>
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<tbody>
<tr>
<td>Pingtel SIPxchange proxy</td>
<td>iptel.org SER proxy</td>
</tr>
<tr>
<td>Cisco gateway</td>
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</tr>
<tr>
<td>Lucent PBX</td>
<td>Centrex – Nortel</td>
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<th><a href="mailto:SIP@yale.edu">SIP@yale.edu</a></th>
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<tr>
<td>Nortel PBX</td>
<td>Siemens PBX</td>
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</table>
SIP.edu Reachable Users

SIP.edu Reachable Users (cumulative)

Reachable Users vs. Date

- columbia.edu
- internet2.edu
- upenn.edu
- yale.edu
- mit.edu

Date: 01/03 02/03 04/03 05/03 07/03 08/03 10/03 11/03 01/04 02/04

Reachable Users: 0 10000 20000 30000 40000 50000 60000 70000 80000 90000 100000
SIP.edu – Just do it!

Questions?