CUSAX: Combined Use of SIP and XMPP
draft-ivov-xmpp-cusax
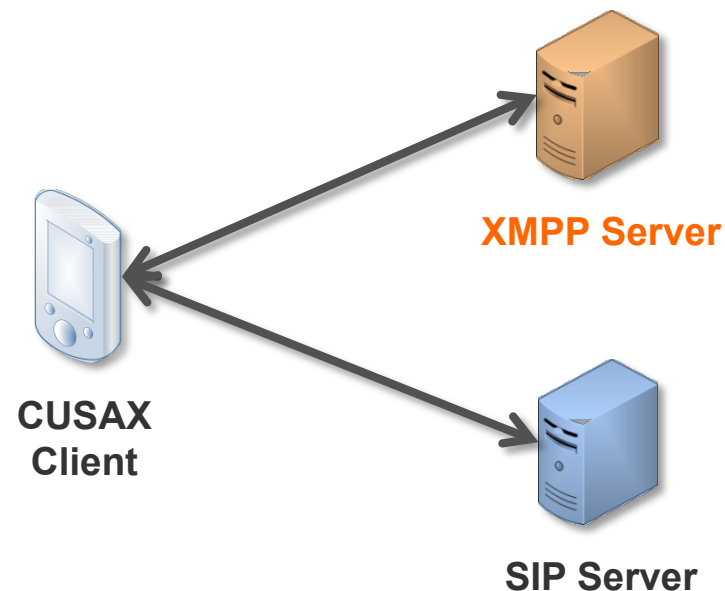
Emil Ivov
Enrico Marocco
Peter Saint-Andre

CUSAX: Why?

- Existing SIP server implementations often have:
  - Rich sets of telephony features (voicemail, call queues, call parking, 3PCC …)
  - Support for media services (transcoding, call mixing, HNT etc.)
  - Abundance of PSTN gateways

  - Relatively poor support for things like presence, instant messaging, server stored contact lists, file transfer, etc.

- Existing XMPP server implementations often have:
  - Great support for things like presence, instant messaging, server stored contact lists, file transfer, etc.

  - Poor or no support for anything related to telephony

  - implementations often

- Entirely based on requests from Unified Communication service providers

CUSAX: What?

- Double stack clients SIP+XMPP clients
- Connect simultaneously to SIP and XMPP infrastructure
- Use SIP for VoIP (only!)
- XMPP for IMP and everything else (no Jingle)

XMPP Server

CUSAX Client

SIP Server

CUSAX Approach

- Not specifying new stuff.

- Reuse

  - vCard-s

  - SIP Contact headers

CUSAX: Matching JIDs to AORs

- Retrieve SIP AORs from VCARDs

```
<vCard xmlns='vcard-temp'>
  <TEL>
   <CELL/>
   <WORK/>
   <NUMBER>+33.1.77.62.43.39</NUMBER>
  </TEL>
</vCard>
```

```
<vCard xmlns='vcard-temp'>
  <TEL>
    <CELL/>`
    <WORK/>
    <NUMBER>sip:alice@atlanta.com</NUMBER>
  </TEL>
</vCard>
```

CUSAX: Matching JIDs to AORs

- Retrieve JIDs from additional SIP Contact headers

```
INVITE sip:bob@biloxi.com SIP/2.0
To: Bob <sip:bob@biloxi.com>
From: Alice <sip:alice@atlanta.com>;tag=1928301774
…
Contact: <sip:alice@pc33.atlanta.com;gr=some-rsrc>
Contact: <xmpp:alice@atlanta.com/some-resource>
```

CUSAX: Related Work

- Similar to SIXPAC but:
    - Does not introduce new SIP headers
    - Does not add new stanza
    - Little interaction between both protocols

CUSAX: Other Details

- SIP and XMPP infrastructure are likely to have a single maintainer.
- Account provisioning recommended but out of scope

```
            Service Login

                        _____
Service ID:       [_____]
Service Passwd:  [_____]

```
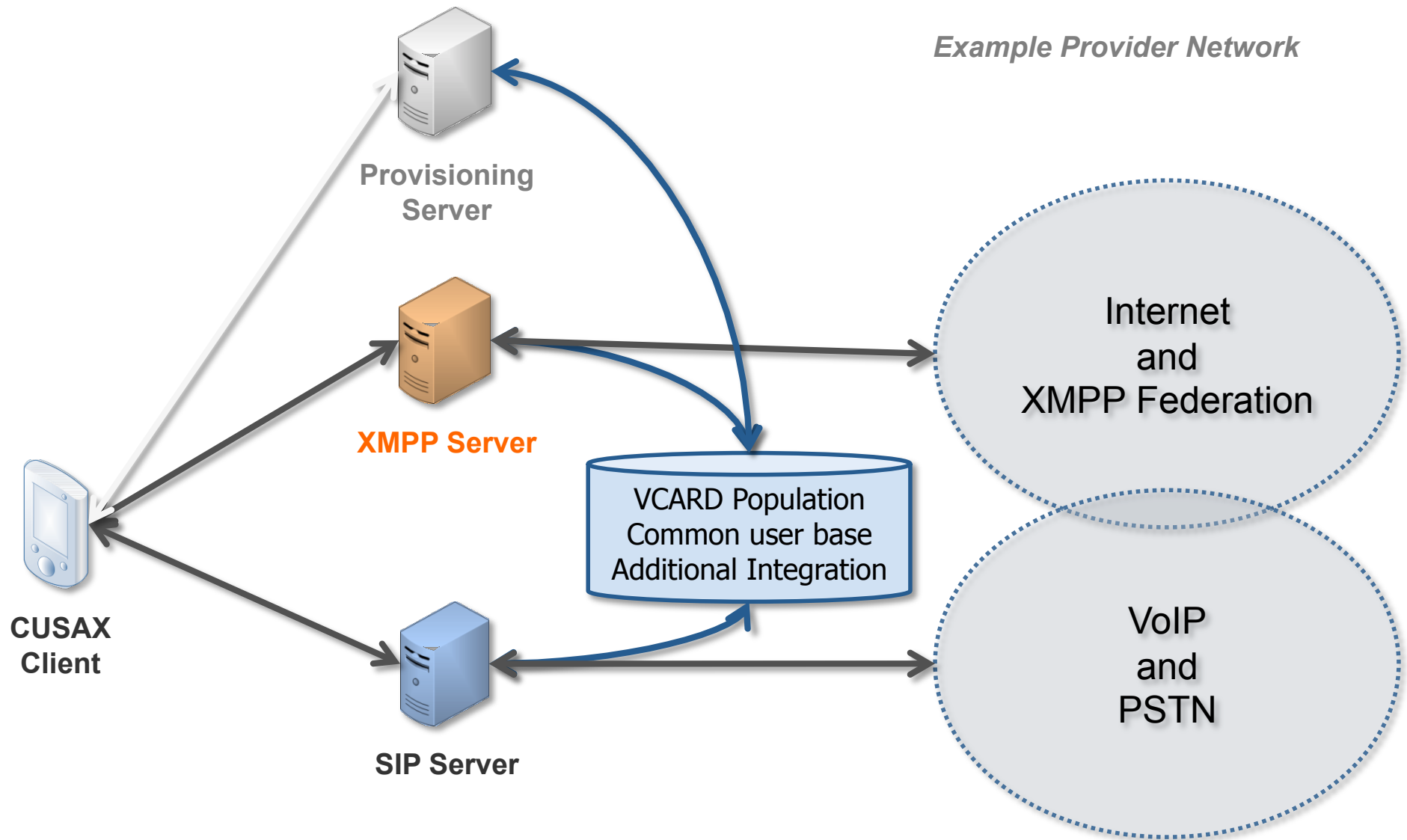
OK!

```
            Service Login

                        _____
SIP ID:         [_____]
SIP Passwd:   [_____]
SIP Server:    [_____]

                        _____
XMPP JID:      [_____]
XMPP Passwd:[_____]

```

NOT REALLY OK!

CUSAX: Example Deployment

Provisioning Server

XMPP Server

VCARD Population
Common user base
Additional Integration

CUSAX Client

SIP Server

Example Provider Network

Internet and XMPP Federation

VoIP and PSTN

CUSAX: Open Issues

- Federation
  - How do we handle x-domain contacts?
  - How do we handle x-domain calls?

CUSAX: Open Issues

- Provisioning
  - Do we keep this out of scope?
  - Do we try to put something on paper?
  - Do we use existing tools?
    (Paul suggested using the digest "domain" param)

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Next Steps?

- Small piece of work
- 80% done
- People are asking for it