current state of i18n support of XMPP servers

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abstract

- We examined several XMPP servers whether they support i18n or not

- I18n in XMPP is explained in internet-draft by peter
  - Internationalized Addresses in XMPP
    - draft-saintandre-xmpp-i18n-03
    - (http://tools.ietf.org/id/draft-saintandre-xmpp-i18n-03.txt)

- We aimed to make sure it is working in real environment
Interop test

Client
- Many!
- Fairly easy
- We will do this here!

Server
- Hard to do this here...
- We setup and tested several server at our own testing environment
What means i18n for XMPP?

- i18n(internationalization)
- For XMPP, it is based on stringprep.
  - EUC v3.2 is supported
- To be migrated to PRECIS.
What is punycode?

- Punycode is an algorithm to represent Unicode into ASCII-code.
- Defined in RFC 3492.
- Used in expressing International domain name

えっくすえむぴーぴー
↓

xn--r8jau4b8b4fa8gr9cja
Tested XMPP servers

- Openfire (3.7.1)
- ejabberd (2.1.2-2)
- Jabberd2 (2.2.8)
- Prosody (0.8.2)
- Tigase
- xmpppd
testing topology

Tigase.im

DNS Server
(えっくすえむびーぴー.net)

The Internet

Hypervisor @ Keio Univ

Jabberd2 (on Ubuntu Lucid)

Prosody (on Ubuntu Lucid)

ejabberd (on Ubuntu Lucid)

Openfire (on Ubuntu Lucid)

Client(adium, psi)
1. Get a international domain.
   - えっくすえむぴーぴー.net(xn--r8jau4b8b4fa8gr9cba.net)
2. Make a XMPP server
3. Connect from psi or adium
   - There seems no client which completely supports i18n
Testing client

- Any client which fully capable of punycode?
- PSI sometimes did not connect well
- Adium, oneteam, swift, iChat will not accept IDN...
- Ended up with this→
■ **1\textsuperscript{st} Test**
  - Test whether client can connect with following setting

<table>
<thead>
<tr>
<th></th>
<th>Username</th>
<th>@</th>
<th>Domainname</th>
<th>/</th>
<th>resourcepart</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eng</td>
<td></td>
<td>Eng</td>
<td></td>
<td>Eng</td>
</tr>
<tr>
<td>2</td>
<td>Eng</td>
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<td>Eng</td>
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<tr>
<td>5</td>
<td>Jpn</td>
<td></td>
<td>Jpn</td>
<td></td>
<td>Jpn</td>
</tr>
</tbody>
</table>
Testing (cont. 2)

- 2nd test

1. Set up MUC component then make sure it works fine when the room name is non-ascii.

2. Also, make sure it works when the nickname is non-ascii.
## Overall result

<table>
<thead>
<tr>
<th></th>
<th>Openfire</th>
<th>Jabberd2</th>
<th>Ejabberd</th>
<th>Tigase</th>
<th>Prosody</th>
</tr>
</thead>
<tbody>
<tr>
<td>eng@eng/eng</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>eng@jp/eng</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>eng@jp/jp</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>jp@jp/eng</td>
<td>✔️</td>
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<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>jp@jp/jp</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>muc</td>
<td>✔️</td>
<td>N/A</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>muc(JPN nic)</td>
<td>✔️</td>
<td>N/A</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>
Openfire

- Ubuntu Server(Lucid)
- wget from ignite realtime website
- Run with OpenJDK6-JDK
- Used mysql as Backend DB
- おーぷんふぁいあ.さーば.えっくすえむぴーぴー.net
  (punycode)
  xn--k8jcfw9sla0r65a.xn--48jucxw.xn--r8jau4b8b4fa8gr9cba.net
Openfire-result(1\textsuperscript{st} test)

- Worked Fine!

<table>
<thead>
<tr>
<th>name</th>
<th>@</th>
<th>Domain</th>
<th>resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>
Openfire result(2nd test)

あとで検証します。
Experienced some minor problem

Can type Japanese when making new users, but showed as “?”.

Ex: After making a user called “ほげ”, I could not make a user named “ぴよ”.
mysql> select * from ofUser where username = '??';
+----------+---------------+--------------------------------------------------+------+-------+-----------------+------------------+
| username | plainPassword | encryptedPassword | name | email | creationDate     | modificationDate |
+----------+---------------+--------------------------------------------------+------+-------+-----------------+------------------+
| ??       | NULL          | 9fd15f2063258d99153a05fd905f5e8b6399e87dfbd7bb45 | NULL | NULL  | 001328078955346 | 001328078955346  |
+----------+---------------+--------------------------------------------------+------+-------+-----------------+------------------+
ejabberd

- Used turnkey linux ejabberd appliance(Ubuntu Lucid)
  - [http://www.turnkeylinux.org/ejabberd](http://www.turnkeylinux.org/ejabberd)
  - ejabberd ver. 2.1.2-2

- いーじゃばーでぃ２．さーば．えっくすえむぴーぴー.net
  - Punycode
    xn--2-y7tc4f9c8b1hx5bda.xn--48jucxw.xn--r8jau4b8b4fa8gr9cba.net
ejabberd-result(1\textsuperscript{st} test)

- Worked fine!

<table>
<thead>
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</tr>
</tbody>
</table>
ejabberd 2^{nd} test.

- Worked fine 😊
- conference. xn--2-y7tc4f9c8b1hx5bda.xn--48jucxw.xn--r8jau4b8b4fa8gr9cba.net
- Setup a Virtual Host at tigase.im
- てぃがせ２．さーば．えっくすえむぴーぴー.net
  - Punycode
  - xn--2-y7t1a1d9b.xn--48jucxw.xn--r8jau4b8b4fa8gr9cba.net

- Tried only in-band registration for Japanese username

[Logo: Tigase.im]
Tigase-result (1\textsuperscript{st} test)

- Worked fine 😊

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</table>
Tigase 2\textsuperscript{nd} test

- Worked fine 😊
Set up a Ubuntu Server (Lucid)

Followed instruction on

```
http://prosody.im/download/package_repository
```

```
apt-get install prosody liblua5.1-sec0
```

punycode

```
xn--m8j8b4a0duf.xn--48jucxw.xn--r8jau4b8b4fa8gr9cba.net
```

```
plusbox.see mue mpn.net
```

- Punycode
- xn--m8j8b4a0duf.xn--48jucxw.xn--r8jau4b8b4fa8gr9cba.net
Prosody result (1\textsuperscript{st} test)

- Worked fine 😊

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</table>
Setup a ubuntu server (Lucid)

Used mysql-server as backend db

じゃばーでぃー2.さーば.えっくすえむぴーぴー.net
  punycode
  xn--2-y7twyc1b3g81bca.xn--48jucxw.xn--r8jau4b8b4fa8gr9c8a.net
Jabberd2 result (1st test)

- Worked fine 😊

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<td>5</td>
<td>Jpn</td>
<td>Jpn</td>
<td>Jpn</td>
<td>Jpn</td>
</tr>
</tbody>
</table>
Please connect this server!

- さみっと.えっくすえむぴーぴー.net
- If you can’t connect from this address, use
  - xn--48j2ap4g.xn--r8jau4b8b4fa8gr9cba.net
- Detail
- ejabberd 2.1.2 on Ubuntu Lucid