

Presence and Location Service: Operation and Client Requirements

version 0.1

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Operation

Registration and Publishing Presence

Figure 1 shows the sequence of messages for user Bob's UA getting online, registering, and publishing Bob's presence information.

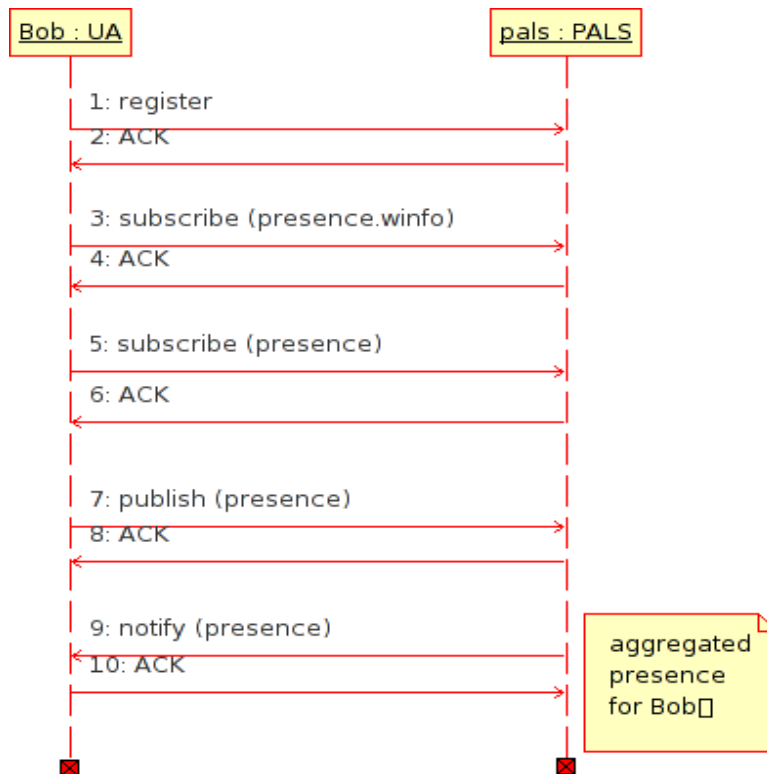


Figure 1: UA Registration and Publication of Presence

In the pals registration picture, a typical user (Bob) turns on his user agent. The UA registers with the proxy server, which is also a presence and location server (PALS). In message 3, Bob's UA subscribes to presence.winfo event package on bob@example.com so that he will be notified when anyone subscribes to his presence info. That is covered in the second diagram.

Because the PALS also publishes presence info, Bob's UA subscribes in message 5 to the presence event package on bob@example.com in order to receive aggregated presence info from all of Bob's user agents and from location information gathered by the PALS.

The PALS can determine basic online/offline via the registration message, but more detailed information must be published by Bob's UA in message 7. Messages 5 and 7 could have been issued in either order.

In message 9, the PALS sends a notify because Bob's presence information was changed by message 7. There could also have been a notify after the message 5 subscribe, depending on the timing of the messages.

Subscribing to a User's Presence Information

Figure 2 shows the sequence of messages for a previously unauthorized user Alice subscribing to Bob's presence information.

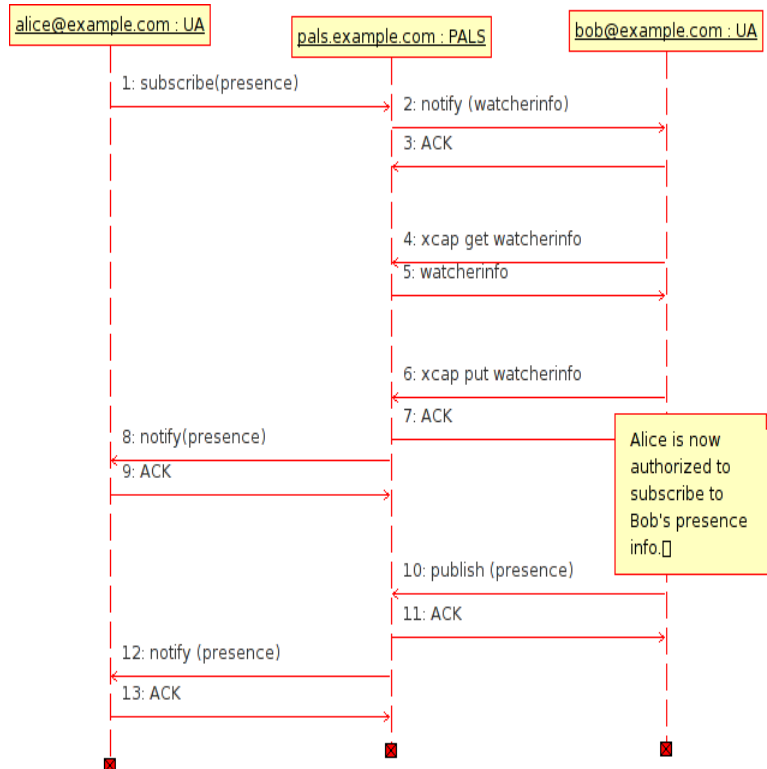


Figure 2: Previously Unauthorized User Subscribing

To begin with, Alice's UA sends message 1 to the PALS server pals.example.com to request to subscribe to Bob's presence information. The event package is "presence" and the accepts format is "application/cpim-pidf+xml", which is defined in

Because alice@example.com is not currently authorized to subscribe to Bob's presence information, PALS sends a presence.winfo notification [WINFO] in format application/watcherinfo+xml [WATCHERINFO] to Bob's UA. Upon receipt of the notification, Bob's UA would query the Bob whether to authorize Alice to watch him.

Bob authorizes Alice, and his UA uses an XCAP [XCAP] GET request (message 4) to fetch the watcherinfo list from the PALS.

The URL that is fetched is: `http://pals.example.com/watcherinfo/users/bob@example.com/watcherinfo.xml`

Bob's UA updates the watcher list, changing the status of the entry for alice@example.com from "pending" to "active", and then puts the updated list back on the server via XCAP PUT in message 6, acknowledged by message 7.

Updating the watcherinfo on PALS triggers it to send a presence notification (message 8) to Alice, containing the current state of Bob's presence. This message is in format application/cpim-pidf+xml.

Messages 9 and 10 contain PUBLISH and ACK of new presence information for Bob. This update triggers PALS to send a new presence notification to Alice's UA (message 11 and ack 12).

Presence Information Format

The overall presence information format is CPIM-PIDF [PIDF]. Within that, PALS adds location information (location-info elements). The contents of the location-info element will conform to the format described in [GEOPRIV-PIDF-LO].

Here is an example presence document:

Example 1. Example cpim-pidf+xml presence document

```
<?xml version="1.0" encoding="UTF-8"?>
<impp:presence xmlns:impp="urn:ietf:params:xml:ns:pidf"
  entity="pres:someone@example.com">
  <impp:tuple id="sg89ae">
    <impp:status>
      <impp:basic>open</impp:basic>
      <gp:geopriv>
        <gp:location-info>
          <gml:location>
            <cl:civilAddress>
              <cl:country>US</cl:country>
              <cl:A1>New York</cl:A1>
              <cl:A3>New York</cl:A3>
              <cl:A6>Broadway</cl:A6>
              <cl:HNO>123</cl:HNO>
              <cl:LOC>Suite 75</cl:LOC>
              <cl:PC>10027-0401</cl:PC>
            </cl:civilAddress>
          </gml:location>
        </gp:location-info>
      </gp:geopriv>
    </impp:status>
    <impp:contact priority="0.8">tel:+09012345678</impp:contact>
  </impp:tuple>
</impp:presence>
```

Example 2. Example cpim-pidf+xml presence document with CRL location info

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```
<?xml version="1.0" encoding="UTF-8"?>
<impp:presence xmlns:impp="urn:ietf:params:xml:ns:pidf"
  entity="pres:someone@example.com">
  <impp:tuple id="sg89ae">
    <impp:status>
      <impp:basic>open</impp:basic>
    <gp:geopriv>
      <gp:location-info>
        <gml:location>
          <cl:civilAddress>
            <loc>
              <crl:site>East West Center</cl:A1>
              <crl:floor>2</cl:A1>
              <crl:room>Kamehameha</cl:A1>
            </loc>
          </cl:civilAddress>
        </gml:location>
      </gp:location-info>
    </gp:geopriv>
  </impp:status>
  <impp:contact priority="0.8">tel:+09012345678</impp:contact>
</impp:tuple>
</impp:presence>
```

Bibliography

[GEOPRIV-PIDF-LO] *A Presence-based GEOPRIV Location Object Format*. draft-ietf-geopriv-pidf-lo-01.txt.

[PIDF] *Common Profile for Instant Messaging (CPIM)*. draft-ietf-impp-im-04.txt.

[CPIM-PIDF] *Presence Information Data Format (PIDF)*. draft-ietf-impp-cpim-pidf-08.txt.

[WATCHERINFO] *An Extensible Markup Language (XML) Based Format for Watcher Information*. draft-ietf-simple-winfo-format-04.txt.

[WINFO] *A Watcher Information Event Template-Package for the Session Initiation Protocol (SIP)*. draft-ietf-simple-winfo-package-05.txt.

Glossary

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|---------------|--|
| watcher | A user subscribing to a type of information about another user. A watcher is notified with updated values of that information when it changes. |
| event package | A type of information to which a watcher can subscribe. |