XEP-0232: Software Information

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This document specifies an extended data format whereby XMPP service discovery responses can include detailed information about the software application that powers a given XMPP entity for includion in service discovery responses.

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Contents

1 Introduction

Service Discovery Extensions (XEP-0128) [1] defines a way for an XMPP entity to include extended information in its responses to Service Discovery (XEP-0030) [2] information requests. This document specifies a usage of Service Discovery Extensions (XEP-0128) [3] whereby an XMPP entity can provide detailed data about itself in such responses. This protocol is intended to replace Software Version (XEP-0092) [4] for software information discovery (thus reducing or eliminating the need for distinct software version requests) and also provides a format that can be encapsulated into Entity Capabilities (XEP-0115) [5] notifications.

2 Use Case

To illustrate this usage, consider the following example of a disco#info request-response interaction that includes detailed client information:

Listing 1: Entity queries client for information

```
<iq from='romeo@montaguue.lit/orchard'
    to='juliet@capulet.lit/chamber'
    id='disco1'
    type='get'>
  <query xmlns='http://jabber.org/protocol/disco#info'/>
</iq>
```

Upon receiving the disco#info request, the software replies and includes extended information in a data form (Data Forms (XEP-0004) [6]), where the icon is communicated using the format defined in Data Forms Media Element (XEP-0221) [7].

Listing 2: Client communicates information

```
<iq from='juliet@capulet.lit/chamber'
    to='romeo@montague.lit/orchard'
    id='disco1'
    type='result'>
  <query xmlns='http://jabber.org/protocol/disco#info'>
    <identity category='client' name='Exodus' type='pc'/>
    <feature var='http://jabber.org/protocol/disco'/>
    <x xmlns='jabber:x:data' type='result'>
```

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[1] XEP-0128: Service Discovery Extensions <https://xmpp.org/extensions/xep-0128.html>.
[2] XEP-0030: Service Discovery <https://xmpp.org/extensions/xep-0030.html>.
[3] XEP-0128: Service Discovery Extensions <https://xmpp.org/extensions/xep-0128.html>.
[4] XEP-0092: Software Version <https://xmpp.org/extensions/xep-0092.html>.
[5] XEP-0115: Entity Capabilities <https://xmpp.org/extensions/xep-0115.html>.
[6] XEP-0004: Data Forms <https://xmpp.org/extensions/xep-0004.html>.
[7] XEP-0221: Data Forms Media Element <https://xmpp.org/extensions/xep-0221.html>.

```
      <field var='FORM_TYPE' type='hidden'>
        <value>urn:xmpp:dataforms:softwareinfo</value>
      </field>
      <field var='icon'>
        <media xmlns='urn:xmpp:media-element'
               height='80'
               width='290'>
          <uri type='image/jpeg'>
            http://www.shakespeare.lit/clients/exodus.jpg
          </uri>
          <uri type='image/jpeg'>
            cid:sha1+f24030b8d91d233bac14777be5ab531ca3b9f102@bob.xmpp
               .org
          </uri>
        </media>
      </field>
      <field var='os'>
        <value>Windows</value>
      </field>
      <field var='os_version'>
        <value>XP</value>
      </field>
      <field var='software'>
        <value>Exodus</value>
      </field>
      <field var='software_version'>
        <value>0.9.1</value>
      </field>
    </x>
  </query>
</iq>
```

The fields have the following meaning:

- icon -- A default icon to show for a device running the software

- os -- The operating system on which the XMPP software is running

- os_version -- The operating system version

- software -- The XMPP software running at the entity (if this field is provided, its value SHOULD override any software name provided as the value of the 'name' attribute in the service discovery <identity/> element)

- software_version -- The XMPP software version

3 Security Considerations

Service discovery information is typically world-readable. Therefore, care should be taken in exposing information that may make it easier for a potential attacker to target the publishing entity's system (e.g., the operating system on which the software is running).

4 IANA Considerations

This document requires no interaction with the Internet Assigned Numbers Authority (IANA) [8].

5 XMPP Registrar Considerations

The XMPP Registrar [9] shall include the following information in its registries.

5.1 Field Standardization

Field Standardization for Data Forms (XEP-0068) [10] defines a process for standardizing the fields used within Data Forms qualified by a particular namespace, and Service Discovery Extensions (XEP-0128) [11] describes how to use field standardization in the context of service discovery. This section registers fields for software information scoped by the "urn:xmpp:dataforms:softwareinfo" FORM_TYPE.

```
<form_type>
  <name>urn:xmpp:dataforms:softwareinfo</name>
  <doc>XEP-0232</doc>
  <desc>
    Forms enabling the communication of detailed information
    about an XMPP client.
  </desc>
  <field
      var='icon'
      type='text-single'
```

---

[8]The Internet Assigned Numbers Authority (IANA) is the central coordinator for the assignment of unique parameter values for Internet protocols, such as port numbers and URI schemes. For further information, see <http://www.iana.org/>.

[9]The XMPP Registrar maintains a list of reserved protocol namespaces as well as registries of parameters used in the context of XMPP extension protocols approved by the XMPP Standards Foundation. For further information, see <https://xmpp.org/registrar/>.

[10]XEP-0068: Field Data Standardization for Data Forms <https://xmpp.org/extensions/xep-0068.html>.

[11]XEP-0128: Service Discovery Extensions <https://xmpp.org/extensions/xep-0128.html>.

```
        label='A_URL_for_an_icon_representing_the_software,_no_matter_
            the
_____presence_or_availability_status_of_the_XMPP_entity'/>
  <field
      var='os'
      type='text-single'
      label='The_operating_system_on_which_the_XMPP_software_is_
          running'/>
  <field
      var='os_version'
      type='text-single'
      label='The_operating_system_version'/>
  <field
      var='software'
      type='text-single'
      label='The_XMPP_software_running_at_the_entity'/>
  <field
      var='software_version'
      type='text-single'
      label='The_XMPP_software_version'/>
</form_type>
```

6 Acknowledgements