



XMPP

XEP-0505: Data Forms File Input Element

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This specification defines an element which can be used with data forms to let users upload one or more files.

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1 Introduction

When using [Data Forms \(XEP-0004\)](#)¹, it can sometimes be useful to let the user upload one or several files. For instance, a ticket system based on [Form Discovery and Publishing \(XEP-0346\)](#)² may need such a feature. This documentation specifies a "file-input" element which can be used for this.

This specification differs from [Data Forms Media Element \(XEP-0221\)](#)³: XEP-0221 is used to display a media in a form (e.g., for a CAPTCHA), while this specification is a way to upload and share files, for instance to attach them to a ticket system.

2 Requirements

The design goals of this XEP are:

- To work with file upload methods such as [Jingle File Transfer \(XEP-0234\)](#)⁴ and [HTTP File Upload \(XEP-0363\)](#)⁵
- To allow for one or multiple files upload.
- To add hints for user interface, such as the media types expected.

3 File Input Element

The root element for file is `<file-input/>`. This element **MUST** be qualified by the "urn:xmpp:file-input:0" namespace. The `<file-input/>` element **MUST** be contained within a `<field/>` element qualified by the 'jabber:x:data' namespace. The `<file/>` element **MAY** have the "multiple" attribute, which is a boolean indicating whether multiple files are allowed, and defaulting to "false"⁶

Hints can be given to indicate which kind of files are accepted, and where they must be uploaded. Two elements are used as direct children of the `<file-input/>` element: `<accept/>` and `<use/>`:

- **accept:** accept indicates the media types of accepted files. The media type is indicated with the text content of the element. An asterisk character (*) can be used to indicate

¹XEP-0004: Data Forms <<https://xmpp.org/extensions/xep-0004.html>>.

²XEP-0346: Form Discovery and Publishing <<https://xmpp.org/extensions/xep-0346.html>>.

³XEP-0221: Data Forms Media Element <<https://xmpp.org/extensions/xep-0221.html>>.

⁴XEP-0234: Jingle File Transfer <<https://xmpp.org/extensions/xep-0234.html>>.

⁵XEP-0363: HTTP File Upload <<https://xmpp.org/extensions/xep-0363.html>>.

⁶In accordance with Section 3.2.2.1 of XML Schema Part 2: Datatypes, the allowable lexical representations for the xs:boolean datatype are the strings "0" and "false" for the concept 'false' and the strings "1" and "true" for the concept 'true'; implementations **MUST** support both styles of lexical representation.

that all subtypes are accepted (e.g., *image/** indicates that any kind of image is accepted). The `<accept/>` element can be used 0, 1 or any number of times. It is a hint destined to the GUI which will be used with end-users. If no `<accept/>` element is specified, any file is accepted.

- **use:** This element indicates the JID to use for file sharing. This can be useful if a service wants to control the file upload, e.g., to run some workflow on the file upload, such as running a malware check. The client **MUST** perform a [Service Discovery \(XEP-0030\)](#)⁷ disco#info to discover how to send files to this entity (via [Jingle File Transfer \(XEP-0234\)](#)⁸ or [HTTP File Upload \(XEP-0363\)](#)⁹). This element can be used multiple times to indicate which entities can be used, by order of preference. If this element is not present at all, any service can be used (e.g., the user's own server file upload service).

When submitting the form, the `<file-input/>` element **MAY** (and **MUST** if `<required/>` is used in the `<field/>` element) contain one or more `<file/>` element qualified by the "urn:xmpp:file:metadata:0" namespace as specified by [File metadata element \(XEP-0446\)](#)¹⁰. The already uploaded files **SHOULD** also be indicated when the form is sent from service to end-user but the service **MAY** hide already uploaded files if it makes sense for it.

3.1 examples

In the following example, a form expects a photo to be uploaded. A single file is accepted, and must be an image type.

Listing 1: Inclusion in Data Form

```
<x xmlns='jabber:x:data' type='form'>
  <!--{}- ... -{}-->
  <field var='photo'>
    <required/>
    <file-input xmlns='urn:xmpp:file-input:0' multiple='false'>
      <accept>image/*</accept>
    </file-input>
  </field>
  <!--{}- ... -{}-->
</x>
```

In the following example, a form allows multiple file uploads of PDF and LibreOffice text files. The `<use/>` element specifies the upload service, and two files are already uploaded.

⁷XEP-0030: Service Discovery <<https://xmpp.org/extensions/xep-0030.html>>.

⁸XEP-0234: Jingle File Transfer <<https://xmpp.org/extensions/xep-0234.html>>.

⁹XEP-0363: HTTP File Upload <<https://xmpp.org/extensions/xep-0363.html>>.

¹⁰XEP-0446: File metadata element <<https://xmpp.org/extensions/xep-0446.html>>.

Listing 2: Form With Already Uploaded Files

```

<x xmlns='jabber:x:data' type='form'>
  <!--{}- ... -{}-->
  <field var='documents'>
    <file-input xmlns='urn:xmpp:file-input:0' multiple='true'>
      <accept>application/pdf</accept>
      <accept>application/vnd.oasis.opendocument.text</accept>
      <use>upload.example.org</use>
      <file xmlns='urn:xmpp:file:metadata:0'>
        <name>balcony_architecture.pdf</name>
        <media-type>application/pdf</media-type>
        <size>123456</size>
        <date>2025-06-15T10:00:00Z</date>
        <hash xmlns='urn:xmpp:hashes:2' algo='sha-256'>...aabbccddeeff</
          hash>
      </file>
      <file xmlns='urn:xmpp:file:metadata:0'>
        <name>serenade.odt</name>
        <media-type>application/vnd.oasis.opendocument.text</media-
          type>
        <size>789012</size>
        <date>2025-06-15T10:05:00Z</date>
        <hash xmlns='urn:xmpp:hashes:2' algo='sha-256'>...112233445566</
          hash>
      </file>
    </file-input>
  </field>
  <!--{}- ... -{}-->
</x>

```

4 Implementation Notes

As it is usual with data forms, the hints can't be enforced. The entity consulting the submitted form SHOULD check the file types, the number of files, the file location, and any other relevant data to see if they match the expected values.

If a single file is expected to be uploaded (with attribute "multiple" set to "false"), a file has already been uploaded in the form, and a user submits a new file, the service MAY automatically delete the old file to replace it with the new one. This should be clearly indicated to end-users, e.g., via a form note, or via service documentation.

5 Security Considerations

File sharing comes with several security implications; the security considerations of [Jingle File Transfer \(XEP-0234\)](#)¹¹, [HTTP File Upload \(XEP-0363\)](#)¹², and [File metadata element \(XEP-0446\)](#)¹³ apply here.

When using a suggested JID to send a file (with the `<use/>` element), the client IP may be exposed. Clients SHOULD mitigate that with appropriate measures (like warning the user, ignoring the `</use>` element, using a proxy, etc).

6 IANA Considerations

This document does not require interaction with the [Internet Assigned Numbers Authority \(IANA\)](#)¹⁴.

7 XMPP Registrar Considerations

TODO

8 XML Schema

TODO

¹¹XEP-0234: Jingle File Transfer <<https://xmpp.org/extensions/xep-0234.html>>.

¹²XEP-0363: HTTP File Upload <<https://xmpp.org/extensions/xep-0363.html>>.

¹³XEP-0446: File metadata element <<https://xmpp.org/extensions/xep-0446.html>>.

¹⁴The 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/>>.