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J. Reschke
S. Eissing
greenbytes

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Including additional properties in WebDAV PROPFIND/allprop requests
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Abstract

Recent specifications extending the Web Distributed Authoring Protocol (WebDAV) restrict the set of properties returned automatically upon a PROPFIND/allprop request. This specification defines a method to add specific properties to the set of properties returned upon PROPFIND/allprop.

Distribution of this document is unlimited. Please send comments to the Distributed Authoring and Versioning (WebDAV) working group at w3c-dist-auth@w3.org[1], which may be joined by sending a message with subject "subscribe" to w3c-dist-auth-request@w3.org[2].

Discussions of the WEBDAV working group are archived at URL: http://lists.w3.org/Archives/Public/w3c-dist-auth/.

Table of Contents

1. Notational Conventions 3
2. Introduction 4
3. Extensions to PROPFIND/allprop 5
3.1 Example for PROPFIND/allprop/include with extended server . . 5
3.2 Example for PROPFIND/allprop/include with non-extended server 7
4. Changes to WebDAV DTD 9
5. Compatibility Considerations 10
6. Internationalization Considerations 11
7. IANA Considerations 12
8. Copyright 13
9. Intellectual Property 14
References 15
Authors' Addresses 15
Full Copyright Statement 16

1. Notational Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].

2. Introduction

Recent specifications extending the "Web Distributed Authoring Protocol" (WebDAV, [RFC2518]) like "Versioning Extensions to WebDAV" [deltaV] and "WebDAV Access Control Protocol" [ACL] restrict the set of properties returned automatically upon a PROPFIND/allprop request in order to avoid the expensive computation of properties that the client in many cases isn't interested in.

However, this change from the behaviour defined in WebDAV can lead to situations where clients need to perform two requests to retrieve all properties they are interested in (one using PROPFIND/allprop, then PROPFIND/prop enumerating the new properties that weren't reported upon the first request). This specification defines a backward-compatible extension to add specific properties to the set of properties returned upon PROPFIND/allprop, thus saving at least one PROPFIND request.

3. Extensions to PROPFIND/allprop

The "allprop" version of PROPFIND is extended to take an optional <include> element (with namespace-URI "DAV:"). When present, it contains a set of property names that shall be reported in addition to those properties that the server usually would return upon PROPFIND/allprop.

3.1 Example for PROPFIND/allprop/include with extended server

```
>>Request

  PROPFIND  /container/front.html HTTP/1.1
  Host: www.foo.bar
  Depth: 1
  Content-Type: text/xml
  Content-Length: xxxx

  <?xml version="1.0"?>
  <propfind xmlns="DAV:">
    <allprop/>
    <include>
      <checked-in/>
      <checked-out/>
    </include>
  </propfind>

>>Response

  HTTP/1.1 207 Multi-Status
  Content-Type: text/xml
  Content-Length: xxxx

  <?xml version="1.0"?>
  <multistatus xmlns="DAV:">
    <response>
      <href>http://www.foo.bar/container/front.html<href>
        <propstat>
         <prop>
           <R:bigbox xmlns:R="http://www.foo.bar/boxschema/">
             <R:BoxType>Box type B</R:BoxType>
           </R:bigbox>
           <creationdate>1997-12-01T18:27:21-08:00</creationdate>
           <displayname>Example HTML resource</displayname>
           <getcontentlength>4525</getcontentlength>
           <getcontenttype>text/html</getcontenttype>
           <getetag>zzyzx</getetag>
           <getlastmodified>Monday, 12-Jan-98 09:25:56 GMT</
getlastmodified>
```

```
                <resourcetype/>
                <supportedlock>
                  <lockentry>
                    <lockscope><exclusive/></lockscope>
                    <locktype><write/></locktype>
                  </lockentry>
                  <lockentry>
                    <lockscope><shared/></lockscope>
                    <locktype><write/></locktype>
                   </lockentry>
                 </supportedlock>
                 <checked-in>
                   <href>http://www.foo.bar/versions/container/front.html-1</
href>
                 </checked-in>
              </prop>
              <status>HTTP/1.1 200 OK</status>
            </propstat>
            <propstat>
              <prop>
                <checked-out/>
              </prop>
              <status>HTTP/1.1 404 NOT FOUND</status>
            </propstat>
          </response>
        </multistatus>
```

In this example, the server has recognized the extension element <include> and included the DAV: properties <checked-in> and <checked-out> (as defined in [deltaV]).

3.2 Example for PROPFIND/allprop/include with non-extended server

```
>>Request

  PROPFIND  /container/front.html HTTP/1.1
  Host: www.foo.bar
  Depth: 1
  Content-Type: text/xml
  Content-Length: xxxx

  <?xml version="1.0"?>
  <propfind xmlns="DAV:">
    <allprop/>
    <include>
      <checked-in/>
      <checked-out/>
    </include>
  </propfind>

>>Response

  HTTP/1.1 207 Multi-Status
  Content-Type: text/xml
  Content-Length: xxxx

  <?xml version="1.0"?>
  <multistatus xmlns="DAV:">
    <response>
      <href>http://www.foo.bar/container/front.html<href>
        <propstat>
         <prop>
           <R:bigbox xmlns:R="http://www.foo.bar/boxschema/">
             <R:BoxType>Box type B</R:BoxType>
           </R:bigbox>
           <creationdate>1997-12-01T18:27:21-08:00</creationdate>
           <displayname>Example HTML resource</displayname>
           <getcontentlength>4525</getcontentlength>
           <getcontenttype>text/html</getcontenttype>
           <getetag>zzyzx</getetag>
           <getlastmodified>Monday, 12-Jan-98 09:25:56 GMT</
getlastmodified>
           <resourcetype/>
           <supportedlock>
             <lockentry>
               <lockscope><exclusive/></lockscope>
               <locktype><write/></locktype>
             </lockentry>
             <lockentry>
```

```
<lockscope><shared/></lockscope>
```

```
                  <locktype><write/></locktype>
                 </lockentry>
               </supportedlock>
             </prop>
             <status>HTTP/1.1 200 OK</status>
           </propstat>
         </response>
       </multistatus>
```

In this case the <include> element was simply ignored. The client can detect this situation by checking for the presence of the requested properties and will have to issue an additional PROPFIND/prop request (to retrieve the missing properties).

4. Changes to WebDAV DTD

```
<!ELEMENT propfind ((allprop, include+) | propname | prop) >
<!ELEMENT include ANY >
```

Note that the WebDAV DTD is informal only and cannot be used to validate request or response bodies (due to the inability to properly work with XML namespaces).

5. Compatibility Considerations

This specification introduces a new child element for the <propfind> element, defined in Section 4. Old servers will ignore this element (see [RFC2518], chapter 14). Clients can detect this situation as outlined in Section 3.2.

Clients not aware of this specification will not be affected at all, because they will never use the new <include> element in PROPFIND requests.

6. Internationalization Considerations

This proposal builds on [RFC2518], and inherits its internationalizability.

7. IANA Considerations

This proposal does not introduce any new IANA considerations, since it does not specify any new namespaces (in the general sense), but merely uses existing ones.

8. Copyright

To be supplied by the RFC Editor.

9. Intellectual Property

To be supplied by the RFC Editor.

References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

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[ACL] Clemm, G., Hopkins, A., Sedlar, E. and J. Whitehead, "WebDAV Access Control Protocol", ID draft-ietf-webdav-acl-06, June 2001, <http://www.webdav.org/acl/protocol/draft-ietf-webdav-acl-06.htm>.

[1] <mailto:w3c-dist-auth@w3.org>

[2] <mailto:w3c-dist-auth-request@w3.org?subject=subscribe>

Authors' Addresses

Julian F. Reschke
greenbytes GmbH
Salzmannstrasse 152
Muenster, NW 48159
Germany

EMail: julian.reschke@greenbytes.de

Stefan Eissing
greenbytes GmbH
Salzmannstrasse 152
Muenster, NW 48159
Germany

EMail: stefan.eissing@greenbytes.de

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