Including additional properties in WebDAV PROPFIND/allprop requests
draft-reschke-webdav-allprop-include-02

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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, which may be joined by sending a message with subject "subscribe" to w3c-dist-auth-request@w3.org.

Discussions of the WEBDAV working group are archived at URL: http://lists.w3.org/Archives/Public/w3c-dist-auth/.
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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" [RFC3253] 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.

This document defines an extension element that could ultimately become part of the core WebDAV protocol. Being just an individual submission, it currently defines it in the proprietary namespace

http://sapportals.com/xmlns/cm/webdav

instead of the "DAV:" namespace. It uses a prefix of "in:" for referring to elements in this namespace. However, WebDAV server and clients are free to use any prefix, provided that there is a namespace declaration that binds the prefix to the URI of the same namespace.
3 Extensions to PROPFIND/allprop

The "allprop" version of PROPFIND is extended to take an optional <in:include> element. 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; charset="utf-8"
Content-Length: xxxx

<?xml version="1.0" encoding="utf-8"?>
<propfind xmlns="DAV:
xmlns:in="http://sapportals.com/xmlns/cm/webdav">
  <allprop/>
  <in:include>
    <checked-in/>
    <checked-out/>
  </in:include>
</propfind>

>>Response

HTTP/1.1 207 Multi-Status
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx

<?xml version="1.0" encoding="utf-8"?>
<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>
      </prop>
    </propstat>
  </response>
</multistatus>
In this example, the server has recognized the extension element <in:include> and included the DAV: properties <checked-in> and <checked-out> (as defined in [RFC3253]).

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
<?xml version="1.0" encoding="utf-8" ?>
<propfind xmlns="DAV:"
xmlns:in="http://sapportals.com/xmlns/cm/webdav">
  <allprop/>
  <in:include>
    <checked-in/>
    <checked-out/>
  </in:include>
</propfind>

>>Response

HTTP/1.1 207 Multi-Status
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx

<?xml version="1.0" encoding="utf-8" ?>
<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>
    </propstat>
  </response>
</multistatus>
In this case the <in: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, in:include+) | propname | prop) >
<!ELEMENT in: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 <in: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.
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Normative References


Informative References


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A Change Log

A.1 Since ‘draft-reschke-webdav-allprop-include-00’

Moved <include> element out of "DAV:" namespace.
Updated reference to deltaV (now RFC3253).
Changed examples to explicitly use utf-8 encoding for HTTP content type and XML encoding.
Updated WebDAV ACL reference to draft 07.
Made sure figures fit in 72 columns.
Split references into "Normative" and "Informative".

A.2 Since ‘draft-reschke-webdav-allprop-include-01’

Updated WebDAV ACL reference to draft 09.

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