Including additional properties in WebDAV PROPFIND/allprop requests
draft-reschke-webdav-allprop-include-05

Status of this Memo

This document is an Internet-Draft and is in full conformance with all provisions of Section 10 of RFC2026.

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF), its areas, and its working groups. Note that other groups may also distribute working documents as Internet-Drafts.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

The list of current Internet-Drafts can be accessed at http://www.ietf.org/ietf/1id-abstracts.txt.

The list of Internet-Draft Shadow Directories can be accessed at http://www.ietf.org/shadow.html.

This Internet-Draft will expire on June 2, 2004.

Copyright Notice

Copyright (C) The Internet Society (2003). All Rights Reserved.

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://
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
   Normative References ............................................ 13
   Informative References ........................................... 14
   Authors’ Addresses ............................................... 15
A. Alternate syntax proposal from interim WebDAV working group meeting ......................................................... 16
   A.1 PROPFIND/prop extension to include dead properties ...... 16
   A.2 Example ......................................................... 16
B. Change Log (to be removed by RFC Editor before publication) . 18
   B.1 Since ‘draft-reschke-webdav-allprop-include-00’ ............ 18
   B.2 Since ‘draft-reschke-webdav-allprop-include-01’ ............ 18
   B.3 Since ‘draft-reschke-webdav-allprop-include-02’ ............ 18
   B.4 Since ‘draft-reschke-webdav-allprop-include-03’ ............ 18
   B.5 Since ‘draft-reschke-webdav-allprop-include-04’ ............ 18
   Intellectual Property and Copyright Statements ............... 19
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.example.org
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.example.org/container/front.html</href>
    <propstat>
      <prop>
        <R:bigbox xmlns:R="http://www.example.org/boxschema/">
          <R:BoxType>Box type B</R:BoxType>
          <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>
          </getlastmodified>
        </R:bigbox>
      </prop>
    </propstat>
  </response>
</multistatus>
In this example, the server has recognized the extension element `in:include` and included the properties DAV:checked-in and DAV: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.example.org
   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>
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.example.org/container/front.html</href>
        <propstat>
            <prop>
                <R:bigbox xmlns:R="http://www.example.org/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 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

```xml
<!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 DAV: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.
Normative References


Informative References


URIs

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

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

Authors’ Addresses

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

Phone: +49 251 2807760
Fax: +49 251 2807761
EMail: julian.reschke@greenbytes.de
URI:  http://greenbytes.de/tech/webdav/

Stefan Eissing
greenbytes GmbH
Salzmannstrasse 152
Muenster, NW 48159
Germany

Phone: +49 251 2807760
Fax: +49 251 2807761
EMail: stefan.eissing@greenbytes.de
URI:  http://greenbytes.de/tech/webdav/
Appendix A. Alternate syntax proposal from interim WebDAV working group meeting

This section briefly describes an alternate approach to the problem covered by this draft. It was discussed during the interim WebDAV working group meeting in January 2003 and was supported by all meeting attendees. It was also added to the latest draft for the revision of [RFC2518], [ID-RFC2518bis].

A.1 PROPFIND/prop extension to include dead properties

Additional PROPFIND marshalling:

```xml
<!ELEMENT propfind (allprop | propname | (prop, dead-props?)) >
<!ELEMENT dead-props EMPTY >
```

The DAV:dead-props element can be added to PROPFIND requests that retrieve named properties using DAV:prop. When present, the server MUST include all dead properties defined on the resource.

A.2 Example

This example shows the alternate syntax applied to the example from Section 3.1.

```xml
>>Request

PROPFIND  /container/front.html HTTP/1.1
Host: www.example.org
Depth: 1
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx

<?xml version="1.0" encoding="utf-8" ?>
<propfind xmlns="DAV:"
    <prop>
        <checked-in />
        <checked-out />
    </prop>
    <dead-props />
</propfind>
```
HTTP/1.1 207 Multi-Status
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx

<?xml version="1.0" encoding="utf-8" ?>
<br:multistatus xmlns="DAV:"
  xmlns:R="http://www.example.org/boxschema/"
><br:response>
  <br:href>http://www.example.org/container/front.html</br:href>
  <br:propstat>
    <br:prop>
      <br:bigbox xmlns:R="http://www.example.org/boxschema/"
        xmlns="DAV:"
      >
        <br:BoxType>Box type B</br:BoxType>
      </br:bigbox>
    </br:prop>
    <br:checked-in>
      <br:href>
        http://www.example.org/vsn/container/front.html-1</br:href>
      </br:checked-in>
    </br:prop>
    <br:status>HTTP/1.1 200 OK</br:status>
  </br:propstat>
  <br:propstat>
    <br:prop>
      <br:checked-out/>
    </br:prop>
    <br:status>HTTP/1.1 404 NOT FOUND</br:status>
  </br:propstat>
</br:response>
</br:multistatus>
Appendix B. Change Log (to be removed by RFC Editor before publication)

B.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".

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

Updated WebDAV ACL reference to draft 09.

B.3 Since ‘draft-reschke-webdav-allprop-include-02’

Fixed XML errors in examples (wrong closing href tags).
Replaced domain names in examples according to RFC2606: "www.foo.bar"
by "www.example.org".
Shortened checked-in URI to fit into 72 characters in example.

B.4 Since ‘draft-reschke-webdav-allprop-include-03’

Added short description of alternate syntax discussed during interim
WebDAV WG meeting (January 2003).

B.5 Since ‘draft-reschke-webdav-allprop-include-04’

DTD fix for dead-props variant. Remove superfluous IP and copyright
sections. Added reference to RFC2518bis. Updated reference to ACL
draft.
Intellectual Property Statement

The IETF takes no position regarding the validity or scope of any intellectual property or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available; neither does it represent that it has made any effort to identify any such rights. Information on the IETF’s procedures with respect to rights in standards-track and standards-related documentation can be found in BCP-11. Copies of claims of rights made available for publication and any assurances of licenses to be made available, or the result of an attempt made to obtain a general license or permission for the use of such proprietary rights by implementors or users of this specification can be obtained from the IETF Secretariat.

The IETF invites any interested party to bring to its attention any copyrights, patents or patent applications, or other proprietary rights which may cover technology that may be required to practice this standard. Please address the information to the IETF Executive Director.

Full Copyright Statement

Copyright (C) The Internet Society (2003). All Rights Reserved.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works. However, this document itself may not be modified in any way, such as by removing the copyright notice or references to the Internet Society or other Internet organizations, except as needed for the purpose of developing Internet standards in which case the procedures for copyrights defined in the Internet Standards process must be followed, or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by the Internet Society or its successors or assignees.

This document and the information contained herein is provided on an "AS IS" basis and THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION...
HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF
MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Acknowledgment

Funding for the RFC Editor function is currently provided by the
Internet Society.