

Network Working Group  
Reschke  
Internet-Draft  
greenbytes  
Expires: February 18, 2004  
2003

J.

August 20,

**Computing the CHECKIN URI in WebDAV versioning  
draft-reschke-deltav-compute-checkin-uri-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 February 18, 2004.

Copyright Notice

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

Abstract

In many cases, a versioning-aware client might want to display/include the URI of the version it's editing while it's being edited. For instance, an editor might include this as meta information, or the author of a document might want to know the URI of the version before it's checked in. A well-known example is the W3C way of referring to document versions in recommendations: it contains references to "the current version", to "this version" and to the "previous version". Something like this is currently impossible with WebDAV versioning [[RFC3253](#)], as the version URI is determined at the time of CHECKIN.

Distribution of this document is unlimited. Please send comments to the WebDAV versioning (delta-V) mailing list at

Reschke  
1]

Expires February 18, 2004

[Page

ietf-dav-versioning@w3.org [1], which may be joined by sending a message with subject "subscribe" to iETF-dav-versioning-request@w3.org [2]. Discussions of the delta-V mailing list are archived at URL: <http://lists.w3.org/Archives/Public/ietf-dav-versioning/>.

## Table of Contents

<a href="#">1</a>	Introduction . . . . .	
<a href="#">3</a>		
<a href="#">2</a>	Notational Conventions . . . . .	
<a href="#">4</a>		
<a href="#">3</a>	Changes for CHECKOUT method . . . . .	
<a href="#">5</a>		
<a href="#">3.1</a>	Example for successful CHECKOUT with computed version URI . . . . .	
<a href="#">5</a>		
<a href="#">3.2</a>	Example for successful CHECKOUT without computed version URI . . . . .	
<a href="#">6</a>		
<a href="#">4</a>	Changes for CHECKIN method (when applied to a version-controlled resource) . . . . .	
<a href="#">8</a>		
<a href="#">4.1</a>	Example for successful CHECKIN with computed version URI . . . . .	
<a href="#">8</a>		
<a href="#">4.2</a>	Example for failed CHECKIN with computed version URI . . . . .	
<a href="#">9</a>		
<a href="#">5</a>	Compatibility Considerations . . . . .	
<a href="#">10</a>		
<a href="#">6</a>	Internationalization Considerations . . . . .	
<a href="#">11</a>		
<a href="#">7</a>	IANA Considerations . . . . .	
<a href="#">12</a>		
<a href="#">13</a>	References . . . . .	
<a href="#">13</a>		
<a href="#">13</a>	Author's Address . . . . .	
<a href="#">14</a>		
<a href="#">A</a>	Change Log (to be removed by RFC Editor before publication) . . . . .	
<a href="#">14</a>		
<a href="#">A.1</a>	Since ' <a href="#">draft-reschke-deltav-compute-checkin-uri-00</a> ' . . . . .	
<a href="#">14</a>		
<a href="#">A.2</a>	Since ' <a href="#">draft-reschke-deltav-compute-checkin-uri-01</a> ' . . . . .	
<a href="#">14</a>		
<a href="#">A.3</a>	Since ' <a href="#">draft-reschke-deltav-compute-checkin-uri-02</a> ' . . . . .	
<a href="#">14</a>		
<a href="#">A.4</a>	Since ' <a href="#">draft-reschke-deltav-compute-checkin-uri-03</a> ' . . . . .	
<a href="#">14</a>		
<a href="#">A.5</a>	Since ' <a href="#">draft-reschke-deltav-compute-checkin-uri-04</a> ' . . . . .	
<a href="#">14</a>		
<a href="#">B</a>	Resolved issues (to be removed by RFC Editor before publication) . . . . .	
<a href="#">15</a>		
<a href="#">B.1</a>	required-checkin-behaviour . . . . .	

[15](#)

Intellectual Property and Copyright Statements . . . . .

[16](#)

Reschke  
2]

Expires February 18, 2004

[Page

## 1. Introduction

In many cases, a versioning-aware client might want to display/include the URI of the version it's editing while it's being edited. For instance, an editor might include this as meta information, or the author of a document might want to know the URI of the version before it's checked in. A well-known example is the W3C way of referring to document versions in recommendations: it contains references to "the current version", to "this version" and to the "previous version". Something like this is currently impossible with WebDAV versioning [[RFC3253](#)], as the version URI is determined at the time of CHECKIN.

This specification builds on the infrastructure provided by the WebDAV Versioning Protocol, adding support for servers willing to compute an "expected version URI" upon CHECKOUT, and using this URI at time of CHECKIN.

This document defines an extension element that could ultimately become part of the WebDAV versioning 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 "cu:" 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.



## **2. 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](#)].





### **3. Changes for CHECKOUT method**

A client may ask for an "expected version URI" upon CHECKOUT (and the CHECKIN variant with DAV:keep-checked-out request element). This is done by placing cu:compute-expected-version-URI as top-level element into the request body.

Additional Marshalling:

Presence of the cu:compute-expected-version-URI as top-level element in the request body indicates that the server SHOULD compute the "expected version URI". The server is free to either ignore the request, or to return it's best guess about what the URI for a version resource created upon CHECKIN would be.

```
<!ELEMENT cu:compute-expected-version-URI EMPTY >
```

The client can detect the "expected version URI" by parsing the response body for a top-level element called cu:expected-version-URI. Absence of this element (or absence of a response body) indicates that the server is not able to compute the URI.

```
<!ELEMENT cu:expected-version-URI (href) >
```

#### **3.1 Example for successful CHECKOUT with computed version URI**

>>Request

```
CHECKOUT /foo.html HTTP/1.1
Host: www.example.org
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx

<?xml version="1.0" encoding="utf-8" ?>
<D:checkout xmlns:D="DAV:"
  xmlns:cu="http://sapportals.com/xmlns/cm/webdav">
  <cu:compute-expected-version-URI />
</D:checkout>
```

>>Response

```
HTTP/1.1 200 OK
```



```
Cache-Control: no-cache
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx
```

```
<?xml version="1.0" encoding="utf-8" ?>
<D:checkout-response xmlns:D="DAV:"
  xmlns:cu="http://sapportals.com/xmlns/cm/webdav">
  <cu:expected-version-URI>
    <D:href>http://repo.example.org/his/23/ver/32</D:href>
  </cu:expected-version-URI>
</D:checkout-response>
```

In this example, the server was able to compute the "expected version

URI" and returned it in the cu:expected-version-URI element.

### **3.2 Example for successful CHECKOUT without computed version URI**

>>Request

```
CHECKOUT /foo.html HTTP/1.1
Host: www.example.org
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx
```

```
<?xml version="1.0" encoding="utf-8" ?>
<D:checkout xmlns:D="DAV:"
  xmlns:cu="http://sapportals.com/xmlns/cm/webdav">
  <cu:compute-expected-version-URI />
</D:checkout>
```

>>Response

```
HTTP/1.1 200 OK
Cache-Control: no-cache
```

In this case, no response body was returned, and thus no "expected version URI" is available. Similarly, the server may also return

>>Response

```
HTTP/1.1 200 OK
Cache-Control: no-cache
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx
```

```
<?xml version="1.0" encoding="utf-8" ?>
<D:checkout-response xmlns:D="DAV:">
  ...other content...
```



</D:checkout-response>

where a response body is available, but it doesn't contain the  
cu:expected-version-URI element.



#### **4. Changes for CHECKIN method (when applied to a version-controlled resource)**

A client may submit the "expected version URI" (obtained during CHECKOUT) upon a CHECKIN by placing it into a top-level cu:expected-version-URI element in the request body.

Additional Marshalling:

A top-level element cu:expected-version-URI, when present, indicates the client's expectation about the URI of the version that will be created by the CHECKIN operation.

Upon failure, the server MAY return a new "expected version URI" in the DAV:error response body using the element cu:expected-version-URI.

Additional Preconditions:

(cu:can-assign-expected-version-URI): if the server does support the cu:compute-expected-version-URI extension upon CHECKOUT, it MUST create the new version at the URI specified in the cu:expected-version-URI or otherwise fail the request.

##### **4.1 Example for successful CHECKIN with computed version URI**

>>Request

```
CHECKIN /foo.html HTTP/1.1
Host: www.example.org
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx

<?xml version="1.0" encoding="utf-8" ?>
<D:checkin xmlns:D="DAV:"
  xmlns:cu="http://sapportals.com/xmlns/cm/webdav">
  <cu:expected-version-URI>
    <D:href>http://repo.example.org/his/23/ver/32</D:href>
  </cu:expected-version-URI>
</D:checkin>
```

>>Response

```
HTTP/1.1 201 Created
Location: http://repo.example.org/his/23/ver/32
Cache-Control: no-cache
```





#### **4.2 Example for failed CHECKIN with computed version URI**

>>Request

```
CHECKIN /foo.html HTTP/1.1
Host: www.example.org
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx
```

```
<?xml version="1.0" encoding="utf-8" ?>
<D:checkin xmlns:D="DAV:"
  xmlns:cu="http://sapportals.com/xmlns/cm/webdav">
  <cu:expected-version-URI>
    <D:href>http://repo.example.org/his/23/ver/32</D:href>
  </cu:expected-version-URI>
</D:checkin>
```

>>Response

```
HTTP/1.1 403 Forbidden
Cache-Control: no-cache
Content-Type: text/xml; charset="utf-8"
Content-Length: xxxx
```

```
<?xml version="1.0" encoding="utf-8" ?>
<D:error xmlns:D="DAV:"
  xmlns:cu="http://sapportals.com/xmlns/cm/webdav">
  <cu:can-assign-expected-version-URI />
  <cu:expected-version-URI>
    <D:href>http://repo.example.org/his/23/ver/33</D:href>
  </cu:expected-version-URI>
</D:error>
```

Note that 403 (Forbidden) is returned because subsequent request with the same expected version URI will always fail.



## **5. Compatibility Considerations**

This specification does introduce new protocol elements for the request and response bodies for CHECKIN and CHECKOUT.

Clients not aware of this specification will never submit the new protocol elements in a request and therefore never will see the new response elements.

Servers not aware of this specification will ignore the additional two request body elements which is legal behaviour according to this protocol (indicating that the protocol extension is not available).



## **6. Internationalization Considerations**

This proposal builds on [[RFC3253](#)], 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.





## References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC2518] Goland, Y., Whitehead, E., Faizi, A., Carter, S. and D. Jensen, "HTTP Extensions for Distributed Authoring -- WEBDAV", [RFC 2518](#), February 1999.
- [RFC3253] Clemm, G., Amsden, J., Ellison, T., Kaler, C. and J. Whitehead, "Versioning Extensions to WebDAV", [RFC 3253](#), March 2002.
- [1] <<mailto:ietf-dav-versioning@w3.org>>
- [2] <<mailto:ietf-dav-versioning-request@w3.org?subject=subscribe>>

## Author's Address

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

Phone: +49 251 2807760  
Fax: +49 251 2807761  
EMail: [julian.reschke@greenbytes.de](mailto:julian.reschke@greenbytes.de)  
URI: <http://greenbytes.de/tech/webdav/>



## **Appendix A. Change Log (to be removed by RFC Editor before publication)**

### **A.1 Since 'draft-reschke-deltav-compute-checkin-uri-00'**

Made the document element for responses upon failed CHECKIN DAV:error rather than DAV:checkin-response.  
Updated reference to [[RFC3253](#)].  
Moved extension elements out of DAV: namespace.  
Changed examples to explicitly use utf-8 encoding for HTTP content type and XML encoding.  
Globally replaced the term "CHECKIN URI" by "version URI"  
Added note about how to discover whether the server actually applied the expected version URI.  
Made sure artwork (figures) fits into 72 columns.

### **A.2 Since 'draft-reschke-deltav-compute-checkin-uri-01'**

Updated abstract not to refer to DeltaV WG anymore. Use "WebDAV versioning" instead of "deltaV".  
Changed descriptions to use [RFC3253](#)'s Marshalling/Precondition format. Changed name of cu:cannot-assign-expected-version-URI to cu:can-assign-expected-version-URI as this is a precondition.

### **A.3 Since 'draft-reschke-deltav-compute-checkin-uri-02'**

Update marshalling to use DAV:href as container for URIs.  
Clarify that the extension applies to CHECKOUT on version resources and to CHECKIN/DAV:keep-checked-out as well.

### **A.4 Since 'draft-reschke-deltav-compute-checkin-uri-03'**

Replaced domain names in examples according to [RFC2606](#): "webdav.org" by "example.org".

### **A.5 Since 'draft-reschke-deltav-compute-checkin-uri-04'**

Remove superfluous IP and copyright sections. Swap "Introduction" and "Notation" sections. Require server to support both extensions to make behaviour more predictable.



**Appendix B. Resolved issues (to be removed by RFC Editor before publication)**

Issues that were either rejected or resolved in this version of this document.

**B.1 required-checkin-behaviour**

Type: change

of julian.reschke@greebytes.de (2003-08-20): The CHECKIN extension is little value if the client can not detect beforehand whether it will be respected.

Resolution: Require support for CHECKIN extension if the server does support the CHECKOUT extension.



## 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

Reschke  
16]

Expires February 18, 2004

[Page



Internet-Draft  
2003

CHECKIN URI in WebDAV versioning

August

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.

