



Errata to SyncML Representation Protocol

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SyncML Initiative

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1 Formatting Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY" and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119].

1.1 Errata Type Classifications

The errata types are classified according to the following scheme:

CLARIFICATION: Textual enhancement that provides a clearer explanation of a specification item without changing any behavior.

CORRECTION: A modification that obsoletes some items in the current published specification.

PROBLEM: A known problem for which an erratum has yet to be proposed.



2 SCR of SftDel element

2.1 Problem

It was decided by the TechCom before the 1.0 release of SyncML specifications that the SCR of the SftDel element must be changed.

2.2 Solution

Chapter 9.1: change the SCR of SftDel element to look like:

Command	Support of Synchronization Server		Support of Synchronization Client	
	Sending	Receiving	Sending	Receiving
SftDel	MAY	MAY	MAY	MAY

2.2.1 Other specifications/erratas affected

None.

3 Status codes for authentication errors

3.1 Problem

The descriptions of these status codes (401, 407, and 509) are very difficult to differentiate from each other. The possibility for misuse is high.

3.2 Solution

Chapter 12: clarify the description of Status codes 401 and 407, and remove the Status code 509. The description of the Status codes is changed to:

401	Invalid credentials. The requested command failed because proper authentication MUST be provided by the requestor. If the property type of authentication was presented in the original request, then the response code indicates that the requested command has been refused for those credentials.
407	Missing credentials. This response code is similar to 401 except that the response code indicates that the originator MUST first authenticate with the recipient. The recipient SHOULD also return the suitable challenge in the Chal element type in the Status.

509	Reserved for future use.
-----	--------------------------

3.2.1 Other specifications/erratas affected

None.



4 SCR for RespURI

4.1 Problem

The Representation protocol specification defines that the client and server must be able to receive and send the RespURI element, respectively. The Sync Protocol specification says, the support is completely optional.

4.2 Solution

Chapter 5.1.15: the usage of the RespURI needs to be clarified to indicate that the server and database are the same logical entities as earlier. The receiver of the RespURI must not repeat the commands by default.

Chapter 9.1: change the SCR for RespURI to look like this:

Command	Support of Synchronization Server		Support of Synchronization Client	
	Sending	Receiving	Sending	Receiving
RespURI	MAY	MUST	MAY	MUST

4.2.1 Other specifications/erratas affected

SyncML Synchronization Protocol: Devices MUST be able to support receiving the RespURI element, see also the Errata for SyncML Synchronization protocol Specification.

5 XML namespace declaration missing

5.1 Problem

The XML namespace declaration is missing from the SyncML element definition in examples in Chapters 5.1.7 and 5.1.16.

5.2 Solution

Chapters 5.1.7, 5.1.16: change the <SyncML> tag to <SyncML xmlns='SYNCCML:SYNCCML 1.0'>

5.2.1 Other specifications/erratas affected

None.

6 UserID in Authentication

6.1 Problem

The current SyncML authentication has a weakness when the userID for the authentication credentials cannot be resolved from the credentials. In the Basic authentication, the userID is in a clear text form in the credentials but for example, if the MD5 digest access authentication is used, the userID is not transferred in the credentials. Then, the reviewer of the credentials may have a difficulty to link the credentials to a correct userID.



6.2 Solution

Chapter 4.13: add the following text to the chapter:

To specify the userID for the credentials, when the credentials do not include it in the resolvable form, the userID must be transferred in the LocName element of Source in SyncHdr. If the userID can be resolved from the credentials, e.g., in the case of the Basic authentication, it can be omitted from the LocName element to reduce the number of bytes to be transferred.

Below, there is an example in which the MD5 digest access authentication is used and a userID is carried in the LocName element.

```

<SyncML>
  <SyncHdr>
    <VerDTD>1.0</VerDTD>
    <VerProto>SyncML/1.0</VerProto>
    <SessionID>1</SessionID>
    <MsgID>1</MsgID>
    <Target>
      <LocURI>http://www.syncml.org/sync-server</LocURI>
    </Target>
    <Source>
      <LocURI>IMEI:493005100592800</LocURI>
      <LocName>Bruce2</LocName> <!-- userID -->
    </Source>
    <Cred>
      <Meta><Type xmlns='syncml:metinf'>syncml:auth-md5</Type></Meta>
      <Data>NTI2OTJhMDAwNjYxODkwYmQ3NWUxN2RhN2ZmYmJlMzk=</Data>
      <!-- Base64 coded MD5 digest of "Bruce2:OhBehave:Nonce" -->
    </Cred>
  </SyncHdr>
  <SyncBody>...</SyncBody>
</SyncML>

```

6.2.1 Other specifications/erratas affected

SyncML Synchronization Protocol: example in Chapter 3.5.2 needs to be updated, see also the Errata for SyncML Synchronization protocol Specification.

7 vCard 2.1 and vCalendar 1.0 URLs missing

7.1 Problem

The URLs for vCard 2.1 and vCalendar 3.0 are missing from the specification.

7.2 Solution

Chapter 11: the table defining the base media types needs to be updated to look like this:

Media Type	Name	URI
------------	------	-----



Application/vnd.syncml-devinf+xml	SyncML Device Info v1.0 (clear text xml)	http://www.syncml.org/supporters/docs/syncml_devinf_v10_20001207.doc
Application/vnd.syncml-devinf+wbxml	SyncML Device Info v1.0 (wbxml)	http://www.syncml.org/supporters/docs/syncml_devinf_v10_20001207.doc
Text/plain	Plain Text	http://www.ietf.org/rfc/rfc2046.txt
Text/x-vcard	vCard v2.1	http://www.imc.org/pdi/vcard-21.doc
Text/vcard	vCard v3.0	http://www.ietf.org/rfc/rfc2426.txt
Application/vnd.syncml-xcard	XML vCard v3.0	TBD
Text/x-vcalendar	VCalendar	http://www.imc.org/pdi/vcal-10.doc
Text/calendar	ICalendar	http://www.ietf.org/rfc/rfc2445.txt
Application/vnd.syncml-xcal	XML iCalendar	TBD
Text/message	MIME Message	http://www.ietf.org/rfc/rfc2045.txt
Application/vnd.syncml-xmsg	XML Email	TBD
Application/vnd.syncml-xbookmark	XML Bookmark	TBD
Application/vnd.syncml-relml	SyncML Relational Object	TBD

7.2.1 Other specifications/erratas affected

None.

8 CmdID contradictory in text and DTD

8.1 Problem

The SyncML DTD specifies that the CmdID element is mandatory in its parent elements, but the text in the Representation Protocol specification says in several elements, that CmdID is optional.

8.2 Solution

Chapters 5.5.1, 5.5.2, 5.5.3, 5.5.4, 5.5.5, 5.5.6, 5.5.7, 5.5.8, 5.5.10, 5.5.11, 5.5.12, 5.5.13, 5.5.14, 5.5.15: Change the text to indicate that the CmdID element is mandatory.

8.2.1 Other specifications/erratas affected

None.

9 Status for multiple items in a command

9.1 Problem

According to the current Representation Protocol specification, it is possible to return a status for multiple items in a command in several different ways. It needs to be clarified how a status for multiple Items is supposed to be returned.



9.2 Solution

Change the "Restrictions" paragraph of chapter 5.4.1 to have the following text:

"If there were multiple Item elements specified in the command, and if the items' status code were not the same, then a Status MUST be returned for each of the items. If all of the items had the same status code, a Status for all of the items MAY be returned. In these cases the SourceRef and TargetRef elements are used to identify the Item, which the status code applies to. If all of the items in the command had the same status code, then it is also allowed to return a single Status for the entire command. When returning a single Status for a command with multiple items, the SourceRef and TargetRef elements MUST NOT be specified in the Status command."

9.2.1 Other specifications/erratas affected

None.

10 Content format for data types

10.1 Problem

There is a table of various content formats that are available for devices to use, but no requirements for clients or servers.

10.2 Solution

Append new section 9.4 that provides a list of content formats that servers support if they are supporting that particular content. The section would look like this:

9.4 Required Content Formats

NOTE: If a server supports a data type listed below, it must also support the associated content format.

Data Type	Content Format	Status
Contact	vCard 2.1	MUST
	vCard 3.0	SHOULD
Calendar	vCalendar 1.0	MUST
	iCalendar 2.0	SHOULD
Memos	text/plain	MUST
Tasks	vTodo 1.0	MUST
Email	message/rfc822	MUST
	message/rfc2822	MUST
	message/rfc2045	MUST



10.2.1 Other specifications/erratas affected

None.

11 Nesting of Atomic and Sequence

11.1 Problem

Both Atomic and Sequence are optional commands. Nested Sequence commands are meaningless. Nested Atomic has such limited meaning as to have almost no value.

11.2 Solution

Change the definition of both Atomic and Sequence to not allow nesting.

In the Atomic command (section 5.5.3), add a paragraph just before the content model with the following text:

"Nested Atomic commands are not legal. A nested Atomic command will generate an error 500 - command failed."

In the Sequence command (section 5.5.x), add a paragraph just before the content model with the following text:

"Nested Sequence commands are not legal. A nested Sequence command will generate an error 500 - command failed."

11.2.1 Other specifications/erratas affected

None.

12 Status on SyncHdr

12.1 Problem

Since it is mandatory to return a Status to all SyncML commands, including SyncHdr, there is a possibility to end up in a loop, where the client and the server keep sending statuses to each others SyncHdr's.

12.2 Solution

Chapter 5.4.1: add the following sentence as a new paragraph in the "Restrictions" section:

" A Status MUST also be returned for the SyncHdr. However, if a client creates a message containing only a successful Status on a SyncHdr, the entire message MUST NOT be sent. A server MUST send this message."

12.2.1 Other specifications/erratas affected

None.



13 References

[[RFC 2119](#)] Key words for use in RFCs to Indicate Requirement Levels, [IETF](#).