



SyncML Device Management Conformance Requirements

Abstract

This document specifies the Static conformance requirements (SCR) features that are optional, mandatory and recommended within implementations conforming to SyncML DM.



SyncML Initiative

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1 Introduction

Static conformance requirements (SCR) specify the features that are optional, mandatory and recommended within implementations conforming to SyncML DM specifications.

Simple tables are used to specify this information.

In these tables, optional features are specified by a "MAY", mandatory features are specified by a "MUST" and recommended features are specified by a "SHOULD".

2 SCR for SyncML Representation Protocol – DM Usage

2.1 Common use elements

The following specifies the static conformance requirements for the SyncML common use elements for devices conforming to SyncML Representation Protocol – Device Management Usage specification [1].

Command	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
Chal	MUST	MUST	MAY	MUST
Cmd	MUST	MUST	MUST	MUST
CmdID	MUST	MUST	MUST	MUST
CmdRef	MUST	MUST	MUST	MUST
Cred	MUST	MUST	MUST	MUST
Final	MUST	MUST	MUST	MUST
LocName	MUST	MUST	MUST	MUST
LocURI	MUST	MUST	MUST	MUST
MsgID	MUST	MUST	MUST	MUST
MsgRef	MUST	MUST	MUST	MUST
RespURI	MAY	MUST	MAY	MUST
SessionID*	MUST	MUST	MUST	MUST
Source	MUST	MUST	MUST	MUST
SourceRef	MUST	MUST	MUST	MUST
Target	MUST	MUST	MUST	MUST
TargetRef	MUST	MUST	MUST	MUST
VerDTD	MUST	MUST	MUST	MUST
VerProto	MUST	MUST	MUST	MUST

*The maximum length of a SessionID is 4 bytes. Note, for a client having an 8-bit incrementing SessionID counter is enough for practical implementations.



2.2 Message container elements

The following specifies the static conformance requirements for the SyncML message container elements for devices conforming to SyncML Representation Protocol – Device Management Usage specification [1].

Command	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
SyncML	MUST	MUST	MUST	MUST
SyncHdr	MUST	MUST	MUST	MUST
SyncBody	MUST	MUST	MUST	MUST

2.3 Data description elements

The following specifies the static conformance requirements for the SyncML data description elements for devices conforming to SyncML Representation Protocol – Device Management Usage specification [1].

Command	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
Data	MUST	MUST	MUST	MUST
Item	MUST	MUST	MUST	MUST
Meta	MUST	MUST	MUST	MUST

2.4 Protocol command elements

The following specifies the static conformance requirements for the SyncML protocol command elements for devices conforming to SyncML Representation Protocol – Device Management Usage specification [1].

Command	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
Alert	MUST	MUST	MUST	MUST
Replace	MUST	MUST	MUST	MUST
Status	MUST	MUST	MUST	MUST

Command	Support of Management Server		Support of Management Client	
	Sending		Receiving	
Add	MUST		MUST	
Atomic	MUST		MUST	
Copy	MAY		MAY	
Delete	MUST		MUST	
Exec	MAY		MAY	
Get	MUST		MUST	
Sequence	MUST		MUST	

Command	Support of Management Server		Support of Management Client	
	Receiving		Sending	
Result	MUST		MUST	



3 SCR for SyncML DM Protocol

This section defines static conformance requirements for SyncML DM Servers and client conforming to SyncML Device Management Protocol [2].

Alert Type	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
Server-Initiated mgmt Alert	MAY	MUST	MUST	MAY
Client-Initiated mgmt Alert	MAY	MUST	MUST	MAY
Display Alert	MAY	MAY	MAY	MAY
Continue or Abort Alert	MAY	MAY	MAY	MAY
Session Abort Alert	MUST	MUST	MUST	MUST
Next Message Alert	MUST	MUST	MUST	MUST
Text Input Alert	MAY	MAY	MAY	MAY
Single Choice Alert	MAY	MAY	MAY	MAY
Multiple Choice Alert	MAY	MAY	MAY	MAY
Result Alert	MAY	MAY	MAY	MAY

4 SCR for SyncML MetaInfo

The following specifies the static conformance requirements for the SyncML Meta-Information element types for devices conforming to SyncML Meta-Information specification [3].

Element Type	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
EMI	MAY	MAY	MAY	MAY
Format	MUST	MUST	MUST	MUST
MaxMsgSize	MAY	MUST	MAY	MUST
MetInf	MUST	MUST	MUST	MUST
NextNonce	MUST	MUST	MUST	MUST
Size	MUST	MUST	MUST	MUST
Type	MUST	MUST	MUST	MUST



5 SCR for SyncML DM Security

The following specifies the static conformance requirements for the SyncML DM Security for devices conforming to SyncML Device Management Security specification [4].

Secure Transport Class:

Command	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
HMAC (Chal)	MUST NOT	MUST	MUST NOT	SHOULD
HMAC (Hdr)	MUST*	MUST	SHOULD	SHOULD

*MUST send HMAC Hdr ONLY if challenged. MUST NOT if not challenged.

InsecureTransport Class:

Command	Support of Management Server		Support of Management Client	
	Sending	Receiving	Sending	Receiving
HMAC (Chal)	SHOULD	MUST	SHOULD	MUST*
HMAC (Hdr)	MUST	MUST	MUST	MUST

*Must be able to respond or terminate the session.

NOTE: OBEX may or may not be secure.

6 SCR for SyncML DM Notification

The following specifies the static conformance requirements for the SyncML DM Notification for devices conforming to SyncML Device Management Notification Initiated specification [5].

Command	Support of Management Server	Support of Management Client
	Sending	Receiving
Notification message	SHOULD	SHOULD

7 SCR for SyncML DM Standardized Objects

The following specifies the static conformance requirements for the SyncML DM Standardized Objects for devices conforming to SyncML Device Management Standardized Objects specification [6].

Standard Object	Support of Management Server	Support of Management Client
DevInfo	MUST	MUST
DevDetail	MUST	MUST
SyncML DM	MUST	MUST



8 SCR for SyncML DM Bootstrap

The following specifies the static conformance requirements for the SyncML DM Bootstrap for devices conforming to SyncML Device Management Bootstrap specification [7].

Bootstrap	Support of Management Server	Support of Management Client
WAP Profile	MAY	MAY
Plain Profile	MAY	MAY

9 SCR for SyncML DM Tree and Description

The following specifies the static conformance requirements for the SyncML DM Tree and Description for devices conforming to SyncML Device Management Tree and Description specification [8].

Property	Support of Management Client
ACL	MUST
Format	MUST
Name	MUST
Size	MUST (for leaf objects) MUST NOT (for interior objects)
Title	MAY
Tstamp	MAY
Type	MUST (for leaf objects) MAY (for interior objects)
VerNo	MAY



10 References

- [1] SyncML Representation Protocol – Device Management usage, [Version 1.1](#), [SyncML](#).
- [2] SyncML Device Management Protocol, [Version 1.1](#), [SyncML](#).
- [3] SyncML Meta-Information DTD, [Version 1.1](#), [SyncML](#).
- [4] SyncML Device Management Security, [Version 1.1](#), [SyncML](#).
- [5] SyncML Notification Initiated Session, [Version 1.1](#), [SyncML](#).
- [6] SyncML Device Management Standardized Objects, [Version 1.1](#), [SyncML](#).
- [7] SyncML Device Management Bootstrap, [Version 1.1](#), [SyncML](#).
- [8] SyncML Device Management Tree and Description, [Version 1.1](#), [SyncML](#).