



Device Management **Push Binding**

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1. Scope

This document describes the Push Binding for carrying DM Messages based on DM representation [DMREPPRO]. DM Notification information can be found in the DM Notification document [DMNOTI].

2. References

2.1 Normative References

- [DMDICT] “OMA Device Management Dictionary, Version 1.0”. Open Mobile Alliance™.
OMA-SUP-DM_Dictionary-v1_0.
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DMHTTP] “OMA Device Management HTTP Binding”, Open Mobile Alliance™,
OMA-TS-DM_HTTPBinding-V1_3,
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DMNOTI] “OMA Device Management Notification”, Open Mobile Alliance™,
OMA-TS-DM_Notification-V1_3,
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DMOBEX] “OMA Device Management OBEX Binding”, Open Mobile Alliance™,
OMA-TS-DM_OBEXBinding-V1_3,
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [DMREPPRO] “OMA Device Management Representation Protocol, Version 1.3”.
Open Mobile Alliance™. OMA-TS-DM_RepPro-V1_3.
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMNAWSP] “OMNA WSP Content Type Numbers”, Open Mobile Alliance™,
[URL:http://www.openmobilealliance.org/Tech/omna/omna-wsp-content-type.aspx](http://www.openmobilealliance.org/Tech/omna/omna-wsp-content-type.aspx)
- [PushOTA] “Push Over The Air”, Open Mobile Alliance™, OMA_TS-PushOTA-V2_3,
[URL:http://www.openmobilealliance.org](http://www.openmobilealliance.org/)
- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”, S. Bradner, March 1997,
[URL:http://www.ietf.org/rfc/rfc2119.txt](http://www.ietf.org/rfc/rfc2119.txt)
- [RFC5627] “Obtaining and Using Globally Routable User Agent URIs (GRUUs) in the Session Initiation Protocol (SIP)”,
[URL:http://tools.ietf.org/html/rfc5627](http://tools.ietf.org/html/rfc5627)
- [SCRRULES] “SCR Rules and Procedures”, Open Mobile Alliance™, OMA-ORG-SCR_Rules_and_Procedures,
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

2.2 Informative References

- [OMAPUSH] “OMA Push Enabler”, Open Mobile Alliance™,
OMA-ERELED-Push-V2_3,
[URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)

3. Terminology and Conventions

3.1 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].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

Any reference to components of the SyncML DTD or XML snippets is specified in this typeface.

3.2 Definitions

Kindly consult [DMDICT] for all definitions used in this document.

3.3 Abbreviations

Kindly consult [DMDICT] for all abbreviations used in this document.

4. Introduction

This document defines the binding requirements for pushing DM Messages via the OMA Push enabler **Error! Reference source not found.** OMA Push allows for several transports and this binding provides additional settings. Push will only be used for single DM Messages such as Bootstrap or Sessionless. Normally, the originator of the DM Message is called the Push Server, and the recipient of the DM Message is called the Push Client.

A Push Message consists of a header section and a body section. The header section is transport dependent, but will identify the version of the DM Message being pushed.

DM Clients MAY support this binding.

5. Push Bindings

The following sections define the requirements for the Push Binding of DM Messages. The DM Client MUST support at least one of these push methods if it supports this binding. Other push protocols MAY be used but are not defined in this binding.

5.1 Push OTA Protocol over WSP

5.1.1 Non-secure Push OTA Protocol over WSP

A DM Message MAY be non-securely pushed to the DM Client using the Push OTA Protocol over WSP (OTA-WSP) [PushOTA] with the following additional rules:

- The DM Message MUST be sent using the non-secure connectionless push.
- The application-id code 0x07 MUST be used.
- The Content-Type code 0x42 (WBXML) or 0x43 (XML) MUST be used. Note that these values are defined on the OMNA page [OMNAWSP].

5.1.2 Secure Push OTA Protocol over WSP

A DM Message MAY be securely pushed to the DM Client using the Push OTA Protocol over WSP (OTA-WSP) [PushOTA] with the following additional rules:

- The DM Message MUST be sent using the secure connectionless push.
- The application-id code 0x07 MUST be used.
- The Content-Type code 0x42 (WBXML) or 0x43 (XML) MUST be used. Note that these values are defined on the OMNA page [OMNAWSP].

5.1.3 Using non-WSP Push capable devices

If the receiver is not a WAP device, it is very unlikely that any other application would be active on the same port, which has been publicly registered with IANA. The decoding of the message headers is very straightforward even if the device lacks a full WAP stack and therefore the device MUST examine if the message has been sent to the default WAP push port (2948) and if the application-id and the MIME type are ones assigned to the OMA DM Message. If all these conditions are satisfied then the message MUST be routed to the OMA Device Management application.

5.2 Push OTA Protocol over SIP

A DM Message MAY be pushed to the DM Client using the Push OTA Protocol over SIP (OTA-SIP) [PushOTA] with the following additional rules:

- The DM Client MUST register with the SIP/IP Core as soon as practical.
- If GRUU [RFC5627] is supported on the device, then it MUST be used in the registration process.
- The Content-Type MUST be *'application/vnd.syncml.dm+xml'* or *'application/vnd.syncml.dm+wbxml'*.
- "syncml.dm" SHALL be used for "g.oma.eventappid" media feature tag.
- "SIP MESSAGE method (Pager-Mode)" SHALL be used to deliver the DM Message.

5.3 Push OTA Protocol over HTTP

A DM Message MAY be pushed to the DM Client using the Push OTA Protocol over HTTP (OTA-HTTP) [PushOTA] with the following additional rules:

- The Content-Type MUST be '*application/vnd.syncml.dm+xml*' or '*application/vnd.syncml.dm+wbxml*'.
- The connection MUST use the same security methods as in the DM HTTP Binding [DMHTTP].

5.4 Push over OBEX

A DM Message MAY be pushed to the DM Client over OBEX protocol by using the PUT command of the OBEX protocol. This happens in the same way as sending the DM Notification over OBEX to a DM client [DMNOTI], [DMOBEX].

- The connection MUST use the same security methods as in the DM OBEX Binding [DMOBEX].

Appendix A. Change History

(Informative)

A.1 Approved Version History

Reference	Date	Description
N/A	N/A	No prior 1.3 version

A.2 Draft/Candidate Version 1.3 History

Document Identifier	Date	Sections	Description
Draft Version OMA-TS-DM_PushBinding-V1_3	26 Aug 2010	All	Baseline as agreed in “OMA-DM-DM13-2010-0088R05-INP_Push_Binding”
Candidate Version OMA-TS-DM_PushBinding-V1_3	07 Dec 2010	N/A	Status changed to Candidate by TP Ref #OMA-TP-2010-0502- INP_DM_V1_3_ERP_and_ETR_for_Candidate_re_approval
Draft Versions OMA-TS-DM_PushBinding-V1_3	13 Jan 2012	2, 3	Applied: OMA-DM-DM13-2011-0133R02-CR_CONR_Push_Binding
	30 Jan 2012	2, 4, App B	Applied 2012 TS template to SCR tables according to AI DM-2012-A008 + added reference to SCRRULES and deleted reference to IOPPROC Restored cross-references in the whole document Applied 2012 template to introduction section.
	02 Feb 2012	2.1	Chnaged reference [REPRO] into [REPPRO] to match the rest of the document
	22 Feb 2012	2.1	Applied OMA-DM-DM13-2012-0092-CR_PUSHBinding
	23 Feb 2012	4.1	Header removed by DSO according to Action Item DM-2012-A030
Candidate Version OMA-TS-DM_PushBinding-V1_3	06 Mar 2012	N/A	Status changed to Candidate by TP Ref # OMA-TP-2012-0084- INP_DM_V1_3_ERP_and_ETR_for_Candidate_re_approval

Appendix B. Static Conformance Requirements (Normative)

The notation used in this appendix is specified in [SCRRULES].

B.1 SCR for Client Features

Item	Function	Reference	Requirement
DM-PUSH-C-001-O	Support for Push Client	Section 4 Section 5	DM-PUSH-C-002-O OR DM-PUSH-C-003-O OR DM-PUSH-C-004-O OR DM-PUSH-C-005-O OR DM-PUSH-C-006-O
DM-PUSH-C-002-O	Support for Non-secure Push Protocol over WSP	Section 5.1	
DM-PUSH-C-003-O	Support for Secure Push Protocol over WSP	Section 5.1	
DM-PUSH-C-004-O	Support for Push Protocol over SIP	Section 5.2	
DM-PUSH-C-005-O	Support for Push Protocol over HTTP	Section 5.3	DM-PUSH-C-007-O
DM-PUSH-C-006-O	Support for Push Over OBEX	Section 5.4	DM-PUSH-C-008-O
DM-PUSH-C-007-O	Support for HTTP security	Section 5.3	
DM-PUSH-C-008-O	Support for OBEX security	Section 5.4	

B.2 SCR for Server Features

Item	Function	Reference	Requirement
DM-PUSH-S-001-O	Support for Push Server	Section 4 Section 5	DM-PUSH-S-002-O OR DM-PUSH-S-003-O OR DM-PUSH-S-004-O OR DM-PUSH-S-005-O OR DM-PUSH-S-006-O
DM-PUSH-S-002-O	Support for Non-secure Push Protocol over WSP	Section 5.1	
DM-PUSH-S-003-O	Support for Secure Push Protocol over WSP	Section 5.1	
DM-PUSH-S-004-O	Support for Push Protocol over SIP	Section 5.2	
DM-PUSH-S-005-O	Support for Push Protocol over HTTP	Section 5.3	DM-PUSH-S-007-O
DM-PUSH-S-006-O	Support for Push Over OBEX	Section 5.4	DM-PUSH-S-008-O
DM-PUSH-S-007-O	Support for HTTP security	Section 5.3	
DM-PUSH-S-008-O	Support for OBEX	Section 5.4	

Item	Function	Reference	Requirement
	security		