OMA Device Management Notification Initiated Session

Candidate Version 1.3 – 22 Apr 2013

Open Mobile Alliance

OMA-TS-DM_Notification-V1_3-20130422-C

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1. Scope

This document specifies the OMA Device Management Notification Initiation package from the DM Server to the DM Client. A DM Server can use this notification capability to cause the DM Client to initiate a connection back to the DM Server.

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2. References

2.1 Normative References

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2.2 Informative References

None.

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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 DTD’s or XML snippets is specified in this “`typeface`.”

3.2 Definitions

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

3.3 Abbreviations

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

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4. Introduction

Many devices cannot continuously listen for connections from a management server. Other devices simply do not wish to "open a port" (i.e. accept connections) for security reasons. However, most devices can receive unsolicited messages, sometimes called "notifications". Some handsets, for example, can receive SMS messages. Other devices may have the ability to receive other, similar datagram messages.

A DM Server can use this notification capability to cause the DM Client to initiate a connection back to the DM Server. This connection might be over HTTP, WAP, SIP or another transport protocol.

The notification message needs to contain authentication information for the server who sent this notification. The result of receiving such a notification would be for the DM Client to initiate a connection to the DM Server that sent the alert. In this scenario, the DM client needs to verify that this DM Server is among those authorized servers to request such activity.

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5. Server Alerted Management Session

This notification message is intended to provide a possibility for the DM Server to alert the DM Client to initiate a management session. Within the notification message the DM Server can tell the DM Client the protocol version and whether the server proposes the session to be a foreground (user interaction) or background (not visible to the end-user) event. It can also tell if the session is happening because server has some management actions to perform or if the user caused the start of the session. The server MUST also send a digest within the notification message that is included to prevent any Denial of Service (DoS) attacks.

Figure 1 describes the message flow how the server alerts management session.

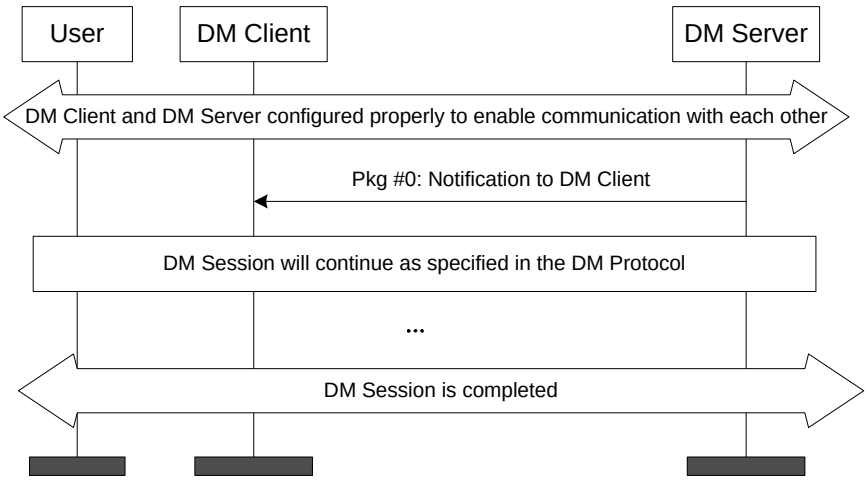

Figure 1: Flow of the Server Alerted Management session

The message flow presented above is one Device Management session. This means that all messages have the same OMA DM Session ID.

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6. Structure of DM Notification

Package#0 is the default format used for the Notification Message.

DM Notification messages are encoded in a simple binary format. DM Notification message consists of a fixed-sized header followed by options in Type-Length-Value (TLV) format and a digest. The number of options is determined by the header.

The following figure describes the format of the General Package #0.

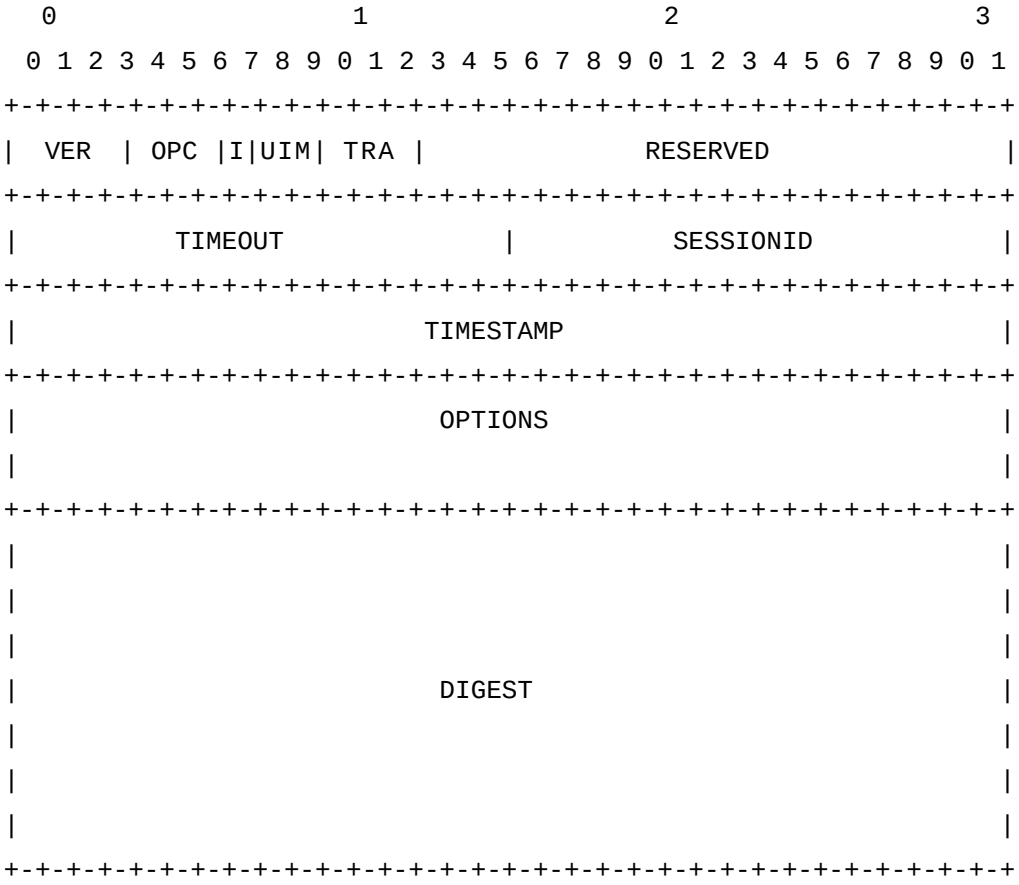

Figure 2: Format of the DM Notification Message (Package#0)

The MIME type for this version of DM Notification Message is *application/vnd.syncml.dm.notification* and the Content-Type code for that is *0x58.* Byte order for DM Notification Message is Big Endian (Network order).

The DM Client MUST support the notification format from DM 1.2 [DMNoti12] and the notification format defined in this specification

6.1 DM Notification Message Header Format

DM Notification header has the fixed size. DM Notification header fields MUST appear in order as described in the following table:

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Header Fields	No. of bits	Short Description
Version	4	Version of DM Notification message.
Option-Count	3	Number of options
Initiator	1	Initiator of the Management Action
UI-Mode	2	Recommended user interaction mode.
Transport	3	Preferred bearer for dm session
Reserved	19	Reserved for future addition of Header Fields
Timeout	16	Timeout of DM Notification message
Session-ID	16	SessionID created by the Server
Timestamp	32	Timestamp of DM Notification message

6.2 DM Notification Message Option Format

Options MUST appear in order of their Option Number (see Section 6.3). Following the Option Number, each option has a Length field which specifies the length of the Option Value, in bytes. The Option Value immediately follows the Length field.

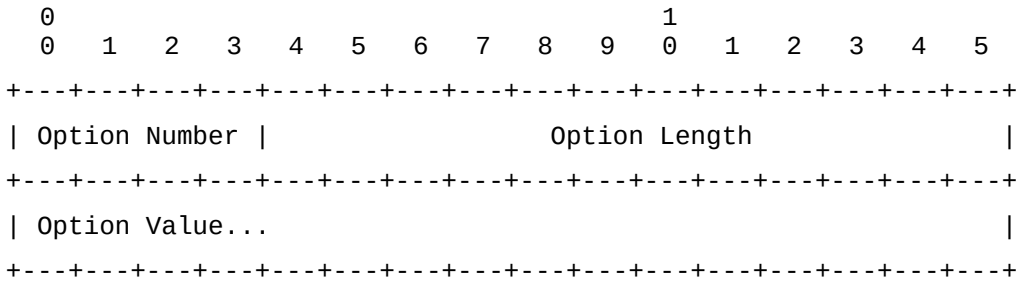

Figure 3: Format of the DM Notification Message Options

6.2.1 Option Number

The <Option-Number> field specifies the sequence number of Options after the header. The value of this field is specified using 4 bits.

6.2.2 Option Length

The <Option-Length> field specifies the length of the Option Value, in bytes. For instance, if the Option Length value is 3 then the Option Value size is 3 bytes. The value of this field is specified using 12 bits.

6.2.3 Option Value

The format of the Option Value depends on the respective option. Options defined in this document make use of the following formats for option values:

- Uint: A non-negative integer which is represented in network byte order using athe bytes which Option Length decides. The Option Value range is calculated by 2 to the power of Option Length in bit. For example if the Option Length is 2, Option Value range is 0-65535 in decimal.
- String: A Unicode string which is encoded using UTF-8 [RFC3629] in Net-Unicode form [RFC5198]. Note that ASCII strings (that do not make use of special control characters) are always valid UTF-8 Net-Unicode strings.
- Opaque: An opaque sequence of bytes. This type could be used when the other types than Uint or String are required. How to handle this type depends on the Option using this type.

6.3 DM Notification Message Options

This specification defines the following Options for DM Notification message:

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Option Number (Binary)	Name	Format	No. of bytes	DM Client Support	DM Server Support	Occurrence
0001	Server-ID	String	1-256	Mandatory	Mandatory	One
0010	Targeted-MO	Uint	1-2	Optional	Mandatory	ZeroOrMore
0011	Requested-MO	Uint	1-2	Mandatory	Mandatory	OneOrMore
0100	Preferred-Bearer	Uint	1	Mandatory	Mandatory	ZeroOrMore
0101	Connect-Reason	String	1-4095	Optional	Optional	ZeroOrOne
0110	Vendor-Info	String	1-4095	Optional	Optional	ZeroOrOne

6.4 Description of the Message Header Fields

6.4.1 Version Information (VER)

The VER field specifies the version of the DM Notification message sent by the DM Server. This value is specified by using the 4 bits in the Notification Message. Implementations of this specification MUST set this field to 0x01. Other values are reserved for future versions.

It is noted that this is not the DM protocol version, but the DM Notification message version.

6.4.2 Options Count (OPC)

The OPC field specifies the number of options after the header. This value is specified by using the 3 bits in the Notification Message.

6.4.3 Initiator of the Management Action (I)

The I field specifies how the DM Server has interpreted the initiation of the management action, either because the end user requested it or because the DM Server has management actions to perform. This value is specified using 1 bit.

The values the Initiator of the Management action MUST be one of the following:

Value (Binary)	Semantics	Description
0	end user initiated	Indicates that the end user caused the device management session to start.
1	server initiated	Indicates that the DM Server caused the device management session to start.

6.4.4 User Interaction Mode (UIM)

The UIM field specifies the DM Server recommendations as to whether the server wants the management session to be executed in the background or if the DM client should show a message to the user. This value is specified using 2 bits. A DM Client SHOULD follow this recommendation. The DM Client MAY display additional disclaimers or notes to the user.

The values of the User Interaction mode MUST be one of the following:

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Value (Binary)	Semantics	Description
00	not specified	Indicates that the DM Server doesn't have a recommendation.
01	background	Indicates that the DM Server recommends that the management session SHOULD be executed as a background event, without displaying a message or any other indications to the user.
10	informative	Indicates that the DM Server recommends that the client MAY display an informative message or maybe emitting a beep sound or other indications announcing the beginning of the management session to the user.
11	user interaction	Indicates that the DM Server recommends to the DM Client to prompt for user input before the management session takes place.

6.4.5 Transport Binding (TRA)

The TRA field indicates the desired transport binding to be used for connection between DM Client and Server in subsequent DM session. This value is specified using 3 bits.

The values of the TRA field MUST be one of the following:

Value (Binary)	Semantics	Description
000	not specified	Indicates no transport binding has been specified. It is up to the client to choose appropriate transport binding to use.
001	HTTP	Indicates the preferred transport is HTTP.
010	HTTPS	Indicates the preferred transport is HTTPS.
011	OBEX	Indicates the preferred transport is OBEX.
100	WSP	Indicates the preferred transport is WSP.
101 - 111	Reserved Values	TBD

6.4.6 Reserved (RESERVED)

The <Reserved> field remains for the future uses.

6.4.7 Timeout of the Notification Message (TIMEOUT)

The `TIMEOUT` field specifies the number of minutes the DM Server will keep the `SESSIONID` within the DM Notification Message valid. After the `SESSIONID` has expired and the DM Client still initiates the management session, the DM Server MAY reject the session. This value is specified by using 16 bits. This value is calculated as unsigned integer. A timeout value of zero indicates there is no timeout.

6.4.8 Session Identifier (SESSIONID)

The `SESSIONID` field specifies the identifier of the OMA DM session associated with the DM Message. This value is specified by using the network byte ordered 16 bits in the DM Notification Message. The `SESSIONID` MUST be different between different Notification Messages and the DM Client MUST use this `SESSIONID` when it connects to the DM Server. If DM Client receives the same Session ID several times from the same DM Server, it is enough for a DM Client to initiate only one management session.

When preparing the OMA DM Message for connection to the DM server, the binary session ID value from the DM Notification Message, in the unsigned hexadecimal range of 1 through FFFF, SHALL be mapped to a string of hexadecimal digits (chosen from the numeric digits "0"-"9" and the upper-case letters "A"-"F") of between one and four characters in length, inclusive, and placed in the `SESSIONID` element of the OMA DM message. Leading zeros MUST NOT be included. A value of zero MUST NOT be used.

6.4.9 Timestamp (TIMESTAMP)

The `TIMESTAMP` field specifies the current server time in POSIX time form as defined in [POSIX]. The data in this field MUST be 32 bits in length.

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The DM Client MAY ignore this notification if the message is older than the number of days specified in TIMEOUT. The age of the message is determined by comparing the value of TIMESTAMP and the current date and time on the device.

The TIMESTAMP is used as the nonce when calculating the digest, to prevent replay attacks.

6.5 Description of the Message Options

6.5.1 Server Identifier Option

The <Server-ID> option specifies the Server Identifier of the DM Server. This is the same identifier as in the DMAcc [DMSTDOBJ].

The length field of <Server-ID> option MUST be equal or less than 8 bits. Therefore the actual length of <Server-ID> will be equal or less than 256 bytes. The <Server-ID> option MUST NOT occur more than once.

The DM Client and DM Server MUST support this option. The <Server-ID> option MUST be present in the DM Notification message.

6.5.2 Targeted MO Option

The <Targeted-MO> option specifies the MO index which indicates the targeted MO to be managed in the resulting DM session. This provides the information to help the DM Client to decide whether it is appropriate to start the DM session with the DM Server. For example, if the DM Server wants to FUMO update but the DM Client detects that the battery is not enough to do so it may not start the DM session. The DM Server MAY still perform management activities on other MOs during the resulting DM session.

The DM Server MUST support this option. The DM Client MAY support this option.

6.5.3 Vendor Specific Information Option

The <Vendor-Info> option is used to specify vendor specific information.

The <Vendor-Info> option MUST NOT occur more than once. The DM Client and DM Server MAY support this Option.

6.5.4 Requested MO Option

The <Requested-MO> option specifies the MO index which indicates the requested MO to be sent in Package #1 in the resulting DM Session as specified in [DMPRO]. The DM Server can request the DevDetail or other MOs by using this option to receive in the Package #1 from the DM Client.

For example, if the DM Server wants to process a large object with the DM Client in the Package #0, the <Requested MO> option field is set to the index of DevDetail, so that the DM Client can send DevDetail MO to the DM Server in the Package #1. This will permit the DM Server to know if the DM Client supports a large object or not.

The DM Client and DM Server MUST support this option. The <Requested MO> option MUST be present in the DM Notification message.

6.5.5 Reason for Connection Option

The <Connect-Reason> option specifies the reason for connection information. If the <Connect-Reason> option is present, the DM Client MAY display this information to the user prior to starting a management session. The DM Client and DM Server MAY support this option.

6.5.6 Preferred-bearer Option

The <Preferred-Bearer> option specifies the preferred bearers that the DM Client is requested to use for connecting to the DM Server. If multiple preferred bearers are specified, the bearer which appears first is to have higher priority over the rest of available bearers. The DM Client SHOULD use the preferred bearers with higher priority first if they are available. If none of

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indicated preferred bearers is available, the DM Client SHOULD wait until one of them becomes available.
The DM Client and DM Server MUST support this option.

The values of the <Preferred-Bearer> option MUST be one of the following:

Value	Semantics	Description
0x00	not specified	Indicates the preferred bearer is not specified.
0x01	*3GPP_CIRCUIT_SWITCHED*	Indicates the preferred bearer is 3GPP circuit switched network.
0x02	*3GPP_PACKET_SWITCHED*	Indicates the preferred bearer is 3GPP packet switched network.
0x03	*3GPP_LTE*	Indicates the preferred bearer is 3GPP LTE.
0x04	*3GPP2_CDMA_PACKET_DATA*	Indicates the preferred bearer is 3GPP2 CDMA packet data.
0x05	*WIMAX*	Indicates the preferred bearer is WIMAX.
0x06	*WLAN*	Indicates the preferred bearer is WLAN.
0x07	*DSL*	Indicates the preferred bearer is DSL.
0x08	*ETHERNET*	Indicates the preferred bearer is Ethernet.
0x09	*Bluetooth*	Indicates the preferred bearer is Bluetooth.
0x0A	*IrDA*	Indicates the preferred bearer is IrDA.
0x0B	*LOCAL*	Indicates the preferred bearer is the DM Server on Smart Card.

6.6 Digest

The digest payload specifies the SHA256 digest [RFC6234] of the notification message. The Length of the Digest payload MUST be 32 bytes. The digest is computed as digest-data of DM Server secret and DM Notification message Header and Options concatenated using colon. The expression is Digest = Hash(server-secret: header:header-options). The Timestamp field included in the DM Notification message is used as the nonce in the digest computation to avoid the replay attack.

The DM Client and DM Server MUST support this payload. This payload MUST be present in the DM Notification message.

The <server-secret> is provided as AAuthSecret in the 'NOTICRED' authentication setting for the DM server. If the 'NOTICRED' authentication setting for the DM Server is not available, AAuthSecret in the 'SRVCRED' authentication setting for the DM Server is used instead of AAuthSecret of 'NOTICRED'.

The DM Client MUST ignore notification message with digest which is not correctly computed.

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7. OMA Device Management Transport Dependant Profiles

The following sections illustrate the transport dependant profiles for sending a Notification Message from a DM Server to a DM Client. At least one of the profiles below MUST be supported.

7.1 Package #0 delivered using connectionless WAP Push

Package #0 MAY be sent to the DM Client using the Push OTA Protocol over WSP (OTA-WSP) [PushOTA] with the following additional rules:

- The package MUST be sent using the non-secure connectionless push.
- The application-id code 0x07 MUST be used.
- The Content-Type code 0x58 MUST be used.
- Other headers may be included; however the total length of the header MUST NOT exceed 48 bytes (to ensure that there is sufficient space for the payload).

For devices on cellular networks, connectionless WAP Push is typically delivered over SMS. For IP-capable devices, connectionless WAP Push MAY be delivered over UDP. In order to receive non-secure connectionless WAP Push over UDP, an IP-capable device MUST listen to the IANA registered port number for connectionless WAP Push (i.e. 2948).

7.1.1 Using non WAP 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 one assigned to the OMA DM Notification Initiation Package. If this information is correct then the message MUST be routed to the OMA Device Management application.

7.2 Package #0 over OBEX

Local Notification Initiated Session over OBEX is done inside the PUT command of the OBEX protocol. This happens in the same way as sending the DM messages over OBEX to a DM Client (see [OBEX]).

7.3 Package #0 over SIP Push

Package #0 MAY be sent to the DM Client using the Push OTA Protocol over SIP (OTA-SIP) [SIPPush] 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 used '*application/vnd.syncml.dm.notification*' in text format.
- "syncml.dm" SHALL be used for "g.oma.eventappid" media feature tag.
- "SIP MESSAGE method (Pager-Mode)" SHALL be used to deliver the Package #0 message.

7.4 Package #0 over HTTP Push

Package #0 MAY be sent to the DM Client using the Push OTA Protocol over HTTP (OTA-HTTP) [PushOTA] with the following additional rules:

- The Content-Type MUST be used '*application/vnd.syncml.dm.notification*' in text format.

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7.5 Package #0 over Cell Broadcast

Package #0 MAY be sent to the DM Client using the Cell Broadcast Protocol [CB] with the following additional rules:

- The total message length (including the header) MUST not exceed 1230 bytes

Notifying a single device by Cell Broadcast can be achieved by allocating a Cell Broadcast channel for the specific device.

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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 Versions OMA-TS-DM_Notification-V1_3	15 Oct 2008	All	Baseline to v1.3 using OMA-TS-DM_Notification-V1_2_1-20080617-A.
	12 Jan 2009	2.1, 7.3	Applied OMA-DM-DM13-2008-0002R02-CR_SipNotification.
	01 Jun 2009	2.1, 7	Applied OMA-DM-DM13-2009-0024R03-CR_Notification_Push_Update.
	14 Aug 2009	6.1, 6.2	Applied OMA-DM-DM13-2009-0046R02-CR_Notification_Body_Extension with comment from R&A
	09 Sep 2009	6.1, 6.2	Applied OMA-DM-DM13-2009-0060R03-CR_Authentication_Type OMA-DM-DM13-2009-0076R01-CR_Transport_Binding.
	18 Nov 2009	All	Applied OMA-DM-DM13-2009-0081-CR_Notification_Cleanup
	10 Dec 2009	6.2.6, B.2	Applied OMA-DM-DM13-2009-0103R02-CR_Notification_Message_Version
	11 Dec 2009	All	Applied OMA-DM-2009-0066-CR_DM_1.3_TS_Notification_Clerical
	07 Jan 2010	All	Clerical changes from Closure Review.
	27 Jan 2010	All	Applied OMA-DM-DM13-2010-0010R01-CR_Notification_Cleanup Editorial clean-up by DSO
	10 Feb 2010	All	Applied OMA-DM-DM13-2010-0030-CR_PresentBits OMA-DM-DM13-2010-0024R01-CR_Notification_Cleanup.
	11 Feb 2010	2.1, A.2	Editorial changes
	14 Apr 2010	All	Applied OMA-DM-DM13-2010-0049-CR_Nonce_Resync_Security OMA-DM-DM13-2010-0060R02-CR_Notification_Hash
	15 Apr 2010	All	Corrected the notification MIME type.
	26 Apr 2010	2.1	Editorial clean-up of formatting
	04 May 2010	All	Applied OMA-DM-DM13-2010-0075-CR_Notification_MIME Language set to English UK.
	05 May 2010	All	[DMStdObj] changed to [DMSTDOBJ]
Candidate Version OMA-TS-DM_Notification-V1_3	25 May 2010	N/A	Status changed to Candidate by TP Ref # OMA-TP-2010-0221-INP_DM_V1.3_ERP_and_ETR_for_Candidate_approval
Draft Versions OMA-TS-DM_Notification-V1_3	26 Aug 2010	2.1, 6.1, 6.2, App B	Applied OMA-DM-DM13-2010-0079-CR_Notif_SCR_Update OMA-DM-DM13-2010-0101R02-CR_SessionID_Timeout
	20 Sep 2010	6.2.6	Applied OMA-DM-DM13-2010-0103R02-CR_Notification_User_Interaction_Mode_Bug_Fixes
Candidate Version OMA-TS-DM_Notification-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

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Document Identifier	Date	Sections	Description
Draft Versions OMA-TS-DM_Notification-V1_3	23 Dec 2010	2.1	Applied OMA-DM-DM13-2010-0118-CR_Notification_Ref_Clerical
	26 Jan 2011	3.3, 7.1	Applied OMA-DM-DM13-2010-0131R04-CR_DM_Noti_Push_Binding_Bugfix
	28 Apr 2011	6, 6.2, App B1	Applied OMA-DM-DM13-2011-0016R06-CR_Obj_Request OMA-DM-DM13-2011-0026R01-CR_Notification_Reject
	30 May 2011	6.1, 6.2.13, 6.2.23, 6.2.24 (new)	Applied OMA-DM-DM13-2010-0124R03-CR_Prefferred_Bearer_for_DM_Session OMA-DM-DM13-2011-0042R01-CR_Clarify_Timestamp
	01 July 2011	6.1, 6.2.19, 6.2.20	Applied OMA-DM-DM13-2011-0051R01-CR_MO_Index_Editorials_in_DM_Noti OMA-DM-DM13-2011-0043R03-CR_SHA2DigestUpdate
	20 July 2011	7.1	Applied OMA-DM-DM13-2011-0058R01-CR_Notification_Value_Table OMA-DM-DM13-2011-0059R01-CR_Clarify_Transport OMA-DM-DM13-2011-0060R01-CR_Targeted_MO
	03 August 2011	6.2.24	Applied OMA-DM-DM13-2011-0068-CR_DigestOnNoti13
	22 Aug 2011	6.1, 6.2.9	Applied OMA-DM-DM13-2011-0066R01-CR_DigestSHA256inNotification
	15 Sep 2011	6.2.25	Applied OMA-DM-DM13-2011-0074-CR_Modification_in_Preferred_Bearer
	22 Sep 2011	6.2.14, 6.2.24	Applied OMA-DM-DM13-2011-0080-CR_Adding_Info_TimeStamp
	10 Oct2011	6, 6.1	Applied: OMA-DM-DM13-2011-0061R05-CR_Notification_TLV_Parttern
	12 Oct 2011	6	Applied: OMA-DM-DM13-2011-0096R01-CR_Noti_Description_Update
	15 Nov 2011	6.1, 6.3	Applied: OMA-DM-DM13-2011-0075R05-CR_NotiDescription
	13 Jan 2012	2,3, 6.5.6	Applied: OMA-DM-DM13-2011-0130R03-CR_CONR_Notification
	27 Jan 2012	All	Applied 2012 TS template to SCR tables according to AI DM-2012-A008 + added reference to SCRRULES and deleted reference to IOPPROC Applied 2012 template to introduction section. AI DM-2012-A007: removed one sentence in 6.2.3, changed reference from “SyncML OBEX Binding” to “DM Obex Binding” in section 2, hard coded references changed into proper cross-referencesin the whole document AI DM-2012-A015: reference PushOTA specification upgraded to version 2.3 in section 2, “reason for session” changed to “reason for Connection” in last line of rightmost column in table of App C
	13 Feb 2012	1, 6, 7.2	Applied: OMA-DM-DM13-2011-0124R04-CR_Notification_1.3_bug_fix OMA-DM-DM13-2012-0025-CR_CONR_resolution_Notification OMA-DM-DM13-2012-0026-CR_CONR_Notification_Comments (applied as per R&A comment) OMA-DM-DM13-2012-0039-CR_Notification_editorials

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Document Identifier	Date	Sections	Description
	16 Feb 2012	All	Applied: OMA-DM-DM13-2012-0035R01-CR_CONR_Notification (according to DM13-12-010 R&A comment) OMA-DM-DM13-2012-0040R01-CR_CONR_Notification_Option_Value_editorial (according to DM13-12-010 R&A comment) OMA-DM-DM13-2012-0045-CR_CONR_Notification_Removing_Auth_Type OMA-DM-DM13-2012-0047R01-CR_Requested_MO_in_Noti Added normative reference to DMPRO in 2.1 since newly introduced by OMA-DM-DM13-2012-0047R01 in section 6.5.4
	17 Feb 2012	6.3, 6.5.6	Applied: OMA-DM-DM13-2012-0061R01-CR_Notification_Options_Support
	22 Feb 2012	All	Applied OMA-DM-DM13-2012-0081R02-CR_CONRR_Notification_fixes
	23 Feb 2012	4.1	Header removed by DSO according to Action Item DM-2012-A030
Candidate Version OMA-TS-DM_Notification-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
Draft Version OMA-TS-DM_Notification-V1_3	15 Apr 2013	2.1, 7.5	Incorporated CR: OMA-DM-DM13-2013-0004R02-CR_Adding_Cell_Broadcast Editorial changes
Candidate Version OMA-TS-DM_Notification-V1_3	22 Apr 2013	n/a	Status changed to Candidate by TP TP Ref # OMA-TP-2013-0113-INP_DM_V1_3_ERP_for_Notification

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Appendix B. Static Conformance Requirements (Normative)

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

B.1 SCR for OMA DM v1.3 Client

Item	Function	Reference	Requirement
SCR-DM-NOTI-C-001-M	Support of Server-Alerted Management Session	Section 5	
SCR-DM-NOTI-C-002-M	Receiving Notification message	Section 6	
SCR-DM-NOTI-C-003-M	Support DM 1.2 format Notification message	Section 6	
SCR-DM-NOTI-C-004-M	Support DM 1.3 format Notification message	Section 6	
SCR-DM-NOTI-C-005-M	Support of Message headers	Section 6.1	
SCR-DM-NOTI-C-006-M	VER value for this version of notification is 0x01	Section 6.4.1	
SCR-DM-NOTI-C-007-O	Implementation of User Interaction Mode recommendation	Section 6.4.4	
SCR-DM-NOTI-C-008-M	Usage of SESSIONID while connecting to the DM Server	Section 6.4.9	
SCR-DM-NOTI-C-009-O	Ignore notification message older than the number of days specified in TIMEOUT	Section 6.4.10	
SCR-DM-NOTI-C-010-M	Support of Server Identifier Option	Section 6.5.1	
SCR-DM-NOTI-C-011-O	Support of Target MO Option	Section 6.5.2	
SCR-DM-NOTI-C-012-O	Support of Vendor Specific Information Option	Section 6.5.3	
SCR-DM-NOTI-C-013-M	Support of Requested MO Option	Section 6.5.3	
SCR-DM-NOTI-C-014-O	Support of Reason for Connection Option	Section 6.5.4	SCR-DM-NOTI-C-014-O
SCR-DM-NOTI-C-015-O	Display information contained in Reason for Connection Option	Section 6.5.4	
SCR-DM-NOTI-C-016-M	Support of Preferred Bearer Option	Section 6.5.3	
SCR-DM-NOTI-C-017-O	Usage of bearer indicated by Preferred Bearer Option	Section 6.5.3	
SCR-DM-NOTI-C-018-M	Support of Digest payload	Section 6.6	

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Item	Function	Reference	Requirement
SCR-DM-NOTI-C-019-M	Ignore message with bad digest	Section 6.6	
SCR-DM-NOTI-C-020-O	Support WAP Push	Section 7.1	
SCR-DM-NOTI-C-021-O	Support OBEX Push	Section 7.2	
SCR-DM-NOTI-C-022-O	Support SIP Push	Section 7.3	
SCR-DM-NOTI-C-023-O	Support HTTP Push	Section 7.4	

B.2 SCR for OMA DM v1.3 Server

Item	Function	Reference	Requirement
SCR-DM-NOTI-S-001-M	Support of Server-Alerted Management Session	Section 5	
SCR-DM-NOTI-S-002-M	Sending of Notification message	Section 6	
SCR-DM-NOTI-S-003-M	Support of Message headers	Section 6.1	
SCR-DM-NOTI-S-004-M	VER value for this version of notification is 0x01	Section 6.4.1	
SCR-DM-NOTI-S-005-M	Support of Server Identifier Option	Section 6.5.1	
SCR-DM-NOTI-S-006-M	Support of Target MO Option	Section 6.5.2	
SCR-DM-NOTI-S-007-O	Support of Vendor Specific Information Option	Section 6.5.3	
SCR-DM-NOTI-S-008-M	Support of Requested MO Option	Section 6.5.3	
SCR-DM-NOTI-S-009-O	Support of Reason for Connection Option	Section 6.5.4	
SCR-DM-NOTI-S-010-M	Support of Preferred Bearer Option	Section 6.5.3	
SCR-DM-NOTI-C-011-M	Support of Digest payload	Section 6.6	
SCR-DM-NOTI-S-012-O	Support WAP Push	Section 7.1	
SCR-DM-NOTI-S-013-O	Support OBEX Push	Section 7.2	
SCR-DM-NOTI-S-014-O	Support SIP Push	Section 7.3	
SCR-DM-NOTI-S-015-O	Support HTTP Push	Section 7.4	

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