



Enabler Validation Plan for Device Management

Candidate Version 1.3 – 08 Dec 2015

Open Mobile Alliance
OMA-EVP-DM-V1_3-20151208-C

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1. Scope

This document details the Validation plan for the DM V1.3 Enabler Release. The successful accomplishment of the validation activities will be required for the Enabler to be considered for Approved status.

The validation plan for the DM V1.3 Enabler Release specifications is based on testing expectations in the Enabler Test Requirements (ETR). While the specific test activities to be performed are described in the Enabler Test Specification (ETS) the test environment is described in this plan. This test environment details infrastructure, operational and participation requirements identified for the needed testing activities.

1.1 Assumptions

None.

1.2 Exclusions

None.

2. References

2.1 Normative References

- [DM-ERELED] “Enabler Release Definition for OMA Device Management”, Open Mobile Alliance™, OMA-ERELED-DM-V1_3, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [IOPETR] “DM Enabler Test Requirements V1.3”, Open Mobile Alliance™, OMA-ETR-DM-V1_3, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [IOPETS] “DM Enabler Test Specification V1.3”, Open Mobile Alliance™, OMA-ETS-DM-V1_3, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [IOPPROC] “OMA Interoperability Policy and Process”, Version 1.8, Open Mobile Alliance™, OMA-ORG-IOP_Process-V1_8, [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)

2.2 Informative References

- [IOPPROC] “OMA Interoperability Policy and Process”, Open Mobile Alliance™, OMA-IOP-Process-V1_7, [URL:http://www.openmobilealliance.org/](http://www.openmobilealliance.org/)
- [OMADICT] “Dictionary for OMA Specifications”, Open Mobile Alliance™, OMA-ORG-Dictionary-V2_7, [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”, are normative, unless they are explicitly indicated to be informative.

3.2 Definitions

Device see [OMADICT]

Management Object A data model for information, which is a logical part of the interfaces exposed by DM components.

3.3 Abbreviations

DM Device Management

MO Management Objects

OMA Open Mobile Alliance

4. Enabler Validation Description

TestFest will cover the full functionality of the DM V1.3 Enabler [DM-ERELD]. Each participant has to make sure that the entry criteria for TestFest are satisfied. In addition, only the test cases associated with the mandatory SCR requirements need to be performed without any problem reports for enabler verification.

5. TestFest Activities

5.1 Enabler Test Guidelines

The DM V1.3 Enabler specifies a protocol that allows servers to manage devices and to notify devices of the need for management sessions. The enabler also defines how to create new management objects.

5.1.1 Minimal Test Configuration

The following describes the minimal test configuration:

1. One DM 1.3 Server that is compliant to the DM V1.3 Enabler. It should be capable of logging the messages between the client and server to allow for analysis of the DM protocol messages sent and received.
2. One DM 1.3 Client that is compliant to the DM V1.3 Enabler.
3. Cellular Data Network. Many of the implementations of DM 1.3 server implementation will use a cellular data network as a bearer to have a session with the DM 1.3 Client. A 2.5G network is minimally required to allow for the remote diagnostics and monitoring as well as the mechanisms to convey the result of DM Operations or report the DM data.

5.1.2 Minimal Participation Guidelines

A minimum of 2 different Client and 2 different Server implementations are required to provide meaningful inter-operability testing and formal approval of the enabler. For prototype testing, if there is at least 1 server and 1 client, that should suffice.

5.1.3 Optimal TestFest Achievement Test Case Priority Guidelines

This list represents the current highest priority test cases that the participants should attempt to perform at the event. In order to facilitate maximum test coverage of the functionality of the enabler over a number of TestFests, this list may be modified by the IOP WG between test events to reflect the latest priorities. Therefore the ETS Test Cases listed below represent a subset of all the Test Cases for the Enabler that it is thought can be executed in a single test session at an OMA TestFest. It is not intended to be the only tests executed at a TestFest, and teams are encouraged to execute more tests if they are able to do so in the time allowed.

The list includes:

Test Case	Title
TBD	

5.2 Enabler Test Requirements

5.2.1 Test Infrastructure Requirements

Test infrastructure will include the DM Client and the DM Server. Besides, 2.5G/3G cellular data network is required as a bearer. For the delivery of the Notification to the device, PPG (Push Proxy Gateway) and SMSC are required. In addition, depending on the agreement between the respective server and client implementations, cellular network may be replaced by Internet.

5.2.2 Enabler Execution Flow

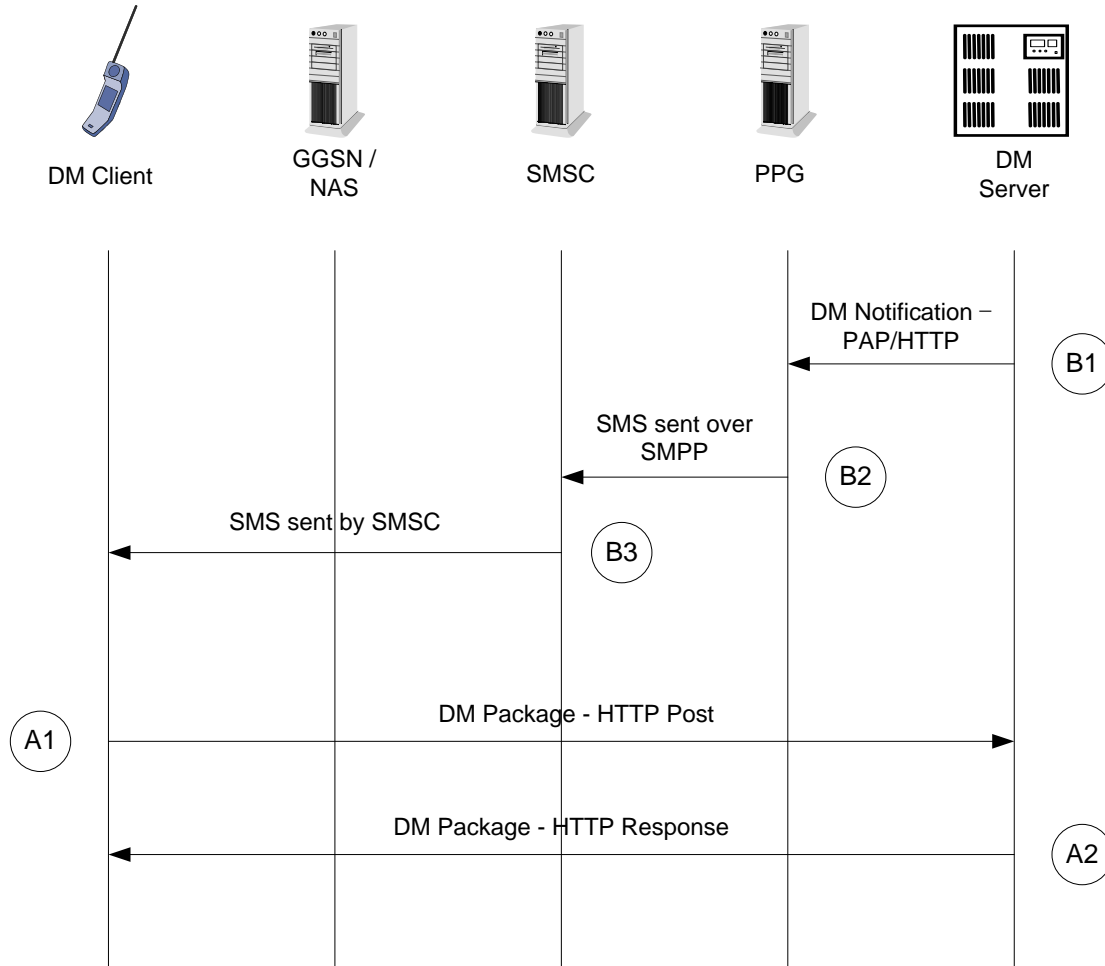


Figure 1: Example Call Flow

The call flow for client initiated session can be as follows:

- (A1) The DM Client connects through the underlying bearer and network access point to the DM servers that are located on the Internet. The Servers on the Internet may be on the OMA Test Fest network or openly available on the Internet.
- (A2) The DM Server will reply to the DM Client as defined in the DM protocol.

The phases A1 and A2 repeat until all the DM messages are exchanged.

The call flow for server initiated session can be as follows:

- (B1) The DM Server may push information to the Client using the Push Proxy Gateway.
- (B2) The information is sent from the PPG using SMPP to the SMSC.
- (B3) The message is sent over SMS to the DM Client at the OMA Test Fest.
- (A1) Client will reply to the server as defined in the DM protocol
- (A2) Servers will reply to the client as defined in the DM protocol.

The phases A1 and A2 repeat until all the DM messages are exchanged.

5.2.3 Test Content Requirements

No test content is required.

5.2.4 Test Limitations

5.2.4.1 Physical

No physical limitations identified at the moment.

5.2.4.2 Resources

It is expected that both Client and Server implementations have dedicated human resources supporting the testing during the entire duration of a test session. No other limitations identified at this time.

5.2.5 Test Restrictions

There is no special test restrictions identified at the moment.

5.2.6 Test Tools

Test tools may be used to verify conformance before coming to the TestFest.

5.2.6.1 Existing Tools to be Used

The SCTS DM tool may be used for conformance testing.

5.2.6.2 Test Tool Requirements

The SCTS DM tool shall support OMA DM 1.3 and especially Generic Alert mechanism and EXEC commands.

5.2.7 Resources Required

It is expected that both Client and Server implementations have at least ONE dedicated human resource to supporting the testing during the entire duration of a test session. The resource SHOULD be familiar with the actual implementation of the enabler so that he/she can answer any pertinent questions immediately and if necessary make changes to connection setup and other implementation aspects.

5.3 Tests to be Performed

The following sections describe the tests related to the formal TestFest validation activities.

5.3.1 Entry Criteria for TestFest

The following tests need to be performed and passed by implementations by members wishing to participate in the TestFest. This ensures minimal requisite capability of the implementations. The tests are defined in the DM V1.3 ETS [IOPETS] and any special comments are noted.

Test Case Id	Special Conditions

Table 1: Listing of Tests for Entry Criteria for TestFest

5.3.2 Testing to be Performed at TestFest

The following tests need to be performed to fully cover the range of capabilities of the enabler and defined protocols. These tests are to be covered in the TestFest. The tests are defined in the DM V1.3 ETS [IOPETS] and any special comments are noted.

Test Case Id	Special Conditions

Table 2: Listing of Tests to be Performed at TestFest

5.4 Enabler Test Reporting

5.4.1 Problem Reporting Requirements

Normal Reporting, no special reporting required.

5.4.2 Enabler Test Requirements

Normal Reporting, no special reporting required.

6. Alternative Validation Activities

There is no needed alternative validation activities required.

7. Approval Criteria

The decision for the approval of the DM V1.3 Enabler SHALL be made as per section “Enabler Release Approval Criteria” in [IOPPROC].

7.1 Enabler Validation Test Cases

The following table should list the set of tests that are used for enabler validation.

Test Case Id	ETR Requirement Id	ETR Status	Notes
<Test Case Id>	<ETR Id>	<M> or <O>	
<Test Case Id>	<ETR Id>		

Table 3: Enabler Validation Test Cases

7.2 Non-Covered ETR Requirements

Any restrictions, limitations and/or infeasibility of testing of the ETR requirements should be stated in this section.

If new information about limitations and/or infeasibility of testing of any of the ETR requirements is discovered, this section should be updated accordingly.

ETR Requirement Id	ETR Status	Notes
<ETR Id>	<M> or <O>	

Table 4: Non-Covered ETR Requirements

Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
n/a	n/a	No prior version

A.2 Draft/Candidate Version 1.3 History

Document Identifier	Date	Sections	Description
Draft versions OMA-EVP-DM-V1_3	24 Sep 2010		The initial version of this document.
	06 Oct 2010	Coversheet, A.1, A.2	Editorial changes.
Candidate version OMA-EVP-DM-V1_3	08 Dec 2015	n/a	Status changed to Candidate by TP TP Ref # OMA-TP-2015-0210- INP_DM_V1_3_EVP_for_Candidate_approval