



## **Enabler Test Report Device Management V1.1.2**

OMA Test Fest (May 2004)

Version 04-Jun-2004

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Open Mobile Alliance  
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# 1. Scope

This report describes the results from the testing carried out at OMA Test Fest (May 2004) concerning the Device Management enabler version 1.1.2.

## 2. References

### 2.1 Normative References

[OMAIOPPROC]	OMA Interoperability Policy and Process, <a href="http://www.openmobilealliance.org/">http://www.openmobilealliance.org/</a>
[DM112EICS]	Device Management version 1.1.2 Enabler Implementation Conformance Statement (EICS), <a href="http://www.openmobilealliance.org/">http://www.openmobilealliance.org/</a>
[ERELD]	OMA Device Management version 1.1.2 Enabler Release Definition
[DM112_SPEC]	OMA Device Management version 1.1.2 specifications
[EPTR]	Enabler Product Test Report
[ETP]	Enabler Test Report
[ETS]	Device Management version 1.1.2 Test Cases, OMA-ETS-DeviceManagement-v1.1.2-20031015-A, 15-Oct-2003

### 2.2 Informative References

## 3. Terminology and Conventions

### 3.1 Conventions

This is an informative document, i.e. the document does not intend to contain normative statements.

### 3.2 Definitions

<b>SCTS</b>	SyncML Conformance Test Suite.
<b>Test Object</b>	The implementation under test is referred to as the Test Object. In this document, the Client.
<b>Test Case</b>	A Test Case is an individual test used to verify the conformance of the Test Object to a particular mandatory feature of the protocol. A 4-digit number identifies Test Cases where the first two digits denote the Test Group ID.
<b>Test Group</b>	A Test Group is a collection of Test Cases, which are executed, in a single SyncML session in SCTS conformance test tool.
<b>&lt;Node&gt;</b>	Path from the root to the interior node that is configured to the SCTS before the testing is done (e.g. './SyncML/DMAcc' or './DevDetail'). Test case is driven to this configured interior node. The <Node> can be different between different Test Cases.
<b>&lt;Leaf&gt; or &lt;Leaf#n&gt;</b>	Leaf node(s) that is configured to the SCTS before the testing is done (e.g. 'SwV' and/or 'Name'). Test case is driven to this configured interior node. The <Leaf> can be different between different Test Cases.

### 3.3 Abbreviations

DM	Device Management
DSDM	Data Synchronization Device Management
EICS	Enabler Implementation Conformance Statement
EPTR	Enabler Product Test Report
ETP	Enabler Test Plan
ETS	Enabler Test Specification
OMA	Open Mobile Alliance
PR	Problem Report
SCTS	Synchronization Conformance Test Suite

## 4. Summary

This report gives details of the testing carried out during the OMA Test Fest (May 2004) for enabler Device Management version 1.1.2.

The report is compiled on behalf of OMA by NCC Group.

The work and reporting has followed the OMA IOP processes and policies [OMAIOPPROC].

## 5. Test Details

### 5.1 Documentation

This chapter lists the details of the enabler and any documentation, tools or test suites used to prove the enabler.

<b>Date:</b>	May 2004
<b>Location:</b>	Richardson, Texas, USA
<b>Enabler:</b>	Device Management v1.1.2
<b>Process:</b>	OMA Interoperability Policy and Process [OMAIOPPROC]
<b>Type of Testing</b>	Interoperability Testing
<b>Products tested:</b>	Client-to-Server
<b>Test Plan:</b>	Device Management Version 1.1.2 Enabler Test Plan [ETP]
<b>Test Specification:</b>	Device Management Enabler Test Specification [ETS]
<b>Test Tool:</b>	SCTS 3.1.2
<b>Test Code:</b>	None
<b>Type of Test event:</b>	Test Fest
<b>Participants:</b>	IBM mFormation Technologies Siemens AG Teleca AB
<b>Number of Client Products:</b>	3
<b>Participating Technology Providers for clients:</b>	IBM SyncML4J Client Siemens AG S65 Client Teleca SyncML DM Client
<b>Number of Server Products:</b>	2
<b>Participating Technology Providers for servers:</b>	IBM Tivoli Device Manager mFormation Service Manager
<b>Number of test sessions completed:</b>	5 of 5



## 5.2 Test Case Statistics

### 5.2.1 Test Case Summary

This chapter gives an overview of the result for all test cases included in [ETS].

The following status is used in the tables below:

- **Total number of TCs:** Used in the summary to indicate how many test cases there are in total.
- **Number of passed:** Used in the summary to indicate how many of the total test cases successfully passed.
- **Number of failed:** Used in the summary to indicate how many of the total test cases failed.
- **Number of N/A:** Used in the summary to indicate how many of the total test cases have not been run due to one of the implementations not supporting the functionality required to run this test case.
- **Number of OT:** Used in the summary to indicate how many of the total test cases have not been run due to no time to run the test case.
- **Number of INC:** Used in the summary to indicate how many of the total test cases have not been run due to functionality not being tested due to an error in the implementation or other functionality that is required to run this test case.

<b>Data Types:</b>	<b>Total number of TCs:</b>	<b>Number of test session:</b>	<b>Number of Passed:</b>	<b>Number of Failed:</b>	<b>Number of N/A:</b>	<b>Number of OT:</b>	<b>Number of INC:</b>
Client to Server TCs	26	5	98	2	27	1	2
<b>Total</b>	26	5	98	2	27	1	2

## 5.2.2 Test Case List

This chapter lists the statistics for all test cases included in [ETS].

The following status is used in the tables below:

- **No. of runs(R):** Used to indicate how many times the test cases have been run in total.
- **No. of passed(P):** Used to indicate how many times the test case has been run with successful result.
- **No. of failed(F):** Used to indicate how many times the test case has been run with failed result
- **No. of OT(O):** Used to indicate how many times the test case has not been run due to no time available.
- **No. of INC(I):** Used to indicate how many times the test case has not been run due to errors being found in other functionality required for running this test case.
- **PR:** Used to indicate if any PRs (Problem Reports) have been issued during testing.
- **Note:** Used to indicate issues with the test cases or specification relating to the test cases.

Test Case:	Test Case Description:	R	P	F	O	I	PR:	Note:
DeviceManagement-v1.1.2-int-001	Purpose of this verification is to show compliance with Basic client authentication.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-002	Purpose of this verification is to show compliance with MD-5 client authentication.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-003	Purpose of this verification is to show compliance with MD-5 server authentication.	5	4	0	1	0		
DeviceManagement-v1.1.2-int-004	Purpose of this verification is to show compliance with the GET command on a leaf node.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-005	Purpose of this verification is to show compliance with the GET command on a node that doesn't exist.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-006	Purpose of this verification is to show compliance with the GET command on an interior node.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-007	Purpose of this verification is to show compliance with the GET on an inaccessible leaf node.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-008	Purpose of this verification is to show compliance with REPLACE on permanent leaf node.	5	5	0	0	0		

DeviceManagement-v1.1.2-int-009	Purpose of this verification is to show compliance with management node ACL behaviour.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-010	Purpose of this verification is to show compliance with the error handling when connection failure occurs during the SyncML DM session.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-011	Purpose of this verification is to show compliance with Basic server authentication.	3	3	0	0	0		
DeviceManagement-v1.1.2-int-012	Purpose of this verification is to show compliance with HMAC client authentication.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-013	Purpose of this verification is to show compliance with HMAC server authentication.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-014	Purpose of this verification is to show compliance with the large object/multiple commands.	1	0	1	0	0		
DeviceManagement-v1.1.2-int-015	Purpose of this verification is to show compliance with notification initiated session.	2	1	0	0	1		
DeviceManagement-v1.1.2-int-016	Purpose of this verification is to show compliance with bootstrap.	2	1	0	0	1		
DeviceManagement-v1.1.2-int-017	Purpose of this verification is to show compliance with UI Display Alert	5	5	0	0	0		
DeviceManagement-v1.1.2-int-018	Purpose of this verification is to show compliance with UI Confirmation Alert.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-019	Purpose of this verification is to show compliance with UI Text Input Alert.	2	1	1	0	0		
DeviceManagement-v1.1.2-int-020	Purpose of this verification is to show compliance with UI Single Choice Alert.	2	2	0	0	0		
DeviceManagement-v1.1.2-int-021	Purpose of this verification is to show compliance with UI Multiple Choice Alert.	2	2	0	0	0		

DeviceManagement-v1.1.2-int-022	Purpose of this verification is to show compliance with the server reading subtree structure without data from part of the management tree.	2	2	0	0	0		
DeviceManagement-v1.1.2-int-023	Purpose of this verification is to show compliance with the server reading subtree structure and data from part of the management tree.	2	2	0	0	0		
DeviceManagement-v1.1.2-int-024	Purpose of this verification is to verify creation of new Application Setting in client using DM server	5	5	0	0	0		
DeviceManagement-v1.1.2-int-025	Purpose of this verification is to verify modification of Application Settings in client using DM server.	5	5	0	0	0		
DeviceManagement-v1.1.2-int-026	Purpose of this verification is to verify deletion of Application Settings in client using DM server.	5	5	0	0	0		

### 5.2.3 Observations

The following issues were captured by the Trusted Zone during the OMA Test Fest.

#### 5.2.3.1 EICS issues

This section details issues with the Device Management v1.1.2 Enabler Implementation Conformance Statement (EICS) [DM112EICS].

<b>Observation: 001</b>	
Document:	[DM112EICS].
SCR items / ICS:	Atomic
Comment:	The 'Atomic' command is marked SHOULD for clients in Device Management Conformance Requirements, Version 1.1.2. In SCTS and the ETS the test case is marked 'Optional'. Hence it was assumed that the MUST in the EICS was an editorial mistake and should have been SHOULD not MUST.
Recommendation:	It is optional (SHOULD) for a client to support receiving of "Atomic" command. Correct this error for future DM EICS template.

#### 5.2.3.2 Enabler Test Suite (ETS) issues

This section details issues with the Enabler Test Specification for OMA DM v1.1.2.

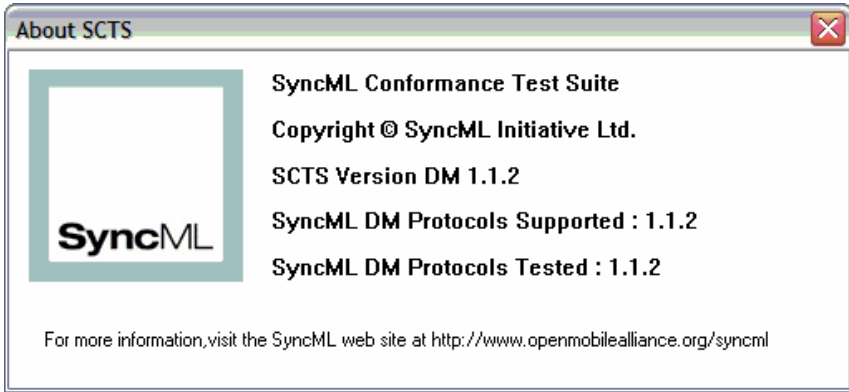
<b>Observation: 002</b>	
Comment:	It was suggested that additional IOP test cases for Plain vs. WAP Profile Bootstrap need to be created and added to the ETS.
Comment:	It was suggested that additional IOP test cases for Bootstrap security need to be created (USERPIN, NETWPIN etc.) and added to the ETS.
Comment:	It was suggested that DM SCR and IOP test cases for Authentication need to be revisited for MANDATORY/OPTIONAL status since devices are not allowing all options for secure and insecure transports.

### 5.2.3.3 DM v1.1.2 Specification issues

This section details issues with the OMA DM v1.1.2 specification.

<b>Observation: 003</b>	
Comment:	It was suggested that DM protocol, section 8 and section 9 be modified to include an explanation that DM challenge in Pkg 2 MUST result in Pkg 3 containing Alert and DevInfo replace plus credentials that were challenged for.  During testing a server did not send any commands to client so client did not challenge server. The specification should be changed to address this.
Comment:	It was suggest that DM security section 5.4.4 be modified for HMAC SyncHdr status code=200 and nextnonce being sent back every message and the new nonce being used each message.
Comment:	It was suggested that DM repro section 6.5.14 Sequence be modified to indicate 200 status code for sequence even if some commands inside sequence failed (also make sure text shows how a UI alert that is cancelled causes all the commands after to return Not Executed).

### 5.2.3.4 DM v1.1.2 General Feedback

<b>Observation: 004</b>	
Comment:	Next TestFest needs to have ability for DM server to send DM notification and bootstrap messages. With the closed loop network and WAP gateway/SMSC at this event, we were unable to send notification and bootstrap messages to the client devices.
Comment:	 <p>The screenshot shows a dialog box titled "About SCTS" with a close button in the top right corner. On the left is the SyncML logo. The text reads: "SyncML Conformance Test Suite", "Copyright © SyncML Initiative Ltd.", "SCTS Version DM 1.1.2", "SyncML DM Protocols Supported : 1.1.2", and "SyncML DM Protocols Tested : 1.1.2". At the bottom, it says "For more information, visit the SyncML web site at <a href="http://www.openmobilealliance.org/syncml">http://www.openmobilealliance.org/syncml</a>".</p> <p>There is concern that the SCTS is reporting the protocol as DM 1.1.1, when it should be 1.1.2 for the above version of SCTS.</p>
Comment:	SCTS needs to add support for testing Bootstrap
Comment:	SCTS DM has a bug in the server where it passes the same nextnonce value in each message. A client can pass the HMAC test but is not really passing because the HMAC nonce is never changing during the session.

## 6. Confirmation

This signature states that the included information is true and valid.

\_\_\_\_\_

Stephen Higgins – Device Management Trusted Zone

## Appendix A. Change History (Informative)

Type of Change	Date	Section	Description