

IMPLEMENTATION TEST REPORT

Title: Product Test Report
Enabler: Data Synchronization v1.2

OMA Confidential

Handling of Form

The vendor of the implementation being reported owns this document. Any disclosure of this information needs to be approved by the vendor.

This Test Report describes the result from the interoperability testing of the Enabler Test Specification [ETS] for the listed implementation of the enabler.

The report provides details on testing performed at the TestFest12 in Montréal, Canada and is compiled on behalf of OMA by TestFest organisation.

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

Test Information

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

Implementation	Funambol Data Synchronization Server v5
Company	Funambol
Contact info	Funambol: Mr. Stefano Nichele (stefano.nichele@funambol.com)
Date	20 th – 27 th January 2006
Location	Montréal, Canada
Enabler	OMA Data Synchronization v1.2
Process	OMA Interoperability Policy and Process [OMAIOPPROC]
Type of Testing	Interoperability Testing
Test procedure	Client-to-Server and Client-to-Server-to-Client
Test Plan	DS v1.2 Enabler Test Plan [ETP]
Test Specification	DS v1.2 Enabler Test Specification [ETS]
Number of products	5 Clients
Test Tool	SCTS Test Tool
Test Code	None
Type of Test event	TestFest

Test Configuration

This section provides information on the configuration and environment for the test execution of the implementation of the enabler.

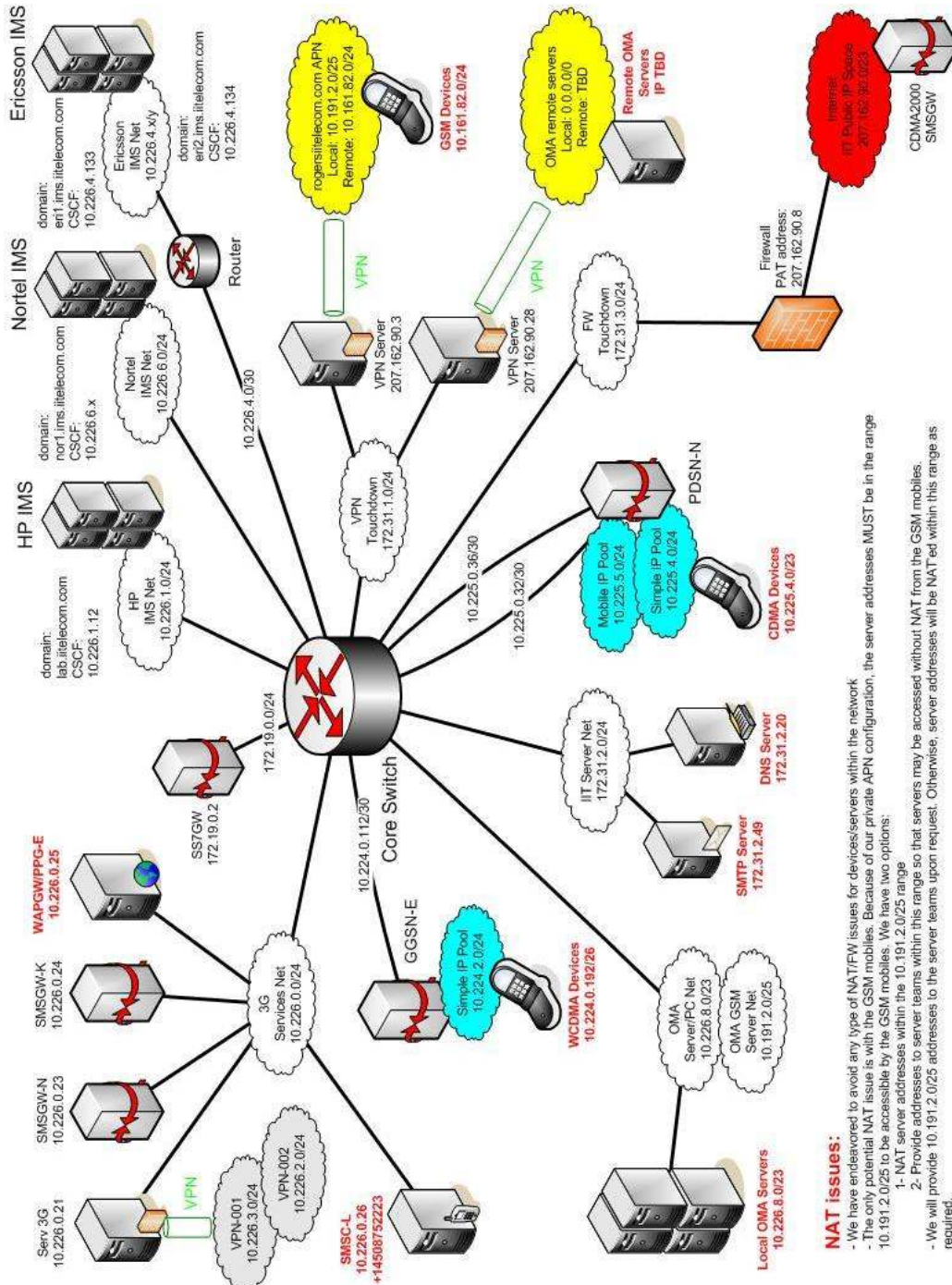


Figure 1. Picture of Test Setup

NAT issues:

- We have endeavored to avoid any type of NAT/FW issues for devices/servers within the network.
- The only potential NAT issue is with the GSM mobiles. Because of our private APN configuration, the server addresses MUST be in the range 10.191.2.0/25 to be accessible by the GSM mobiles. We have two options:
 - 1- NAT server addresses within the 10.191.2.0/25 range
 - 2- Provide addresses to server teams within this range so that servers may be accessed without NAT from the GSM mobiles.
- We will provide 10.191.2.0/25 addresses to the server teams upon request. Otherwise, server addresses will be NAT'ed within this range as required.

Test Case Statistics

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

The following counts are collected in the tables below:

- **Total:** The number of test cases in total for the specific section.
- **Passed:** The number of test cases that successfully passed.
- **Failed:** The number of test cases that failed.
- **N/A:** The number of test cases that were not run due to implementation(s) that did not support the functionality required.
- **OT:** The number of test cases that were not run due to being out-of-time.
- **INC:** The number of test cases that were not run due to that the functionality could not be tested due to an error in the implementation or in another functionality that was required and not available.

Data Types synchronized as follows:

Test Section	No. of test cases	No of test sessions	Test Case Counts					Total
			Passed	Failed	N/A	OT	INC	
vCard2.1	54	4	72	2	117	25	0	216
vCard3.0	54	-	-	-	-	-	-	-
vCalendar1.0	54	4	64	4	107	41	0	216
iCalendar2.0	54	-	-	-	-	-	-	-
vTodo1.0	54	-	-	-	-	-	-	-
x-file	54	-	-	-	-	-	-	-
x-email	54	-	-	-	-	-	-	-
x-folder	54	-	-	-	-	-	-	-
text/plain	54	-	-	-	-	-	-	-
rfc822	54	-	-	-	-	-	-	-
rfc2822	54	-	-	-	-	-	-	-
rfc2045	54	-	-	-	-	-	-	-
Other: vNote	54	-	-	-	-	-	-	-
Totals	54	8¹	136	6	224	66	0	432

Table 1. Test Summary Table

¹ Over 5 TestFest test session with 5 different clients

Test Case List

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

The following status is collected in the table below:

- **Runs:** The number of times the specific test case was run.
- **Passed:** The number of times the specific test case successfully passed.
- **Failed:** The number of times the specific test case failed.
- **OT:** The number of times the test case was not run due to being out-of-time.
- **INC:** The number of times the test result was inconclusive possibly due to that the functionality could not be tested due to an error in the implementation or in other functionality that was required.
- **PR:** Used to indicate any PRs (Problem Report) that were issued during testing.
- **Note:** Used to indicate the cause of Inconclusive or Fail verdicts.

Results for vCard 2.1

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
DataSynchronization-v1.2-int-001	Client authentication with no credentials	4	4	0	0	0		
DataSynchronization-v1.2-int-002	Client authentication with incorrect credentials	4	4	0	0	0		
DataSynchronization-v1.2-int-003	Server challenge in Basic authentication scheme	4	4	0	0	0		
DataSynchronization-v1.2-int-004	Server challenge in MD5 Digest authentication scheme	4	4	0	0	0		
DataSynchronization-v1.2-int-005	Initial Two-way Sync	4	4	0	0	0		
DataSynchronization-v1.2-int-006	Two-way Sync with Client and Server Add command	4	4	0	0	0		
DataSynchronization-v1.2-int-007	Two-way Sync with Client and Server Replace command	4	4	0	0	0		
DataSynchronization-v1.2-int-008	Two-way Sync with Client and Server Delete command	4	4	0	0	0		
DataSynchronization-v1.2-int-009	Two-way Sync with Client sending new data	4	4	0	0	0		
DataSynchronization-v1.2-int-010	Two-way Sync with deletion of a non-existent target	4	4	0	0	0		

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
DataSynchronization -v1.2-int-011	Two-way Sync with Server sending new data	4	4	0	0	0		
DataSynchronization -v1.2-int-012	Two-way Sync with large number of Objects	4	4	0	0	0		
DataSynchronization -v1.2-int-013	Two-way Sync with large number of Objects returned	4	4	0	0	0		
DataSynchronization -v1.2-int-014	Two-way Slow Sync with data	4	4	0	0	0		
DataSynchronization -v1.2-int-015	Two-way Slow Sync to restore client data	4	4	0	0	0		
DataSynchronization -v1.2-int-016	Large Object Handling [Optional]	3	3	0	0	0		Note 001
DataSynchronization -v1.2-int-017	Large Object Handling – incorrect size [Optional]	3	2	0	1	0		Note 001
DataSynchronization -v1.2-int-018	Large Object Handling – Client sending multiple Large Objects [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-019	Server authentication with no credentials [Optional]	0	0	0	0	0		Note 001
DataSynchronization -v1.2-int-020	Server authentication with incorrect credentials [Optional]	0	0	0	0	0		Note 001
DataSynchronization -v1.2-int-021	Client challenge in Basic authentication scheme [Optional]	0	0	0	0	0		Note 001
DataSynchronization -v1.2-int-022	Client challenge in MD5 Digest authentication scheme [Optional]	0	0	0	0	0		Note 001
DataSynchronization -v1.2-int-023	Suspend / Resume - Accept [Optional]	3	1	1	1	0		Note 001 Note 003
DataSynchronization -v1.2-int-024	Suspend / Resume – Server unable to accept Resume request [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-025	Suspend / Resume – Client unable to accept	3	0	0	3	0		Note 001

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
	Resume request [Optional]							
DataSynchronization -v1.2-int-026	Suspend / Resume – Client suspends sync repetitively [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-027	Suspend / Resume – Client suspends One-way Refresh Sync from Client [Optional]	3	0	0	3	0		Note 001
DataSynchronization -v1.2-int-028	Suspend / Resume – Client suspends One-way Refresh Sync from Server [Optional]	3	0	0	3	0		Note 001
DataSynchronization -v1.2-int-029	One-way Sync from server only [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-030	One-way Sync from Client only [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-031	Refresh Sync from Server only [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-032	Refresh Sync from Client only [Optional]	3	0	1	2	0		Note 001
DataSynchronization -v1.2-int-033	Server alerted sync – Client accept [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-034	Server alerted sync – Client ignore[Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-035	Object record filtering[Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-036	Object record filtering – Attempt to update deleted object[Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-037	Object record filtering – compound filter [Optional]	0	0	0	0	0		Note 004
DataSynchronization -v1.2-int-038	Field Level Filtering [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-039	Field Level Filtering – compound filter[Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization	Field level	0	0	0	0	0		Note 001

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
-v1.2-int-040	changes from the client [Optional]							Note 002
DataSynchronization -v1.2-int-041	Field level changes from the server [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-042	Field level changes – Multiple Fields Update [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-043	Field level changes – Large Dataset Update [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-044	Hierarchical Synchronization – Add to folder verification [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-045	Hierarchical Synchronization – Add new folder verification [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-046	Hierarchical Synchronization – Delete all items in folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-047	Hierarchical Synchronization – Delete folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-048	Hierarchical Synchronization – Move item from folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-049	Hierarchical Synchronization – Move existing item to new folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-050	Multiple DS Session – 1Way Sync Server to Client, Suspend resume, 1Way Sync Client to Server [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-051	Multiple DS Session – Record Filter, Suspend Resume [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-052	Multiple DS Session – Field Level Filter, Suspend Resume [Optional]	0	0	0	0	0		Note 001 Note 002

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
DataSynchronization -v1.2-int-053	Multiple DS Session – Field Level Change, Suspend Resume [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-054	Multiple DS Session – 1Way Sync Server to Client, Field Level Filtering, Field Level Change, record Filter update, 1Way Sync - [Optional]	0	0	0	0	0		Note 001 Note 002

Table 2. Test Case Counts

Notes:

1. Not Applicable for the Client
2. Not Applicable for the Server.
3. Fail verdict due to issue in the Server.
4. This test case was omitted from the TestSessionReport template in an editorial error.

Results for vCalendar 1.0

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
DataSynchronization -v1.2-int-001	Client authentication with no credentials	4	4	0	0	0		
DataSynchronization -v1.2-int-002	Client authentication with incorrect credentials	4	4	0	0	0		
DataSynchronization -v1.2-int-003	Server challenge in Basic authentication scheme	4	4	0	0	0		
DataSynchronization -v1.2-int-004	Server challenge in MD5 Digest authentication scheme	4	4	0	0	0		
DataSynchronization -v1.2-int-005	Initial Two-way Sync	4	4	0	0	0		
DataSynchronization -v1.2-int-006	Two-way Sync with Client and Server Add command	4	4	0	0	0		
DataSynchronization -v1.2-int-007	Two-way Sync with Client and Server Replace command	4	4	0	0	0		

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
DataSynchronization -v1.2-int-008	Two-way Sync with Client and Server Delete command	4	3	0	1	0		
DataSynchronization -v1.2-int-009	Two-way Sync with Client sending new data	4	3	0	1	0		
DataSynchronization -v1.2-int-010	Two-way Sync with deletion of a non-existent target	4	3	0	1	0		
DataSynchronization -v1.2-int-011	Two-way Sync with Server sending new data	4	3	0	1	0		
DataSynchronization -v1.2-int-012	Two-way Sync with large number of Objects	4	3	0	1	0		
DataSynchronization -v1.2-int-013	Two-way Sync with large number of Objects returned	4	3	0	1	0		
DataSynchronization -v1.2-int-014	Two-way Slow Sync with data	4	3	0	1	0		
DataSynchronization -v1.2-int-015	Two-way Slow Sync to restore client data	4	3	0	1	0		
DataSynchronization -v1.2-int-016	Large Object Handling [Optional]	4	3	0	1	0		
DataSynchronization -v1.2-int-017	Large Object Handling – incorrect size [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-018	Large Object Handling – Client sending multiple Large Objects [Optional]	4	1	1	2	0		Note 001
DataSynchronization -v1.2-int-019	Server authentication with no credentials [Optional]	1	1	0	0	0		Note 001
DataSynchronization -v1.2-int-020	Server authentication with incorrect credentials [Optional]	1	1	0	0	0		Note 001
DataSynchronization -v1.2-int-021	Client challenge in Basic authentication scheme [Optional]	1	1	0	0	0		Note 001
DataSynchronization -v1.2-int-022	Client challenge in MD5 Digest authentication scheme [Optional]	1	1	0	0	0		Note 001

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
DataSynchronization -v1.2-int-023	Suspend / Resume - Accept [Optional]	3	0	1	2	0		Note 001 Note 003
DataSynchronization -v1.2-int-024	Suspend / Resume – Server unable to accept Resume request [Optional]	3	1	0	2	0		Note 001
DataSynchronization -v1.2-int-025	Suspend / Resume – Client unable to accept Resume request [Optional]	3	0	0	3	0		Note 001
DataSynchronization -v1.2-int-026	Suspend / Resume – Client suspends sync repetitively [Optional]	3	0	0	3	0		Note 001
DataSynchronization -v1.2-int-027	Suspend / Resume – Client suspends One- way Refresh Sync from Client [Optional]	3	0	0	3	0		Note 001
DataSynchronization -v1.2-int-028	Suspend / Resume – Client suspends One- way Refresh Sync from Server [Optional]	3	0	0	3	0		Note 001
DataSynchronization -v1.2-int-029	One-way Sync from server only [Optional]	4	0	1	3	0		Note 001 Note 004
DataSynchronization -v1.2-int-030	One-way Sync from Client only [Optional]	4	1	0	3	0		Note 001
DataSynchronization -v1.2-int-031	Refresh Sync from Server only [Optional]	4	0	1	3	0		Note 001
DataSynchronization -v1.2-int-032	Refresh Sync from Client only [Optional]	4	1	0	3	0		Note 001
DataSynchronization -v1.2-int-033	Server alerted sync – Client accept [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-034	Server alerted sync – Client ignore[Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-035	Object record filtering[Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-036	Object record filtering – Attempt to update deleted object[Optional]	0	0	0	0	0		Note 001 Note 002

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
DataSynchronization -v1.2-int-037	Object record filtering – compound filter [Optional]	0	0	0	0	0		Note 005
DataSynchronization -v1.2-int-038	Field Level Filtering [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-039	Field Level Filtering – compound filter[Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-040	Field level changes from the client [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-041	Field level changes from the server [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-042	Field level changes – Multiple Fields Update [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-043	Field level changes – Large Dataset Update [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-044	Hierarchical Synchronization – Add to folder verification [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-045	Hierarchical Synchronization – Add new folder verification [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-046	Hierarchical Synchronization – Delete all items in folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-047	Hierarchical Synchronization – Delete folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-048	Hierarchical Synchronization – Move item from folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-049	Hierarchical Synchronization – Move existing item to new folder [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-050	Multiple DS Session – 1Way Sync Server to Client, Suspend	0	0	0	0	0		Note 001 Note 002

Test Case	Description	Test Counts					PR	Notes
		Runs	Passed	Failed	OT	INC		
	resume, 1Way Sync Client to Server [Optional]							
DataSynchronization -v1.2-int-051	Multiple DS Session – Record Filter, Suspend Resume [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-052	Multiple DS Session – Field Level Filter, Suspend Resume [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-053	Multiple DS Session – Field Level Change, Suspend Resume [Optional]	0	0	0	0	0		Note 001 Note 002
DataSynchronization -v1.2-int-054	Multiple DS Session – 1Way Sync Server to Client, Field Level Filtering, Field Level Change, record Filter update, 1Way Sync - [Optional]	0	0	0	0	0		Note 001 Note 002


Table 3. Test Case Counts

Notes:

1. Not Applicable for the Client
2. Not Applicable for the Server.
3. Fail verdict due to issue in the Server.
4. Fail verdict due to issue in the Client.
5. This test case was omitted from the TestSessionReport template in an editorial error.

Confirmation

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

Implementation Reporting Information			
Product Name:	Funambol Data Synchronization Server v5		
Trusted Zone Rep Name:	Johan Petersen		
Trusted Zone Rep Title	OMA Trusted Zone		
Trusted Zone Rep Signature:		Date:	2006-02-03