Enabler Validation Plan for the

Web Runtime API (WRAPI) Push API

Candidate Version 1.0 – 08 Oct 2013

Open Mobile Alliance

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1. Scope

This document details the Validation plan for the Web Runtime API V1.0 Enabler Release (WRAPI 1.0). The successful accomplishment of the validation activities will be required for the Enabler to be considered for Approved status.

The validation plan for WRAPI 1.0 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.

The list of specifications, defining the scope of WRAPI 1.0, as stated in [ERELD] and [ETR] is according to the following:

- OMA-TS-WRAPI_Push-V1_0 [WRAPI-Push]
- OMA-TS-WRAPI_Design_Patterns-V1_0 [WRAPI-Patterns]

1.1 Assumptions

NONE

1.2 Exclusions

NONE

2. References

2.1 Normative References

[IOPPROC] "OMA Interoperability Policy and Process", Version 1.8, Open Mobile Alliance™, OMA-ORG-IOP_Process-V1_8, URL: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

[WRAPI-Push] "Web Runtime API (WRAPI) – Push". Open Mobile Alliance™. OMA-TS-WRAPI_Push-V1_0 URL: http://www.openmobilealliance.org/

[WRAPI-Patterns] "Web Runtime API (WRAPI) – Design Patterns". Open Mobile Alliance™. OMA-TS-WRAPI_Design_Patterns-V1_0 URL: http://www.openmobilealliance.org/

[WRAPI-ETR] "Enabler Test Requirements for the Web Runtime API (WRAPI)". Open Mobile Alliance™. OMA-ETR-WRAPI-V1_0 URL: http://www.openmobilealliance.org/

[WRAPI-ETS] "Enabler Test Specification for the Web Runtime API (WRAPI)". Open Mobile Alliance™. OMA-ETS-WRAPI-V1_0 URL: http://www.openmobilealliance.org/

2.2 Informative References

[WAPPushArch] "Push Architectural Overview". WAP Forum™. WAP-250-PushArchOverview URL: http://www.wapforum.org

[Push2.1Arch] "Push Architectural Overview". WAP Forum™. WAP-250-PushArchOverview URL: http://www.wapforum.org

[Push2.2Arch] "Push Architectural Overview". Open Mobile Alliance™. OMA-AD-Push-V2_2 URL http://www.openmobilealliance.org/

[Push2.3Arch] "Push Architectural Overview". Open Mobile Alliance™. OMA-AD-Push-V2_3 URL: 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

API Patterns	Design guidelines and requirements for definition of APIs
Browser Context	Web applications executing under a Web browser as Web runtime environment.
ECMAScript	Use definition from [OMADICT].
JavaScript	Use definition from [OMADICT].
User Agent	Use definition from [OMADICT].
Web	The World Wide Web, a content and application framework based upon hypertext and related technologies, e.g. XML, JavaScript/ECMAScript, CSS, etc.
Web Application	An application designed using Web technologies.
Web IDL	An IDL language for Web application APIs
Web Runtime	Client software that supports the execution of Web Applications
Widget Context	Web applications installed and executing under a W3C Widget [W3C-Widgets] engine as Web runtime environment.
Uniform Resource Identifier	Use definition from [OMADICT].

3.3 Abbreviations

API	Application Programming Interface
HTTP	HyperText Transfer Protocol
IDL	Interface Definition Language
JSON	JavaScript Object Notation
MIME	Multipurpose Internet Mail Extensions
OMA	Open Mobile Alliance
REST	REpresentational State Transfer
SCR	Static Conformance Requirements
SMS	Short Message Service
TS	Technical Specification
UA	User Agent
UE	User Equipment
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
WAC	Wholesale Applications Community

W3C	World Wide Web Consortium
WRAPI	The OMA Web Runtime API enabler
WRT	Web runtime environment
XML	eXtensible Markup Language
XSD	XML Schema Definition

4. Enabler Validation Description

This document details the Validation plan for the WRAPI V1.0 Enabler Release. The successful accomplishment of the validation activities will be required for the Enabler to be considered for Approved status. This Plan will detail the required testing environment and tools required to implement the testing successfully.

5. TestFest Activities

5.1 Enabler Test Guidelines

A full description of WRAPI 1.0 can be found in the ERELD and specifications.

These guidelines cover all WRAPI 1.0 testing areas.

Assumptions:

- A Push Initiator Tool is required to connect to the PPG for invoking OMA Push message requests
- An SMS Initiator Tool for initiating SMS message requests
- At least one Push-OTA protocol binding supported by the target device is tested
- The testing requires Push Client and PPG functionality, supporting any release of WAP Push or the OMA Push enabler ([WAPPushArch], [Push2.1Arch], [Push2.2Arch], [Push2.3Arch])

5.1.1 Minimal Test Configuration

The minimal test configuration of Push shall include:

- A WRAPI Push API implementation
- A Push Proxy Gateway
- A Push Initiator tool or Push-enabled service acting as the Application Server in the following diagram
- A network for Push message delivery via Push-OTA and SMS

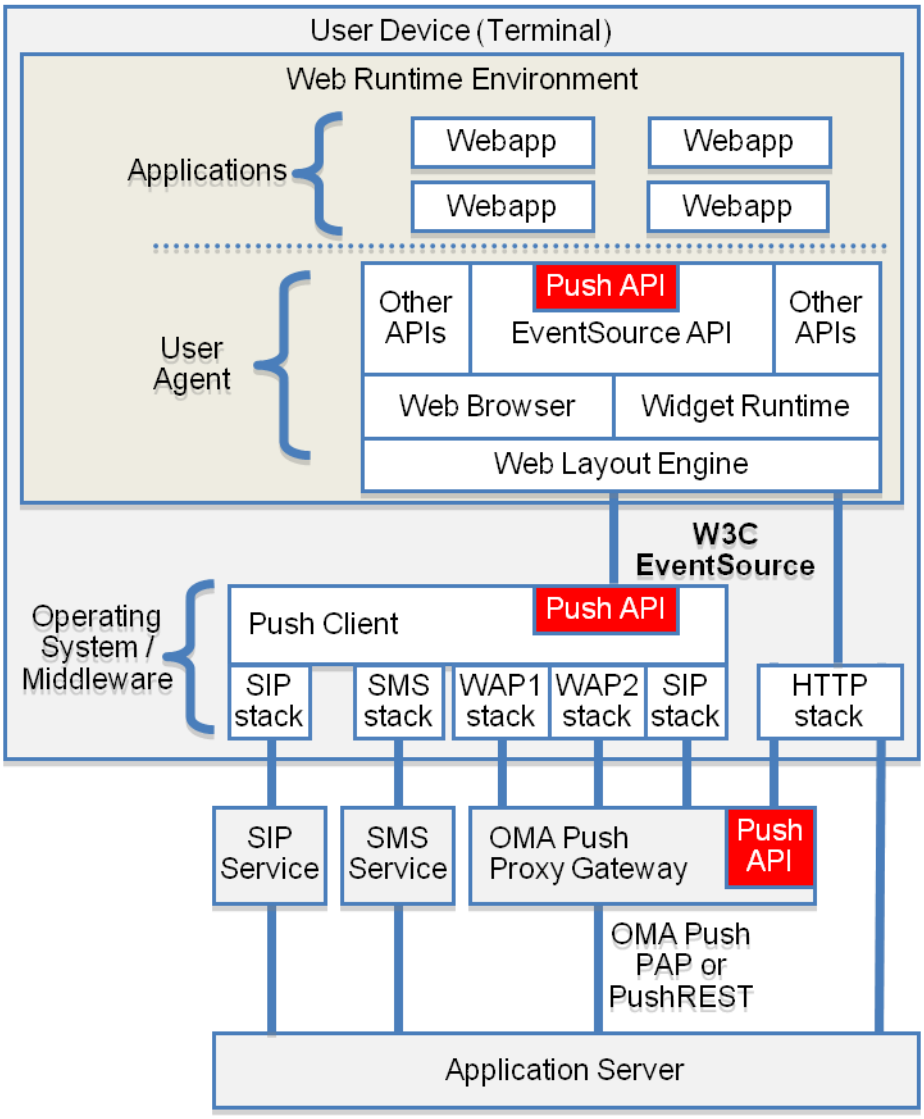

Figure 1 Test Configuration Options, as of OMA Push 2.3

5.1.2 Minimal Participation Guidelines

Minimum

- 1 WRAPI Push Client implementation
- 1 PPG

5.1.3 Optimal TestFest Achievement Guidelines

The ETS Test Cases include all the Test Cases for the Enabler that it is thought should be executed in a test session at an OMA TestFest. This list is intended to facilitate maximum test coverage of the functionality of the enabler within a test session. 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 in the time allowed.

In addition to availability of a suitable Push Initiator supporting WRAPI 1.0, preparations for the test fest are the same as necessary for the Push-OTA bindings planned to be used in the tests, as described by the applicable WAP Push or OMA Push enabler release test validation plans.

5.2 Enabler Test Requirements

5.2.1 Test Infrastructure Requirements

For test cases related to OMA Push-delivered messages, see the applicable WAP Push or OMA Push enabler release test validation plans. For test cases related to SMS-delivered messages, an SMS network infrastructure is required.

5.2.2 Enabler Execution Flow

Apart from the functions described below, execution flow will be per the applicable delivery method, e.g. WAP Push, OMA Push, or SMS.

[WRAPI-Push] defines three options for implementation approaches. The enabler execution flow for each of these is expected to be as defined in [WRAPI-Push].

5.2.3 Test Content Requirements

For test cases related to OMA Push-delivered messages, it is recommended that at least the Push Service Indication content type is tested. It is further recommended that other OMA-defined content types and arbitrary content types be tested where possible. For test cases related to SMS-delivered messages, any text-based SMS message content may be used.

5.2.4 Test Limitations

5.2.4.1 Physical

NONE

5.2.4.2 Resources

NONE

5.2.5 Test Restrictions

NONE

5.2.6 Test Tools

5.2.6.1 Existing Tools to be Used

The test tools needed to carry out the conformance and interoperability test cases are listed as:

- User Agent, e.g. Web browser other Web runtime client
- Push Initiator Tool
- PPG
- SIP Proxy
- SMSC
- Device supporting WRAPI Push client functions

5.2.6.2 Test Tool Requirements

As described in [WRAPI-ETS] for the dependent tests.

5.2.7 Resources Required

All test cases can be run in approx 8 hours. However, comparative testing may require more time, depending on the number of devices being compared.

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

There are no specific tests that need to be performed and passed by implementations by members wishing to participate in the TestFest.

5.3.2 Testing to be performed at TestFest

All tests defined in [WRAPI-ETS] need to be performed to fully cover the range of capabilities of the enabler and defined protocols.

5.4 Enabler Test Reporting

5.4.1 Problem Reporting Requirements

Normal Reporting Tool to be used, no special reporting required.

5.4.2 Enabler Test Requirements

As per the [ETR]

6. Alternative Validation Activities

NONE

7. Approval Criteria

The WRAPI 1.0 Enabler can be put in the Approved state when:

- The Enabler has been tested successfully at 2 Test Fests or
- 3 Companies have successfully run Bi-lateral tests sessions towards a Push server and has reported results and any issues to OMA
- No open PRs exist.

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 1.0 History

Document Identifier	Date	Sections	Description
Draft Versions OMA-EVP-WRAPI-V1_0	17 Sep 2012	All	New document, based on OMA-IOP-BRO-2012-0054-INP_WRAPI_EVP_Baseline
Candidate Version OMA-EVP-WRAPI-V1_0	08 Oct 2013	N/A	Status changed to candidate by TP TP Ref#OMA-TP-2013-0316-INP_WRAPI_V1_0_EVP_for_Candidate_approval