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Conformance Test Specification for Marlin Import Specification

Version 1.0
Final

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65 Contents

66			
67	1	Introduction	4
68	1.1	Document Organization	4
69	1.2	Overview	4
70	1.3	Conformance Conventions	4
71	1.4	References	4
72	2	Conformance Test Items for Marlin Import Agent.....	5
73	2.1	Exclusion Function.....	5
74	2.2	License Generation	5
75	2.3	Content File Generation	5
76	2.4	License and Content Compatibility	5
77	2.5	Content Invalidation	5
78	3	Conformance Test Items for Gateway Service Protocol.....	6
79	3.1	Message Bindings	6
80	3.2	Security Policy and Message Security Bindings	6
81	3.3	Role Assertion	6
82	3.4	Gateway Service Message	6
83	3.5	Content Transfer	7
84	4	Conformance Test Items for Importing from Specific Content Distribution Technologies	8
85	4.1	Import from E-FTA	8
86	4.1.1	Usage Information Extraction	8
87	4.2	Import from DTCP.....	8
88	4.2.1	Usage Information Extraction	8
89	4.3	Import from ARIB	8
90	4.3.1	Usage Information Extraction	8
91			

1 Introduction

1.1 Document Organization

This document describes the Conformance Test Specification for client and service implementations of the Marlin Import Specification (MI). It is organized as follows:

- (this) introduction, overview, conformance conventions and references
- Sections for each of the Conformance Test Items. These are:
 - Conformance Test Items for Marlin Import Agent
 - Conformance Test Items for Gateway Service
 - Conformance Test Items for Importing from Specific Content Distribution Technologies

1.2 Overview

This document describes Conformance Test Specification for client and service implementations of the Marlin Import Specification [MI]. The goal for this specification is to help ensure interoperability between independent implementations of Marlin BB DRM Client, Marlin Import Agent and Marlin Gateway Service by testing functions specified in [MI]. In other words, this Conformance Test Specification does not ensure 100% coverage of the specification. It is expected that the tests are expanded upon as implementers verify interoperability with each other.

1.3 Conformance Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this specification are to be interpreted as described in IETF RFC 2119 [RFC 2119].

1.4 References

Normative References

[MI]	Marlin Import Specification, Version 1.0
[MBNS]	Marlin - Broadband Network Service Profile Specification, Version 1.2
[MCS]	Marlin - Core System Specification, version1.3
[RFC 2119]	S. Bradner, <i>RFC 2119 - Key words for use in RFCs to Indicate Requirement Levels</i> , IETF, March 1997, http://www.ietf.org/rfc/rfc2119.txt

2 Conformance Test Items for Marlin Import Agent

This section describes the REQUIRED common test items for Marlin Import Agent.

2.1 Exclusion Function

The following SHALL be tested for Marlin Import Agent per [MCS] §7.3 and §7.4:

- Before the first exclusion, the content key SHALL be encrypted using by the Scuba key (public or secret) of the entity the license is targeted to.
- After the first exclusion, the content key SHALL be encrypted using the [Starfish] revocation mechanism. The BKB SHALL be carried in the same Bundle as the Content Key object.

The Conformance Test SHALL confirm the specifications above for Marlin Import Agent.

2.2 License Generation

The following SHALL be tested for Marlin Import Agent per [MI] §3:

- Marlin Import Agent SHALL support functionality to conform to the usage conditions of the original content when generating and issuing a Marlin License to the client.

The Conformance Test SHALL confirm the specifications above for the Marlin Import Agent.

2.3 Content File Generation

The following SHALL be tested for Marlin Import Agent per [MI] §3:

- Marlin Import Agent SHALL generate a content file in the Marlin-compliant format, and encrypt it with the content key. The file format MAY be:
 - BBTS
 - MIPMP
 - (P)DCF

The Conformance Test SHALL confirm the specifications above for the Marlin Import Agent.

2.4 License and Content Compatibility

The following SHALL be tested for Marlin Import Agent per [MI] §3:

- The licence and the content generated by Marlin Import Agent SHALL be able to be consumed by a Marlin BB DRM Client which implements the Full Implementation of [MBNS]:

The Conformance Test SHALL confirm the specifications above for the Marlin Import Agent.

2.5 Content Invalidation

The following SHALL be tested for Marlin Import Agent per [MI] §3:

- Marlin Import Agent SHALL invalidate the content file in the Marlin Import Device if required by the usage condition of the original content.

The Conformance Test SHALL confirm the specifications above for the Marlin Import Agent.

3 Conformance Test Items for Gateway Service Protocol

The support of Gateway Service is OPTIONAL for Marlin Import Agent. This section describes REQUIRED common test items for Gateway Service and Marlin Import Agent in Gateway Service protocol for Marlin Import.

3.1 Message Bindings

The following Message Bindings SHALL be tested for Gateway Service per [MI] §5.2.5:

- The NEMO basic security protocol SHALL be used for Marlin Gateway Service protocol messages.

The Conformance Test SHALL confirm the specifications above in both client and service.

3.2 Security Policy and Message Security Bindings

The following Security Policy SHALL be tested for Gateway Service per [MI] §5.2.5:

- The Gateway Service Request Message SHALL conform to the 'Integrity Only' policy. In addition, the Role Assertion of the Marlin Import Agent is attached to the Request.
- The Gateway Service Response Message SHALL conform to the 'Confidentiality Only' policy.

The Conformance Test SHALL confirm the specifications above in both client and service.

3.3 Role Assertion

The following SHALL be tested for Marlin Import Agent per [MI] §5.4:

- If Marlin Import Agent supports the Gateway Service protocol, it SHALL have the Import Agent role, and the Import Agent role SHALL be put in the request message of Gateway Service Protocol.

The Conformance Test SHALL confirm the specifications above for the service.

3.4 Gateway Service Message

The following message parameters SHALL be tested for Gateway Service per [MI] §5.2.1 and §5.2.2:

- The Gateway Service Request Message includes a Nonce element which is generated by the Marlin Import Agent
- The Gateway Service Request Message includes a BusinessToken element which is retrieved from the Action Token for Gateway Service protocol.
- The Gateway Service Response Message includes a SignedContainer element which contains the same Nonce as the corresponding Request Message and a UsageInfoSet element which contains the usage conditions for the content to be transferred.
- The Gateway Service Response Message includes a EncKey element which contains the encrypt key data when the content is transferred from Marlin Gateway to Marlin Import Agent.
- The Gateway Service Response Message includes a Signature.

The Conformance Test SHALL confirm the specifications above in both client and service.

202 **3.5 Content Transfer**

203 The following SHALL be tested for content transfer from Marlin Gateway to Marlin
204 Import Agent per [MI] §5.1, §5.2.3 and §5.2.4:

- 205 • The content SHALL be encrypted while being transferred from Marlin
206 Gateway to Marlin Import Agent.
207 • The content SHALL be transferred from the Marlin Gateway to the Marlin
208 Import Agent in HTTP response..

209 The Conformance Test SHALL confirm the specifications above in both client and
210 service.

4 Conformance Test Items for Importing from Specific Content Distribution Technologies

This section describes the REQUIRED test items for importing from specific content distribution technologies. Marlin Import Agent can import from at least one of E-FTA, DTCP, ARIB.

4.1 Import from E-FTA

4.1.1 Usage Information Extraction

The following SHALL be tested for Marlin Gateway Device per [MI] §3.1.4:

- Marlin Gateway Device SHALL extract the output control rules in the original content and put them into the usage information structure of the Gateway Service protocol.

The Conformance Test SHALL confirm the specifications above for the Marlin Gateway Device.

4.2 Import from DTCP

4.2.1 Usage Information Extraction

The following SHALL be tested for Marlin Gateway Device per [MI] §3.2.3:

- Marlin Gateway Device SHALL extract the output control rules in the original content and put them into the usage information structure of the Gateway Service protocol.

The Conformance Test SHALL confirm the specifications above for the Marlin Gateway Device.

4.3 Import from ARIB

4.3.1 Usage Information Extraction

The following SHALL be tested for Marlin Gateway Device per [MI] §3.3.3:

- Marlin Gateway Device SHALL extract the output control rules in the original content and put them into the usage information structure of the Gateway Service protocol.

The Conformance Test SHALL confirm the specifications above for the Marlin Gateway Device.