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Conformance Test Specification for Marlin Import Specification

Version 1.0
Final

Source
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Marlin Developer Community
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64

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

93 1 Introduction

94 1.1 Document Organization

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

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

103 1.2 Overview

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

111 1.3 Conformance Conventions

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

115 1.4 References

116 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

117

118 **2 Conformance Test Items for Marlin Import Agent**

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

120 **2.1 Exclusion Function**

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

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

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

129 **2.2 License Generation**

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

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

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

136 **2.3 Content File Generation**

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

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

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

145 **2.4 License and Content Compatibility**

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

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

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

152 **2.5 Content Invalidation**

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

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

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

158 **3 Conformance Test Items for Gateway Service** 159 **Protocol**

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

163 **3.1 Message Bindings**

164 The following Message Bindings SHALL be tested for Gateway Service per [MI]
165 §5.2.5:

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

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

170 **3.2 Security Policy and Message Security Bindings**

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

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

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

179 **3.3 Role Assertion**

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

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

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

185 **3.4 Gateway Service Message**

186 The following message parameters SHALL be tested for Gateway Service per [MI]
187 §5.2.1 and §5.2.2:

- 188 • The Gateway Service Request Message includes a Nonce element which is
189 generated by the Marlin Import Agent
- 190 • The Gateway Service Request Message includes a BusinessToken element
191 which is retrieved from the Action Token for Gateway Service protocol.
- 192 • The Gateway Service Response Message includes a SignedContainer
193 element which contains the same Nonce as the corresponding Request
194 Message and a UsageInfoSet element which contains the usage conditions
195 for the content to be transferred.
- 196 • The Gateway Service Response Message includes a EncKey element which
197 contains the encrypt key data when the content is transferred from Marlin
198 Gateway to Marlin Import Agent.
- 199 • The Gateway Service Response Message includes a Signature.

200 The Conformance Test SHALL confirm the specifications above in both client and
201 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.

211 **4 Conformance Test Items for Importing from Specific**
212 **Content Distribution Technologies**

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

216 **4.1 Import from E-FTA**

217 **4.1.1 Usage Information Extraction**

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

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

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

224 **4.2 Import from DTCP**

225 **4.2.1 Usage Information Extraction**

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

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

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

232 **4.3 Import from ARIB**

233 **4.3.1 Usage Information Extraction**

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

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

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