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**Document Identifier: DSP1067**

**Date: 2015-09-23**

**Version: 1.0.0**

## 5 **Software ID Tag Profile**

- 6 **Supersedes: None**
- 7 **Document Class: Normative**
- 8 **Document Status: Published**
- 9 **Document Language: en-US**

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# CONTENTS

35	Foreword .....	5
36	Introduction.....	6
37	1 Scope .....	7
38	2 Normative references .....	7
39	3 Terms and definitions .....	7
40	4 Symbols and abbreviated terms.....	9
41	5 Synopsis .....	9
42	6 Description .....	9
43	7 Implementation.....	10
44	7.1 CIM_SoftwareIDTag .....	10
45	7.2 CIM_SoftwareIDTagData.....	12
46	8 Methods.....	12
47	8.1 Profile conventions for operations .....	12
48	8.2 CIM_SoftwareIDTag .....	12
49	8.3 CIM_SoftwareIDTagData.....	12
50	8.4 CIM_Dependency .....	13
51	9 Use cases (informative).....	13
52	10 CIM Elements.....	13
53	10.1 CIM_Dependency .....	13
54	10.2 CIM_SoftwareIDTag .....	14
55	10.3 CIM_SoftwareIDTagData.....	14
56	10.4 CIM_SoftwareIDTagEntityStructure.....	14
57	10.5 CIM_RegisteredProfile.....	15
58	ANNEX A (informative) Change log.....	16
59		

**60 Figures**

61	Figure 1 - Software Identification Tag Profile.....	10
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**62 Tables**

63	Table 1 – Referenced profiles.....	9
64	Table 2 – Operations: CIM_BindsTo.....	13
65	Table 3 – CIM Elements: Software ID Tag Profile.....	13
66	Table 4 – Class: CIM_Dependency.....	14
67	Table 5 – Class: CIM_SoftwareIDTag.....	14
68	Table 6 – Class: CIM_SoftwareIDTagData.....	14
69	Table 7 – Class: CIM_SoftwareIDTagEntityStructure.....	14
70	Table 8 – Class: CIM_RegisteredProfile.....	15

71

## Foreword

72 The Software ID Tag Profile (DSP1067) was prepared by the Software Entitlement Working Group of the  
73 DMTF.

74 DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems  
75 management and interoperability.

## 76 Acknowledgments

77 The DMTF acknowledges the following individuals for their contributions to this document:

78 Editors

- 79 • Jim Davis – WS, Inc.

80 Contributors:

- 81 • Howard Hastings - Apptria Technologies
- 82 • Shishir Pardikar - Citrix Systems Inc.
- 83 • Arturo Martin de Nicolas - Ericsson AB
- 84 • Arul Murugan Alwar - Hewlett-Packard Company
- 85 • Niranjan Ramarajar - Hewlett-Packard Company
- 86 • Pawel Gocek - IBM
- 87 • Pat Fetty - Microsoft Corporation
- 88 • William Benassi – Savvis, a CenturyLink Company
- 89 • Steve Klos - TagVault.org
- 90 • Winston Bumpus - VMware Inc.
- 91 • Lawrence Lamers - VMware Inc.
- 92 • Ghazanfar Ali - ZTE Corporation

93

## Introduction

94 The information in this specification should be sufficient for a provider or consumer of this data to identify  
95 unambiguously the classes, properties, methods, and values that shall be instantiated and manipulated to  
96 obtain information regarding Software ID Tags.

97

# Software ID Tag Profile

## 98 1 Scope

99 The Software ID Tag Profile (DSP1067) defines the process in which to obtain CIM-based software ID tag  
100 information.

## 101 2 Normative references

102 The following referenced documents are indispensable for the application of this document. For dated or  
103 versioned references, only the edition cited (including any corrigenda or DMTF update versions) applies.  
104 For references without a date or version, the latest published edition of the referenced document  
105 (including any corrigenda or DMTF update versions) applies.

106 DMTF DSP0200, *CIM Operations over HTTP 1.4.0*,  
107 [http://www.dmtf.org/sites/default/files/standards/documents/DSP0200\\_1.4.0.pdf](http://www.dmtf.org/sites/default/files/standards/documents/DSP0200_1.4.0.pdf)

108 DMTF DSP1001, Management Profile Specification Usage Guide 1.1,  
109 [http://www.dmtf.org/standards/published\\_documents/DSP1001\\_1.1.pdf](http://www.dmtf.org/standards/published_documents/DSP1001_1.1.pdf)

110 DMTF DSP1002, *Diagnostics Profile 2.0.0*  
111 [http://dmtof.org/sites/default/files/standards/documents/DSP1002\\_2.0.0\\_0.pdf](http://dmtof.org/sites/default/files/standards/documents/DSP1002_2.0.0_0.pdf)

112 DMTF DSP1033, Profile Registration Profile 1.0.0  
113 [http://www.dmtf.org/sites/default/files/standards/documents/DSP1033\\_1.0.0.pdf](http://www.dmtf.org/sites/default/files/standards/documents/DSP1033_1.0.0.pdf)

114 ISO/IEC Directives, Part 2, *Rules for the structure and drafting of International Standards*,  
115 <http://isotc.iso.org/livelink/livelink.exe?func=ll&objId=4230456&objAction=browse&sort=subtype>

116 ISO/IEC 19770, Part 2, *Software identification tag*,  
117 <https://webstore.iec.ch/publication/10732>

118 SNIA Storage Management Initiative  
119 <http://www.snia.org/forums/smi>

120 Unified Modeling Language (UML) from the Open Management Group (OMG), <http://www.uml.org>

## 121 3 Terms and definitions

122 For the purposes of this document, the following terms and definitions apply. For the purposes of this  
123 document, the terms and definitions given in [DSP1033](#) and [DSP1001](#) also apply.

### 124 3.1

#### 125 **can**

126 used for statements of possibility and capability, whether material, physical, or causal

### 127 3.2

#### 128 **cannot**

129 used for statements of possibility and capability, whether material, physical, or causal

130 **3.3**  
131 **conditional**  
132 indicates requirements to be followed strictly in order to conform to the document when the specified  
133 conditions are met

134 **3.4**  
135 **mandatory**  
136 indicates requirements to be followed strictly in order to conform to the document and from which no  
137 deviation is permitted

138 **3.5**  
139 **may**  
140 indicates a course of action permissible within the limits of the document

141 **3.6**  
142 **need not**  
143 indicates a course of action permissible within the limits of the document

144 **3.7**  
145 **Online**  
146 Production/customer OS whether system is in production or not

147 **3.8**  
148 **optional**  
149 indicates a course of action permissible within the limits of the document

150 **3.9**  
151 **referencing profile**  
152 indicates a profile that owns the definition of this class and can include a reference to this profile in its  
153 "Related Profiles" table

154 **3.10**  
155 **shall**  
156 indicates requirements to be followed strictly in order to conform to the document and from which no  
157 deviation is permitted

158 **3.11**  
159 **shall not**  
160 indicates requirements to be followed in order to conform to the document and from which no deviation is  
161 permitted

162 **3.12**  
163 **should**  
164 indicates that among several possibilities, one is recommended as particularly suitable, without  
165 mentioning or excluding others, or that a certain course of action is preferred but not necessarily required

166 **3.13**  
167 **should not**  
168 indicates that a certain possibility or course of action is deprecated but not prohibited



169 **3.14**  
 170 **unspecified**  
 171 Keyword indicating that this profile does not define any constraints for the referenced CIM element or  
 172 operation

173 **4 Symbols and abbreviated terms**

174 The following symbols and abbreviations are used in this document.

175 **4.1**  
 176 **SWID**  
 177 Software Identification tag

178 **5 Synopsis**

179 **Profile Name:** Software ID Tag Profile

180 **Version:** 1.0.0

181 **Organization:** DMTF

182 **CIM schema version:** 2.43.0

183 **Central Class:** CIM\_SoftwareIDTag

184 **Scoping Class:** CIM\_SoftwareIDTag

185 The Software ID Tag Profile is an autonomous profile that provides a CIM interface to Software ID Tag  
 186 data.

187  
 188 CIM\_SoftwareIDTag shall be the Central Class of this profile. The instance of CIM\_SoftwareIDTag shall  
 189 be the Central Instance of this profile.

190 Table 1 identifies profiles on which this profile has a dependency.

191 **Table 1 – Referenced profiles**

Profile Name	Organization	Version	Description
Profile Registration Profile	DMTF	1.1.0	Mandatory

192 **6 Description**

193 The Software ID Tag Profile provides the necessary properties and methods to represent software  
 194 identification tags. The software identification tag (SWID) is an international standard defined in [ISO/IEC](#)  
 195 [19770-2](#). The SWID is a standardized data structure containing authoritative identification and  
 196 management information about a software product. Product information provided in the software  
 197 identification tag structure will often be provided in an XML data file. This profile describes the method in  
 198 which the information is available in CIM.

199 Figure 1 represents the class schema for the Software ID Tag Profile. For simplicity, the prefix CIM\_ has  
 200 been removed from the names of the classes.

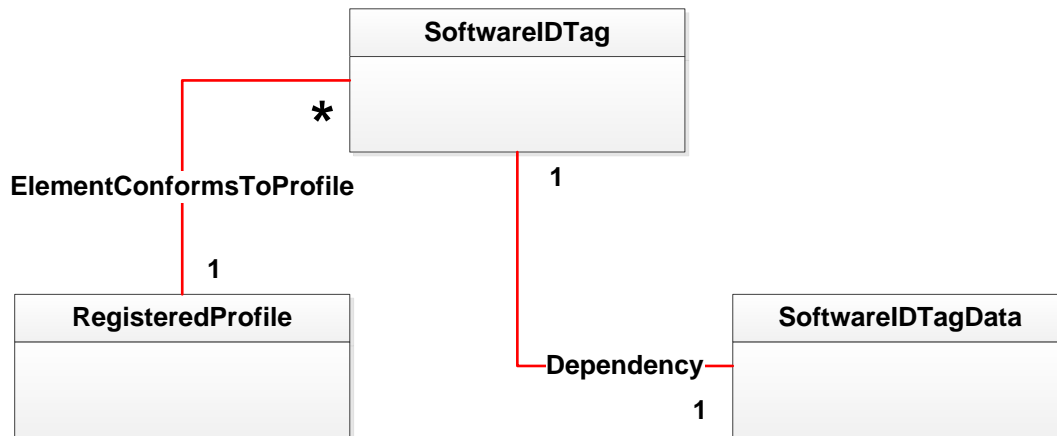


Figure 1 - Software Identification Tag Profile

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207

This version of the profile does not model all of the information available in the SWID data structure in CIM. A small subset is modeled in CIM and future version of this specification may expand the model. The profile does provide a mechanism to retrieve the XML file so that a client may get any needed information. CIM\_SoftwareIDTag includes the properties needed to identify the product

## 208 7 Implementation

209 This clause details the requirements related to the arrangement of instances and their properties for  
210 implementations of this profile.

### 211 7.1 CIM\_SoftwareIDTag

212 One or more instance of CIM\_SoftwareIDTag shall be implemented.

#### 213 7.1.1 CIM\_SoftwareIDTag.EntitlementRequired

214 CIM\_SoftwareIDTag.EntitlementRequired is optional.

215 If implemented, this property value shall represent the value as defined in the Software ID tag XML file  
216 that is the property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance  
217 through CIM\_Dependency.

#### 218 7.1.2 CIM\_SoftwareIDTag.Name

219 The CIM\_SoftwareIDTag.Name specifies the name/title of the software represented by this software ID  
220 tag property and shall be implemented.

221 This property value shall represent the value as defined in the Software ID tag XML file that is the  
222 property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through  
223 CIM\_Dependency.

224 For more information, see Section 8.5.1 of [ISO/IEC 19770-2:2015](#) for more information.

#### 225 7.1.3 CIM\_SoftwareIDTag.TagID

226 The CIM\_SoftwareIDTag.TagID property shall be a globally unique identifier and should be assigned a  
227 GUID and shall be implemented.

228 This property value shall represent the value as defined in the Software ID tag XML file that is the  
229 property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through  
230 CIM\_Dependency.

231 For more information, see Section 8.5.1 of [ISO/IEC 19770-2:2015](#) for more information.

#### 232 **7.1.4 CIM\_SoftwareIDTag.TagVersion**

233 The CIM\_SoftwareIDTag.TagID property value is the string representation of the version of the tag and  
234 shall be implemented. The default value is zero (0).

235 This property value shall represent the value as defined in the Software ID tag XML file that is the  
236 property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through  
237 CIM\_Dependency.

238 For more information, see Section 8.5.1 of [ISO/IEC 19770-2:2015](#) for more information

#### 239 **7.1.5 CIM\_SoftwareIDTag.Version**

240 The CIM\_SoftwareIDTag.Version represents the version of the product and shall be implemented. The  
241 default value is zero (0.0). This property works along with the CIM\_SoftwareIDTag.VersionSchema.

242 This property value shall represent the value as defined in the Software ID tag XML file that is the  
243 property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through  
244 CIM\_Dependency.

245 For more information, see Section 8.5.1 of [ISO/IEC 19770-2:2015](#) for more information.

#### 246 **7.1.6 CIM\_SoftwareIDTag.VersionScheme**

247 The CIM\_SoftwareIDTag.VersionScheme represents the version of the product and shall be  
248 implemented. The default value is 2 (multipartnumeric). This property works along with the  
249 CIM\_SoftwareIDTag.Version.

250 This property value shall represent the value as defined in the Software ID tag XML file that is the  
251 property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through  
252 CIM\_Dependency.

253 For more information, see Section 8.6.11 of [ISO/IEC 19770-2:2015](#) for more information.

#### 254 **7.1.7 CIM\_SoftwareIDTag.Patch**

255 The CIM\_SoftwareIDTag.Patch represents whether the SWID is a patch or modification to another  
256 software element. The property shall be implemented.

257 This property value shall represent the value as defined in the Software ID tag XML file that is the  
258 property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through  
259 CIM\_Dependency.

260 For more information, see Section 8.6.11 of [ISO/IEC 19770-2:2015](#) for more information.

#### 261 **7.1.8 CIM\_SoftwareIDTag.Supplemental**

262 The CIM\_SoftwareIDTag.Supplemental represents whether this tag is a supplemental tag that can be  
263 merged with a primary tag.

264 This property value shall represent the value as defined in the Software ID tag XML file that is the  
265 property value for CIM\_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through  
266 CIM\_Dependency.

267 For more information, see Section 8.5.1 of [ISO/IEC 19770-2:2015](#) for more information.

### 268 **7.1.9 CIM\_SoftwareIDTag.Entity**

269 The CIM\_SoftwareIDTag.Entity property is mandatory. This property is an array of  
270 CIM\_SoftwareIDTagEntityStructures and represents the organization(s) responsible for this SWID tag. At  
271 least one entry in the array shall be present for the tagCreator: the CIM\_SoftwareIDTagEntityStructures.  
272 Roles shall include at a minimum, the value "tagCreator". (The property value may include additional  
273 roles.)

274 For more information, see Section 8.5.2 of [ISO/IEC 19770-2:2015](#) for more information.

## 275 **7.2 CIM\_SoftwareIDTagData**

276 For each instance of CIM\_SoftwareIDTag, there shall be an instance of CIM\_SoftwareIDTagData  
277 associated by CIM\_Dependency.

### 278 **7.2.1 CIM\_SoftwareIDTagData.SoftwareIDTagXML**

279 CIM\_SoftwareIDTagData.SoftwareIDTagXML shall be implemented and shall contain the complete XML  
280 document.

## 281 **8 Methods**

282 This clause details the requirements for supporting intrinsic CIM operations and extrinsic methods for the  
283 CIM elements defined by this profile.

### 284 **8.1 Profile conventions for operations**

285 For each profile class (including associations), the implementation requirements for operations, including  
286 those in the following default list, are specified in class-specific subclauses of this clause.

287 The default list of operations is as follows:

- 288 • GetInstance
- 289 • Associators
- 290 • AssociatorNames
- 291 • References
- 292 • ReferenceNames
- 293 • EnumerateInstances
- 294 • EnumerateInstanceNames

### 295 **8.2 CIM\_SoftwareIDTag**

296 All operations in the default list in 8.1 shall be implemented as defined in [DSP0200](#).

297 NOTE Related profiles may define additional requirements on operations for the profile class.

### 298 **8.3 CIM\_SoftwareIDTagData**

299 All operations in the default list in 8.1 shall be implemented as defined in [DSP0200](#).

300 NOTE Related profiles may define additional requirements on operations for the profile class.

301 **8.4 CIM\_Dependency**

302 Table 2 lists implementation requirements for operations. If implemented, these operations shall be  
 303 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 2, all operations in  
 304 the default list in 8.1 shall be implemented as defined in [DSP0200](#).

305 NOTE Related profiles may define additional requirements on operations for the profile class.

306 **Table 2 – Operations: CIM\_BindsTo**

Operation	Requirement	Messages
Associators	Unspecified	None
AssociatorNames	Unspecified	None
References	Unspecified	None
ReferenceNames	Unspecified	None

307 **9 Use cases (informative)**

308 This clause provides informative use cases and object diagrams.

309 The following diagrams will be used to illustrate some of the use cases.

310 **10 CIM Elements**

311 Table 3 shows the instances of CIM Elements for this profile. Instances of the CIM Elements shall be  
 312 implemented as described in Table 3. Clauses 7 (“Implementation”) and 8 (“Methods”) may impose  
 313 additional requirements on these elements.

314 **Table 3 – CIM Elements: Software ID Tag Profile**

Element Name	Requirement	Description
<b>Classes</b>		
CIM_Dependency	Mandatory	See 10.1.
CIM_SoftwareIDTag	Mandatory	See 10.2.
CIM_SoftwareIDTagData	Mandatory	See 10.3.
CIM_SoftwareIDTagEntityStructure	Mandatory	See 10.4.
CIM_RegisteredProfile	Mandatory	See 10.5.
<b>Indications</b>		
None defined in this profile		

315 **10.1 CIM\_Dependency**

316 CIM\_Dependency is used to associate an instance of CIM\_SoftwareIDTag to the instance of  
 317 CIM\_SoftwareIDTagData that represents the associated CIM\_SoftwareIDTag. Table 4 defines the  
 318 requirements for elements of this class.

319

**Table 4 – Class: CIM\_ Dependency**

Elements	Requirement	Notes
Antecedent	Mandatory	Key: REF to the instance of CIM_SoftwareIDTag
Dependent	Mandatory	Key: REF to the instance of CIM_SoftwareIDTagData

320 **10.2 CIM\_ SoftwareIDTag**

321 CIM\_SoftwareIDTag includes the elements that describe the installed product.

322 Table 5 defines the requirements for elements of this class.

323

**Table 5 – Class: CIM\_ SoftwareIDTag**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
Name	Mandatory	See 7.1.2
TagID	Mandatory	See 7.1.3
TagVersion	Mandatory	See 7.1.4
Version	Mandatory	See 7.1.5
VersionScheme	Mandatory	See 7.1.6
Patch	Mandatory	See 7.1.7
Supplemental	Mandatory	See 7.1.8
Entity	Mandatory	See 7.1.9
EntitlementRequired	Mandatory	See 7.1.1

324 **10.3 CIM\_ SoftwareIDTagData**

325 The constraints listed in Table 6 are in addition to those specified in 10.2 CIM\_SoftwareIDTag.

326

**Table 6 – Class: CIM\_ SoftwareIDTagData**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
SoftwareIDTagXML		

327 **10.4 CIM\_ SoftwareIDTagEntityStructure**

328 The constraints listed in Table 7 are in addition to those specified in 10.2 CIM\_SoftwareIDTag.

329

**Table 7 – Class: CIM\_ SoftwareIDTagEntityStructure**

Elements	Requirement	Notes
Name	Mandatory	
RegID	Mandatory	
Role[]	Mandatory	See 7.1.9

330 **10.5 CIM\_RegisteredProfile**

331 The CIM\_RegisteredProfile class is defined by the Profile Registration Profile. Table 8 defines the  
 332 requirements for elements of this class.

333 **Table 8 – Class: CIM\_RegisteredProfile**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
RegisteredName	Mandatory	Shall be “Software ID Tag”
RegisteredVersion	Mandatory	Shall be “1.0.0”
RegisteredOrganization	Mandatory	Shall be 2 (DMTF)
SpecificationType	Mandatory	Shall be 2 (Profile)

334  
335  
336  
337  
338

## **ANNEX A (informative)**

### **Change log**

<b>Version</b>	<b>Date</b>	<b>Description</b>
1.0.0	2015-09-23	

339