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Software ID Tag Profile

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Foreword

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

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Introduction

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

Software ID Tag Profile

1 Scope

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

2 Normative references

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

DMTF DSP0200, *CIM Operations over HTTP 1.4.0,*
http://www.dmtf.org/sites/default/files/standards/documents/DSP0200_1.4.0.pdf

DMTF DSP1001, Management Profile Specification Usage Guide 1.1,
http://www.dmtf.org/standards/published_documents/DSP1001_1.1.pdf

DMTF DSP1002, *Diagnostics Profile* 2.0.0
http://dmtf.org/sites/default/files/standards/documents/DSP1002_2.0.0_0.pdf

DMTF DSP1033, Profile Registration Profile 1.0.0
http://www.dmtf.org/sites/default/files/standards/documents/DSP1033_1.0.0.pdf

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

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

SNIA Storage Management Initiative
http://www.snia.org/forums/smi

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply. For the purposes of this document, the terms and definitions given in DSP1033 and DSP1001 also apply.

3.1
can
used for statements of possibility and capability, whether material, physical, or causal

3.2
cannot
used for statements of possibility and capability, whether material, physical, or causal

3.3

conditional

indicates requirements to be followed strictly in order to conform to the document when the specified conditions are met

3.4

mandatory

indicates requirements to be followed strictly in order to conform to the document and from which no deviation is permitted

3.5

may

indicates a course of action permissible within the limits of the document

3.6

need not

indicates a course of action permissible within the limits of the document

3.7

Online

Production/customer OS whether system is in production or not

3.8

optional

indicates a course of action permissible within the limits of the document

3.9

referencing profile

indicates a profile that owns the definition of this class and can include a reference to this profile in its "Related Profiles" table

3.10

shall

indicates requirements to be followed strictly in order to conform to the document and from which no deviation is permitted

3.11

shall not

indicates requirements to be followed in order to conform to the document and from which no deviation is permitted

3.12

should

indicates that among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required

3.13

should not

indicates that a certain possibility or course of action is deprecated but not prohibited

3.14
unspecified
Keyword indicating that this profile does not define any constraints for the referenced CIM element or operation

4 Symbols and abbreviated terms

The following symbols and abbreviations are used in this document.

4.1
SWID
Software Identification tag

5 Synopsis

Profile Name: Software ID Tag Profile

Version: 1.0.0

Organization: DMTF

CIM schema version: 2.43.0

Central Class: CIM_SoftwareIDTag

Scoping Class: CIM_SoftwareIDTag

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

CIM_SoftwareIDTag shall be the Central Class of this profile. The instance of CIM_SoftwareIDTag shall be the Central Instance of this profile.

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

Table 1 – Referenced profiles

Profile Name	Organization	Version	Description
Profile Registration Profile	DMTF	1.1.0	Mandatory

6 Description

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

Figure 1 represents the class schema for the Software ID Tag Profile. For simplicity, the prefix CIM_ has been removed from the names of the classes.

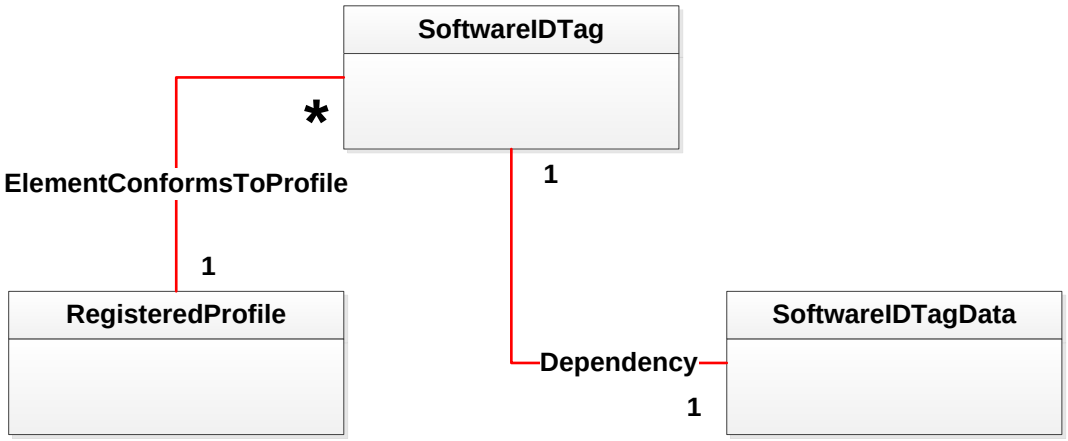

Figure 1 - Software Identification Tag Profile

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

7 Implementation

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

7.1 CIM_SoftwareIDTag

One or more instance of CIM_SoftwareIDTag shall be implemented.

7.1.1 CIM_SoftwareIDTag.EntitlementRequired

CIM_SoftwareIDTag.EntitlementRequired is optional.

If implemented, this property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

7.1.2 CIM_SoftwareIDTag.Name

The CIM_SoftwareIDTag.Name specifies the name/title of the software represented by this software ID tag property and shall be implemented.

This property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

For more information, see Section 8.5.1 of ISO/IEC 19770-2:2015 for more information.

7.1.3 CIM_SoftwareIDTag.TagID

The CIM_SoftwareIDTag.TagID property shall be a globally unique identifier and should be assigned a GUID and shall be implemented.

This property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

For more information, see Section 8.5.1 of ISO/IEC 19770-2:2015 for more information.

7.1.4 CIM_SoftwareIDTag.TagVersion

The CIM_SoftwareIDTag.TagID property value is the string representation of the version of the tag and shall be implemented. The default value is zero (0).

This property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

For more information, see Section 8.5.1 of ISO/IEC 19770-2:2015 for more information

7.1.5 CIM_SoftwareIDTag.Version

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

This property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

For more information, see Section 8.5.1 of ISO/IEC 19770-2:2015 for more information.

7.1.6 CIM_SoftwareIDTag.VersionScheme

The CIM_SoftwareIDTag.VersionScheme represents the version of the product and shall be implemented. The default value is 2 (multipartnumeric). This property works along with the CIM_SoftwareIDTag.Version.

This property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

For more information, see Section 8.6.11 of ISO/IEC 19770-2:2015 for more information.

7.1.7 CIM_SoftwareIDTag.Patch

The CIM_SoftwareIDTag.Patch represents whether the SWID is a patch or modification to another software element. The property shall be implemented.

This property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

For more information, see Section 8.6.11 of ISO/IEC 19770-2:2015 for more information.

7.1.8 CIM_SoftwareIDTag.Supplemental

The CIM_SoftwareIDTag.Supplemental represents whether this tag is a supplemental tag that can be merged with a primary tag.

This property value shall represent the value as defined in the Software ID tag XML file that is the property value for CIM_SoftwareIDTagData.SoftwareIDTagXML associated to this instance through CIM_Dependency.

For more information, see Section 8.5.1 of ISO/IEC 19770-2:2015 for more information.

7.1.9 CIM_SoftwareIDTag.Entity

The CIM_SoftwareIDTag.Entity property is mandatory. This property is an array of CIM_SoftwareIDTagEntityStructures and represents the organization(s) responsible for this SWID tag. At least one entry in the array shall be present for the tagCreator: the CIM_SoftwareIDTagEntityStructures. Roles shall include at a minimum, the value “tagCreator”. (The property value may include additional roles.)

For more information, see Section 8.5.2 of ISO/IEC 19770-2:2015 for more information.

7.2 CIM_SoftwareIDTagData

For each instance of CIM_SoftwareIDTag, there shall be an instance of CIM_SoftwareIDTagData associated by CIM_Dependency.

7.2.1 CIM_SoftwareIDTagData.SoftwareIDTagXML

CIM_SoftwareIDTagData.SoftwareIDTagXML shall be implemented and shall contain the complete XML document.

8 Methods

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

8.1 Profile conventions for operations

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

The default list of operations is as follows:

- GetInstance
- Associators
- AssociatorNames
- References
- ReferenceNames
- EnumerateInstances
- EnumerateInstanceNames

8.2 CIM_SoftwareIDTag

All operations in the default list in 8.1 shall be implemented as defined in DSP0200.

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

8.3 CIM_SoftwareIDTagData

All operations in the default list in 8.1 shall be implemented as defined in DSP0200.

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

8.4 CIM_Dependency

Table 2 lists implementation requirements for operations. If implemented, these operations shall be implemented as defined in DSP0200. In addition, and unless otherwise stated in Table 2, all operations in the default list in 8.1 shall be implemented as defined in DSP0200.

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

Table 2 – Operations: CIM_BindsTo

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

9 Use cases (informative)

This clause provides informative use cases and object diagrams.

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

10 CIM Elements

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

Table 3 – CIM Elements: Software ID Tag Profile

Element Name	Requirement	Description
Classes		
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.
Indications		
None defined in this profile		

10.1 CIM_Dependency

CIM_Dependency is used to associate an instance of CIM_SoftwareIDTag to the instance of CIM_SoftwareIDTagData that represents the associated CIM_SoftwareIDTag. Table 4 defines the 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

10.5 CIM_RegisteredProfile

The CIM_RegisteredProfile class is defined by the Profile Registration Profile. Table 8 defines the requirements for elements of this class.

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)

ANNEX A
(informative)

Change log

Version	Date	Description
1.0.0	2015-09-23	