Base System Profile

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Foreword

This document was prepared by the DMTF Architecture Working Group

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Introduction

This document defines the CIM model for representing a simple base definition of a system, for use by derived profiles. In combination with a derived profile, the information in this document is intended to be sufficient for a provider or consumer of this data to identify unambiguously the classes, properties, methods, and values that need to be instantiated and manipulated.

The target audience for this specification is implementers who are writing CIM-based providers or consumers of management interfaces that represent the components described in this document.

Document conventions

Typographical conventions

The following typographical conventions are used in this document:

- Document titles are marked in italics.
- Important terms that are used for the first time are marked in italics.
- Terms include a link to the term definition in the "Terms and definitions" clause, enabling easy navigation to the term definition.

OCL usage conventions

Constraints in this document are specified using OCL (see OCL 2.0).

OCL statements are in monospaced font.
1 Scope

The Base System profile is an abstract autonomous profile that provides its derived profiles with a simple base definition of a system and optionally with a representation of system capabilities.

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.

OMG formal/06-05-01, Object Constraint Language 2.0, http://www.omg.org/spec/OCL/2.0/

3 Terms and definitions

In this document, some terms have a specific meaning beyond the normal English meaning. Those terms are defined in this clause.

3.1 General

The terms "shall" ("required"), "shall not", "should" ("recommended"), "should not" ("not recommended"), "may", "need not" ("not required"), "can" and "cannot" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Annex H. The terms in parenthesis are alternatives for the preceding term, for use in exceptional cases when the preceding term cannot be used for linguistic reasons. Note that ISO/IEC Directives, Part 2, Annex H specifies additional alternatives. Occurrences of such additional alternatives shall be interpreted in their normal English meaning in this document.

The terms "clause", "subclause", "paragraph", "annex" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 5.

The terms "normative" and "informative" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 3. In this document, clauses, subclauses or annexes indicated with "(informative)" as well as notes and examples do not contain normative content.
The terms defined in DSP0004, DSP0223, and DSP1001 apply to this document.

The following additional terms are defined in this document.

### 3.2 System

An entity in the managed environment that is made up of component parts and that operates as a "functional whole". Examples are computer systems, or power supplies.

### 4 Symbols and abbreviated terms

The abbreviations defined in DSP0004, DSP0223, and DSP1001 apply to this document.

This document does not define any additional abbreviations.

### 5 Synopsis

**Profile name:** Base System  
**Version:** 1.0.0  
**Organization:** DMTF  
**Abstract indicator:** True  
**Profile type:** Autonomous  
**Schema:** DMTF CIM 2.22  
**Central class adaptation:** BaseSystem  
**Scoping class adaptation:** BaseSystem

The Base System profile is an abstract autonomous profile that provides its derived profiles with a simple base definition of a system and optionally with a representation of system capabilities as defined in the ELE profile.

The following table identifies the profile references defined in this profile.

<table>
<thead>
<tr>
<th>Profile reference name</th>
<th>Profile name</th>
<th>Organization</th>
<th>Version</th>
<th>Relation-ship</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE</td>
<td>Enabled Logical Element</td>
<td>DMTF</td>
<td>1.0.1</td>
<td>Mandatory</td>
<td></td>
</tr>
</tbody>
</table>

This profile does not define any features.

The following table identifies the class adaptations defined in this profile.

<table>
<thead>
<tr>
<th>Adaptation</th>
<th>Elements</th>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instantiated, embedded and abstract adaptations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BaseSystem</td>
<td>CIM_System</td>
<td>Mandatory</td>
<td>See 7.1.2.</td>
</tr>
<tr>
<td><strong>Indications and exceptions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This profile does not define any such adaptations.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This profile does not define any use cases or state descriptions.

### 6 Description

The class diagram in Figure 1 shows all class usages (adaptations) defined in this profile, and relevant class usages defined in referenced profiles.

![Base System Class Diagram](image)

**Figure 1 – Class diagram**

The BaseSystem class adaptation is the central and scoping element of this profile; its instances represent systems.

The ELE::ElementCapabilities and ELE::EnabledLogicalElementCapabilities class adaptations defined in the ELE profile model capabilities of the system. These class adaptations are part of features defined in the ELE profile.

Conformance to this profile is advertised using mechanisms defined by derived profiles.

### 7 Implementation

#### 7.1 Adaptations

#### 7.1.1 Conventions

This profile defines operation requirements based on [DSP0223](#).

For adaptations of ordinary classes and of associations, the requirements for operations are defined in adaptation-specific subclauses of subclause 7.1.

For association traversal operation requirements that are specified only in the elements table of an adaptation (i.e., without operation-specific subclauses), the names of the association adaptations to be traversed are listed in the elements table.

The default initialization requirement level for property requirements is optional.
The default modification requirement level for property requirements is optional.

This profile repeats the effective values of certain Boolean qualifiers as part of property, method parameter, or method return value requirements. The following convention is established: If the name of a qualifier is listed, its effective value is True; if the qualifier name is not listed, its effective value is False. The convention is applied in the following cases:

- **In**: indicates that the parameter is an input parameter
- **Out**: indicates that the parameter is an output parameter
- **Key**: indicates that the property is a key (that is, its value is part of the instance path)
- **Required**: indicates that the element value shall be non-Null
- **Null OK**: indicates explicitly that the element value may be Null for mandatory, conditional or conditional exclusive properties. This information is not specified as a qualifier in the schema but as an indicator in the profile.

### 7.1.2 Adaptation: BaseSystem: CIM_System

This adaptation models systems and defines a minimal set of properties and methods.

The implementation type of this adaptation is instantiated ordinary adaptation.

A concrete subclass of the abstract schema class CIM_System needs to be implemented.

The requirement level for this adaptation is mandatory.

The following table identifies the element requirements for this adaptation.

<table>
<thead>
<tr>
<th>Table 3 – BaseSystem: Element requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Base adaptations</td>
</tr>
<tr>
<td>ELE::EnabledLogicalElement</td>
</tr>
</tbody>
</table>

### 8 Use cases and state descriptions

This profile does not define any use cases.
ANNEX A
(informative)

Change log

Table 4 – Change log

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
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<tr>
<td>1.0.0a</td>
<td>2013-06-24</td>
<td>Released as Work in Progress</td>
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