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## Base System Profile

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10

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## Foreword

This document was prepared by the DMTF Architecture Working Group

24 DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems  
management and interoperability. For information about the DMTF, see <http://www.dmtf.org>.

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30

## Introduction

31 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.

32 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.

### 33 **Document conventions**

#### 34 **Typographical conventions**

35 The following typographical conventions are used in this document:

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

#### 39 **OCL usage conventions**

40 Constraints in this document are specified using OCL (see [OCL 2.0](#)).

41 OCL statements are in `monospaced font`.

42

# Base System Profile

43

## 1 Scope

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

## 2 Normative references

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

47 DMTF DSP0004, *CIM Infrastructure Specification 2.7*,  
[http://www.dmtf.org/standards/published\\_documents/DSP0004\\_2.7.pdf](http://www.dmtf.org/standards/published_documents/DSP0004_2.7.pdf)

48 DMTF DSP0223, *Generic Operations 1.0*,  
[http://www.dmtf.org/standards/published\\_documents/DSP0223\\_1.0.pdf](http://www.dmtf.org/standards/published_documents/DSP0223_1.0.pdf)

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

50 DMTF DSP1080, *Enabled Logical Element Profile 1.0.1*,  
[http://www.dmtf.org/standards/published\\_documents/DSP1080\\_1.0.1.pdf](http://www.dmtf.org/standards/published_documents/DSP1080_1.0.1.pdf)

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

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

53

## 3 Terms and definitions

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

### 3.1 General

56 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, Part2](#), 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, Part2](#), Annex H specifies additional alternatives. Occurrences of such additional  
alternatives shall be interpreted in their normal English meaning in this document.

57 The terms "clause", "subclause", "paragraph", "annex" in this document are to be interpreted as described  
in [ISO/IEC Directives, Part2](#), Clause 5.

58 The terms "normative" and "informative" in this document are to be interpreted as described in [ISO/IEC  
Directives, Part2](#), 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.

59 The following additional terms are defined in this document.

60 **3.2**

61 **system**

62 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.

63

**4 Symbols and abbreviated terms**

64 The abbreviations defined in [DSP0004](#), [DSP0223](#), and [DSP1001](#) apply to this document.

65 This document does not define any additional abbreviations.

66

**5 Synopsis**

67 **Profile name:** Base System

68 **Version:** 1.0.0

69 **Organization:** DMTF

70 **Abstract indicator:** True

71 **Profile type:** Autonomous

72 **Schema:** DMTF CIM 2.22

73 **Central class adaptation:** BaseSystem

74 **Scoping class adaptation:** BaseSystem

75 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.

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

77

**Table 1 – Profile references**

Profile reference name	Profile name	Organi-zation	Version	Relation-ship	Description
ELE	<a href="#">Enabled Logical Element</a>	DMTF	1.0.1	Mandatory	

80 This profile does not define any features.

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

82

**Table 2 – Adaptations**

Adaptation	Elements	Requirement	Description
<b>Instantiated, embedded and abstract adaptations</b>			
BaseSystem	CIM_System	Mandatory	See 7.1.2.
<b>Indications and exceptions</b>			
This profile does not define any such adaptations.			

88

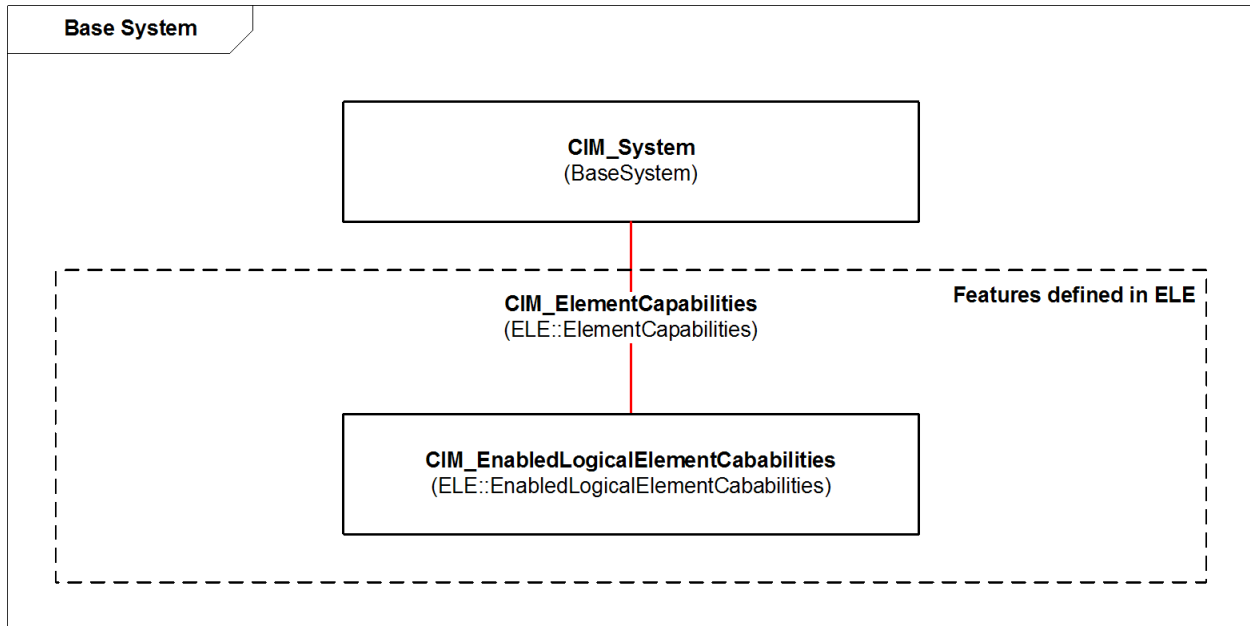
This profile does not define any use cases or state descriptions.

89

## 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.

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**Figure 1 – Class diagram**

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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.

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## 7 Implementation

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### 7.1 Adaptations

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#### 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.

103



The default modification requirement level for property requirements is optional.

104 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:

- 105 • In: indicates that the parameter is an input parameter
- 106 • Out: indicates that the parameter is an output parameter
- 107 • Key: indicates that the property is a key (that is, its value is part of the instance path)
- 108 • Required: indicates that the element value shall be non-Null
- 109 • 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.

110 **7.1.2 Adaptation: BaseSystem: CIM\_System**

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

111 The implementation type of this adaptation is instantiated ordinary adaptation.

112 A concrete subclass of the abstract schema class CIM\_System needs to be implemented.

113 The requirement level for this adaptation is mandatory.

114 The following table identifies the element requirements for this adaptation.

115 **Table 3 – BaseSystem: Element requirements**

Element	Requirement	Description
<b>Base adaptations</b>		
ELE::EnabledLogicalElement	Mandatory	See ELE::EnabledLogicalElement.

119 **8 Use cases and state descriptions**

120 This profile does not define any use cases.

121

## ANNEX A (informative)

### Change log

122

**Table 4 – Change log**

123

124

Version	Date	Description
1.0.0a	2013-06-24	Released as Work in Progress