



CHAPTER 1

Introduction

This chapter provides an overview of SMI-S support in the Cisco UCS Servers.

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About the Cisco Unified Computing System

Cisco Unified Computing System (Cisco UCS) fuses access layer networking and servers. This high-performance, next-generation server system provides a data center with a high degree of workload agility and scalability. The hardware and software components support Cisco's unified fabric, which runs multiple types of data center traffic over a single converged network adapter.

About the DMTF

The Distributed Management Task Force (DMTF) is an industry organization that develops and promotes standards for the platform-independent management of enterprise servers and systems. Founded in 1992, the DMTF has a membership of more than 200 organizations and companies, including many universities and most major vendors of enterprise IT systems. The activities of the DMTF consist of several general initiatives, with multiple working groups addressing specific aspects of each initiative.

About the CIM

The central concept at the core of most DMTF standards is the Common Information Model (CIM), an object-oriented framework for modeling the logical and physical components of an information system. The CIM describes a common set of managed elements and the relationships between them.

The CIM Schema defines a hierarchy of classes in which subclasses inherit general attributes from parent classes while adding more specialized attributes. Each class will have one or more instances. Each instance has a number of properties and each property has a value. For example, a 2 gigabyte DIMM memory module is an instance of the CIM_PhysicalMemory class, which is a subclass of the CIM_Chip class, and has a Capacity property whose value is 2147483648 bytes.

The CIM further defines profiles, which comprise the classes, properties, methods, and values that are required to represent and manage a particular management domain or functional area. For example, the Fan profile describes the properties and methods of fans and redundant fans in a managed system. This profile associates the physical fan instance with a sensor instance and requires the ability to sense and set properties such as fan speed and state. The DMTF publishes specifications for many standard profiles, with most system vendors implementing a subset of the available profiles.

About the SNIA

The Storage Networking Industry Association (SNIA) is an industry organization that develops and promotes standards for the platform-independent management of information storage systems. For information about the SNIA, see:

<http://www.snia.org>

About SMI-S

An initiative of the SNIA, the Storage Management Initiative Specification (SMI-S) defines profiles and methods for the vendor-independent management of a Storage Area Network (SAN) and its components using a WBEM client. For information about SMI-S, see:

http://www.snia.org/tech_activities/standards/curr_standards/smi