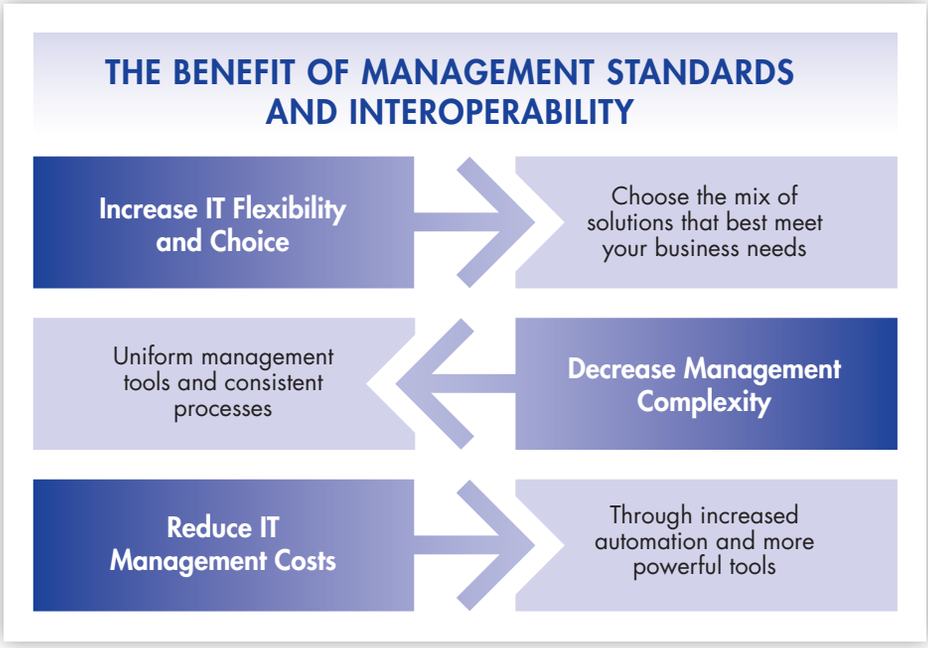

DMTF®
distributed management task force, inc.
Developing Management Standards and Promoting Interoperability for Enterprise and Internet Environments

The Growing Importance of Management Standards for IT

With the ever-increasing need for flexibility, availability and performance in today's distributed enterprises, management standards for IT professionals are now more important than ever. Deploying systems, tools and solutions that support management standards helps reduce system management complexity and lower overall IT costs. By selecting solutions that support standards, IT managers can deploy the best mix of systems and tools that meet their business or customer needs and still minimize



their TCO (total cost of ownership). As companies are faced with the need to do more with less, standards become critical to reduce the cost of managing computing and networking environments while retaining flexibility for future requirements.

The Distributed Management Task Force, Inc. (DMTF) is the global industry organization leading the development, adoption and promotion of management standards and interoperable systems management. It is comprised of more than 4,000 active participants representing 44 countries and nearly 200 organizations, including many of the most influential companies in the computing industry.

DMTF works with its alliance partners to:

- *Deliver management standards most relevant to IT*
- *Enable vendors to develop superior solutions based on management standards*
- *Help IT managers realize the full benefit of interoperable systems management*

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DMTF Standards Can Simplify IT Management and Lower Costs

Standards become even more crucial with increasing pressure to ensure that technology investments remain viable for years to come. Standards allow forward-thinking CIOs and end users to select the products that best suit their needs today while helping to assure that no proprietary constraints arise when new systems are put in place in the future.

DMTF is committed to accelerating the adoption and ongoing development of end-to-end management solutions to help companies control costs and manage complexity in today's diverse technology environment. Our goal is to streamline integration for users, thus reducing costs while providing flexibility for future needs. As an independent, non-profit consortium, DMTF brings the technology industry together to collaborate in all aspects of management specification development, refinement, adoption and promotion.

"The mission of the Distributed Management Task Force is to enable a more integrated, interoperable approach for end-to-end management in distributed enterprises. By joining forces to develop open standards, we help companies control costs, manage complexity and optimize technology investments today while providing flexibility and scalability for tomorrow's needs."

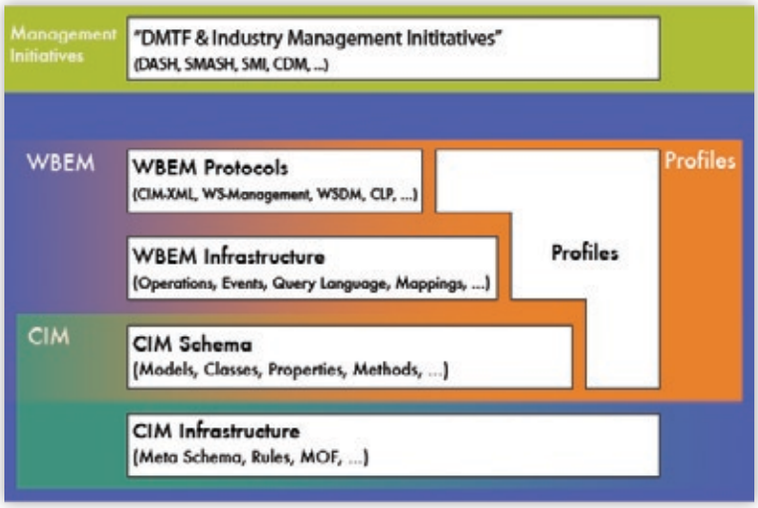
Winston Bumpus
President
Distributed Management
Task Force

Standards for End-to-End Management Solutions

DMTF standards help alleviate the challenges associated with managing today's complex, heterogeneous technology environments while retaining flexibility to meet tomorrow's needs. DMTF's technologies are designed to work together to address the industry's needs and requirements for interoperable distributed management. By enabling end-to-end management solutions, they provide valuable tools for corporate IT departments grappling with managing multiple platforms across diverse departments, sites and geographies.

Common Information Model (CIM) is a conceptual object-oriented model for describing a company's computing and networking environments. It defines "rules" and provides the details for integration with other management models. CIM is the foundation for many management standards by providing the basis for a single set of management tools and applications for managing an IT environment. Enabling consolidation of IT management into a single set of tools greatly reduces complexity and cost. CIM is also is designed to minimize the impact of introducing new technology, giving customers the freedom to change vendor implementations with minimal impact.

Web-Based Enterprise Management (WBEM) is a set of management and Internet specifications developed to unify the management of distributed computing environments. WBEM provides the ability for the industry to deliver a well-integrated set of standard-based management tools for distributed management, facilitating the exchange of data across boundaries.



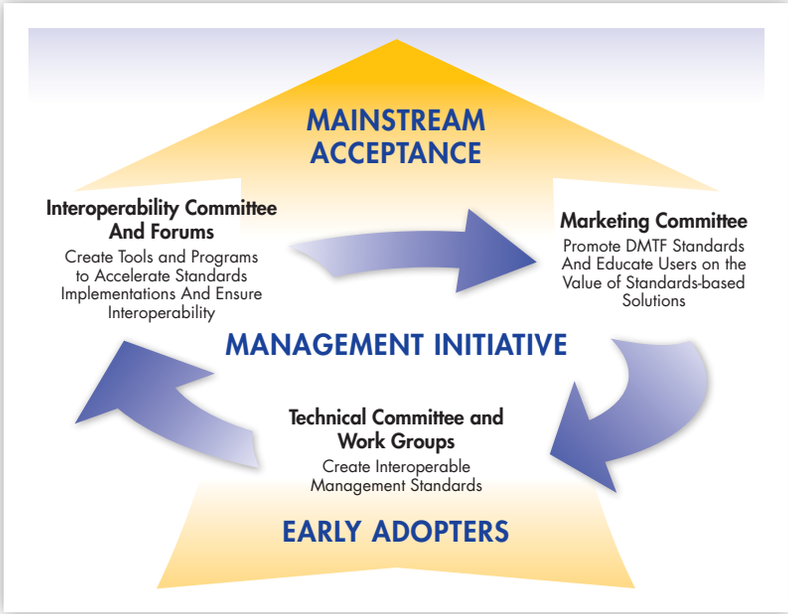
DMTF standards provide well-defined, interoperable interfaces that build upon each other; the interrelationships between the DMTF technologies in this diagram build value with each additional layer.

The DMTF works to standardize key areas of systems management to benefit both developers implementing management solutions and IT administrators who seek to simplify management of their environments. These key areas include:

Common Diagnostics Model (CDM)	An extension of CIM, the CDM specification is used to evaluate the health of computer system components.
Desktop and mobile Architecture for System Hardware (DASH)	Set of specifications that deliver standards-based web services management for desktop and mobile client systems.
Platform Management Component Intercommunications (PMCI)	Set of specifications that standardize communications between the various components of a management subsystem and includes a set of standard protocols, interfaces, and platform level data models across a full range of platforms—including traditional desktop systems, mobile, laptop and server computers, bladed PCs, and thin clients.
Systems Management Architecture for Server Hardware (SMASH)	Set of specifications that deliver standards-based management for servers and includes both a command line protocol and a web services-based programmatic interface.
System Management BIOS (SMBIOS)	Specification that addresses how motherboard and system vendors present management information about their products in a standard format by extending the BIOS interface on x86 architecture systems.
System Virtualization Management	Standards specifications for managing a virtualized environment and the lifecycle of virtual machines and deployments.

Industry Initiatives to Enable and Promote Standards-Based Solutions

Management initiatives within the DMTF and its alliance partners build on DMTF technologies. An initiative combines a management standard with activities designed to promote the standard in the industry and to help vendors develop interoperable solutions based on that standard. The goal of each DMTF initiative is to accelerate the adoption of its associated standard into mainstream acceptance. Some key initiatives include:



Common Diagnostic Model (CDM) Initiative: CDM is used to evaluate the health of computer system components in multi-vendor environments. It specifies diagnostic instrumentation that can be utilized by vendors (OEMs and system builders) and platform management applications to determine the health of a computer system component. Because it uses CIM as its foundation, CDM diagnostic tests can be integrated into critical management functions. The CDM Initiative strives to make it easy for component vendors to implement CDM diagnostics tests and ultimately deliver more robust, easy to manage systems to users.

Desktop and mobile Architecture for System Hardware (DASH) Initiative: DASH is a suite of specifications that take advantage of the DMTF's Web Services for Management (WS-Management) specification – delivering a web services-based standard for desktop and mobile management. DASH provides the next generation of standards for secure, in-band, out-of-band and remote management of desktop and mobile systems. The DASH initiative strives to promote the DASH standard in the industry and enable vendors to implement compliant, interoperable DASH solutions.

Systems Management Architecture for Server Hardware (SMASH) Initiative: The SMASH standard includes a suite of specifications that deliver architectural semantics, industry standard protocols and profiles to unify the management of data center systems, including servers, blades and racks. The SMASH Command Line Protocol (CLP) provides a standard command line interface for managing heterogeneous servers in the data center independent of machine state, operating system state, server system topology or access method, facilitating local and remote management of server hardware in both out-of-service and out-of-band management environments. SMASH also specifies a programmatic web services interface for secure in-band, out-of-band and remote management of server hardware. The SMASH initiative strives to promote the SMASH standard in the industry and enable vendors to implement compliant, interoperable SMASH solutions.

Storage Management Initiative (SMI): SMI is a Storage Networking Industry Association (SNIA) initiative to standardize interoperable storage management technologies, based on the rich foundation provided by the DMTF's CIM and WBEM specifications.

Joining Forces through Strategic Alliances

DMTF brings the industry together to collaborate in all aspects of distributed management specification development and refinement. By forming strategic alliances with affiliated industry organizations and academic institutions, DMTF encourages the open development of standards to address the challenge of providing interoperable distributed management.

DMTF works closely with industries such as:

- **Security**
- **Grids**
- **Blades**
- **Storage**
- **Objects**
- **Power and Cooling**
- **Peripherals**

By encouraging participation in the development of DMTF standards, the Alliance Partner Program is an important way the DMTF is helping unify management initiatives and develop more solid partnerships.

- For more information about the DMTF Alliance Partner Work Registers, visit: www.dmtf.org/about/register/
- If you're involved with an industry organization that would like to join forces with the DMTF, please contact the Vice President of Alliances at: vp-alliances@dmtf.org
- To find out more about solutions employing DMTF standards, please contact the Vice President of Technology at: vp-technology@dmtf.org
- If you would like to join, please contact the Vice President of Membership at: vp-membership@dmtf.org

With more than 40 alliances with academic institutions from around the world, DMTF values input from the academic world and is open to providing information to faculty and students who are studying and researching management standards. An Academic Alliance membership allows access to work groups and their documents based on the interest of the particular institution.

- To view the full list of DMTF Academic Alliance partners, please visit: www.dmtf.org/about/lists
- If you are interested in joining DMTF as an Academic Alliance partner, please contact the Vice President of Alliances at: vp-alliances@dmtf.org

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1001 SW 5th Avenue, #1100, Portland, OR 97204
Phone: +1.503.220.1655 Fax: +1.503.296.2432
www.dmtf.org