



DMTF Overview

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Disclaimer

- The information in this presentation represents a snapshot of work in progress within the DMTF.
- This information is subject to change. The Standard Specifications remain the normative reference for all information.
- For additional information, see the Distributed Management Task Force (DMTF) Web site.





Agenda

- **DMTF Background**
 - Who is the DMTF?
 - DMTF Alliance Partners
- **Technology as a whole**
 - Management Initiatives
- **Technical Committee**
 - Organizational Chart
 - Process Changes
 - Current Technical Work
 - Opportunities for Involvement
- **Interoperability Committee**
 - CDM, SMF, VMF, CSC
- **Regional Chapter Committee**
- **Marketing Committee**
- **Process & Incubator Committee**
- **Alliance & Academic Partners**
- **Working with the DMTF**

Who is the DMTF?



DMTF Board Companies



DMTF Leadership Companies

Arquimedes Automacao e Informatica Ltda
Brocade Communications
China Academy of Telecommunication
Research, MIIT
China Electronics Standardization Institute
Daten Tecnologia Ltda
Dell
Digibras Industria do Brasil S/A

EMC
Inspur
Lenovo
Mellanox Technologies
NetIQ Corporation
Positivo Informatica S.A.
Red Hat
Samsung Electronics Company Ltd

Samsung Electronics Company
Savvis a CenturyLink Company
WBEM Solutions
ZTE Corporation
*More than 3,500
participants from well
over 180 organizations
crossing 43 countries*



DMTF Alliance Partners

- China Communications Standards Association (CCSA)
- China Electronics Standardization Institute (CESI)
- Cloud Security Alliance (CSA)
- Cloud Standards Customer Council (CSCC)
- ECMA International (ECMA)
- Global Inter-Cloud Technology Forum (GICTF)
- The Green Grid (TGG)
- Metro Ethernet Forum (MEF)
- OASIS Symptoms Automation Framework (SAF) TC
- Open Data Center Alliance (ODCA)
- Open Grid Forum (OGF)
- The Open Group (TOG)
- SNIA/DMTF CR Process Flow
- Storage Networking Industry Association (SNIA)
- TagVault.org
- TeleManagement Forum (TMF)
- Trusted Computing Group (TCG)
- Unified Extensible Firmware Interface (UEFI)
 - And the DMTF is a member of the INCITS Executive Board & has representation in ISO JTC1 SC38/INCITS DAPS38 & requesting liaison relationship with ISO/IEC JTC1 SC38



Academic Alliances

- Alexandria University
- Athens University of Economics and Business
- Balarussian State University
- Bharathidasan University
- Case Western Reserve University
- ENST Bretagne
- Fudan University
- George Mason University
- Hangzhou Dianzi University
- HOSEI Univ
- Huazhong University of Science and Technology
- Imperial College of Science Technology and Medicine
- Indian Institute of Technology Roorkee
- Indian Institute of Technology, Bombay
- Institute of Information Security (IISEC)
- Instituto de Educao Tecnologica (IETEC)
- Kasetsart University
- Laurentian University
- Leibniz Supercomputing Center
- Ludwig Maximilians University
- Lund Institute of Technology
- Madrid Technical University
- Marshall University
- Modern College of Engineering, University of Pune
- Munich University of Technology
- Nanjing University
- Nanyang Polytechnic
- Nanyang Technological University
- National Research University Higher School of Economics
- National Technical University of Athens
- Naval Postgraduate School
- North Carolina State University
- Northwestern University
- Oakland Community College
- Ostfalia University of Applied Sciences
- Paul Sabatier University
- Peking University
- Penn State University
- POLITECNICO DI TORINO
- Pontifical Catholic University of Parana
- Pontifical Catholic University of Rio Grande do Sul
- Ruprecht-Karls-University Heidelberg
- Saint-Petersburg University for Aerospace Instrumentation
- Shanghai Jiao Tong University
- Stanford University
- Technische Universitaet Dresden
- Technische Universität Carolo-Wilhelmina zu Braunschweig
- TU Dortmund
- TU Muenchen
- Universidad Complutense de Madrid
- Universidad Libre Cali
- Universidade Federal do Rio Grande do Sul
- University College Dublin: Center for Cybersecurity and Cybercrime Investigation
- University Joseph Fourier of Grenoble
- University Karlstuhe
- University of Athens
- University of Aveiro- Portugal
- University of Bologna
- University of Calgary
- University of California
- University of California-Irvine
- University of Cauca
- University of Edinburgh
- University of Hamburg
- University of Illinois
- University of Karlsruhe
- University of Leipzig
- University of Milan Bicocca
- University of Milano-Bicocca
- University of Minnesota
- University of Munich
- University of Murcia (Spain)
- University of New Hampshire
- University of Pisa - Italy
- University of Southampton
- University of Stuttgart
- University of Sydney
- University of Teesside
- University of Texas Health Science
- University of the Federal Armed Forces Munich
- University of the Rockies
- University of Tuebingen
- University of Twente
- University of Western Ontario
- University of Wuerzburg
- University Technology Petronas
- Vellore Institute of Technology
- Vienna University of Technology

DMTF Background

Distributed Management Task Force

- Formed in 1992 with a focus on desktop management.
- DMI (1994)

Evolved from desktop management to web based enterprise management

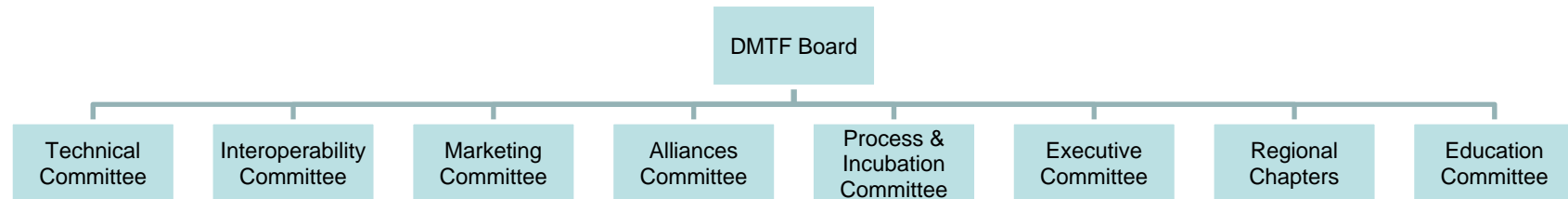
- CIM (1996)
- DEN (1997)
- WBEM (1998)
- SMBIOS (1999)
- ASF (2001)
- CDM (2005)
- SMASH (2005)
- DASH (2006)
- PMCI & NC-SI (2007)
- OVF, VMan & WS-Man(2008)
- CMDBf (2009)
- Cloud (2010)
- CADF (2011)
- CIMI, SLM, MRP, VPP (2012)
- SDDC, Networking (2013)

Evolving work includes

- DMTF Management Initiatives, Protocols (Web Services), Profile Development, Schema Evolution, Internal Interfaces, Operations, Messages, Registries, Federation & more.

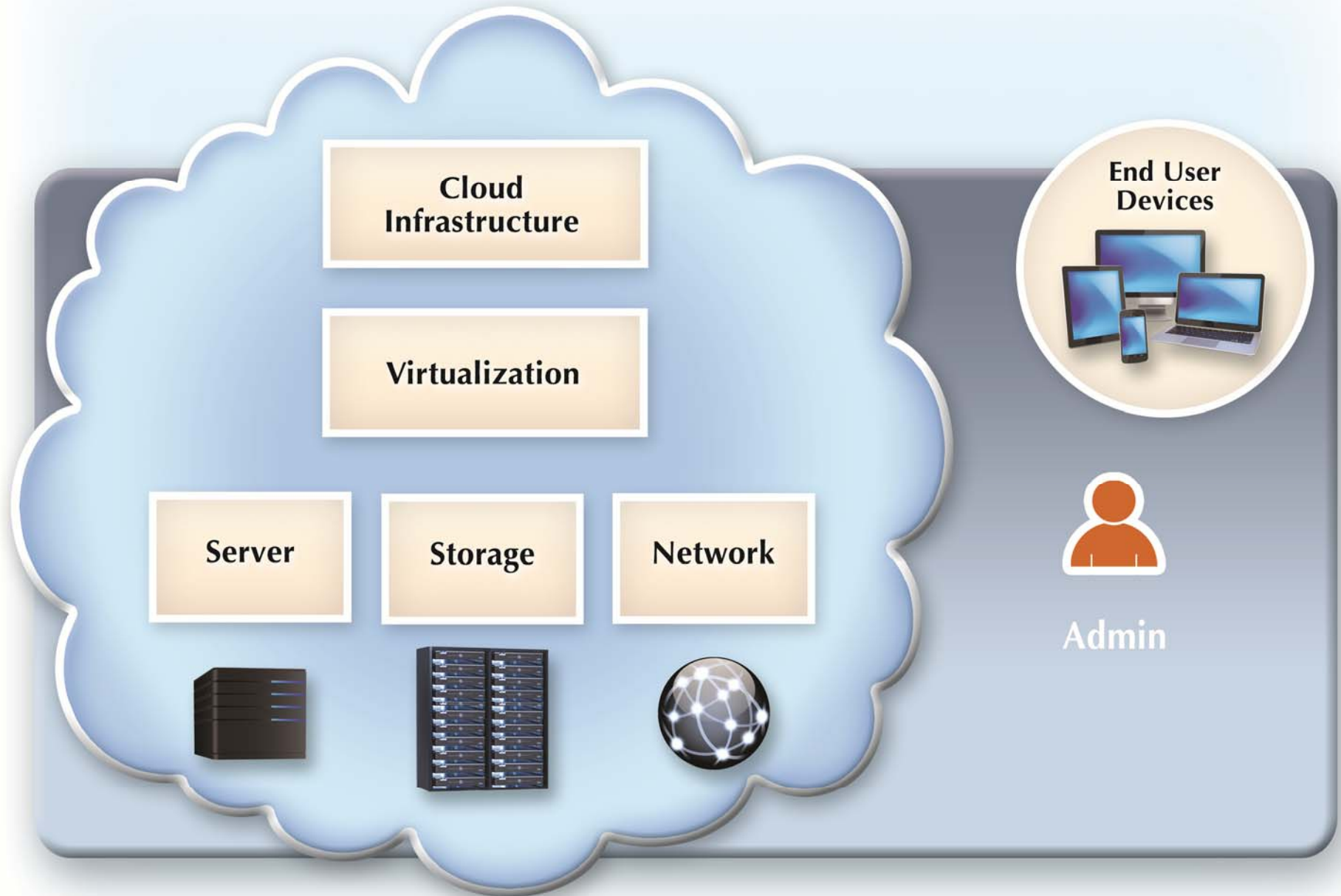


How is the DMTF Organized?

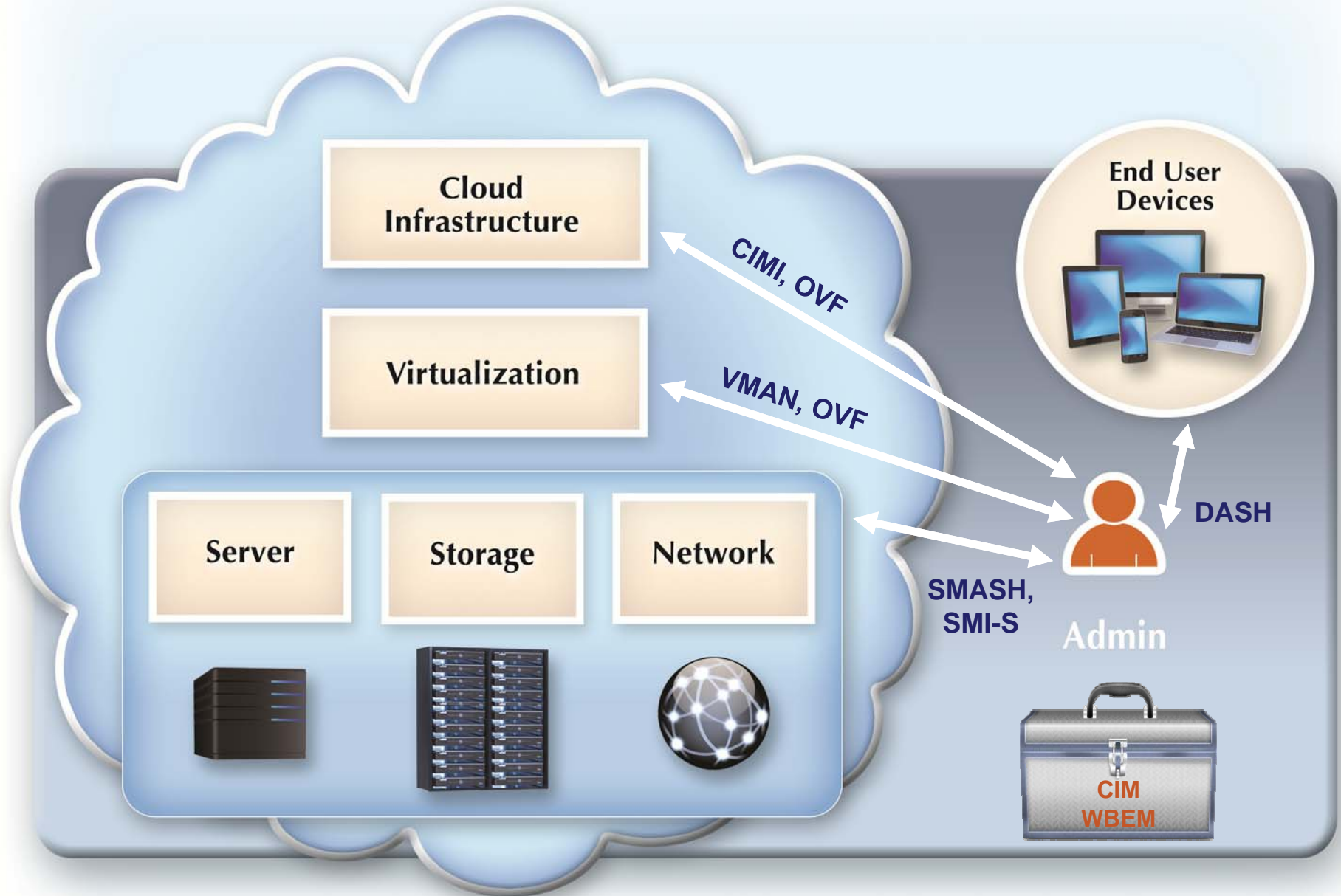


- Board approves specifications, defines direction, oversees activities and coordinates with other industry organizations
- Technical Committee reviews and approves specifications, white papers and other materials developed in Working Groups under the Technical Committee
- Interoperability Committee ensures interoperability through plug-fests, test tool development and conformance certification programs which are managed by Forums
- Marketing Committee coordinates press releases, conferences and events, web site content
- Alliance Committee coordinates alliance partner & academic alliance activities
- Process & Incubator Committee manages DMTF Policies and Incubators
- Executive Committee manages day to day operations of the DMTF
- Regional Chapter Committee coordinates activities with regional chapters of the DMTF
- Education Committee coordinates education of DMTF standards

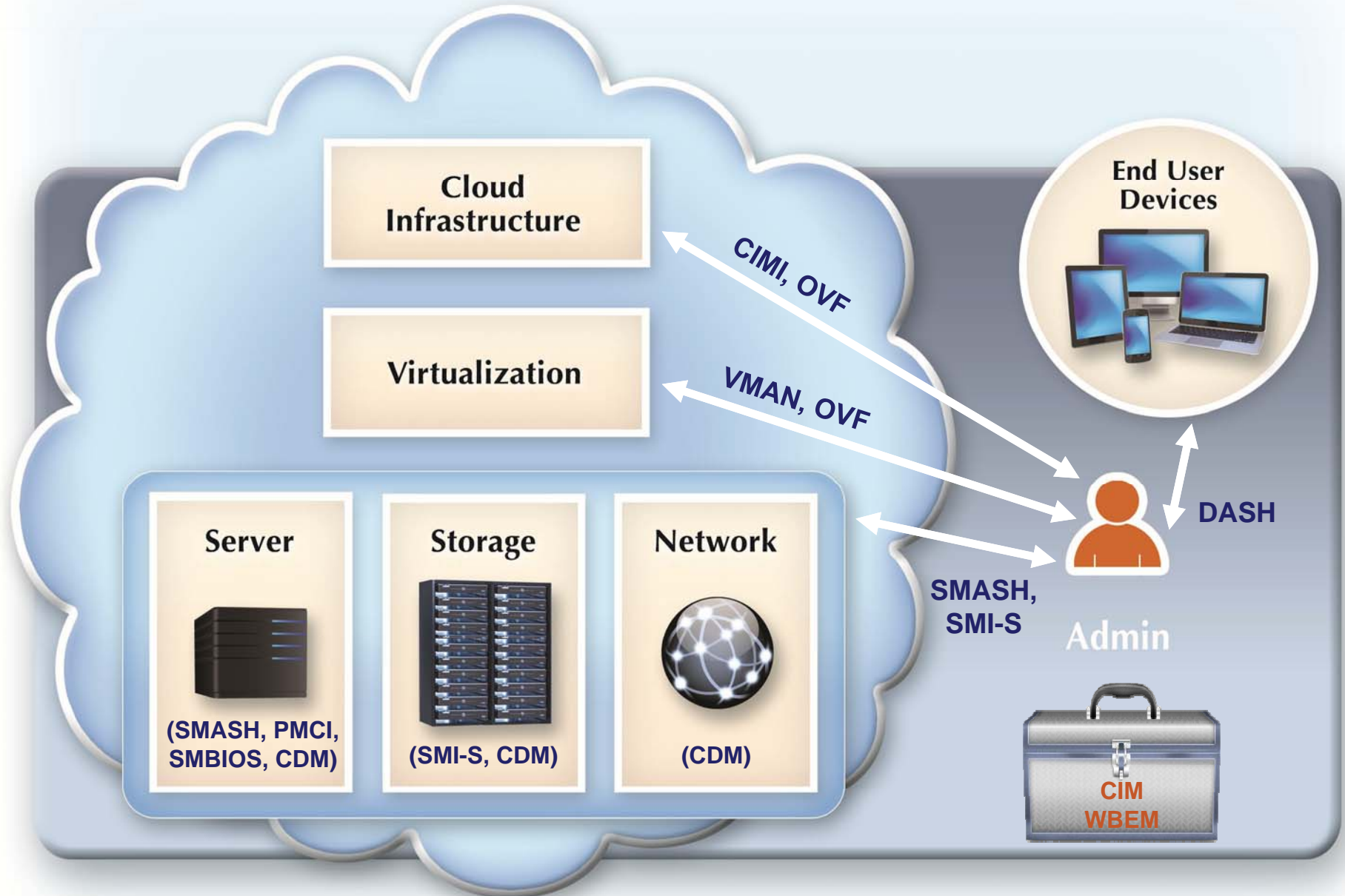
DMTF Management Technologies



DMTF Management Technologies



DMTF Management Technologies





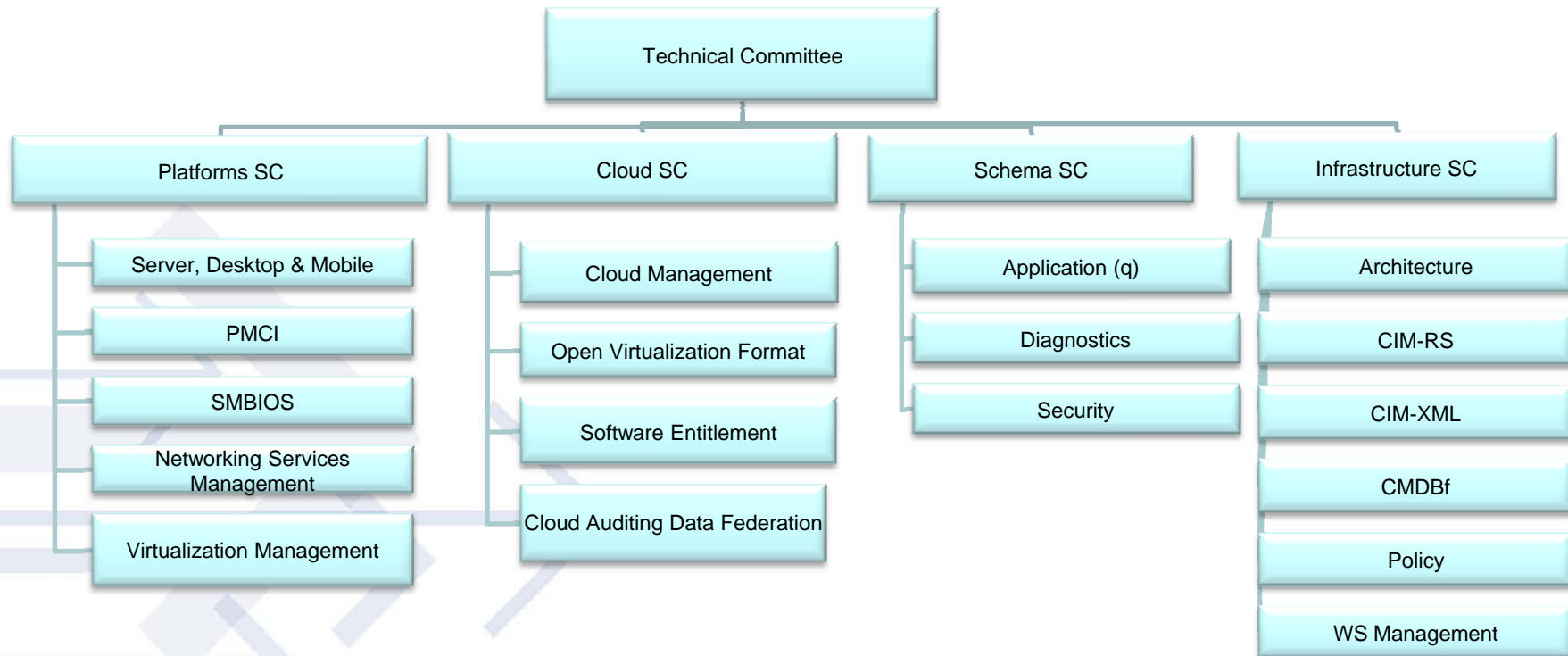
DMTF Management Initiatives

- **SMASH – Systems Management Architecture for Server Hardware**
 - Vertical Manageability standard focused on Server Management
 - Defined by the SMASH Implementation Requirements Specification
 - Developed by the SMWG, Interoperability certified by SMForum
- **DASH – Desktop and Mobile Architecture for System Hardware**
 - Vertical Manageability standard focused on Desktop & Mobile Computer Management
 - Defined by the DASH Implementation Requirements Specification
 - Developed by the DMWG, Interoperability certified by SMForum
- **CDM – Common Diagnostics Model**
 - Defined by CDM Profile developed by Diagnostics WG
 - Interoperability certified by CDM Forum
- **VMan – Virtualization Management**
 - Defined in OVF and Virtualization Profiles
 - Developed in the System Virtualization, Partitioning and Clustering WG
 - Interoperability managed by VMF
- **CIMI – Cloud Infrastructure Management Interface**
 - Defined in CIMI Specs
 - Developed by Cloud Management WG
 - Beginning Interoperability phase



TC Organizational Chart

- VP of Technology – Hemal Shah, Broadcom





Ongoing Technical Work

- Schema SC
 - All DMTF Schema changes and additions going through this subcommittee
 - Schema continues to go on a 3-4 month release cycle
 - Schedule kept going 1 year out to help Alliance Partner planning
 - Release Process allows CR verification and Build automation
 - Visio diagram replacement under investigation
 - CIM 2.38 released, 2.39 in development
 - Common abstract profile definitions (ELE)
 - Initial View Class base classes are now in the Schema, with a few sub classes
 - WGs working on Diagnostics & Security
 - CR Tool in full use
 - CRs are being rendered in XML
 - A tool to fill out the CR template that will improve our automated builds
 - Available to Alliance Partners via website



Ongoing Technical Work

- **Infrastructure Subcommittee**

- CIM v3 definition done
- CIM-RS released
- PUG 1.1 released
- MRP - Machine Readable Profile definition released
- Web Services
 - 1.x going through ISO, 2.x work needs volunteers
- CMDB Federation released use case White Paper (WIP).
- WBEM Infrastructure Modeling – adding new profiles
- Standard Message definition
- Standard Indications 1.2 in development



Ongoing Technical Work

- Platform Management Subcommittee
 - PMCI - Platform Management Controller Interface
 - Embedded chip-to-chip systems management interface
 - Developing more mapping specs for PLDM & MCTP plus NC-SI version next
 - SMBIOS continued maintenance
 - SMBIOS is our most successful standard – in nearly every x86 machine for over a decade
 - SMBIOS being extended to encompass evolving systems
 - SDMP - Server Desktop and Mobile Platforms WG
 - No plans to combine SMASH & DASH implementation requirements documents
 - System View Class and NIC Configuration Profiles Complete
 - Working to resolve open issues in all specs, including wrapper specs
 - VMWG – Virtualization Management WG
 - OVF spun off as separate group, SVPC rechartered as VMWG
 - Working on Profiles and wrapper spec
 - Focus is run time management and migration of virtual systems
 - Hypervisors, Virtual Resources, Virtual Systems (including Partitions), Clustering
 - Virtual Networks
 - NSM - Networking Services Management
 - Re-chartered from Telco to add network services
 - Modernize CIM networking model with the help of SVPC and SDMPWG
 - Adding profiles for commonly found network services – ***Initiative forthcoming***



Ongoing Technical Work

- Cloud SC
 - CMWG – working on next version of CIMI. Holding plug fests and working on interoperability with Interop
 - SEWG – Software Entitlement WG – working on deliverables, white paper released.
 - OVF – Version 2.0 to encompass cloud released, working on vNext
 - CADF – first round deliverables met, working on next set of deliverables



Interoperability Committee

VP of Interoperability – Bob Freund, Hitachi
Three Independent Forums

- **Common Diagnostics Forum (CDM)**
 - Promote plug-fests to test interoperability and test conformance tools
 - CDM conformance test suite in use now
 - Conformance Registry in use now.
- **Systems Management Forum (SMF)**
 - DASH 1.01 conformance test suite nearly ready, DASH 1.1 in the works
 - SMASH 1.0 conformance test suite under way
 - Certification Registry contains over 70 product entries now
- **Virtualization and Cloud Management Forum (VCMF)**
 - Ensure conformance and interoperability of products
 - Make VMAN and Cloud initiatives successful
 - Organize plugfests and other interoperability events

One Sub-Committee

- **Conformance Sub-Committee**
 - Common functions required by forums



Marketing Committee

- **Marketing Committee**

- VP of Marketing- Troy Bieggers, WSI

- **Focused on building awareness within the industry and with IT customers**

- Promoting DMTF standards and activities
- Manage PR and press/analyst relationships
- Attend industry events and place speaking sessions
- Support development & distribution of educational resources
- Create marketing collateral and content for external DMTF website
- Collaborate with member companies & Alliance Partners on co-marketing

- **Sub-Committees**

- Virtualization Management Initiative Subcommittee
- Japan Subcommittee



Process & Incubation Committees

- Run by the VP of Process, Colleen Evans, Microsoft
- Process & Incubator Committees Develop DMTF procedures and oversees Incubators
 - Process documents can be found at <http://www.dmtf.org/about/policies/>
- Currently 2 active incubators: Virtualization Protection Profile, Software Defined Data Center
- Process Change Highlights:
 - Combined DSP4002 & 4004 into DSP4014 (one single process doc)
 - Changing Charters to reflect openness
- Alliance Partner involvement opportunity
 - During DSP Acquisition, Alliance Partners may request an early snapshot to be released as a Work In Progress when specs near completion (0.9?) to provide feedback.
 - Feedback would still need to come in through the feedback portal.
 - DSP request notifications handled through Alliance Committee
 - DSPList is now updated by TC/SC to reflect state of our standards
 - CRs can be released as a WIP to provide external review opportunity.



Alliance Committee

- VP of Alliances is Mark Carlson, Oracle
- Manages Alliance Partners & Academic Alliances
 - Create Work Registers to create relationship where areas of interest and expertise intersect.
 - Facilitates work through Alliance Partner Liaison
 - Scope of work include Joint Releases, leveraging DMTF specification, feedback to/from DMTF, Joint Meetings, APTS & SVM



Opportunities for Alliance Partner Involvement

- Greatest opportunity for involvement is where areas of interest and expertise intersect.
- Examples
 - Working needed schema changes into DMTF Schema
 - PWG, SNIA, OGF, The Green Grid
 - Working together on Profiles
 - PUG & Profiles
 - Would like to see Alliance Partners take advantage of DSP4005 opportunity to notify us that they are working on Profiles.
 - DMTF normatively referencing SMI-S profiles from SMASH Implementation Requirements Specs.
 - Technology submissions from SNIA to DMTF are now out as profiles
 - Working on Registries
 - DSP0228 has been modified to allow any standards organization to use it.
 - Joint Releases of specification
 - **OMG**
 - DSP0219 come out for DMTF Standard. It is covered by the work register between DMTF and OMG.
 - **TMF**
 - CIM/SID Harmonization Work – joint specification release!
 - Work together to ensure specifications enable solutions
 - **UEFI**
 - Working with DMWG, SMWG, PMCI & Core to see BIOS Modeling, Registries and Access Methods Specified
 - **TGG**
 - Working with DMWG on modeling



Opportunities for Academic Partner Involvement

- There is still plenty of work to be done
- The DMTF maintains a list of possible research areas
 - <http://dmtof.org/education/academicalliance>
 - Help us get the word out!
- Examples
 - Profile & Model Development ideas:
 - GP/GPU, TPM, Display Control (Graphics and LCD), Serial Port, Parallel Port
 - Docking station modeling, Optical drive management, USB & device, Bluetooth
 - Cardbus (SD Card, MMC, etc), IR Device, 1394, Broadband device
 - GPS, Local Storage (anything not covered by SMI-S), Audio, Webcam
 - Generic IO Device (enable/Disable/description like a Logical Device profile inherited from ELE).
 - Generic Services, Operating System Management, Networking models
 - Comparison of DMTF interfaces in the same and similar markets.
 - Performance evaluation of DMTF interfaces (how heavy weight is CIM via the protocols on various implementations).
- Send us your ideas – we will get the word out.



Events - SVM, APST & MDC

- SVM
 - This workshop is dedicated to academic research on standards and new technologies for systems and virtualization management, with a focus on cloud computing.
 - <http://www.dmtf.org/news/events>
- Alliance Partner Technical Symposium
 - DMTF Sponsored opportunity for gathering of multiple standards bodies to discuss issues and exchange ideas pertaining to work registers & other standards activities in the management space
 - <http://www.dmtf.org/news/events>
- Management Developers Conference
 - <http://mandevcon.com/>
 - Opportunity for educational & collaboration with individuals leading industry standardization efforts



How to Work with the DMTF

- **Join the DMTF**
 - Scope of the DMTF is clear: it's all about management
 - Drive specifications through TC, conformance through the Interoperability Committee, messaging through the Marketing Committee and ground breaking areas through Incubators and International partnerships through Alliance and Regional Chapters
- **Members**
 - Active participation brings about standards based on best practices
 - Drive standards through participation
 - Consider bringing work into the DMTF
- **Alliance Partners**
 - DMTF Originated Work
 - **Feedback from the DMTF**
 - DSP Acquisition
 - Work In Progress Release capability
 - **Feedback into the DMTF**
 - Alliance Liaison
 - Joint Member (companies that are members of both organizations).
 - The DMTF Technology Adoption Policy
 - The DMTF Feedback Portal
 - Alliance Partner Originated Work
 - Similar mechanisms would speed things along if you wish DMTF input
- **Academic Partners**
 - Let us know what you are working on.
 - Let your colleagues know the opportunities for involvement,
 - idea exchange, advice from industry leaders



Enjoy the Conference!

www.dmtf.org