



ECAP470: CLOUD COMPUTING

Dr. Tarandeep Kaur
Assistant Professor

Learning Outcomes



After this lecture, you will be able to,

- ✓ Know about the open cloud consortium and the distributed management task force.
- ✓ Understand the cloud standards with detailed exploration of the standards for application developers, Standards for messaging, Standards for security.

Standards in Cloud Computing

In Internet circles, everything eventually gets driven by a working group of one sort or another.

- Working group is an assembled, cooperative collaboration of researchers working on new research activities that would be difficult for any one member to develop alone.
- Sometimes, they are also referred to as task groups or technical advisory groups.

The Open Cloud Consortium (OCC)

- Supports the development of standards for cloud computing and frameworks for interoperating between clouds;
- Develops benchmarks for cloud computing; and
- Supports reference implementations for cloud computing, preferably open source reference implementations.

The Open Cloud Consortium (OCC)

The OCC is organized into several different working groups-

Working Group on Standards
and Interoperability for Clouds

Working Group on Wide Area
Clouds and the Impact of
Network Protocols on Clouds

The Open Cloud Consortium
(OCC) Working Groups

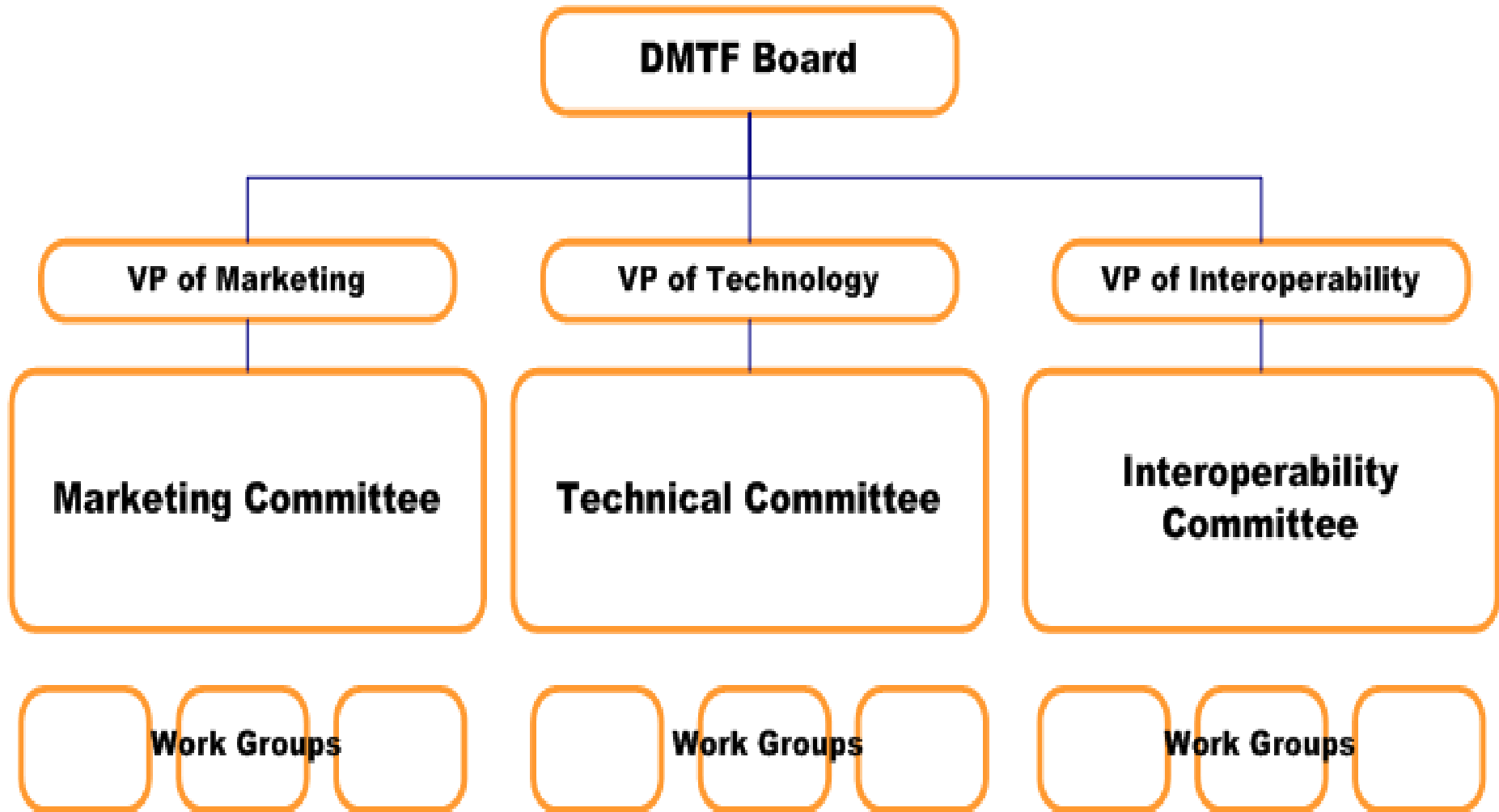
The Open Cloud Test-bed
Working Group

Working Group on Information
Sharing, Security, and Clouds

Distributed Management Task Force

With more than 3,500 active participants, the Distributed Management Task Force, Inc. (DMTF) is a not-for-profit, vendor-neutral, collaborative body that is leading the development, adoption, and unification of management standards and initiatives for desktop, enterprise, and Internet environments.

DMTF Organization



DMTF Work Groups and Committees



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graph TD; A[DMTF Board] --> B[Technical Committee]; B --> C[Interoperability Committee]; C --> D[Marketing Committee];
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DMTF Board

Technical
Committee

Interoperability
Committee

Marketing
Committee

DMTF Standards and Initiatives

DMTF is leading the development, adoption, and unification of management standards and initiatives for desktop, enterprise and Internet environments.

DMTF Standards and Initiatives

Some of the approved specifications that the DMTF has made public.

- Common Information Model (CIM)
- Web-Based Enterprise Management (WBEM)
- Systems Management Architecture for Server Hardware (SMASH) Initiative

DMTF Standards and Initiatives

Some of the approved specifications that the DMTF has made public.

- Alert Standard Format (ASF)
- System Management BIOS (SMBIOS)
- Virtualization Management Initiative (VMAN)
- Open Virtualization Format (OVF)

Standards for Application Developers

Purpose of application development standards is to ensure uniform, consistent, high-quality software solutions.

- Browsers (Ajax)
- Data
 - XML- Extensible Markup Language (XML)
 - JavaScript Object Notation (JSON)
- Solution Stacks
 - LAMP
 - Linux, Apache, PostgreSQL, and PHP(or Perl or Python)

Standards for Messaging

A message is a unit of information that is moved from one place to another.

1. Simple Message Transfer Protocol (SMTP)
2. Post Office Protocol (POP)
3. Internet Messaging Access Protocol (IMAP)
4. Syndication (Atom, Atom Publishing Protocol, and RSS)
5. Web Services (REST)- Representational State Transfer
6. SOAP (Simple Object Access Protocol)
7. Communications (HTTP, SIMPLE, and XMPP)

Standards for Security

Define the processes, procedures, and practices necessary for implementing a security program.

Standards for Security

- Security Assertion Markup Language (SAML)
- Open Authentication (OAuth)
- OpenID
- SSL/TLS

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That's all for now...