DMTF Cloud Management Working Group Charter
Dated 2014-01-16

The information provided below is subject to change and reflects the current knowledge of the Working Group.

Management Problem(s) and Environment

A new computing paradigm is quickly emerging called Cloud Computing. Vendors have embraced the need to provide interoperability between enterprise computing and cloud service providers.

Virtualization technology and the evolution from software packages that can be created and deployed as a collection of virtual images is becoming the primary focus for delivering and managing software solutions into enterprise customers today. As these customers look to also take advantage of cloud computing, extensions are needed to enable interactions between private clouds within enterprises and between private and public cloud providers to exploit this emerging business model.

The Cloud Management Working Group will focus on addressing the management interfaces between the cloud service consumer/developer and the cloud service provider. The Working Group will also need to address the security mechanisms required to enable interoperability.

Working Group Scope & Charter

The CMWG will develop a set of prescriptive specifications and sample implementations that deliver architectural semantics as well as implementation details to achieve interoperable management of clouds between service requestors/developers and providers. This Working Group will propose an extended resource model that captures the key artifacts identified by implementation experiences and input from use case requirements identified in the alliance partner work of the GICTF.

The primary focus of this Working Group will be modeling the management of cloud services and the operations and attributes of the cloud service lifecycle. The scope of this activity is cloud resource management of Infrastructure as a Service (IaaS), including, multi-cloud, inter-cloud, cloud brokers, and hybrid clouds. The cloud resources being managed include: computing (virtual machines), storage, and networks. The management will include constraints and policies (SLAs, QoS, etc.), control, configuration, provisioning, monitoring/reporting, and auditing on these resources.

The CMWG will also need to work closely with the Virtualization Management and OVF Working Groups on the evolution of their model as middleware and applications are brought into the composite image, including the aspects of personalization and policy controls for those elements within an OVF package. The CMWG will investigate mappings to DMTF's OVF and SNIA's Cloud Data Management Interface (CDMI), and other infrastructure (server, storage and network) models that may be prevalent in the industry.

It is expected that the CMWG will need to develop new modeling constructs, including federation/model interchange, to aggregate or roll-up the various domain models including compute, network, and storage

Business Justification

This effort will enable new cross-cloud computing management that will support this emerging market. This initiative would provide benefit to our members on several fronts:

1. Enable the use of cloud computing within enterprises and improve the interoperability between cloud platforms via open cloud resource management standards.
2. Increase interoperability of management systems that manage cloud resources
3. Enable cloud workload portability.
4. Provide management consistency cross cloud and enterprise platforms.

Expected WG Input

The Open Cloud Incubator has produced the following documents that may be of interest to the CMWG to build on:

1. Use Cases and Interactions for Managing Clouds (whitepaper from the cloud incubator) DSP IS0103
2. Architecture for Managing Clouds (whitepaper from the cloud incubator) DSP IS0102
3. Other notes and white papers as necessary

Working Group Deliverables

1. Cloud Service Management Models
2. Cloud Infrastructure Management Interface (CIMI) Specification
3. CIMI profiles and extensions
4. CIMI sample implementation(s)
5. Other notes and white papers as necessary

Alliance Partnerships

1. Cloud Security Alliance
2. Open Grid Forum
3. Storage Networking Industry Association
4. TeleManagement Forum
5. GICTF
6. ODCA
7. Others – TBD

Reliance/Coordination with Other Working Groups

1. Virtualization Management Working Group
2. OVF Working Group
3. Infrastructure Subcommittee
4. Cloud Management Subcommittee
5. Network Services Management Working Group
6. Security Working Group
7. CADF Working Group
8. OSDDC Incubator
9. Others TBD

DMTF Contacts

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To join the DMTF and/or the WG, see http://www.dmtf.org/join/ and http://members.dmtf.org/apps/org/workgroup/cmwg/.