

System Virtualization, Partitioning, and Clustering Work Group Charter

July 29, 2010

The information provided below is subject to change and reflects the current knowledge of the work group.

Management Problem(s) and Environment

Vendors in the computer industry have provided clusters of machines in order to provide for high availability services, or computational scaling. Vendors have also embraced the need to provide flexibility in the utilization of a single computer's resources by virtualizing these resources for use across multiple virtual machine images on a single computer, or by partitioning the set of resources into subsets each of which is assigned to an individual 'logical' machine.

Whether multiple machine images are available on a single hardware platform, multiple separate machines are joined into a single cluster, or combinations of clusters and virtualization, the management of such aggregations of systems (physical, virtual, clusters) must provide the ability to determine the configuration of the systems, and to manage them with the requisite security, reliability, availability, and extensibility. In addition, simplification of the total overall system management of such multiple machine images must be provided.

Working Group Charter

The Distributed Management Task Force (DMTF) has chartered the System Virtualization, Partitioning, and Clustering (SVPC) work group with the following objectives:

- Create profiles for the management of:
 - computer systems which are clustered for high availability or high-performance computing;
 - virtualization of computer systems and the associated resources;
 - partitioning of computer systems and the associated resources;
 - image formats for the provisioning and management of single and groups of virtual systems optionally providing an application or service.
- Create specifications for virtual machine image formats.
- Create specifications for interoperability of virtualization management.
- White papers in support of the above objectives.
- Work with DMTF Interoperability committee, Virtualization Management Forum and System Management Forum to support an interoperability initiative for virtualization management.

Alliance Partnerships

Alliance partnerships are required with the following organizations in the specified areas:

- SNIA: Storage Networking Industry Association

Reliance/Coordination with other WG Models

The SVPC works with the following sub-committees and work groups to ensure consistency with their models:

- Platform Management Sub-Committee
 - Cloud Management Work Group (CMWG)
 - Server Desktop & Mobile Work Group (SDMWG)
 - Platform Profiles Work Group
- Infrastructure Sub-Committee
 - Architecture Work Group
 - Profile Infrastructure Work Group
 - Profile Infrastructure Work Group
 - WBEM Infrastructure Modeling Work Group
- Schema Sub-Committee
 - Metrics Work Group
 - Security Work Group

Prior Work

| DSP# | Title | DMTF Version |
|---------|--|--------------|
| DSP1041 | Resource Allocation Profile | 1.1.0 |
| DSP1042 | System Virtualization Profile | 1.0.0 |
| DSP1043 | Allocation Capabilities Profile | 1.0.0 |
| DSP1044 | Processor Resource Virtualization Profile | 1.0.0 |
| DSP1045 | Memory Resource Virtualization Profile | 1.0.0 |
| DSP1047 | Storage Resource Virtualization Profile | 1.0.0 |
| DSP1057 | Virtual System Profile | 1.0.0 |
| DSP1059 | Generic Device Resource Virtualization Profile | 1.0.0 |
| DSP2013 | Virtualization White Paper | 1.0.0 |
| DSP1050 | Ethernet Port Resource Virtualization Profile | 1.0.0 |
| DSP1097 | Virtual System Ethernet Switch Profile | 1.0.0 |
| DSP0243 | Open Virtualization Format Specification | 1.0.0 |
| DSP8023 | OVF Envelope XSD | 1.0.0 |
| DSP8027 | OVF Environment XSD | 1.0.0 |
| DSP2017 | Open Virtualization Format Whitepaper | 1.0.0 |
| DSP2021 | Open Virtualization Format Example | 1.0.0 |
| DSP0243 | Open Virtualization Format Specification | 1.1.0 |
| DSP8023 | OVF Envelope XSD | 1.1.0 |
| DSP8027 | OVF Environment XSD | 1.1.0 |

Current Work – Overview, Deliverables and Timeline

Open Virtualization Format 2.0 – Specifications in development

| DSP# | Title | DMTF Version | Target | Technical Editor |
|---------|--|--------------|--------|------------------|
| DSP0243 | Open Virtualization Format Specification | 2.0.0 | 2010Q4 | Steffen Grarup |
| DSP8023 | OVF Envelope XSD | 2.0.0 | 2010Q4 | Steffen Grarup |
| DSP8027 | OVF Environment XSD | 2.0.0 | 2010Q4 | Steffen Grarup |
| DSP2017 | Open Virtualization Format Whitepaper | 2.0.0 | 2010Q4 | Rene Schmidt |
| DSP2021 | Open Virtualization Format Example | 2.0.0 | 2010Q4 | Rene Schmidt |

Virtualization Management 2 – Specifications in development

| DSP# | Title | DMTF Version | Target | Technical Editor |
|---------|--|--------------|--------|-------------------|
| DSP6041 | Resource Allocation Profile | 2.0.0 | 2010Q4 | Michael Johanssen |
| DSP6042 | System Virtualization Profile | 2.0.0 | 2010Q4 | Michael Johanssen |
| DSP8026 | SVPC message registry | 2.0.0 | 2010Q4 | Michael Johanssen |
| DSP6044 | System Virtualization Processor Resource Profile | 2.0.0 | 2011Q2 | Larry Lamers |
| DSP6045 | System Virtualization Memory Resource Profile | 2.0.0 | 2011Q2 | Larry Lamers |
| DSP6050 | System Virtualization Ethernet Port Resource Profile | 2.0.0 | 2011Q2 | John Parchem |
| DSP6081 | System Virtualization Migration Profile | 2.0.0 | 2011Q2 | Michael Johanssen |
| DSP6047 | System Virtualization Storage Resource Profile | 2.0.0 | 2011Q2 | Michael Johanssen |
| DSP6097 | Virtual System Ethernet Switch Profile | 2.0.0 | 2011Q2 | John Parchem |
| DSP2013 | System Virtualization White Paper | 2.0.0 | 2011Q3 | Larry Lamers |
| DSP8049 | Network Port Profile XML Schema | 1.0.0 | 2010Q4 | Hemal Shah |
| DSP2025 | Virtual Networking White Paper | 1.0.0 | 2010Q4 | Murali Rajagopal |

Future Work

Virtualization Management Future Work - Near term

| DSP# | Title | DMTF Version | Target | Technical Editor |
|---------|--|--------------|--------|------------------|
| DSP1093 | Multi-System Virtualization Profile | | | |
| DSP1055 | High Performance Computing Cluster Profile | | | |
| DSP1056 | Cluster Resource Automation Service Profile | | | |
| DSP1094 | High Availability Cluster Resource Profile | | | |
| DSP1098 | File Browser Profile | | | |
| DSP1046 | Removable Media Resource Allocation Profile | | | |
| DSP1078 | Serial and Parallel Controller Resource Allocation Profile | | | |
| DSP1079 | Display Controller Resource Allocation Profile | | | |
| DSP6049 | Storage Adapter Resource Virtualization Profile | | | |
| DSP0250 | System Virtualization Wrapper Specification | | | |

Virtualization Management Future Work - Long term

| DSP# | Title | DMTF Version | Target | Technical Editor |
|------|------------------------------------|--------------|--------|------------------|
| | Physical Partitioning White Paper | | | |
| | Virtual Keyboard, Mouse | | | |
| | Console | | | |
| | Farm | | | |
| | OVF Management | | | |
| | Virtual System Template Management | | | |

DMTF Contacts

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Link to Subteam Charter(s)

SVPC Virtual Networking sub-group <http://www.dmtf.org/apps/org/workgroup/svpc-iov/description.php>

To join the DMTF see <http://www.dmtf.org/join/>

To join the SVPC see <http://www.dmtf.org/apps/org/workgroup/redundancy/>