Network Services Management Working Group Charter (NSMWG)
January 16 2012
Version 2.1 Draft

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

Management Context

The blurring and merging of the legacy boundaries between Enterprise, Service Provider (SP), and Carrier networks has led to a re-architecture of traditional network management solutions.
The commoditization of many revenue producing network services and devices has led to a major consolidation of historically separate network components with separation and multitenant security being pushed to software solutions rather than hardware designs.

The recent introduction of virtualized and Cloud network infrastructure and services also provides the impetus to refocus the Telco Working Group to a more reasoned and useful charter and to rename it to the Network Services Management Working Group. This name better reflects the focus.

Many of the DMTF efforts today to address the Cloud and Virtual Network management space are focused on L2 with modeling and profile efforts stopping at the Ethernet Port or Switch.

There is then an attendant demand to provide unified management profiles for the RoutED and RoutING layers and services that can be used to manage both the Physical / Logical (legacy) and the new Virtual Network. It is imperative that this body of work dovetail into and support fully any and all other Cloud and Virtual Network management efforts underway or in Charter in other Working Groups (WG).

Implementers and Solutions Providers that are using DMTF CIM-based solutions require integration into a mature OSS/BSS tool set as well as require mapping of new management solutions into existing NMS systems architecture. The Network Services Management WG will provide this focus as a result of the revised Charter and work scope.

At a high level, the results of the Network Services Management WG efforts will provide for significant simplification and reduction of costs due to the complexity that SPs and Enterprise users face today when implementing multiple hardware and software management solutions to address both the Network Admin and Sys Admin demands to manage any virtual IAAS, PAAS, or SAAS solution.

In the emerging Virtual Network and the Cloud IAAS technologies there is a shift from hardware network devices and services (appliances, physical routers and switches etc.) to software-based network devices and services (Virtual Appliances and Virtual Machines). It is large-scale systems that provide the hosting services. This shift has strained the legacy semantics and syntax in use in traditional network management architectures and solutions. The Network Services Management WG's efforts will seek to unify this disparity and provide common management profiles built, in most cases, on the prior work done in other WGs or by extending the work underway and Chartered in other WGs.

Working Group Charter

The Distributed Management Task Force (DMTF) has chartered the Network Services Management WG (NSM WG) with the following objectives:
- Augment the existing CIM profiles addressing the management requirements for the RoutED and RoutING protocols and services for the physical, logical, and virtual technologies and infrastructures.
  - The RoutED protocols include TCP, UDP, IPv4 and IPv6.
  - The RoutING protocols include the dominant EGP and IGP solutions in place in the Enterprise and SP markets today and should include BGP, OSPF, ISIS and Static Routing.

- Collect and prioritize Use Cases modeling resources and services required to support SP operations. This focus will initially be on Cloud and Virtual Network Management of L3 and above.

- Extend the Use Cases that other Working Groups are working on into the Network Services management domain to include RoutED and RoutING protocols and services for the physical, logical, and virtual technologies.

- Extend existing CIM profiles to ensure adequate coverage for the SP and Carrier markets, including:
  - Profiles addressing NMS and OSS integration and support through DMTF or other common management APIs for L3 and above.
  - Profiles addressing that area above the existing SVPC Virtual Networks work (L3 and above) specific to SP and Enterprise physical and virtual infrastructures.
  - Adequate coverage by the CIM model of the standard telecommunications-grade programmatic interfaces for intelligent hardware and virtual systems' management.
  - Any DMTF / emerging Cloud / Virtual Network API set.

- Focus on the old Networks WG work items and bring to completion those profiles deemed critical for this new charter.

- Create new profiles for the management of:
  - New Network features, functionality, and services that have resulted from the introduction of Cloud and Virtual Network solutions in the industry.
  - RoutED and RoutING protocols not covered in the old Networks WG or in other WG Charters.

- Facilitate the work on Harmonization of Common Information Model (CIM) and Management Interfaces developed and maintained by DMTF with Information and Data Models developed by other Standards Development Organizations (SDO) in the context of end-to-end service delivery and management (International Telecommunication Union (ITU-T), TM Forum, 3rd Generation Partnership Project (3GPP), Internet Engineering Task Force (IETF) – specifically related to NetConf Management Protocol, etc.). This work will be done as a joint effort between this Working Group and similar Working Groups in peer organizations and in conjunction with other DMTF Working Groups

- Augment the existing CIM profiles that address the management requirements for the RoutED and RoutING protocols and services for the physical, logical, and virtual technologies.

- Create specifications for interoperability of Virtual Network and Network device and service management above L2.

- Create white papers in support of the above objectives.

- Work with DMTF System, Virtualization, Platform and Clustering Working Group (SVPC), SVPC Virtual Networking, Cloud Management WG, Cloud Audit Data Federation Working Group, Infrastructure Subcommittee, Schema Subcommittee, and other DMTF groups and committees to ensure support for any and all interoperability initiatives and management initiatives for virtualization management.

Alliance Partnerships

Alliance partnerships with the following organizations are required in the specified areas:
- TM Forum. A Work Register Addendum is already in place with the TM Forum covering aspects of this revised and old Charter items.

Reliance/Coordination with other WGs

The NSMWG works with the following subcommittees and Working Groups to ensure consistency with their work:
- Platform Management Subcommittee
- Cloud Management Working Group (CMWG)
- Cloud Audit Data Federation Working Group (CADFWG)
- Server Desktop & Mobile Platforms Working Group (SDMPWG)
- Infrastructure Subcommittee
- Architecture Working Group
- Profile Infrastructure Working Group

- WBEM Infrastructure Modeling Working Group
- Schema Subcommittee
- Security Working Group
- System, Virtualization, Platform and Clustering Working Group (SVPC) and subgroups

Related Work

The following work is assumed to relate directly to the work undertaken by the NSMWG.

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
DSP0263	Cloud Infrastructure Management Interface (CIMI) Model and REST Interface over HTTP	1.0.0
DSP0264	Cloud Infrastructure Management Interface – Common Information Model (CIMI-CIM) Specification	1.0.0
DSP2027	Cloud Infrastructure Management Interface Primer	1.0.0

Current Work – Overview, Deliverables and Timeline

Current work Items of TNWG that will be completed after the WG name change to the NSMWG

DSP#	Title	DMTF Version	Target	Technical Editor
DSP2029	Joint TM Forum/DMTF Whitepaper titled "Cloud Management for Communications Service Providers"	1.0.0	Feb 2012	Alex Zhdankin
	TM Forum Work Register update	V1.5	Feb 2012	Alex Zhdankin
	Old Networks WG L3 items	WIP	TBD	Jeff Wheeler

Prior Work

The Network Services Management Working Group has published the following specifications:

DSP#	Title	DMTF

		Version
DSP2009	DMTF/TMF Model Alignment, SID Logical Resources and CIM Networks Sub-Modes	1.0
DSP2004	DMTF/TMF Model Alignment, SID Physical Sub-Model	1.0

Initial NSMWG Work Items

DSP#	Title	DMTF Version	Target	Technical Editor
DSP2029	Joint TM Forum/DMTF Whitepaper titled "Cloud Management for Communications Service Providers"	1.0.0	Feb 2012	Alex Zhdankin
	Cloud SLA Management and Metrics (L3 Network and above)		TBD	Alex Zhdankin
	Prioritized list of the work items generated from dialog with other WGs (SVPC, CMWG)		Feb 2012	Alex Zhdankin

Future Work

RoutED and RoutING Management Profile and Model work

DSP#	Title	DMTF Version	Target	Technical Editor
	IPv4 Management Profile work			Jeff Wheeler
	IPv6 Management Profile work			Jeff Wheeler
	L3 and above Routing Services work			Jeff Wheeler
	L3 and above Network Services work			Jeff Wheeler
	L3 and above Firewall Services work			Jeff Wheeler
	L3 and above Load Balancer work			Jeff Wheeler

DMTF Contacts

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Link to Subteam Charter(s)

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

To join the NSMWG see **http://members.dmtf.org/apps/org/workgroup/nsm**