

## **Network Services Management Working Group Charter Dated 2014-03-28**

**The information provided below is subject to change and reflects the current state of the Working Group charter within the DMTF.**

### **Management Problem(s) and Environment**

The blurring and merging of the legacy boundaries between Enterprise and 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 multi-tenant security being pushed to software solutions rather than hardware designs.

The recent introduction of virtualized and Cloud network infrastructure and Services has also provided the impetus to recast the Telco Working Group to a more reasoned and useful charter and rename it to the Network Services Management Working Group (WG) for the name to better reflect the focus.

Many of the DMTF efforts today to address the Cloud and Virtual Network management space are focused on layer 2 of network 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 (new). It is imperative that this body of work dovetail into and support fully any / all other Cloud and Virtual Network management efforts underway or in Charter in other WGs.

Implementers and Solutions Providers using DMTF Common Information Model (CIM)-based solutions require integration into a mature operation and business support system (OSS/BSS) tool set as well as mapping of new management solutions into existing network management systems (NMS) architecture. The Network Services Management WG will provide this focus as a result of the revised Charter and work scope.

The results, at a high level, 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 Administrator and System Administrator demands to manage any virtual Infrastructure as a Service (IAAS), Platform as a Service (PAAS), or Software as a Service (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 providing 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 scope of work for the Network Services Management Working Group (NSMWG) is to achieve the following objectives:

- Augment the existing CIM profiles and CIM Schema (via Schema Subcommittee (SC)) 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 Transmission Control Protocol (TCP), User Datagram Protocol (UDP), Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6).
  - The RoutING protocols include the dominant Exterior Gateway Protocol (EGP) and Interior Gateway Protocol (IGP) solutions in place in the Enterprise and SP markets today and should include Border Gateway Protocol (BGP), Open Shortest Path First (OSPF), Intermediate System to Intermediate System (ISIS) and Static Routing.
- Collect and prioritize Use Cases modeling resources and services required to support SP operations. This focus will be on Cloud, Virtual, and Hybrid Network Management.
- 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 and change CIM Schema via Schema SC to ensure adequate coverage for the SP and Carrier markets.
  - This would include Profiles addressing NMS and OSS integration and support through DMTF or other common management application programming interfaces (API)s for Virtual and Hybrid Networks, specific to SP and Enterprise.
  - Support the 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.

- 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 nor in other WG Charters.
- Facilitate the work on Harmonization of 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. 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 addressing 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.
- Create white papers in support of the above objectives.
- Work with DMTF Virtualization Management Working Group (VMWG), Open Virtualization Format Working Group (OVFWG), Cloud Management Working Group (CMWG), Cloud Audit Data Federation Working Group (CADFWG), Infrastructure Subcommittee, Schema Subcommittee, and other DMTF groups and committees to ensure support any and all interoperability initiatives and management initiatives for virtualization and network management.
- The NSMWG will also own the following tasks related to its area of focus:
  - Definition of the DMTF Management Initiative NETMAN

## **Reliance/Coordination with other DMTF Groups**

The NSMWG works with the following subcommittees and working groups to ensure consistency with their work:

- Server Desktop & Mobile Platforms Working Group (SDMPWG )
- Virtualization Management Working Group (VMWG)
- Cloud Management Subcommittee
- Cloud Management Working Group (CMWG)
- Cloud Audit Data Federation Working Group (CADFWG)
- Open Virtualization Format Working Group (OVFWG)
- Infrastructure Subcommittee
- Schema Subcommittee
- Security Working Group

## **DMTF Contacts**

Contact chair: [nsmwg-chair@dmf.org](mailto:nsmwg-chair@dmf.org)

**To join the DMTF and/or the Network Services Management Working Group, see <http://www.dmf.org/join/> and <http://members.dmf.org/apps/org/workgroup/nsmwg>.**