

Telecommunications and Networks Work Group Charter (TNWG)

July24, 2010
Version 2.0 Final

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 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 refocus the Telco WG to a more reasoned and useful charter.

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 which 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 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 Telco & Networks WG will provide this focus as a result of the revised Charter and work scope.

The results, at a high level, of the Telco & Networks 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 providing the hosting services. This shift has strained the legacy semantics and syntax in use in traditional network management architectures and solutions. The Telco and Networks 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 Telecommunications and Networks WG (T&N WG) work group 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 existing CIM Profiles 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 APIs for L3 and above.

- Includes the Profiles addressing that area above the existing SVPC Virtual Networks work (L3 and above) specific to SP and Enterprise physical and virtual infrastructures.
 - 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.
- 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 nor 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 workgroup and similar workgroups in peer organizations and in conjunction with other DMTF Workgroups
 - 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 above L2.
 - White papers in support of the above objectives.
 - Work with DMTF Interoperability committee, Virtualization Management Forum, System Management Forum, Schema Sub Committee, SVPC, SVPC Virtual Networking, OVF, and other DMTF groups to ensure support any and all interoperability initiatives and management initiatives for virtualization management.

Alliance Partnerships

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

- TeleManagement Forum. There is already in place a Work Register Addendum with the TMF covering aspects of this revised and old Charter items.

Reliance/Coordination with other WGs

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

- Platform Management Sub-Committee
- Cloud Management Work Group (CMWG)
- Server Desktop & Mobile Work Group (SDMWG)
- Physical Platform Profiles Work Group (PPPWG)
- Infrastructure Sub-Committee
- Architecture Work Group
- Profile Infrastructure Work Group
- WBEM Infrastructure Modeling Work Group
- Schema Sub-Committee
- Metrics Work Group
- Security Work Group
- System, Virtualization, Platform and Clustering Work Group (SVPC) and subgroups

Related Work

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

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

Current TNWG Items

DSP#	Title	DMTF Version	Target	Technical Editor
	Cloud Metrics SDO Survey	WIP	Q4	Jeff Wheeler
	TMF Work Register Addendum items	WIP	Q4	Alex Zhdankin
	Old Networks WG L3 items	WIP		Jeff Wheeler
	CIM /SID Harmonization with TMF	WIP		Alex Zhdankin

Prior Work

The Telecommunications Working Group has the objective of producing a number of specifications, describing use cases, reference models, interoperable profiles and sub profiles with the focus on a common approach to management and service delivery in converged multi-technology physical and virtual network environment. The specific deliverables, in priority order, being developed are:

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
DSP2019	Justification for DMTF/TMF Management Architecture Harmonization	Publication pending
DSP0251	Connectionless, Connection Oriented Convergence, TP Modeling and Harmonization	Publication pending

DSP2020	CIM-to-HPI Mapping Guideline Whitepaper	Publication pending
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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

Initial TNWG Work Items

DSP#	Title	DMTF Version	Target	Technical Editor
	Priority List of initial work scope from old Networks WG items		Q4	Jeff Wheeler
	Priority List of initial work scope from dialog with other WGs		Q4	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 TNWG see <http://www.dmtf.org/apps/org/workgroup/tnwg/>