Making NFV Real

As a new TM Forum project led by the world's leading providers and suppliers, TM Forum's ZOOM Program will:
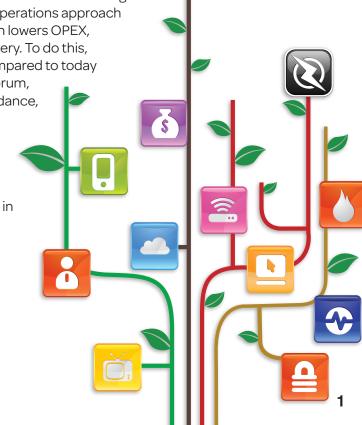
- Clearly define a vision of the new virtualized operations environment necessary to enable the delivery and management of virtualized network and services while enabling both low cost operations and innovation
- Define an architecture that is based on the seamless interaction between physical and virtual components that are easily and dynamically assembled into personalized services
- Help service providers completely rethink their business and operations practices to achieve the profound flexibility and agility needed to successfully leverage virtual networks and services
- Develop guidance on adapting to new business models and provide best practice on how to monetize the new service enabled by virtualization
- Provide tangible business and operational blueprints to successfully navigate the transformation journey, enabled by virtualization covering people, process and system impacts, and reducing the cost and risk of transformation
- Identify and define new security approaches that will protect infrastructure, functions and services across all layers of software and hardware
- Provide best practice on the use of open systems and open source in the realization of virtualization
- Complement ongoing work within ETSI, working together to provide the management platform and transformation guidance to support successful deployment of NFV

TM Forum's ZOOM Program is organized along four key themes, with key deliverables planned for Frameworx 14.5 and beyond.

Theme #1: DevOps Transformation Framework for the Digital Ecosystem

User story: As a leader in the CTO/CIO organization accountable for transforming the company to support virtualization, I need to move to an operations approach that supports a dramatically more agile service lifecycle which lowers OPEX, CAPEX and supports continuous service innovation and delivery. To do this, I need to understand what operationally needs to change compared to today when I manage hybrid and virtualized operations. From TM Forum, I will receive the how to support, the best practice guides, guidance, blueprints for operational models and virtualization-ready Frameworx enhancements necessary to succeed in this transformation.

Vision/Goals: With the DevOps Transformation Framework, TM Forum sets a clear vision of what the digital world requires in terms of approach to hybrid and virtualized operations, specifically outlining how to transform from SysOps/NetOps to an agile DevOps approach to introduce new services that make it possible to compete in a digital world.

Planned deliverables include:

- Quick Insight ebook: DevOps Transformation Framework for the Digital Ecosystem
- Information models based on Information Framework extensions to allow the necessary automation of DevOps processes for managing virtualized services though out their lifecycle, including policy management
- OSS futures briefing and framework addressing the need for DevOps processes and OSS transformation to a modular set of orchestrated management services that can be composed to match dynamically composed network services based on virtualized functions
- Catalyst demonstrating Policy Management for virtualized services
- Catalyst demonstrating DevOps operations controlling services across multiple data centers and interconnected with dynamic SLA managed WAN

Theme #2: Blueprint for End-to-End Management

User story: As an operations executive responsible for planning and operating the end-to-end management of services, I need to understand how to manage services end-to-end across multiple providers on a hybrid of physical and virtualized infrastructure. To do this, I need to extend my current end-to-end management architecture. I need an information model to manage and correlate diverse and disparate data from managed systems and address the out of scope management areas for ETSI MANO. From TM Forum, I will receive the how to support, the best practice guides, the end-to-end management framework and Frameworx enhancements (including information model) to enable end-to-end management.

Vision/Goals: With Blueprint for End-to-End Management, TM Forum defines the essential requirements for effective management of physical and virtualized services end-to-end across multiple provider environments, specifically outlining how to make end-to-end management happen and what common practices, architectural and integration principles are needed to get there.

Planned deliverables include:

- An ebook on how to make the transition to DevOps happen from a cultural, organizational and technical perspective
- DevOps Transformation Best Practice Guide drawing from experiences from a number of Catalyst activities during the year
- Operational model blueprints
- Virtualization-ready Frameworx enhancements necessary to succeed in this transformation

Theme #3: Operations and Procurement Readiness

User story: As a procurement executive responsible for sourcing solutions for hybrid environments of physical and virtual infrastructure including NFV, I need to understand the key procurement process/organizational/ operational changes that are necessary to reap the benefits of increased service agility as well as opportunities to reduce OPEX and CAPEX. To do this, I need to understand the best practices and requirements that need to be managed throughout the sourcing lifecycle for building agile services in a hybrid environment. From TM Forum, I will receive the how to support, the Best Practice Guides and the Procurement Lifecycle Checklists that will enable me to set the relevant requirements on my sourcing process to manage the full service lifecycle across multiple providers including: RFx Requirements, selection, acquisition, on-boarding, acceptance testing and in-life operational support aspects.

Vision/Goals: With Operations and Procurement Readiness, TM Forum will identify the key requirements (including technical, business, organizational, and cultural changes) necessary for service providers to include when sourcing agile services in a hybrid environment, specifically outlining how to adhere to these requirements throughout the full sourcing lifecycle. This will help meet the NFV promise of service agility (slashing TTM for new services), OPEX reductions (NetOps to DevOps), and CAPEX reductions (migrate from specialized expensive telco hardware to standard low-cost IT fabric).

Planned deliverables include:

- An ebook on what is required to change from an organizational, operational and process perspective
- Operations and Procurement Readiness Best Practice Guide drawing from experiences from a number of Catalyst activities during the year
- Procurement Lifecycle checklists that will enable you to set the relevant requirements on the sourcing process to manage the full service lifecycle across multiple providers, including: RFx requirements, selection acquisition, on-boarding, acceptance testing and in-life operational support aspects

#4: Open Source Direction

User story: As an industry participant, I need to understand the TM Forum approach to the use of open source for acquiring open solutions that support management and operations, and how TM Forum is positioned with other industry open source approaches. To do this, I need to understand how open source principles are applied in ZOOM to the management of agile services in a hybrid environment. From TM Forum, I will receive a positioning document outlining how other open source initiatives (e.g., OPNFV) can consume the results produced by the ZOOM project, the focus of TM Forum's open source efforts, its alignment to other open source initiatives, and the industry in general.

Vision/Goals: TM Forum has a pragmatic business driver led approach to the use of open source, and has a track record in using it to develop and test management interfaces. It plans to do the same when the requirements and business drivers for its use in management and operations have been established and qualified with it members.

Planned deliverable include:

- Positioning paper on open source for ZOOM/NFV (addressing interoperability-interfaces)

Key business drivers

- Take advantage of NFV, SDN and other virtualization technologies to create a fully virtualized IT infrastructure
- Integrating with current back office systems
- Service innovation and orchestration
- Agile management
- Low cost operations
- Succeed with the transformation journey

These drivers have led to the identification of the following challenges, areas of risk and business impacts:

1 Impacts to IT Operations

- Redefines organizational boundaries between IT and Network
- Increases orchestration and management challenges
- Moves focus to DevOps

2 Area of risk

- Major cultural change
- Unforeseen complexities in the software layer
- Security
- Major change in feature rollup approach

3 Business impact

- Ability to quickly add, update and retire services
- Full IT enabled virtual infrastructure
- Simplified provisioning
- Massively reduced OPEX

Project plan

There is a comprehensive operations plan for each of the deliverables and the project teams that deliver them. This is available on request and is available online to ZOOM project members.

Collaboration Program: We have an active collaboration project for ZOOM. We are looking for participants to work with us. Participation can be as little as joining a project online and offering to be a reviewer of contributions/work outputs, or as in-depth as leading a team which generally would mean a one-day per week commitment.

Catalyst Project: Four Catalyst demonstrations on NFV are planned for TM Forum Live! Digital Disruption 2014 in San Jose. These will be an extension of a very successful project at TM Forum Live! Nice 2014. We are always looking for more active participants in the work to prove out the use cases and methodologies. We are also seeking additional proposals on security for virtualization and e2e assurance across hybrid virtualizaed and legacy networks

Marketing outreach to drive adoption: We will be looking for members to promote their brands through the Forum's marketing channels in a win-win situation where they help us promote NFV/ZOOM by creating content, sponsoring webinars, and participating in events. We are always looking for members to:

- Sponsor a webinar on NFV – work with TM Forum to get your thought leading ideas out there while promoting the ZOOM project
- Online/Newsletter articles – do you have an interesting insight on NFV that includes a reference to our ZOOM project? If so, let's work on getting an article published about it!
- Event speaking sessions – come up with an innovative panel on NFV – especially one that talks about the ZOOM project – and submit it for one of our events

Types of companies that are currently involved with the program

Industry Sectors:
IT, communications, consulting/transformation

Company type:
Leading digital service providers, management and orchestration disruptors, data centers, standards bodies, and relevant open source platforms

Job Titles:
Executive sponsor: Chief Digital Officer / CIO, Contributor: Mix of business / technical

Three reasons why you should invest your time and resources in this program
The opportunity to collaborate with other companies within the digital ecosystem to:

1. Develop zero-touch business: 100% self-service and automation, with increased resiliency and pro-active monitoring.

2. Bring NFV from a concept to an operational ready to deploy and operate capability. Uniquely, TM Forum is addressing procurement, operations and technical challenges for virtualization. And it is leveraging and enhancing existing Frameworx assets including the Business Process Framework, Information Framework, DSRA, Integration interfaces for both legacy and Digital services APIs, product catalog, Product Lifecycle Management and B2B2X partnering best practices.

3. Opportunity to be a part of the Catalyst Program, working through relevant issues with other TM Forum members to deliver end-to-end solutions to the market. The community can support multiple work groups, and each work group is comprised of 10-50 members.