Management aspects of virtualisation business scenarios

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Today’s and Future Internet challenges

**Current Challenges**
- Operators manage and maintain network infrastructure through a diverse and high number of Network Management Systems
- Human factor is dominant in the network management process
- Lack of simple, cost efficient, end-to-end management solutions

**Future Internet**
- Heterogeneous interconnected devices
- Greater distribution of intelligence
- Added complexity: technological and management

**Autonomic networks**
- Achieve the desired levels of dynamicity, efficiency and scalability to manage current and future networks
- Shift to a service-enabler and/or service-centric approach focusing on end-user satisfaction fulfilling current and future demands
- 10+ years of research, but little impact on market adoption – What is missing?
Unified Management Framework

UMF is a framework that will help produce the plug and play of networking autonomic solutions within existing and future management ecosystems.

- Includes a repository of guidelines, patterns, models, specification and IT tools to support development of UMF compliant systems.

- In this context, “framework” means an architecture and methodology which can support business, system, and implementation views of autonomic networking solutions.

UMF Requirements
Centred on managing a network and/or service platform:

- The customers of this service might be entities **owners of network fabric** and entities **leasing the network fabric** and providing basic services, tools and **virtual resources** to ASPs.

- Integration of **autonomic functionalities** facilitating the management of physical and **virtual resources** in heterogeneous environments.

- Specific story: A group of friends willing to play a social game using an interactive gaming application made available by an ASP.
UMF facilitates a flexible model of network infrastructure sharing and composition

UMF and autonomic functionalities facilitate the decoupling of networks’ ownership, operation and service provision activities

Potential bottlenecks: the interplay between actors seems at risk if no incentives are in place to engage Hardware Manufacturers and Infrastructure Providers in network virtualisation services and UMF adoption

Questions:
- What is the impact of new business roles on service’s liability?
- Who is the guarantor?
- Which incentives could be considered to engage Infrastructure Providers?
- Which incentives could be considered for Hardware Manufacturers/Vendors for UMF adoption?
- Would standardisation of interfaces between actors lower the barriers for adoption?
Thank You!

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