

## NFV for Delivering Messaging Services

### Turning to NFV for Delivering Messaging Services

#### The benefits of turning to NFV for delivering messaging services

Expected to generate around \$113 billion in 2019, messaging continues to be a major source of revenue for Communications Service Providers (CSPs), despite the threat to the market from over-the-top provider (OTT) services and cloud-based freemium solutions.

Revenue from more traditional messaging services is declining, though, meaning CSPs must find new ways to remain competitive in this area. While modernizing their networks and services, they are looking at how to best support new next-generation IP-based messaging services, alongside those they already have in place. Improving both efficiency and the overall experience means consumers will be better placed to take advantage of differentiated services, rivaling third-party messaging applications.

However, CSPs are increasingly finding that, with much of their existing hardware reaching their end of life, some products are no longer supported, forcing them to either evolve or replace. Shopping for new hardware can be costly and unnecessary, particularly with virtualized environments, theoretically allowing services to run anywhere.

It's perhaps unsurprising, therefore, that the past few years have seen both mobile and fixed CSPs make the transition towards virtualizing their networks by implementing Network Function Virtualization (NFV) which is, on many levels, the perfect architecture for delivering messaging services. Enabling low-cost, elastic scalability, service agility, and a reduction in capex and opex, NFV essentially transforms CSPs into cloud operators. In doing so, it positions them as competitive players within the mobile market by enabling them, for the first time in years, to take an evolved stance regarding message service delivery.

Clearly, a shift to NFV can have a significant impact on the future success and profitability of operators. To understand the current maturity of the market, Mavenir researched in 2016, into the progress, timing, and drivers and challenges – both business and technical – relating to the virtualization of messaging services.

#### State of the market

The research revealed that the majority of CSPs are highly committed to virtualizing their networks, with 70 percent planning to virtualize some if not all of their messaging platforms over the next four years. In terms of which messaging services were brought online when, SMS was a clear leader, with more than a quarter (27%) considering it a priority for migration to an NFV-based virtualized platform. [Spam and Fraud messaging control](#) was next on the list at 22 percent, followed by IP messaging at 21 percent.

These findings indicate how CSPs are looking to virtualize their most heavily used services first, such as SMS, before aligning the launch of new offerings, such as IP-based [Rich Communication Services](#) (RCS), or what the GSMA refers to as “advanced messaging” with deployments in NFV.

Those services that had suffered the biggest and most irrevocable hits from OTT applications were – perhaps understandably – lower priorities. Indeed, almost a third of CSPs (31%) said they had no plans to virtualize MMS messaging yet, for example.

## Greatest challenges

Product interworking, orchestration, and migration complexity were identified as being some of the biggest barriers to NFV implementation. Orchestration appears to be particularly problematic, with over a half of the survey's respondents (55%) conceding that, while they would like to employ a single Management and Orchestration (MANO) architectural framework, it would be difficult to achieve.

The main concern is that to do so would force CSPs to deploy a number of vendor-specific virtual network function (VNF) orchestrators, adding both cost and complexity into any virtualization migration. As a result, approximately seven percent of respondents planning to use a single MANO orchestrator could set the standard for what's realistically achievable over the next few years.

Preferences within the industry are currently divided between whether VMware or OpenStack makes the best possible cloud orchestration framework for an NFV environment although, following some initial skepticism, OpenStack is beginning to gain real credibility in the marketplace as a carrier-grade framework. What is clear though, is that given the continued demand for VMware, the increased interest in OpenStack and, to a lesser extent, in Microsoft Azure, any solution needs to be agnostic in its support for different orchestration and virtualization environments in order to maximize the commercial opportunities available to CSPs.

Cultural challenges and business case definitions were identified as the top business challenges an organization can face regarding NFV implementation. When it comes to an organization's culture, the main challenge tends to stem from the inevitable power struggle over where the responsibility lies. Decisions will need to be made as to whether the network team, the value-added services team, or the IT department is responsible for the service implementation and delivery, and who is ultimately in charge of managing the budget, the platform, and the day to day maintenance.

## Shifting focus

The shift to virtualized messaging platforms is likely to be gradual, as CSPs test and launch their systems, often tweaking them for new services. Being able to more quickly offer and launch new messaging services to subscribers as a result of virtualization will, however, not only help CSPs to better compete with OTT offerings, but also enable them to benefit from new revenue streams, and from potentially greater customer satisfaction and loyalty.

As CSPs continue to shift their focus toward bigger platforms that will, in the long run, deliver them the biggest operational and cost benefits, paying attention to NFV now will be to everyone's advantage.