Network Virtualization: The Road Gets Longer

EXECUTIVE SUMMARY

The Future of Virtualization Indexes – part of Light Reading's Virtuapedia initiative – track communications service provider (CSP) progress in deploying virtualization. The indexes are based on direct input from more than three dozen CSPs worldwide, and are intended to provide CSPs with a set of clear benchmarks that can be used to measure their virtualization progress against that reported by a select group of the world's leading network operators.

The indexes are organized in three functional groupings: Planning, Deployment, and Spending. Each index grouping provides CSPs with a single, integrated view of where the world's leading CSPs are in the virtualization process, and the progress they are making – or not making – in moving to the virtualization model. The indexes will be updated twice a year, providing an industry-wide composite scorecard for tracking the transition to virtualized networks and services.

Network Virtualization: The Road Gets Longer provides the findings of Heavy Reading's third survey on the Future of Virtualization Indexes, based on data gathered in November 2016.

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Participation in this survey was by invitation only, with participants targeted for their knowledge and influence regarding their company's virtualization programs. Forty different CSPs are represented in this report, including Tier 1 providers from all major regions (Asia/Pacific, CALA, EMEA and North America). Participating CSPs include a mix of wireline, mobile and cable providers, with the majority operating converged networks (wireline and wireless) with national footprints. The majority of CSPs were Tier 1 operators, with the remainder being Tier 2 and Tier 3.

The key findings of this report are as follows:

Planning Index

- The percentage of CSPs that have identified all of the functions they plan to virtualize by 2020 grew from 4% in May 2016 to 11% in November 2016.
• Timetables for identifying all of the functions to be virtualized by 2020 continue to slip. A year ago, 38% expected to have this done in 2016, but only 11% actually did.

• Network functions remain the top virtualization priority. "NFV/cloud services" replaces CPE as the second-highest priority, although CPE was still #3. None of the other areas registered double digits.

• Just over two thirds of CSPs have identified all or most of their high-priority functions, and 18% have a complete timetable in place for testing and deploying them.

• Confidence in timetables for testing and deploying high-priority functions has declined dramatically over the past year. The percentage saying they are "extremely confident" has declined from 22% in November 2015 to only 5% in November 2016.

**Deployment Index**

• Development work on high-priority virtualization areas continues, but progress is slow. More than 50% have started on 10-50% of these areas, but only 17% have started on more than 50% of them.

• Similarly, there has been slow progress on moving high-priority functions into production. The percentage of CSPs with at least some of these functions in production reversed the slide seen in May, growing from 71% to 77%. However, the percentage with more than 25% of these functions in production declined from 17% to 13%.

• As would be expected by the delays in development of the high-priority functions, the timetables for deploying them continue to slide. The bulk of deployments originally expected to take place in 2016 have shifted to 2017, while more than a third of CSPs in November 2016 said they will need until 2019 or later.

• The portion of CSPs that expect to complete their *entire* virtualization transformation by the end of 2020 remained the same in November 2016 compared to May. However, the percentage stating they would complete it by 2022 grew from 22% in May 2016 to 30% in November.

**Spending Index**

• As in the May survey, the majority of CSPs in November 2016 said that virtualization would make up 10% or less of their capex budget in the following year. Still, more than 75% say their capex on virtualization will increase in 2017.

• Most CSPs (57%) continue to believe that their capex will not level off or begin to decline until 2020 or later, although that is slightly fewer than in the first two studies.

• As in the May survey, very few CSPs (11%) expect virtualization to result in lower operating expenses in the next two years. Most continue to expect to see some opex relief from virtualization in three to five years, although in this survey zero respondents said that virtualization would have *no* impact on opex.

• The percentage of CSPs expecting virtualization will lower their opex by 10% by 2019 or sooner grew from 51% in May 2016 to 70% in November. None believe it will take more than 10 years to see these savings.

**Network Virtualization: The Road Gets Longer** is published in PDF format.