COMMENT

Vendor Case Study: New entertainment services require Telus to use scenario planning for IP capacity

26 April 2012

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Telus, a leading national telecoms company in Canada, is implementing IP capacity planning products from Aria Networks[1] to support its growing and increasingly entertainment-focused IP networks in the access, edge and core domains. The Aria Networks project is a part of a larger project involving other systems.

Telus (TSX: T, T.A; NYSE: TU) has annual revenue of USD10.4 billion and 12.7 million customer connections (including 7.3 million wireless subscribers, 3.6 million wireline network access lines, 1.3 million Internet subscribers and more than 500 000 TELUS TV customers). It provides a wide range of communications products and services (encompassing wireless, data, Internet Protocol (IP), voice, TV, entertainment and video), including:

- pre- and post-paid voice and data solutions to more than 7 million wireless customers across Canada
- a wide variety of fixed telecoms products to consumers, including residential telephony, Internet access, TV and entertainment services
- telecoms and IT solutions for small to large businesses, including IP, voice, video, data and managed solutions, and contact centre outsourcing solutions for domestic and international businesses.

The problem – IP capacity, driven by new forces, requires faster, optimised, scenario-based planning

Mr. Zouheir Mansourati (VP of Network Technology Development Planning and Engineering at Telus) described how Telus had identified an "historical break" in the way that it needed to plan IP network capacity for its wireless and wireline networks, to support both consumer and enterprise customer needs. No longer were those needs driven exclusively by low-bandwidth services such as voice, with market-pull growth leading to gradual, foreseeable increases in capacity requirements. Instead, the transformation of Telus from a telephony company to an entertainment company had created unprecedented demand for new capacity for high-bandwidth entertainment services in all parts of the network – access, edge and core – much of it driven by new services and marketing efforts. As a result, Telus required IP capacity planning to:

- be more of a system, with a centralised data store (rather than desktop planning tools), to allow planners who specialise in the access, edge and core domains of the network to create a unified plan
- be much faster than before, allowing planners to do much more 'what-if' planning to take into account uncertainties in the forecast capacity requirements and create contingencies
- provide a solution that is well optimised, to provide the best service levels given the available budget for new capacity
- spot capacity deficits in the access, edge and core networks (both now and predicted for the future), based on historical trends

[1] This vendor case study was prepared by Analysys Mason on behalf of Aria Networks. It has been compiled on the basis of an independent interview with Telus personnel.

- support sophisticated scenario planning for the next 12 to 18 months, driven either by marketing programmes or by the introduction of new services.

Analysys Mason spoke to Mr. Mansourati about the IP capacity planning project, and how Telus' needs are being met using products from Aria Networks.

Implementation approach

After evaluating commercial products available from all of the major vendors in the space, Telus chose Aria Networks on the basis of the functionality of its products, industry references, the experience of its people in the planning domain, and the architectural fit of its products with Telus' operations.

In the first phase of the project, which has just been completed, a set of functional specifications for the new IP capacity planning system were developed and tested with the planners. The IP capacity project will be an integral part of a broader picture that will include other (as yet unannounced) systems and new capabilities involving IP network and usage data collection, planning and network implementation. In the second phase, Telus engineering personnel will begin to use the IP capacity planning system, along with other systems, as part of their standard operations.

Business benefits

Planners who do not have sufficiently fast, efficient scenario-based capacity planning capability cannot plan complex failover situations in IP networks. Instead, they must resort to using simple, inefficient policies for adding capacity. Typically, a maximum of 40% of the available capacity would be specified for normal operations, which would allow for failover of another 40%, leaving 20% capacity still available. But, when equipped with scenario-based planning capability, planners can establish more-complex arrangements, involving shared loads, link failover, physical router redundancy, redundant paths, etc. With systems such as those provided by Aria Networks (which can perform scenario-based planning while taking into account the interplay of layers 1 to 3 of these arrangements on an IP network), fills of 60% capacity or more can be achieved. But, to be able to move to these higher fills, the IP capacity planning system must provide the engineers with an optimised plan that meets the required service levels even in a complex set of failover operational scenarios – Mr Mansourati commented that "The rigour of the system matters a lot."

Key learnings

Telus concluded that a systems approach, rather than the use of traditional desktop planning tools, was critical in providing a multi-user system that could be functionally integrated into a new, transformed IP capacity planning function. It found the ability to quickly produce scenario-tested optimised network plans was critical in meeting its future marketing and service-driven needs. Based on these needs, Telus decided that Aria Networks provided the capabilities and architecture it required, along with a team that was "responsive to our needs, just as much after the sale as it was before the sale."