



Next-Gen Planning Tools: Ready for Prime Time

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Today's operators face a myriad of challenges. Increased competition. Declining revenue. The move to all-IP networks. Add to this a downward economy and the pressure to grow top-line revenue while simultaneously reducing operating expenses (opex) and capital expenditures (capex).

Meeting these challenges head-on requires a Herculean effort, really – one in which operators must fundamentally change how they do business while at the same time maintaining legacy operations and migrating to all-IP networking.

While daunting, operators don't have to face the task all alone. Equipment vendors have been expending considerable amounts of energy and R&D resources developing comprehensive network planning tools that can help ease the pain of migration. These solutions inject efficiency into the equation and should be viewed as an indispensable component of any migration strategy.

Planning's Past...and its Future

Historically, network planning tools have played a key role in helping operators improve the performance of their networks. They've used the tools to find weaknesses in their network ecosystem and pinpoint opportunities for optimization. This often led to increased efficiencies and savings in time and money too, in the form of reduced opex and capex.

But for those looking to migrate from legacy networks to IP-based ones, a more advanced approach is required. While nearly all planning tools on the market today can perform traffic analysis, simulate growth and provide reporting capabilities, only next-generation (NG) planning tools are architected to address the unique challenges of NG telecoms providers. With an evolutionary approach to planning,

NG tools can handle growing network complexity by analyzing multi-technology infrastructure and adapting to continually changing service needs including NG voice, video on demand (VoD) and more.

Retrofitted legacy planning tools simply aren't up to the challenge. For all NG telecoms operators, NG planning tools are a critical component of a smooth evolution.

Why Planning Tools are Needed

Five key requirements drive operators to put in place planning tools. We'll take a brief look at them here.

- Network agility – Reduced service provisioning time and simplified change management
- End-to-end design – Simplified multi-layered (TDM, Ethernet, WDM), multi-service (IPTV, voice over IP [VoIP], etc.), multi-vendor planning and provisioning
- Reduced opex – Auto-provisioning and elimination of single points of failure for increased network reliability
- Reduced capex – Intelligent network design for steady-state operation and capacity overload avoidance minimize incremental investment
- Smooth migration to NG infrastructure – Gradual transformation dictated by customer demand and without service interruption, for a leading-edge competitive advantage

Putting the 'Next' in Next-Gen

There are a number of legacy planning tools available in the marketplace, and each offers a particular benefit or addresses a specific phase of the network lifecycle. However, network operators must exercise caution and seek a single, multi-layer solution that addresses all the nuances and complexities involved in migrating to all-IP networks. What's required is an NG planning solution.

At its core, an NG planning solution is a unified system that supports all technologies and all lifecycle stages, for optimal network performance. Although extremely complex on the back end, for end-users it provides simplifying features such as user-friendly GUIs or back-tracking functionality. It includes analysis capabilities for network engineers interested in technical deep dives as well as financial managers looking for cost efficiencies. And it takes into account both reactive (immediate response) and proactive (long term) planning.

What should an NG planning tool ultimately look like? Here's a checklist of the features that put the next in next-gen:

Multi-layer, multi-technology, • multi-vendor support – A single tool and GUI to analyze network performance at all levels and transport technologies, regardless of type or supplier. This enables maximum optimization, helping to reduce costs and improve utilization and reliability.

- Stepped planning capabilities – Pre-planned, step-by-step transformations allow providers to leverage existing infrastructure during network expansions or migration to NG networks. This type of stepped approach has proven to be an effective cost reducer.
- Smooth implementation – Efficient provisioning and activation are pivotal to the process, as these activities can be time consuming and prone to errors. Optimization results are integrated into the management system, providing significant time savings over manual executions.
- Scheduled, synchronized work order implementations – Provisioning of services in all applicable management systems, as well as synchronization of tasks, injects efficiency into the management of multi-layered, multi-vendor networks.

- Sub-layer analysis (layering and partitioning) – Analysis of any sub-layer or partition of the network, even those affected by different constraints or operational environments. This capability dramatically improves the accuracy of analyses, ensuring more realistic results and reducing total costs.
- Single platform – One optimized tool for all planning needs, whether strategic, long term, tactical or operational. Advanced planning and optimization capabilities for current and predictive analysis enhance network performance and help reduce capex, as every stage of design is planned and growth can be more accurately predicted.

Are You Ready for Prime Time?

These days, for network operators the focus is squarely on improving their top and bottom lines. One way to do this is via good short-term and long-term planning that increases the efficiency of the network and provides a foundation for the delivery of next-gen services. It's clear that retrofitting existing planning tools won't be enough. What's required are planning tools focused specifically on next-generation networking. True NG planning tools enable operators to take an incremental approach towards their goals – one that's more practical and easier to implement than a revolutionary approach. These tools are available today, and they can provide significant financial benefits to carriers and service providers during difficult economic times.

(Courtesy: NetEvents)