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A new look at network maintenance

How multi-vendor maintenance cuts costs and improves efficiency

Strategic White Paper

Telecom service providers around the world are reinventing their businesses by adopting next-generation technologies. At the same time, requirements for ongoing maintenance and operations of legacy networks, investment protection, and customer satisfaction remain a top priority. Yet as the cost of maintaining those networks climbs, communications companies are increasingly under pressure to make maintenance more financially manageable. Enter multi-vendor maintenance: an alternative maintenance support service model that includes a single point of contact to radically streamline legacy network support and bring costs under control.

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'In with the new' doesn't always mean 'out with the old'

With fierce competition and changing consumer behavior taking a bite out of traditional revenues, telecommunications service providers are under terrific pressure to find fresh ways to grow their businesses. They're working to develop new revenue streams by delivering innovative offerings and consistently high-quality customer experience. They're investing heavily in next-generation networks that use fiber-to-the-premises (FTTP), asynchronous digital subscriber line (ADSL) and Voice over Internet Protocol (VoIP) technologies.

At the same time, they have to keep their legacy networks—the ones their customers currently depend on—up and running. It's a pricey proposition especially since older equipment will likely require more service and support. Older legacy network equipment may also be at end-of-life or near end-of-life status, making the ongoing support capability questionable. As a result, service providers around the world are seeing maintenance costs spike—by as much as 20 percent a year—undermining their efforts to spend less and earn more.

What's driving the cost of maintenance

For many service providers, deciding how to support both legacy and next-generation networks—while managing the transition from one to the other—requires careful planning and business analysis. The fact is legacy networks still represent a significant proportion of many companies' infrastructures: they provide key capabilities—such as emergency services—that have not yet been perfected in next-generation alternatives; and they are the product of significant investments. Understandably, telcos want to get the most out of these past expenditures and keep capital expenses (CAPEX) to a minimum.

That said, these legacy networks have to live up to increasingly demanding customer expectations for high-quality network services as new technologies become available. Ensuring an optimized support structure is therefore critical to customer retention. It's also necessary for guaranteeing availability of new services and cost-competitive operations.

Maintaining legacy networks tends to be a complex task. Existing support models often involve different processes, service-level agreements (SLAs), and communication with multiple vendors and providers. It's not always easy for telcos with multivendor networks to correctly identify whose equipment is associated with an operational problem. And, as a result, it can be hard to know which vendor to contact to address the issue.

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In general, to keep costs down, telcos are attempting to do more with less: re-engineering their maintenance operations and reducing staff. But transferring resources to next-generation network operations—or losing expertise through staff cuts—has shifted the burden of network upkeep to maintenance suppliers, who in turn seek additional compensation.

> "We need to break away from our usual 5 percent to 10 percent OPEX reduction per year. We need geometric or non-linear OPEX reductions."
>
> – North American Tier 1 Senior VP Operations

The original equipment manufacturer approach

Most network operators purchase corrective action and update support services from multiple original equipment manufacturers (OEMs). But those OEMs are under the same market pressures as the operators themselves—with margins shrinking as the industry evolves. This makes it difficult for OEMs to provide a high level of service at the low cost telcos now require.

In the current business climate, many OEMs are focusing on their newer products and phasing out support for older equipment, occasionally even increasing maintenance costs for end-of-life products. Meanwhile, some smaller OEMs don't have the reach to cover the service provider's full footprint forcing the telco's to scramble to find complementary coverage while exposing them to a degraded level of support or increased costs. This puts a squeeze on telco's hoping to maximize return on investment in existing networks while maintaining a high level of customer satisfaction.

To help service providers adapt their support systems while adopting new approaches, a new single-point-of-contact multivendor maintenance (MVM) approach is emerging—one that supports networks with multiple OEMs and technologies while reducing costs and increasing efficiency.

Single-point of contact multi-vendor maintenance

The multivendor maintenance (MVM) model streamlines and integrates traditional OEM maintenance-related activities and end-to-end processes to deliver faster, more efficient and cost-effective support. It mimics the primary contractor model by engaging third parties to provide a complete suite of support services, filling in any gaps in capability, technology or geography.

Providing the full range of maintenance services, MVM replaces individual maintenance contracts and OEM agreements with a single MVM contract. It can also take the form of a hybrid contractual model, where some OEM contracts remain and the MVM provider operates as a middleman, working with the OEMs when their capabilities are needed.

Integration and simplification

- The MVM model delivers a number of key benefits, including:
- A single point of contact for maintenance requests
- Remote technical support services (RTS)
- On-site field maintenance services (FM)
- Part repair and exchange services (RES)
- Guaranteed service level agreements (SLAs) across all vendors' equipment
- Integrated reporting

A solution that saves

MVM achieves significant economies of scale in maintenance delivery and vendor management, resulting in dramatic OPEX and CAPEX reductions. By channeling all maintenance through one supplier, difficult problems—when there are complex interactions between multiple devices—can be resolved more readily. Overall, operational expenses can be reduced in the range of 10 to 25 percent. Actual savings depend upon the number and mix of OEMs, types of products included in the MVM solution, SLAs, ticket volume, and type of problem. Additional OPEX savings are to be expected through consolidation of resources and processes.

Further capital expense savings come from transferring spares management ownership to the MVM provider and from leveraging the MVM provider's logistics and warehousing infrastructure. This model enables the service provider to cut back on stocking first line critical spares while relying on the MVM provider furnishing dependable next-day parts replenishment.

OPEX and CAPEX reduction

- Immediate OPEX reduction on maintenance spending with savings between 10 percent and 25 percent
- Lower contract management and related overhead costs by reducing the number of contracts to a single MVM contract
- Potential for streamlining or relocating resources within the services provider's staff due to realized operational efficiencies
- Synergy between remote technical support, parts repair, and exchange services, as well as onsite field maintenance across multiple network elements

Consolidation and convergence

With the MVM model, a telecom service provider receives a predictable level of service delivered with common processes. For instance, all parts are delivered by the same transportation company and are stocked in the same depots while returns are sent through a single repair process. With one contact center to call, providers can verify all trouble tickets through one system, receiving standardized metrics and a single network-wide performance report from the MVM provider. This allows them to see how the network is performing and to better align maintenance needs with business growth.

With a single multi-year contract replacing individual OEM contracts, the MVM agreement enables consistent contract terms and conditions, standard SLA definitions and simple, less expensive pricing structures.

Making the move to the MVM model

A successful transition to MVM means service providers can start saving immediately. But the right steps are required to ensure the evolution is as seamless as possible.

Step 1: Assess the network and services

Typically, the best candidates for the MVM solution are networks, technologies, vendors, and products that are relatively stable and require few software updates. Products that are coming out of warranty coverage can also benefit from MVM. For every product, current SLAs must be identified as well as the current costs associated with its maintenance. The locations of all products requiring parts, repair, and delivery or field service must be mapped to identify the spares required to support the location, as well as to confirm response capability for onsite requests.

Step 2: Set targets

The targeted annual operational expense reduction—including overhead such as project management resources—should be clearly defined. Realistic SLAs should be set for each technology or product type, and performance metrics should be quantified.

Step 3: Select the right MVM partner

As with any contract, due diligence is a necessity. Service providers must thoroughly evaluate prospective multi-vendor maintenance providers to ensure that maintenance services match their business needs—and that the risk of service interruption due to a decline in maintenance services is minimized. As well, many multi-vendor maintenance providers have different definitions of their services. Some MVM providers consider outsourced operations or multi-vendor repair services as multi-vendor maintenance while others do not.

When choosing an MVM partner, it's critical to compare apples to apples. Ideally, an MVM partner should have:

- A proven, global multi-vendor track record and solid lineup of MVM customers

- A global, scalable support infrastructure, including call centers and technical assistance centers available 24x7

- Solid, well-integrated global processes linking different maintenance services, remote technical support, parts repair and exchange, and onsite field maintenance technical support

- Industry quality standard-compliant processes such as TL-9000V

- Qualified technical experts providing remote diagnostic support to service providers' technicians for a large set of technologies and OEM equipment

- Extensive credentials in multi-vendor maintenance

- A comprehensive call support infrastructure, including a web-based knowledge center, immediate phone access, and the capability to remotely access service provider networks

- Global parts stocking depots and multi-vendor dispatch technicians close to all of the service provider's locations

- An advanced assistance request tracking system to document problems, progress, and solutions, and to generate integrated performance metric reports

- A web-based problem tracking system for service providers to query, review, update and track assistance requests for all maintenance services

- Account-assigned project and maintenance service managers along with a documented governance process

- Representation on standards forums

- A well-developed network of partners to seamlessly deliver services on a global basis

Nokia: Experienced MVM provider

The telecommunications industry is in a period of dramatic evolution. The market is changing, competition is evolving, and for many providers, maintenance costs are skyrocketing as networks are transitioned to next-generation technologies.

The multi-vendor maintenance model is a new approach to network support through a single point of contact delivery model. Streamlining and integrating traditional OEM maintenance-related activities and end-to-end processes, MVM makes trouble resolution faster, better, and less expensive—paving the way for the networks of the future while supporting the legacy networks of the past.

With decades of industry experience, Nokia is a pioneer in the telecommunications marketplace. A trusted partner to service providers around the world, we are market leaders in access, optics and IP, IP transformation, multi-vendor network and OSS/BSS integration, business process management, IPTV, mobile video, and managed services. Accessing the innovative thinking and research of Bell Labs—holders of thousands of cutting edge patents—we provide a range of services to guide service providers through today's challenges toward the opportunities of tomorrow.

Glossary

ADSL	Asynchronous digital subscriber line
CAPEX	Capital expenditure
FM	Field maintenance
FTTP	Fiber-to-the-premises
MVM	Multi-vendor maintenance
OEM	Original equipment manufacturer
OPEX	Operational expenditure
OSS/BSS	Operations support system/billing support system
RES	Repair and exchange services
RTS	Remote technical support services
SLA	Service Level Agreement
VoIP	Voice over Internet Protocol

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