

Amdocs Open Ecosystem Accelerator for Disaggregated Transport Network



As competition in our industry intensifies, network operators are looking to the promise of 5G to create new avenues of differentiation. While best known for its highly superior data speeds, increased bandwidth and expanded network capacity, 5G's real value lies in its ability to enable new applications based on ultra-low latency and high availability, as well its power to expand Internet of Things (IoT) opportunities on an exponential scale. 5G is laying a strong foundation for transport network upgrades and paving the path towards disaggregation. In the process, this is creating a fundamental shift towards open, multivendor networks.

Current limitations

Traditional routers provide a monolithic package of hardware and software from a single vendor. Although such a model provides a range of benefits such as guaranteed hardware/software interoperability and a single point of contact for purchasing, service and support, its rigidity is creating a host of challenges for today's network operators. Firstly, with their proprietary interfaces, such systems carry the burden of vendor lock-in, as well as high capital and operating expenses. Meanwhile, innovation is hindered by a dependency on the capabilities a single selected vendor rather than a wider ecosystem. In turn, this holds network operators back from leveraging different combinations of hardware and software innovation or selecting best-of-breed hardware and software based on their own use case.

An additional limitation is based on the wide array of network elements that exist across the various sections of the transport network. One of the biggest changes network operators need to introduce is at the access gateway. While mobile base stations typically connect to an access gateway using RJ45 or SFP Gigabit Ethernet interfaces, to accommodate the increased capacity required in modern 4G and 5G networks, base stations also need to use Gigabit Ethernet SFP+ interfaces. This makes most currently deployed routers unsuitable to carry 5G base station traffic.

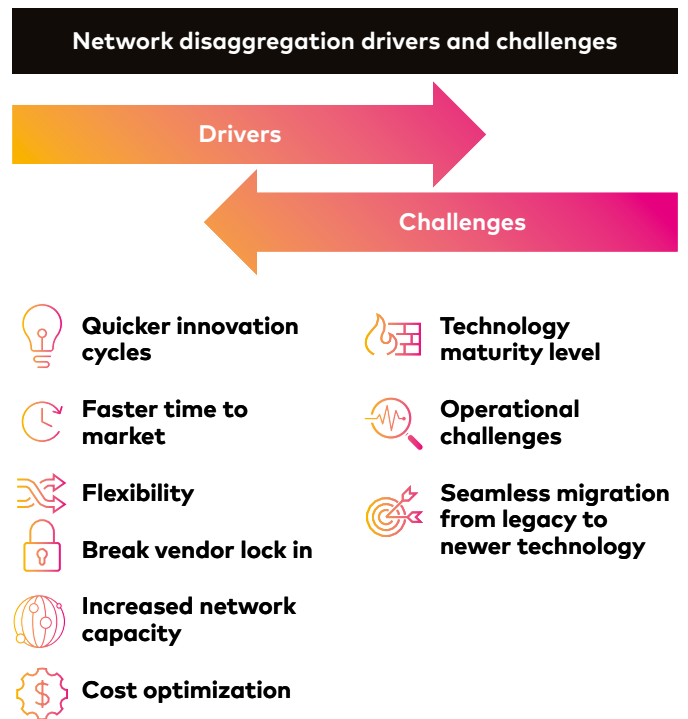


Figure 1: Network challenges

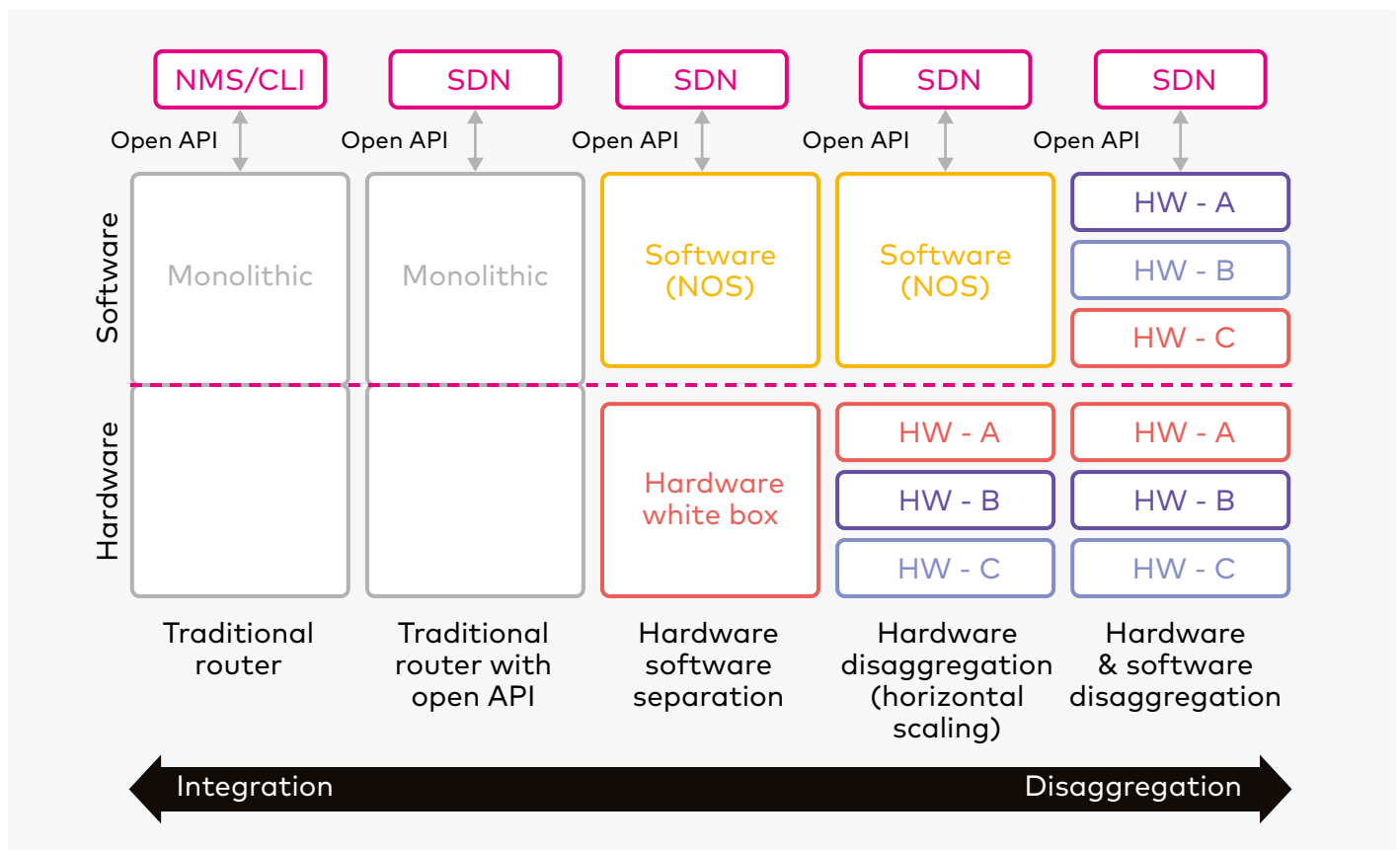
Disaggregating the network

As connectivity, automation and artificial intelligence accelerate ever-increasing user expectations for instant access to data, service providers need agile networks to evolve, scale and launch new innovative services. To compete effectively, these players must therefore adopt a disaggregated strategy by addressing the current transport network challenges.

Disaggregation is not binary but exists on a spectrum. A first step from migrating away from traditional routers with command line interface (CLI)-based configuration and/ or network

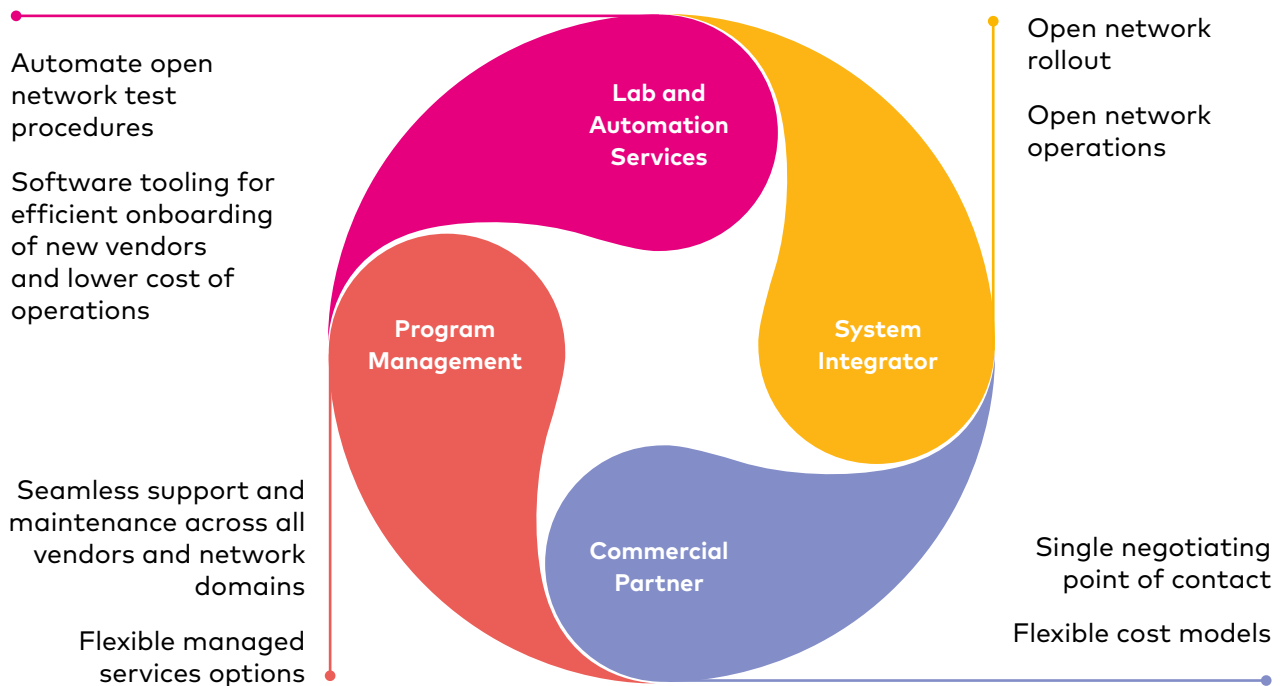
management system (NMS)-based management is the transition to software-defined networking (SDN) and open application programming interfaces (APIs) based on NETCONF. This lowers operational expenditure, increases programmability, and provides the option to disaggregate some control plane functionality from the network element to the SDN controller/orchestrator. Beyond the basic separation of software and hardware, the different hardware elements of a chassis-based router can also be disaggregated to enable horizontal scaling (i.e. scaling by adding more "machines," or in this case, white boxes, as opposed to vertical scaling), thereby upgrading the power of existing machines.

Router disaggregation spectrum



Amdocs Open Ecosystem Accelerator for Disaggregated Transport Network

Amdocs Open Ecosystem Accelerator for Disaggregated Transport Network provides a comprehensive set of open network solutions and services that minimizes risk during the transition. In addition, to enable network operators to extract maximum value from complementary solutions across the wider vendor ecosystem, we have carefully evaluated product technology, hardware and software vendors and established value-added resale agreements with various members, creating one-stop shop for all network requirements.



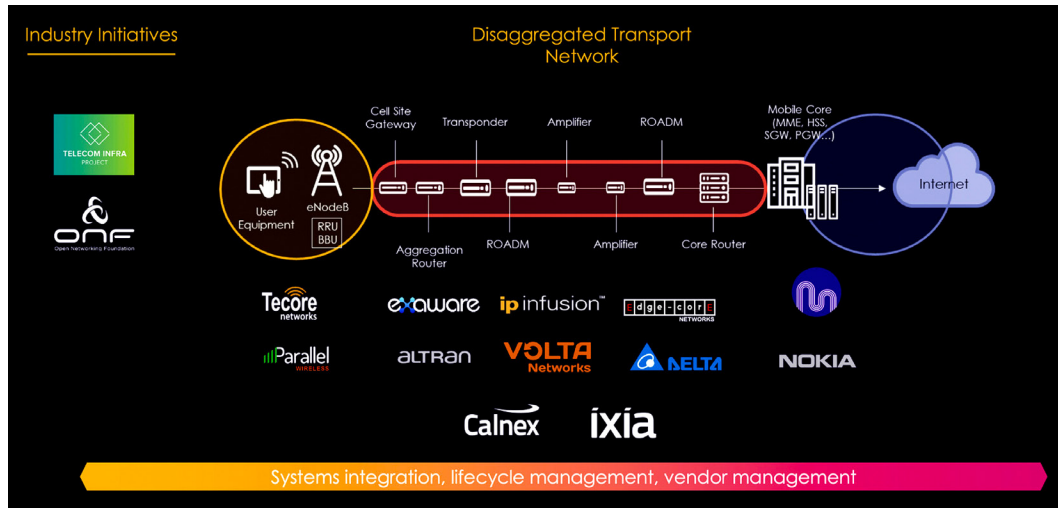
Amdocs Open Ecosystem Accelerator for Disaggregated Transport Network includes:

- System integration services for network operators who are in the process of deploying disaggregated hardware and software in their networks
- Commercial partner services to ease the process of buying, deploying and supporting new technology, hardware and software for network operators
- Lab and automation services to test various hardware and software combinations for specific use cases in the labs
- Program management services for seamless network transformation support

Why Amdocs?

As a preferred partner for tier-1 and tier-2 service providers across the globe, our vast network of rollout and acceptance services provides scalable, fast and reliable network rollouts – enabled by our software-led approach and bolstered by our automation and resource flexibility to support

process acceleration. With our Open Ecosystem Accelerator for Disaggregated Transport Network solution, we deliver flexible solutions that give you the freedom to move rapidly, adapt easily, automate operations and streamline innovation – without being held back by proprietary, monolithic network systems.



Open ecosystem with range of choice: Leveraging our large partner ecosystem of hardware and software vendors, we offer a wide range of choice to network providers. Such options are critical to our customers' ability to provide the increased capacity and availability to meet high data demands, while cost-efficiently enabling market penetration in rural areas.

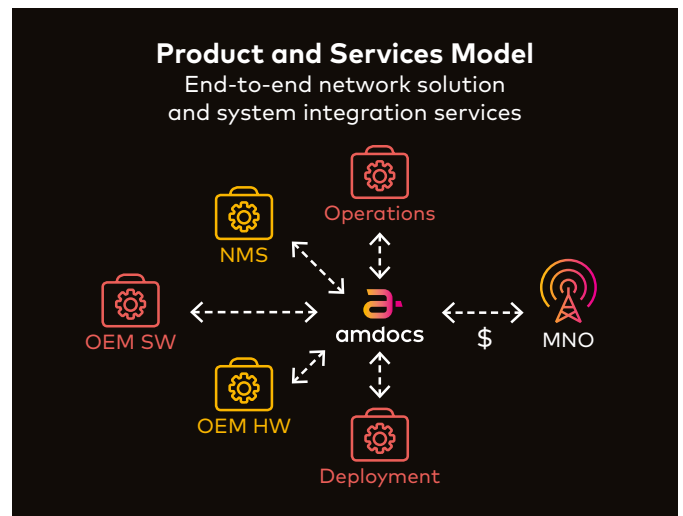
Member of TIP Exchange: The TIP community is a marketplace for tested products, solutions and configurations that enable network operators to evaluate technology and partnerships. The community acknowledges the importance of 5G and the associated need to have open architectures, open protocols and interfaces to realize the technology's true benefits. An active member since 2016, Amdocs is a certified system integrator for telecom infra solution providers, and is actively associated with Facebook, a TIP founding member, in the development of Open RAN solutions.

Network expertise: The processes of deploying new open technologies, new hardware & software components and conducting interoperability tests are time-consuming and high-risk activities, with returns on investment tightly linked to new network services and timely deployment. When deployment is delayed, the result can be revenue loss and increased costs due to delayed service/product launches. Furthermore, when network quality is impaired, it can also lead to high customer

churn rates along with a reputation for poor network quality.

Amdocs' product and services model

As an end-to-end systems integrator partner for network operators, we provide services for third-party network components (ranging from functional testing, automation and hardening to helping customers implement deployments at scale – including greenfield and brownfield deployments) leading to network transformation. This also includes managed services and program management to ensure a successful transition and efficient operations.



For more information, contact [Amdocs Network Marketing](#).

