

A DEVOPS PRIMER FOR SERVICE PROVIDERS: TEN KEY TECHNOLOGIES YOU SHOULD KNOW

Service providers are increasingly embracing the DevOps concept. DevOps brings IT and network teams together, enables better collaboration with vendor ecosystem partners, and improves business agility.

Virtualization is bringing sweeping changes to the telecommunications industry. As Network Functions Virtualization (NFV) enables an increasing number of network elements to move from physical devices to virtual appliances and Software-Defined Networking (SDN) becomes more established, network operators are adopting new practices and tools to maximize the benefits of these technologies.

DevOps is one such practice to take advantage of these new industry realities. Born in the data center, the DevOps approach combines software development best practices with those of network operations to create an interconnected ecosystem. The main benefits are:

- Significantly reduced time required to develop new services compared to the legacy model
- Improved openness, enabling greater interoperability between vendors

This combination dramatically increases agility for service providers; this agility is critical as competition increases from over-the-top providers offering innovative services.

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What follows are 10 technical concepts service providers should know about to better understand how adopting DevOps can help them quickly adapt their networks to

changes in market needs, improve service quality, and reduce the costs of developing new services.

1. Linux

What it is: Linux is a cross-platform operating system modelled on UNIX. It was initially developed and released as an open-source operating system for personal computers under a GNU General Public License (GPL), which meant it was free to use, modify, and redistribute to others. It is now managed by the Linux Foundation, a non-profit organization that works to optimize the operating system's development of Linux.



Why it's important: Linux is the de facto operating system at the heart of almost all of today's applications, servers, and devices. This means it is also the operating system for the cloud, and is at the heart of cloud services. The Linux Foundation is the driving force behind important NFV and SDN initiatives, such as the Open Platform for NFV Project and Open Network Operating System (ONOS), which are crucial open-source networking initiatives designed to help service providers quickly respond to market demands.

2. Docker

What it is: Docker is an open-source program that enables applications to be built using isolated, service-specific software containers known as micro-services, instead of using a large monolith of code. Docker and micro-services are now largely viewed as the best way to deploy large-scale distributed application software.



Why it's important: In monolithic architectures, changes made to a small part of the application require the entire monolith to be rebuilt and re-deployed. Scaling equates to scaling of the entire application rather than just the components