

Why DevOps Success Depends on the Right Infrastructure



Do you remember building with LEGO®? You could follow the directions that came in the box down to the letter, or you could go off-script to create something totally your own and evolve and refine it over time. Regardless of your level of creativity, if you had one of those classic green baseplates to build from, then LEGO cities were in your grasp.

In many ways, a DevOps methodology aligns with the block-building process. While the tools and processes can change, a solid foundation is the backbone for fast and repeatable success. Developers and IT operations teams are beginning to reap the benefits, with 75 percent of all organizations planning to modify their application development and delivery to a DevOps model.¹ Analyst firm IDC predicts that by 2021, 65 percent of CIOs will expand agile and DevOps practices into the wider business to achieve the velocity necessary for innovation, execution and change.²

But even though adoption is on the rise, some DevOps teams still struggle to extract the full range of benefits from a DevOps model. Why? Perhaps because they are more concerned about the LEGO without first having considered the base plate. DevOps requires a flexible and modular foundation in order to be successful, preferably a software-defined infrastructure (SDI) built with open source technologies. Here's why.

Infrastructure: The Path to Agile Business

The aim of a DevOps approach is to speed up the entire application delivery life cycle, from initial development, through testing, to delivery to market. The goal is to enable the business to quickly respond to consumer demands by delivering new services, fixing bugs and adding new features. However, for DevOps teams to successfully execute, they need a flexible and modular software-defined or cloud infrastructure that easily adapts and extends to meet their needs.

SDI provides easier access to resources via a self-service interface that enables developers to quickly get the resources they need. It also gives the DevOps team the capability to standardize services so that applications built in the development environment will easily deploy and run in both test and production environments, speeding their delivery to market. SDI also offers a flexible and modular

approach that provides timely and easy access to the latest technologies, such as containers, where innovation is occurring at a rapid pace and easy integration or migration is available via standard open protocols.

SDI provides the best LEGO base plate to support your DevOps processes and improve application lifecycle management.

Automation to Support Strategic Collaboration

Routine deployment and management tasks are the Achilles heel of every IT organization. The best way to improve efficiency, reduce costs and quickly respond to infrastructure demands is with automation.

Automation and orchestration of the entire application life cycle, including the deployment of hardened VM or container templates, are key components of any SDI. These components help to ensure faster, consistent and repeatable provisioning and configuration. Additionally, the SDI automation and monitoring tools can intelligently sense and respond to changing infrastructure demands, automatically optimizing and adapting the infrastructure in real time. This frees up time for the team to focus on strategic initiatives versus backend tasks.

The DevOps movement is all about collaboration and constant innovation, which is made possible by an infrastructure that automates mundane tasks and automatically responds to infrastructure demands.

¹ Source: [SDI, Containers and DevOps - CloudAdoption Trends Driving IT Transformation](#)

² Source: [IDC Worldwide CIO Agenda 2019 Predictions](#)



Visibility Down to the Base Level

One challenge facing successful DevOps adoption is balancing the visibility preferences of developers with the improvements in productivity and speed of operations demanded by the business. Some DevOps teams favor a loosely coupled set of tools that give them control at each software layer in the application delivery system. By contrast, a more integrated solution could help take care of the heavy lifting and time-intensive tasks, freeing up developers to get on with what they do best: delivering new software code and innovation. Whichever approach is most appropriate for your organization, you will want the freedom to select the right balance of tools, processes and automation to keep things moving in the right direction and with optimum efficiency.

In the case of open source, there is no infrastructure more transparent or collaborative. The infrastructure itself is built on openness and exchange of code, leading to a natural transition to its use in a developer environment. As DevOps uses CI/CD to stay refined, so do the open source projects that contribute to its infrastructure. Constant innovation is what keeps the infrastructure and development tools up to date, supporting the entire DevOps team.

The Solution to Cultural Challenges

Successful DevOps adoption doesn't solely involve changes to existing technology. It also requires a cultural shift within an organization. An SDI that utilizes open source technologies are built on the same concept: growth through collaboration. Instead of being committed to a single vendor or tied to a proprietary solution, businesses can take advantage of an expanded network of resources and tools. These can be optimized and tailored to suit businesses' specific IT needs and business operations, giving them the flexibility to implement changes rapidly. DevOps is a marriage of technology, processes and people, and an SDI environment that enables that union to succeed.

The world has seen many great LEGO projects over the years, from small-scale private home projects to large-scale public exhibitions. But the common thread for LEGO's success is the base plate that enables innovators everywhere to build LEGO masterpieces more rapidly and effectively. For DevOps professionals, an SDI that is built using open source solutions is the base plate for success. SDI environments improve efficiency with automation, refine visibility into application performance, enable innovative and agile business models and create stronger cultural alignment.

SUSE Solutions for the Software-Defined Infrastructure

SUSE, a pioneer in open source solutions for the enterprise, offers a full set of solutions to transform the data center into a software-defined infrastructure that drives innovation, supports the adoption of DevOps methodologies or processes and integrates seamlessly with the latest application delivery platforms.



SUSE OPENSTACK CLOUD

Dynamically provision, control and automate compute, storage and networking resources, with on-demand, self-service access to create the ideal software-defined infrastructure.



SUSE ENTERPRISE STORAGE

Built on Ceph technology to reduce CapEx and OpEx by providing a resilient, self-managing, self-healing and massively scalable software-defined storage (SDS) infrastructure.



SUSE LINUX ENTERPRISE SERVER

Enterprise-grade Linux, a multimodal operating system, makes it easier to develop, deploy, manage and support containerized, micro services-based or cloud-native applications across your software-defined or cloud platforms.



SUSE CAAS PLATFORM

Quickly and easily delivers a Kubernetes environment with all the components needed to deploy, run, manage and scale container-based applications and services.



SUSE CLOUD APPLICATION PLATFORM

A full application delivery platform based on Cloud Foundry and leveraging Kubernetes for orchestration and management. It provides DevOps teams with all the tools they need to develop containerized, cloud-native applications at scale for deployment to any software-defined or cloud infrastructure.



SUSE MANAGER

Offers a robust infrastructure management solution to reduce the complexity of patching, provisioning and maintaining your software-defined infrastructure from a single, centralized console. It supports multiple Linux distributions and hardware platforms, along with physical, virtual, containerized and cloud environments.



**For more information,
contact your local SUSE
Solutions Provider, visit us
online or call SUSE at:**

1-800-796-3700 (U.S. and Canada)

1-801-861-4500 (Worldwide)

**SUSE
Maxfeldstrasse 5
90409 Nuremberg
Germany**

www.suse.com