



DevOps with Linux on IBM z14

The software innovation

In today's era of digital disruption, enterprise organizations need to increase the pace of innovation while ensuring the stability of their business systems.

As part of this trend, faster and more responsive software delivery has become crucial to the business, with the goal to improve the customer value.

Continuous delivery, continuous deployment and continuous monitoring of applications are the major steps to achieve this goal.

Also, most of today's applications are comprised of components that run on many operating systems, and therefore the use of cross-platform tools is essential for optimized software delivery.

The DevOps approach is helping on software innovation, bringing teams together, and using lean and agile principles.

DevOps is the future

While the term DevOps comes from the merging of Development and Operations, it is more than that — DevOps is about an organizational strategy to manage the entire lifecycle.

While the transformation has to be understood and done by the people, using the right tools is important.

Collaborative Lifecycle Management with Linux

IBM offers a complete multi-platform DevOps solution from idea capture through to solution delivery.

Using the Collaborative Management Lifecycle (CLM)¹ solution, organizations can:

- Rapidly capture, manage and prioritize requirements
- Raise and plan work against these requirements for continuous delivery
- Develop and manage tests early in the development cycle for continuous testing
- Work with the latest agile and lean processes and practices
- Manage source and other artifacts safely and securely at scale across all platforms

This means developers can build and test their applications for deployment on IBM Z[®] servers.

In fact, the CLM suite supports the development of any application targeted toward the Linux[®] on IBM Z environment.

To complete the developer experience, CLM can be used with commercial or open source tools to provide the full Linux development environment.

IBM DevOps and Scaled Agile Framework (SAFe)²

IBM's DevOps approach supports the continuous delivery model through an open, standards-based tooling platform to help drive organizational efficiency and effectiveness.

SAFe is the market-leading process framework for scaling lean and agile across the enterprise, providing guidance and best practices to help organizations realize success.

¹ <https://jazz.net/products/clm>

² <https://jazz.net/safe>

IBM DevOps combined with SAFe provides a comprehensive process and tooling framework that enables an optimized end-to-end lifecycle management that helps to synchronize teams in heterogeneous environments and enables collaboration of all roles.

DevOps and Deployment

Extending CLM with UrbanCode™ Deploy (UCD) means applications can be deployed to IBM Z and many other platforms.

Modern applications may need deliveries to be synchronized and orchestrated on many platforms, and to many targets. UCD automates and manages all these deployment complexities. By using UCD for each environment, you can ensure the deployment is consistent across development, test, and production.

DevOps solutions for Linux on IBM z14™ (z14)

With the IBM DevOps solutions for Linux on z14, you can accelerate collaborative development of innovative software. A few examples:

IBM Rational® Collaborative Lifecycle Management delivers requirements management, quality management, change and configuration management and planning and tracking. It combines several IBM Rational products.

IBM Rational Team Concert™ enables development teams to manage all aspects of their work, including planning, tracking, revision control, build automation, and reporting. It includes SAFe support for lean and agile development.

IBM Rational DOORS® is a requirements management application for optimizing requirements communication, collaboration and verification.

IBM Rational Application Developer for WebSphere® accelerates the development, quality assurance, and deployment of Java™, Java EE, Web, mobile, portal and service-oriented architecture (SOA) applications.

IBM Rational Quality Manager is a collaborative hub for business-driven software and systems quality across virtually any platform and type of testing.

IBM UrbanCode Deploy orchestrates and automates application deployments through the environments to facilitate rapid feedback and continuous delivery in agile development while providing the audit trails, versioning and approvals needed in production.

IBM's comprehensive DevOps solution portfolio for Linux on z14 provides project management, lifecycle management, deployment automation, monitoring and feedback capabilities.

In addition, development languages such as C, Go, JavaScript, Python or Ruby are available with Linux on Z, as well as many DevOps tools from the open source community such as Ansible, Chef, Docker, ElasticSearch, Logstash, Kibana, Jenkins, Puppet, or Salt.

Summary

The IBM DevOps and open source solutions for Linux on z14 (Models: M01, M02, M03, M04, M05, ZR1) allow for the complete management and automation of the software development cycle.

As well, porting of Linux applications from other platforms is enabled by the solutions, allowing for application development, testing, and execution on Linux on Z with minimal effort.

Running your DevOps with Linux on Z, you can not only benefit from the outstanding capabilities of the IBM Z servers — such as scalability and security, but also from the co-location benefits in performance and operational efficiency when running it next to your z/OS®, z/VSE® or z/TPF environments.

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