Near-zero downtime for SAP production environments

Red Hat Enterprise Linux for SAP solutions

Highlights

- Rapidly and reliably prepare and configure Red Hat® infrastructure for SAP installations.

- Conduct rapid patching of Red Hat-based SAP environments.

- Achieve near-zero downtime and maintenance for SAP HANA® applications.

- Automate failover for SAP HANA System Replication (HSR) in both scale-up and scale-out configurations.

Introduction

Reducing planned and unplanned downtime for SAP applications requires a focus on both infrastructure and on SAP itself. Deploying your SAP landscapes on Red Hat Enterprise Linux® provides a stable foundation that delivers stability, performance, security, and high availability at scale. Designed specifically for SAP environments, Red Hat Enterprise Linux for SAP Solutions provides key stability for your SAP landscape and IT environment by offering:

- A consistent and reliable platform to streamline operations and management, increase stability, and reduce costs.

- A high-performance foundation that delivers superior record-setting performance for SAP applications.

- High-availability solutions that complement SAP HANA's native high-availability capabilities.

- Effective, proactive management to keep SAP landscapes up-to-date and in compliance with security and regulatory policies.

- Enterprise stability for business environments through features such as security patches and critical fixes for select minor releases of Red Hat Enterprise Linux.

- World-class support that helps prevent issues in your SAP environment that can cause costly downtime.

Achieving near-zero downtime

Included with Red Hat Enterprise Linux for SAP Solutions, the Red Hat Enterprise Linux High Availability Add-On automates high availability and failover, potentially reducing both planned and unplanned downtime in scale-up and scale-out SAP HANA, SAP S/4HANA, and SAP NetWeaver deployments. Building on SAP HANA's native replication capabilities, the add-on offers a standards-based approach for ensuring SAP application reliability in both on-premise and cloud environments.

Successful nonstop operation depends on having a robust, enterprise-grade platform, a high-availability feature set in support of SAP applications, and IT automation technology that removes human error from complex and repetitive configuration tasks. Red Hat provides technologies that can be used to minimize downtime for SAP deployments. For example:

- **Red Hat Satellite** helps you build a trusted Red Hat environment and manage the Red Hat life cycle — standardizing your environment while provisioning and configuring at scale.

- **Red Hat Insights** puts SAP on a firm foundation by preventing critical issues with continuous insights, verified knowledge, and proactive resolutions.

Automating routine tasks and eliminating errors

Minimizing downtime requires an approach that automates routine tasks and eliminates human error from the configuration process. Red Hat Ansible® Automation Platform provides critical automation for SAP landscapes as well as other IT processes and Red Hat infrastructure. Ansible Roles provide automation for Red Hat Virtualization, Red Hat Satellite, Red Hat Enterprise Linux, SAP HANA, and SAP NetWeaver.

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Flexible failover for SAP HANA System Replication (HSR)

Standard SAP HANA System Replication (HSR) replicates all data to a secondary SAP HANA system, but failover (takeover) to and from that system is not automated by default, requiring a third-party cluster manager. SAP HSR takeover can be automated using the Red Hat High Availability Add-on. For scale-up configurations, automated SAP HANA System replication assumes a 2-node cluster. Cost-optimized configurations, performance-optimized configurations, and multitier system replication can all be configured depending on the needs of the organization. For scale-out configurations, automated SAP HSR is supported between 2 different sites.[1]

Enhanced availability for SAP NetWeaver and SAP S/4 HANA

To help ensure high availability for SAP NetWeaver environments, Red Hat Enterprise Linux provides pacemaker-based cluster resource agents SAPDatabase and SAPInstance. These resource agents are compatible with Standalone Enqueue Server version 1 (ENSA1, used with SAP NetWeaver deployments), and Standalone Enqueue Server version 2 (ENSA2, used with SAP S/4HANA 1809 or newer).[2]

Conclusion

Red Hat Enterprise Linux for SAP Solutions helps you reduce downtime for SAP, SAP HANA, SAP S/4HANA, and SAP NetWeaver deployments. Automating key tasks with Red Hat Ansible Automation Platform helps eliminate errors and greatly accelerates configuration of complex infrastructure. Automating failover scale-up or scale-out SAP configurations lets organizations make the most of their SAP landscape, focusing priorities where they can best benefit the business.

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1 *Beginning with Red Hat Enterprise Linux 7.6 or later.*

2 *To learn more about configuring a highly-available SAP NetWeaver deployment visit the following knowledge base article for guidelines:* *https://access.redhat.com/articles/3150081.*

About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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