Oracle software with Linux on IBM Z

Oracle software is a powerful candidate to look at hosting on Linux® on IBM Z®.

Why? The deployment of Oracle software, especially the Oracle database, often results in a level of complexity that is hard to manage and increasingly expensive on x86 servers.

Deploying Oracle databases onto IBM Z with Linux, especially onto IBM z15™ (z15), can reduce system management and maintenance requirements. IBM z15 can handle massive workloads at high volume and low cost and is highly performant leveraging up to 190 cores running at 5.2 GHz, and up to 40 TB RAIM.

Linux on IBM Z is Linux, however, it is optimized to leverage the strengths and capabilities of the outstanding IBM Z technology, such as unparalleled resiliency, advanced security capabilities, high utilization and extreme scalability.

- IBM Z earned 'best in class' exhibiting true fault tolerance, experiencing just 0.96 minutes of unplanned per server, per annum annual downtime[1]. IBM Z includes error prevention, detection, correction and error recovery.
- Low latency is given for co-located Linux, z/OS®, and z/VSE® workloads on the same server, eliminating network handling and helping on operational efficiency.
- IBM Z allows for high workload density, with up to thousands of virtual Linux servers in a few square meters footprint, which results in fewer components, less management, less software licenses.

IBM z/VM®'s outstanding virtualization[2], certified by Oracle, combined with the unique ability to support diverse workloads concurrently, high levels of security and intelligent recovery capabilities make the IBM Z environment the ideal choice to host Oracle solutions in the enterprise.

Together, IBM and Oracle can provide an integrated and virtualized environment. Solution teams of Oracle and IBM experts work together to provide design, development, testing, and technical support to support Oracle solutions running Red Hat or SUSE Linux distributions on IBM Z.

KRZ-SWD put Oracle to work

Stiftung Kirchliches Rechenzentrum Südwest-deutschland (KRZ-SWD) is a specialist provider of applications and IT services to churches and the charity sector in Germany. KRZ-SWD rebuild applications on Java and Linux with Oracle database, following successful total cost of ownership studies.

This approach enabled KRZ-SWD to run the software stack on the IBM Z platform with the added flexibility and cost-efficiency of Linux.

"IBM Z platform is very cost-effective and delivers exceptional reliability, availability and serviceability (RAS) levels helping us improve the quality of service we deliver to our clients."

– Frank Schütze, Head of IT, KRZ-SWD

"We can demonstrate to our customers our capability to modernize and innovate in new technologies while providing them with a very modern and cost-effective infrastructure, a key competitive differentiator."

— Jochen Gamber, CEO, KRZ-SWD

[1] Source: ITIC, "ITIC 2019 Global Server Hardware Server OS Reliability Report", March 28, 2019

[2] z/VM is a supported environment for the IBM Dynamic Partition Manager (DPM)

Oracle Database and Oracle Real Application Clusters on Linux for IBM Z

Oracle Database is ideal for Oracle deployments that need to support high volume online transaction processing and query intensive data warehousing applications.

Oracle's multitenant database offers a unique architecture that simplifies consolidation and delivers the high density of schema-based consolidation, but without requiring changes to existing applications. It delivers isolation, agility and economies of scale.

A multitenant container database can hold many pluggable databases. An existing database can simply be adopted with no application changes required.

Oracle Multitenant fully complements other options, including Oracle Real Application Clusters and Oracle Active Data Guard.

Oracle Database and Linux on IBM Z

The Linux on IBM Z solution is designed to add value to the Oracle Database solutions.

- Provides high levels of security with the industry highest EAL5+ and virtualization ratings, and high quality of service.
- Optimizes performance by deploying powerful database hardware engines.
- Provides high-speed I/O capabilities from IBM Z's dedicated I/O processors reducing dependency on workload dependent IFLs.
- Achieves greater flexibility through the IBM Z workload management capability by allowing the Oracle Database environment to dynamically adjust to demands.
- Reduces TCO by using the Linux cores that run the Oracle Database and management of the environment.

"The reliability of IBM Z is outstanding—in the 20 years I've worked with the IBM Z platform, we've never experienced an hour of unplanned downtime."

— Mike Riggs, Director of Judicial Information Technology, Office of the Executive Secretary, Supreme Court of Virginia

Get Started

Redbooks

- Oracle on IBM Z
- Best practices and Getting Started Guide for Oracle on IBM Z / LinuxONE

More …

- Oracle announces availability of On-Premises Oracle Database 19c running Linux on IBM Z and LinuxONE
- Oracle announces On-Premises Database 20c roadmap for Linux running on IBM Z
- Oracle announces availability of Oracle WebLogic Server 14c on IBM Z and LinuxONE
- Oracle announces Oracle Database 19c running Linux on IBM Z and LinuxONE with Oracle E-Business Suite Release 12.1.3
- Oracle announces Oracle Database 19c running Linux on IBM Z and LinuxONE with Oracle E-Business Suite Release 12.2

Article

- Migration from Oracle Exadata to IBM Z / LinuxONE

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