IBM AIX operating system and IBM Power servers for Oracle workloads

Drive innovation with capabilities that help build and deploy applications in a secured and resilient environment

Highlights

Scale your business without impacting mission-critical workload performance

Increase server utilization and optimize costs with IBM PowerVM for AIX

Maximize application availability with IBM PowerHA

Reduce risk and build cyber resiliency with protection across the entire stack

In today's "always on" world, organizations need reliability, availability and security more than ever when it comes to mission-critical business applications. The IBM® AIX® operating system (OS) on IBM Power® servers is designed to support the most demanding workloads for Oracle hybrid cloud environments. For over 35 years, clients have relied on IBM Power to deploy their Oracle database and application workloads. IBM Power is engineered to support the most demanding workloads in a hybrid cloud environment. Organizations, both big and small, can take advantage of Power's class leading reliability and security[1] as well as its advanced recovery, self healing and diagnostic capabilities designed to reduce application downtime.

AIX and Power servers for Oracle Database is an integrated approach that helps ensure that clients can easily deploy a foundation for Oracle Database. Power technology is built to offer thousands of popular industry applications from independent software vendors (ISVs) running AIX. Power servers deliver leading performance and scalability in their class to support Oracle Database and application workloads. Oracle certifies its products on Power systems, delivering a host of benefits, including comprehensive end-to-end support, portability and efficiency. The combined design of AIX on Power servers brings clients unmatched uptime, protection and the ability to build a hybrid cloud in the way that best meets the needs of their business.

IBM

Scale your business without impacting mission-critical workload performance
Mission-critical workloads need a mission-critical operating system with reliability, high availability, scalability and security. The efficiency of AIX provides the flexibility to grow and scale without impacting mission-critical workload performance. On AIX, workloads can grow linearly without hitting bottlenecks, enabling excellent per-core performance with high system utilization that lowers costs. The ability to consolidate multiple workloads on fewer servers increases overall system utilization can lower overall costs by decreasing the number of Oracle licenses required.

Power servers and AIX create a solid foundation for the modernization of traditional Oracle Database workloads, new application developments and workload consolidation. On AIX, clients can run Oracle workloads, middleware, application servers and countless industry applications on the same platform—all without unwanted downtime. Clients can use Power10 memory hardware encryption for protecting Oracle workloads, and benefit from 2.5 times improved performance per core compared to IBM POWER8® servers. When modernizing applications as part of a hybrid cloud strategy, maintaining the scalability, reliability and security of your Oracle Database is essential to business continuity. AIX 7.3 OS further extends on uptime with continuous computing enhancements and live system change management extensions that further reduce planned downtime. Read the [AIX with Oracle Database on IBM Power Systems Considerations for Performance and Stability](#) white paper to learn more.

Increase server utilization and optimize costs with IBM PowerVM for AIX
The IBM PowerVM® feature provides server virtualization without limits and is built into every Power server at no additional charge. Consolidate multiple workloads onto fewer systems, ultimately increasing server utilization and reducing overall costs. The PowerVM feature enables a secured and scalable virtualized environment for AIX, IBM i and Linux® applications. Scale virtualized deployments without the penalties and eliminate scheduled downtime by deploying live mobility between servers. In addition, VM Recovery Manager enables dataceneter management of VMs as well as the capabilities to replicate and restart VMs at a remote location.

IBM PowerHA SystemMirror and VM Recovery Manager

The IBM PowerHA® solution encompasses automation, data integrity and security, and is focused on providing superior economic value and more advanced clustering technology. Monitor and manage availability to eliminate both planned and unplanned outages. PowerHA technology provides smart assists for out-of-the-box high-availability setup and application management for middleware products, such as IBM Db2® data management, SAP NetWeaver and Oracle. These smart assists are high-availability agents for application deployment and management. Smart assists are used to define high-availability policies by discovering software that's deployed within the cluster. IBM PowerHA Enterprise Edition and VM Recovery Manager enable clients to extend their cluster to incorporate remote locations for disasterrecovery. These high-availability solutions reduce the chance of failures that come from combining multiple components from multiple vendors. PowerHA technology is available in either a Standard Edition or Enterprise Edition for AIX and IBM i operating systems.

Reduce risk and build cyber resiliency with end-to-end protection across the entire stack

As security threats continue to rise, protecting your database is more critical now than ever before. AIX and Power10 servers are equipped with enhanced security capabilities, including endpoint detection and response (EDR) technology that provides added security for virtual machine (VM) workloads and helps ensure complete protection at every endpoint within the network. For systems that rely on passwords to be secure, AIX uses IBM PowerSC Multi Factor Authentication to add an additional level of authentication for all users and defends against password-cracking malware. AIX trusted execution verifies the integrity of the system and implements advance security policies to enhance the trust level of the complete system. IBM PowerSC Multi Factor Authentication further hardens AIX environments against security threats, simplifies administration and accelerates compliance and audit preparation. With IBM Power technology, you can increase cyber resiliency and manage risks with comprehensive protection that integrates across the entire stack—from processor and firmware to OS and hypervisors, to apps and network resources, all the way to security system management.

Conclusion

Today's global businesses must rely on technology that's protected, highly available and able to adapt quickly to changing business needs and customer demands. AIX and Power servers deliver these capabilities and more, with the performance, reliability and protection that your mission-critical Oracle Database demands. For more information, read the white paper Modernizing Oracle Database on IBM Power.

For more information

To learn more about Oracle workloads for the IBM AIX OS on IBM Power servers, contact your IBM Business Partner.

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1. ITIC 2022 Global Server Hardware, Server OS Reliability Report; ITIC 2022 Global Server Hardware, Server OS Security