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Oracle Linux: The Ideal Choice for Running Oracle Database

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Purpose statement

This document describes what makes Oracle Linux the ideal choice for running Oracle Database.

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Introduction

Many essential business applications such as order entry, financials, human resources, customer relationship management, and enterprise resource planning run on an Oracle Database. Because business success often depends closely on these strategic applications, IT departments strive to provide an optimal Oracle Database infrastructure—one that delivers responsive performance, scalable capacity, tight security, and "always-on" availability. The infrastructure must also be easy to manage and support fast database server provisioning, allowing transaction capacity to be added easily and deployed into production quickly.

For Oracle Database workloads running on Oracle Linux, on-premises or in the cloud, deep testing and integration between the layers brings substantial benefits: fast transaction speeds, scalable performance, and the security and reliability needed to meet strict service level agreements (SLAs). In addition, an end-to-end Oracle stack increases administrative efficiency since there's no need for cross-platform skill sets to manage multiple vendor technologies. And there's the added benefit of a single point of contact from the industry's leading database infrastructure experts, for your most critical service and support issues.

Oracle Database is built on a multitenant architecture designed to simplify the process of evolving to a cloud-based Database-as-a-Service (DBaaS) delivery model. To build an optimal infrastructure for Oracle Database, forward-thinking solution architects select Oracle Linux for the operating system (OS) tier. Oracle Linux is a highly reliable, highly secure, and cloud-ready operating system that is a cost-effective and high-performance choice when modernizing infrastructure or consolidating database instances on Oracle Database. This paper explains what makes Oracle Linux the ideal choice for Oracle Database environments.

Oracle Database is developed on Oracle Linux

Oracle Linux is the development standard at Oracle. Oracle Database and all of Oracle's other software, services, and solutions are developed on and run in production on Oracle Linux. Developers working on Oracle Database can troubleshoot the entire stack, all the way down to the Linux kernel, making performance and reliability improvements as well as fixing bugs. This allows them to fix bottlenecks and problems that might originate in the OS, rather than working around them.

Oracle Linux is tightly coupled with Oracle Database and application testing, which hardens software releases throughout each product's lifecycle. Even before formal evaluation occurs, Oracle Linux is the base platform on which developers prove functionality, quality, and software viability. And before any database or application software is made available, Oracle engineering teams conduct formal stress tests on Oracle Database and Oracle Real Application Clusters (RAC) running on Oracle Linux, along with an extensive battery of system verification and performance tests.

Oracle Linux is the runtime standard at Oracle. SaaS, PaaS, and internal services for Oracle Cloud Infrastructure (OCI) run on Oracle Linux. Oracle's premier converged infrastructure runs Oracle Linux. This creates a very large pool of high-value, heavily loaded usage scenarios that Oracle is constantly monitoring. This tends to expose hidden weakness in either the OS or the interaction with the database in an environment where that weakness is very likely to be discovered, properly diagnosed, and fixed. It is unlikely that any other combination of operating system and database receives this breadth and depth of live testing.

Oracle Linux includes the Unbreakable Enterprise Kernel (UEK), which is specifically optimized for the best performance of Oracle software and hardware. Oracle Database and Oracle Linux development teams collaborate on UEK performance enhancements, tuning system calls, and C library interfaces that accelerate applications and query processing times. Oracle engineers extensively test UEK across Oracle's database, middleware, and application tiers as well as on Oracle servers and engineered systems. UEK is also subject to incremental and widespread testing across IT development systems running the family of Oracle Database products. UEK also pulls in valuable improvements from upstream Linux that are not available in other distributions but are nonetheless 100% open source and community

driven. These improvements eventually are released by other distributions, but Oracle Linux users receive the benefit of a commercially supported, tested, and optimized kernel before other mainstream Linux users.

The standard for Oracle Database

Oracle's internal development teams are supported by thousands of Oracle Linux servers, with Oracle Linux as the development standard for Oracle Database products and services. Oracle Linux is used extensively by thousands of Oracle Cloud customers worldwide. Thousands of Independent Software Vendors (ISVs) certify their software on Oracle Linux and independent hardware vendors qualify their hardware on Oracle Linux with UEK.

Oracle Database and Oracle Linux on Arm

In addition to 64-bit Intel and AMD (x86-64) architecture, Oracle Linux with UEK is available on 64-bit Arm (aarch64), allowing users to build next-generation applications in enterprise computing environments. The growing adoption of Arm processors is driven by advantages such as improved performance to power ratios, potential cost savings, and increasing support for cloud native and AI workloads. Oracle Linux for Arm is built from the same source packages as the corresponding Oracle Linux distribution for the x86-64 architecture, plus any patches and modifications that are required to support the Arm platform. This compatibility extends to Oracle Database, which is available for both cloud and on-premises deployments.

Oracle Linux advantages for Database deployments

Beyond the flexibility and low TCO of open source, Oracle Linux offers enterprise-class performance, security, and mission-critical reliability, availability, and serviceability (RAS). Additionally, what distinguishes Oracle Linux from other OS platforms—in particular for Oracle Database workloads—are advantages afforded by the operating system's deep integration with the solution stack, UEK, and optimizations resulting from industry collaborations.

Optimized transaction performance and scale

Oracle Database and Oracle Linux engineering teams collaborate continuously on improvements and optimizations to boost database application performance. For example, when traditional inter-process communication (IPC) mechanisms exhibited stability issues under heavy loads, Oracle engineers pioneered a new approach—Reliable Datagram Sockets (RDS), a low-latency connectionless protocol for delivering datagrams reliably to thousands of endpoints. Because RDS resulted in fewer retransmissions (especially during times of peak processing), it greatly improved database performance on Linux. Oracle contributed the RDS code to the open source community and it is now part of the Linux kernel. Oracle Database engineers were subsequently able to simplify the database code, removing extraneous user code that addressed the instability issues—allowing Oracle Linux to do the "heavy lifting" for high-performance database communications.

Collaborating with Intel has resulted in enhancements that help Oracle Database applications scale well on x86 servers running Oracle Linux. Working with Oracle Database engineers, Intel optimized CPU threading algorithms, allowing the database to take advantage of Intel SIMD and AVX instructions that improve NUMA scalability. In addition, Oracle Database software uses the multithreaded Intel® IPP (Intel® Integrated Performance Primitives) library to accelerate columnar compression/decompression as well as encryption operations. For database applications compiled on Oracle Linux, Oracle and Intel also recommend the optimized Intel compiler to obtain the best application performance.

In addition, UEK includes extensive performance and scalability improvements to the process scheduler, memory management, file systems, and the networking stack. It is tuned to perform better and faster on leading-edge x86 and Arm configurations that feature many CPU cores and large amounts of main memory. Optimized libraries and system calls help to improve performance for Oracle Database queries. Additionally, the Remote Direct Memory Access (RDMA) capabilities within UEK, which allow direct data access from one computer to another without CPU

involvement, have been extensively optimized for Oracle Database workloads. These optimizations enable Oracle Database to leverage high-performance networking capabilities, resulting in high throughput and reduced latency for database operations.

In Oracle Exadata Database Machine, RDMA is used to facilitate direct memory access from database servers to storage servers. Originally run on InfiniBand, Exadata now utilizes a RDMA over Converged Ethernet (RoCE) network fabric, which provides low latency and ample bandwidth for rapid data access and transfer rates. This integration helps ensure zero packet loss messaging, direct data access without CPU involvement, and KVM-based virtualization security.

Due to these optimizations and the pervasive testing that occurs within Oracle, Oracle Linux can address large transaction capacities and scale well as the number of database users or the number of databases increases. For companies consolidating multiple databases on Oracle Database, fast transaction response times and good scalability are key factors that contribute to a cost-effective infrastructure. Improvements to the operating system are also pushed upstream into the open source Linux community so that the optimizations can benefit non-Oracle application workloads as well.

Resource management

Allocating system resources (CPUs, memory, network and storage bandwidth) to specific processes—such as Oracle Database instances—helps strategic applications get the resources they need, while restricting resources available to other less-critical applications. Oracle Linux enables resource management through the use of control groups (`cgroups`). For Oracle Database applications on large systems (like Oracle Exadata), `cgroups` can be especially valuable because it's possible to perform "instance caging," which is binding database instances to specific CPUs. On NUMA architectures, this has the effect of pinning processes to the same processor and memory nodes. NUMA binding in this way can provide a significant performance boost, as it allows a processor to access local rather than non-local memory, making memory accesses considerably faster.

Database Smart Flash Cache

Since many OLTP workloads are read-intensive, Oracle Database engineers developed Database Smart Flash Cache, an innovative solution supported only on Oracle Linux, to accelerate I/O operations for read-mostly database workloads. This functionality allows the database buffer cache to expand beyond the System Global Area (SGA) in main memory to a second-level cache that resides on a flash device. It stores clean (unmodified) database blocks that have been evicted from the SGA buffer cache to make room for other blocks. If a block selected for eviction has been modified, the dirty block is first written to disk by one of the database writers (DBWR) processes, then it is written to the Database Smart Flash Cache. Blocks can later be retrieved from the Database Smart Flash Cache and returned to the SGA as required. If a block cannot be found either in the SGA buffer cache or the Database Smart Flash Cache, it will be retrieved from disk.

Because flash memory is an order of magnitude faster for read operations, benefits can include both increased transaction throughput and improved application response times. Smart Flash Cache also significantly accelerates database performance without additional cost, beyond the cost of the secondary flash device.

Oracle Database environments with the potential to make effective use of this technology include workloads with repeated short transactions where many users access the same data, storage systems that exhibit intensive disk read activity, and systems under heavy main memory pressure that prevents more memory from being allocated to the SGA buffer cache. Database Smart Flash Cache is also supported in Oracle Real Application Clusters (RAC) environments and can be applied to individual Oracle RAC nodes as required.

To learn more, read the Oracle Database Smart Flash Cache with Oracle Linux technical paper.

Mission-critical reliability, availability, and serviceability

In conjunction with advanced reliability features in leading-edge x86 systems, Oracle Linux creates a highly available operating system for deploying mission-critical database applications. Its ability to apply kernel fixes and security patches as soon as these updates become available is a vital element in protecting data and maintaining application continuity. While other operating systems require planned outages to apply kernel fixes as well as time to reboot, Oracle Linux supports "zero-downtime" updates using Oracle Ksplice technology. Ksplice updates the Linux OS kernel and key user space libraries, with no reboot or interruption—virtually eliminating system downtime associated with updates. Additionally, Ksplice's known exploit detection feature adds an extra layer of security by providing tripwires that alarm system administrators if there is an attempt to exploit a known vulnerability. Ksplice is available to customers with an Oracle Linux Premier Support subscription, for on-premises and OCI deployment, at no additional cost. Ksplice greatly simplifies server maintenance, improving the continuous availability of business-critical database applications. For more information, see the Protecting your Linux Systems with Oracle Ksplice Zero-Downtime Updates datasheet.

Another feature that enhances the reliability and serviceability of Oracle Linux is DTrace, a comprehensive, advanced tracing tool for troubleshooting systematic problems in real time. DTrace allows administrators, integrators, and developers to dynamically and safely observe live systems for performance issues in both applications and the operating system. This is particularly beneficial for Oracle Database environments, where tracking performance issues across various layers can be challenging.

Oracle Linux takes full advantage of RAS features in today's x86 processors configured in Oracle and third-party x86 systems. These advanced processors follow the Machine Check Architecture (MCA) in which CPUs can report hardware errors (e.g., bus, Error-Correcting Code (ECC), parity, and cache errors) to the operating system. Oracle Linux runs a Machine Check Exception (MCE) daemon called `mcelog` that detects and reports unrecoverable hardware problems. The daemon tracks and logs hardware errors, taking action based on error thresholds and in some cases triggering events such as CPU or memory off-lining.

In addition to fault management at the processor level, Oracle x86 systems feature superior RAS capabilities at the system level, including redundant hot-swappable power supplies and cooling fans, hot-swappable drives, and *ECC* memories. Oracle Servers feature hot-swappable PCIe Express Modules, as well as hot-pluggable drives and redundant hot-swappable power supplies and fans. Using the Intelligent Platform Management Interface (IPMI) utility (`ipmitool`), administrators can perform server initialization, monitoring, and maintenance tasks from Oracle Linux, managing Field-Replaceable Units (FRUs), network configurations, sensor readings, and remote chassis power controls through the system's service processor.

Advanced end-to-end data integrity solutions

Oracle Database and Oracle Linux engineering teams have played a key role in developing several cutting-edge data integrity solutions that prevent silent data corruption. Silent data corruption can occur when invalid data is read or written without an I/O error being reported to the application or operating system. It typically occurs as the result of a component failure or an administrative mistake. Such errors can be catastrophic for data-centric business applications and potentially result in extended outages. Oracle engineering teams have collaborated with third-party HBA and storage vendors to develop Data Integrity Extensions (DIX) and help construct data integrity solutions that follow the T10 Protection Information (T10 PI) standard, performing integrity checking across the end-to-end data path—from the application to the operating system, through the switch and host bus adapter, and to the disk storage device itself. When data is first written, the solution generates integrity metadata or protection information that is validated at each stage of the data path. Any detected errors are directed to the application for remediation. Oracle implements an open source interface to expose the T10 PI standard to the Linux kernel and end-user applications. T10 PI has become a standard feature in the industry, supported by a wide range of storage vendors and devices.

The Oracle Automatic Storage Management library (ASMLib) embeds protection information in each I/O request that is passed through the layers in the Oracle Linux operating system with UEK to the HBA driver. The driver verifies data integrity before forwarding data to the storage device, which revalidates integrity before writing the data to disk.

High availability with Oracle Clusterware

Oracle Database applications frequently demand high availability, which is why Oracle supplies Oracle Clusterware to Oracle Linux Basic and Premier Support customers at no additional charge. Oracle Clusterware is software that allows multiple Oracle Linux servers to operate as a single system, providing redundancy in the event of a hardware or software failure. Each node communicates through a private interconnect, maintaining a cluster heartbeat that indicates node availability. The main software components are the Voting Disk, which records node membership, and the Oracle Cluster Registry, which stores and manages cluster information.

Oracle Clusterware is tightly integrated with Oracle Advanced Cluster File System (Oracle ACFS), a multiplatform, scalable file system, and storage management technology that extends Oracle Automatic Storage Management (Oracle ASM) functionality to support all customer files. It supports Oracle Database files and application files, including executables, database data files, database trace files, database alert logs, application reports, BFILEs, and configuration files.

For data centers that deploy Oracle RAC, Oracle Clusterware is used to monitor and manage the Oracle RAC infrastructure, databases, and application services. When a node in an Oracle RAC cluster is started, all database instances, listeners, and services are automatically started. If a database instance fails, it is automatically restarted. Events broadcast cluster changes to any application to help ensure they remain online and accessible. Oracle Clusterware is included as a part of Oracle Linux Support, enabling customers to enjoy a single point of contact for their software infrastructure.

To learn more, read the Oracle Database and Oracle Real Application Clusters on Oracle Linux KVM technical paper.

Built-In security and data safeguards

Along with the extensive testing that Oracle Linux undergoes internally for database applications, the operating system includes advanced enterprise features to secure access and protect data. Linux receives intense scrutiny from the open source development community, which yields strong code and ongoing security enhancements. As a result, Oracle Linux includes robust security features—IP filtering for firewall capabilities, strong encryption, and military-grade SELinux mechanisms.

Many database applications are subject to strict information privacy and regulatory requirements. For applications that require stringent security, these Oracle Database options are supported and extensively tested on Oracle Linux:

- Oracle Advanced Security Transparent Data Encryption (TDE), which enforces data-at-rest encryption in the database layer.
- Oracle Advanced Security Data Redaction, which provides on-the-fly redaction of sensitive data in SQL query results (prior to display) to protect sensitive data.
- Oracle Audit Vault and Database Firewall, which provide controls to block SQL injection threats and consolidate audit data from databases, operating systems, and directories.

Accelerated application development and deployment

Faced with tight budgets and the need for greater agility, many IT organizations are moving production Oracle Database applications from physical servers to virtual environments—and taking advantage of the compatibility of Oracle Linux, deployed either on bare metal or guest virtual machines.

Oracle simplifies the process of moving applications from physical servers to virtual guests, and to a cloud delivery model. Oracle Linux with UEK can be deployed either on physical servers or on virtual servers with Oracle Linux KVM. It provides a set of modules that enable you to use the Oracle Linux kernel as a hypervisor to run virtual machines.

Oracle Applications and Oracle Database are certified on Oracle Linux KVM. Oracle provides templates for Oracle Linux KVM, an innovative approach to deploying a fully configured software stack by offering pre-installed and pre-configured software images. The use of these templates virtually eliminates installation and configuration expenses, while also reducing ongoing maintenance efforts, helping organizations achieve faster time to market and lower operational costs.

Given that many Oracle customers are already using containers for applications, providing container images for single instance databases, Oracle Globally Distributed Databases, and Oracle RAC databases was the next logical step. This would complement existing application deployments and lay the foundation for container-based microservices architectures. The single instance database container image, for example, which supports Oracle Database 23ai, brings the power of AI to enterprise data and applications and can be deployed on platforms like Podman and Docker. The Globally Distributed Database container image enables nearly seamless deployment of horizontally partitioned databases, providing near linear scalability, complete fault isolation, and global data distribution for the most demanding applications. Meanwhile, Oracle RAC on containers simplifies and accelerates the deployment of Oracle RAC environments; Oracle RAC databases in containers can be launched in as little as a few seconds, and containers are portable across machines and locations. In addition, Oracle RAC on containers benefits from inherent container characteristics such as low system overhead.

The Oracle Single Instance Database image, distinct from the single instance database container image, is available in the Oracle Cloud Marketplace. This image leverages Oracle VM templates for Oracle Database to provide a quick, easy, and cost-efficient path to deploy a single database instance in OCI.

Oracle Cloud Native Environment is software for configuring, deploying, updating, and upgrading infrastructure for running cloud native applications. It is based on open standards, specifications, and APIs defined by the Open Container Initiative and Cloud Native Computing Foundation (CNCF), including a CNCF-certified Kubernetes module, container runtimes, virtualization, observability, and diagnostics. Oracle Cloud Native Environment supports the Oracle Database Operator, a specialized controller that integrates Oracle Database management into Kubernetes infrastructure, enhancing the deployment of Oracle databases. The Database Operator reduces the time and complexity of deploying and managing Oracle Database instances by creating databases and making them available within Kubernetes clusters. The operator extends the Kubernetes API with custom resources and controllers for automating Oracle Database lifecycle management, providing these capabilities both on-premises and in the cloud.

Cloud-ready integrated services

For enterprises planning to move to the cloud, deploying Oracle Database on Oracle Linux is the ideal and cost-effective choice. When users subscribe to OCI, Oracle Linux Support is provided at no additional cost. This includes access to the latest packages and updates for Oracle Linux, 24x7 expert Linux support, the My Oracle Support portal with an extensive Linux knowledge base, Oracle Ksplice for zero-downtime kernel and user space updates, and Oracle OS Management Hub to manage Oracle Linux instances. Support is also included for Oracle Container Registry for trusted Oracle software container images, including Oracle Linux Container Services for use with Kubernetes. In addition, deploying Oracle Database on Oracle Linux, whether on-premises or on OCI, provides a single point of contact for cloud infrastructure, OS, and Oracle software.

Oracle Linux is a cloud-ready and integrated operating system that enables easier deployment and migration of Oracle Applications and databases to OCI. Oracle Linux Support on OCI provides access to frequent Oracle Linux image updates so that the latest bug fixes and security errata are readily available. In addition, the Oracle Linux yum server and Oracle Container Registry are mirrored inside OCI to enable faster downloads of the latest Oracle Linux

bug fixes, security errata, and container images for Oracle software. Because all network traffic stays within OCI regions, no internet traffic bandwidth is consumed, and no additional network charges are incurred.

Oracle Autonomous Linux is a managed service based on Oracle Linux that reduces the complexity and overhead of common OS management tasks. It automatically handles tasks including zero-downtime patching without human intervention and monitors for critical events. Autonomous Linux instances can be deployed directly from the platform images catalog in the OCI Console. As such, Oracle Linux provides Oracle Database users with cloud-ready services designed to minimize deployment, management, and maintenance complexity.

Simplified OS and virtualization management

OS Management Hub delivers a centralized console to automate, streamline, and simplify the management and monitoring of updates and patches for Oracle Linux systems. It allows for easy automation of patching policies and schedules with customizable configuration options through an intuitive interface. Additionally, OS Management Hub is integrated with Ksplice for zero-downtime security updates and includes fleet management capabilities, helping to reduce management complexity and human error while allowing for greater operational efficiency and scalability. OS Management Hub is included with Oracle Linux Support and OCI Compute subscriptions at no additional cost, providing an efficient solution for managing the OS layer of Oracle Database environments.

Oracle Linux Automation Manager and Engine, based upon the open source AWX and Ansible projects respectively, provide a powerful, scalable, and secure infrastructure automation framework for enterprise environments. Together, they help streamline software provisioning, configuration management, and application deployment, enabling infrastructure as code. Oracle Linux Automation Manager delivers a centralized web-based UI for scheduling jobs and running Ansible playbook tasks, such as user and firewall management. Additionally, by using Oracle Linux Automation Manager, paired with the OCI Ansible Collection, which helps simplify the provisioning and management of resources in OCI, the management of Oracle Database deployments can be streamlined by automating host configuration, installation, and patching.

Oracle Linux Virtualization Manager is a server virtualization management platform that can be easily deployed to configure, monitor, and manage Oracle Linux KVM environments. It features a modern web-based UI and a REST API for managing multiple KVM hosts, along with various automation options and management interfaces for monitoring virtualized system health and comprehensive event tracking. Additionally, it supports hard partitioning technology for Oracle software licensing. VMs can be pinned to specific physical cores on a server, and once pinned, the Oracle Database or application only needs to be licensed for the number of physical cores to which it is pinned. Oracle Linux Virtualization Manager provides an efficient platform for managing workloads in virtualized environments, including those for Oracle Database.

Rapid deployments

Preinstallation packages for Oracle Database

When deploying database applications on Oracle Linux, Oracle Database requires certain packages, package versions, and kernel parameters. To adhere to best practices, administrators typically minimize the operating system image, installing only the minimal number of Oracle Linux packages. They can apply Oracle Database preinstallation packages to resolve dependencies, address prerequisites, and configure the kernel prior to database installation. These preinstallation packages help to provide an easily repeatable deployment process. You can install Oracle Database using a single RPM.

Purpose-built Engineered Systems

Oracle designs engineered systems that are preassembled and preintegrated to reduce complexity and speed application deployment. Because Oracle Linux offers superior performance and enterprise-class features, it is the operating system embedded in most Oracle engineered systems, including:

- Oracle Exadata Database Machine. With optimizations specific to Oracle Database workloads, Oracle Exadata Database Machine is factory-integrated with Oracle servers, Oracle Linux, storage, and other software. This engineered system is designed to accelerate Oracle Database services for large-scale data warehousing and OLTP applications. Oracle Linux scales well to support highly demanding database workloads.
- Exadata Cloud@Customer. This service enables customers to run Oracle Exadata Database Service and Oracle Autonomous Database on-premises, allowing them to maintain full control of their data while benefiting from the advantages of the cloud. This solution helps customers start using cloud database resources in their data centers and addresses strict data residency, security, and latency requirements.
- Oracle Autonomous Database. Oracle Autonomous Database is a cloud native, fully managed database service tuned to run on Oracle Linux. It enhances efficiency, security, and performance by automating tasks like provisioning, tuning, backups, and monitoring. It also offers automated threat detection, remediation, and dynamic scaling to optimize resource usage and cost.
- Oracle Database Appliance. This appliance is a simple, optimized, and affordable entry-level engineered system that integrates Oracle Database, Oracle Linux, Oracle Linux KVM, x86 servers, storage, and networking. It delivers highly available database services in an off-the-shelf solution.
- Oracle Zero Loss Data Recovery Appliance. This appliance provides robust protection for Oracle Databases to help prevent against data loss. Backup workloads are offloaded to the appliance, where dedicated hardware and storage handle backup and recovery tasks in an efficient manner.

Empowering database solutions on Oracle Linux

Oracle Linux makes it easy to set up environments using Oracle software and the tools needed to develop applications with Oracle Database. Oracle Linux provides packages built specifically for developers and enables the bootstrapping of self-contained environments. Scripting languages and database connectors are made available via the Oracle Linux yum server. `python-oracledb` is a Python extension module that allows access to Oracle Database and conforms with the Python database API specification. PHP repositories contain the latest builds of stable PHP releases from the community, including the `php-oci8` extension to connect your PHP applications to Oracle Database. The `node-oracledb` add-on for `Node.js` powers high performance Oracle Database applications and can be used to connect `Node.js` to Oracle Database. Customers who have Oracle Linux support and Oracle Java SE support from Oracle have access to commercial releases of Java SE via Oracle's Unbreakable Linux Network (ULN). For OCI customers, an OCI subscription includes licenses and full support for all Oracle Java SE and Oracle GraalVM versions at no extra cost. In addition, Oracle launched a GitHub repository for building Vagrant projects with Oracle VirtualBox to provide an easy and automated way of setting up developer environments with fully configured Oracle software.

Collaborative partnerships for optimized deployments

To help you implement IT solutions quickly and cost-effectively, Oracle fosters relationships with industry partners and technology leaders that can help you develop implementation plans, customize solutions, provide training, and supplement your internal staffing. The Oracle Linux team works closely with these partners to develop solutions and tools to deploy and effectively manage Oracle Database applications on Oracle Linux. Oracle engineers consult with software partners to help them certify applications on Oracle Linux. Oracle collaborates with hardware partners to help them qualify their systems, validate drivers, and optimize performance of Oracle Database on Oracle Linux.

How to get started

Oracle Linux can be freely downloaded from the Oracle Linux yum server. In addition to no-charge software downloads, Oracle makes all errata for Oracle Linux freely available from the Oracle Linux yum server—no other commercial Linux vendor provides these updates at no charge. This means that your administrators can set up a proof-of-concept environment that includes all released bug and security fixes without initially purchasing a support contract, allowing you to get started immediately evaluating the benefits of Oracle Linux for your database infrastructure.

You can also get started with Oracle Linux on OCI with Oracle Cloud Free Tier resources to build, test, and deploy applications. Contact your Oracle representative to learn more or visit oracle.com/linux.

Conclusion

When you deploy Oracle Database on Oracle Linux, you can be confident that you are deploying on an operating system backed by development teams that work closely together to optimize performance, enterprise security, and availability. Because Oracle's applications, middleware, and database products are developed on Oracle Linux, you'll be deploying on an extensively tested solution. And with your Oracle Linux Support subscription, your software environment is backed by the expertise of Oracle's global 24x7 support organization, regardless of whether you deploy on Oracle servers, an Oracle engineered system, third-party hardware, or the cloud. Additionally, your support agreement can provide management and high availability solutions at no additional charge, which helps to reduce the TCO of your database infrastructure.

For more information

Resources

- Oracle Linux
- Download Oracle Linux
- Oracle Linux KVM templates
- Oracle Cloud Infrastructure
- Oracle Database Smart Flash Cache with Oracle Linux
- SAP Applications with Oracle Database in the Cloud
- Accelerating Zero Trust Adoption with Oracle Linux

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