ORACLE

Oracle Linux for Arm

Oracle Linux is available on the 64-bit Arm platform (aarch64). Oracle Linux for Arm features the Unbreakable Enterprise Kernel (UEK), Oracle's optimized Linux kernel built for business-critical performance and security optimizations for cloud and on-premises deployments. 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.

Build next generation applications

Arm processors are ubiquitous—already powering billions of smartphones and edge devices, they're increasingly used in PCs, laptops, and servers.

With highly optimized performance, better performance to power ratios, and reduced total cost of ownership, Arm processors are now driving the growth of on-premises data centers and clouds.

Oracle Linux for Arm is an optimized and secure operating environment that delivers virtualization, management, and a solid developer toolset to build next generation Arm-based applications.

Free and easy access

Oracle Linux for Arm can be downloaded, used, and distributed free of charge, with easy access to installation ISOs and ready to run images. An ISO image can be used for a standard installation on generic 64-bit Arm hardware. This ISO has been tested on Arm 64-bit hardware and is engineered for use with AmpereOne, Ampere Altra, and Ampere Altra Max based platforms.

You can download an Oracle Linux for Arm installation media image from the Oracle Linux yum server or the Oracle Software Delivery Cloud. You can also obtain the latest Oracle Linux packages from the Unbreakable Linux Network (ULN) or the Oracle Linux yum server.

The process of installing Oracle Linux on the Arm platform does not differ substantially from the installation process of an x86 platform. Review the Oracle Linux documentation for instructions.

To find out about hardware qualified on Oracle Linux for Arm, refer to the Hardware Certification List.

Fast and easy deployment in Oracle Cloud Infrastructure

For Oracle Cloud Infrastructure (OCI) users, Oracle Linux for Arm images are easily accessible and can be deployed on AmpereOne and Ampere Altra Arm-based compute services directly from the OCI console. Oracle Linux images available in OCI are frequently updated to help ensure access to the latest software. These images also include pre-installed OCI utilities to simplify and accelerate the deployment and configuration of Oracle Linux for Arm instances on OCI.

The Oracle Linux yum server is mirrored inside OCI regions to enable faster downloads for Oracle software and the latest Oracle Linux bug fixes and security errata. Because all network traffic stays within OCI regions, no internet traffic bandwidth is consumed, and no additional network charges are incurred.

High performance for Oracle Database workloads

Oracle Linux is the development and runtime platform at Oracle, and it's the foundation upon which Oracle Database is engineered and run in production.

Oracle Database on Arm, powered by Oracle Linux, is available and certified for both cloud and on-premises deployments, enabling you to build and run increasingly complex applications with predictable and consistent performance while achieving excellent scalability.

Zero-downtime patching with Ksplice

Oracle Ksplice can be used to apply zero-downtime security updates for the kernel and key user space libraries such as glibc and openssl, without requiring a reboot or stopping applications. Ksplice on the Arm platform is available with current releases of the Unbreakable Enterprise Kernel (UEK) for Oracle Linux.

Ksplice is included with Oracle Linux Premier Support and available at no additional charge with OCI subscriptions.

Manage updates with OS Management Hub

Oracle OS Management Hub, a managed service hosted in OCI, simplifies the management and monitoring of updates and patches for Oracle Linux systems across distributed environments—in private data centers, OCI, and supported third-party clouds—through a centralized management console.

Using an intuitive interface, run update and patch jobs immediately or automate patching policies and schedule them based on best practices. Track and resolve critical issues across an environment of managed instances and leverage additional OS management features, including lifecycle management for staged rollouts of security errata and other content. For enhanced security, mission-critical Oracle Linux features like Ksplice are integrated with OS Management Hub.

OS Management Hub is available with Oracle Linux Support (Basic and Premier) subscriptions and OCI Compute subscriptions at no additional cost.

Jump start Arm development on OCI

The Oracle Linux Cloud Developer image provides software and tools that integrate with native OCI services, making it easy to deploy an Arm development environment within minutes. It is an Oracle Linux-based, ready-to-run image that provides an out-of-the-box development platform on OCI. It enables you to automatically configure and launch a comprehensive development environment that includes a choice of preferred development languages like Java Platform Standard Edition (Java SE) and Oracle GraalVM, software development kits (SDKs), and OCI client tools. This image enables application developers to easily access the software and tools they need to transition existing applications and build new ones on an Arm-based cloud platform.

Java SE subscriptions, which include Oracle GraalVM, are offered and supported at no additional cost for OCI deployments.

Arm developer toolset

Oracle Linux for Arm includes a solid developer toolset, including the `gcc` compiler, to build code for 64-bit Arm platforms. Oracle Linux 9 and 8 present the concept of Application Streams, where multiple versions of user space components can be delivered and updated more frequently than the core operating system packages. With Application Streams, developers can leverage recent versions of Python, PHP, NodeJS, nginx, and more, without risk of disrupting applications running on different versions of these components. Application Streams contain all the necessary system components along with other products and programs.

In addition, Extra Packages for Enterprise Linux (EPEL) packages, available in the EPEL repository, are built and signed by Oracle for security and compliance.

Real time troubleshooting with DTrace

Oracle DTrace is a comprehensive, advanced tracing tool for troubleshooting systematic problems in real time. It allows administrators, integrators, and developers to dynamically and safely observe live systems for performance issues in both applications and the operating system itself.

DTrace user space code in the dtrace-utils package has been ported to run on 64-bit Arm platforms to enable DTrace for Oracle Linux for Arm.

Container Runtimes

Available for Oracle Linux 9 and 8 for Arm, Podman provides a lightweight utility to run and manage Open Container Initiative compatible containers. Podman can be installed from the Oracle Linux yum server. Container images for Oracle Linux for Arm can be pulled from the Oracle Container Registry, GitHub, and Docker Hub.

MySQL Community packages

MySQL Community packages are available for the Arm platform and can be installed directly from the Unbreakable Linux Network (ULN) or the Oracle Linux yum server by enabling the appropriate channel or repository.

Flexible support options

Oracle Linux for Arm is available with Oracle Linux Support and self-support options. This means you can decide which support coverage is best for each of your systems. Oracle's worldwide, around-the-clock, cost-effective Linux support is offered in 145 countries for traditional, cloud-based, and virtual environments.

Oracle Linux Premier Support is available at no additional cost for OCI subscribers.

Technology preview for Raspberry Pi

Oracle also makes available a disk image of Oracle Linux 9 and 8 for Arm for use on Raspberry Pi hardware. This disk image is available as a technology preview for developer use only. Oracle does not provide support for this disk image or the hardware. Developers can find mutual support through the Oracle Linux for Arm community forum.

Oracle Linux partner ecosystem

With an extensive ISV and IHV partner ecosystem, Oracle Linux and virtualization customers can improve time to market and simplify deployment. As partners qualify their software or hardware on Oracle Linux for Arm, the Oracle Linux ISV Catalog or Hardware Certification List will be updated accordingly.

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