ORACLE Linux

Oracle Linux for Arm

Oracle Linux 8 and 7 are available on the 64-bit Armv8 platform (`aarch64`). Oracle Linux for Arm features the Unbreakable Enterprise Kernel (UEK), Oracle's Linux kernel built for performance and reliability. 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 Armv8 platform.

Build next generation applications

Arm processors are ubiquitous on billions of smartphones and edge devices, and increasingly used in PCs, laptops, and servers. With greater optimized performance, better performance-power ratios, and reduced total cost of ownership, Arm processors are now driving the growth of Arm-powered data centers and clouds.

Oracle Linux for Arm is an open and complete 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. An ISO image can be used for a standard installation on generic 64-bit Armv8 hardware. This ISO has been tested on Arm hardware and is engineered for use with the Ampere eMAG-based EVK platform and the Marvell ThunderX2 processor.

You can download a full 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

For Oracle Cloud Infrastructure (OCI) users, Oracle Linux for Arm images are easily accessible and can be deployed on 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.

Key features

- Free to use, distribute, and update
- Features the Unbreakable Enterprise Kernel (UEK) for Oracle Linux
- Zero-downtime patching of kernel and key user spaces with Oracle Ksplice
- Comprehensive kernel and application tracing with DTrace
- Includes a solid developer toolset to build code for 64-bit Arm platforms
- Rapidly deploy a cloud development environment with the Oracle Linux Cloud Developer image.

Key benefits

- Access a modern Linux kernel and development environment to build a next generation Arm-based solution
- Flexible support options including free support for Oracle Cloud Infrastructure subscribers

Related products

Additional software available for Oracle Linux for Arm on the Oracle Linux yum server includes:

- MySQL Community Server
- OpenJDK

Resources

- Oracle.com/linux
- Oracle Linux Support
- Oracle Cloud Infrastructure

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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 the Oracle Cloud data centers, no Internet traffic bandwidth is consumed, and no network charges are incurred.

Zero downtime patching with Ksplice

Oracle Ksplice technology 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 Unbreakable Enterprise Kernel (UEK) for Oracle Linux. UEK is an Oracle supported kernel that provides the latest open source innovations and business-critical performance and security optimizations for cloud and on-premises deployments.

Ksplice is exclusively available with an Oracle Linux Premier Support subscription, which is included at no extra charge for instances running in OCI.

Arm developer toolset

Oracle Linux for Arm includes a solid developer toolset, including the `gcc` compiler, to build code for 64-bit Arm platforms and to compile modules against the provided kernel. The Software Collection Library for Oracle Linux 7 enables developers to install recent versions of Python, PHP, NodeJS, nginx, and more, without risk of disrupting applications running on different versions of these components.

Oracle Linux 8 introduces 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. Application Streams contain all of the necessary system components and a range of applications that were previously distributed in Software Collections, as well as other products and programs.

In addition, Extra Packages for Enterprise Linux (EPEL) packages available under the EPEL channel 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 8 and 7 for Arm, Podman provides a lightweight utility to run and manage Open Container Initiative (OCI) compatible containers. Oracle Container Runtime for Docker is available for Oracle Linux 7 for Arm. Podman and Oracle Container Runtime for Docker can be installed from the Oracle Linux yum server. Container images for Oracle Linux for Arm can be pulled from GitHub and Docker Hub.

MySQL Community packages

The MySQLCommunity 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.

Jump start Arm development on Oracle Cloud

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 8-based, ready-to-run image that provides an out-of-the-box development platform on OCI. It enables you to rapidly pre-install, 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 Enterprise

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Edition (EE), 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 to build new ones on an Arm cloud platform.

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

Flexible support options

Oracle Linux is available with Premier, Basic, 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 support subscriptions are available on x86 and Arm-based systems.

Oracle Linux Premier level suppport is available at no additional cost for Oracle Cloud Infrastructure customers.

Technology preview for Raspberry Pi

Oracle also makes available a disk image of Oracle Linux 8 and 7 for Arm for use on Raspberry Pi 4 Model B and Raspberry Pi 3 Model B/B+ 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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