

## Frequently Asked Questions

### Oracle Linux

#### Introduction

This document answers commonly asked questions about Oracle Linux. If you don't see the information you need, please feel free to connect with us via Twitter (@ORCL\_Linux), Facebook (Facebook.com/OracleLinux), or via LinkedIn (Oracle Linux Experts Group).

**Q:** What is Oracle Linux?

**A:** Oracle Linux is Oracle's Linux operating system engineered for open cloud. It is freely available under the GNU General Public License (GPLv2). Support contracts are available from Oracle.

**Q:** What is the Unbreakable Enterprise Kernel (UEK) for Oracle Linux?

**A:** The Unbreakable Enterprise Kernel (UEK), part of Oracle Linux, is designed for use with applications requiring scalability and reliability. UEK boasts a wide range of advanced features for demanding workloads. For example, the Unbreakable Enterprise Kernel is the kernel used by Oracle's Engineered Systems and Oracle Cloud.

Oracle Linux is application binary compatible with Red Hat Enterprise Linux whether running the Unbreakable Enterprise Kernel or Oracle's alternative Red Hat compatible kernel. Existing applications run unchanged with the Unbreakable Enterprise Kernel because all system libraries remain unchanged.

The Unbreakable Enterprise Kernel, the default kernel for Oracle Linux, is available for x86\_64 (64bit) systems.

**Q:** What are Ksplice zero-downtime updates?

**A:** Ksplice zero-downtime updates are available to Oracle Linux Premier Support customers at no additional cost. Ksplice patches the Oracle Linux operating system kernel and select user space libraries while the system is running, without a reboot or any service interruption. This

unique capability enables you to stay current with important Linux updates without the operational cost and disruption of scheduling maintenance windows and the risk of rebooting the operating system.

You can use Ksplice for rebootless updates of Oracle Linux whether you are using the Unbreakable Enterprise Kernel or the Red Hat compatible kernel.

Read more about [how to get started with Ksplice](#).

**Q:** What is DTrace for Oracle Linux?

**A:** DTrace is a comprehensive dynamic tracing framework available to Oracle Linux customers. DTrace is designed to give operational insights that allow users to tune and troubleshoot the operating system. DTrace provides Oracle Linux developers with a tool to analyze performance and increase observability into systems, to see how they work. DTrace enables higher quality applications development, reduced downtime, lower cost and greater utilization of existing resources. Oracle Linux Support customers can download DTrace from the [Unbreakable Linux Network \(ULN\)](#).

**Q:** Is clustering software included with Oracle Linux Support?

**A:** Yes. Oracle Linux Support customers at the Basic and Premier support levels can download and deploy Oracle Clusterware at no additional license fee or support cost..

Oracle Clusterware provides server failover capability that helps protect Oracle and non-Oracle applications. It can be a valuable component of a business continuity infrastructure for applications and databases managed in a cluster environment -- including Oracle Application Servers, Oracle Enterprise Manager components, third-party databases, and other applications. For more information, read the [Oracle Clusterware for Oracle Linux FAQ](#).

**Q:** Does Oracle Linux Support include support for KVM?

**A:** KVM is the default hypervisor for Red Hat Enterprise Linux and is part of the Red Hat Enterprise Linux kernel. Because it is part of the RHEL distribution, it is supported

by Oracle under the Oracle Linux Support program. However, [Oracle does not support Oracle software products on KVM](#). Oracle VM Server for x86 is Oracle's free server virtualization software that supports both Oracle and non-Oracle applications, it delivers more efficient performance and is backed by world-class support, at a significantly lower cost.

Learn more about [Oracle VM Server for x86](#).

**Q:** Does Oracle provide support for the Red Hat Scalable File System add-on?

**A:** The Red Hat Scalable File System Add-on is a solution which incorporates the Linux XFS file system and is available, for an additional cost per socket-pair, with the Red Hat Enterprise Linux Server subscription.

Oracle Linux customers with Premier Support subscriptions can receive support for XFS on Oracle Linux 6 at no additional charge. With Oracle Linux 7, XFS is the default file system and is included with Basic and Premier Support subscriptions at no additional charge. This support includes both the Unbreakable Enterprise Kernel (UEK) and the Red Hat compatible kernel. For the Unbreakable Enterprise Kernel, you must use Release 2 or higher.

**Q:** Does Oracle provide support for Red Hat Global File System (GFS), Red Hat Cluster Suite (RHCS), or Red Hat Application Server (RHAS)?

**A:** Red Hat Global File System (GFS) and Red Hat Cluster Suite (RHCS) are part of RHEL5 and Oracle Linux 5 so they are supported by Oracle under the Oracle Linux Support Program. Beginning with Red Hat Enterprise Linux 6, several features were separated into add-ons, requiring a separate purchase, such as the High Availability Add-On for clustering and the Resilient Storage Add-On for GFS2. Oracle Linux Support does not include support for these add-ons.

Oracle Linux already includes the Oracle Cluster File System (OCFS2). Developed by Oracle, OCFS2 is a shared storage file system integrated into the Linux kernel (2.6.16 and higher) and released under the GNU General Public License.

## Oracle Linux Support Offerings

**Q:** What does Oracle deliver with its Linux support?

**A:** The Oracle Linux Support Program delivers 24x7 support for Oracle Linux and Red Hat Enterprise Linux. Technical

support is provided by dedicated Linux support experts via My Oracle Support, the well-established support infrastructure for all Oracle products and backed by an industry-leading Linux engineering team.

Oracle also provides:

- free installation binaries and errata for Oracle Linux;
- comprehensive testing and optimization of Linux with third-party hardware, storage, networking and drivers;
- support for the complete software stack including enterprise applications, middleware, database, Linux, virtualization, servers and storage;
- services and expertise for installation, configuration and full Linux stack deployment.

**Q:** What levels of Linux support are available?

**A:** Oracle offers two levels of Linux support.

- **Basic**—24x7 global support, complete Linux server lifecycle management using Spacewalk or Oracle Enterprise Manager, high availability software, Docker container support.
- **Premier**—24x7 global support, with all of the features of Basic support plus:
  - Premier backports;
  - Oracle Lifetime Support;
  - DTrace for diagnostics and application stack tracing;
  - Ksplice for zero-downtime updates;
  - Ceph Storage;
  - Software Collection Libraries;
  - Oracle OpenStack;
  - and more.

**Q:** Who can take advantage of Oracle's Linux support services?

**A:** Anyone can purchase support for Oracle Linux, Red Hat Enterprise Linux and CentOS installations.

**Q:** What is Oracle's support lifecycle for Oracle Linux?

**A:** Oracle's support lifecycle for Oracle Linux is 10 years. More details can be found [here](#).

**Q:** Does Oracle offer Extended Support?

**A:** Yes. When available, Oracle will provide Extended Support for Oracle Linux once Premier Support has ended. For more information on Extended Support, please review the [Oracle Linux and Oracle VM Support Policies](#). To see which versions of Oracle Linux offer Extended Support today, refer to the [Lifetime Support Policy: Coverage for Oracle Linux and Oracle VM](#).

**Q:** Is Oracle Linux Support available in Oracle Cloud?

**A:** Yes, Oracle Linux Premier Support is included with Oracle Bare Metal Cloud Compute Service, at no additional cost. Read more about [Oracle Bare Metal Cloud Compute Service](#).

**Q:** Is Oracle Linux Support included with Oracle's Sun x86 systems?

**A:** Yes, when you purchase Oracle's Sun x86 systems with Premier Support for Systems, Oracle Linux Premier Support is included (as well as support for Oracle VM and Oracle Solaris). Read more about [Oracle Premier Support for Systems](#).

**Q:** On which hardware architectures is Oracle Linux supported?

**A:** Oracle Linux is supported on x86 (32 bit) and x86-64 (64 bit) hardware.

**Q:** Where can I find details about certified hardware for Oracle Linux?

**A:** You can read more about certified hardware for Oracle Linux [here](#).

**Q:** Are third party applications supported on Oracle Linux?

**A:** Thousands of leading technology partners—-independent software vendors and hardware vendors—certify their products with Oracle Linux. Their products work out-of-the-box with Oracle Linux because it is application binary compatible with Red Hat Enterprise Linux. Visit our [website](#) to learn how to certify hardware and applications on Oracle Linux. Also, Oracle has strategic development and support partnerships with key industry vendors that run on Linux. Visit the [Partner page](#) to learn more about hardware qualification.

**Q:** How much do I pay for Linux support from Oracle?

**A:** Oracle's pricing for Linux support is simple and flexible. Support pricing is calculated on a per-system basis and customers can choose any level of support (including choosing no support) on each server in their deployment.

Premier Support is included with Oracle Bare Metal Cloud and Oracle x86 systems, at no additional cost.

Please see the [Oracle corporate price list](#) for further details.

**Q:** Does Oracle indemnify users against intellectual property infringement claims?

**A:** Yes. Oracle is committed to the success of the Linux operating system and will stand behind its support offering by providing indemnification for intellectual property claims raised against our customers. This indemnification is offered for all Linux users supported by Oracle and is included with Oracle Linux Support. The indemnification is not in any way limited to the amount of money a customer has paid Oracle. Oracle's indemnification offer is part of the Oracle Linux Support contract, which states:

"Provided you are a current subscriber to Oracle Linux Support services, if a third party makes a claim against you that any covered programs furnished by Oracle ("material" or "materials"), and used by you for your business operations infringes its intellectual property rights, Oracle, at its sole cost and expense, will defend you against the claim and indemnify you from the damages, liabilities, costs and expenses awarded by the court to the third party claiming infringement or the settlement agreed to by Oracle, if you do the following:

- notify Oracle promptly in writing, not later than 30 days after you receive notice of the claim (or sooner if required by applicable law);
- give Oracle sole control of the defense and any settlement negotiations;
- give Oracle the information, authority and assistance it needs to defend against or settle the claim."

With Oracle's offer of comprehensive and thorough indemnification against infringement, users can now deploy Linux without hesitation. Oracle's indemnification offer makes Linux an even more attractive choice for enterprise deployments.

Read the [Top Five Facts About Oracle's Indemnification for Linux](#) for more information.

## Oracle's Commitment to Linux

**Q:** Why does Oracle offer Linux support?

**A:** Oracle is deeply committed to delivering the industry's best Linux support and advancing Linux technology. Oracle has a long-standing history of supporting

standards-based computing to lower the cost of IT infrastructure for customers. Linux is the most popular and fastest growing operating system for Oracle software deployments, and as such, it is very important to our customers. Our customers demand the highest quality support when they deploy data center and cloud solutions using Oracle Linux.

- Q:** How is it possible for Oracle to provide enterprise-quality support for Linux while lowering cost?
- A:** For decades, Oracle has been supporting customers' enterprise systems in data centers around the world, with over 14,000 Oracle Linux customers today. This means our Linux support organization can take full advantage of the economies of scale of Oracle and pass along the cost savings to our customers.
- Q:** Does Oracle use Oracle Linux to run its business and product development?
- A:** Oracle has realized first-hand the benefits of lower IT costs by using Oracle Linux in a cloud computing infrastructure. Oracle Global IT runs Oracle Linux with more than 42,000 servers for Oracle's public cloud and Oracle's managed cloud services, as well as Oracle University. These systems support more than 4 million external users and 84,000 internal users.

More than 20,000 developers at Oracle use Oracle Linux to develop key Oracle products such as Oracle Database and Oracle Cloud solutions. Nearly 40,000 Oracle Linux systems run more than 128,000 compute-hours per day of testing in Oracle's product development farm.

- Q:** How does Oracle work with the Linux community?
- A:** Oracle is committed to developing, supporting and promoting Linux. Oracle has been a key contributor to the Linux community for many years. This includes major code contributions such as Oracle Cluster File System and the Btrfs file system, and much more. Oracle's Linux engineering team is a trusted part of the Linux community and several Oracle employees are Linux mainline kernel maintainers. Oracle continues to contribute Linux-related innovations, modifications, fixes and documentation directly to the Linux community. We strive to set the standard for collaboration.

Oracle also puts tremendous effort into testing Linux to run well in enterprises. Oracle's Linux test lab uses many test kits that are based on real customer workloads to test and stress Linux for performance, scalability, reliability and security. The results of these testing efforts make their way into the Linux kernel as bug fixes and new

enhancements, thereby making Linux better for all customers.

Learn more about Oracle's work with the Linux community and with other open source projects at [oss.oracle.com](https://oss.oracle.com).

## Oracle Linux Updates and Patches

- Q:** How do I get updates for Oracle Linux?
- A:** Oracle provides security updates and bug fixes (errata) for Oracle Linux for free from the Oracle Linux yum server on [yum.oracle.com/](https://yum.oracle.com/). Updates to Ksplice and Oracle Linux 5 require Oracle Linux Premier or Extended Support. Customers can freely choose which of their systems should be covered by a support subscription, and at which support level.

The Unbreakable Linux Network (ULN) is a comprehensive resource for Oracle Linux Support subscribers, and offers access to additional Linux software (e.g. ASMLib, DTrace) as well as patches, updates and fixes. ULN is similar to Red Hat Network (RHN). To access ULN, a valid Customer Support Identifier (CSI) is required. To obtain a CSI, purchase Linux support from the Oracle Store or through your Oracle sales contact.

Read the [Unbreakable Linux Network white paper](#) for more information.

- Q:** How can users manage their Linux servers once they download patches from ULN?
- A:** The base installation of Oracle Enterprise Manager 13c includes several features free of charge with the purchase of an Oracle Linux Support contract. These features include server, storage and virtualization management features such as:

- Configuration management;
- Advanced alert management;
- Host monitoring and management;
- Linux OS patching.

Several additional features are also included free of charge, including:

- Bare metal OS provisioning;
- Compliance automation;
- Historical monitoring.

To download Oracle Enterprise Manager 13c, visit the [Oracle Enterprise Manager downloads page](#).

Oracle also provides support for Spacewalk, an open source Linux management product. More information about Oracle's Spacewalk support can be found in the Spacewalk Release Notes.

## Migrating to Oracle Linux

- Q:** Does Oracle Linux offer Red Hat Enterprise Linux compatibility?
- A:** Yes, Oracle has offered application binary compatibility with Red Hat Enterprise Linux for more than ten years, with no reported issues.
- Q:** What do I need to do to migrate from Red Hat Enterprise Linux (RHEL) to Oracle Linux?
- A:** There is no need to reinstall the operating system. To transition your existing RHEL systems from RHN to the Unbreakable Linux Network, follow the steps outlined here. In summary, you register for an account with ULN using a valid customer support identifier (CSI), then you download and install registration software and use it to register your server. Once you have completed these steps, you may use yum or up2date to download and install updates from ULN.
- Q:** When switching to Oracle Linux Support for my current Red Hat Enterprise Linux installations, am I required to remove any Red Hat logos or other Red Hat files from my system?
- A:** As per the Red Hat license agreement, as long as you do not redistribute the Red Hat Enterprise Linux software, you do not have to change or remove any packages in the Red Hat Enterprise Linux distribution when switching to Oracle Linux Support.

In order to receive updates for Oracle Linux, you must register your system with Unbreakable Linux Network by following the instructions above.

- Q:** What do I need to do to migrate from SUSE Linux (SLES) to Oracle Linux?
- A:** Oracle has developed a simple process for customers who are moving from SLES to Oracle Linux. Begin by reviewing the information found at Migration Made Easy: SUSE Linux to Oracle Linux. Next, familiarize yourself with Oracle Linux by downloading the distribution from our website. Purchase your Oracle Linux Support subscription by contacting your Oracle sales representative or by visiting the Oracle Store.

Remember, Oracle Linux is free to download and distribute, so you only need to purchase the number of subscriptions for which you need support. Plan your migration and while you are transitioning from SLES to Oracle Linux, you will receive configuration and troubleshooting support for SLES under your Oracle Linux Support subscription.

And, if you need additional assistance in planning and implementing a migration strategy, Oracle Consulting is available to help with SLES to Oracle Linux migration services.

- Q:** How do I get more information and purchase Linux support from Oracle?
- A:** To get more information, visit [oracle.com/linux](http://oracle.com/linux) and to purchase Linux support, visit [shop.oracle.com](http://shop.oracle.com) or contact your Oracle sales representative.



### Oracle Corporation, World Headquarters

500 Oracle Parkway  
Redwood Shores, CA 94065, USA

### Worldwide Inquiries

Phone: +1.650.506.7000  
Fax: +1.650.506.7200

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### Integrated Cloud Applications & Platform Services

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