



# Release Notes

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## SUSE Linux Enterprise Real Time 15 SP2

SUSE Linux Enterprise Real Time is an integrated suite of robust open source real-time technologies that enable enterprises to implement solutions with controlled response times. This document gives an overview of features of SUSE Linux Enterprise Real Time and their limitations. Note that this document apply to the x86\_64 architecture only and might refer to Real Time specific details.

Manuals can be found in the docu directory of the installation media, or in the directory /usr/share/doc/ on the installed system (if installed).

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# 1 SUSE Linux Enterprise Real Time

SUSE Linux Enterprise Real Time is an integrated suite of robust open source real-time technologies that enable enterprises to implement solutions with controlled response times.

SUSE Linux Enterprise Real Time enables usage of SUSE Linux Enterprise Server based technologies in environments where having control over latencies is a critical requirement.

Its open source license minimizes the risk of vendor lock-in, and its adherence to open standards encourages interoperability with industry standard tools and technologies.

## 2 What's New?

This section includes an overview of some of the major features and new functionality provided by SUSE Linux Enterprise Real Time 15 SP2.

- The kernel has inherited hardware enablement and part of new features of SUSE Linux Enterprise Server 15 SP2 kernel.
- The latest stable 5.3 PREEMPT\_RT has been incorporated into the service pack.
- LTTng tools package has been updated to version 2.10 and moved to the Development Tools Module 15 SP2. SUSE Linux Enterprise Real Time 15 SP2 carries kernel module packages needed for operation of LTTng.
- LTTng Userspace Tracing has been fully enabled in the product.
- Support for Precision Time Protocol version 2 continues to be available through the base SUSE Linux Enterprise Server 15 SP2 product.
- RT-Tests suite has been updated to version 1.3, the suite contains programs to test various real time Linux features.
- Cpuset has been updated to version 1.6, it allows manipulation of cpusets on the system and provides higher level functions such as implementation and control of a basic CPU shielding setup.

- SUSE Linux Enterprise Real Time 15 SP2 enables the SCHED\_DEADLINE scheduling class as a Technology Preview ( best-effort support ). This scheduler predicts task scheduling based on application deadlines, which is particularly useful for realtime workload.
- To support the use of virtualization to separate system components and to help with creating higher dense systems, SUSE Linux Enterprise Real Time 15 SP2 supports the following features as a Technology Preview ( best-effort support ).
  - Supported guests for non-realtime sensitive workloads.
  - Supported docker containers and real-time capabilities.
  - Supports the realtime sensitive workloads guests, which means that customer can install both RT and non-RT VM on a single machine. With proper system settings and application analysis, RT guest and Non-RT guest not only can co-exist but also not interfere or affect each other

### 3 Installation


Please refer to the Section Two of SUSE Linux Enterprise Real Time Quick Start Guide.

During installation, there are 2 system roles that could be selected. One is Real Time ( GUI mode ) and the other is Real Time ( Text mode ).




After installation, end user may find that the Real Time kernel may not be the default one. It is because the kernel-rt and kernel-default is sorting by the version number. In order to set the default kernel, end user can go to "YaST", find the "Boot Loader", and click on the "Bootloader Options" tab. Select the kernel-rt from the "Default Boot Section" and press "OK" to save the changes. Real Time Kernel will be the default one at the next boot.

### 4 Support Statement for SUSE Linux Enterprise Real Time 15 SP2

SUSE Linux Enterprise Real Time follows the same support policy as SUSE Linux Enterprise Server 15 SP2.

Support requires an appropriate subscription from SUSE; for more information, see <http://www.suse.com/products/server/> .

## 5 How to Obtain Source Code




This SUSE product includes materials licensed to SUSE under the GNU General Public License (GPL). The GPL requires SUSE to provide the source code that corresponds to the GPL-licensed material. The source code is available for download at <http://www.suse.com/download-linux/source-code.html> . Also, for up to three years after distribution of the SUSE product, upon request, SUSE will mail a copy of the source code. Requests should be sent by e-mail to [mailto:sle\\_source\\_request@suse.com](mailto:sle_source_request@suse.com)  or as otherwise instructed at <http://www.suse.com/download-linux/source-code.html> . SUSE may charge a reasonable fee to recover distribution costs.

## 6 More Information and Feedback

- Read the READMEs on the CDs.
- Get detailed changelog information about a particular package from the RPM:

```
rpm --changelog -qp <FILENAME>.rpm
```

<FILENAME>. is the name of the RPM.

- Check the ChangeLog file in the top level of CD1 for a chronological log of all changes made to the updated packages.
- Find more information in the docu directory of CD1 of the SUSE Linux Enterprise Real Time CDs. This directory includes a PDF version of the Real Time Guide.
- <https://www.suse.com/documentation/slerte-12/>  contains additional or updated documentation for SUSE Linux Enterprise Real Time 15 SP2.
- Visit <http://www.suse.com/products/>  for the latest product news from SUSE and <http://www.suse.com/download-linux/source-code.html>  for additional information on the source code of SUSE Linux Enterprise products.

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Thanks for using SUSE Linux Enterprise Real Time in your business.

The SUSE Linux Enterprise Real Time Team.