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Systems Management

Creating a Custom Installation Medium for SUSE Linux Enterprise 15

SUSE Linux Enterprise 15

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Creating a Custom Installation Medium for SUSE Linux Enterprise 15

This document provides guidance on how to create one single custom installation media for SUSE Linux Enterprise 15.

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1 Introduction

The release of SUSE Linux Enterprise 15 is a modern, modular operating system and the next major release since SUSE Linux Enterprise 12 in 2014. It helps simplify multimedia's IT, makes traditional IT infrastructure more efficient and provides an engaging platform for developers. a result, customers can easily deploy and transition business-critical workloads across on-premise and public cloud environments.

With a focus on the developer community, SUSE Linux Enterprise 15 also accelerates the enterprise transition from free developer subscription or community Linux (openSUSE Leap) setups to production deployments of fully supported enterprise Linux. Existing customers can use this release as an opportunity to baseline their systems to SUSE Linux Enterprise 15 from older releases, so they are well positioned for many years to come.

The SUSE Linux Enterprise 15 platform uses a **common code base**. This means that all SUSE Linux Enterprise 15 products share the same code base across all architectures. Packages are built using the same source code to ensure consistency and improve application portability across a multi-modal IT to ensure application mobility across multimodal IT environments. With the **Modular+** architecture, everything is a module. Delivery of new features is easy, and you can get product updates and patches more frequently.

2 Preparing the Installation

SUSE Linux Enterprise 15 products are distributed via two different kinds of media:

1. The installer media
2. The “Packages” media which contains the (optional) modules

The installer media (“SLE-15-Installer-DVD-<architecture>-GM-DVD1.iso”) contain only a minimal set of packages to ensure you have available a minimal, command line based system for installing, updating and registering SUSE Linux Enterprise products. All other packages must be installed either from online repositories like the SUSE Customer Center (SCC), the Subscription Management Tool (SMT) or the Repository Mirroring Tool (RMT), or from the Packages media (“SLE-15-Packages-DVD-<architecture>-GM-DVD1.iso”). Using RMT for mirroring the repositories will save bandwidth though.

For a regular offline installation without Internet access, the following downloads are required in advance for each architecture you want to install on:

1. DVD1 of the installer medium
2. DVD1 of the packages medium

Download the ISO images from https://download.suse.com to a workstation or to a network drive. Burn a DVD from the ISO image (AMD64, Intel 64, and AArch64 only).

Important: Use Content of ISO Images

Create the DVDs using the **content** of the ISO images. Do not create the DVDs by burning the `.iso` files themselves, for example as a single "track" to the DVD. Instead always choose "burn image", "burn ISO", "write premastered image" or similar. For example, if you are using GNOME, right-click the ISO image and select "Open with CD/DVD Creator", then click "Write".

After that, prepare booting into the installation system.

In some cases, it can be useful to create one single custom medium containing the installer and a specific set of modules. For example, this can be the case if you want to prepare for an unattended autoinstallation with AutoYaST.

3 Creating One Single Installation Medium for SUSE Linux Enterprise 15

You can easily create a combined installation medium by following the steps described below.

1. Download the installer medium and create a directory for each module on it.
   The initial structure of your custom installation medium looks like the following example:

   ```
   /
   - media.1
   - repodata
   - noarch
   - x86_64
   - [...]
   - SLE-Module-Basesystem
   - SLE-Module-XXX
   ```

2. Copy the repository from the module to the respective directory for all modules. You can copy it either from the modules DVD or from the repository mirror on your local SMT or RMT server. Type the following command:

   ```
   cp -a /srv/www/htdocs/repo/SUSE/Products/SLE-Module-<name>/15/<arch>/product/* SLE-
   Module-<name>
   ```

Alternatively, you can create your own repository with the command **createrepo** or import the repository from any other source as long as the repository uses the *rpm-md* format of metadata.

Important: SUSE Tags

Do not use repositories with the *SUSE Tags* metadata format.

3. Append new lines to the end of the file `/media.1/products` on the medium. For each of the modules, add one line in the following format:

   <Path on media> <Name of the module>

   The module name can consist of any text, which will later be presented by the installer. For example, it can be as follows:

   /SLE-Module-Basesystem SLE-15-Module Basesystem

4. *(Optional)* Automate the selection of modules.

   To automatically preselect the modules, create an `add_on_products.xml` file in the root of the media and specify all modules which should be pre-selected by the installer. Find an example for such a file below:

```
<add_on_products xmlns="http://www.suse.com/1.0/yast2ns"
        xmlns:config="http://www.suse.com/1.0/configns">
 <product_items config:type="list">
  <product_item>
   <url>relurl:////</url>
   <path>/SLE-15-Module-Basesystem</path>
   <install_products config:type="list">
    <product>sle-module-basesystem</product>
   </install_products>
  </product_item>
 </product_items>
</add_on_products>
```

   Repeat the *product_item* element for every module you want to pre-select. The <*product*> entry must match the identifier of the product to ensure the correct release package gets installed.

5. Create a bootable DVD with the following command:

```
mksusecd --create My-SLE-15-Installer-DVD.iso <path>
```

6. Boot the DVD.

7. In the add-on step, select the additional modules you want to install.

Important: Modules Selection

In the list of modules to select, the installer will also offer the product which comes from the root of media (corresponding to the already existing line in the `media.1/products` file). Do **not** select this one. Also, do **not** remove this entry from `media.1/products`, as it is necessary for bootstrapping the installation.

At this point, having followed the steps as described above, your custom installation medium for SUSE Linux Enterprise 15 containing the installer plus the modules you have chosen to install is ready to use.

Find an example structure of the final custom installation medium below:

```
/
 - media.1
 - repodata
 - noarch
 - x86_64
 - [...]
 - SLE-Module-Basesystem
   - repodata
   - noarch
   - x86_64
   - [...]
 - SLE-Module-XXX
   - repodata
   - noarch
   - x86_64
   - [...]
```

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