

通过网络 PXE 引导部署 SUSE Linux Enterprise Server

内容

SUSE Linux Enterprise Server 提供可通过目标设备的 PXE 引导进行远程部署的映像。

原因

您希望远程部署 SUSE Linux Enterprise Server。

工作量

读完本文大约需要 15 分钟。

目标

获得一个正确安装且可正常运行的 SUSE Linux Enterprise Server 实例。

要求

一台配置正确的 PXE 引导服务器。有关详细信息，请参见：[PXE 服务器安装 \(https://susedoc.github.io/doc-modular/main/html/SLE-PXE-server/\)](https://susedoc.github.io/doc-modular/main/html/SLE-PXE-server/) 。

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1 SUSE Linux Enterprise Server 的 PXE 安装简介

SUSE Linux Enterprise Server 可通过预引导执行环境（简称 PXE）进行安装。客户端硬件需支持通过 PXE 引导。网络需要提供 DHCP 服务器和 TFTP 服务器，以向客户端提供所需的数据。

部署过程可以归纳为以下步骤：

1. 确保 DHCP 服务器配置正确。
2. 准备 TFTP 或 HTTP 服务器：添加安装映像并配置引导设置。有关详细信息，请参见[准备安装文件 \(https://susedoc.github.io/doc-modular/main/html/SLE-PXE-server/index.html#sles-pxe-server-prepare-installer\)](https://susedoc.github.io/doc-modular/main/html/SLE-PXE-server/index.html#sles-pxe-server-prepare-installer) 。
3. 在目标计算机上，选择 PXE 引导并引导计算机。有关详细信息，请参见第 2.1 节 “引导计算机”。

2 远程部署 SLES

部署过程分为两个阶段。第一阶段是引导计算机并加载内核和 `initrd`。第二阶段是使用 Agama 执行安装本身。各阶段的详细信息如下文各节所述。

2.1 引导计算机

以下过程介绍如何引导客户端计算机，以通过 PXE 客户端开始 SLES 的远程部署。

1. 将目标物理计算机开机，或创建一台虚拟机。确保使用桥接网络。
2. 进入 UEFI 或传统 BIOS 引导菜单，选择通过 PXE 或 HTTP 引导。继续引导计算机。
3. 计算机应该会启动部署过程。从 PXE 引导服务器下载内核和 `initrd`。引导加载程序即会启动。
4. 在 GRUB 2 菜单中，选择安装目标。如有需要，可传递内核引导参数。

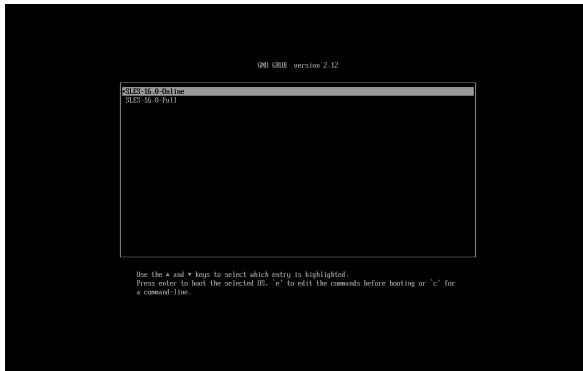


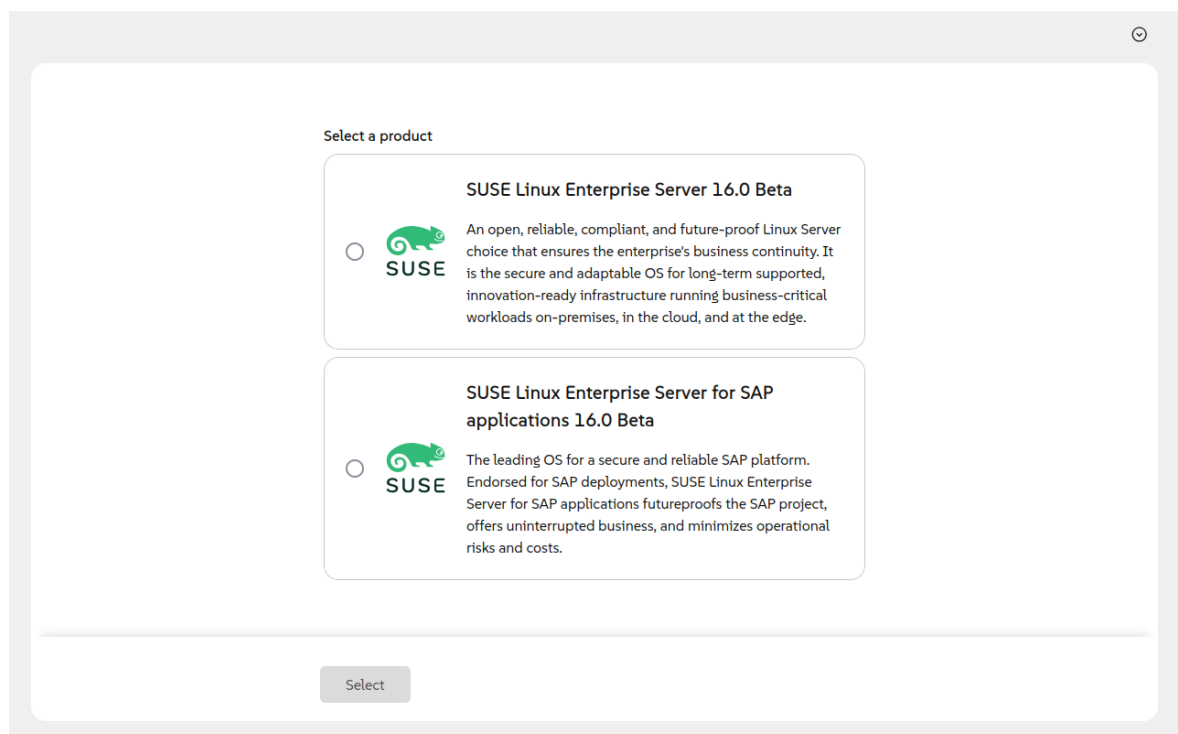
图 1：在 PXE 引导菜单中选择安装目标

5. initrd 会配置网络并启动使用 Agama 部署 SUSE Linux Enterprise Server 的流程。

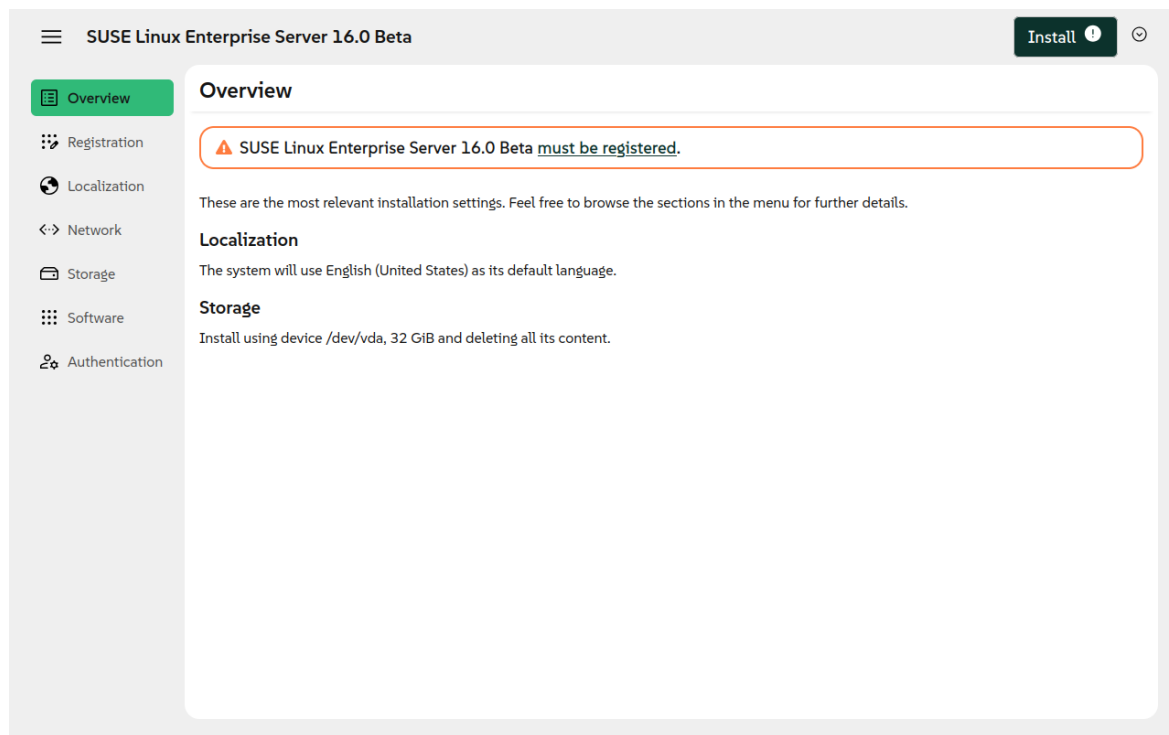
2.2 使用 Agama 安装 SLES

以下过程提供了如何使用 Agama 从远程服务器手动安装 SLES 的分步说明。

1. 选择 SUSE Linux Enterprise Server 16.0 进行安装，并接受许可协议以继续。



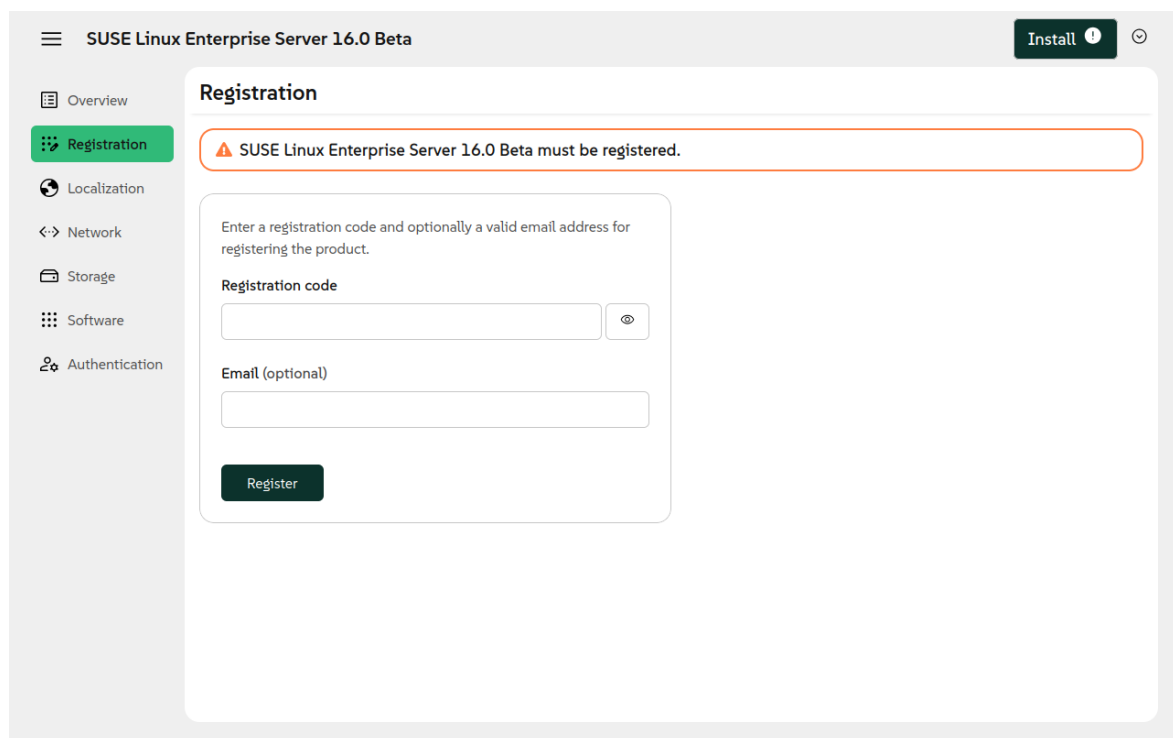
2. 系统会显示包含核心安装设置的概览界面。您可以通过左侧菜单选择对应类别调整设置，也可以直接继续安装。



提示：安装程序语言和键盘

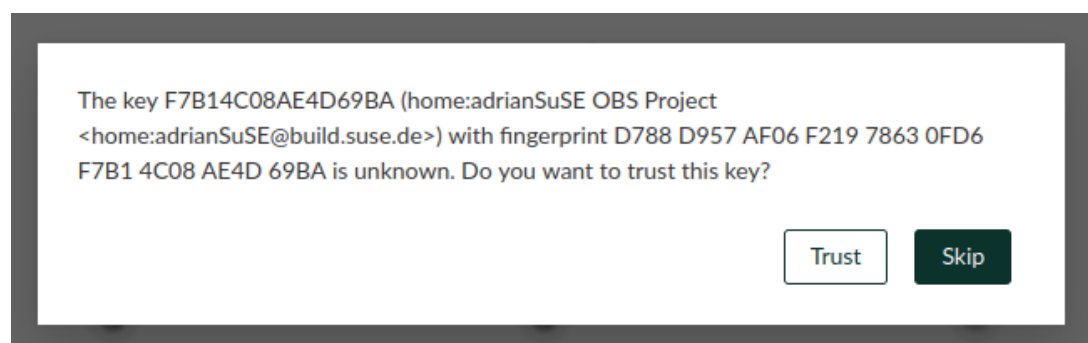
单击右上角的箭头菜单并选择安装程序选项，可更改安装程序使用的语言和键盘布局。只有本地安装支持更改语言。如果通过 Web 浏览器进行远程安装，请在浏览器设置中配置首选内容语言，然后重新加载安装程序。

3. 注册产品。输入注册代码，也可选择输入有效的电子邮件地址。



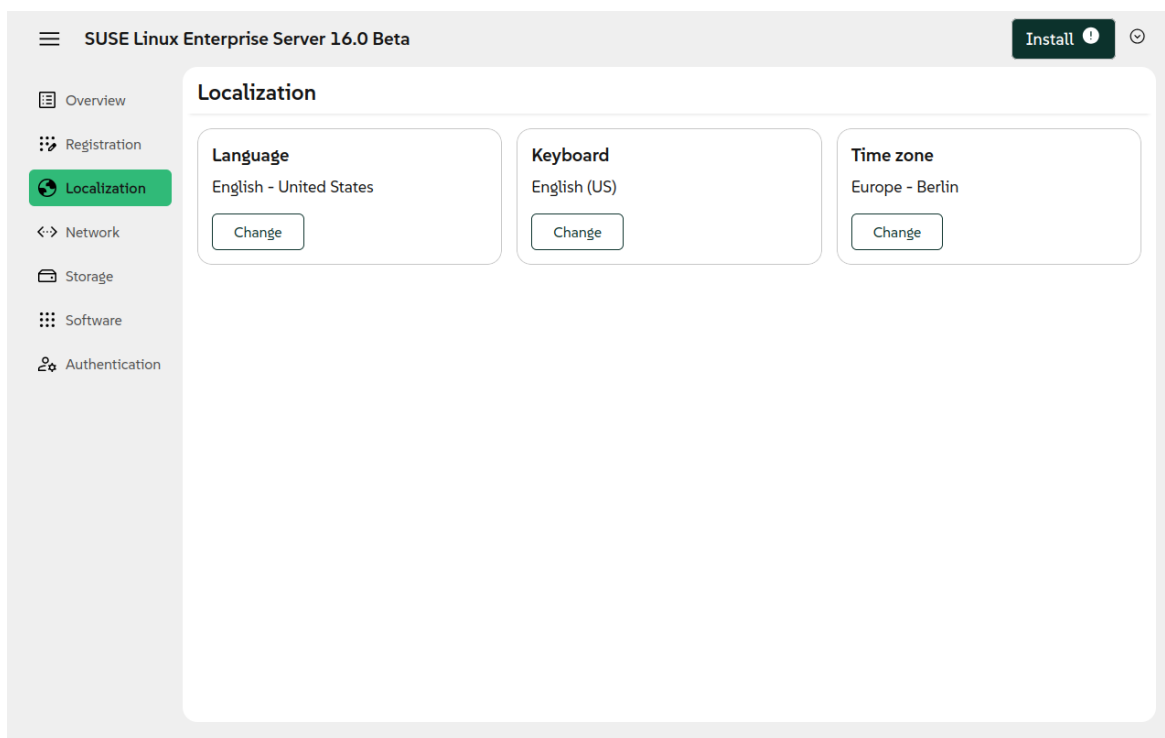
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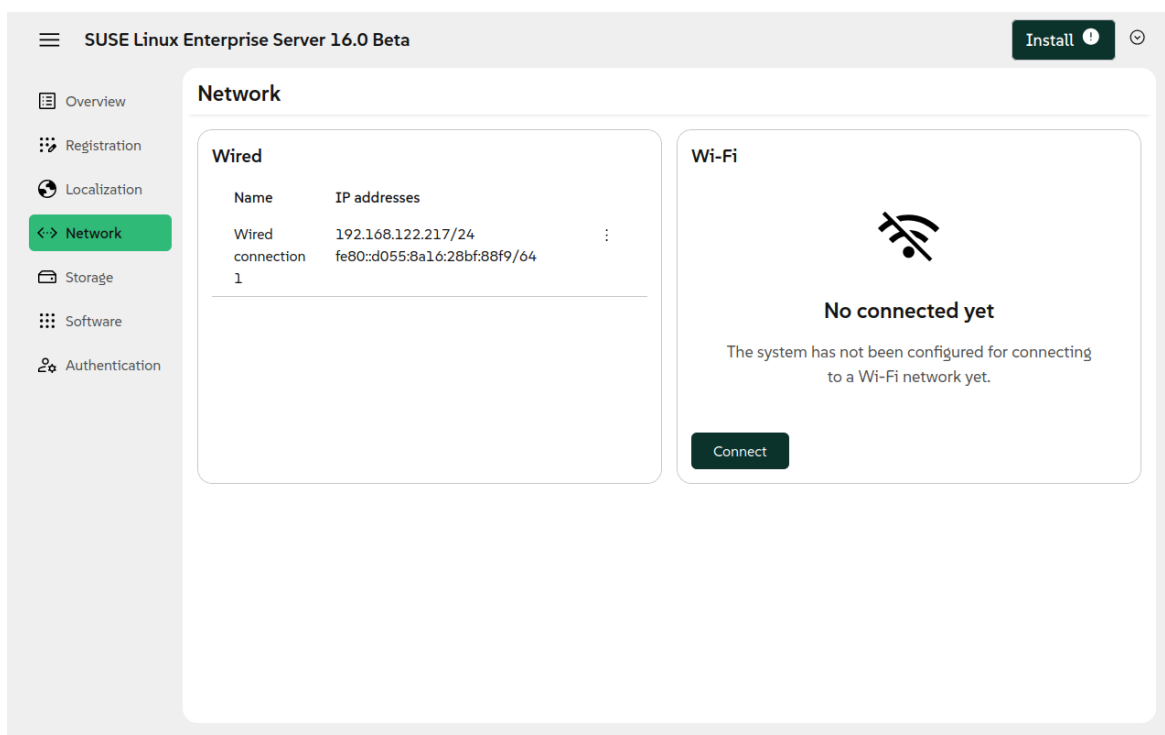


要进行无注册安装，请在弹出窗口中选择信任。

4. （可选）调整本地化设置，如语言、键盘布局和时区。



5. （可选）配置网络设置。要编辑现有网络连接，请单击相应的三点图标。



6. 选择用于安装的存储设备。

目前支持在单个磁盘或 LVM 上进行安装。要更换磁盘或使用 LVM，请在安装设备部分，单击对应设备名称旁的更多选项按钮。

要检测 iSCSI 磁盘，请选择 iSCSI 启动器，然后单击发现 iSCSI 目标。

默认情况下，文件系统会作为新分区分配到所选设备上。您可以在安装设备部分的所有内容都将被删除下拉列表中更改此行为。系统提供以下磁盘空间策略：

磁盘空间策略

删除现有内容

将去除所有分区，磁盘上的所有数据都将被清除。

缩小现有分区

将保留数据，但会根据需要缩小现有分区。

使用可用空间

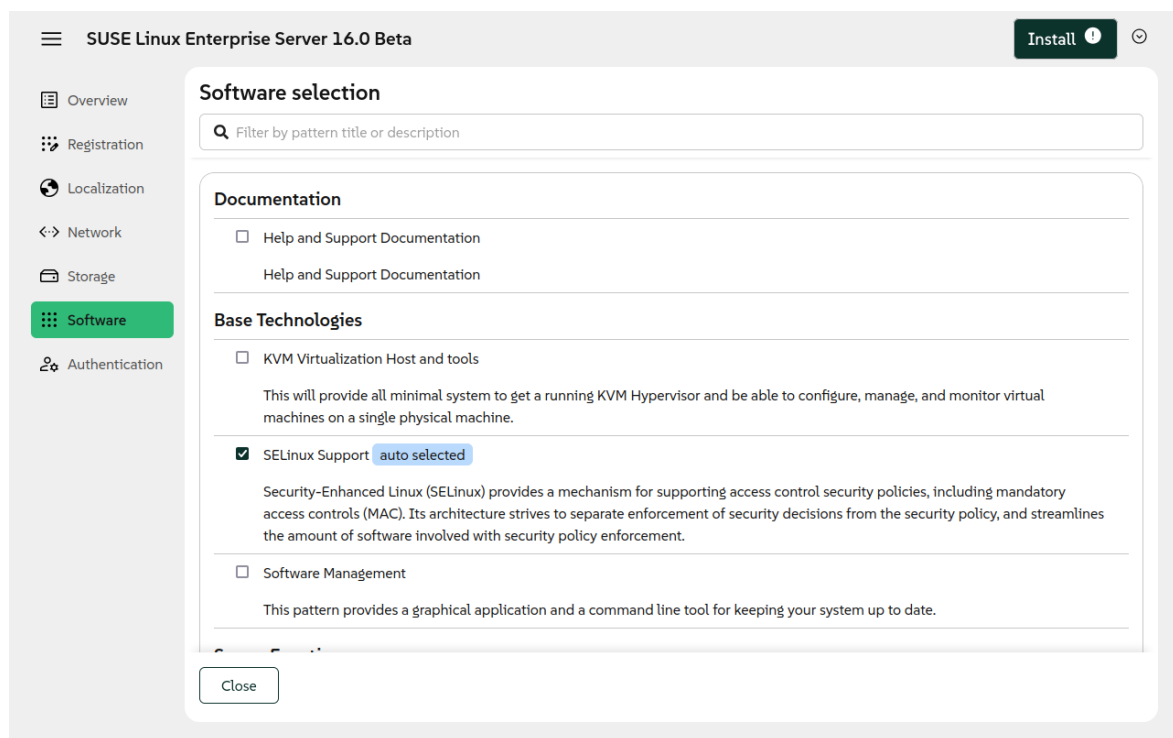
将保留数据。仅使用未分配给任何分区的空闲空间。

自定义

手动选择对每个分区的处理方式。

要单独编辑某个分区，请单击 > 符号展开分区和文件系统部分。您也可以选择配置 Btrfs 快照、引导选项，并启用全盘加密 (FDE)。

7. （可选）添加需额外安装的软件，如 KVM 超级管理程序或 Cockpit 系统管理服务。



8. 配置身份验证设置。

！ 重要：root 默认没有 SSH 权限

root 的 SSH 权限默认处于禁用状态。因此，强烈建议创建一个系统用户。第一个系统用户会自动获得 sudo 权限，也可用于访问 Cockpit。

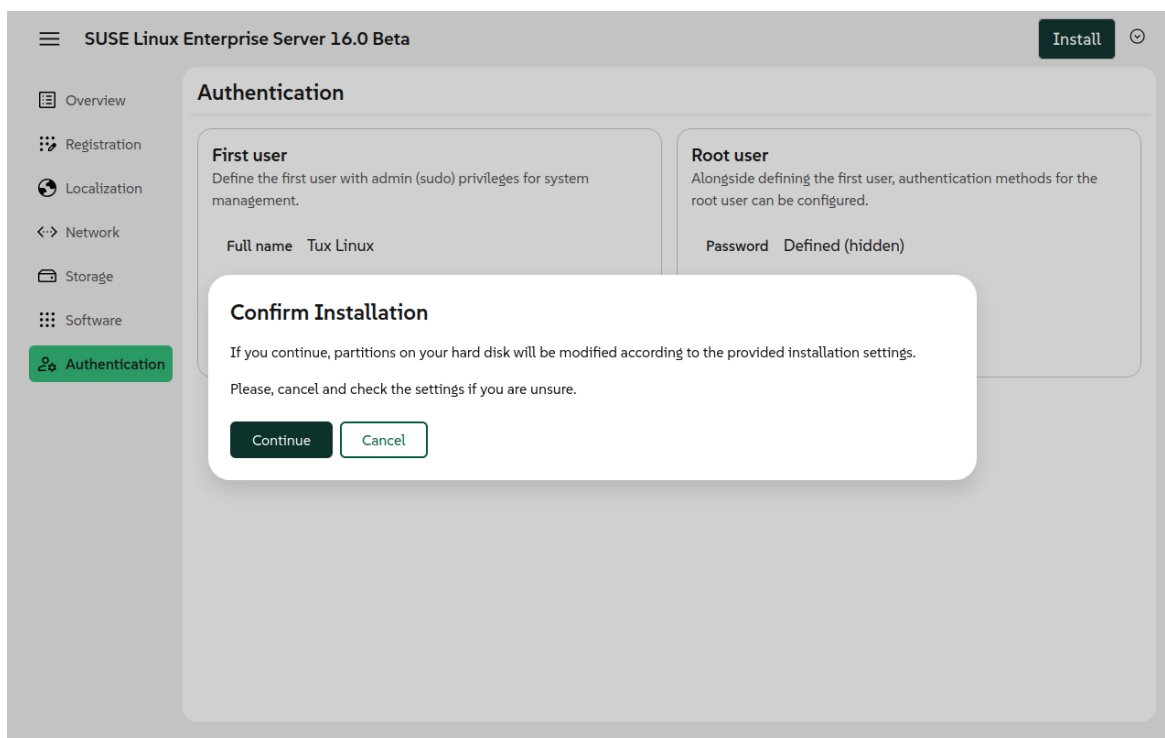
- a. 创建非 root 用户。单击现在设定用户，输入用户名、口令等详细信息。

The screenshot shows the 'Create user' form in the SUSE Linux Enterprise Server 16.0 Beta web interface. The left sidebar contains navigation links: Overview, Registration, Localization, Network, Storage, Software, and Authentication (highlighted in green). The main form area has the following fields: 'Full name' (text input), 'Username' (text input), 'Password' (password input with a toggle icon), and 'Password confirmation' (password input with a toggle icon). At the bottom of the form are 'Accept' and 'Cancel' buttons. The top right of the interface shows an 'Install' button with a clock icon.

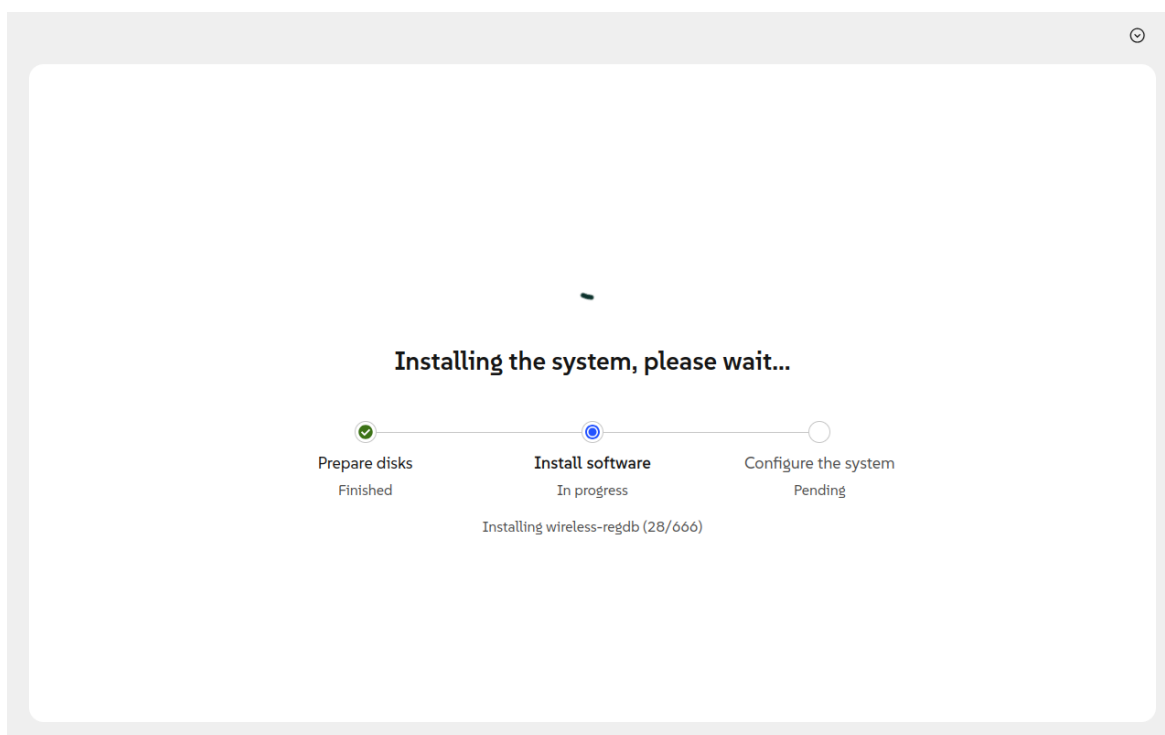
b. 配置 root 的身份验证方式。可以使用安全口令、SSH 公钥，或同时使用两种方式。

The screenshot shows the 'Root authentication methods' form in the SUSE Linux Enterprise Server 16.0 Beta web interface. The left sidebar is the same as the previous screenshot, with 'Authentication' highlighted. The main form area has two radio button options: 'Use password' (selected) and 'Use public SSH Key'. At the bottom of the form are 'Accept' and 'Cancel' buttons. The top right of the interface shows an 'Install' button with a clock icon.

9. 单击安装并确认开始安装。



10. 等待系统安装过程完成。安装过程大约需要 30 分钟才能完成。





提示：安装日志

您可以使用窗口右上角的箭头菜单查看日志和系统消息。

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```

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If your document contains nontrivial examples of program code, we recommend releasing these examples in parallel under your choice of free software license, such as the GNU General Public License, to permit their use in free software.