

SUSE Linux Enterprise Desktop 15

安装快速入门

SUSE Linux Enterprise Desktop 15

本《快速入门》引导您逐步完成安装 SUSE® Linux Enterprise Desktop 15 的过程。

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1 欢迎使用 SUSE Linux Enterprise Desktop

执行以下过程可在所有支持的硬件平台上安装本产品。这些过程假设您已成功引导至安装系统中。有关更详细的安装指导和部署策略，请参见《Deployment Guide》。有关引导至安装系统中所需满足的先决条件，请参见《Deployment Guide》，第 2 章 “Installation on AMD64 and Intel 64”。

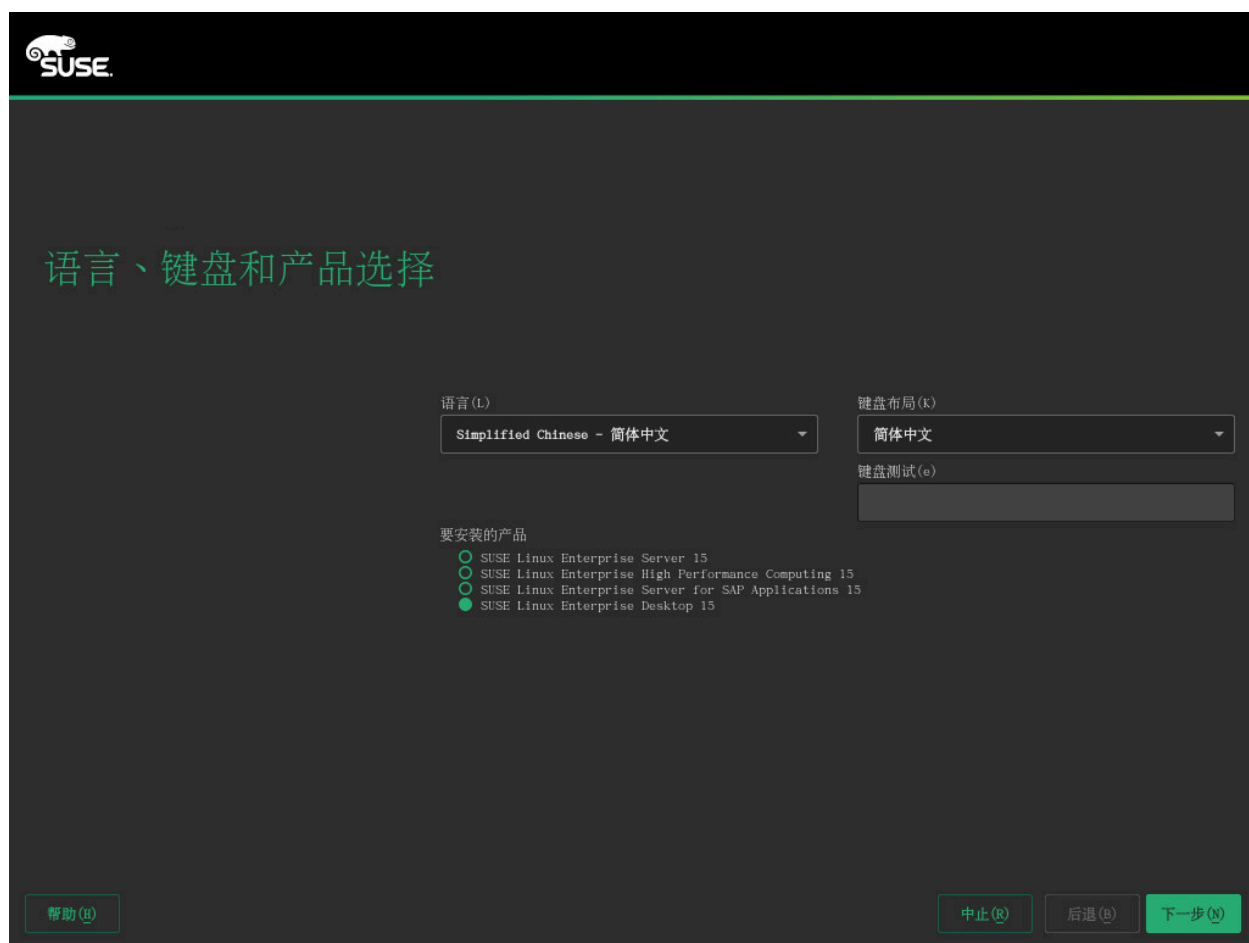
1.1 默认安装过程

从 SUSE Linux Enterprise Desktop 15 开始，安装媒体仅包含安装程序 - 一个用于安装、更新和注册 SUSE Linux Enterprise Desktop 的基于命令行的精简系统。在安装期间，您可以通过选择要基于安装程序安装的模块来添加功能。

默认的安装方式需要通过网络访问 SUSE Customer Center 或本地储存库管理工具服务器，以检索模块的储存库数据。如果您想在不访问网络的情况下执行安装，还需要第二个安装媒体 “SLE-15-Packages ISO 映像”。

要安装 SUSE Linux Enterprise Desktop，请从安装程序媒体引导至安装程序，然后开始安装。

1.1.1.1 语言、键盘和产品选择



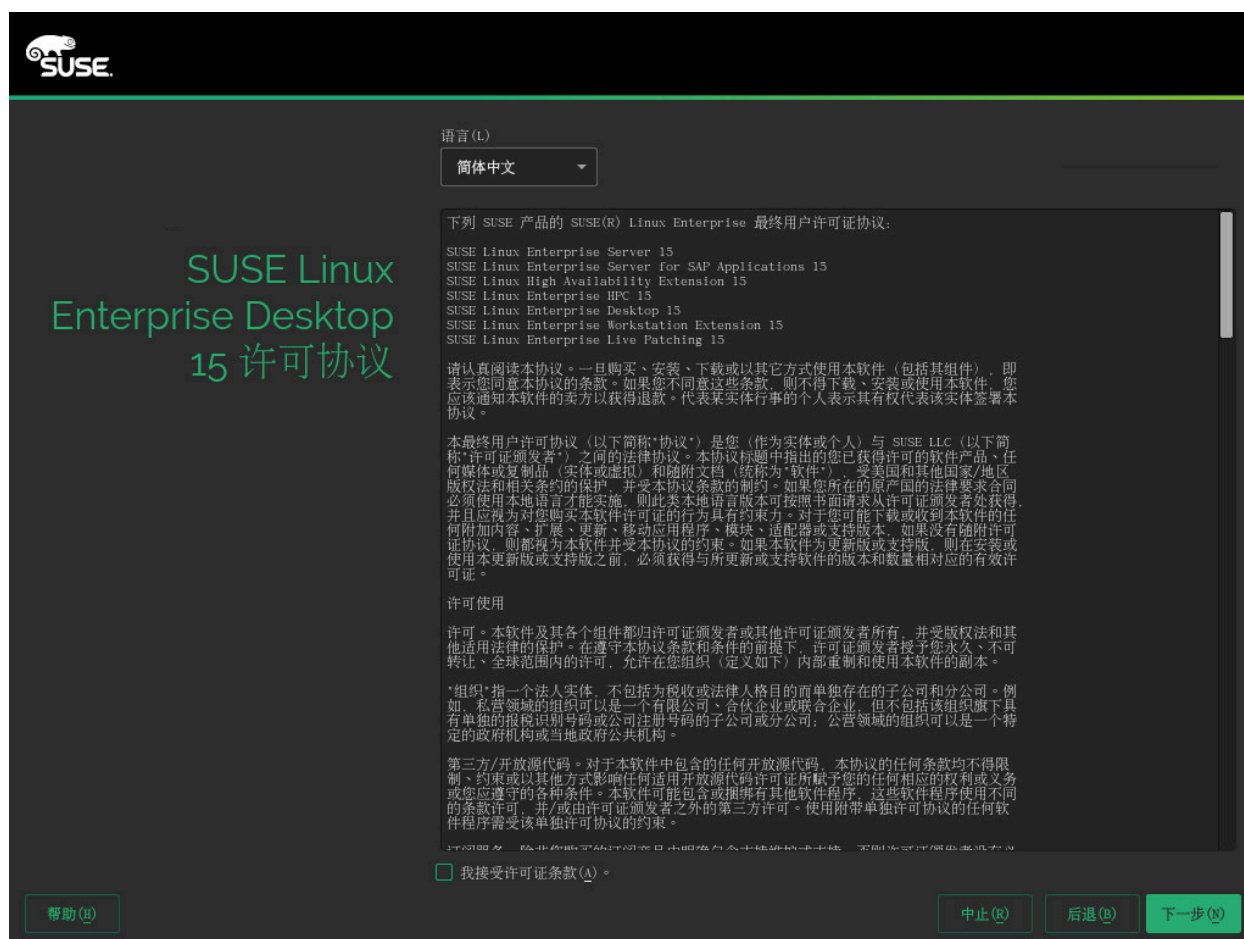
语言和键盘布局设置会根据您在引导屏幕上选择的语言进行初始化。如果您之前未更改默认设置，则语言为“英语（美国）”。如果需要，可在此处更改设置。使用键盘测试文本框可测试布局。

使用安装程序可以安装所有 SUSE Linux Enterprise 基础产品：

- SUSE Linux Enterprise Server（参见 <https://www.suse.com/documentation/sles/> 中的安装指导）
- SUSE Linux Enterprise Desktop（本文档已介绍）
- SUSE Linux Enterprise High Performance Computing（参见 FIXME 中的安装指导）
- SUSE Linux Enterprise Server for SAP Applications（参见 <https://www.suse.com/documentation/sles-for-sap/> 中的安装指导）

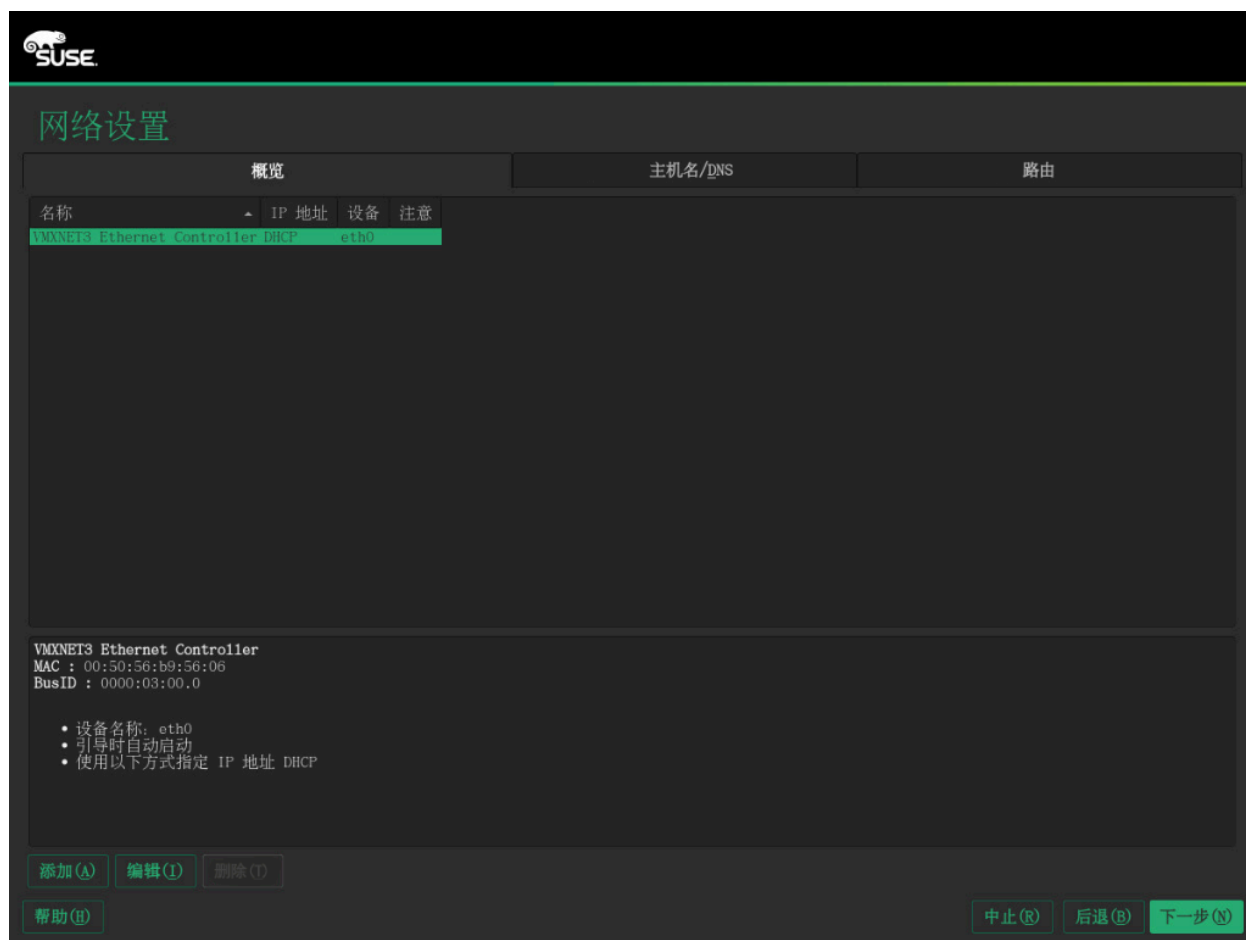
选择要安装的产品。您需有相应产品的注册代码。整篇文档假设您已选择 SUSE Linux Enterprise Desktop。单击下一步继续。

1.1.2 许可协议



阅读许可协议。此内容以您在引导屏幕上选择的语言显示。可以通过许可证语言下拉框获取翻译。您需要选中我接受许可证条款接受该协议，才能安装 SUSE Linux Enterprise Desktop。单击下一步继续。

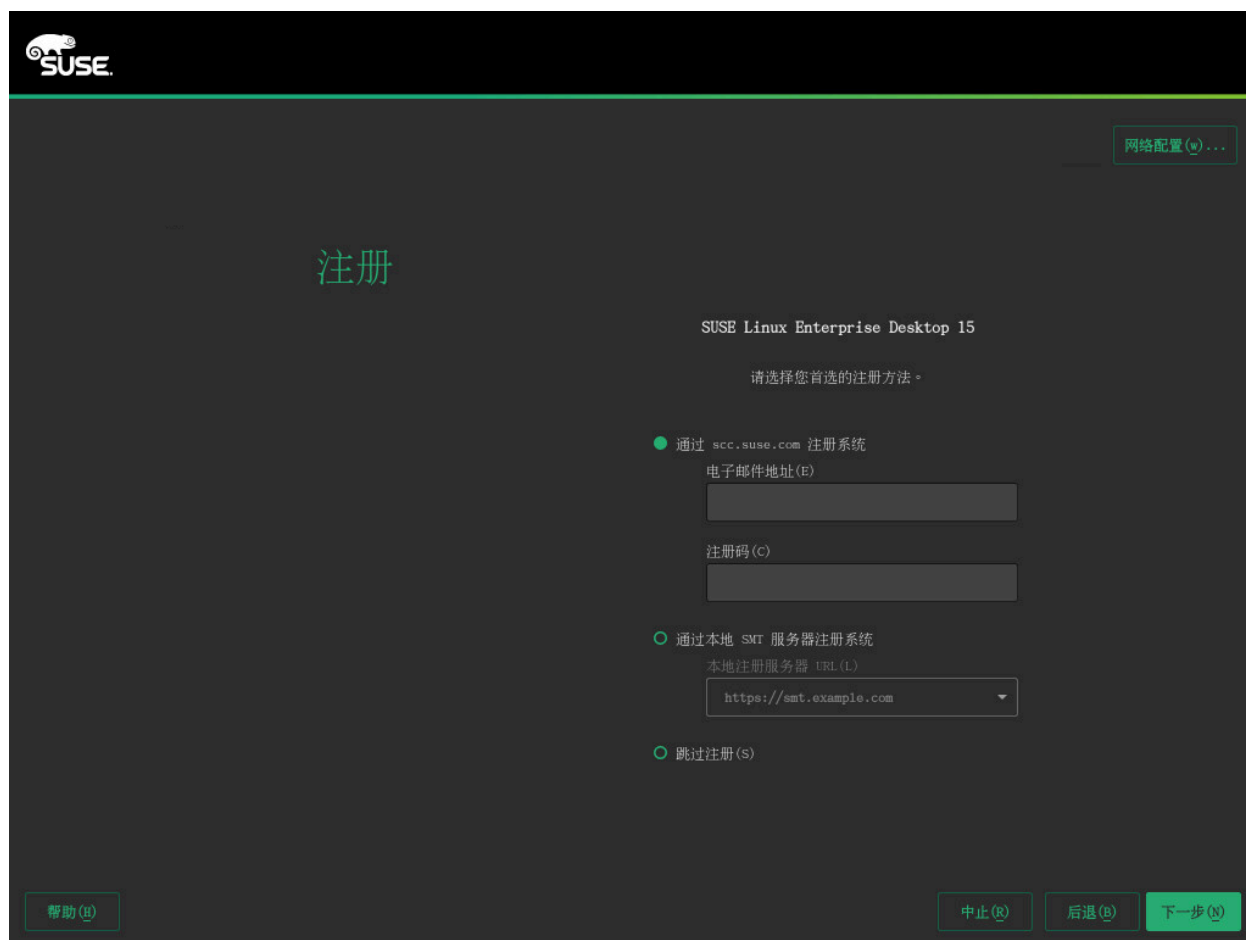
1.1.3 网络设置



随后会进行系统分析，在此过程中，安装程序会探测储存设备，并尝试查找其他安装的系统。如果在开始安装期间已通过 DHCP 自动配置了网络，您将转到注册步骤。

如果尚未配置网络，则网络设置对话框将会打开。从列表中选择网络接口，然后使用编辑对其进行配置。也可以手动添加一个接口。有关详细信息，请参见《Deployment Guide》，第 4 章 “Installation Steps”，第 4.5 节 “Network Settings” 和《管理指南》，第 17 章 “基本联网知识”，第 17.4 节 “使用 YaST 配置网络连接”。如果您希望在不访问网络的情况下执行安装，请不做任何更改跳过此步骤，然后单击下一步继续。

1.1.4 注册



要获取技术支持和产品更新，需要在 SUSE Customer Center 或本地注册服务器中注册并激活产品。在此阶段注册 SUSE Linux Enterprise Desktop 可让您立即获得访问更新储存库的权限。如此，您便可以将最新的更新和可用增补程序随系统一起安装。

注册时，将从注册服务器装载您下一步可能会安装的模块和扩展的储存库与依赖项。

如果您处于脱机状态，或想跳过注册，请激活跳过注册。遵照第 1.2 节“安装但不注册”中的指导继续安装。

要注册到 SUSE Customer Center 中，请输入与您的 SCC 帐户关联的电子邮件地址，以及 SUSE Linux Enterprise Desktop 的注册代码。如果您的组织提供了本地注册服务器，您也可以在该服务器中注册。激活通过本地 SMT 服务器注册系统，然后从下拉框中选择 URL，或者键入地址。



注意：信任储存库

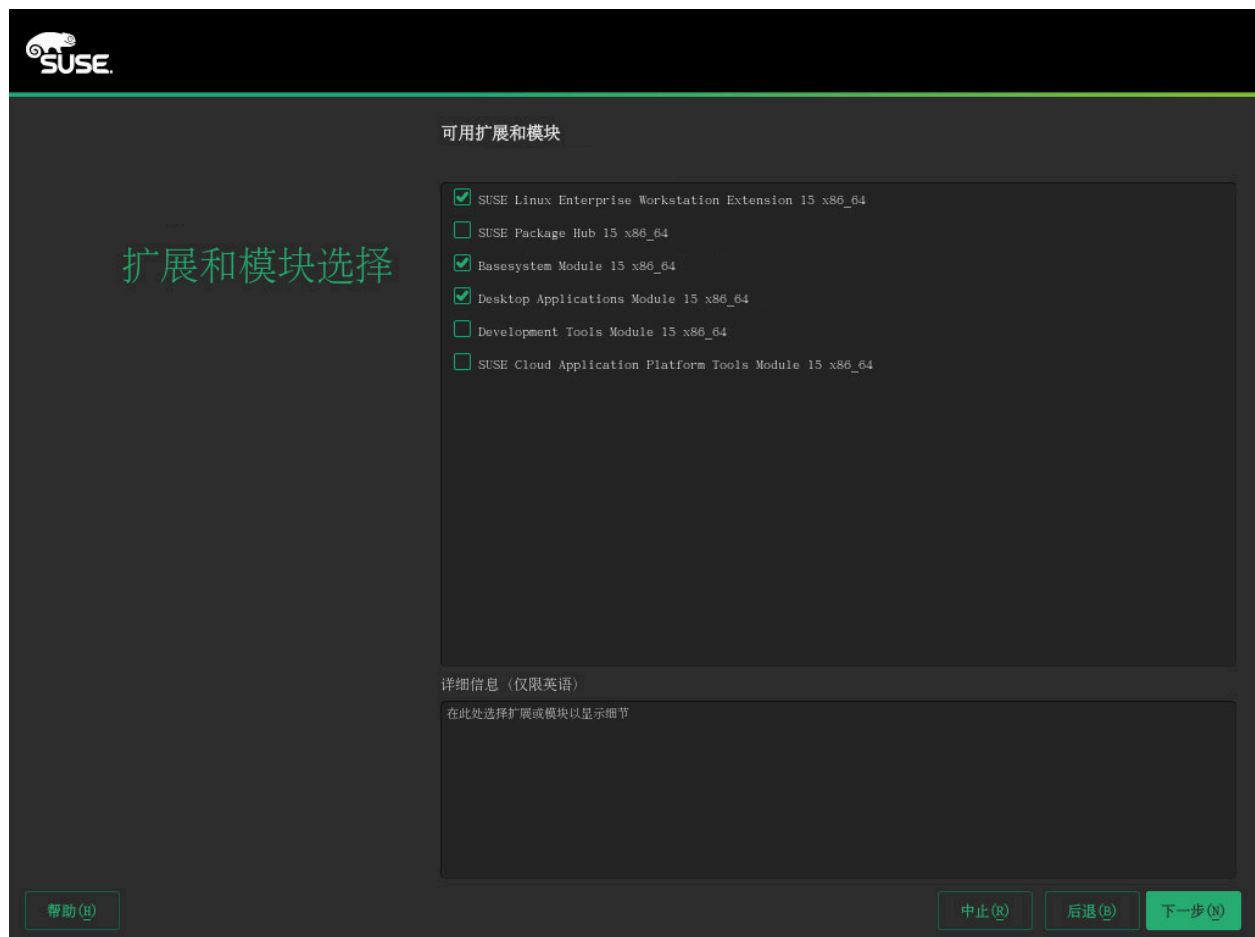
根据您的硬件的不同，注册期间可添加包含硬件驱动程序的其他储存库。如果要添加，系统将要求您信任其中的每个储存库。



提示：在安装时安装产品增补程序

成功注册 SUSE Linux Enterprise Desktop 后，系统会在安装期间询问您是否安装最新的可用联机更新。如果您选择是，最新的包将随系统一起安装，如此便不必在安装后应用更新。建议激活此选项。

1.1.5 扩展和模块选择



成功注册系统后，安装程序会列出适用于 SUSE Linux Enterprise Desktop 的模块和扩展。模块是用于根据需要定制产品功能的组件。它们是免费提供的。扩展可在产品中添加功能。它们以订阅的形式提供，需要注册密钥，因此需付费才能使用。

有哪些模块或扩展可用取决于您在安装的第一步中选择的产品。有关模块及其生命周期的说明，请选择一个模块查看附带的文本。[发行说明 \(https://www.suse.com/releasenotes/x86_64/SUSE-SLES/15/#Intro.Module\)](https://www.suse.com/releasenotes/x86_64/SUSE-SLES/15/#Intro.Module) 中提供了更多详细信息。

模块的选择会间接影响安装范围，因为该选择定义了哪些软件源（储存库）可用于安装，以及可用于运行中的系统。

以下模块和扩展适用于 SUSE Linux Enterprise Desktop：

Basesystem 模块

此模块在安装程序的基础上添加一个基本系统。其他所有模块和扩展都需要此模块。只包含基础系统的安装其范围相当于旧版 SUSE Linux Enterprise Desktop 的最小系统安装模式。

依赖项：无

Desktop Applications 模块

向系统添加图形用户界面 (Wayland) 和最基本的桌面应用程序。此模块也是服务器应用程序和开发工具模块的先决组件。

依赖项：Basesystem

Development Tools 模块

包含编译器（包括 `gcc`）以及编译和调试应用程序所需的库。

依赖项：Basesystem、Desktop Applications

SUSE Cloud Application Platform Tools 模块

添加用来与 SUSE Cloud Application Platform 产品交互的工具。

依赖项：Basesystem

SUSE Package Hub

用于访问 openSUSE 社区维护的各个 SUSE Linux Enterprise Desktop 包。提供的这些包没有 L3 支持，且不影响 SUSE Linux Enterprise Desktop 的支持。有关详细信息，请参见<https://packagehub.suse.com/>。

依赖项：无

SUSE Linux Enterprise Workstation Extension

包含其他桌面工具（如办公套件）或多媒体软件（如音乐和视频播放器）。

依赖项：Basesystem、Desktop Applications

某些模块需要已安装其他模块。因此，在选择某个模块时，可能会自动选择其他模块来满足依赖关系。

根据具体的产品，注册服务器可能会将模块和扩展标记为建议安装。系统会将建议的模块和扩展预先选为要加以注册和安装。如要避免安装这些建议的项目，请手动取消选择。

选择要安装的模块和扩展，然后单击下一步继续。如果您选择了一个或多个扩展，系统会提示您提供相应的注册代码。根据所做的选择，您可能还需要接受附加的许可协议。

1.1.6 附加产品



附加产品对话框可让您向 SUSE Linux Enterprise Desktop 添加不是由 SUSE Customer Center 提供的其他软件源（即“储存库”）。此类附加产品可以包括第三方产品和驱动程序，或适用于您系统的其他软件。



提示：在安装过程中添加驱动程序

您还可以通过附加产品对话框添加驱动程序更新储存库。<http://drivers.suse.com/> 上会提供 SUSE Linux Enterprise 的驱动程序更新。这些驱动程序已通过 SUSE SolidDriver Program 创建。

如果要跳过此步骤，请单击下一步继续。否则，请激活我要安装附加产品。请指定媒体类型、本地路径或托管储存库的网络资源，然后按照屏幕上的指导操作。

选中下载安装源描述文件可立即下载用于描述安装源的文件。如果不激活，系统将在安装启动后下载它们。单击下一步继续，并根据需要插入媒体。根据产品内容，可能必须接受附加许可协议。单击下一步继续。如果您选择了需要注册密钥的附加产品，在继续下一步之前，系统会要求您输入该密钥。

1.1.7 系统角色



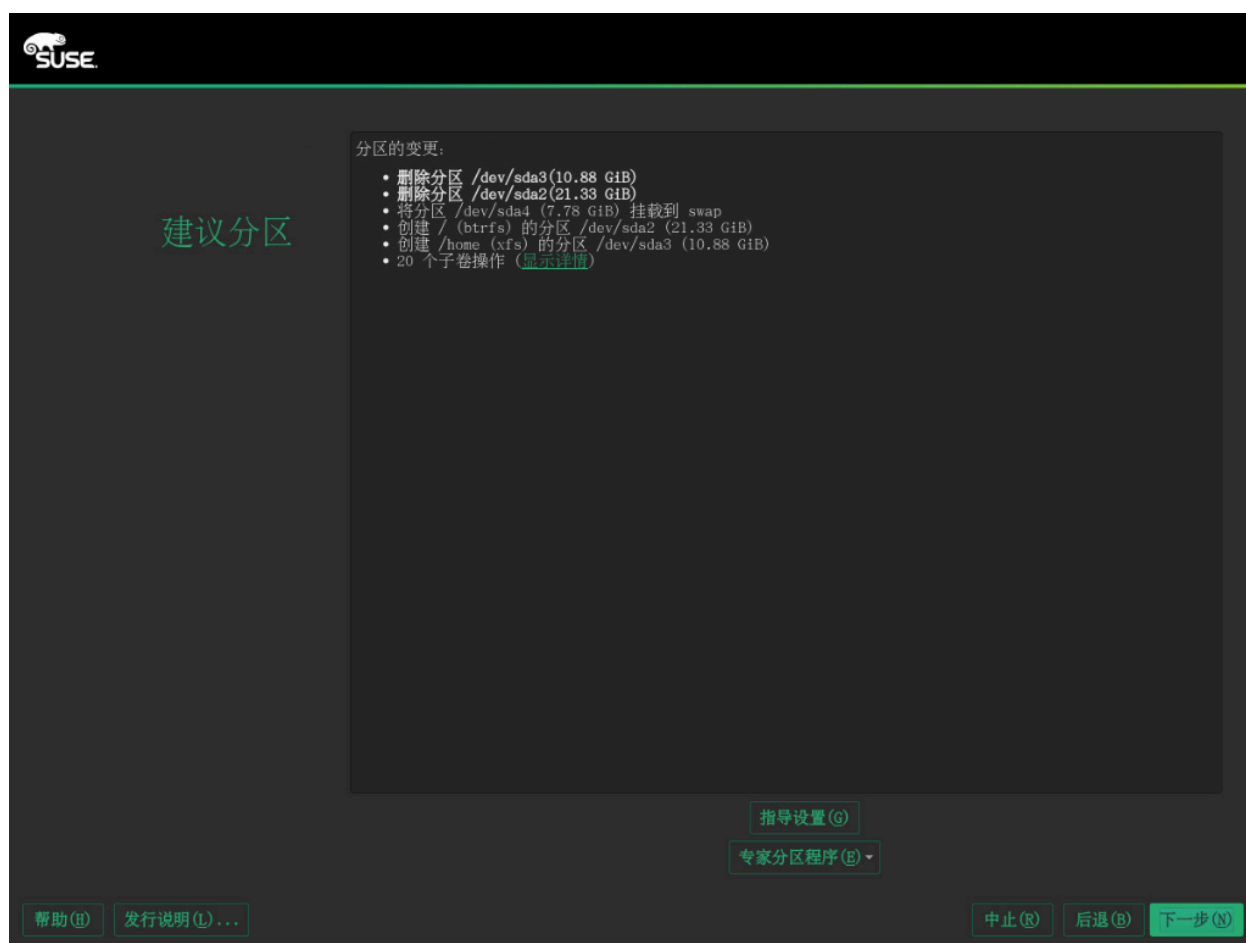
可用的系统角色取决于所选的模块和扩展。例如，系统角色定义分区建议，以及要预先选定加以安装的软件模式集。请参考屏幕上的说明做出选择。选择角色，然后单击下一步继续。



提示：发行说明

从此步骤开始，可以通过选择发行说明在安装过程中的任一屏幕上查看发行说明。

1.1.8 建议的分区



查看系统建议的分区设置。如果需要，可以更改它们。您可以选择以下选项：

指导设置

启动可用来优化分区建议的向导。此处可用的选项取决于系统设置。如果系统包含多个硬盘，则您可以选择要使用哪个磁盘，以及要将根分区放到哪个位置。如果磁盘已包含分区，请决定是要去除分区还是调整分区的大小。

在后续步骤中，您还可以添加 LVM 支持和磁盘加密。您可以更改根分区的文件系统，并决定是否创建单独的主分区。

专家分区程序

打开专家分区程序，如《Deployment Guide》，第 6 章 “Expert Partitioner”，第 6.1 节 “Using the Expert Partitioner” 中所述。此选项可让您完全控制分区设置，以及创建自定义设置。它面向的是专家用户。

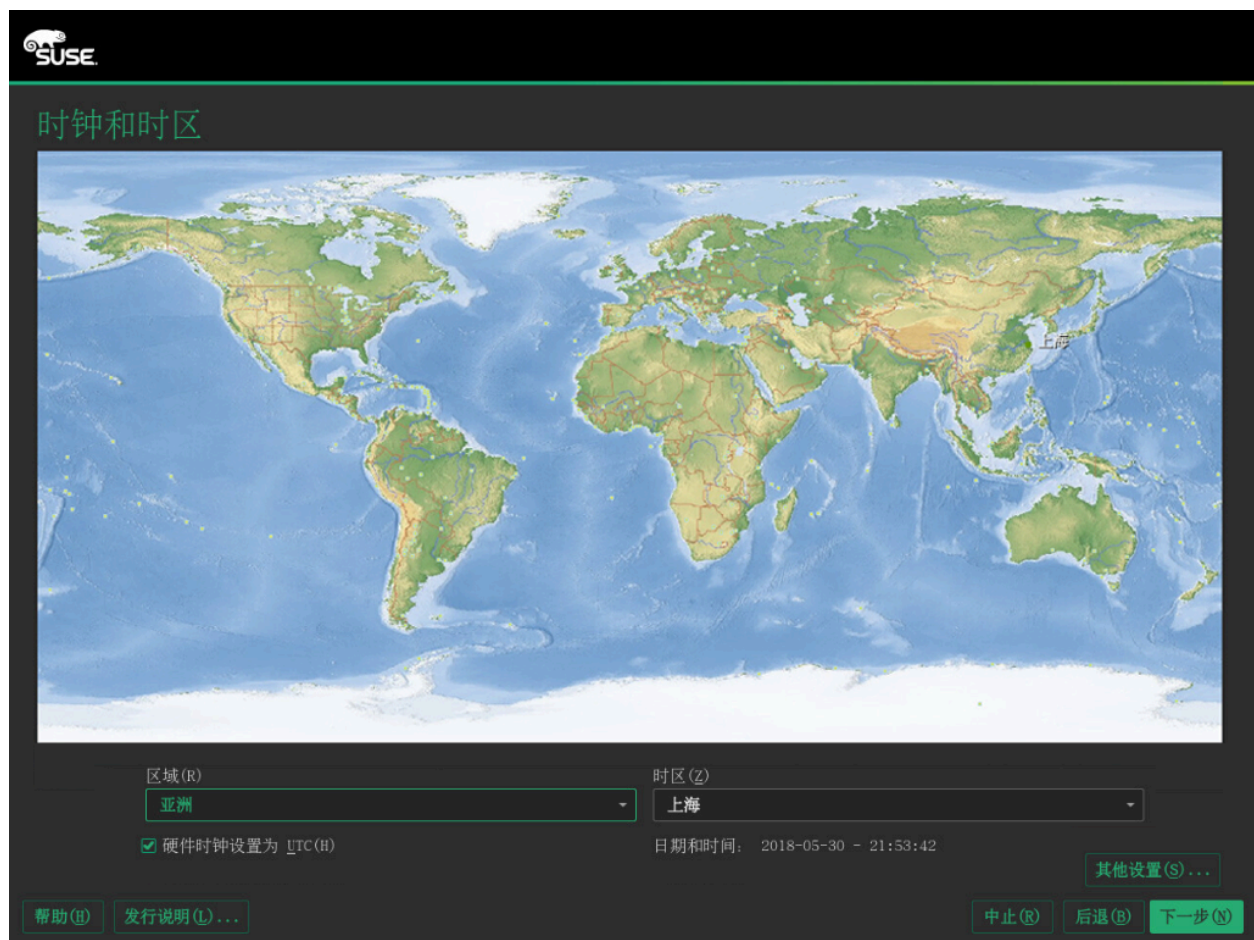
要接受建议的设置而不做任何改动，请选择下一步继续。



提示：发行说明


从此步骤开始，可以通过选择发行说明在安装过程中的任一屏幕上查看发行说明。

1.1.9 时钟和时区



选择系统使用的时钟和时区。要手动调整时间或配置 NTP 服务器以保持时间的同步，请选择其他设置。有关详细信息，请参见《Deployment Guide》，第 4 章 “Installation Steps”，第 4.11 节 “Clock and Time Zone”。单击下一步继续。

1.1.10 本地用户



本地用户

● 创建新用户 (C)

用户的完整名称 (F)

用户名 (U)

口令 (P)

确认口令 (O)

☐ 对系统管理员使用此口令 (S)

☐ 自动登录 (A)

○ 从先前的安装导入用户数据 (I)

未选择任何用户


○ 跳过用户创建 (S)

要创建本地用户，请在用户的完整名称字段中输入姓氏和名称，在用户名字段中输入登录名，在口令字段中输入口令。

口令至少为 8 个字符，而且应包含大小写字母及数字。口令最长为 72 个字符，区分大小写。

出于安全考虑，强烈建议您不要启用自动登录。此外，也不应对系统管理员使用此口令，而应在安装的下一步中提供一个单独的 root 口令。单击下一步继续。

1.1.11 系统管理员 “root” 的口令



系统管理员"root"的口令

请不要忘记在此输入的内容。

root 用户的口令(P)

确认口令(F)

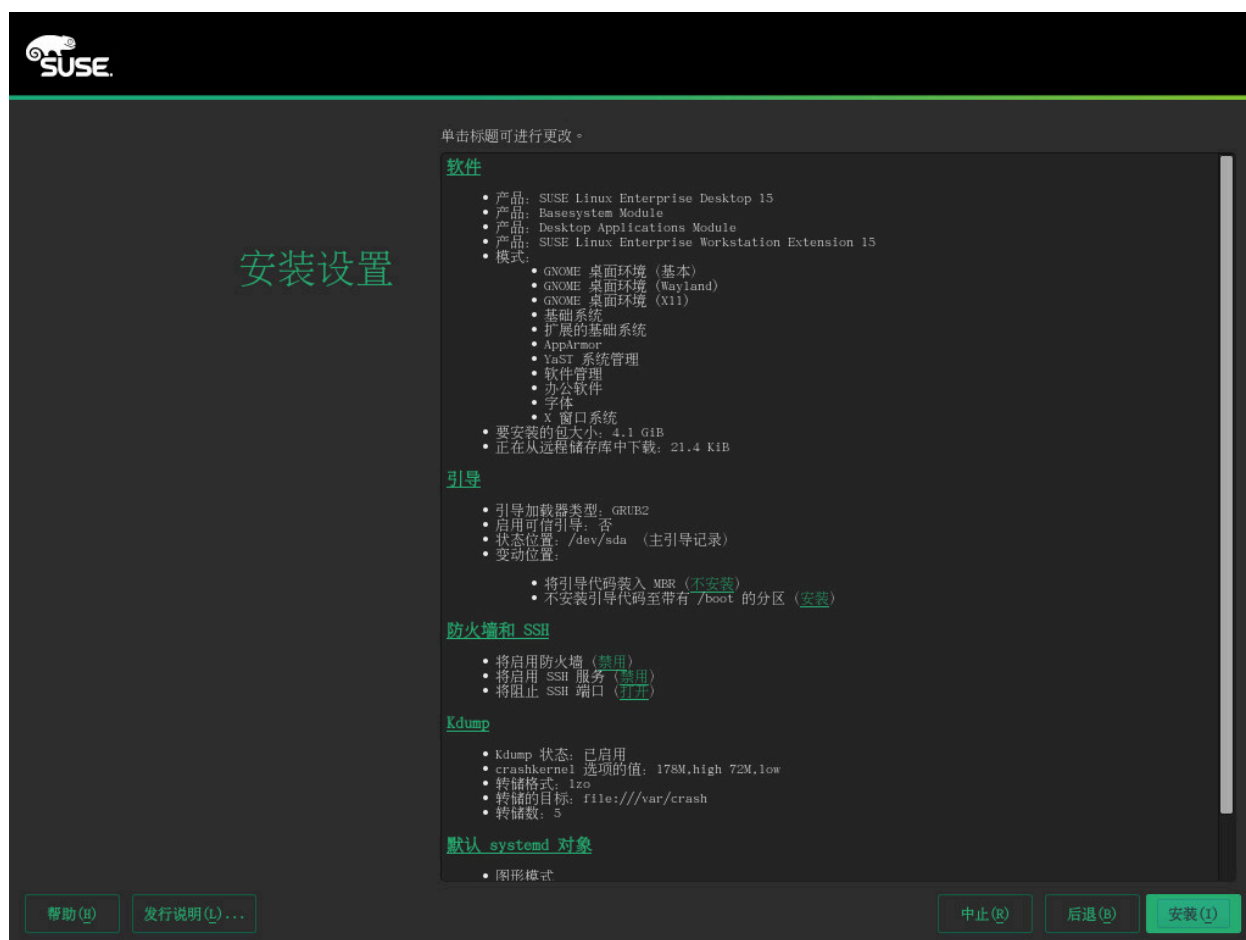
测试键盘布局(T)

帮助(H)发行说明(L)...中止(R)后退(B)下一步(N)

输入系统管理员帐户（称为 root 用户）的口令。

千万不要忘记 root 口令！您在此处输入之后，就不能检索该口令。有关详细信息，请参见《Deployment Guide》，第 4 章 “Installation Steps”，第 4.13 节 “Password for the System Administrator”。单击下一步继续。

1.1.12 安装设置



使用安装设置屏幕查看并根据需要更改若干建议的安装设置。每个设置的当前配置都在此处列出。要进行更改，请单击标题。有些设置（如防火墙或 SSH）可以直接通过单击相应链接更改。



提示：远程访问

此处可更改的设置也可以日后在安装的系统中加以更改。但是，如果您在安装后需要马上进行远程访问，此时应该检查防火墙和 SSH 设置。

软件

安装范围由为此安装选择的模块和扩展定义。但是，根据您所做的选择，不一定会选中模块中提供的所有包加以安装。

单击软件会打开软件选择和系统任务屏幕，您可在此处选择或取消选择某些模式来更改软件选择。每个模式都包含特定功能（例如 KVM 主机服务器）所需的几个软件包。如果想查看要安装软件包的更为详细的选择，请选择细节切换到 YaST 软件管理器。有关详细信息，请参见《Deployment Guide》，第 16 章 “Installing or Removing Software”。

引导

此部分显示引导加载程序配置。建议您仅在确实需要时才更改默认设置。有关详细信息，请参见《管理指南》，第 12 章 “引导加载程序 GRUB 2”。

防火墙和 SSH

默认情况下，系统会对为公共区域配置的所有网络接口启用防火墙。有关配置细节，请参见《Security and Hardening Guide》，第 23 章 “Masquerading and Firewalls”，第 23.4 节 “firewalld”。

SSH 服务默认处于启用状态，其端口 (22) 已打开。单击启用并打开可切换这些设置。请注意，如果 SSH 已禁用，则无法远程登录。

Kdump

如果发生内核崩溃，Kdump 可将内存映像（“内核转储”）保存到文件系统中。如此，您便可以通过调试转储文件来查找崩溃原因。Kdump 已预先配置好，默认处于启用状态。有关详细信息，请参见《System Analysis and Tuning Guide》，第 17 章 “Kexec and Kdump”，第 17.7 节 “Basic Kdump Configuration”。

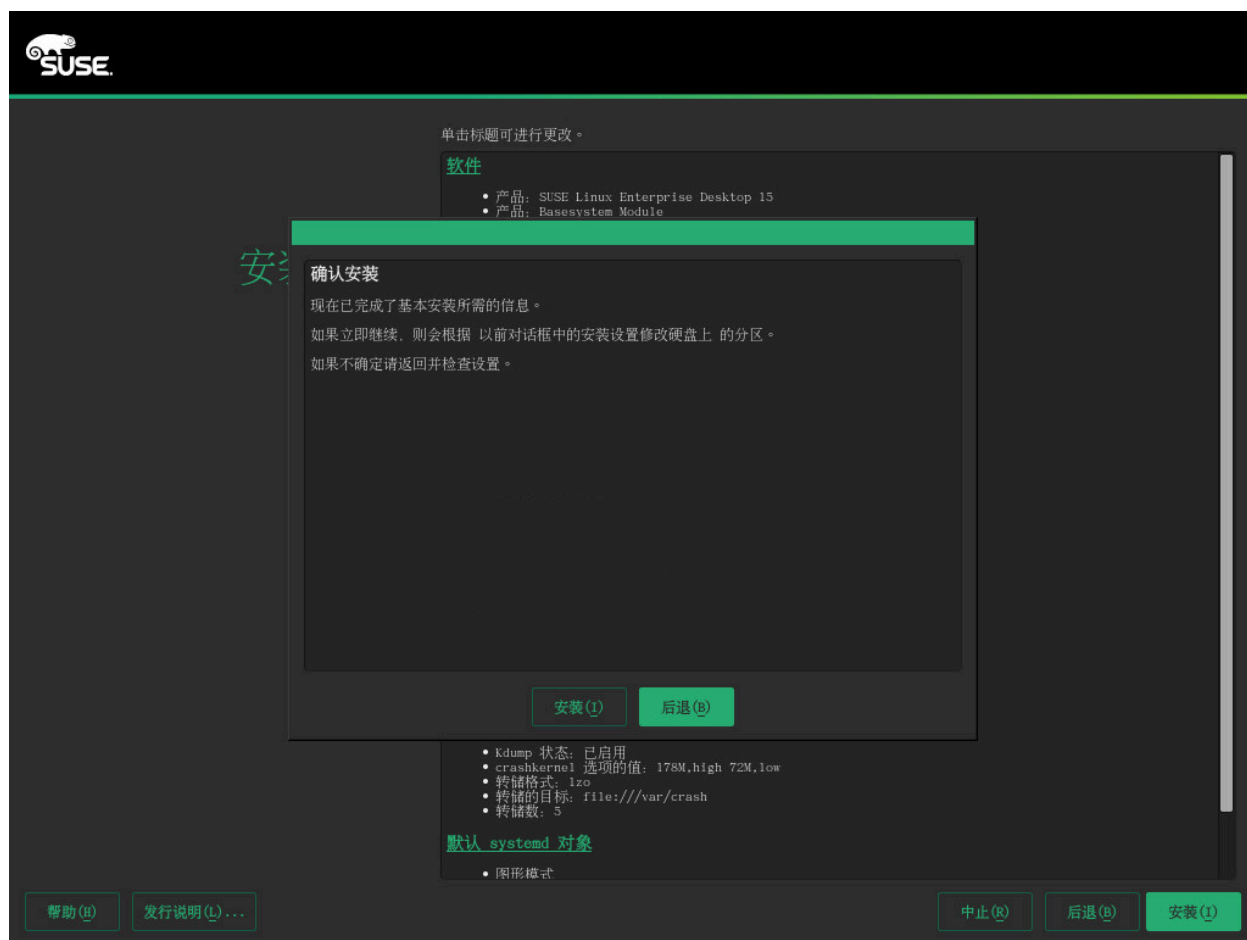
默认 Systemd 目标

SUSE Linux Enterprise Desktop 默认会引导至图形桌面。由于从命令行运行桌面系统并不太符合常理，因此建议不要更改此设置。

系统

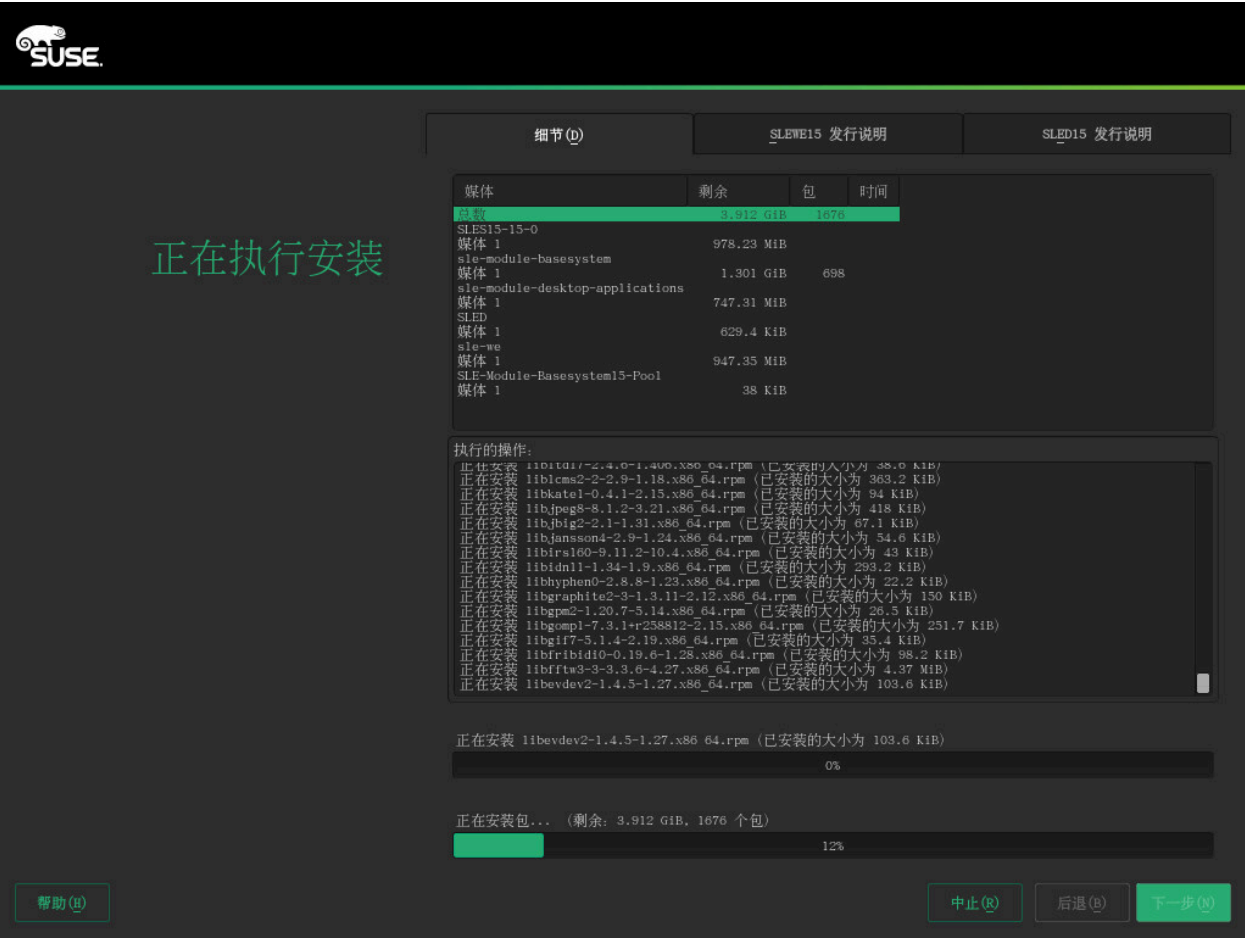
单击系统可查看详细的硬件信息。在随后显示的屏幕中，还可以更改内核设置，有关更多信息，请参见《Deployment Guide》，第 4 章 “Installation Steps”，第 4.14.6 节 “System”。

1.1.13 开始安装



在安装设置屏幕上确定了系统配置后，单击安装。根据您做的软件选择，您可能需要同意许可协议，安装确认屏幕才会弹出。到目前为止，我们还未对您的系统进行任何更改。当您再次单击安装后，安装过程即会开始。

1.1.14 安装过程



安装期间，细节选项卡中会显示详细的安装进度。

安装例程完成后，计算机会重引导至安装的系统。登录并启动 YaST 以微调系统。如果您使用的不是图形桌面或者正通过远程方式工作，请参考《管理指南》，第 5 章“文本方式的 YaST”获得有关从终端使用 YaST 的信息。

1.2 安装但不注册

如果您在执行安装时未连接到注册服务器，则无法在安装期间注册您的系统。因而将无法从注册服务器接收模块和扩展的储存库配置。为了支持常规安装，SUSE 还提供了另一个安装媒体：SLE-15-Packages ISO 映像。



注意：注册 SUSE Linux Enterprise Desktop

需要注册您的系统和扩展才能检索更新以及获得支持资格。如果在安装期间未注册，以后随时可以从运行中的系统上注册。要进行此操作，请运行 YaST > 产品注册。

要执行安装但不注册，请确保安装期间可以访问 SLE-15-Packages ISO 映像的内容。将此映像复制到本地硬盘或可卸闪存盘、刻录到 DVD 或者放置在本地网络中，即可实现此目的。请选择您的硬件支持的一种方法。



提示：将 SLE-15-Packages ISO 映像中的数据复制到可卸闪存盘

要将 ISO 映像的内容复制到可卸闪存盘，请使用以下命令。

```
tux > sudo dd if=PATH_TO_ISO_IMAGE  
of=FLASH_STORAGE_PARTITION bs=4M && sync
```

需将 `PATH_TO_ISO_IMAGE` 替换为此 ISO 映像文件的相对或绝对路径。需将 `FLASH_STORAGE_PARTITION` 替换为闪存设备上某个分区（通常只有一个）的路径。要识别设备及其分区，请插入设备，并使用下面的示例中所示的命令：

```
root # grep -Ff <(hwinfo --disk --short) <(hwinfo --usb --short)  
disk:  
    /dev/sdc                General USB Flash Disk  
root # fdisk -l /dev/sdc | grep -e "^/dev"  
/dev/sdc1 *                2048 31490047 31488000 15G 83 Linux
```

例如，在这种情况下，要使用的命令是：

```
dd if=/tmp/SLE-15-Packages-x86_64-DVD1.iso \  
of=/dev/sdc1 bs=4M && sync
```

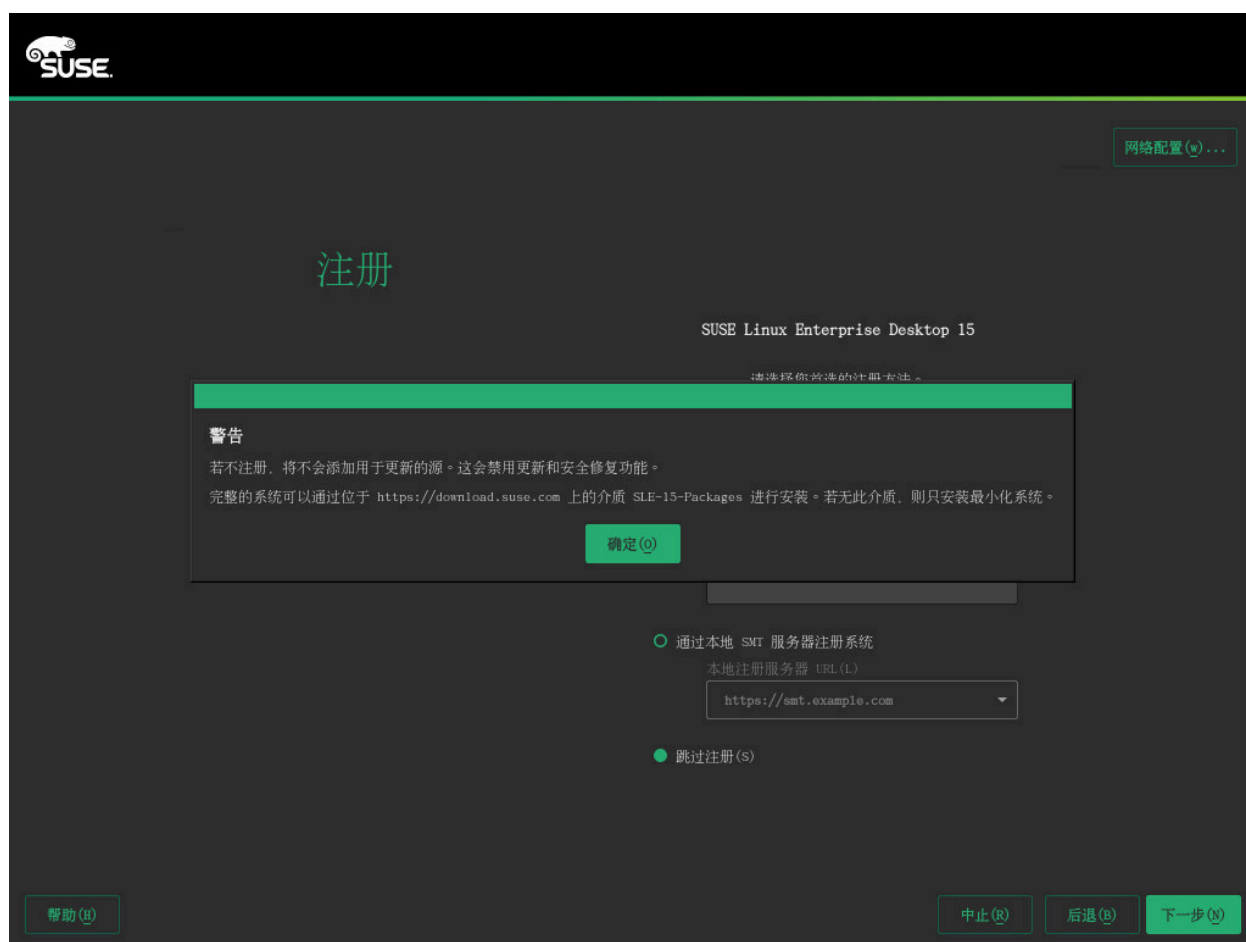
确保设备上存在足够大（6 GB 或以上）的分区。此外，在运行 `dd` 命令时，不得装入该设备。请注意，分区中的所有数据都将被删除！

1.2.1 开始安装但不注册

安装遵循第 1.1 节“默认安装过程”中所述的相同工作流程，只是注册系统和添加模块/扩展的步骤有所不同。要开始安装，请执行第 1.1 节“默认安装过程”中的步骤第 1.1.1 节“语言、键盘和产品选择”至第 1.1.3 节“网络设置”。

1.2.2 跳过注册

在注册屏幕上，激活跳过注册。单击确定接受警告，然后单击下一步继续。

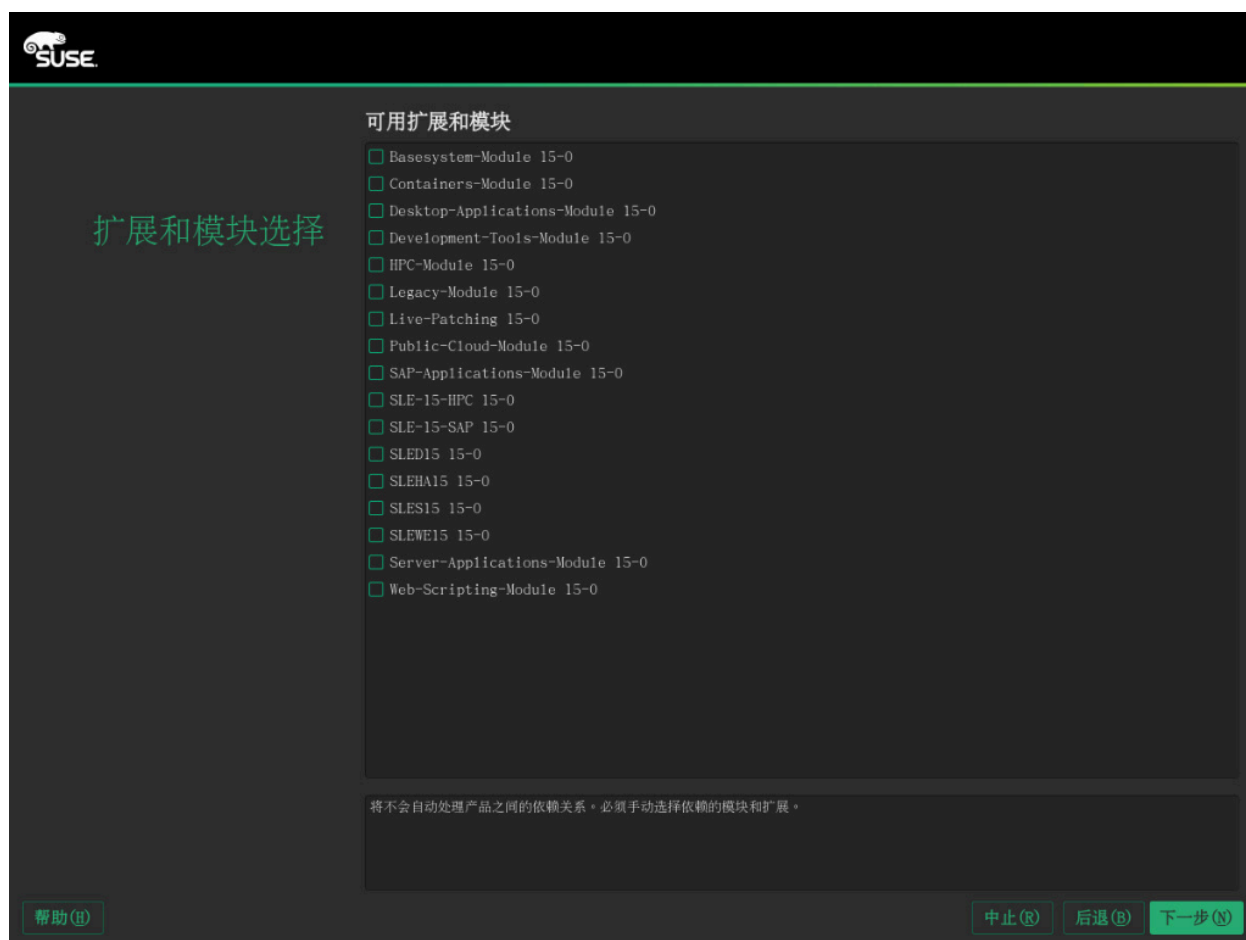


1.2.3 访问 SLE-15-Packages 映像



在附加产品对话框中，激活我要安装其他附加产品，并指定 SLE-15-Packages ISO 映像的来源。选中下载储存库说明文件可立即下载用于描述储存库的文件。如果不激活，系统将在安装启动后下载它们。单击下一步继续。如果您之前选择 DVD 作为数据源，系统将提示您插入该媒体。

1.2.4 选择扩展和模块



在扩展和模块选择对话框中，需要选择一个产品、至少一个模块，并视需要选择一个或多个扩展。

SLE-15-Packages ISO 映像包含所有 SUSE Linux Enterprise 产品的扩展和模块。请务必只选择下面所列的模块和扩展，否则系统最终可能安装失败，并且不能获得 SUSE 的支持。

产品

必须选择一个产品。选择 SLED 15 15-0。

模块

模块会扩展 SUSE Linux Enterprise Desktop 的功能，并且是免费提供的。需要安装 Basesystem-Module 15-0。另外还建议您安装 Desktop-Applications-Module 15-0。请注意，大部分模块依赖于其他模块。在此步骤无法自动解决这些依赖关系。请务必手动解决依赖关系，否则后面安装将会失败。有关细节，请参见下面的列表。

Basesystem-Module 15-0: 此模块在安装程序的基础上添加一个基本系统。其他所有模块和扩展都需要此模块。只包含基础系统的安装其范围相当于旧版 SUSE Linux Enterprise Desktop 的最小系统安装模式。依赖项：无

Desktop-Applications-Module 15-0: 向系统添加图形用户界面 (Wayland) 和最基本的桌面应用程序。此模块也是服务器应用程序和开发工具模块的先决组件。依赖项：Basesystem

Development-Tools-Module 15-0: 包含编译器（包括 `gcc`）以及编译和调试应用程序所需的库。

SUSE Linux Enterprise Workstation Extension (SLEWE15 15-0)

包含其他桌面工具（如办公套件）或多媒体软件（如音乐和视频播放器）。SUSE Linux Enterprise Workstation Extension for SUSE Linux Enterprise Desktop 是免费提供的，不需要额外的注册代码。建议安装 SLEWE15 15-0。



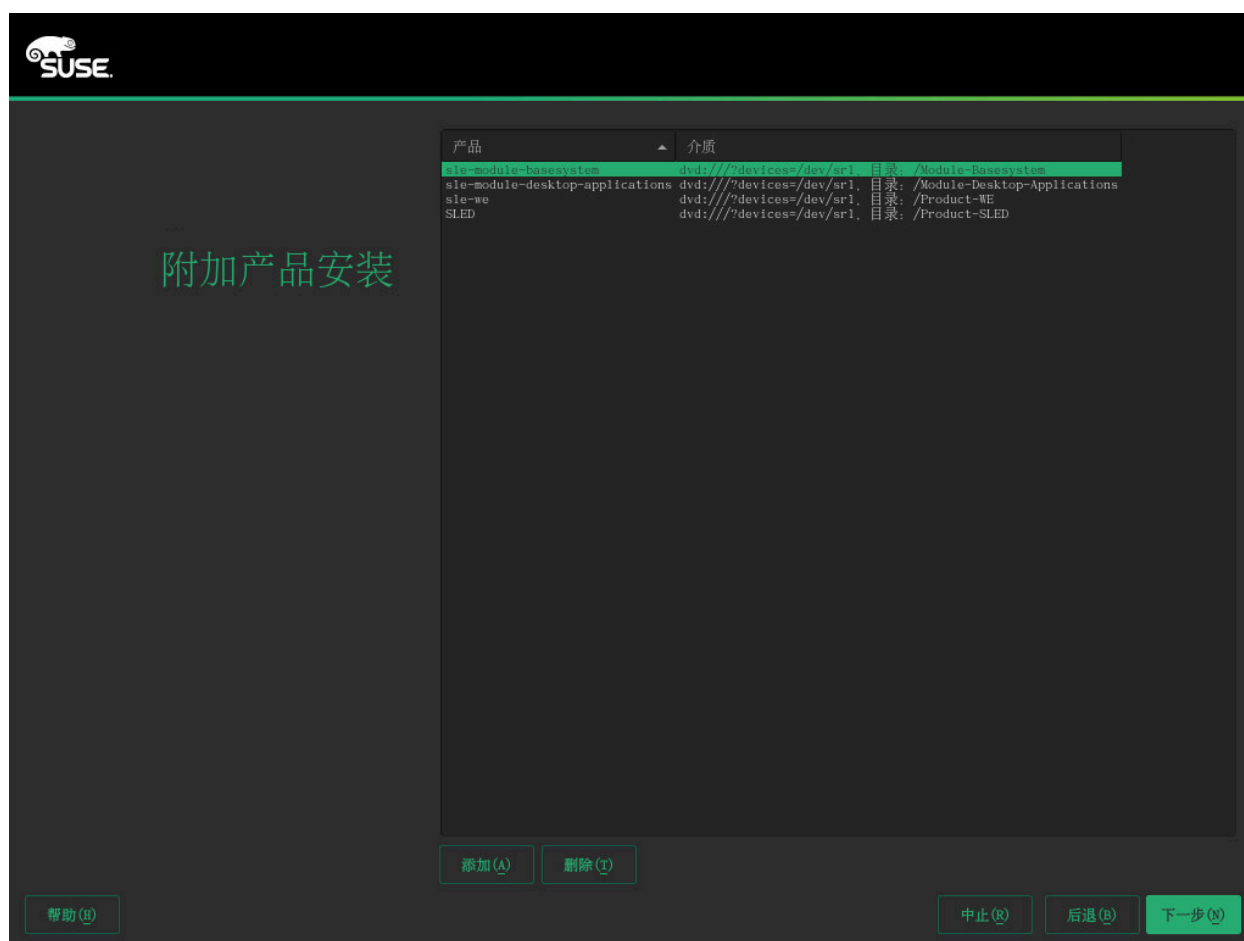
警告：禁止的选项

请不要在 SUSE Linux Enterprise Desktop 中安装以下任何选项，否则系统最终可能会安装失败，且不能获得 SUSE 的支持。

- Containers-Module 15-0
- HPC-Module 15-0
- Legacy-Module 15-0
- Live-Patching 15-0
- Public-Cloud-Module 15-0
- SAP-Applications-Module 15-0
- SLE-15-HPC 15-0
- SLE-15-SAP 15-0
- SLEHA15 15-0
- SLES15 15-0
- Server-Applications-Module 15-0
- Web-Scripting-Module 15-0

选择完模块和扩展后，请单击下一步继续。

1.2.5 确认扩展和模块选择



选择安装的所有模块将列在附加产品安装对话框中。要更改列表，请使用添加或删除选项。使用添加时，可以选择性地添加其他附加产品。单击下一步继续安装。

1.2.6 完成安装

从现在起，安装将会按默认安装的路径进行。从第 1.1 节“默认安装过程”中的步骤第 1.1.7 节“系统角色”继续。

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