

SUSE provides [SUSE Linux Enterprise \(SLE\)](#) and [openSUSE Leap](#) virtual machine (VM) images suitable for use in Harvester. These images are built on the [openSUSE Build Service](#) (OBS) using the [Kiwi](#) image building tool, and can be used immediately after downloading.

For most cases, you can use the *Minimal VM Cloud* qcow2 images because these include the cloud-init tool necessary for automatic VM configuration. Other image variants require you to log onto the VM console and then perform initial configuration.

:::info The *Minimal VM Cloud* images were named *Minimal VM OpenStack Cloud* in releases earlier than SLES 15 SP5 and openSUSE 15.5. :::

## Using the openSUSE Build Service (OBS)

You can create custom images based on what SUSE provides using OBS [image templates](#), which are pre-configured Kiwi image configurations. For example, if you want use other packages with SLE 15 SP5, you can create an image using the *SLE 15 SP5 Minimal* template. OBS provides an interface for adding packages and automatically builds the image, which you can download and then upload to Harvester. For more information, see the [OBS User Guide](#).

### 1. Create a custom image based on an existing template.

1. Go to [https://build.opensuse.org/image\\_templates](https://build.opensuse.org/image_templates). You must sign in to your openSUSE account to access the resources.
2. Select the template that you want to use.
3. Specify a name for the image, and then select **Create appliance**.

OBS automatically builds the image. By default, the interface shows the **Overview** tab, which contains information such as the number of included packages and the build status.

### 2. Select image profiles and add packages.

1. Go to the **Software** tab.
2. Select the image profiles that you want OBS to build.

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1. (Optional) Add and remove packages.

### 3. (Optional) Switch to *View Package* mode.

*View Package* mode provides more granular control over configuration. To switch, click the *View Package* icon in the navigation bar.

The **Source Files** section of the **Overview** tab shows all the files that comprise your Kiwi template. You can edit any of the files by selecting the corresponding file name.

### 4. (Optional) Edit the configuration file `Minimal.kiwi`.

Select the file name to open the text editor. The `<packages type="image">` section lists the packages to be installed. You can specify additional packages for each image profile.

By default, the *Cloud* image profile ( `<package type="image" profiles="Cloud">` ) installs the *kernel-default-base* package. In the following example, that package is replaced with *kernel-default*, which includes modules necessary for iSCSI support.

### 5. Wait for OBS to finish building the image.

Once the process is completed, the **Build Results** section on the **Overview** tab shows the status *succeeded*.

The **Build Results** section also contains a download link for the new image.

### 6. Enable publishing to share the image.

To allow the public to download your custom image, go to the **Repositories** tab of your OBS project and enable the *Publish* flag.

Your image is published to <https://download.opensuse.org/> (under `repositories/home:/YOUR_USER_NAME:/branches:/SUSE:/Templates:/Images:/` ).

## Using the Kiwi Command-line Tool

As an alternative to the openSUSE Build Service, you can create images locally using the Kiwi command-line tool. For more information about the tool, see [Building Linux System Appliances with KIWI Next Generation](#)

[\(KIWI NG\)](#).

To create custom images, you must first download the file `Minimal.kiwi`, and the scripts `config.sh` and `editbootinstall_rpi.sh` from the corresponding project on OBS.

OS	openSUSE Build Service Project
SLE 15 SP5	<a href="https://build.opensuse.org/package/show/SUSE:SLE-15-SP5:GA/kiwi-templates-Minimal">https://build.opensuse.org/package/show/SUSE:SLE-15-SP5:GA/kiwi-templates-Minimal</a>
openSUSE Leap 15.5	<a href="https://build.opensuse.org/package/show/openSUSE:Leap:15.5/kiwi-templates-Minimal">https://build.opensuse.org/package/show/openSUSE:Leap:15.5/kiwi-templates-Minimal</a>
SLE 15 SP4	<a href="https://build.opensuse.org/package/show/SUSE:SLE-15-SP4:GA/kiwi-templates-Minimal">https://build.opensuse.org/package/show/SUSE:SLE-15-SP4:GA/kiwi-templates-Minimal</a>
openSUSE Leap 15.4	<a href="https://build.opensuse.org/package/show/openSUSE:Leap:15.4/kiwi-templates-Minimal">https://build.opensuse.org/package/show/openSUSE:Leap:15.4/kiwi-templates-Minimal</a>