

# Liberica NIK 24.1.1+1 (23.0.1+13) Installation Guide



Liberica NIK  
23.0.1  
October, 2024

**be//soft**

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# Contents

## 1. Introduction 5

---

## 2. Apple macOS 6

---

Installing DMG bundle on Apple macOS 6

Installing ZIP bundle on macOS 8

Liberica NIK dependencies on macOS 9

## 3. Linux 10

---

Installing DEB and RPM packages 10

Installing standalone NIK package on GNU/Linux 10

Liberica NIK dependencies on Linux 11

## 4. Alpine Linux 12

---

Installing APK package on Alpine Linux 12

Installing standalone NIK package on Alpine Linux 12

Liberica NIK dependencies on Alpine Linux 13

## 5. Microsoft Windows 14

---

Installing with Microsoft Windows Installer package 14

Installing standalone package on Microsoft Windows 16

Liberica NIK dependencies on Windows 16

## 6. Installing language packages 17

---

## 7. Verifying downloaded files 18

---

Windows 18

Apple macOS 18

Linux 18

# 1. Introduction

This document provides installation instructions for Liberica NIK in different operating systems.

You can download Liberica NIK from either the [Liberica JDK Download Center](#) or, as a support-plan customer, via a link on the [support portal](#). After you log in to the support portal, you can see a direct link to the version of Liberica product you requested under Technologies. If you use the Liberica Download Center page, scroll down and select the NIK version, OS, and [package type](#). After the download is finished, you can [verify](#) the downloaded file by comparing its size on your drive to the size on the Downloads page.

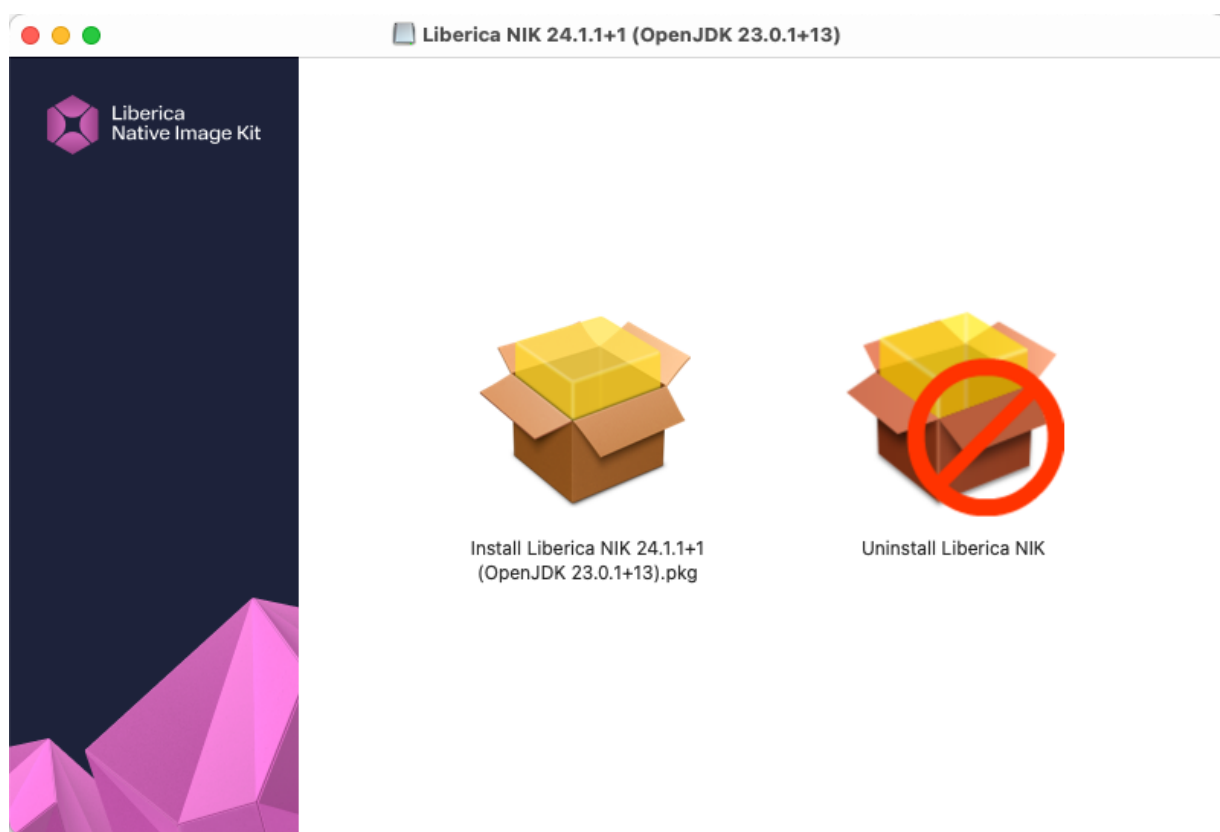
**Note:**

The installer screens are provided for information purpose only and may vary in different releases.

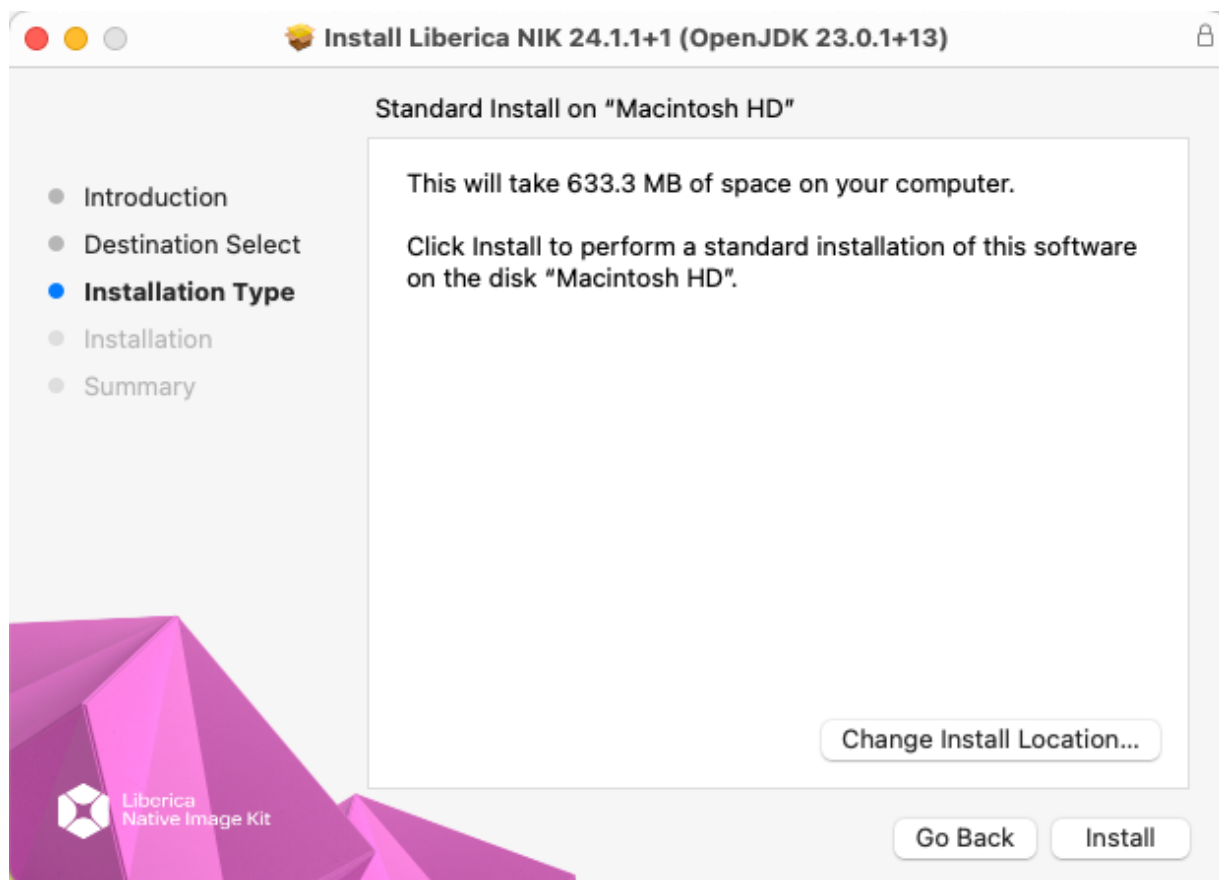
## 2. Apple macOS

### Installing DMG bundle on Apple macOS

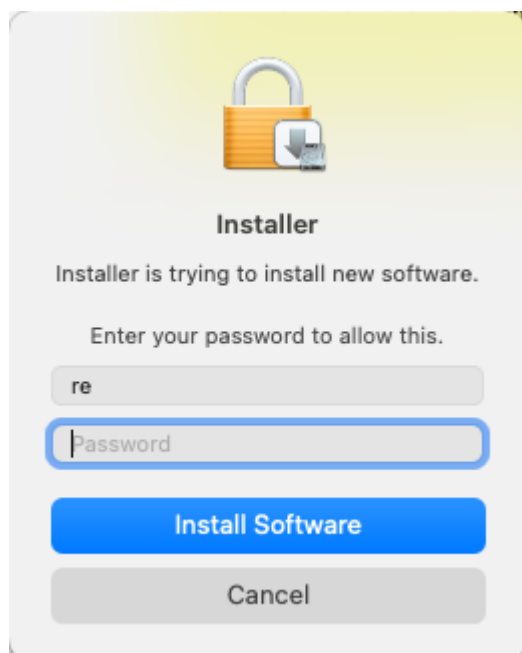
1. To run the installer, double-click the file you have downloaded.
2. Double-click the pkg icon to open the **Install Liberica NIK Wizard**.



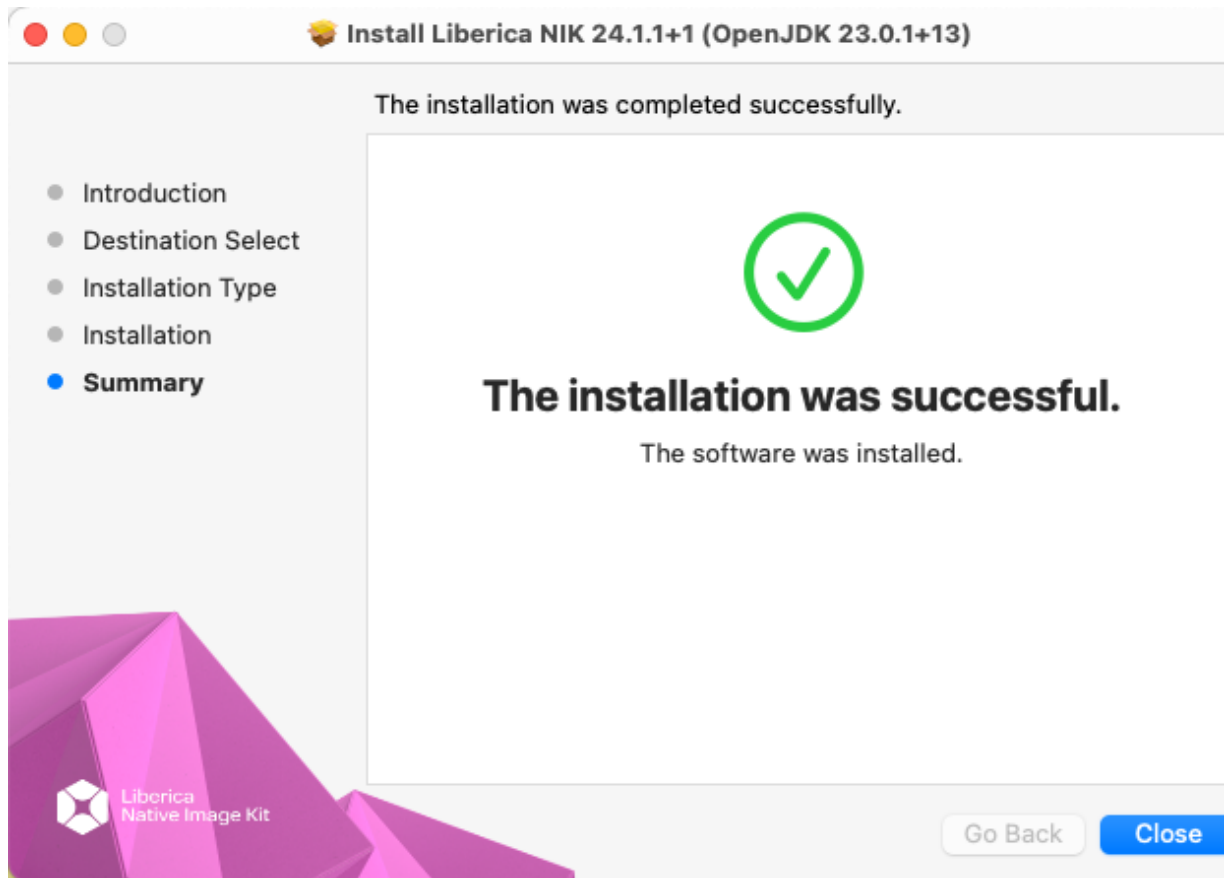
3. Click **Continue** on the Welcome screen.
4. Optionally, you can change the installation location. Press **Install** to proceed.



5. Confirm new software installation. The files will start copying immediately.



6. Once the installation is complete, press **Close** to exit the installation wizard.



Liberica NIK 24.1.1 is installed to the `/Library/Java/LibericaNativeImageKit/liberica-vm-24.1.1-openjdk23/` directory, or another directory with a similar name in `/Library/Java/LibericaNativeImageKit`, depending on the selected version of the JDK and package type (core, standard, or full). You can use the `$NIK_HOME` environment variable to store the path to the installed package: `/Library/Java/LibericaNativeImageKit/liberica-vm-24.1.1-openjdk23/Contents/Home/`.

## Installing ZIP bundle on macOS

1. To install Liberica NIK, download the .zip package.

```
curl -O https://download.bell-sw.com/vm/24.1.1/bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-macos-amd64.zip
```

2. After the download is finished, unpack the file.

```
unzip bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-macos-amd64.zip
sudo mv bellsoft-liberica-vm-openjdk23-24.1.1
/Library/Java/LibericaNativeImageKit/
```



This will unpack Liberica NIK to `/Library/Java/LibericaNativeImageKit/`. Either add `Contents/Home/bin` subdirectory to `$PATH`, or remember `/Library/Java/LibericaNativeImageKit/bellsoft-liberica-vm-openjdk23-24.1.1/Contents/Home/` as the `$NIK_HOME` environment variable.

To uninstall Liberica NIK, simply remove its directory and unset the related environmental variables.

## Liberica NIK dependencies on macOS

`xcode` is required for Liberica Native Image Kit. Install the necessary tools with the following command:

```
xcode-select --install
```

# 3. Linux

## Installing DEB and RPM packages

Download either `.rpm` or `.deb` package.

Install the package using the appropriate package manager. See the example for Apt:

```
sudo apt install ./bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-linux-  
amd64.deb
```

Or for an RPM-base system:

```
sudo yum install ./bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-linux-  
amd64.rpm
```

The package is installed to `/opt/bellsoft/liberica-vm-24.1.1-openjdk23/`.

For scripting purposes, we recommend adding the `${NIK_HOME}` environment variable that points to your Liberica Native Image Kit installation directory.

## Installing standalone NIK package on GNU/Linux

To install Liberica NIK, download the `.tar.gz` package.

Unpack it with the following command.

```
export INSTALL_DIR=<your directory>  
tar -C $INSTALL_DIR -xzf bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-linux-  
amd64.tar.gz
```

This will unpack Liberica NIK to the selected directory. Either add `$INSTALL_DIR/bellsoft-liberica-vm-openjdk23-24.1.1/bin` to `$PATH`, or remember `$INSTALL_DIR/bellsoft-liberica-vm-openjdk23-24.1.1` as the `$NIK_HOME` environment variable.

To uninstall Liberica NIK, simply remove this directory and unset the related environmental variables.

## Liberica NIK dependencies on Linux

Several libraries are required for Liberica Native Image Kit on Linux systems. Install these libraries on Debian-based systems with the following command:

```
sudo apt install g++ make zlib1g-dev
```

Installed components also have additional libraries dependencies, such as TruffleRuby depends on libssl-dev.

You can use a similar command to install dependencies on rpm-based systems. See this example for CentOS:

```
sudo yum install gcc-c++ make zlib-devel
```

Other types of Linux systems may require different packages.

# 4. Alpine Linux

## Installing APK package on Alpine Linux

Download the `.dmg` package.

Install the package using the appropriate package manager. See our example for Apt:

```
# Add public key to check signature
wget -P /etc/apk/keys/ https://apk.bell-sw.com/info@bell-sw.com-
5fea454e.rsa.pub
# Install package
sudo apk add ./bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-linux-x64-
musl.apk
```

The package is installed to `/opt/bellsoft/liberica-vm-24.1.1-openjdk23/`.

For scripting purposes, we recommend adding the `${NIK_HOME}` environment variable which would point to your Liberica Native Image Kit installation directory.

## Installing standalone NIK package on Alpine Linux

To install Liberica NIK, download the `.tar.gz` package.

```
wget https://download.bell-sw.com/vm/24.1.1/bellsoft-liberica-vm-
openjdk23.0.1+13-24.1.1+1-linux-x64-musl.tar.gz
```

Unpack it with the following command.

```
export INSTALL_DIR=<your directory>
tar -C $INSTALL_DIR -xzf bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-linux-
x64-musl.tar.gz
```

This will unpack Liberica NIK to the selected directory. Either add `$INSTALL_DIR/bellsoft-liberica-vm-openjdk23-24.1.1/bin` to `$PATH`, or remember `$INSTALL_DIR/bellsoft-liberica-vm-openjdk23-24.1.1` as the `$NIK_HOME` environment variable.

To uninstall Liberica NIK, simply remove this directory and unset the related environmental variables.

## Liberica NIK dependencies on Alpine Linux

Several libraries are required for Liberica Native Image Kit on Alpine Linux. Install these libraries with the following command:

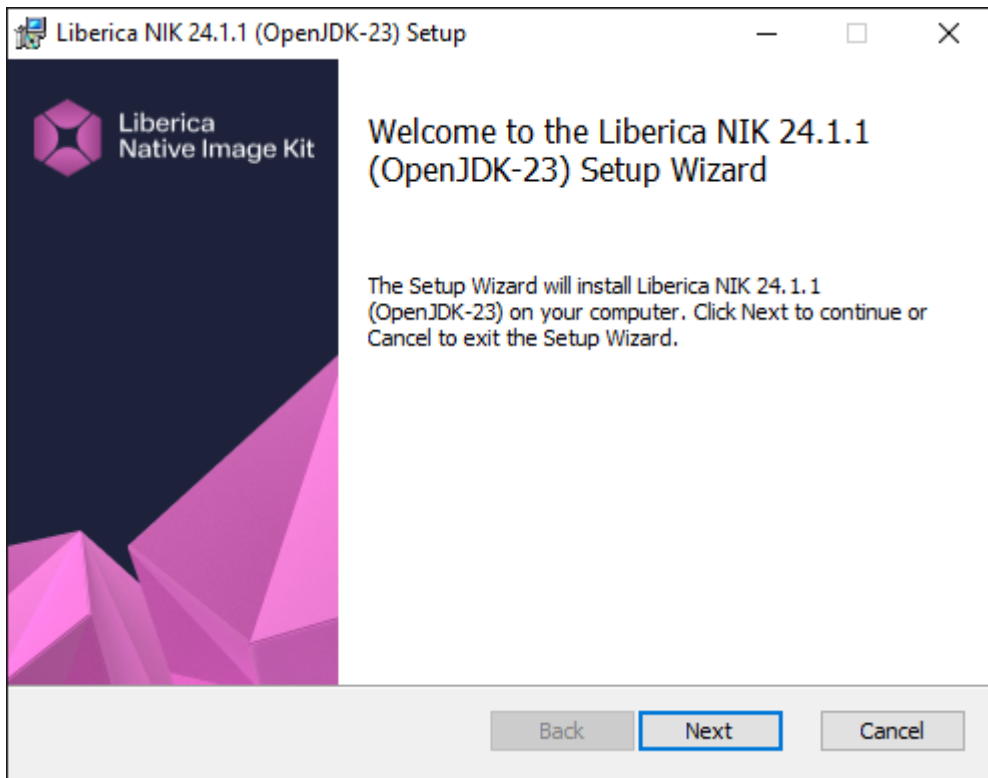
```
sudo apk add bash g++ make zlib-static
```

Installed components also have additional libraries dependencies, such as TruffleRuby depends on openssl-dev.

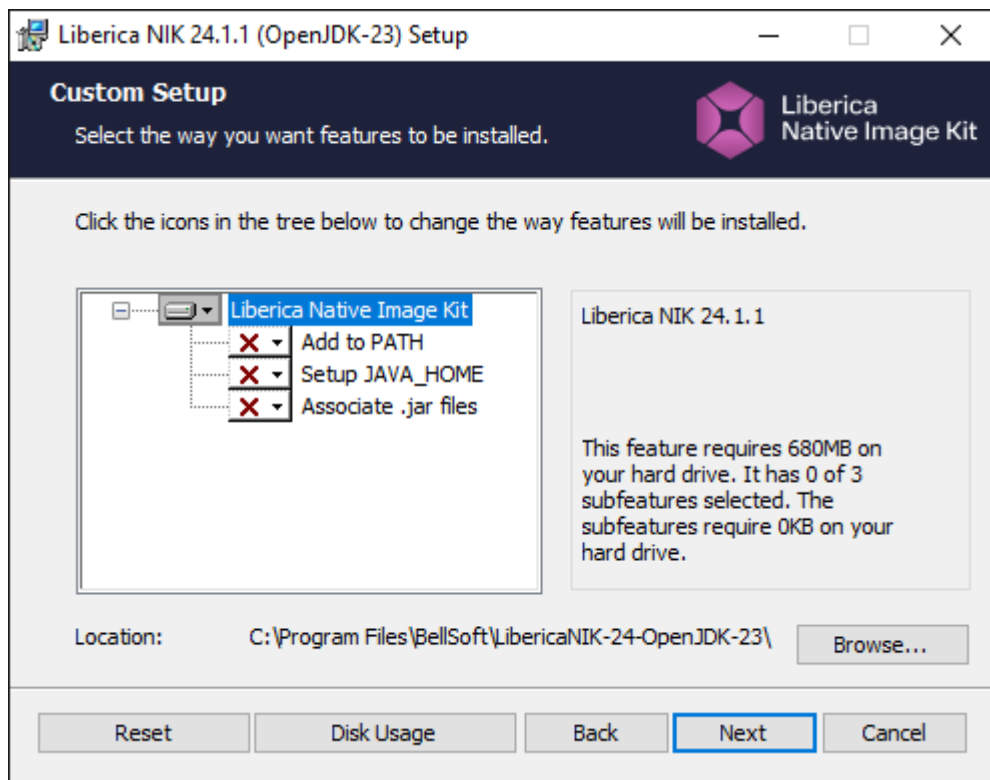
# 5. Microsoft Windows

## Installing with Microsoft Windows Installer package

1. Double-click the Windows installation file you downloaded. The **Liberica NIK Setup** Wizard opens.
2. Click **Next** on the Welcome screen.



3. On the **Custom Setup** window, choose the features you need. Select a feature to see its description. In most cases, you can use the default setup. Click **Disk Usage** to see the available and required space on your disk. Click **Next**.



4. The package is ready to install. Press **Install**. If you see the User Account Control warning, verify the publisher (BELLSOFT) and click **Yes**.
5. After the installation is complete, click **Finish** to quit the **Liberica NIK Setup Wizard**.

**Note:**

The installer screens above may vary in different releases.

If you want to install Liberica NIK silently, open the command line and run the following command:

```
msiexec /quiet /i bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-windows-  
amd64.msi
```

Liberica NIK is installed to the `C:\Program Files\BellSoft\LibericaNIK-24-OpenJDK-23` directory by default. For scripting purposes, we recommend adding the `$NIK_HOME` environment variable that points to your Liberica Native Image Kit installation directory.

## Installing standalone package on Microsoft Windows

To install Liberica NIK as a standalone package on your computer, download the .zip package file and unpack it to a folder. You can also use Windows PowerShell to download and unpack the zip file as follows:

```
Invoke-WebRequest "https://download.bell-sw.com/vm/24.1.1/bellsoft-liberica-vm-  
openjdk23.0.1+13-24.1.1+1-windows-amd64.zip"  
Expand-Archive bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-windows-amd64.zip  
-DestinationPath .
```

This will unpack Liberica NIK to the current directory. Either add bin subdirectory to PATH, or remember this directory as the \$NIK\_HOME environment variable.

## Liberica NIK dependencies on Windows

Microsoft Visual Studio 2017 with Microsoft Visual C++ (MSVC) 15 or later is required for Liberica Native Image Kit.

Start x64 Native Tools Command Prompt to allow native-image and other utilities to find development tools and work from command prompt.



# 6. Installing language packages

Language packages, such as JS, Python, Wasm, and others can be downloaded from the [Liberica Native Image Kit Download Center](#) and installed as standalone components. To download the package:

1. Scroll down the page to the required OS.
2. Click the **Package** list and then click **Additional Packages**.
3. Click the language package you want to install.
4. Click the download link to the right of the **Package** list.

Once the download is complete, extract the package from zip or tar.gz archive to install it as a standalone component. You can also add `<PACKAGE_DIR>/bin` path to your `PATH` environment variable, where `PACKAGE_DIR` is the language package directory created after extraction.

For example, to install NodeJS package on a Linux OS, download it first and then extract using the following command:

```
tar -zxf nodejs-java-openjdk23+13-24.1.1+1-linux-amd64.tar.gz
```

The `nodejs-openjdk23-24.1.1` directory is created. You can use the extracted language pack providing the path to its directory in commands as follows:

```
nodejs-openjdk23-24.1.1/bin/node --version  
v20.15.1
```

You can also add the path to the `nodejs-openjdk23-24.1.1/bin` subdirectory to the `$PATH` variable for the current terminal session if necessary.

```
export PATH=$<NODEJS_PACKAGE_DIR>/bin:$PATH
```

# 7. Verifying downloaded files

It is a good practice to verify the downloaded installation file by comparing its size on your drive to the size on the [Downloads](#) page.

A more advanced approach is to obtain the checksum of the downloaded file in a command-line interface and compare it to the one you can find next to the Liberica NIK link on the [Downloads](#) page. Check the OS-specific commands below.

## Windows

To get the checksum of the downloaded file in the command-line, run the following command in Windows PowerShell. To run PowerShell, open the **Start** menu or press the Windows key + R, type powershell in the **Run** dialog box, and click **OK**.

```
(Get-FileHash .\bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-windows-  
amd64.msi -Algorithm SHA1).Hash
```

## Apple macOS

To get the checksum of the downloaded file, use the following command.

```
shasum -a 1 bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-macos-amd64.dmg
```

## Linux

To get the checksum of the downloaded file, use the following command. The installation file extension depends on the Linux version.

```
shasum -a 1 bellsoft-liberica-vm-openjdk23.0.1+13-24.1.1+1-linux-amd64.deb
```



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