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How To Manually Install Oracle Java on a Debian or Ubuntu VPS

Apr 17, 2014   Java Ubuntu, Debian

Introduction

Java is a programming technology originally developed by Sun Microsystems and later acquired by Oracle. Oracle Java is a proprietary implementation for Java that is free to download and use for commercial use, but not to redistribute, therefore it is not included in a officially maintained repository.

There are many reasons why you would want to install Oracle Java over OpenJDK. In this tutorial, we will not discuss the differences between the above mentioned implementations.

Assumptions

This tutorial assumes that you have an account with DigitalOcean, as well as a Droplet running Debian 7 or Ubuntu 12.04 or above. You will need root privileges (via sudo) to complete the tutorial.

You will need to know whether you are running a 32 bit or a 64 bit OS:

```
uname -m
```

- **x86_64**: 64 bit kernel

- **i686**: 32 bit kernel

Downloading Oracle Java JDK

Using your web browser, go to the Oracle Java SE (Standard Edition) website and decide which version you want to install:

- **JDK:** Java Development Kit. Includes a complete JRE plus tools for developing, debugging, and monitoring Java applications.

- **Server JRE:** Java Runtime Environment. For deploying Java applications on servers. Includes tools for JVM monitoring and tools commonly required for server applications.

In this tutorial we will be installing the JDK Java SE Development Kit 8 x64 bits. Accept the license and **copy the download link** into your clipboard. Remember to **choose the right tar.gz** (64 or 32 bits). Use wget to download the archive into your server:

```
wget --header "Cookie: oraclelicense=accept-securebackup-cookie" h
```

Oracle does not allow downloads without accepting their license, therefore we needed to modify the header of our request. Alternatively, you can just download the compressed file using your browser and manually upload it using a SFTP/FTP client.

Always get the latest version from Oracle's website and modify the commands from this tutorial accordingly to your downloaded file.

Installing Oracle JDK

In this section, you will need sudo privileges:

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```
sudo su
```

The **/opt** directory is reserved for all the software and add-on packages that are not part of the default installation. Create a directory for your JDK installation:

```
mkdir /opt/jdk
```

and extract java into the **/opt/jdk** directory:

```
tar -zxf jdk-8u5-linux-x64.tar.gz -C /opt/jdk
```

Verify that the file has been extracted into the **/opt/jdk** directory.

```
ls /opt/jdk
```

Setting Oracle JDK as the default JVM

In our case, the java executable is located under **/opt/jdk/jdk1.8.0_05/bin/java** . To set it as the default JVM in your machine run:

```
update-alternatives --install /usr/bin/java java /opt/jdk/jdk1.8.0
```

and

```
update-alternatives --install /usr/bin/javac javac /opt/jdk/jdk1.8
```

Verify your installation

Verify that java has been successfully configured by running:

```
update-alternatives --display java
```

and

```
update-alternatives --display javac
```

The output should look like this:

```
java - auto mode
link currently points to /opt/jdk/jdk1.8.0_05/bin/java
/opt/jdk/jdk1.8.0_05/bin/java - priority 100
Current 'best' version is '/opt/jdk/jdk1.8.0_05/bin/java'.

javac - auto mode
link currently points to /opt/jdk/jdk1.8.0_05/bin/javac
/opt/jdk/jdk1.8.0_05/bin/javac - priority 100
Current 'best' version is '/opt/jdk/jdk1.8.0_05/bin/javac'.
```

Another easy way to check your installation is:

```
java -version
```

The output should look like this:

```
java version "1.8.0_05"
Java(TM) SE Runtime Environment (build 1.8.0_05-b13)
Java HotSpot(TM) 64-Bit Server VM (build 25.5-b02, mixed mode)
```

(Optional) Updating Java

To update Java, simply download an updated version from Oracle's website and
extract it under the **/opt/jdk** directory, then set it up as the default `"`***`...`***`:`

higher priority number (in this case 110):

```
update-alternatives --install /usr/bin/java java /opt/jdk/jdk.new.
update-alternatives --install /usr/bin/javac javac /opt/jdk/jdk.ne
```

You can keep the old version or delete it:

```
update-alternatives --remove java /opt/jdk/jdk.old.version/bin/jav
update-alternatives --remove javac /opt/jdk/jdk.old.version/bin/ja

rm -rf /opt/jdk/jdk.old.version
```

The installation procedure documented above is confirmed to work on a Debian server, but can also be applied to an Ubuntu server. If you encounter any problem after following all the steps, please post a comment below.

Submitted by: Santiago Ti

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18 Comments

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SantiagoTi *April 21, 2014*

* In this tutorial, we will NOT discuss the differences between...

♡

asb *April 21, 2014*

Thanks for catching that! Fixed.

♡

kilianvonpflugk *April 28, 2014*

Other good way via ppa

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http://www.webupd8.org/2012/01/install-oracle-java-jdk-7-in-ubuntu-via.html
♡

casanova36295   *May 1, 2014*

thx, it helped me
♡

Russell   *June 22, 2014*

The wget --header parameter saved me from uploading the file via FTP. ;)
♡

egidiocaprino   *August 20, 2014*

Thank you.
♡

artemn   *October 6, 2014*

Thank you a lot for a tips!
♡

redcraft   *January 11, 2015*

Thanks a lot! Especially for wget --header parameter :-)
♡

salasiapro   *January 12, 2015*

Thanks. This was very helpful.
♡

surindersharma4   *February 13, 2015*

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fergus *February 28, 2015*

Thanks a million. Great tutorial.
As a debian newbie went to alot of sites, but most had incorrect information.
Only thing I had to do extra was change the default oracle via:
update-alternatives --config java

♡

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nitinmahesh *May 17, 2015*

Nice explanations...

♡

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thelordofnosgoth *June 13, 2015*

There is only one thing I would add to this post: Debian 8.1 sets default Java
priority to 1071. Setting the priority higher than this (in my case, 1200) will resolve
the issue.

♡

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alexmon *July 11, 2015*

in case you have already setup OpenJDK run

```
sudo update-alternatives --config java
```

and select java 1.8

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paddel10 *July 15, 2015*

you also might add jar to the list

```
sudo update-alternatives --install /usr/bin/ja
```

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enkidu *November 1, 2015*

this is the error i get:

update-alternatives --install /usr/bin/java java /opt/jdk/jdk1.8.0_66/bin java 100

update-alternatives: priority must be an integer

♡

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mohamedoulmaki *January 20, 2016*

Thanks :)

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