

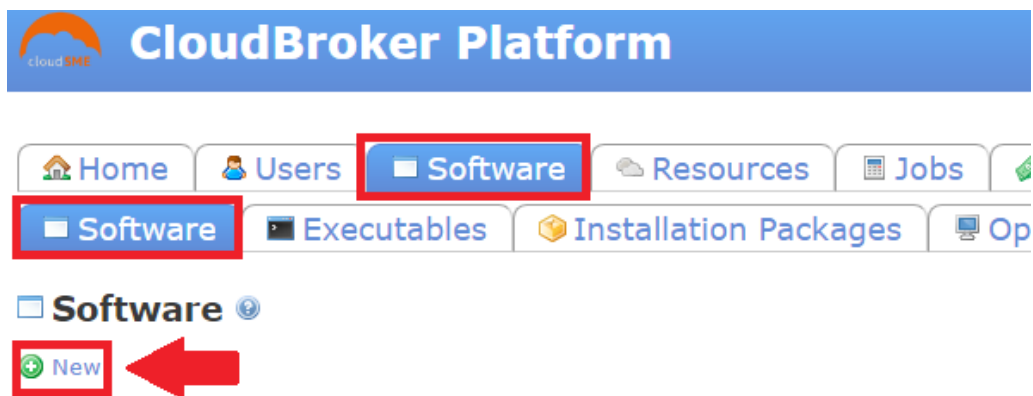
Software Deployment:

In this tutorial, you will learn how to deploy your software on the CloudSME-Platform. As in all of our tutorials, we will use an installation of the Blender software as example.

What is a deployment?

To add your software into the CloudSME AppCenter, the software needs to be deployed in the platform. In the deployment-process an image of the software will be installed on an OS of your choice and uploaded to a cloud provider. This image acts as a template for all instances that will be generated, when a customer uses your product.

1. First you need to login with your platform admin-account. If you don't have an account, please contact the support.
2. Once you have logged in, go to the software tab and click on the „add software“ button (*Fig. 1*). After the click, a new page with an installation wizard opens.



(Fig. 1: Location of the „new“ button)

3. The „Create software“-tab

You need to fill in some basic information about your software in this step:

- **Product:** This field contains the name of your software.
- **Version:** This field contains the version of your software.
- **Visibility:** This dropdown-menu is to set the visibility of your software. There are three options you can choose of.
 - **1. Private** (Software is only available for the admins of your organization)
 - **2. Protected** (Software is only visible for the members of your organization)
 - **3. Public** (The Software is visible for all)

After filling out all necessary fields like in our example below (Fig. 2), proceed to the next step by clicking the „save“ button.

Software ⓘ

1. Create software | 2. Create executable | 3. Deploy software | 4. Activate software

Entries marked with * are required.

Product *
 ⓘ

Version *
 ⓘ

Visibility
 ⓘ

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(Fig. 2: Fill out example for Blender installation)

4. The „Executables“-tab

The next two steps require some testing on a VM (Virtual Machine), where your software is already installed. The software-wizard will ask you for a binary and at a later task for the installation directory.

Finding the Binary:

The binary is the file on an OS that starts your actual software. **To start our Blender software on the VM, we just type „blender“ into the console.** So that is the binary we are looking for.

Finding the installation directory:

If you are also using a Linux-based VM for your software, you can try the following command to find all related folders and files of your software. Its helpful to pipe (>>) the output of the following command into a external file to save it for a later use. Therefore navigate to your **desktop** in your shell and create a new file.

```
Cd /home/$username/Desktop  
Sudo touch NAME_OF_YOUR_OUTPUT_FILE  
Sudo find / -name THE_NAME_OF_YOUR_SOFTWARE >> NAME_OF_YOUR_OUTPUT_FILE
```

From the root directory, the command searches for all folders that share the name of their software. If you found the "binary" on your test system, enter its name in the corresponding field and click the "save executable and deploy software" button. As in step 3, we will provide you with all input parameters for installing the Blender software. These can be found in a later picture (Fig. 4)

5. Now its time to generate an image of your software to deploy it in the cloud. Therefore the CloudSME-Platform provides the use of an installationscript. Installationscripts should be written in bash. Proceed by selecting the „I have an installationscript...“ checkbox and click on the „Proceed to installation package creation“ button.

6. The package creation asks you for the information we collected in step 4. You need to specify the operating system your software will run on, and also the architecture of your test VM. The installation directory field needs the file path to your binary without the name of your binary itself. For example if the file path to your software is:

```
/Folder1/Folder2/Software
```

You just have to fill in the first two folders, because the last entry in the path is the actual binary-file.

The last step in the installation package wizard is, to provide a installationscript. As mentioned before it has to be written in bash. In other tutorials we have used blender as example, so we would like to give you an example for a blender installationscript.

```
Sudo add-apt-repository -y ppa:thomas-schiex/blender
sudo apt-get --yes --force-yes update
sudo apt-get install --yes --force-yes blender
```

Save the script with an „.sh“ filetype and upload it to the platform, then proceed by saving and go to the deployment preparation.

7. In the preparation for deployment-tab, you need to specify the instance type and the IaaS provider. The differences between the instances are based on the actual hardware of the server, that is needed to run your software. The more computingpower a server offers, the higher are the prices for the actual deployment. Because the deployment acts as a template to all other instances made by customers, the computing power is not really needed to be high. Therefore it's better to select a small instance for a deployment. After pressing the „Proceed to deployment“ button, the CloudSME-Platform will automaticly generate an image. To upload it to a hoster select the deployment in the „Software“→“Deployments“-subtab and open the „Action“-menu on the right side of the window. Then select the „generate“-button. When this job is finshed, you need to set your software as active by opening the the „Action“-menu again and select the „Activate“-option. Once this is done, you have to navigate to the „Software“→“Software“-subtab and open the same „Action“-menu on your software again, to activate it also.

8. Now your software-deployment is complete and ready to use.