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# Getting started with the App IDE

## Introduction

(Write the context of Kuksa - APPSATCLE Project Max 7 sent)

Kuksa IDE is an open source developer workspace and Cloud IDE. The Kuksa IDE is a full custom build based on the Eclipse Che.

(Write about Kuksa IDE from Che components)

The development of software-intensive automotive systems by the Original Equipment Manufactureres (OEM) still has unresolved challenges. Therefore, development of standardized car-to-cloud senario could improve the activities and invites external applications, service provider and use of open-source software. A platform such as: the Eclipse [Kuksa](https://www.eclipse.org/kuksa/), which is based on the APPSTACLE project which itself is part of the European ITEA3 program provides mobility as a service as well as after-sales innovations and the means to catch up with the fastly growing of software in changing the business in connected cars. Kuksa is a secure and open automotive platform built as a full custom Eclipse Che Assembly. [Eclipse Che](https://en.wikipedia.org/wiki/Eclipse\_Che) is an open-source java based integrated developer inveronment as cloude, and server which provides a mult-user remote development platform. It consists of a Software Development Kit (SDK) to allow application for certain software packages, framework, platform or computer systems by allowing to create plug-ins for those frameworks, languages or tools.

### Getting started with the App IDE

[Kuksa is divided into a series of components](https://wiki.eclipse.org/Kuksa):

\*InVehicle\*, \*AGL build scripts\*, \*IDE\*, \*Cloud\*, \*Integration\*, \*Apps\*, \* [Website](https://projects.eclipse.org/projects/iot.kuksa)\*. Each of these components will be discussed in details.

### Installing Docker for Ubuntu

\* Check the Ubuntu version using the command `!lsb_release -a`

(check\_ubuntu\_version0.png).

\* To Get the Comunity Edition (Docker CE) version for ubuntu, make sure you have 64-bit version of Ubuntu.

\* Cosmic 18.10

\* Bionic 18.04 (LTS)

\* Xenial 16.04 (LTS)

\* Docker CE is supported on `x86_64` (or `amd64`), `armhf`, `arm64`, `s390x` (IBM Z), and `ppc64le` (IBM Power) architectures.

\* Uninstall older Docer version using:

`$ sudo apt-get remove docker docker-engine docker.io containerd runc`

\* The supported storage drives for Docker CE on Ubuntu are : `overlay2`, `aufs` and `btrfs`.

\* Depending on the needs, Docker CE can be installed in different ways:

\* For ease installation and upgrade task (Recomended) use [set up Docker's repositories](https://docs.docker.com/install/linux/docker-ce/ubuntu/#install-from-a-package).

\* For manual installation and upgrading, use [install it manually](https://docs.docker.com/install/linux/docker-ce/ubuntu/#install-from-a-package). Which might be useful in situations as installing Docker on air-gapped systems with no access to the internet.

\* For testing and development purpose, use automated [convenience scripts](https://docs.docker.com/install/linux/docker-ce/ubuntu/#install-using-the-convenience-script) to install Docker.

## Install using the repository

Set up the Docker repository by following the steps:

1. Update the `apt` package index

`$ sudo apt-get update`

2. Coppy and paste the following line of command to allow `apt` to use repository over HTTPS:

`sudo apt-get install \apt-transport-https \`

```
```ca-certificates\curl \gnupg-agent```
```

```
```software-properties-common```
```

3. Getting Docker's official GPG key: type the command:

Copy and paste the following command:

```
```curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add _```
```

This will show:

>OK</span>

```
```sudo apt-key fingerprint ```
```

```
![fingerprint](finger_print1.png)
```

To verify the fingerprint key: use the last 8 characters, in this case (D38B4796). You should be able to see similar to:

```
```kirubel@kuru:~$ sudo apt-key fingerprint D38B4796 ```
```

```
```pub    rsa4096 2016-04-12 [SC]```  
```    EB4C 1BFD 4F04 2F6D DDCC  EC91 7721 F63B D38B 4796 ```
```

```
```uid    [ unknown] Google Inc. (Linux Packages Signing Authority) <linux-  
packages-keymaster@google.com>```
```

```
```sub    rsa4096 2016-04-12 [S] [expires: 2019-04-12]```
```

```
```sub    rsa4096 2017-01-24 [S] [expires: 2020-01-24]```
```

4. Using the following command set up a >stable</span> repository. To get the latest release of general availability, use >Stable</span>. >Nightly</span> and >Test</span> can be added next to the word >Stable</span> together as >Stable Test Nightly</span> or separately as >Stable Test</span> or >Stable Nightly</span> for updating Docker CE. [Learn more on Docker CE update channels](https://docs.docker.com/install/).

```
```kirubel@kuru:~$ sudo add-apt-repository ```
```

```
```"deb [arch=amd64] https://download.docker.com/linux/ubuntu ```
```

```
```$(lsb_release -cs) ```
```

```
```stable"```
```

## Install Docker CE

Docker CE installation has the following three steps:

1. Update the >apt </span> (Advanced Package Tool) index.

```
```~$ sudo apt-get update```
```

2. The latest version of Docker CE and containerd can be installed using the following command:

```
```~$ sudo apt-get install docker-ce docker-ce-cli containerd.io```
```

However, specific version of Docker CE can be installed from the repo.

To list the available version in your repo, use the command:

a.

```
```~$ apt-cache madison docker-ce```
```

![Terminal window looks like](Docker\_CE\_from\_repo.png)

b. The next step is to install specific version using the **version string** displayed in the terminal window. e.g `5:18.09.3~3-0~ubuntu-bionic`.

```
```$ sudo apt-get install docker-ce=<VERSION_STRING>``` ```docker-ce-  
cli=<VERSION_STRING> containerd.io```
```

3. To verify Docker CE has installed correctly, run `hello-world` image.

```
```~$ sudo docker run hello-world```
```

The above command downloads a test image and runs it in a container. The container runs and prints informational message and exits as shown in the terminal window below.

![running hello world](Hello-world\_docker.png)

Docker CE is installed and running. The docker group is created but no users are added to it. You need to use sudo to run Docker commands. Continue to Linux postinstall to allow non-privileged users to run Docker commands and for other optional configuration steps.

2. Double-click [Docker](<https://docs.docker.com/docker-for-windows/install/>) Desktop for Windows Installer.exe to run the installer. The downloaded installer (Docker Desktop Installer.exe), can be found from ([download.docker.com](https://download.docker.com)). It usually downloads to the Downloads folder, or else, run it from the recent downloads bar at the bottom of the web browser (if Google Chrome is used).

3. Follow the install wizard to accept the license, authorize the installer, and proceed with the install. ![A test image](DockerImage.png)

4. You are asked to authorize Docker.app with your system password during the install process. Privileged access is needed to install networking components, links to the Docker apps, and manage the Hyper-V VMs.![Enabling Hype-V container feature](Enabling Container features.png)

5. Click Finish on the setup complete dialog to launch Docker.

As Eclipse Che is a top-level project in the cloud development Eclipse Cloud Development (ECD), the Che assembly needs to be identified. Therefore, Che assembly is either .war or a Tomcat assembly (<https://www.eclipse.org/che/docs/che-6/assemblies.html>). However, **\*\*\*missing\*\*\***