ALICE SOFTWARE INSTALLATION
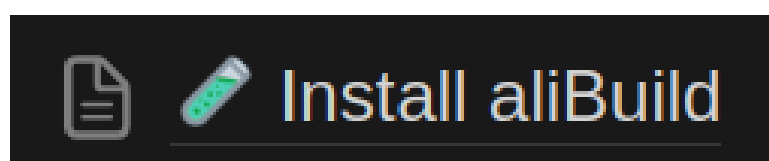
O² ANALYSIS TUTORIAL

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Build ALICE software

ALICE software can be build using officially supported tool called `aliBuild`:

🧪 Install ALICE software with alibuild

This tool provides users with a way to build the ALICE software directly on their system. On CC7 you will benefit from precompiled binaries which will make you save plenty of time. This method works on any modern Linux distribution and macOS.

📄 🧪 Install aliBuild

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aliBuild

ALICE uses aliBuild to build software. aliBuild:

- knows how to build software via per-package recipes,
- manages the dependencies consistently,
- rebuilds only what's necessary,
- allows several versions of the same software to be installed at the same time.

Install required system packages

With root permissions, *i.e.* `sudo`, update your package sources:

```
sudo apt update -y
```

With root permissions, *i.e.* `sudo`, install the following packages:

```
sudo apt install -y curl libcurl4-gnutls-dev build-essential gfortran libmysqlclient-dev x
```

Installing aliBuild

AliBuild, our build tool, is installed as a standard ubuntu package, provided you enable the `alisw` PPA repository. This is done with:

```
sudo add-apt-repository ppa:alisw/ppa
sudo apt update
sudo apt install python3-alibuild
```

You are now ready to start building ALICE software

Version and source


```
andrea@victus:~$ aliBuild version
aliBuild version: 1.14.5-jammy (ubuntu2204_x86-64)
andrea@victus:~$ which aliBuild
/usr/bin/aliBuild
```

Method 1

Prepare your source code

We assume your work area is `~/alice`. So, first off, create the directory and move to it:

```
mkdir -p ~/alice
cd ~/alice
```

If you want to develop analysis code, download AliPhysics:

```
aliBuild init AliPhysics@master
```

Only if you need to develop the Run 2 core software (unlikely), download AliRoot:

```
aliBuild init AliRoot@master
```

If you need to develop for Run 3, download O2Physics:

```
aliBuild init O2Physics@master
```

Only if you need to develop the Run 3 core software (unlikely), download O2:

```
aliBuild init O2@dev
```

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```
aliBuild init O2Physics@master
```

If you perform `ls` under your work directory, you will see the packages you have downloaded via `aliBuild init` , plus an `alidist` directory.

The `alidist` directory contains software recipes, telling aliBuild how the software is built. Your `alidist` directory and your software source code are Git directories **managed by you**: you need to keep them up-to-date manually.

Only if you ne

```
aliBuild init O2@dev
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Method 1

Prepare your source code

We assume your work area is `~/alice` . So, first off, create the directory and move to it:

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mkdir -p ~/alice
cd ~/alice
```

If you want to develop analysis code, download AliPhysics:

```
aliBuild init AliPhysics@master
```

To compile O2 Physics, all you need is:

```
$ aliBuild build O2Physics
```

Only if you need to develop the Run 2 core software (unlikely), download AliRoot:

```
aliBuild init AliRoot@master
```

If you need to develop for Run 3, download O2Physics:

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aliBuild init O2Physics@master
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If you perform `ls` under your work directory, you will see the packages you have downloaded via `aliBuild init` , plus an `alidist` directory.

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```
aliBuild init O2@dev
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KNOW WE'RE GOING TO SEE HOW TO DOWNLOADED IT AND FORK IT FROM GITHUB, DOUBLE-CLICK THE FOLLOWING IMAGE:

USEFUL LINKS:

[Documentation](#)

[Mattermost](#) [O2](#)

[Mattermost O2 tutorial](#)

[TROUBLESHOOTING](#)

THANK YOU!