

Work session with Cloud resources

Your session instructor will guide you through these steps. The total duration is about 20 min.

An application template is provided by this training material (with the main application wrappers defined), and you will learn to include a toolbox (doing the actual data processing step) as part of it.

Prerequisites

- You have successfully performed the [SSH key pair and VPN Setup \(Preparatory Step 1/2\)](#),
- You have successfully performed the [Cloud Dashboard access and Sandbox deployment \(Preparatory Step 2/2\)](#).

Get the Application

- Log on the Developer Cloud Sandbox,
- Clone the "dcs-bash-sentinel2.git" Application repository, depending on the language chosen, by typing:

(Bash)

```
git clone https://github.com/terradaue/dcs-bash-sentinel2.git
cd dcs-bash-sentinel2
```

(Python)

```
git clone https://github.com/terradaue/dcs-python-sentinel2.git
cd dcs-python-sentinel2
```

Install the tools

- Type:

```
sudo yum install -y miniconda openjpeg2
sudo conda install -y gdal
sudo conda install -y sen2cor=2.2.1
```

Note: - installing the 'miniconda' and 'openjpeg2' software packages on your Sandbox from yum repository will take approx. 2 minutes - installing the 'gdal' and 'sen2cor' software packages on your Sandbox from conda repository will take approx. 3 minutes

(only for Python)

```
sudo conda install -y cioppy
```

Install the Application

- Type:

```
mvn install
```

Execute the Application

- Open a browser,
- Type `http://sandbox-host` (*Hint*: according to the Prerequisites: Preparatory Step 2/2, see [Cloud Dashboard access and Sandbox deployment](#) to get instructions about how to obtain the *sandbox-host* value),
- Click on the link **User Dashboard**,
- Click on the tab **Invoke**,
- Click on the link **Sentinel-2 Atmospheric Correction**,
- In the *Sentinel-2 L1C* field, type the URL of a *sentinel-2-reference* value, for example :
`https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161008T183936_R051_V20161008T105022_20161008T105022`

Such reference is provided by Catalog queries such as:

[https://catalog.terradue.com/sentinel2/search?q="S2A"](https://catalog.terradue.com/sentinel2/search?q=) See further below for a list of proposed datasets.

- Click on the button **Run** button.

Monitor and Debug the Application

- Open a browser,
- Type `http://sandbox-host`,
- Click on the link **User Dashboard**,
- Click on the tab **Debug**,
- Click on the Oozie run item,
- Click on the *info* icon on the block with the label *n-sen2cor_node*,
- Click on the link `consoleUrl`,
- Follow the guidance provided by your instructor.

Developer Cloud Sandbox online documentation

[Cloud Sandbox - Getting Started Guide](#)

Reference inputs recommended for the training

- 1 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161008T183936_R051_V20161008T105022_20161008T105022
- 2 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161008T184802_R051_V20161008T105022_20161008T105022
- 3 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161008T182923_R051_V20161008T105022_20161008T105022
- 4 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161008T183005_R051_V20161008T105022_20161008T105022
- 5 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161008T183132_R051_V20161008T105022_20161008T105022
- 6 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161008T183126_R051_V20161008T105022_20161008T105022
- 7 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161005T204601_R008_V20161005T104022_20161005T104018
- 8 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161005T204309_R008_V20161005T104022_20161005T104018
- 9 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161005T204518_R008_V20161005T104022_20161005T104018
- 10 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161005T203229_R008_V20161005T104022_20161005T104018
- 11 -
https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161005T204207_R008_V20161005T104022_20161005T104018

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https://catalog.terradue.com/sentinel2/search?format=atom&uid=S2A_OPER_PRD_MSIL1C_PDMC_20161005T203605_R008_V20161005T104022_20161005T104018