



CEPLAS

Cluster of Excellence on Plant Sciences

Start Your ARC Workshop Series

Session 02 - Build your ARC

May 31st, 2023


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Goals

- Create your first ARC
- Add data to your ARC
- Share the ARC

Legend

 = Locally (on your machine)

 = Remote (in the DataHUB)

Info in `<brackets>` are placeholders - please replace with proper info

Part 0: Check-in

Installation

Open a terminal and one after the other execute

```
git --version
```

```
git-lfs --version
```

```
arc --version
```

💡 If you see a warning at any of these, let me know.

Config

```
git config --global --get-regexp user
```

💡 If this does not display your user name and email, you need to [configure git](#).

Have a simple text editor ready

- Windows Notepad
- MacOS TextEdit

Recommended text editors with code highlighting:

- Visual Studio Code <https://code.visualstudio.com/>
- BBEdit <https://www.barebones.com/products/bbedit/>
- Sublime <https://www.sublimetext.com/>

Create a fresh folder for your ARCs

For this workshop, create a new folder somewhere on your machine where you want to store ARCs, e.g. on the desktop:



- `C:\Users\<username>\Desktop\workshop-arcs` (windows)
- `~/Desktop/workshop-arcs` (mac)

Download the demo data

```
git clone "https://demo-user:1_eznmzxxzARAbUxxnF@git.nfdi4plants.org/teaching/demo-arc_level0.git"
```

Part 1: Hands-on with demo data

Your fresh ARC folder

1.  Create a new folder, which you want to initialize as an ARC.
2.  Open the command line inside the folder or navigate via command line to that folder.

For example:

```
mkdir -p ~/Desktop/workshop-arcs/arc-demo  
cd ~/Desktop/workshop-arcs/arc-demo
```

Initiate the ARC folder structure

```
arc init
```

Create an investigation

```
arc investigation create -i TalinumPhotosynthesis
```

Add a study

```
arc study add -s talinum_drought
```

Add assays

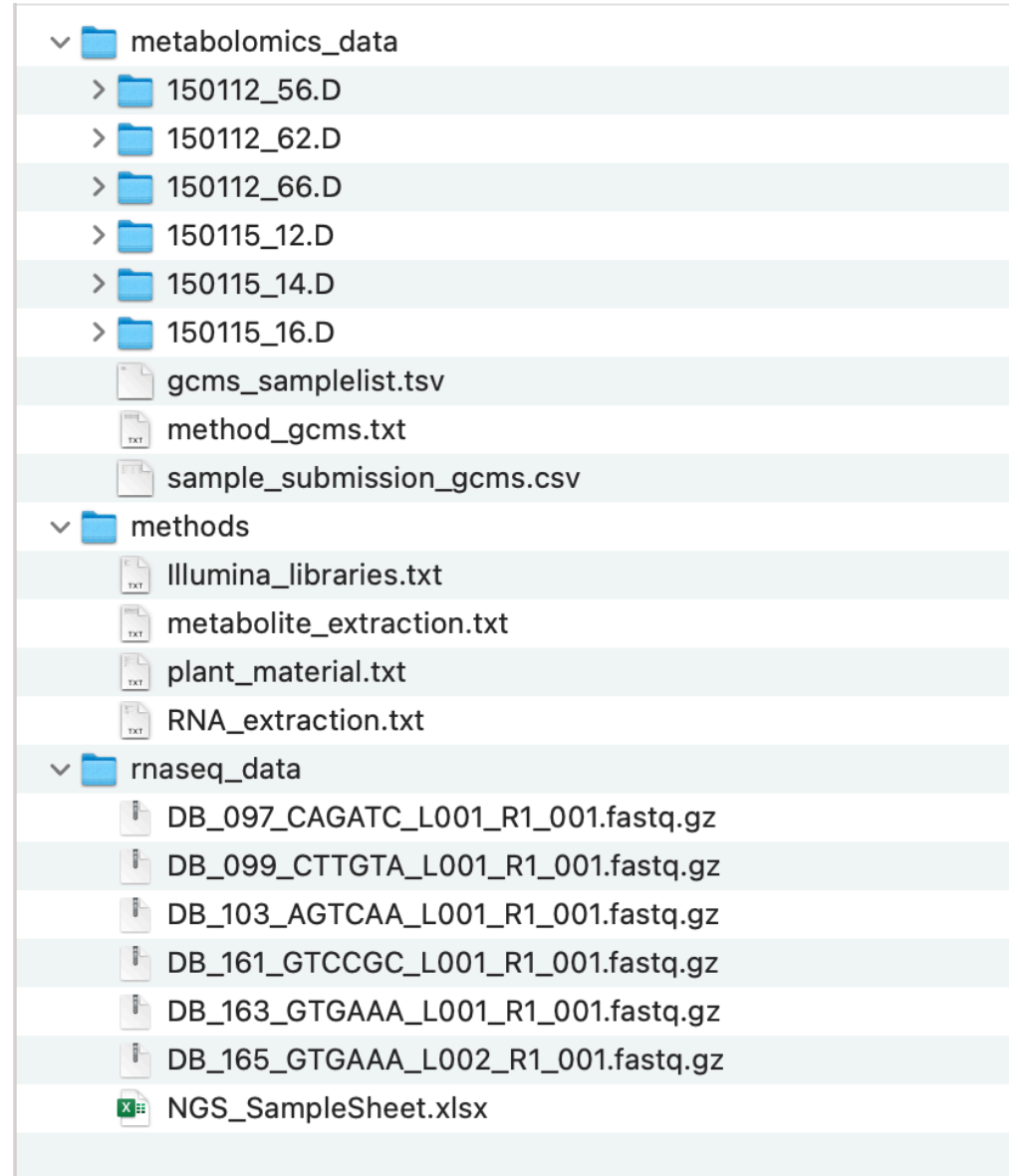
```
arc assay add -s talinum_drought -a rnaseq  
arc assay add -s talinum_drought -a metabolomics
```

Upload your local ARC to the DataHUB

```
arc sync -r https://git.nfdi4plants.org/<username>/arc-demo
```


Sort the demo data into the ARC

Identify "raw dataset(s)" and "protocols" and move them to the proper subfolders in the ARC.



Sync your ARC to the DataHUB

To save the changes, sync the ARC to the DataHUB including a message.

```
arc sync -m "sorted the demo data"
```

Invite a collaborator 

1. Click on **Project Information** in the left navigation panel

Demo User / Demo_ARC

[CQC pipelines](#) on DataHUB received major updates and are now opt-in. If you used the DataHUB publication service before, head [here](#) to learn how to opt-in.

Demo_ARC

main Demo_ARC / +

History Find file Edit Code

arc init
Demo User authored 1 week ago

Name	Last commit	Last update
assays	arc init	1 week ago
runs	arc init	1 week ago
studies	arc init	1 week ago
workflows	arc init	1 week ago
.gitignore	arc init	1 week ago
isa.investigation.xlsx	arc init	1 week ago

Project information

pipeline passed Publish ARC

- 1 Commit
- 2 Branches
- 0 Tags
- 21 KiB Project Storage
- Auto DevOps enabled
- Wiki
- + Add README
- + Add LICENSE
- + Add CHANGELOG
- + Add CONTRIBUTING
- + Add Kubernetes cluster
- + Configure Integrations

Created on
July 13, 2024

2. Click on Members

13

12

Search or go to...

Project

D Demo_ARC

Pinned

>

Manage

1

>

Activity

Members

2

Labels

Plan

>

</> Code

>

Build

>

Secure

>

Deploy

>

Operate

>

Monitor

>

Analyze

>

Settings

>

Demo User / Demo_ARC / Members

CQC pipelines

 on DataHUB received major updates and are now opt-in. If you used the DataHUB publication service before, head [here](#) to learn how to opt-in.

Project members

Import from a project

Invite a group

Invite members

You can invite a new member to Demo_ARC or invite another group.

Members

1

Filter members

Q

Account

>

⌵

Account	Source	Max role	Expiration	Activity
<div><div></div><div>Demo User</div><div>@DemoUser</div><div>It's you</div></div>	Direct member by Demo User	Owner	<div>Expiration date</div> <div></div>	<div>8+ Sep 27, 2023</div> <div>✓ Jul 13, 2024</div> <div>⌵ Jul 21, 2024</div> <div>⋮</div>

3. Click on **Invite members**

13

12

Search or go to...

Project

Demo_ARC

Pinned

1Manage

Activity

2Members

Labels

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Demo User / Demo_ARC / Members

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Project members

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3Invite members

Members 1

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Invite members



You're inviting members to the **Demo_ARC** project.

Username, name or email address

4

Select members or type email addresses

Select a role

Guest



[Read more](#) about role permissions

Access expiration date (optional)

YYYY-MM-DD



Invite members



✓ Guest

Reporter

Developer

Maintainer

Owner

4

5

_ARC project.

ses

Guest



[Read more](#) about role permissions

Access expiration date (optional)

YYYY-MM-DD



Choosing the proper role

Guests

Have the least rights. They will not be able to see the content of your ARC (only the wiki page).

Reporters

Have **read access** to your ARC. This is recommended for people you ask for consultancy.

Developers

The choice for most people you want to invite to your ARC. Developers have **read and write access**, but cannot maintain the project on the DataHUB, e.g. inviting others.

Maintainers

Gives the person the same rights as you have (except of removing you from your own project). This is recommended for inviting PIs or group leaders allowing them to add their group members for data upload or analysis to the project as well.

A detailed list of all permissions for the individual roles can be found [here](#)

Contributors

Slides presented here include contributions by

- Dominik Brilhaus | [GitHub](#) | [ORCID](#)
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