



JUWELS BOOSTER ONBOARDING SC21 TUTORIAL *SESSION 1B*

14 November 2021 | Andreas Herten | Jülich Supercomputing Centre, Forschungszentrum Jülich

Accessing JUWELS Booster

- Everything listed on GitHub repo of tutorial:

[go.fzj.de/sc21-mg-gh¹](https://go.fzj.de/sc21-mg-gh)

¹Unshortened link: <https://github.com/FZJ-JSC/tutorial-multi-gpu/>

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- 1 Create JSC account at JuDoor
- 2 Join training2125 project
→ go.fzj.de/sc21-mg-jd
- 3 Accept usage agreement
- 4 Wait 15 minutes 
- 5 Access system via Jupyter v2
→ jupyter-jsc.fz-juelich.de
- 6 Source course environment in a Jupyter Shell
`$ source $PROJECT_training2125/env.sh`
- 7 Gather course material
`$ jsc-material-sync`

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- Everything listed on GitHub repo of tutorial:
go.fzj.de/sc21-mg-gh¹
- Please start process now
- We'll repeat the following steps in the first hands-on session

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JuDoor Login

<https://judoor.fz-juelich.de/login?show=/projects/training2125/>

JuDoor Login

You need to login in order to visit that page.

Portal for managing accounts, projects and resources at JSC.

Login using JSC account

Username

Password

[Login](#) [Register](#) [Reset password](#)

Login with e-mail callback

Login mail address

A confirmation email to confirm your identity will be sent to this address.

[Send identification mail](#)

JU Send join request to project X +

>Your account xyzhert1

Send join request to project

JÜLICH Forschungszentrum SUPERCOMPUTING CENTRE

Do you want to send a project join request to the [training2125](#) project?

The following information will be given to the PI and PA of the project: Dr. Andreas Herten, [xyzhert1, an@email.address.com](#)

Optional additional information for the PI and PA

Attending SC21 Mult-GPU tutorial and excited about today!

[Send join request to project.](#)

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Forschungszentrum Jülich, JSC

Contact Support
JuDoor Requests

We are pleased to bring "Supercomputing in your browser". Jupyter-JSC is designed to provide the rich high performance computing (HPC) ecosystem to the world's most popular software: web browsers. JupyterLab is a web-based interactive development environment for Jupyter notebooks, code, and data. JupyterLab is flexible to support a wide range of workflows in data science, scientific computing, and machine learning. [Read more](#).

JURECA, JUWELS, JURECA, JUSUF, DEEP

Please use your JSC account to log in or register if you have not already done so. It's also possible to log in via Helmholtz AAI.

[Login](#) [Register](#)

Jupyter-JSC **JUWELS** **JURECA** **JUSUF** **DEEP**

HDFML **HDF-Cloud**

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HELMHOLTZ
RESEARCH FOR GRAND CHALLENGES

Jupyter-JSC OAuth2 Authorizat X +

https://unity-jsc.fz-juelich.de/jupyter-oauth2-as/oauth2-authz-web-entry

Start Links

JSC account Helmholtz account

xyzhert1

Sign in with Helmholtz

Sign in

Jupyter-JSC JUWELS JURECA JUSUF DEEP

JÜLICH
Forschungszentrum

JÜLICH
SUPERCOMPUTING
CENTRE

Last login: 13:23:11 2021-10-27

an@email.address.com

Logout

Start Links

Configurations

Please give each of your configurations a name.
This way you can run multiple instances at the same time.
Supported characters are a-z, 0-9 and '_'.
JupyterLab

Name	Version	System	Account	Project	Partition	Details	Actions
sc21multigpu							Add new JupyterLab

Jupyter-JSC JUWELS JURECA JUSUF DEEP
HDFML HDF-Cloud

Jupyter-JSC

Last login: 19:50:07 2021-11-13

an@email.address.com

Logout

JupyterLab Options

Version: JupyterLab 2 (2020b) ▾

System: JUWELS ▾

Account: herten1 ▾

Project: training2125 ▾

Partition: LoginNodeBooster ▾

Start

Jupyter-JSC

JUWELS

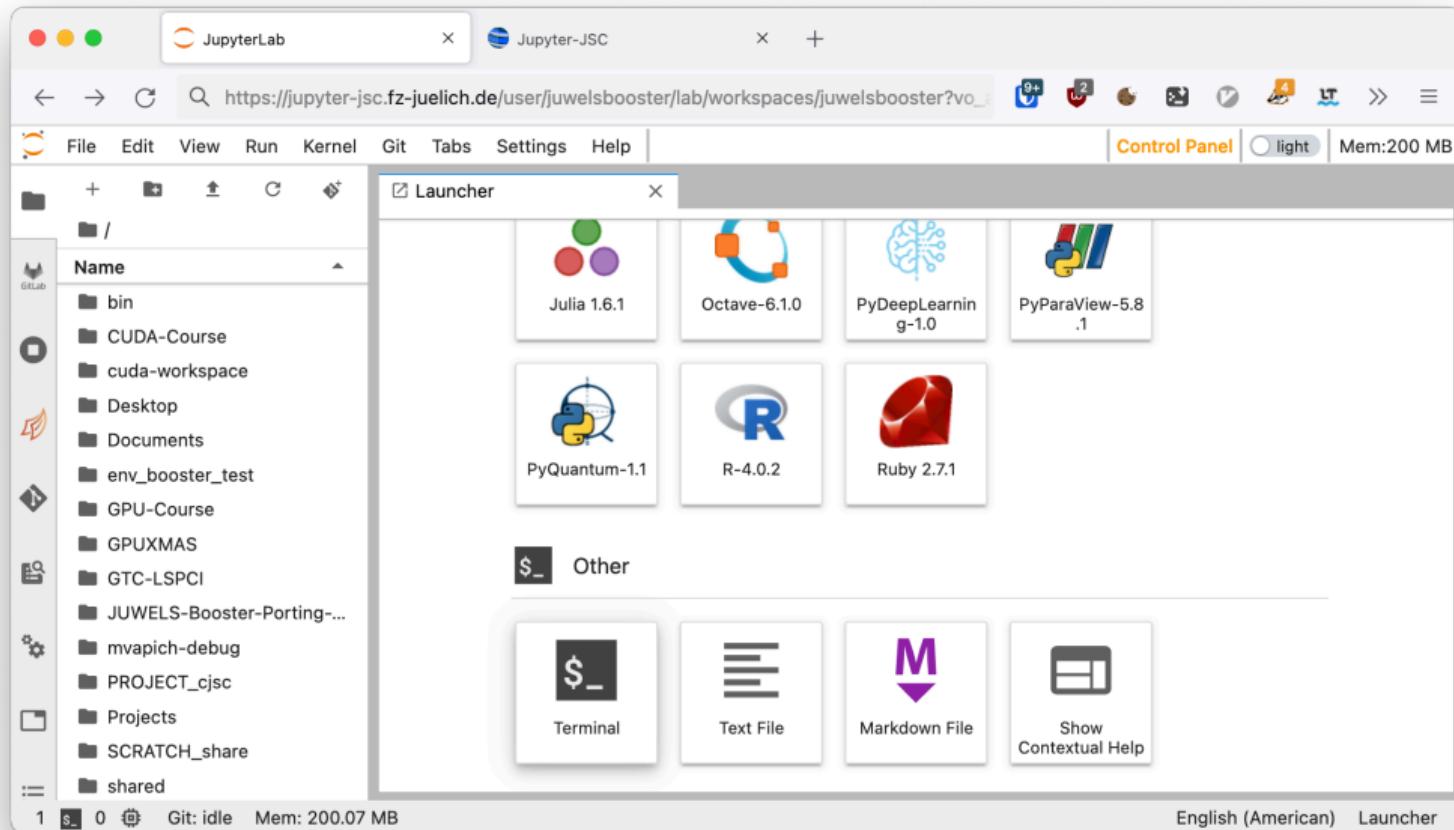
JURECA

JUSUF

DEEP

HPEML

HPC Cloud



JupyterLab

https://jupyter-jsc.fz-juelich.de/user/an@email.address.com/sc21multigpu/lab/workspaces/sc21multigpu?

File Edit View Run Kernel Git Tabs Settings Help Control Panel light Mem:140 MB

~ via M 20:55:31 > source \$PROJECT_training2125/env.sh

Name bin SCRATCH_share

1 0 Git: idle Mem: 139.67 MB English (American) @jwlogin24:~

The screenshot shows the JupyterLab interface. On the left is a file browser with a sidebar containing icons for GitHub, GitLab, a search bar, and settings. The main area has a terminal window showing a command being run: 'source \$PROJECT_training2125/env.sh'. Below the terminal is a file browser showing a directory structure with 'bin' and 'SCRATCH_share' folders. At the bottom, there are status indicators for Git and memory usage.

JupyterLab

https://jupyter-jsc.fz-juelich.de/user/an@email.address.com/sc21multigpu/lab/workspaces/sc21multigpu?

File Edit View Run Kernel Git Tabs Settings Help Control Panel light Mem:156 MB

@jwlogin24:~

1) Stages/2020

Preparing the environment for use of requested stage (2020).

The following have been reloaded with a version change:

1) NCCL/2.8.3-1-CUDA-11.3 => NCCL/2.10.3-1-CUDA-11.3

Welcome to the SC21 Tutorial on Multi-GPU Computing for Exascale!

Submit a job to the batch system with '\$JSC_SUBMIT_CMD'

The value of \$JSC_SUBMIT_CMD is:

srun --partition booster --gres=gpu:4 --time 0:10:00 --pty

Some modules have been loaded into the environment. See them with
'module list'.

Synchronize the master material folder to your own by calling
'jsc-material-sync'

~ took 3s via 20:56:02

1 \$_ 0 Git: idle Mem: 140.28 MB English (American) @jwlogin24:~

The following have been reloaded with a version change:
1) NCCL/2.8.3-1-CUDA-11.3 => NCCL/2.10.3-1-CUDA-11.3

```
*****  
Welcome to the SC21 Tutorial on Multi-GPU Computing for Exascale!  
Submit a job to the batch system with '$JSC_SUBMIT_CMD'  
The value of $JSC_SUBMIT_CMD is:  
srun --partition booster --gres=gpu:4 --time 0:10:00 --pty  
Some modules have been loaded into the environment. See them with  
'module list'.  
Synchronize the master material folder to your own by calling  
'jsc-material-sync'  
*****  
~ took 3s via M  
20:56:02 > jsc-material-sync  
  
~ via M  
20:56:15 > cd SC21-Multi-GPU-Tutorial/  
  
~/SC21-Multi-GPU-Tutorial via M  
20:56:27 > █
```

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