



INTERACTIVE HCP WITH JUPYTER

PRACE Training Course

2021-04-20..22 | JENS. H. GÖBBERT
ALICE GROSCH

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WELCOME

- Hello !
- Workshop information (live document)
 - https://gitlab.version.fz-juelich.de/hedgedoc/2xL_vGsLQvyEwUg49sNAIA#
 - Added: Recording of day 1
 - Added: Recording of day 2
- Workshop interaction
 - Zoom chat
- Workshop repository
 - <https://gitlab.version.fz-juelich.de/jupyter4jsc/prace-2021.04-jupyter4hpc>

<https://jupyter.org>

WELCOME

Agenda

• day 1: JupyterLab Introduction

- 9:00 - 11:00
 - Welcome and Login
 - Introducing JupyterLab
- 11:00 - 11:30
 - Break
- 11:30 - 13:00
 - JupyterLab extensions tour

• day 2: Jupyterlab Customization for HPC

- 9:00 - 11:00
 - Welcome and Login
 - JupyterLab on HPC resources
 - Customizing your environment
- 11:00 - 11:30
 - Break
- 11:30 - 13:00
 - Using JupyterLab as Proxy
 - Remote visualization

• day 3: JupyterLab Optimization for HPC

- 9:00 - 11:00
 - Welcome and Login
 - Utilizing supercomputers with JupyterLab
- 11:00 - 11:30
 - Break
- 11:30 - 13:00
 - Extend/build/install your own JupyterLab
 - Jupyter-JSC under the hood
 - Workshop summary and feedback

Resources:

HDF Cloud

JUSUF

F# JUWELS

<https://jupyter.org>

PRE-WORKSHOP TODOS

Login to

<https://jupyter-jsc.fz-juelich.de>

Ensure you are in the Group

workshop-210420

Name your JupyterLab

e.g. „JUWELS_batch“

Add new JupyterLab

Configure the new JupyterLab

Runtime: 300

<https://jupyter.org>

Click „Start“

Last login: 09:36:51 2021-04-20

j.goebbert@fz-juelich.de Group (?): workshop-210420 Logout



JupyterLab

Name your JupyterLab Add new JupyterLab

JupyterLab Options

System	JUWELS ▾
Account	goebbert1 ▾
Project	training2109 ▾
Partition	booster ▾
Reservation	prace-jupyter-2021-04-22 ▾
Nodes [1, 384]	1 ▾
Runtime (min) [10, 1440]	300 ▾
GPUs [1, 4]	4 ▾
Show reservation info (?)	<input checked="" type="checkbox"/>

Start

Your server is starting up.

You will be redirected automatically when it's ready for you.

Request submitted to JUSUF for goebbert1:cjsc

Preparing environment on jsfl01 ...

... port-forwarding established

... request-specific configuration generated

... disk quota in \$HOME checked

... modules loaded for JupyterCollection/2020.2.6

Starting JupyterLab. Waiting for an answer. This may take a few seconds.

Server ready at /user/j.goebbert@fz-juelich.de/jusuf_login/



2-FACTOR AUTHENTICATION

2-FACTOR AUTHENTICATION



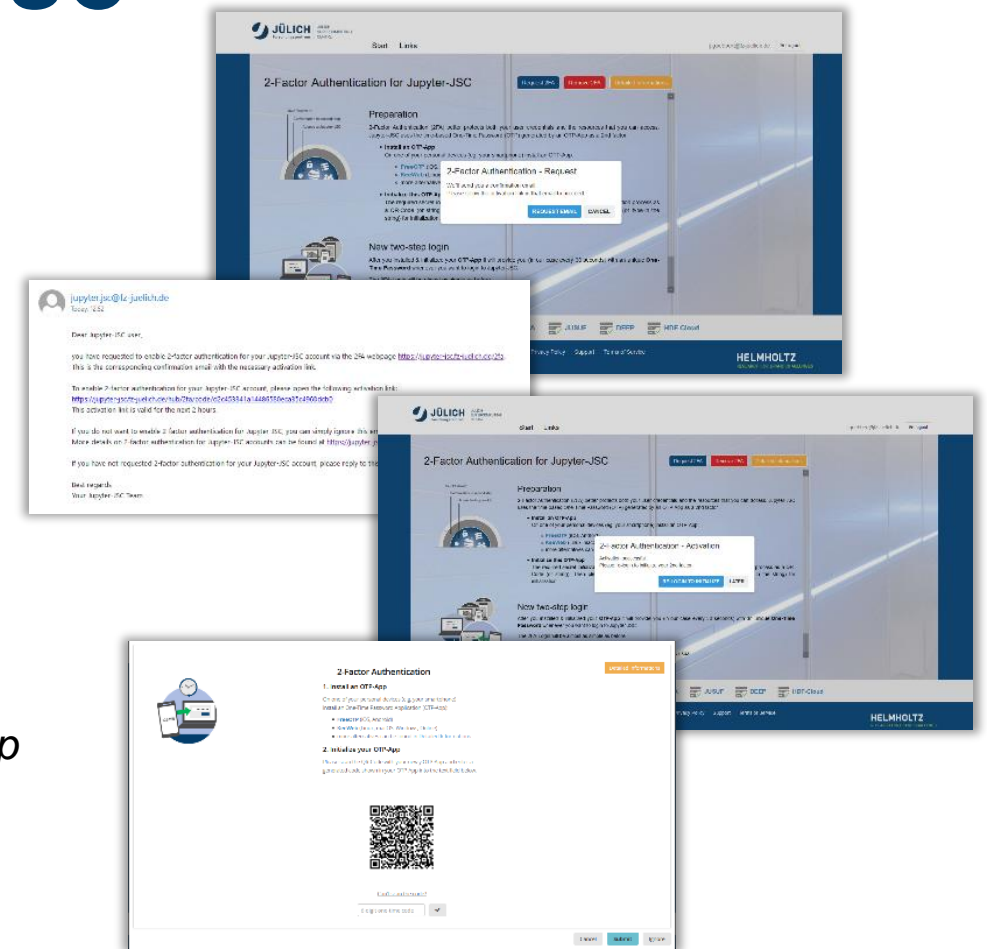
ENABLE 2FA FOR JUPYTER-JSC

To get ready to use 2-Factor Authentication (2FA) for Jupyter-JSC you have to **prepare** it ONCE:

- (1) **request 2FA** for Jupyter-JSC,
 - (a) login to Jupyter-JSC
 - (b) visit <https://jupyter-jsc.fz-juelich.de/2fa> and request 2FA
 - (c) wait for a *confirmation emails* and click the provided *activation link*
- (2) **activate 2FA** for Jupyter-JSC,
 - (a) install an **OTP-App**, which supports the TOTP algorithm
 - (b) communicate the **secret initialization code** to this *OTP-App*
 - (c) test a first **one-time password** generated.

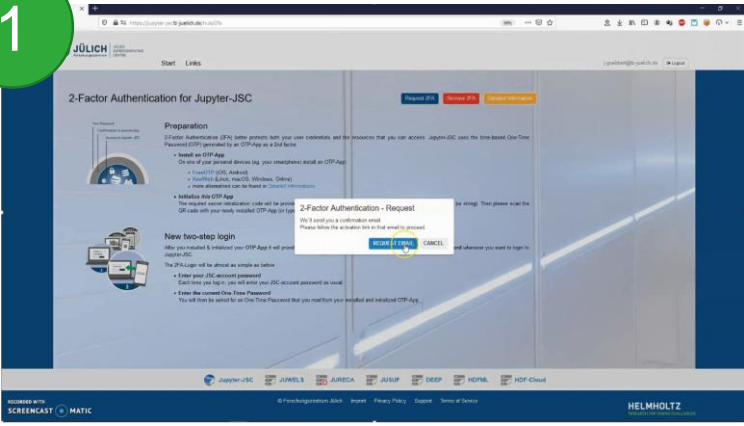
... and then 2FA is ready to be used next time you log in.

More details on <https://jupyter-jsc.fz-juelich.de/2fadetails>

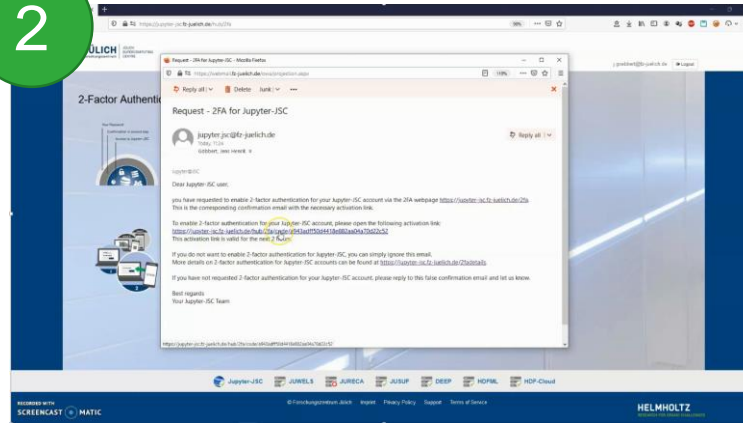


<https://jupyter-jsc.fz-juelich.de/2fa>

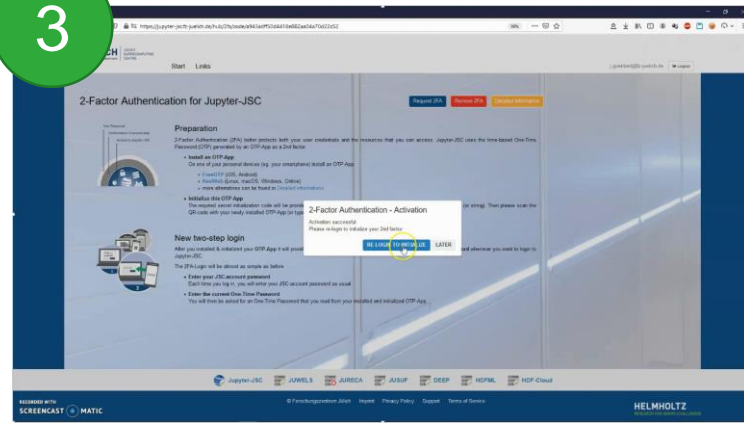
1



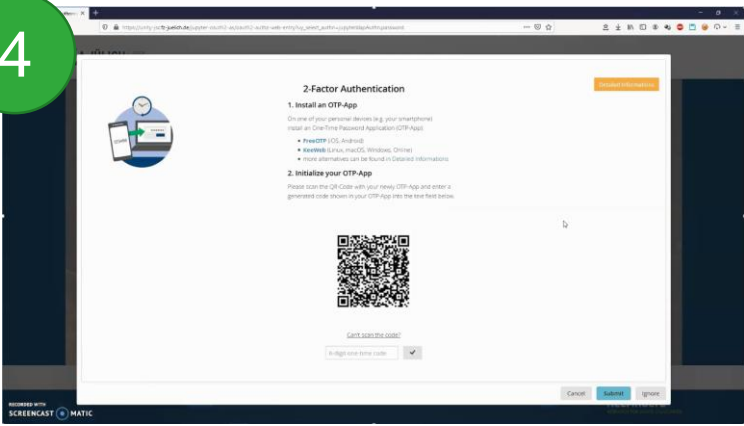
2



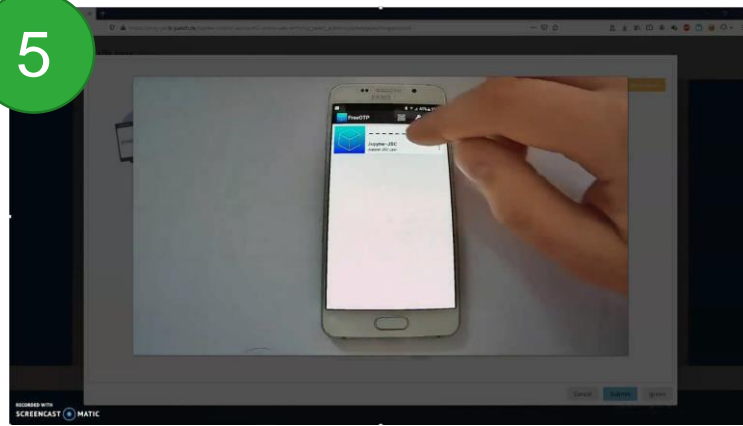
3



4



5



6

