

NEW JSC USAGE MODEL AND PORTAL

INTRODUCTION COURSE

23. NOVEMBER | STEFANIE JANETZKO

CURRENT USAGE MODEL

Project-centered

- Applications for research projects
 - Example: User A is member of two research projects led by PI1 and PI2

Project 1	PID: HLZ10, PI: PI1		
	Budget: HLZ10		
	Account of user A: HLZ104		
	Unix group all accounts: HLZ10		
	\$HOME	\$WORK	\$ARCH
	hlz10/hlz104	hlz10/hlz104	hlz10/hlz104
Project 2	PID: HHH25, PI: PI2		
	Budget: HHH25		
	Account of user A: HHH251		
	Unix group all accounts: HHH25		
	\$HOME	\$WORK	\$ARCH
	hhh25/hhh251	hhh25/hhh251	hhh25/hhh251

- Close connection between PID, account, budget of research projects and storage is a problem

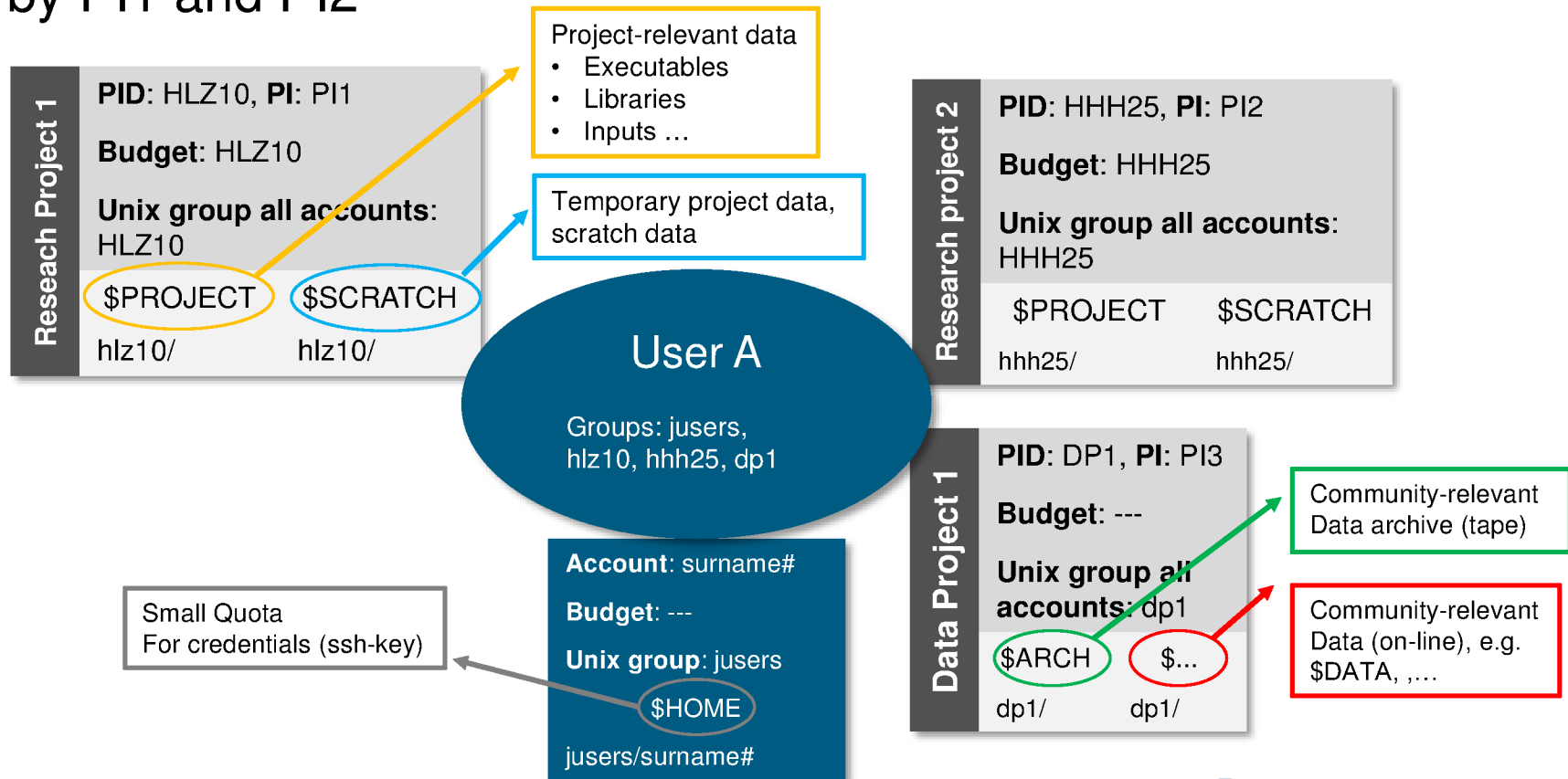
USE CASES / MOTIVATION

<i>Use Case</i>	<i>Current Model</i>	
<i>Access to more than one resource pool</i>	The same user needs several accounts connected to budgets	
<i>Sharing data between different users/projects</i>	cp to \$WORK or allow access to \$HOME – big data needs to be copied by administrators	
<i>Access to data of former project members</i>	Via dispatch/PI, copying of data	
<i>Carry forward data onto a new project</i>	Data needs to be copied by users or administrators	

NEW USAGE MODEL

User-centered

- Same Example: User A is member of two research projects led by PI1 and PI2



USE CASES / MOTIVATION II

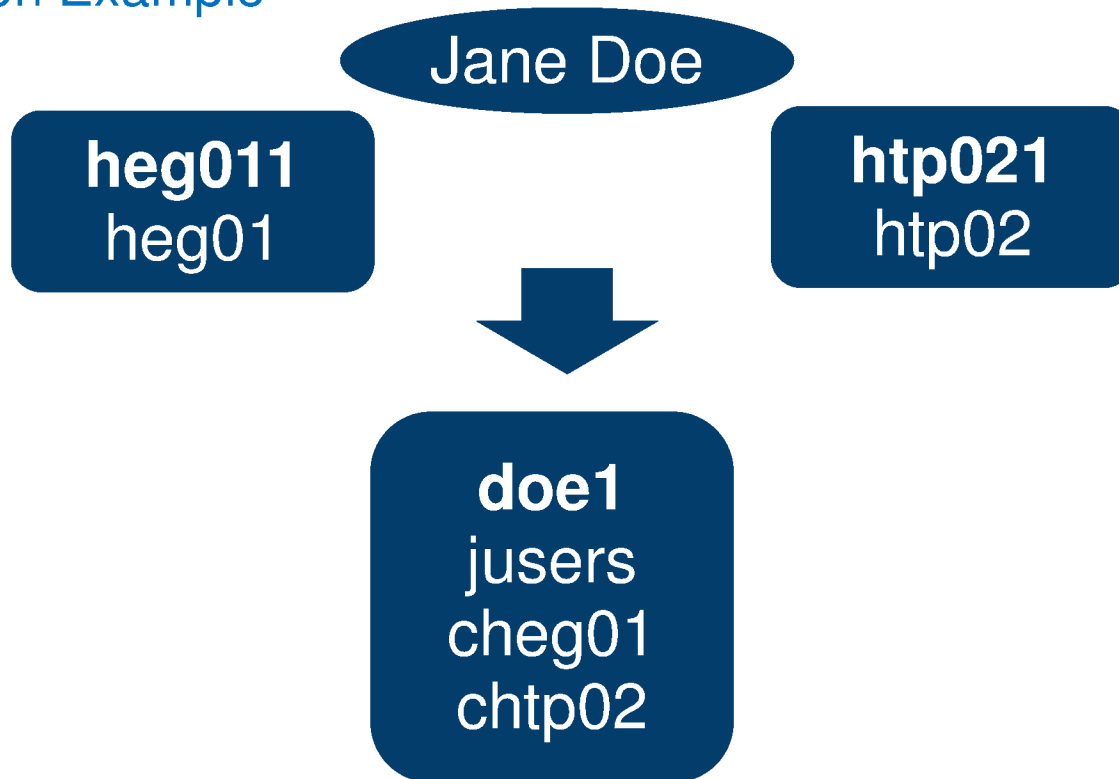
<i>Use Case</i>	Current Model	New Model
<i>Access to more than one resource pool</i>	The same user needs several accounts connected to budgets	Only one account for one user with access to different budgets
<i>Sharing data between different users/projects</i>	cp to \$WORK or allow access to \$HOME – big data needs to be copied by administrators	\$PROJECT / \$DATA in research project / data project for communities
<i>Access to data of former project members</i>	Via dispatch/PI, copying of data	Data remains in \$PROJECT / \$DATA
<i>Carry forward data onto a new project</i>	Data needs to be copied by users or administrators	Data projects are independent of research projects

MAIN FEATURES

One account

surname# (# is a consecutive number)

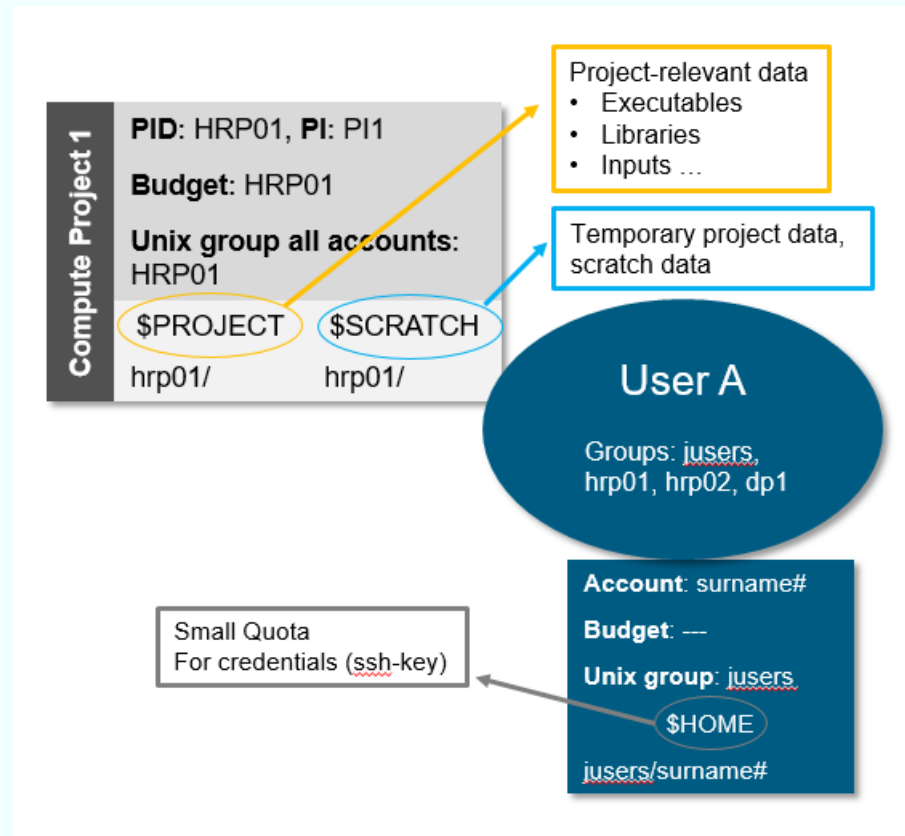
- Transition Example



MAIN FEATURES

Separation of user and project data

- Single account with HOME data
 - Separated home per system
.../jureca,.../juwels,.../shared
- Project space
 - \$project, \$scratch
 - setgid, -rwxrws---
- Transition
 - \$HOME →
\$PROJECT/<old_account>
 - Access rights not changed



MAIN FEATURES

Data projects

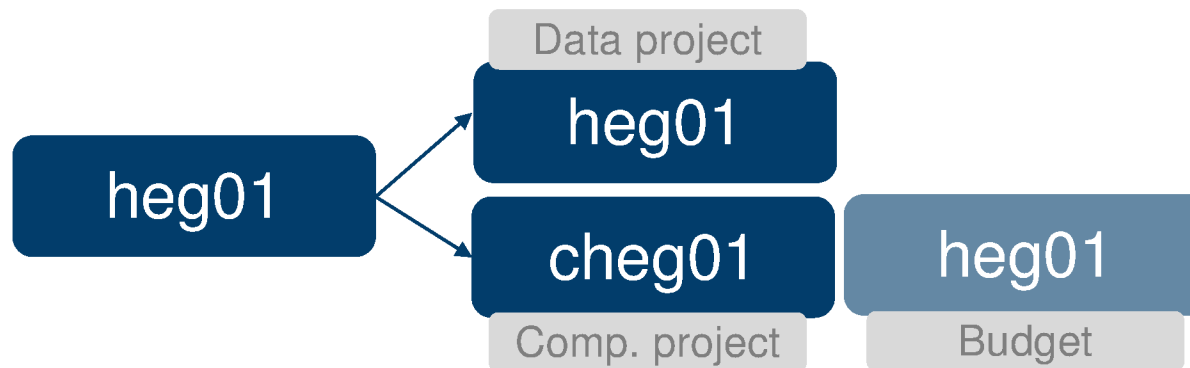
- Characteristics and usage
 - Access to ARCHIVE, ...
 - Independent from research project
 - exchange of data between projects, community data
 - for running projects/analysis, not just data repository (2019)
 - Runtime 1 year, in future long-term possible
- After transition: application for a data project needed
 - Rolling call starting Jan 2019
 - Technical Review
 - Prolongation yearly
- Later on:
 - Scientific review, longer runtimes possible

DATA AND COMPUTE PROJECTS

Transition example

Transition

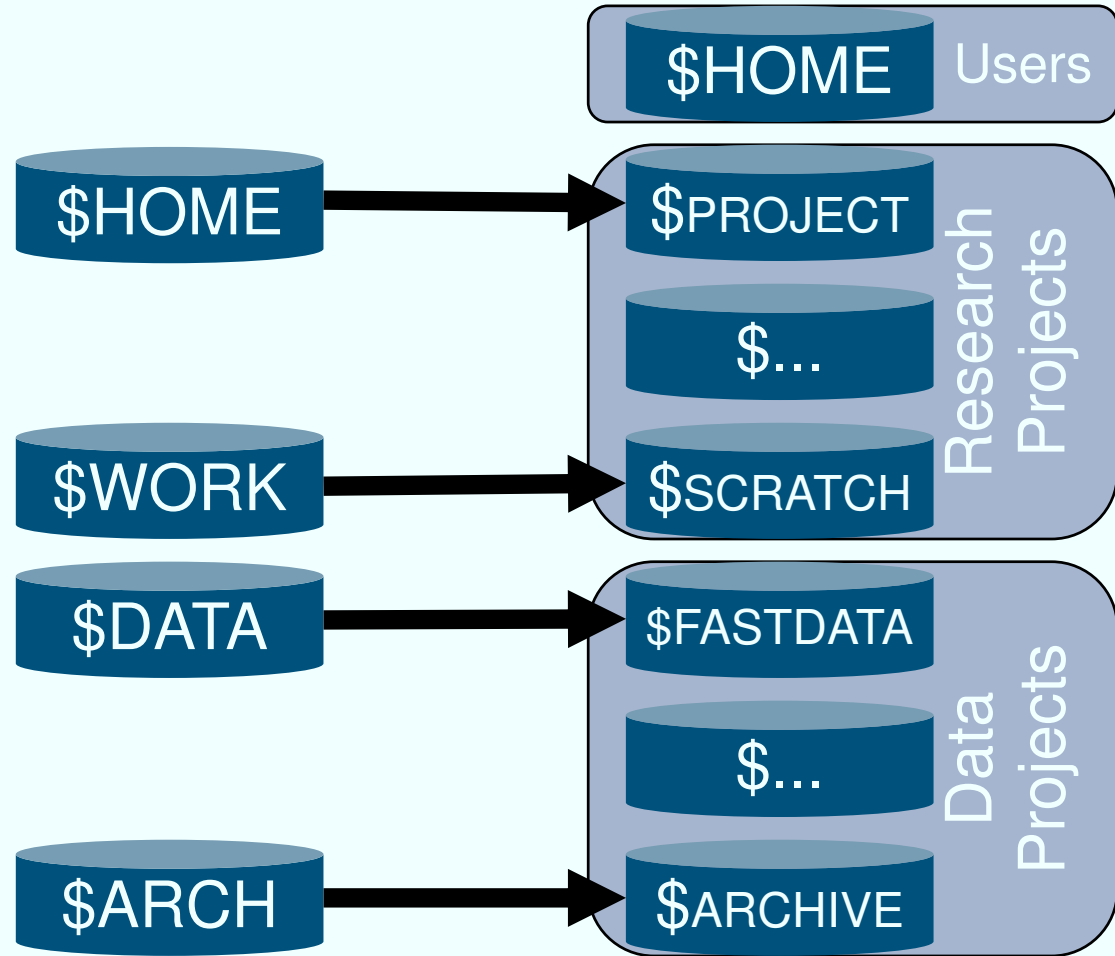
- Each project with data in ARCH will get a data project
- Data projects get the name of the former single project
- Compute projects are named c<project_id>, budget is still <project_id>!



NEW USAGE MODEL – TRANSITION

Database and Data Migration

- Filling of new LDAP
 - New usernames
 - New project associations
- Data Migration
 - Transparent to the user
 - Already started



HOW TO WORK WITH THE NEW MODEL

User tools

- **q_cpuquota -?**
 - Query CPU quota
 - New: -l <old_account>
- **jutil - Querying information and activating projects**
 - Usage: jutil [-h] person|user|project|env <action> [<options>][[-v]][-o <format>]

Actions:

show : Query info for users or projects

projects : List of projects that a user is member of

cpuquota : Query CPU quota

dataquota : Query disk quota

activate : Activate a project -> exports env vars and change current unixgroup

Options:

- u <val>, --user=<val> : Specify user
- k <val>, --pkey=<val> : Specify personal key
- p <val>, --project=<val> : Specify project
- g <val>, --group=<val> : Specify project or (primary) group
- c <val>, --contpart=<val> : Query a contingent partition
- A <val>, --account=<val> : Query/activate a budget account
- a <val>, --all : Query all entries (Only as root)
- h, --help : Print this help message
- v, --verbose : Show more info/logs
- o <val>, --output=<val> : Output format: rows(default),columns,parsable,json
- research : Switch for research projects only
- data : Switch for data projects only
- system : Show info for current system only

Allowed user interface:

```
jutil person show [-u <uid>|-k <persKey>|-a]
```

```
jutil user show [-u <uid>|-a [--system]]
```

```
jutil user projects [-u <uid>] [--research|--data]
```

```
jutil user cpuquota [-u <uid>|-a] [-p <proj> [-c <contpart> [-A <budget>]]]
```

```
jutil user dataquota [-u <uid>|-a] [-p <proj>]
```

```
jutil project show -p <project>|-a
```

```
jutil project cpuquota -p <project>|-a [-c <contpart> [-A <budget>]]
```

```
jutil project dataquota -p <project>|-a
```

```
jutil env activate -p <project> [-A <budget>]
```

```
jutil env init
```

```
jutil env refresh
```

Example

```
> jutil user show -u janetzko2
```

```
name=Stefanie Janetzko
```

```
email=st.janetzko@fz-juelich.de
```

```
uidNumber=8003
```

```
...
```

```
> jutil user projects -u janetzko2 -o columns
```

project	unixgroup	project-type	budgets
-----	-----	-----	-----
hbi18	hbi18	D	-
cjsc	cjsc	R	zam
jsc	zam	D	-

Example

```
> jutil project dataquota -p cjsc
```

```
name=cjsc
```

```
filesystem=project
```

```
storage=just
```

```
data-hard-limit=...
```

```
...
```

```
name=cjsc
```

```
filesystem=scratch
```

```
storage=just
```

```
data-hard-limit=...
```

```
...
```

Example

> jutil env init

```
export ARCHIVE_zam=/arch2/zam; export PROJECT_cjsc=/p/project/cjsc;  
export SCRATCH_cjsc=/p/scratch/cjsc; export  
HOME=/p/home//jusers/janetzko2/jureca_booster; export  
FASTDATA_zam=/p/fastdata/zam; export FASTDATA_hbi18=/p/fastdata/hbi18;  
export ARCHIVE_hbi18=/arch2/hbi18;
```

> jutil env activate -p cjsc

```
unset SLURM_ACCOUNT; export JSC_BUDGET_ACCOUNTS=zam; export  
SCRATCH=/p/scratch/cjsc; export PROJECT=/p/project/cjsc;
```

> jutil env activate -A zam -p cjsc BE CAREFUL!

```
export SLURM_ACCOUNT=zam; export JSC_BUDGET_ACCOUNTS=zam;  
export SCRATCH=/p/scratch/cjsc; export PROJECT=/p/project/cjsc;
```

HOW TO WORK...

Job submission

- Budget needed
 - -A <budget-id> or --account=<budget-id> in the batch script
or
 - jutil env activate -A <budget-id>
 - **The name of the budget is the same as before the transition!**
 - **Be careful in choosing the right project!**
- Environment variables
 - E.g. data is no longer in \$HOME, but in \$PROJECT
 - \$WORK→\$SCRATCH

USER PORTAL JUDOOR

- Administration of accounts/projects
 - Account application 1x
 - Approve/Reject/Delete account for projects
 - User Agreement
- Almost paperless
- Role-based (User/PI/PA)
 - PI – Principle Investigator
 - PA – Project Administrator
- Future
 - Resource usage

The screenshot displays the 'JuDoor Your account' page for user 'mustermann1'. The header includes the user's name 'Max Mustermann' and the JÜLICH Forschungszentrum logo. The account details section lists: Account (mustermann1), E-mail address (max.mustermann@example.com), Telephone (1234-5678), Fax (1234-5678), and Address. The 'Systems' section shows access to 'judac', 'jureca', and 'juwels', each with a 'Manage SSH-keys' link and usage agreement confirmation dates. The 'Projects' section lists three projects: 'Compute project title one' (CPR0J1), 'Compute project title two' (CPR0J2), and 'Dataproject title' (DATAPROJ), each with a grid icon. Below the projects is a 'Join a project' link. The 'Software Licenses' section has a 'Request access to licensed software' link. The 'Connected Services' section shows links for 'jads', 'tview', and 'trac', along with a 'Make changes' link.

JUDOOR – MAIN TASKS

- Get access to a project
 - PI is informed about project id
 - User → “Join a project”
 - PI approve user and assigns resources
- Manage ssh-keys
- View/Accept user agreement
- Change contact data (not FZJ)
- Get software access
- Webservices

The screenshot shows the JuDoor 'Your account' page for user Max Mustermann. The page is divided into several sections:

- Account Information:** Displays user details such as Account (mustermann1), E-mail address (max.mustermann@example.com), Telephone (1234-5678), Fax (1234-5678), and Address.
- Systems:** Lists access to various systems with their respective usage agreements and resource allocations.
 - judac:** Manage SSH-keys, Usage agreement confirmed on 14.11.2018. Resources: CPROJ1, CPROJ2, DATAPROJ.
 - jureca:** Manage SSH-keys, Usage agreement confirmed on 14.11.2018. Resources: JURECA_CPROJ2, JURECA_GPUS_CPROJ2, JURECA_VIS_CPROJ2.
 - juwels:** You need to sign the usage agreement to access this system. Resources: JUWELS_CPROJ2, JUWELS_GPUS_CPROJ2.
- Projects:** Lists projects with their titles and IDs.
 - Compute project title one CPROJ1
 - Compute project title two CPROJ2
 - Dataproject title DATAPROJ
- Software Licenses:** Includes a link to 'Request access to licensed software'.
- Connected Services:** Lists services like jads, livew, and trac, with a 'Make changes' link.

JUDOOR – PI VIEW

- Add/modify users in a project
 - Add resources
- Appoint user to project administrator (PA)

JuDoor Your account

[Back to cPROJ1](#)

Modify access for user in CPROJ1

Appoint person as project admin

You would like to appoint the following person as a project administrator for the project CPROJ1:

Name	Max Mustermann
Email	max.mustermann@example.com
Account	mustermann1

This will allow the person to see a list of all project members, add and remove persons from this project as well as assigning compute resources to project members.

By appointing the person as a project administrator you declare that the actions taken by the PA shall be attributed to yourself and that you are responsible for all of the PA's measures taken in the context of your supercomputing project.

On pressing "Appoint as PA" Max Mustermann will receive a form, which has to be signed and sent to the JSC user administration in order to complete the appointment.

[Appoint as PA](#) [Cancel](#)

JuDoor Your account

examplepi1 Logout

[Back to cPROJ1](#)

Modify access for user in CPROJ1



Max Mustermann

Account mustermann1
E-mail address max.mustermann@example.com

As PI or PA of the project you are obliged to follow data protection regulations, in particular to maintain confidentiality. That means not to communicate or make data accessible to other persons without authorization by the data provider (even after the end of the project).

Data access

☒ JUDAC

Contingent proj1 ☐

☒ JUWELS

☒ JUWELS_GPUS

You can restrict the available resources for this user before adding the user to the project.

[Save](#) [Remove from project](#) [Promote user to PA](#) [Cancel](#)

[Legal Notice](#)
[Privacy Policy](#)

Forschungszentrum Jülich, JSC

[Contact Dispatch](#)

USER DOCUMENTATION

- Usage Model
 - <http://www.fz-juelich.de/ias/jsc/usage-model>
- JuDoor
 - <http://www.fz-juelich.de/ias/jsc/judoor>

MAINTENANCE AND SUPPORT INFORMATION

- Maintenance for transition to the new model affects all systems
 - November 30, 8 a.m. – December 4
 - All queued jobs will be cancelled!
- SC – Support
 - 02461/61-2828
 - sc@fz-juelich.de