

NEW JSC USAGE MODEL AND PORTAL

ESM USER FORUM

6. FEBRUARY | STEFANIE JANETZKO

OLD USAGE MODEL

Project-centered

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

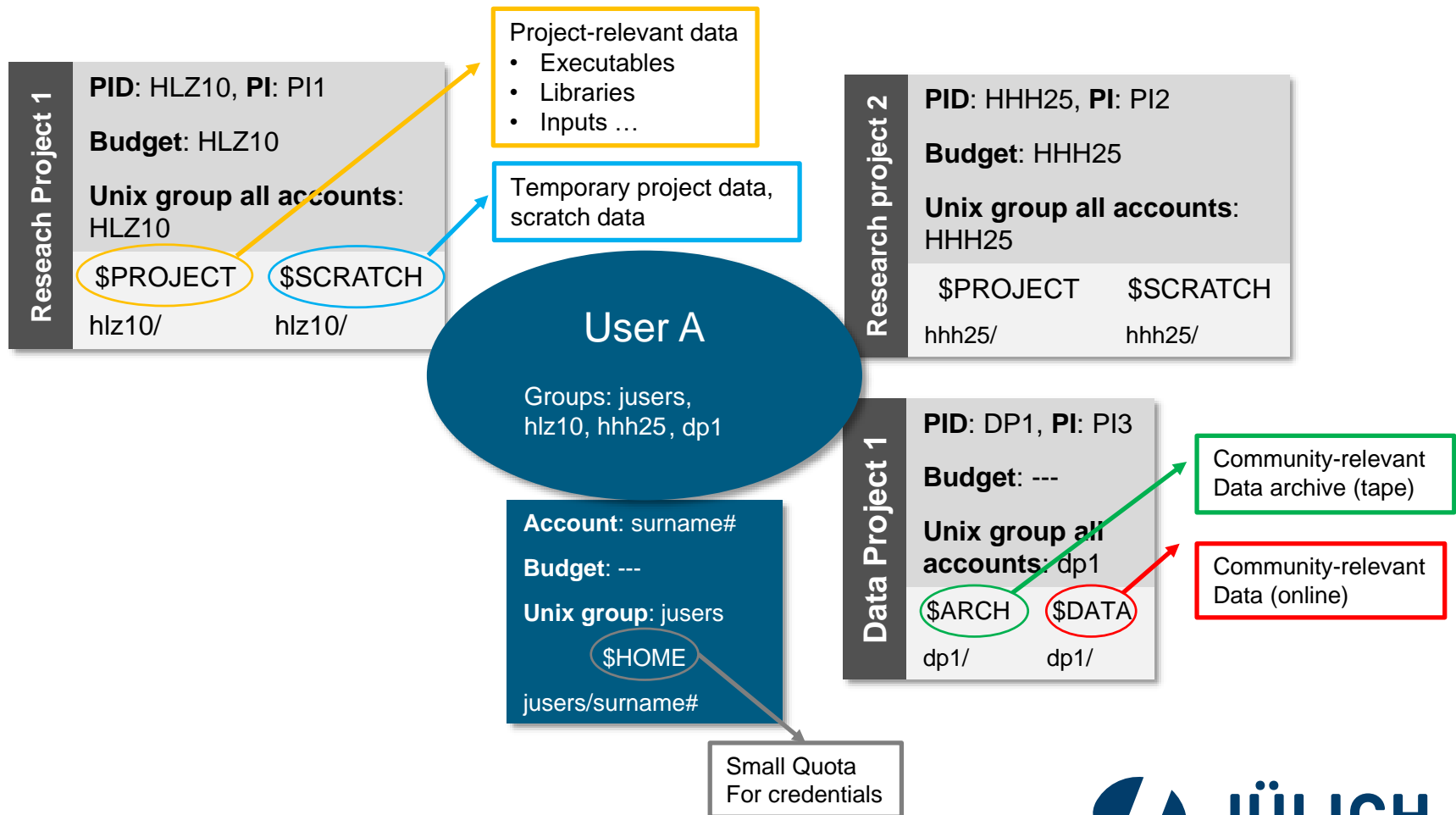
Project 1	PID: HLZ10, PI: PI1		
	Budget: HLZ10		
	Account of user A: HLZ104		
	Unix group all accounts: HLZ10		
	\$HOME	\$WORK	\$ARCH
	hlz10/hlz104	hlz10/hlz104	hlz10/hlz104

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

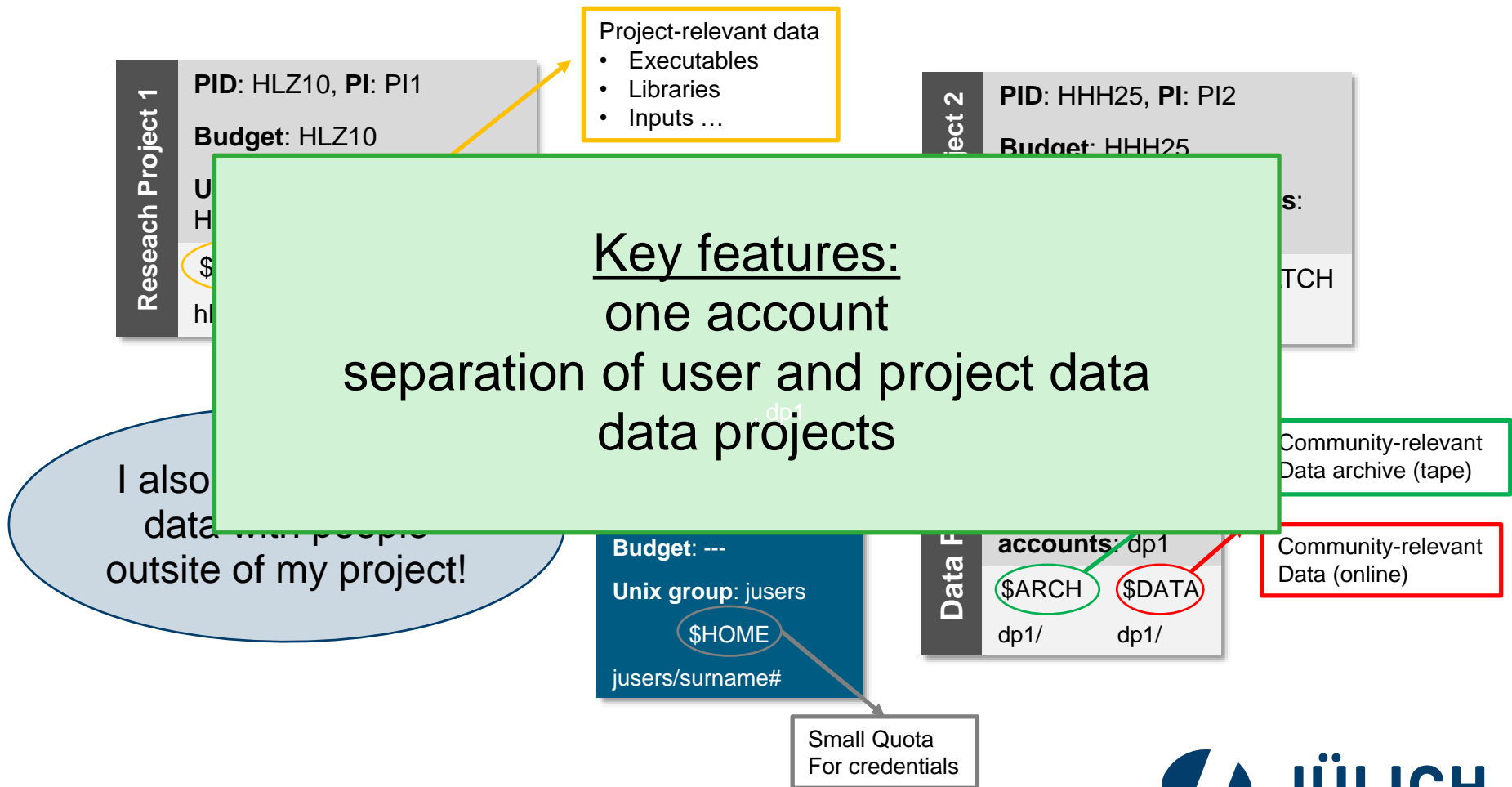
NEW USAGE MODEL

User-centered



NEW USAGE MODEL

User-centered



MAIN FEATURES

One account

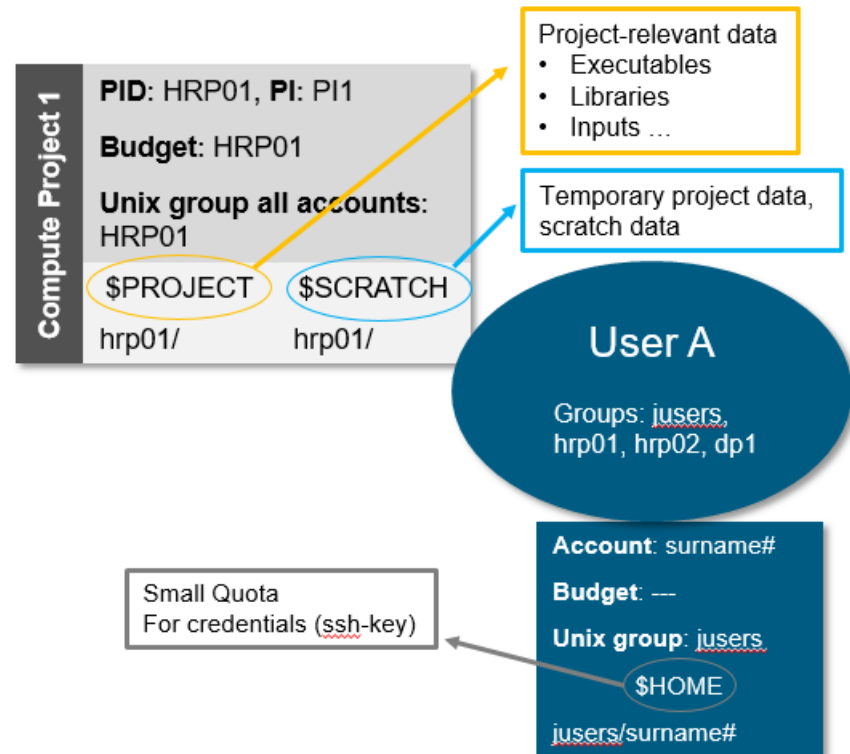
surname# (# is a consecutive number)

- Email address as key
 - In case you got more than one account, just contact us

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**
 - -> setgid can be set by the user



MAIN FEATURES

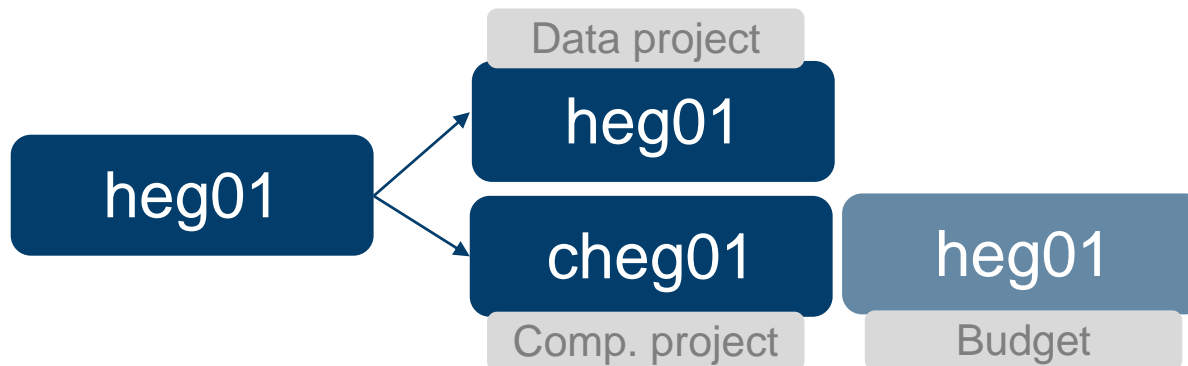
Data projects

- Characteristics and usage
 - Access to **ARCHIVE, DATA, FASTDATA**, (SOFTWARE) possible
 - Independent from research project
 - exchange of data between projects, community data
 - for running projects/analysis, not just data repository
 - Runtime 1 year, in future long-term possible
 - Projects from transition: runtime as former compute project
- 1. Call 14. Jan 2019 - 11. Feb 2019, rolling call starting in May
 - Technical Review
 - Prolongation yearly
- Later on:
 - Scientific review, longer runtimes possible

HOW TO WORK WITH THE NEW MODEL

Terms – project/group/budget

- The **project** is just the official name of the compute or data project as found also in JuDoor. You need to ask for access to a project via JuDoor to get access to the compute time and data.
- The **group** is the UNIX-group assigned to the project, the **data** in the project is assigned to that group.
- The **budget** provides access to the **compute time** of the project, you have to specify the budget in which you would like to run your job in slurm or via jutils.



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

JUTIL

Reference

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	-

JUTIL

Example

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

```
name=cjsc
```

```
filesystem=project
```

```
storage=just
```

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

```
...
```

```
name=cjsc
```

```
filesystem=scratch
```

```
storage=just
```

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

```
...
```

JUTIL

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, possibilities:
 - Via batch script: `#SBATCH - - account=<name of budget>`
 - Via submission command: `sbatch/salloc -A <name of budget>`
 - Via jutil: `jutil env activate -p <project> -A <budget-id>`
 - **Be careful in choosing the right project!**
- Environment variables changed in the new model
 - E.g. data is no longer in `$HOME`, but in `$PROJECT`
 - `$WORK` → `$SCRATCH`
 - `$ARCH` → `$ARCHIVE`

HOW TO WORK...

Data sharing

There are different use cases and solutions for sharing data between users:

- **Solution 1 - Project data**

- Users are members of the same project and can access each other's data. Please regard that a user can also get member of a project without access to project's compute resources. Such a user can just access the data of the project.

- **Solution 2 - Data projects for sharing data between compute projects**

- Data can be shared via a common data project. Members of different compute projects can join the same data project.

- **Solution 3 - Single files**

- Data can be made available also via the SCRATCH filesystem: All users can access `$SCRATCH/./share` for this purpose.

NEW PORTAL - JUDOOR


- Managing of accounts / projects
- Role-based
 - User, PI/PA
- Overview of resources
- Paperless account creation

- Manage ssh-keys
- View/Accept user agreement
- Change contact data
- Get software access
- Get and access web services

- Future: resource usage,...

JuDoor Your account

Max Mustermann

Account	mustermann1
E-mail address	max.mustermann@example.com 
Telephone	1234-5678
Fax	1234-5678
Address	

Systems




judac [Manage SSH-keys](#)

Usage agreement confirmed on 14.11.2018

jureca [Manage SSH-keys](#)

Usage agreement confirmed on 14.11.2018

JURECA:  JURECA_GPUS:  JURECA_VIS: 

juwels You need to [sign the usage agreement](#) to access this system

JUWELS:  JUWELS_GPUS: 

Projects

 Compute project title one 

 Compute project title two 

JUDOOR – MAIN TASKS

- Get access to a project
 - PI is informed about project id
 - User → “Join a project”
 - PI approve user and assigns resources
- PI view
 - Add/modify users in a project
 - Add resources
 - Appoint user to project administrator (PA)

The screenshot shows the JuDoor user account interface. At the top, it displays 'JuDoor Your account' and the user 'mustermann1' with a 'Logout' option. The user's name 'Max Mustermann' is prominently displayed next to the JÜLICH Forschungszentrum logo. Below this, account details are listed: Account (mustermann1), E-mail address (max.mustermann@example.com), Telephone (1234-5678), Fax (1234-5678), and Address. The 'Systems' section lists three systems: 'judac' (Manage SSH-keys, usage agreement confirmed on 14.11.2018, with tags CPROJ1, CPROJ2, DATAPROJ), 'jureca' (Manage SSH-keys, usage agreement confirmed on 14.11.2018, with tags JURECA, JURECA_GPUS, JURECA_VIS), and 'juwels' (with a note to sign the usage agreement to access the system, and tags JUWELS, JUWELS_GPUS). The 'Projects' section lists three projects: 'Compute project title one' (CPROJ1), 'Compute project title two' (CPROJ2), and 'Dataproject title' (DATAPROJ), with a 'Join a project' link. The 'Software Licenses' section has a 'Request access to licensed software' link. The 'Connected Services' section lists 'jads', 'liview', and 'trac', with a 'Make changes' link.

USER DOCUMENTATION AND SUPPORT

- Usage Model
 - <http://www.fz-juelich.de/ias/jsc/usage-model>
- JuDoor
 - <http://www.fz-juelich.de/ias/jsc/judoor>
- SC – Support
 - 02461/61-2828
 - sc@fz-juelich.de

THANK YOU FOR YOUR ATTENTION