

# User sharing of computational workflows in the **REANA** reproducible analysis platform

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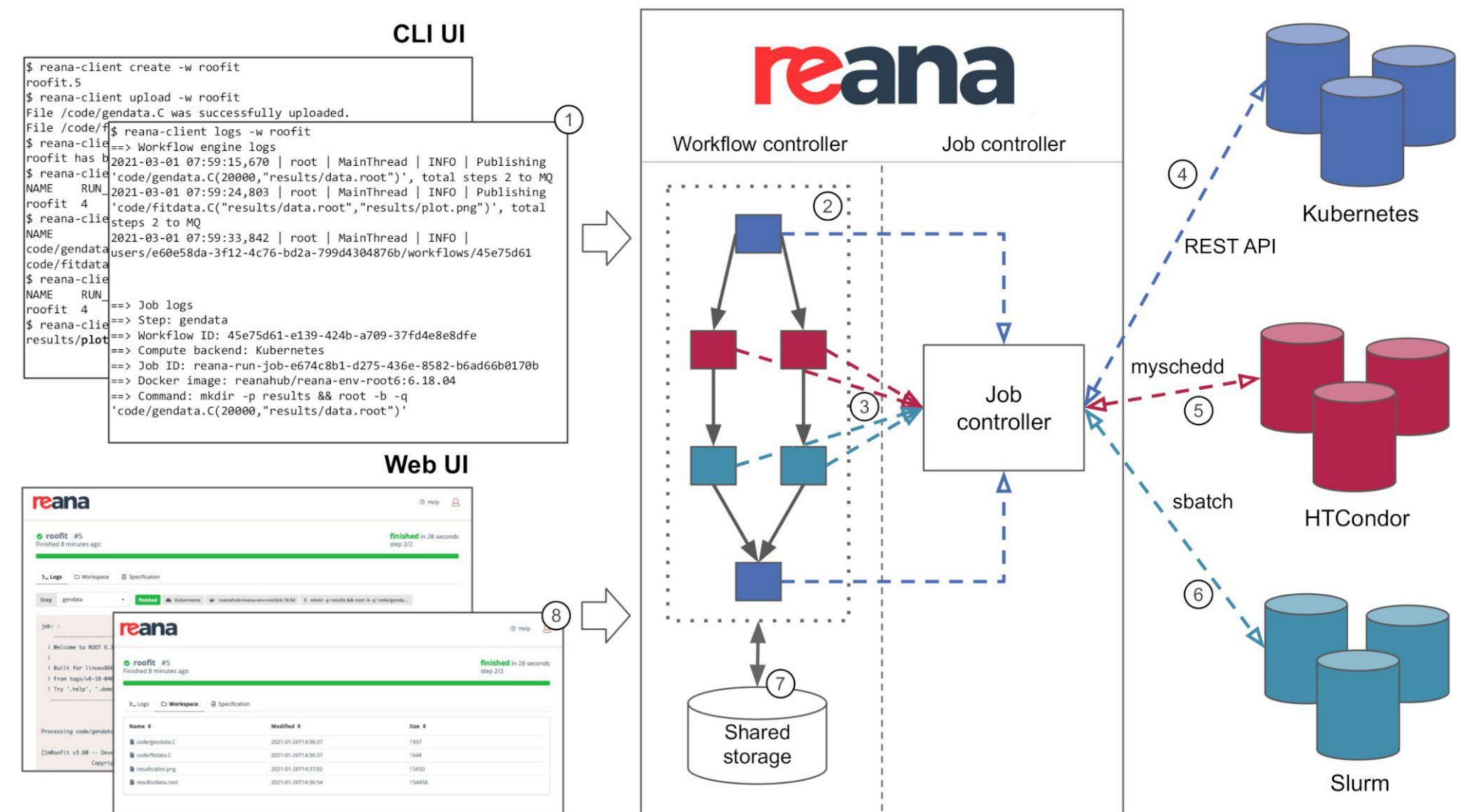
## What is REANA?

REANA is a reproducible analysis platform allowing scientists to run declarative computational data analysis pipelines on containerised compute clouds. REANA was built with the goal of fostering computational reproducibility.

Four ingredients are needed to run a workflow:

- input data and parameters;
- analysis code;
- computing environment (Docker, Singularity);
- computational workflow steps to arrive at results (CWL, Yadage, Snakemake).

These declarative workflows are then executed on remote containerised cloud (Kubernetes) or other supported compute backends (HTCondor, Slurm).

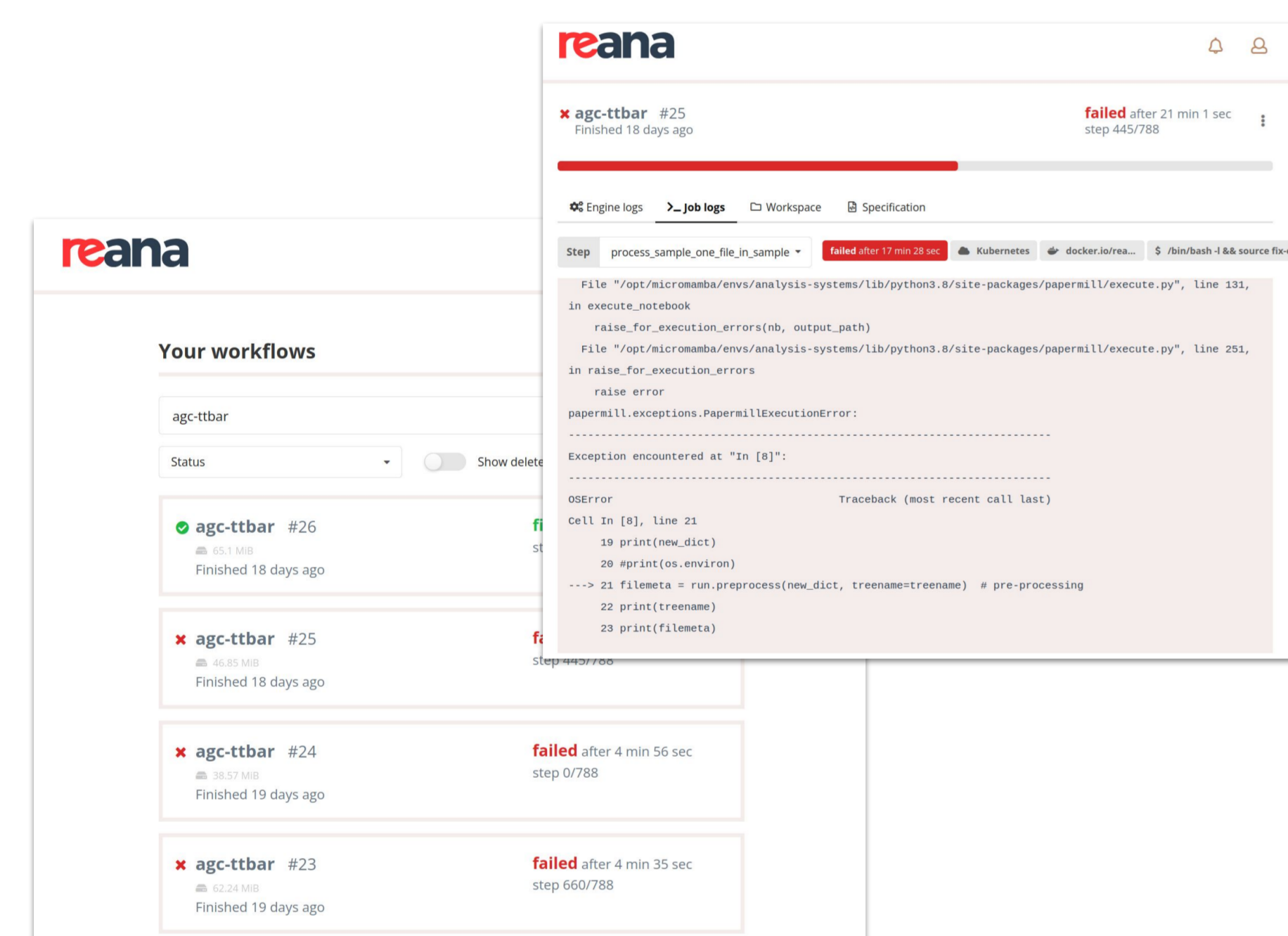


The architecture of REANA. Researchers can interact with the platform via the web interface and the command-line client, to run workflows on supported compute backends.

## Sharing workflow runs

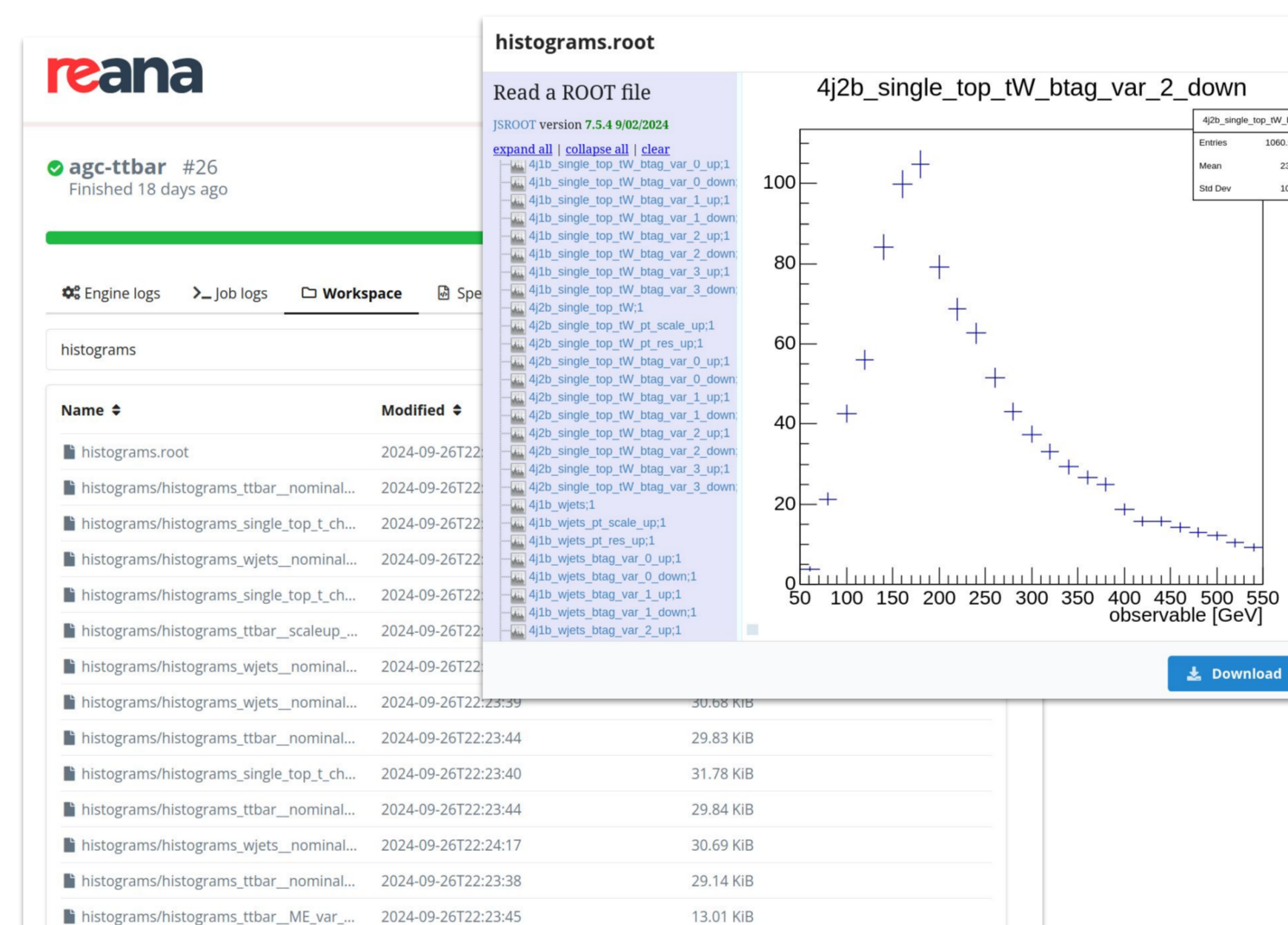
### Share execution logs

Ease inspection of unexpected failures and issues of the workflow execution



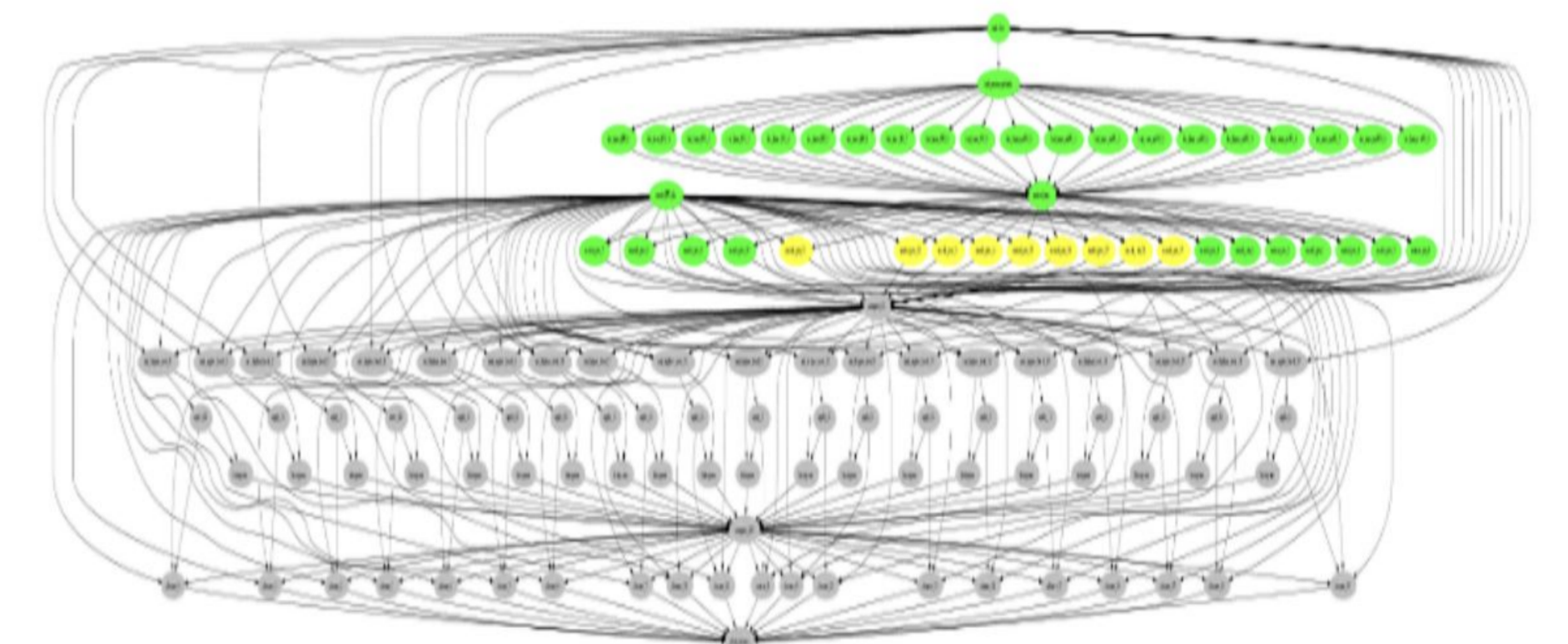
### Share workflow results

Share workflow inputs and outputs and visualise results and plots, including images, PDF and ROOT files



### Promote traceability and reproducibility

Provide a clear trace of the origin of final analysis outputs by sharing not only the results, but the whole workflow execution



## How to share a workflow

### Command-line interface

Use `reana-client` command to manage the sharing of your workflow runs

Alice shares her analysis with Bob

```
$ reana-client share-add -w myanalysis.42 \
  --user bob@example.org \
  --message "Hi Bob, please check my plots" \
  --valid-until 2024-11-30
```

Bob checks which analyses were shared by Alice

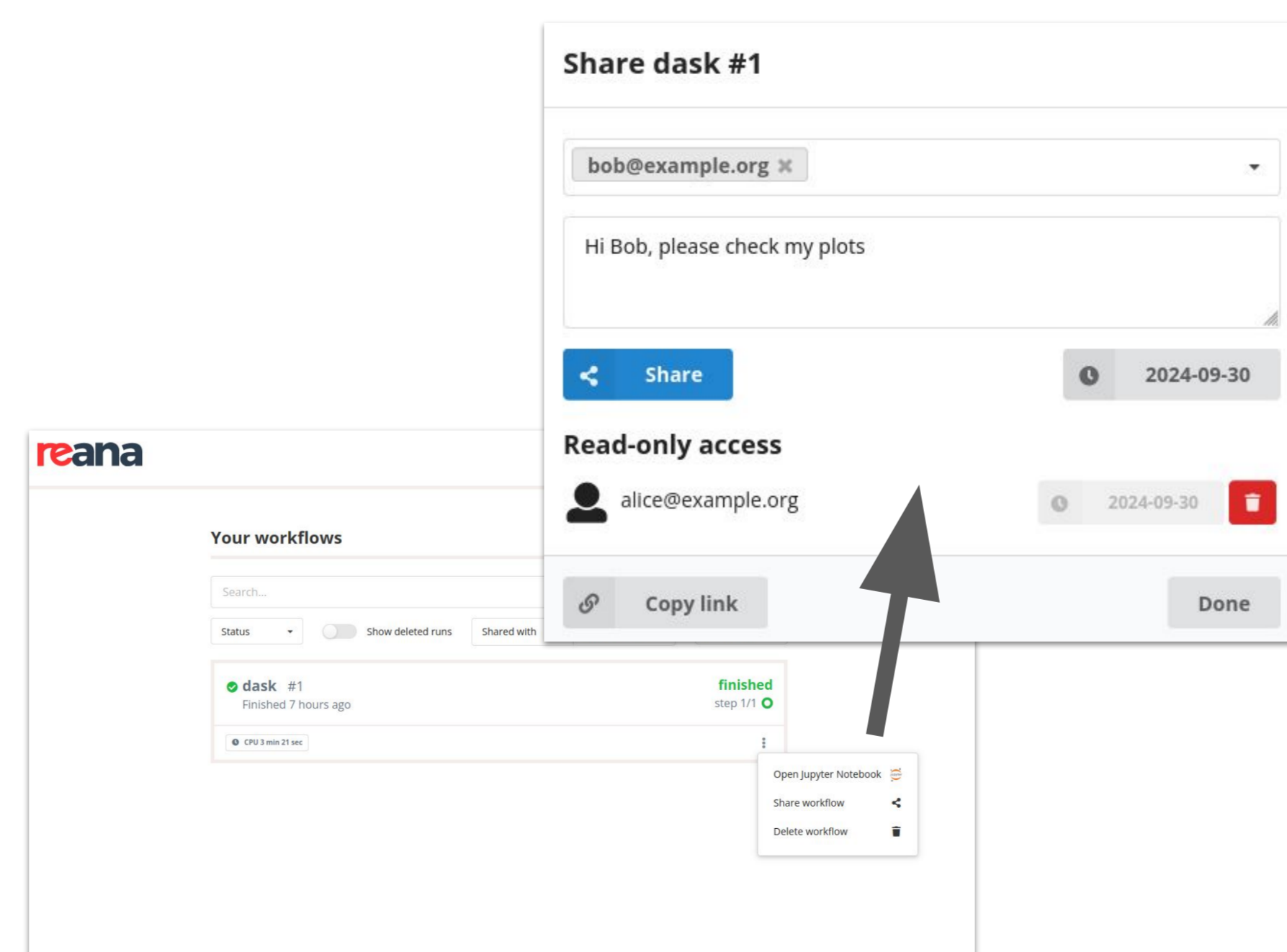
```
$ reana-client list --shared-by alice@example.org
```

Carol checks which analyses she shared with Bob

```
$ reana-client list --shared-with bob@example.org
```

### Web interface

Use web browser to share workflow runs in familiar ways



## Features

### Current status

- owner retains R/W access
- colleagues get R/O access
- integration with external Identity and Access Management systems (OAuth2/OIDC, Keycloak)
- share for desired time duration

### Coming next

- support for sharing with groups
- referencing specific files
- referencing specific output log lines