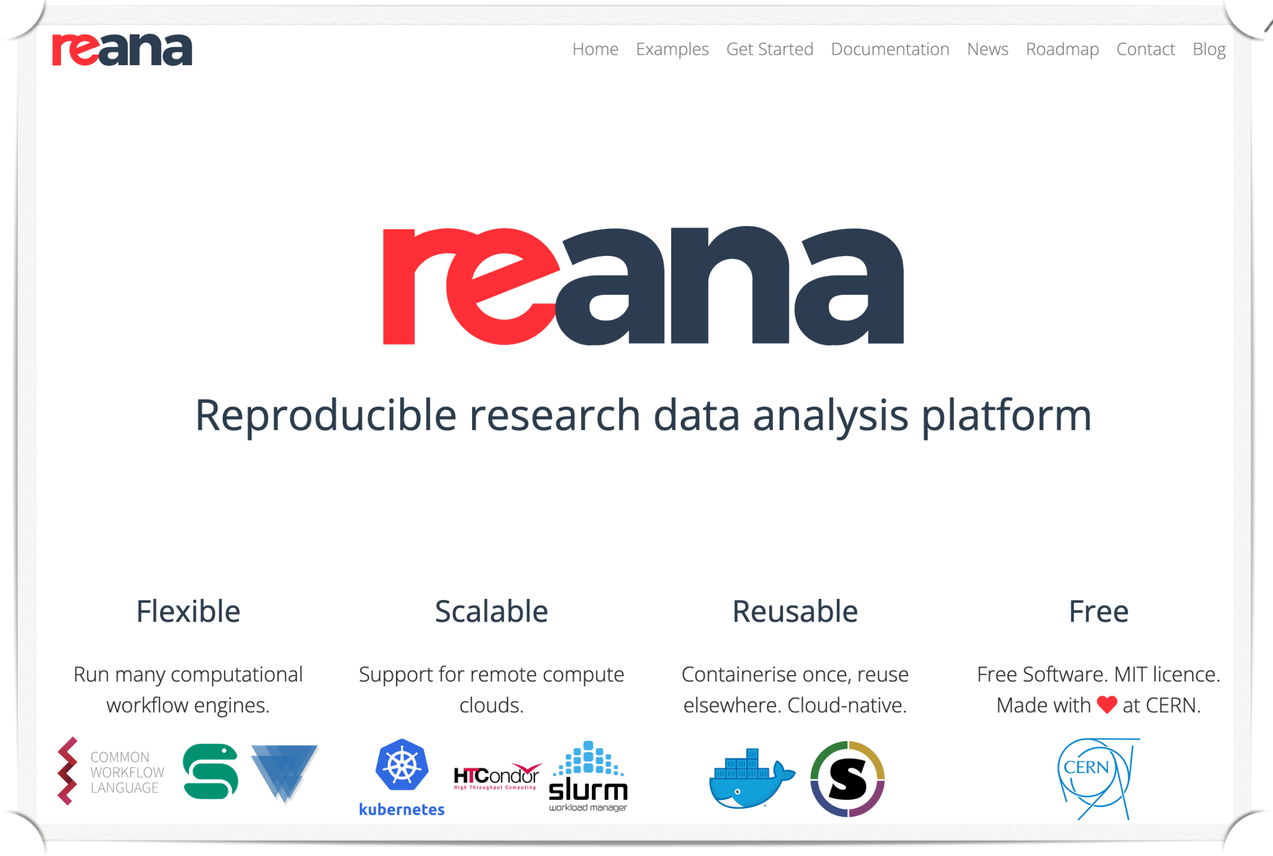
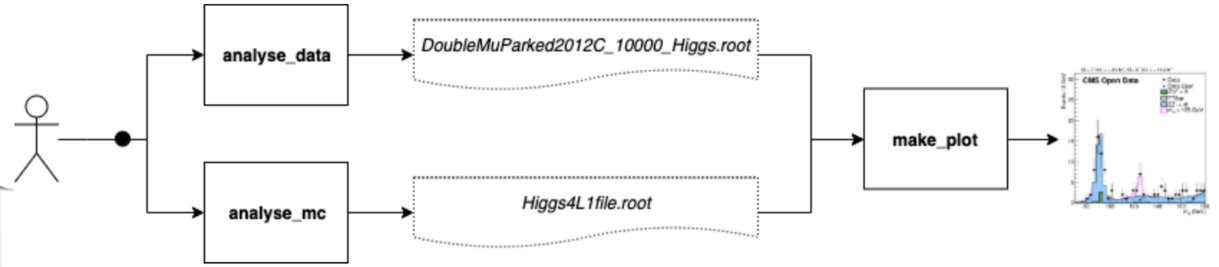
REANA & Compute4PUNCH

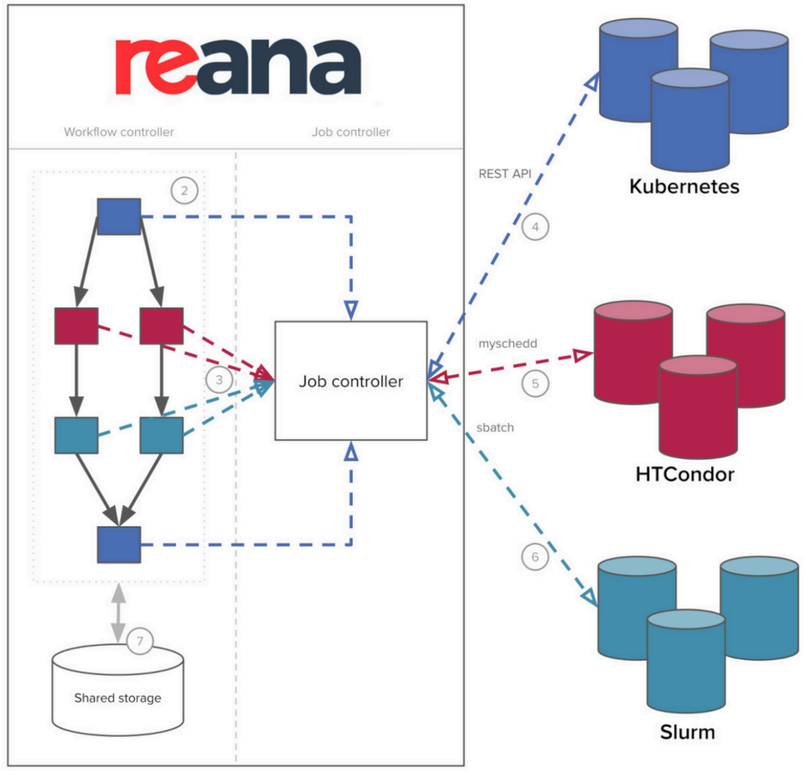
Status & Update

Manuel Giffels, 26.02.2024

What is REANA?







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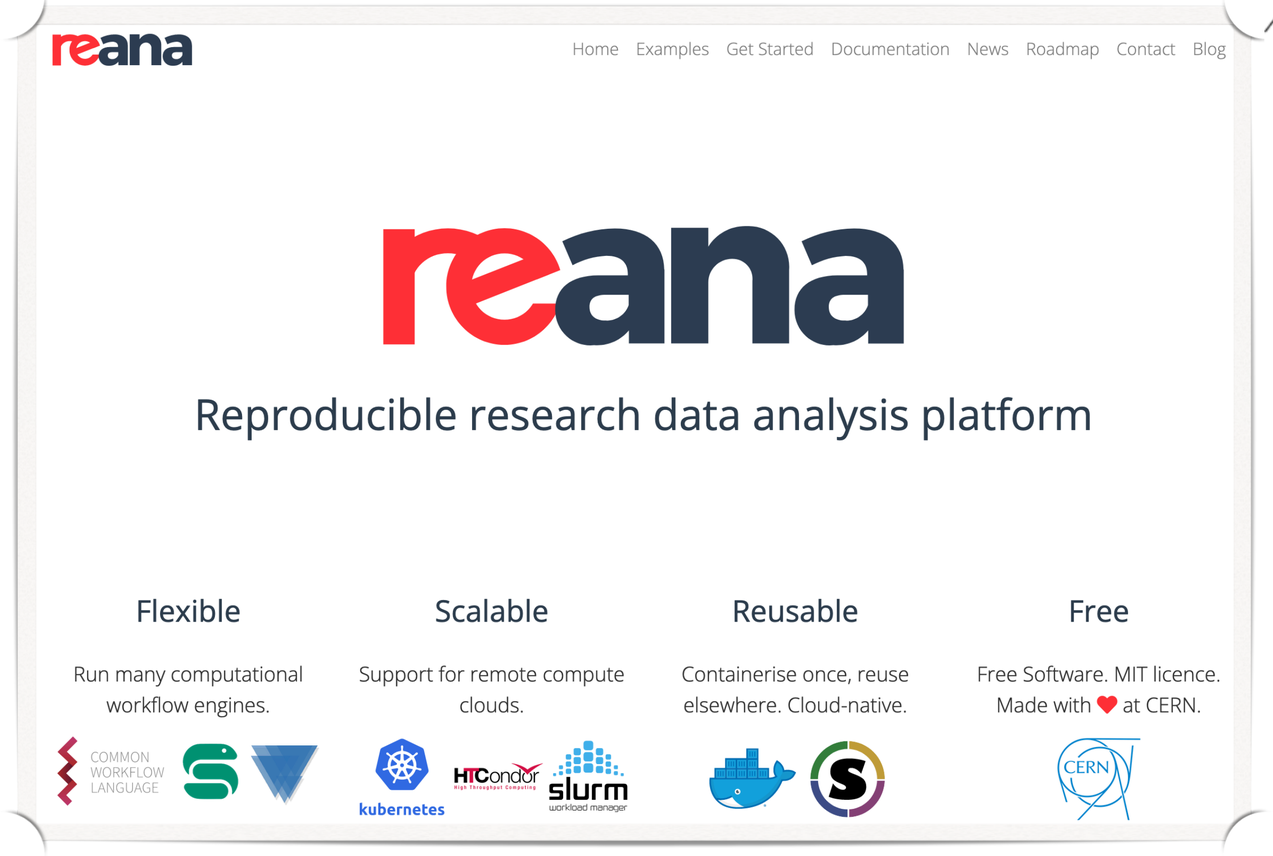
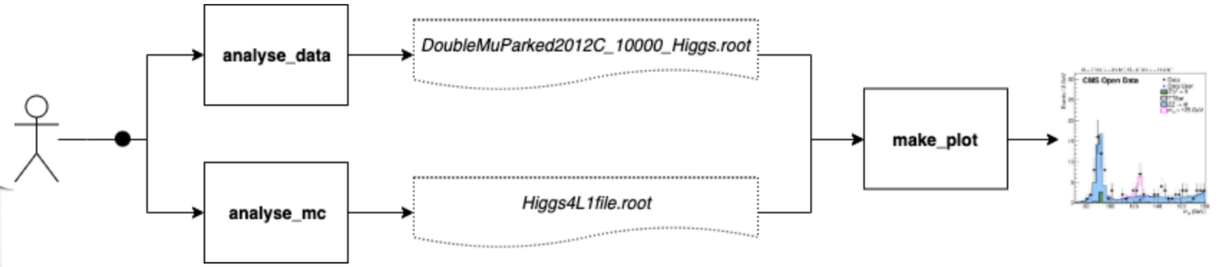
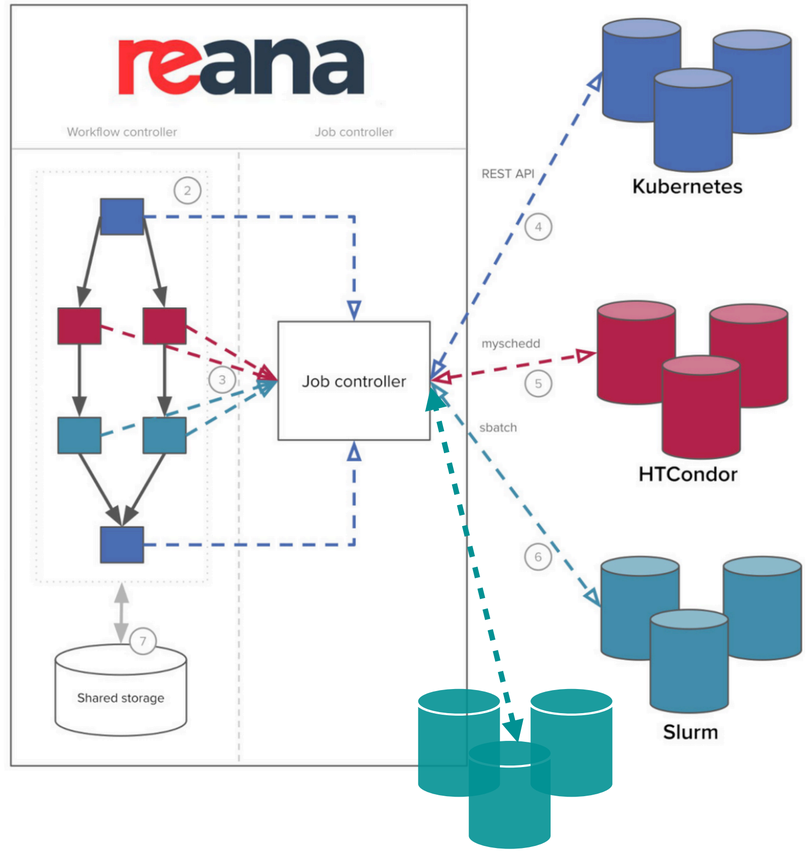
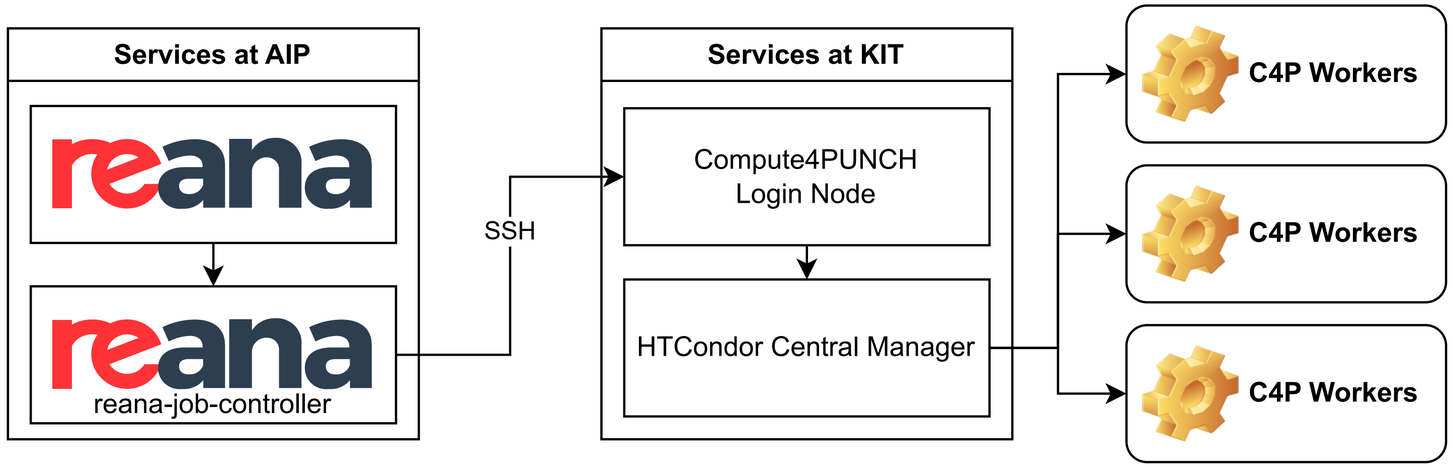






How to get your jobs on Compute4PUNCH?

- Actual job submission in REANA is handled by a `reana-job-controller` per workflow (K8S Pod)
- There is now a prototype implementation of the Compute4PUNCH job controller available (reana-job-controller/pull/430)
- Prototype utilizes a tokenized (mytoken) ssh connection to the c4p-login node at GridKa to submit, watch and handle jobs on Compute4PUNCH
- Needs a replacement in the future by using e.g. HTCondor's remote submission



How to access Compute & Storage4PUNCH

- An access token is necessary to access Compute & Storage4PUNCH
- Luckily REANA already comprises the management of arbitrary secrets
- Benoit already implement a convenient tool to create and upload mytokens to REANA
- Token can be accessed in the REANA job controller, used for ssh access to c4p-login

Fine for the initial token, but how to deal with renewals?

- C4P's HTCondor will take care of the token renewals

Secret management commands ¶

secrets-add

Add secrets from literal string or from file.

Examples:

```
$ reana-client secrets-add --env RUCIO_USERNAME=ruciouser

$ reana-client secrets-add --file userkey.pem

$ reana-client secrets-add --env VOMSPROXY_FILE=x509up_u1000
                           --file /tmp/x509up_u1000
```

secrets-delete

Delete user secrets by name.

Examples:

```
$ reana-client secrets-delete RUCIO_USERNAME
```

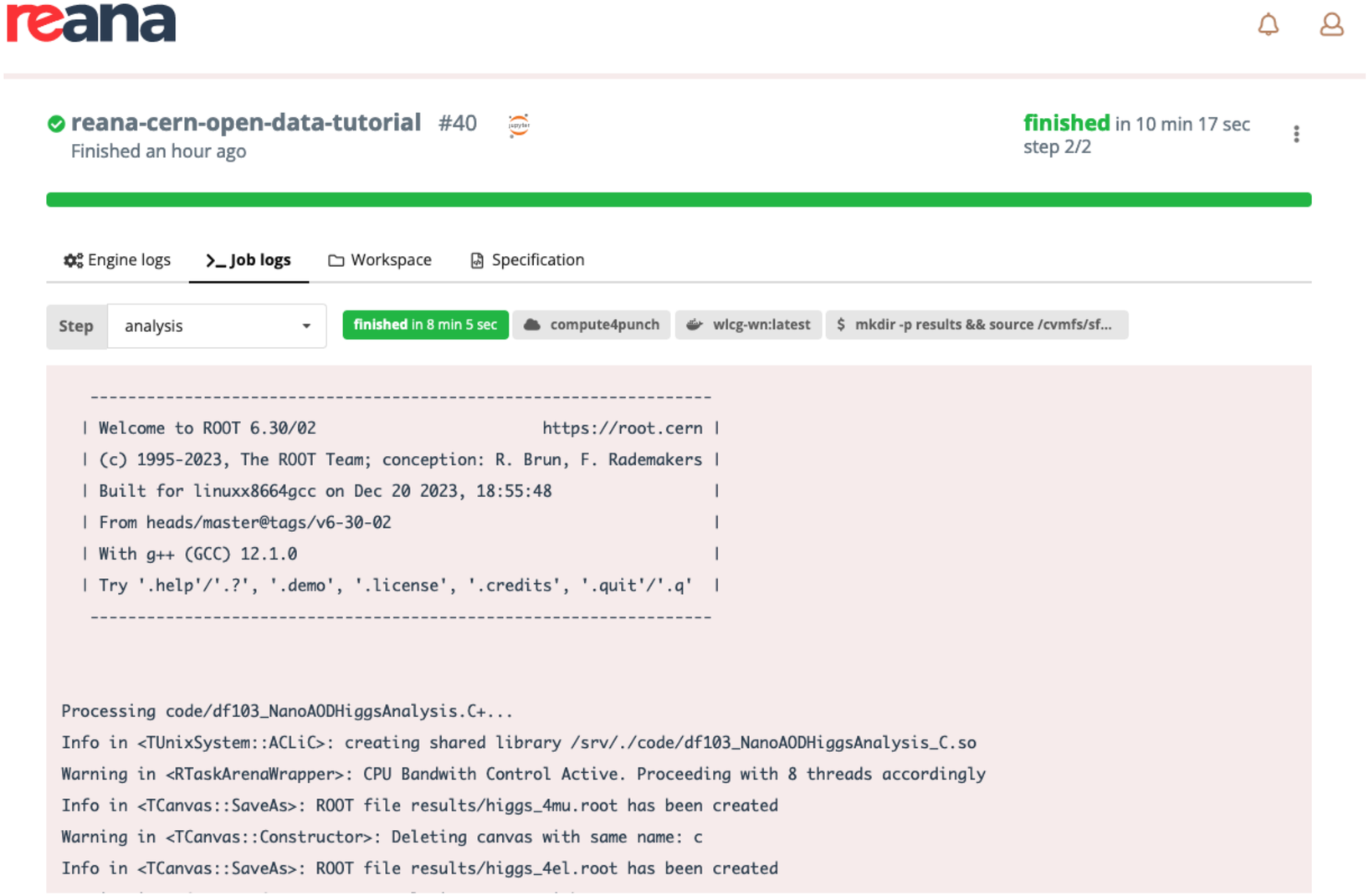
secrets-list

List user secrets.

Examples:

```
$ reana-client secrets-list
```

First REANA workflow on Compute4PUNCH



- Deployed on a private REANA instance
- Modified helm chart deployment required
- Multiple parts of REANA deployment need to be replaced
- Successfully run the CERN open data tutorial via REANA
- Storage4PUNCH not yet involved

Discovered Drawbacks so far

- All files end up in REANA workspace by default, also temporary ones. Your REANA instance will be fill-up quickly for data intensive workflows.
  →Large files need to be deleted after migration to Storage4PUNCH?

- You cannot specify compute requirements in a workflow yet, like how many cores, memory or disk space you need.

- You cannot force your workflow to run on a dedicated compute site yet.

- You cannot delete failed workflows, you can only hide them. It is part of the concept of REANA, but it is annoying for testing.

- In the current setup the entire REANA workspace needs to be duplicated on the c4p-login node, would be nice to sync only the actually needed input files.