

# Credentials in Compute4PUNCH

TA2 workshop - DESY

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# Credentials in HTCondor

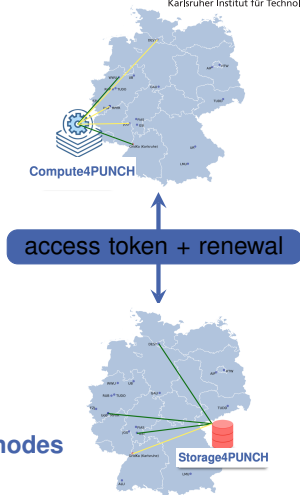
- Helmholtz AAI access tokens are mandatory to access Storage4PUNCH from Compute4PUNCH worker nodes

→ **Have to be inserted in the HTCondor job**

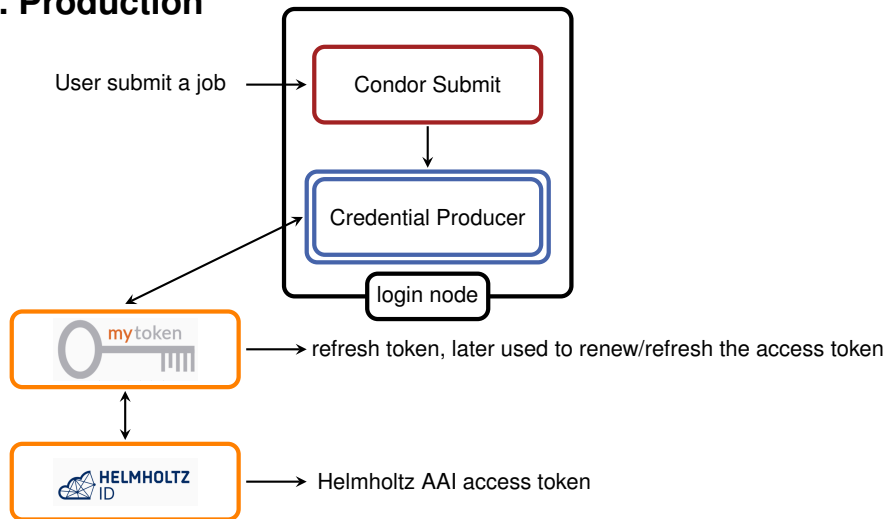
- Access tokens have a limited life time of about one hour

→ **Have to be renewed for jobs exceeding their life time**

→ **Need a mechanism to renew on-the-fly access tokens on the worker nodes**



# I. Production



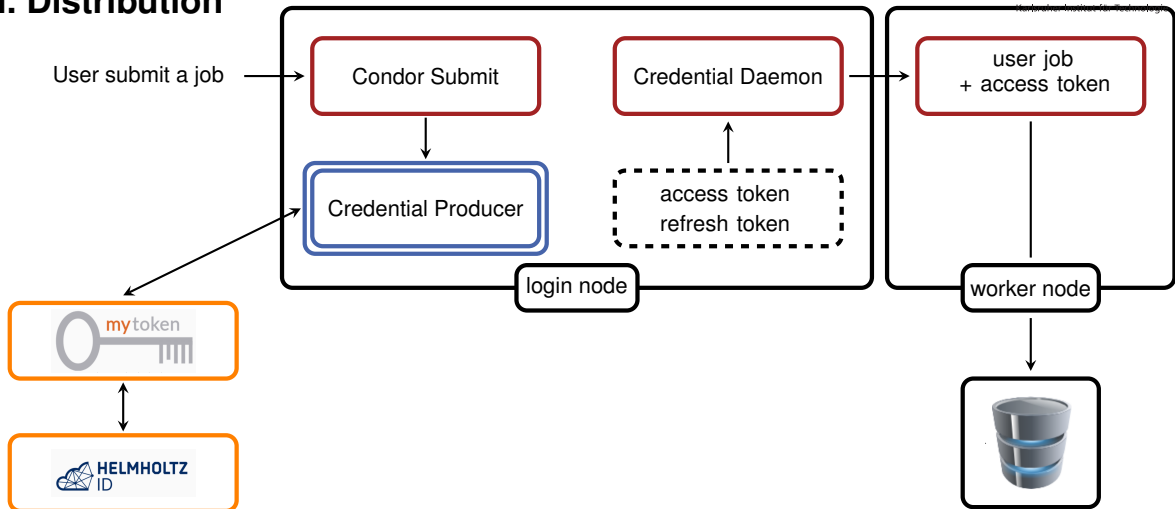
Credentials in HTCondor  
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Job point of view  
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Credentials in REANA  
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Summary  
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## II. Distribution



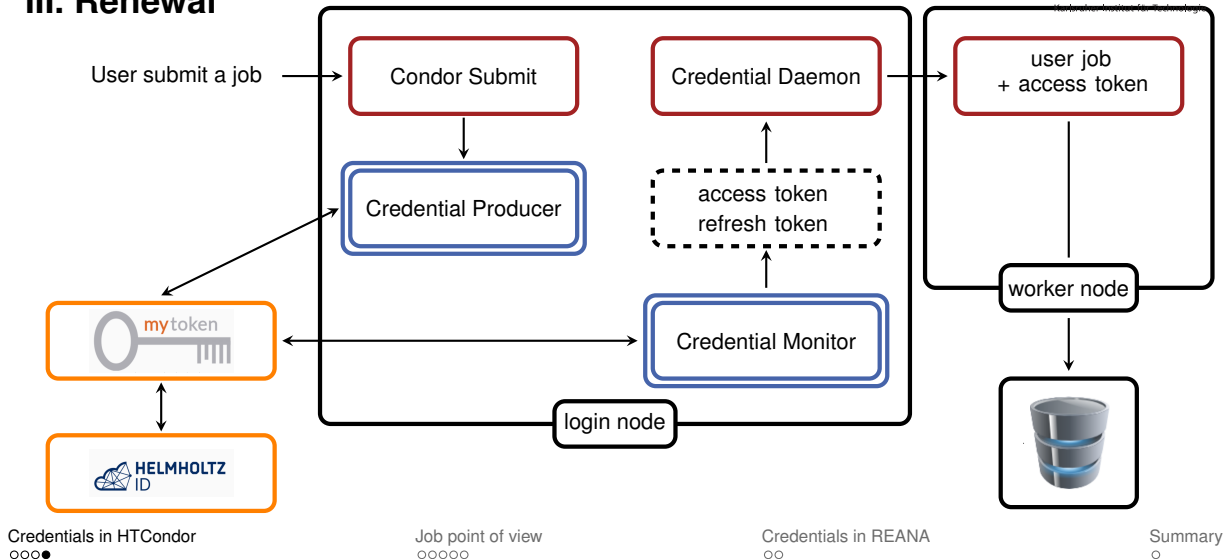
Credentials in HTCondor  
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Job point of view  
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Credentials in REANA  
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Summary  
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### III. Renewal



# Job configuration

```
executable = analysis.sh
```

```
use_oauth_services = helmholtz → Just need to specify the Helmholtz AAI provider!
```

```
should_transfer_files = YES
```

```
output_destination =
```

```
helmholtz+https://dcache-desy-webdav.desy.de:2880//pnfs/desy.de/punch/analysis
```

```
output = logs/$(machine).$(cluster).$(process).out
```

```
error = logs/$(machine).$(cluster).$(process).err
```

```
log = logs/$(machine).cluster.log
```

```
request_cpus = 1
```

```
request_memory = 256
```

```
+SINGULARITY_JOB_CONTAINER = "container-analysis:latest"
```

```
queue 1
```

# First job submission

Submitting job(s)

Hello benoit\_roland! You are going to submit your HTCondor jobs.

**No credential has been found!**

Please visit the following url in order to generate your credential:

<https://mytoken.data.kit.edu/c/HkLyNuco>

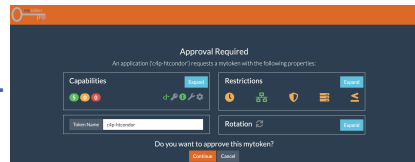
Starting polling and waiting for your approval .....

Your credential has been successfully created!

**Its remaining life time is 6 days 23 hours 59 minutes 58 seconds.**

Your HTCondor jobs will now be submitted!

1 job(s) submitted to cluster 142.



→ **Just need to visit the specified url to approve the generation of the refresh token**

Credentials in HTCondor  
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Job point of view  
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Credentials in REANA  
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Summary  
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# Next job submission

Submitting job(s)

Hello benoit\_roland! You are going to submit your HTCondor jobs.

**A valid credential has been found with a remaining life time of 6 days 23 hours 8 minutes 48 seconds.**

Your HTCondor jobs will now be submitted!

1 job(s) submitted to cluster 143.

→ **Job directly submitted as long as refresh token is valid**

Credentials in HTCondor  
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Job point of view  
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Credentials in REANA  
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Summary  
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# Job submission cases treated by the producer

- The credential does not exist
- The credential exists and is still valid
- The credential exists and is still valid but will expire in less than 1 day
- The credential has been revoked
- The credential has expired

# Software status

- Updated Pull Request for merging in the HTCondor release
- Private rpms available for RHEL8 and RHEL9
- Production version (RHEL8) deployed on the Compute4PUNCH login node (Helmholtz AAI)
- Production version (RHEL9) tested by the Darwin collaboration (Darwin IAM)

Credentials in HTCondor  
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Job point of view  
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Credentials in REANA  
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Summary  
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# Credentials in REANA I

- REANA job submission managed by a REANA Job Manager
- REANA Job Managers are specific to the infrastructure
- Existing Job Managers
  - ▶ HTCondor and Kerberos (CERN)
  - ▶ SLURM (CERN)
  - ▶ Kubernetes
- **Compute4PUNCH specific Job Manager** needed to deal with HTCondor and the Helmholtz AAI
- Job Manager developed by Manuel and available at **Reana-Job-Controller**

# Credentials in REANA II

- Specific producer needed to generate the refresh tokens and upload them to the REANA server
- Development available at [C4P-REANA-Producer](#)
- Specific plugin needed to allow the REANA Job Manager to upload the refresh tokens to the login node
- Development ongoing

## Long term plan

- Implement the producer in the REANA client
- Use the refresh tokens as authorization to HTCondor

# Summary

- Overview of the credentials in Compute4PUNCH
- HTCondor production version (RHEL8) deployed on the Compute4PUNCH login node
- HTCondor production version (RHEL9) tested by the Darwin collaboration
- Development ongoing to integrate REANA into Compute4PUNCH

**Thanks a lot for your attention!**