

## Beiträge der Plattformpartner:



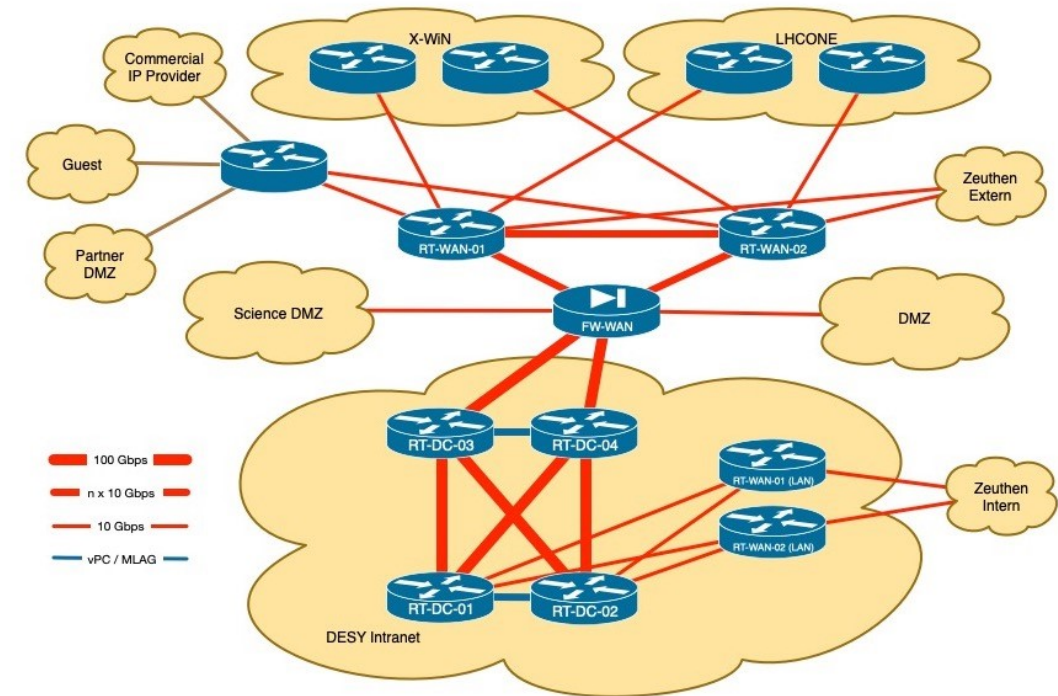
DESY  
Core Services  
Kars Ohrenberg

Storage and Compute Cloud  
Patrick Fuhrmann

# Backbone Services

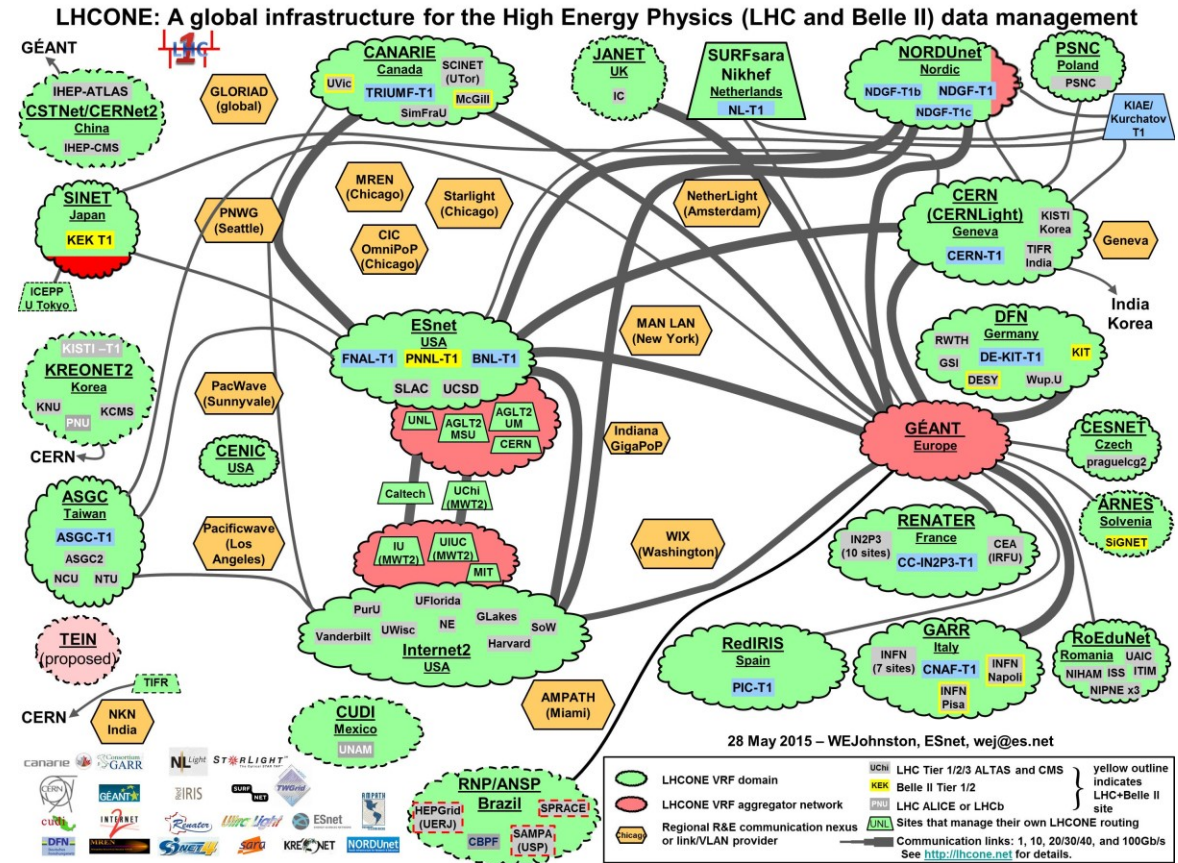
# Netzwerkstrukturen Anforderungen und Lösungen am DESY

- Gäste, Start-Ups, etc.
  - Extern mit kommerziellem IP-Provider
- „Untrusted“
  - DMZ, Science-DMZ mit hoher Bandbreite, Partner DMZ, ...
- „Trusted“
  - Optisches Point-to-Point VPN zwischen Zeuthen und Hamburg
- Overlays
  - IP Fabrics in der OpenStack-Instanz
  - LHCONE

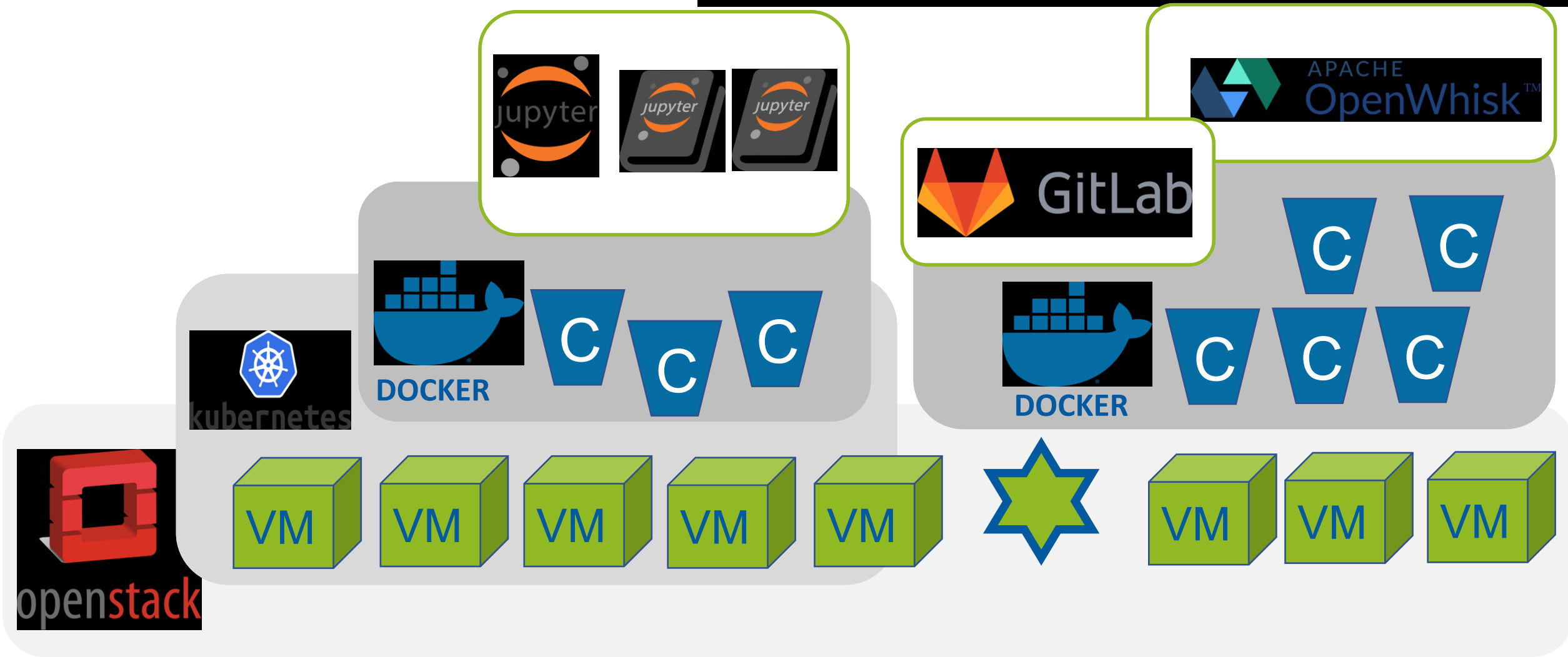


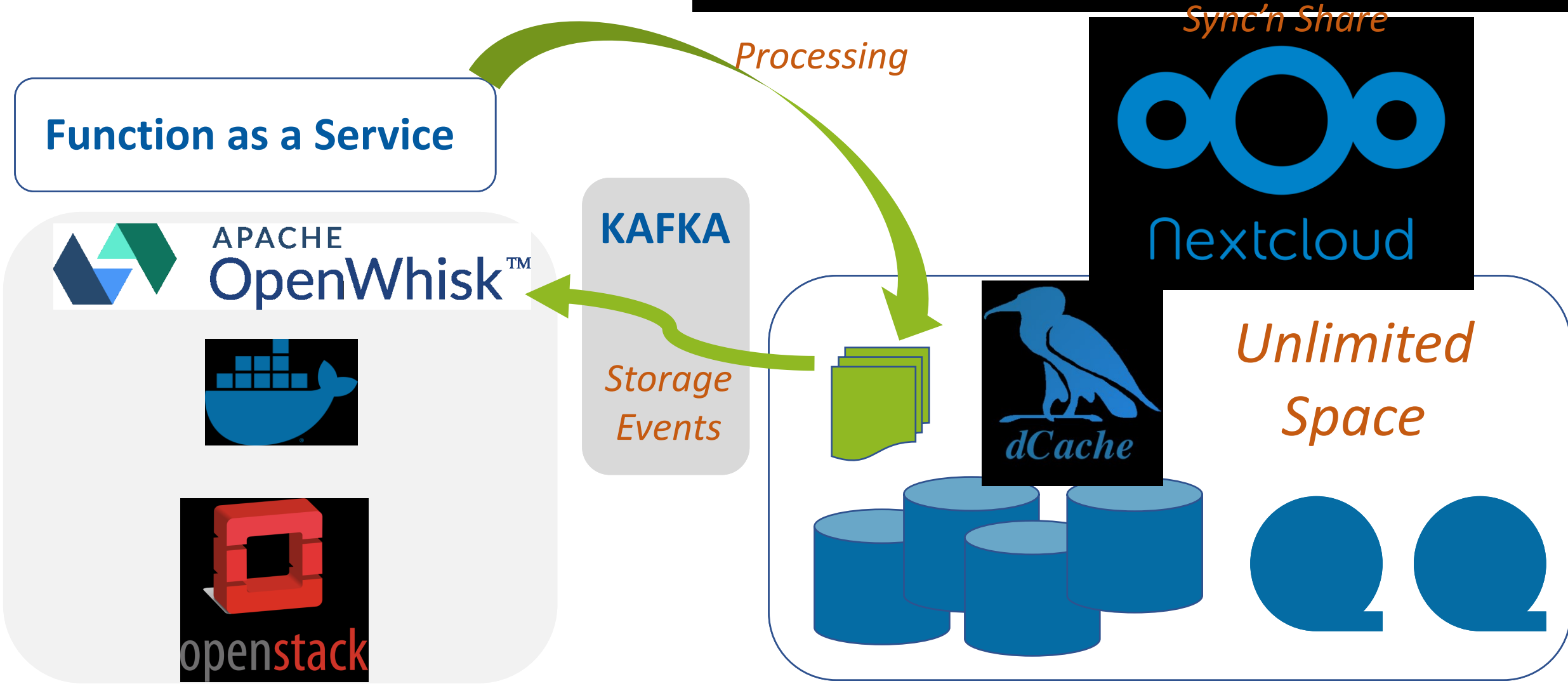
# LHCONE: Blueprint eines HGF Backbones?

- Weltweites Overlay Netzwerk zur Analyse der LHC-Daten auf den Infrastrukturen der NREN
- Routing Protokoll erlaubt hohe Skalierbarkeit und Redundanzen
- Hoher Trust Level durch abgestimmte Routing Policies
- Skalierbare Anbindung über P2P- oder Tagging auf bestehenden Zugängen



# Cloud Services

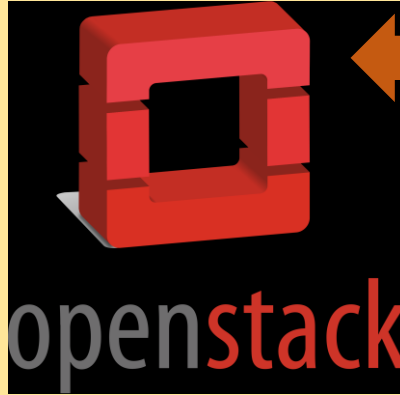




Outside

SSH (22)  
http (80)  
https (443)

DMZ



Inside DESY



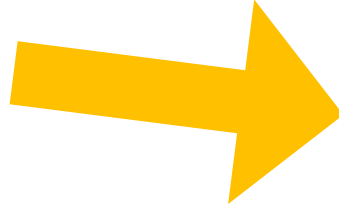
Sync & Share Client



HGF DMZ



Sign in with OpenID Connect



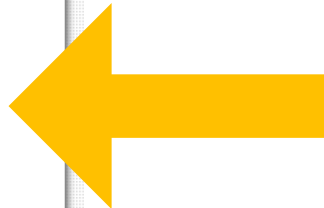
Check-in

Choose your academic/social account

Search...

- Deutsches Elektronen-Synchrotron DESY
- A. T. Still University
- AAF Virtual Home
- AAI@EduHr Single Sign-On Service
- Aalborg University

or



## Identity Provider

Log in to EGI AAI Service Provider Proxy (DEVEL)

patrick

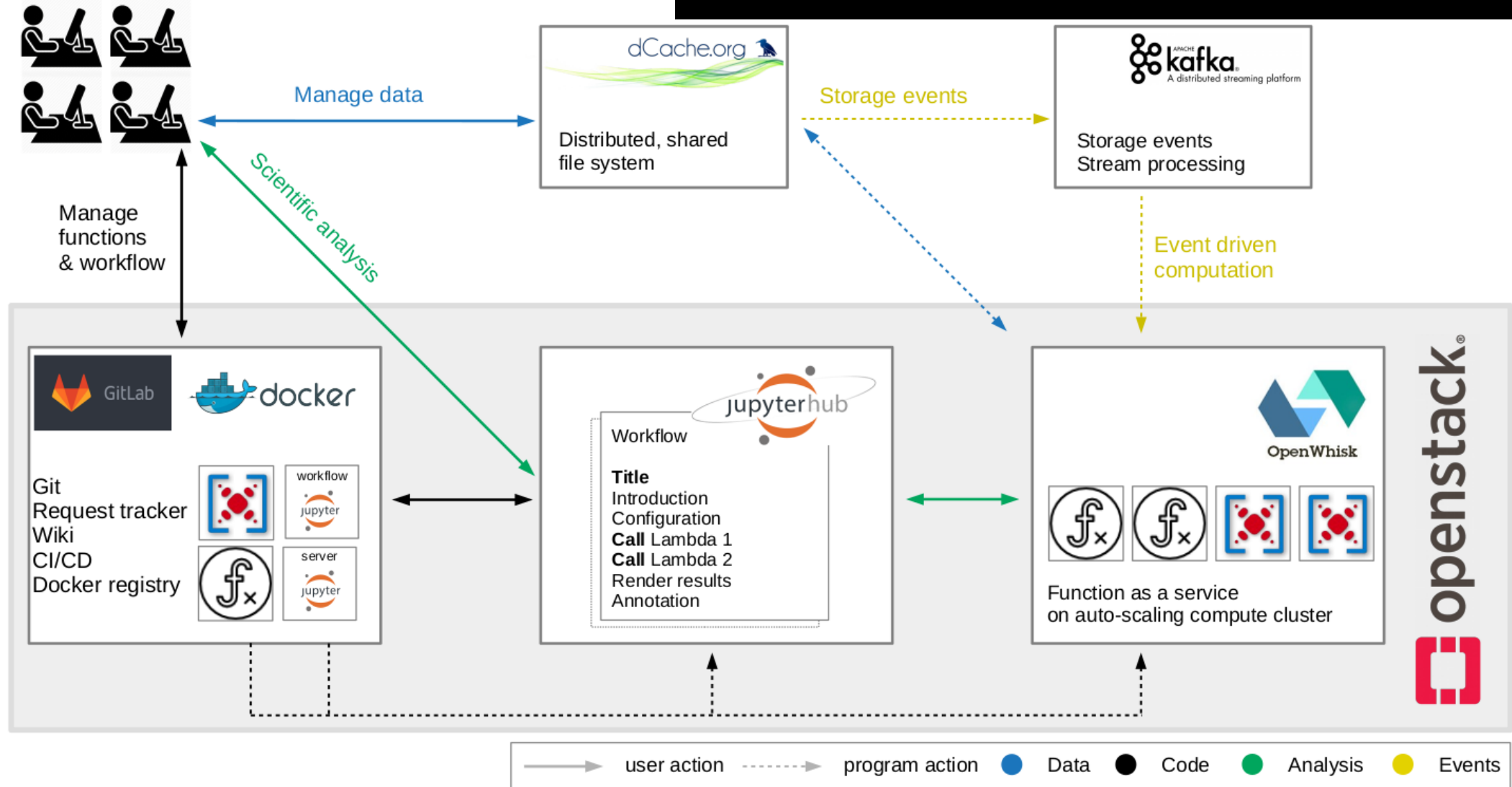
.....

Login

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# Cloud Services, Working Group



DESY contributes to the EOSC Marketplace:



EUROPEAN OPEN  
SCIENCE CLOUD  
MARKETPLACE



CFEL CrystFEL Software (Jupyter Notebook in GitLab)



Jupyter Notebook Infrastructure



CrystFEL images



Authentication via *EGI Checkin* and Site IdP



**EUROPEAN OPEN  
SCIENCE CLOUD**

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NETWORKING



COMPUTE



STORAGE



SHARING & DISCOVERY



## Search results

### PaN notebook

... Cloud and run notebooks which can make use of the EOSC **PaN** FaaS Service and connect to EOSC **PaN** Data Service Provided by Deutsches Elektronen-Synchrotron DESY ...

Roksana Dobrzańska - 11/21/2018 - 14:38

### PaN data

... dCache backend storage for the EOSC **PaN** Science Demonstrator Provided by Deutsches Elektronen-Synchrotron ...  
<https://marketplace.eosc-portal.eu/services/pan-data> Tag Category: Storage ...

Roksana Dobrzańska - 11/21/2018 - 14:40

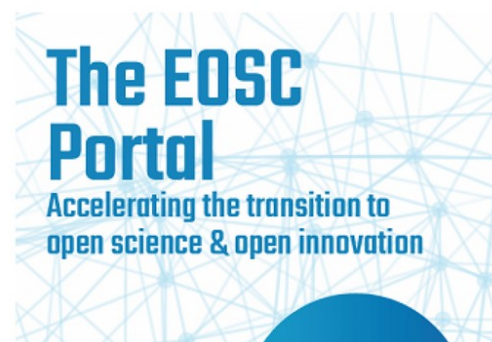
### PaN FaaS

... OpenWhisk, cloud functions for the EOSC **PaN** Science Demonstrator Provided by Deutsches Elektronen-Synchrotron ...  
<https://marketplace.eosc-portal.eu/services/pan-faaS> Tag Category: Storage ...

Roksana Dobrzańska - 11/21/2018 - 14:40

### PaN gitlab

... GitLab for the EOSC **PaN** Science Demonstrator Provided by Deutsches Elektronen-Synchrotron ... <https://marketplace.eosc-portal.eu/services/pan-gitlab> Tag Category: Processing & Analysis ...



The EOSC Portal Booklet is available!

The EOSC Portal Booklet is available on the EOSC website.

This booklet collects endorsements from research communities and various stakeholders...

een Plenary

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You are here: [Home](#) > [Services](#) > [Compute](#) > PaN notebook



## PaN notebook

JupyterHub for the EOSC PAN Science Demonstrator

By: [Deutsches Elektronen-Synchrotron DESY](#)

Research area: [Interdisciplinary](#)

For: [Researchers](#)

☆☆☆☆☆ (0.0 /5) 0 reviews

[Order](#)

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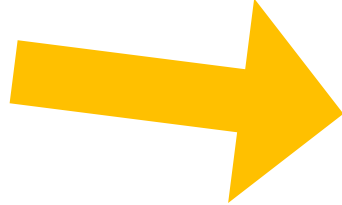
[ABOUT](#)[REVIEWS \(0\)](#)

Spawn Jupyter Servers in the DESY Compute Cloud and run notebooks which can make use of the EOSC PaN FaaS Service and connect to EOSC PaN Data Service.

PLACES AND LANGUAGES

Europe

Sign in with OpenID Connect

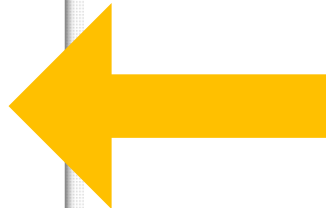


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Select items to perform actions on them.

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<input type="checkbox"/> 0 ▾	/	Name ▾	Last Modified	File size
<input type="checkbox"/>	trude-first.ipynb	Running	8 hours ago	586 kB
<input type="checkbox"/>	Untitled.ipynb		2 days ago	304 kB

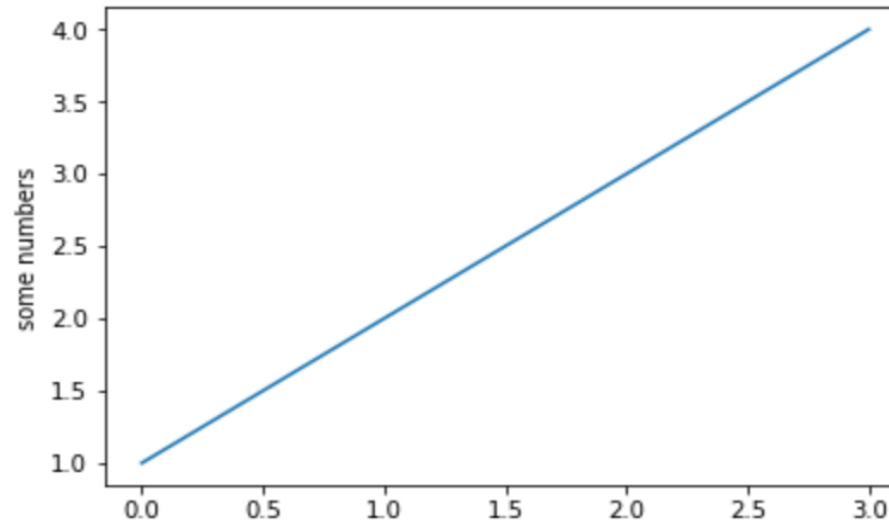


trude-first Last Checkpoint: Yesterday at 8:13 AM (unsaved changes)

File Edit View Insert Cell Kernel Widgets Help



```
In [2]: import matplotlib.pyplot as plt  
plt.plot([1,2,3,4])  
plt.ylabel('some numbers')  
plt.show()
```



Almost END

Compute



Overview

Instances

Images

Key Pairs

Server Groups

Volumes



Network



Orchestration



Identity



## Overview

### Limit Summary

#### Compute



Instances  
Used 2 of 50



VCPUs  
Used 2 of 100



RAM  
Used 4GB of 50GB

#### Volume



Volumes  
Used 1 of 10



Volume Snapshots  
Used 0 of 10



Volume Storage  
Used 20GB of 9.8TB

