Birdhouse Web Processing Services
A Use Case for the Climate Science Community

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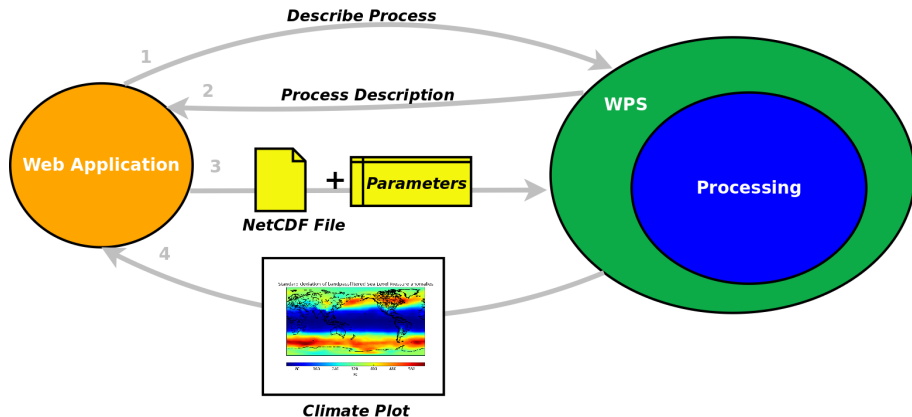
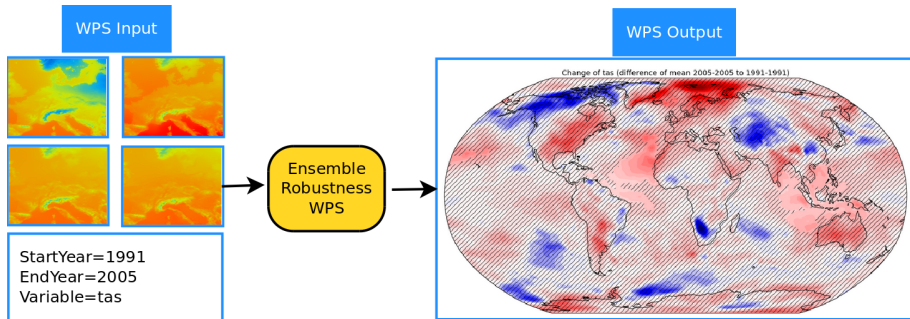EGI Workshop: Design your e-Infrastructure
April 2016, Amsterdam
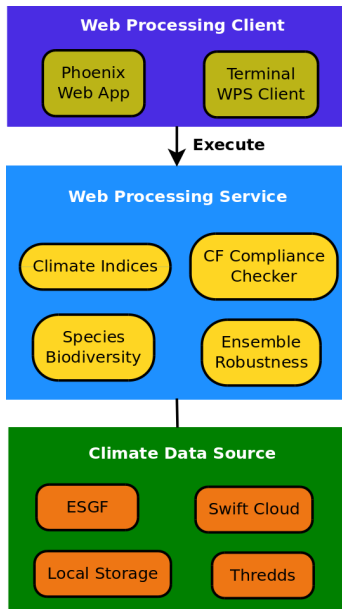
Overview

Web Processing Service

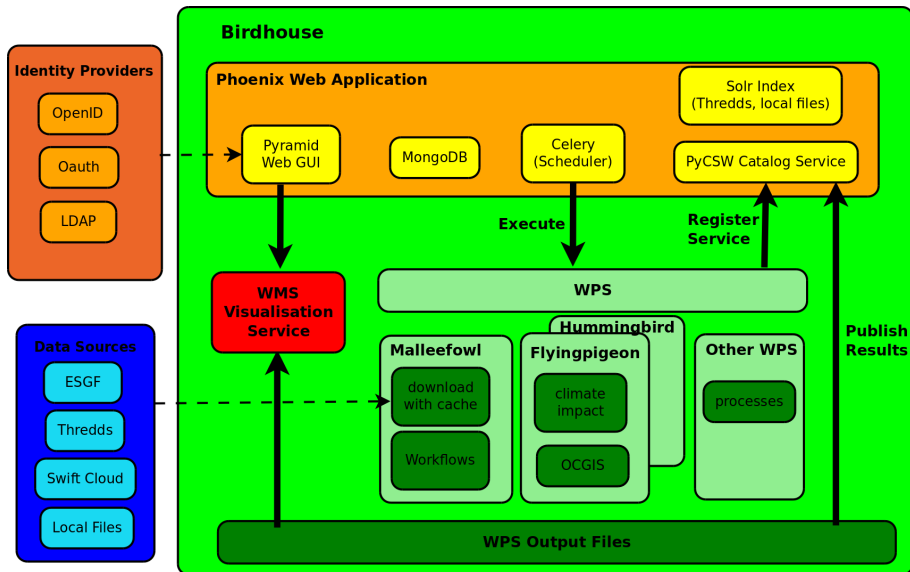A web service interface to standardize the way that algorithms are made available on the Internet.
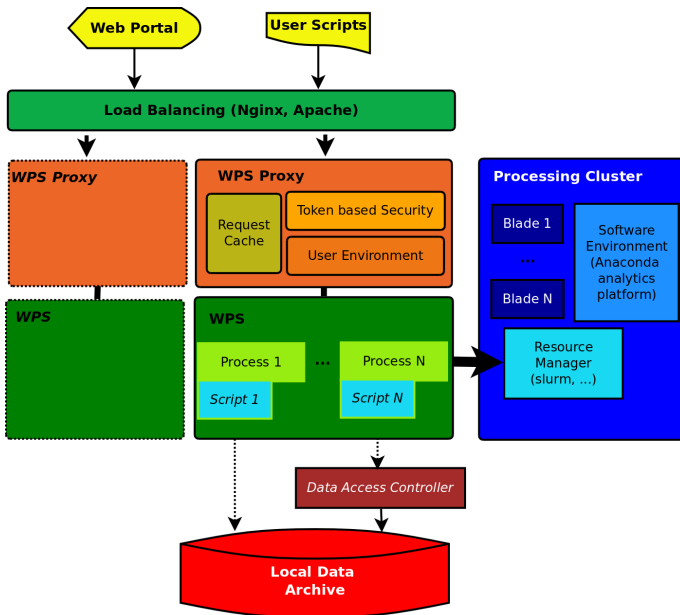
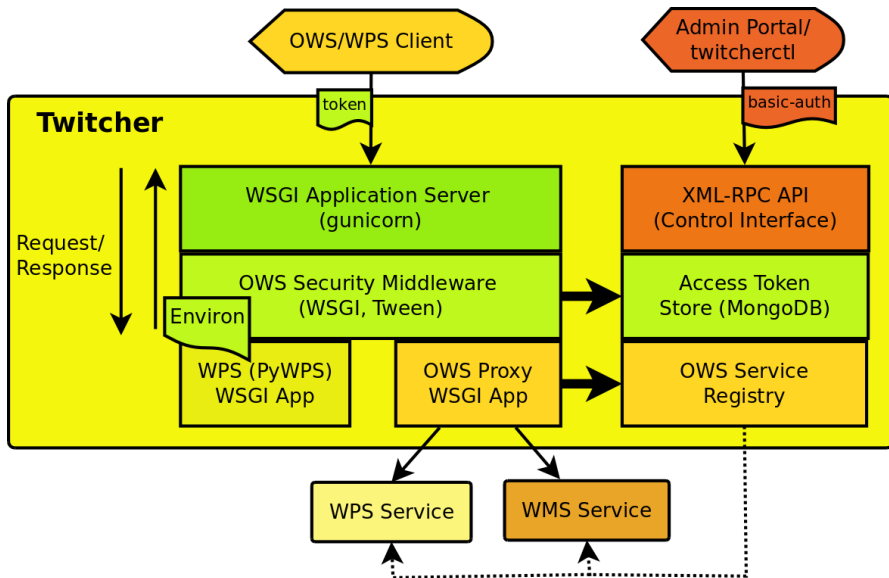# Example: Ensemble Robustness Process

Birdhouse WPS

Birdhouse Overview

Using WPS in Copernicus

Twitcher: WPS Security Proxy

Background

Who is the community the use case belongs to?

- Climate data producers (metadata checks).
- Users of climate data (impact modelers, forestry, biodiversity, ...).
- Decision makers (Copernicus).

What's the timeline for development, tests and large-scale operation?

- Processing backend for Copernicus, starting in summer 2016, operational in 2019.
- Climate metadata quality checks, development till summer 2016, operational end of 2016.

What's your role in the use case?

Providing the WPS infrastructure: deployment environment, security, test environment, attaching WPS to job schedulers like slurm, ...

Users

Who will be the users of the planned community-specific e-infrastructure? How many of them?

- Scientists who work with or produce climate data (few to many).
- Decision makers (use a portal only, WPS is called via batch jobs).

How will the users interact with the system?

- Most users will probably use a Web Portal which has access to the WPS services.
- Advanced users will use a command line and interact with the WPS services directly using scripts.

Who and how would validate the system?

- Scientists write algorithms which are published as WPS services.
- Functional tests provided by scientists to validate the results of the algorithms can be run in a continous integration environment (travis).

Status

Which components/services already exist in your architecture?

- Deployment of WPS system (conda, buildout, docker).
- Access to climate data sources (ESGF, Thredds, Cloud, ...).
- WPS clients (web based and terminal).

Which components/services are under development (and by who)?

- Security proxy for WPS services (DKRZ, KNMI).
- Attaching job scheduler to WPS (DKRZ, BADC).

Which components/services do you expect to get from EGI?

Usage of the EGI cloud resources?

Plans for today

What questions would you like to get answered today?
Is it possible to setup WPS on EGI cloud resources?

What issues you would like to solve today?
Try an installation of a WPS service on EGI cloud.

Other outcomes that you would like to get out from the workshop?
I'm new to EGI ... so just curious about the other Use Cases.

Further Reading I

📄 Birdhouse
`http://bird-house.github.io/`

📄 Climate4Impact Portal
`http://climate4impact.eu/impactportal/general/index.jsp`

📄 Web Processing Service
`http://www.slideshare.net/GasperiJerome/`
`20130530-web-processing-service-cct-cloud-toulouse-2942371`

The End