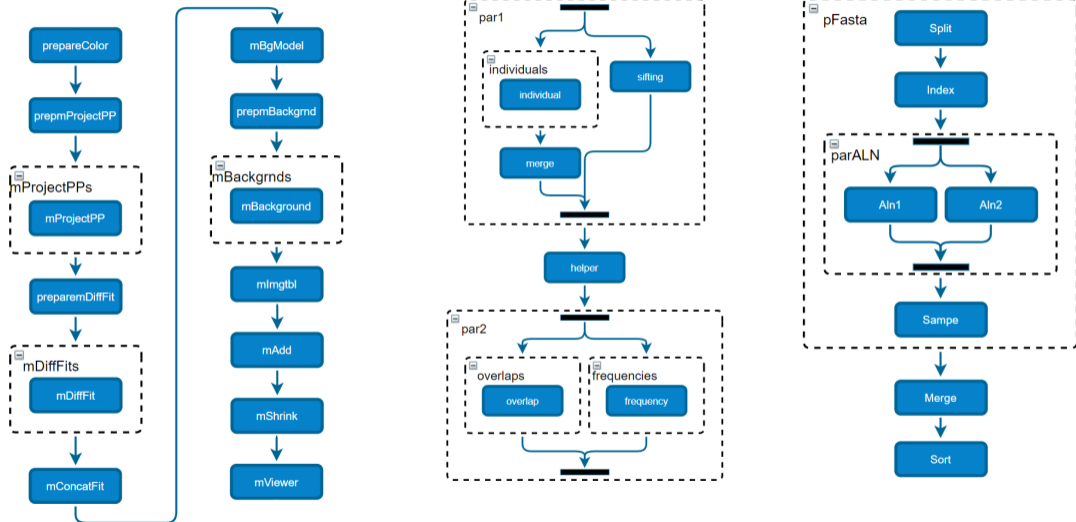




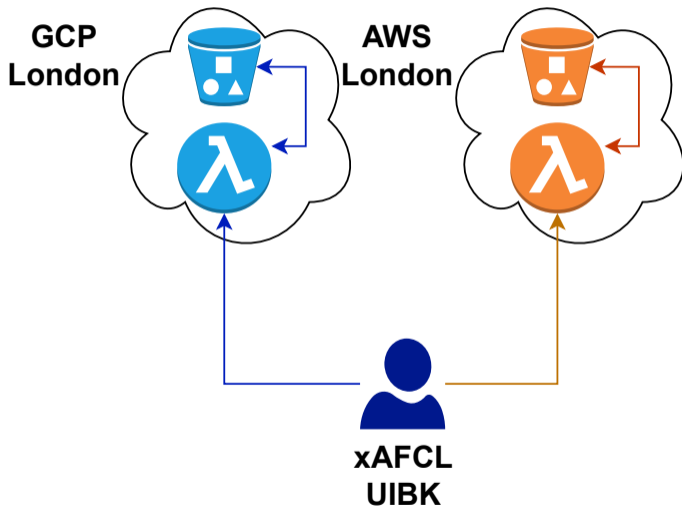
## Characterizing AFCL Serverless Scientific Workflows in Federated FaaS

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# AFCL Workflows (Montage, Genome, BWA, Monte Carlo)



# AFCL Configuration Example



# AFCL - Base Function

- function:

name: "prepareColor"

type: "prepareColorType"

dataIns:

- name: "bucket"

type: "string"

source: "montage\_workflow/bucket"

dataOuts:

- name: "bucket"

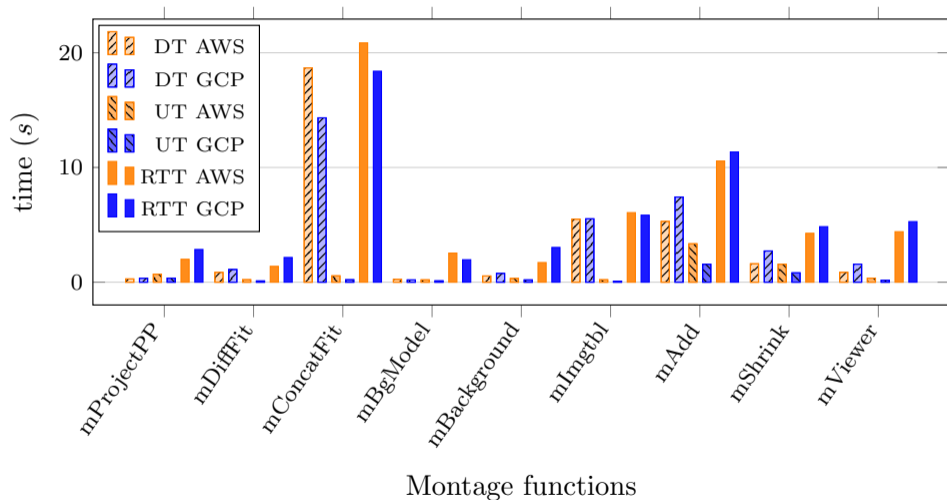
type: "string"

properties:

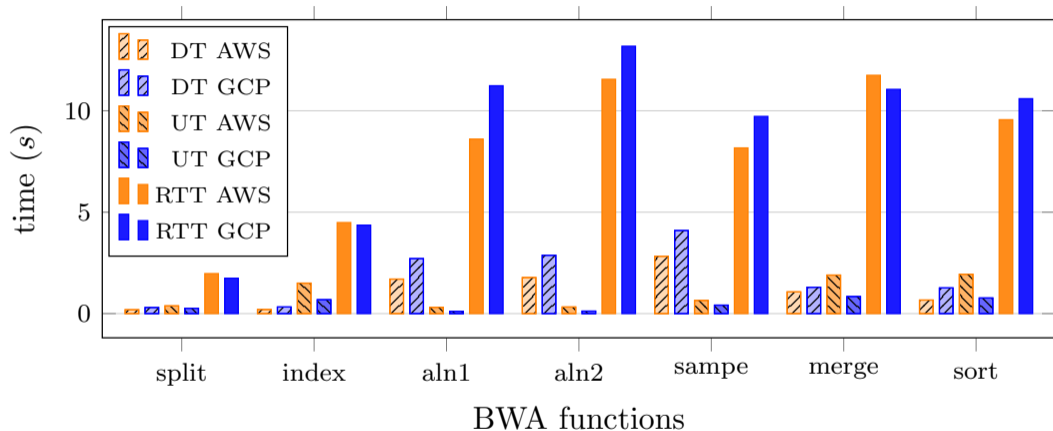
- name: "resource"

value: "<TODO>"

# Characterization Montage



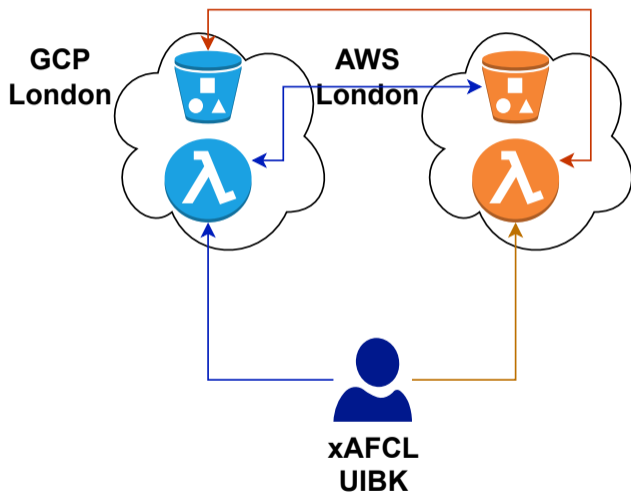
# Characterization BWA



# Characterization

- Workflow functions **download** ephemeral data and run **computation faster on AWS** than on GCP.
- However, functions on **GCP upload faster** on the collocated storage

# Federated Storage: Cross-provider execution



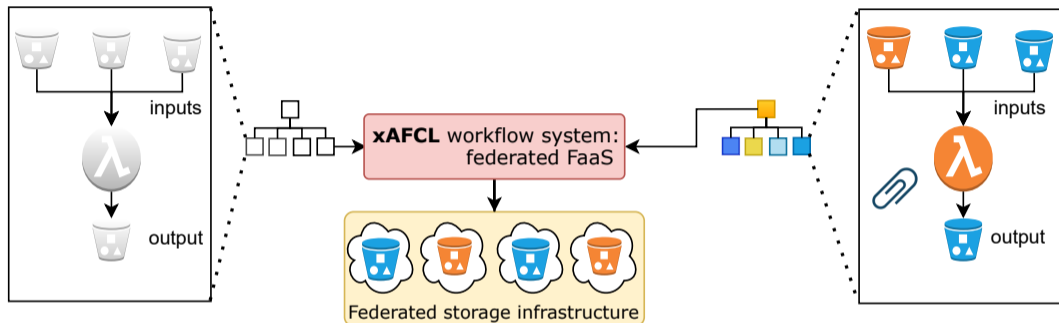


# AFCL - Base Function - Data Ins/Outs + Resource

## - function:

```
name: "prepareColor"  
type: "prepareColorType"  
dataIns:  
- name: "bucket"  
  type: "string"  
  source: "montage_workflow/bucket"  
dataOuts:  
- name: "bucket"  
  type: "string"  
properties:  
- name: "resource"  
  value: "<TODO>"
```

# Dynamic Federated Storage



<https://github.com/AFCLWorkflows/>