Interacting with Scientific Workflows.

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- Provides coordinated management and support of the University’s e-Research
- Manage and provide support for a range of technologies
  - HPC, Cloud
  - Data storage and management
  - Visualization
Scientific Workflow

**What**

- High level specification of a set of tasks and their dependencies
  - Control-flow and data-flow
- Task
  - local/remote
  - own/third party
  - executables/scripts
  - different infrastructure
  - different access controls

**Why**

- Automation
  Automate computational aspects of experiments
- Scaling
  Make use of parallel computing resources and handle large data
- Abstraction
  Workflow should be easy to reuse, evolve and share
- Provenance
  Processing history, data lineage for transparency

Adapt from Carole Goble at
https://www.slideshare.net/carolegoble/advances-in-scientific-workflow-environments
Cross-domain platform...

Projects
- Microscopy
- Ecoscience
- Astrophysics
- Bioinformatics
- Engineering Optimisation

Disciplines
- Microscopy
- Ecoscience
- Astrophysics
- Bioinformatics

https://kepler-project.org/
Science Gateway

> A Web portal interfaced to a community set of tools, applications and data collections

> Computations behind the gateway
  > Single packages
  > Workflow

> Workflow-based science gateways typically execute workflows in batch mode

> Workways
  > A platform to support development and execution of human-in-the-loop scientific workflow
Micro-mixer workflow