

WDL development

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mini



{wdl}

What is miniwdl?

- Lightweight runner for WDL ("widdle") workflow scripts
- WDL = Workflow Definition Language
- Open source language and tools, code on GitHub
- Used in bioinformatics world-wide

Audience

- WDL users
- WDL developers

Objective

Learn to use the miniwdl library to **evaluate, parse, visualize or run** WDL workflow script files.

Materials

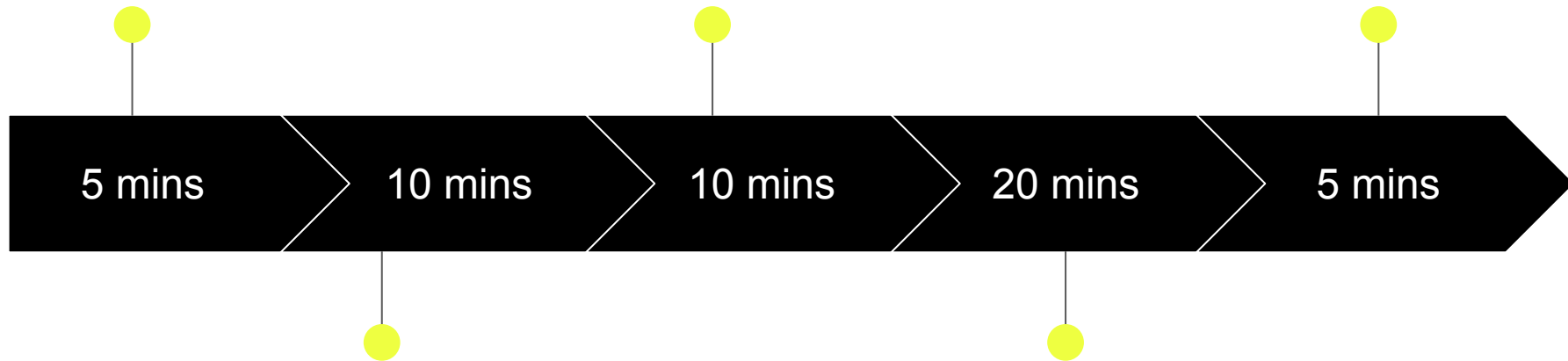
- Tools & Dev Env
- Workflow scripts & sample data
- Patterns & Examples

Course Flow

Verify miniwdl dev env

Work with
'chrom_counter.wdl'

Next steps and learn
more



Work with 'hello.wdl'
workflow

Work with
'ref_assembly.wdl'

Prerequisites

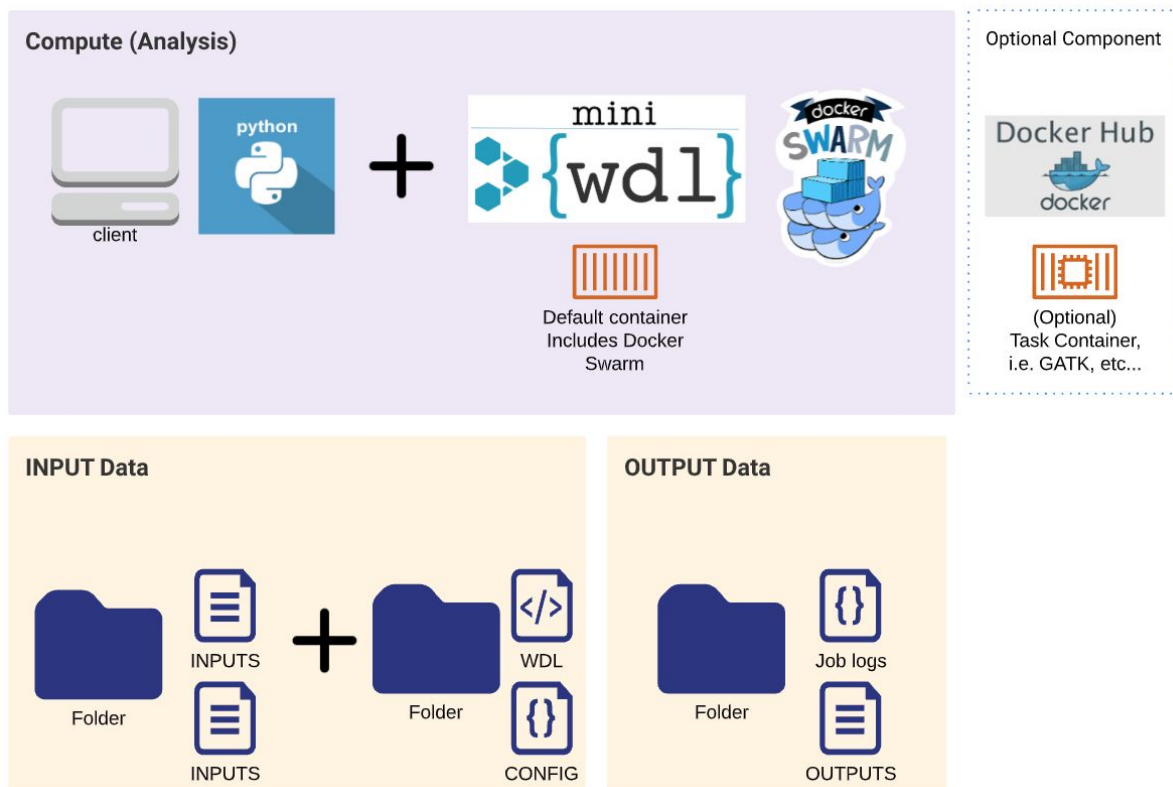
Select and set up a miniwdl dev env

1. Pick a machine - local or cloud VM
2. Configure per your OS, Linux is simplest
3. Verify Python install
4. Verify Python package manager - pip or conda

*Recommended: Use a cloud VM with Python installed, such as **Google Cloud Notebook instance**.*

miniwdl dev env

- Data Lake Pattern
- Input / Config / Output files
- Dynamic compute cluster



hello.wdl

miniwdl usage

- check - lint (WDL syntax)
- run - list of parameters
- run w/WDL - run the workflow
- viz - create a graph of workflow nodes

chrom_counter.wdl

assemble_ref_based.wdl

Learn More

- `readthedocs` for miniwdl - [link](#)
- GitHub Repo `miniwdl` source code
- GitHub Repo `learn-wdl` course - [link](#)
- GitHub Repo czi/idseq-workflows - [link](#)
- GitHub Repo `broadinstitute/viral-pipelines` - [link](#)