



# Kicking off compute on Gadi with Globus flows

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# Globus for Bioinformatics Workflows

- Bioinformatics workflows often require large data transfers followed by workflow execution
- Traditional approach:
  - Manually initiate and monitor data transfers
  - Manually launch workflows after data arrival
  - Prone to delays and human error
- Improved approach with Globus Flows:
  - Automate reliable data transfers using **Globus Transfer**
  - Automatically trigger/monitor downstream workflows using **Globus Compute**
  - Enables faster, reproducible, and fully automated workflows

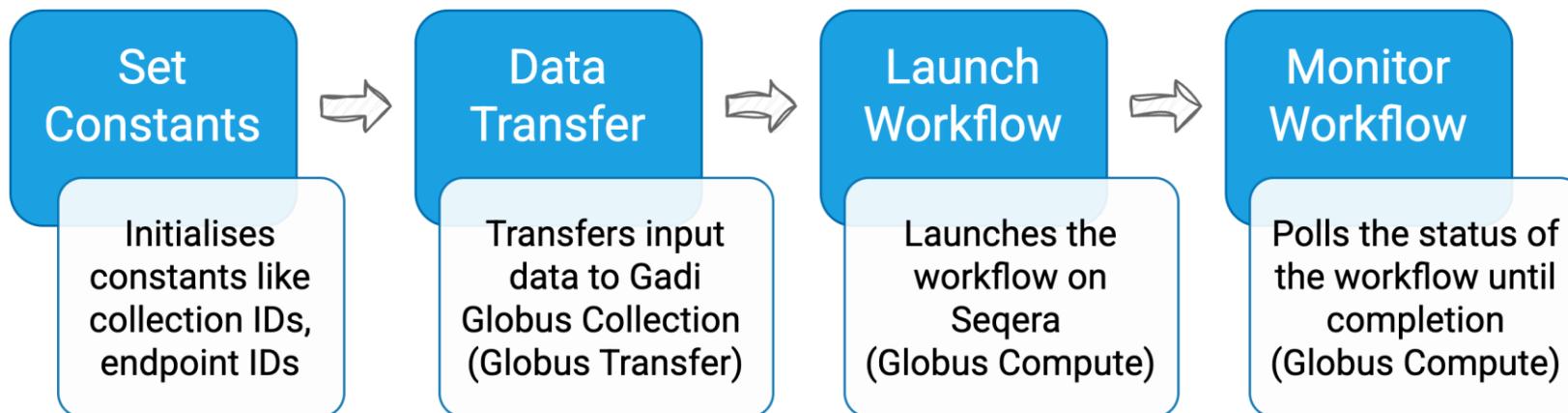


# Globus Flow Design

Two approaches

1. Data transfer → Launch workflow within a persistent session
2. Data transfer → Launch workflow on Seqera platform

[GitHub repository: <https://github.com/kisarur/gadi-genomics-globus-flow>]





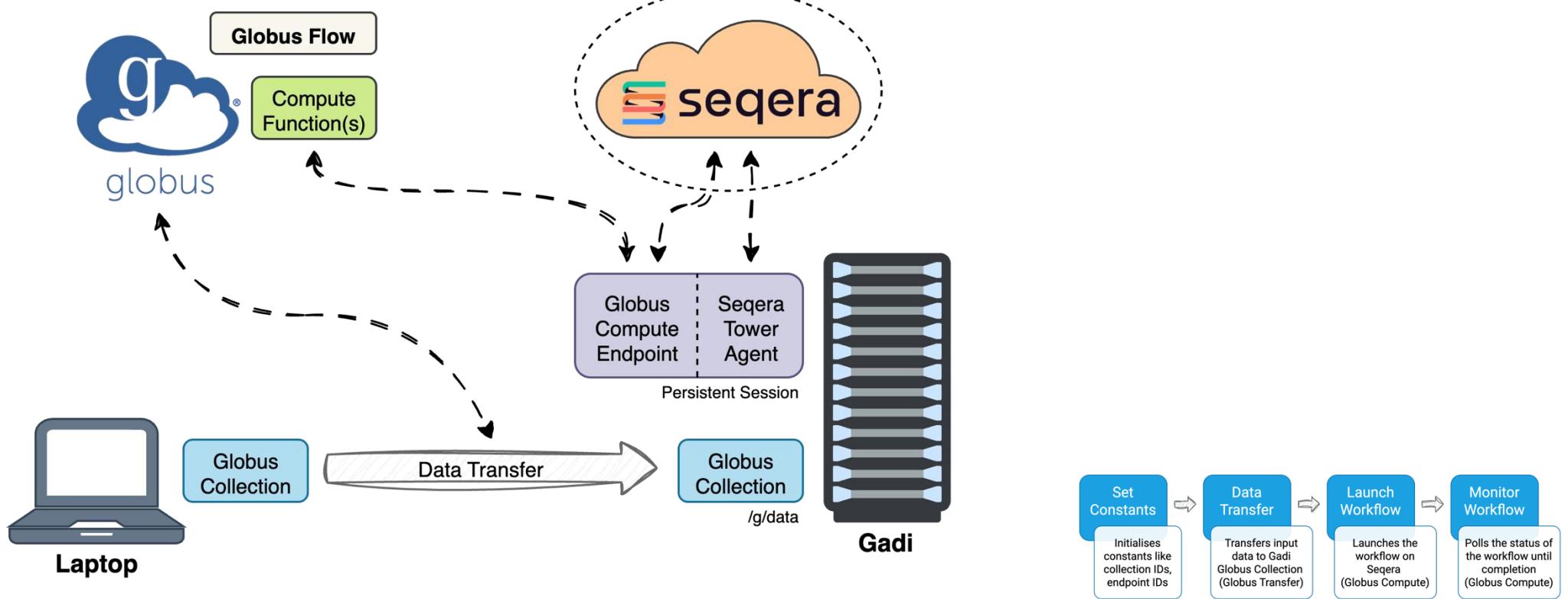
# System Architecture Overview

## Components

- Globus Flow
  - Flow Definition
  - Input Schema
- Globus Collections
- Globus Compute Endpoint
- Compute Function(s)
- Seqera Tower Agent (Optional)

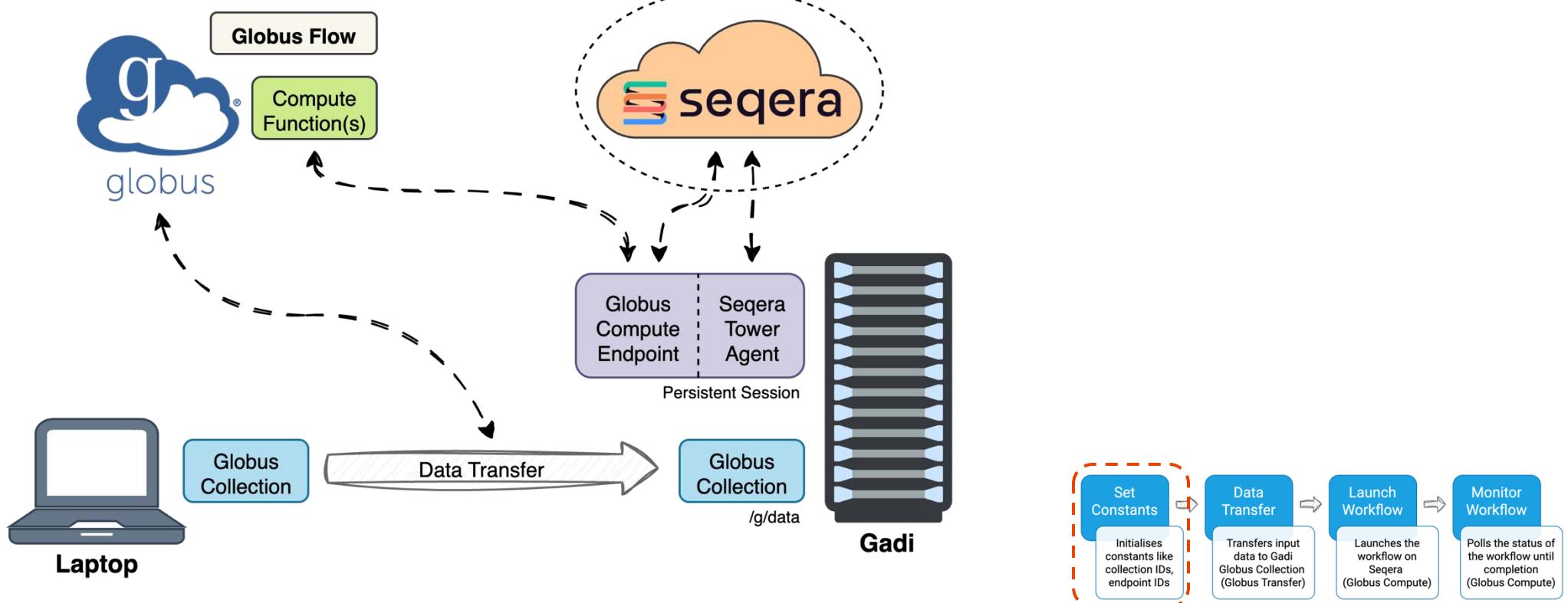
# System Architecture Overview

## Interconnection



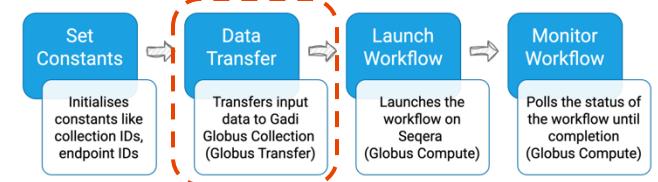
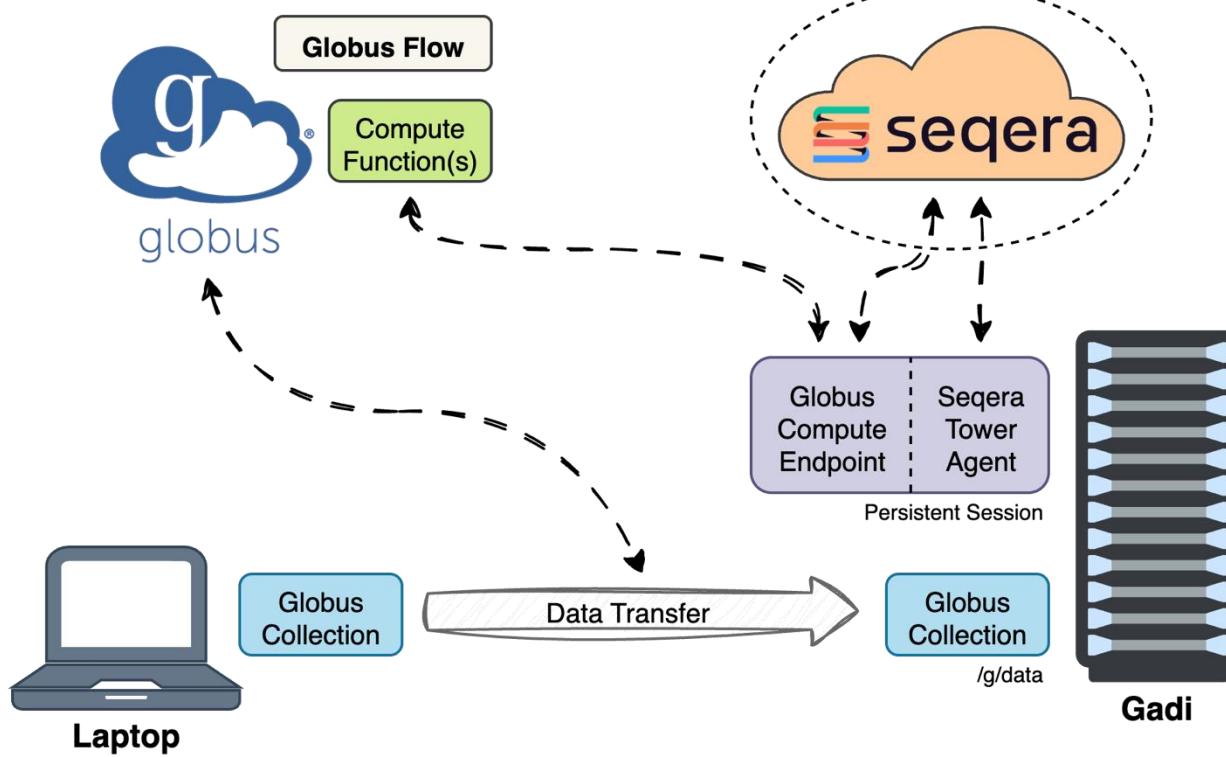
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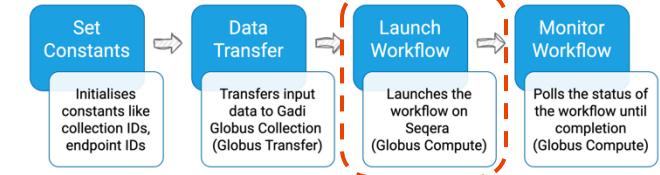
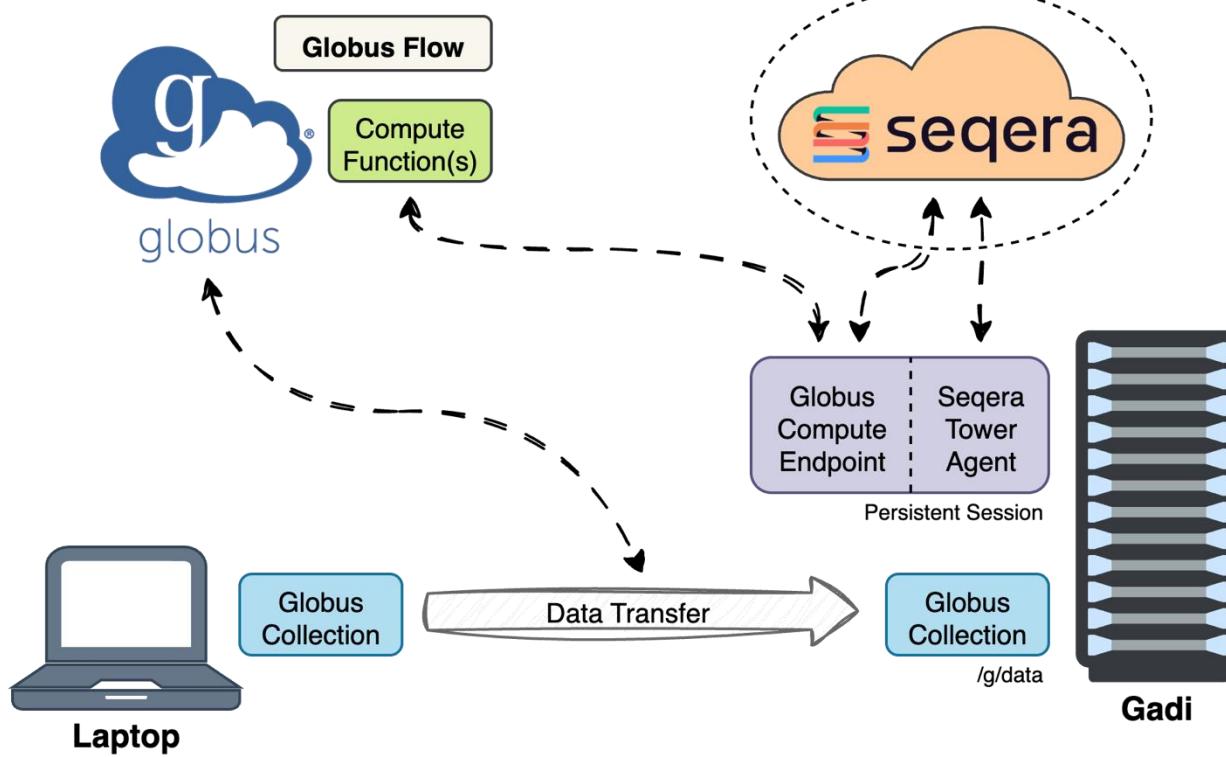
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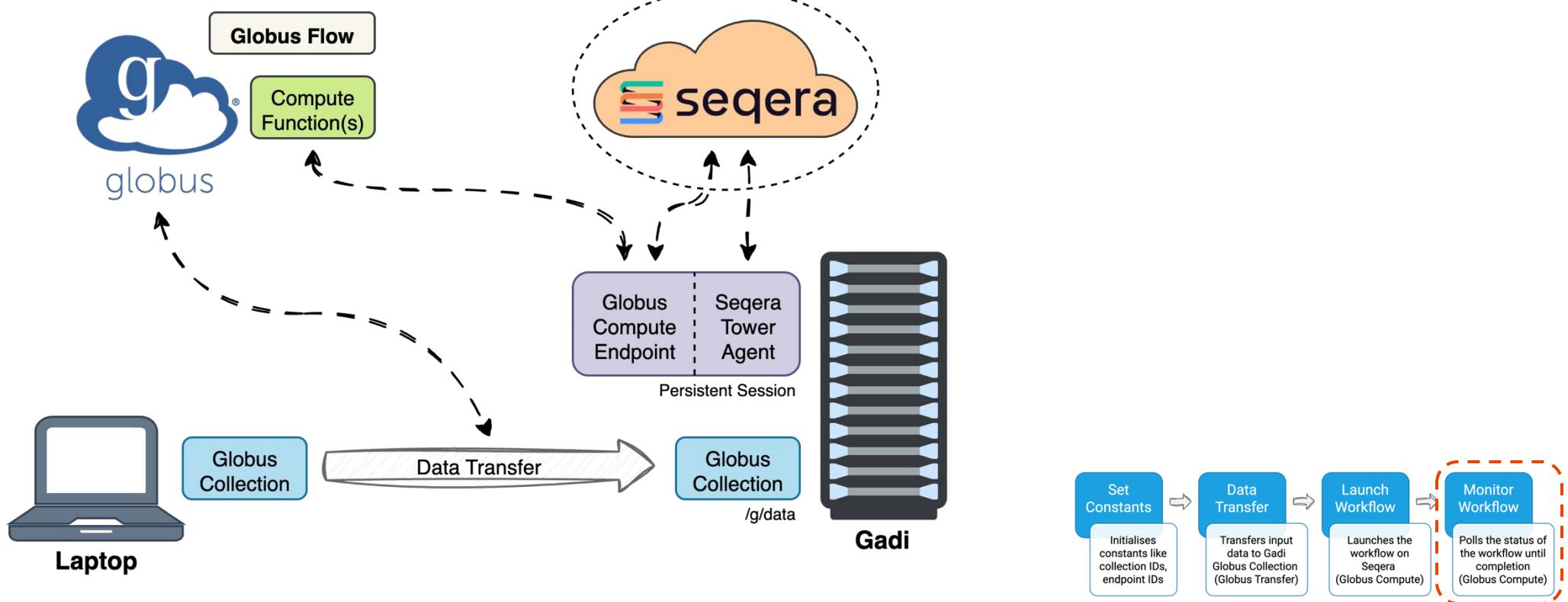
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# Demo

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