iRODS 2025
Updates and Lessons Learned

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Open Source

- C++ client-server architecture
- BSD-3 Licensed

Distributed

- Runs on a laptop, a cluster, on premises or geographically distributed

Data Centric & Metadata Driven

- Insulate both your users and your data from your infrastructure

iRODS Overview at LoC DSA 2024

Where is iRODS used?

- Research, Commercial, and Governmental Organizations
- Largest userbase in Europe
  - Strict data protection laws
  - Data sovereignty
  - Federation with other entities for collaboration
- iRODS is designed for long-term storage needs - 100+ years
  - Keeps your infrastructure flexible

What is the cost of running iRODS?

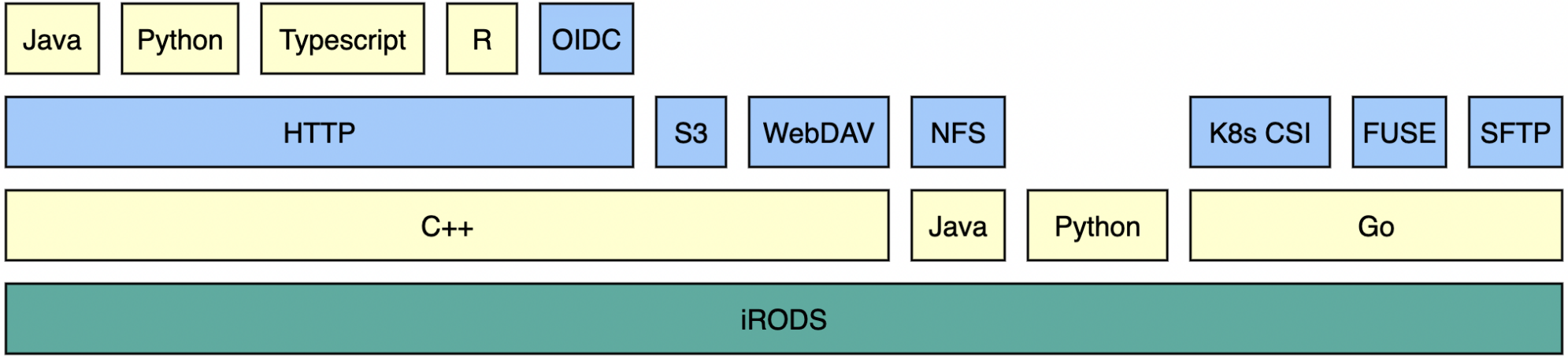
- The software is free - no hosted service today
- Requires time and education
  - There is a learning curve - mental model
  - Requires understanding your problem and what you want
  - Maintenance - compatibility, upgrades, etc.
- The iRODS Consortium can provide service and support

Lessons Learned

- Everybody wants something different
  - Building good generic tools is hard and takes time
- Generic solutions are helpful, but come with a cost
  - Performance is a goal
  - Providing insulation lowers maintenance burden
- Supporting multiple external technologies takes effort
  - Interoperability - backward and forward compatibility
- Administrators love metrics
  - Important for making decisions
  - Dashboards, time-series, etc.

Lessons Learned (continued)

- Important to be approachable and predictable
  - Easy to reason about
  - iRODS has its own protocol, so we provide
    - Protocol translations (blue)
    - Client libraries (yellow)



Thank you!

Questions?

https://irods.org/ugm2025

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