IOP: Birds eyes view
APIs and Protocols are different stuff

- **API** stands for Application Programming Interface, it refers to methods and data needed to interact with a component from an application you are programming.

- A **Protocol** defines the way two entities communicate, the sequence of actions to achieve a goal, using one or more **APIs**.
ScienceMesh Use-Cases

- Each use-case is backed up by one or more APIs and Protocols.
- 1) Data Science Environments
- 2) Open Data Systems
- 3) Collaborative Documents
- 4) On-demand data transfers
APIS that we need

- **OpenCloudMesh**: establishes a rendezvous to start exchanging "things" between sites using arbitrary protocols
  - WebDAV protocol is used to exchange data between sites
- **WOPI**: defines a protocol to allow concurrent and collaborative editing of documents, mostly used by Office-like applications like Microsoft 365/Collabora
  - API to perform on demand data transfers
  - API to set rich metadata for research data management/digital repositories (tagging, ...)
  - API for monitoring the health of the deployments
- ...
IOP is a middleware that adds the necessary APIs for interoperability and implements policies for healthy participation in the mesh

- timespan of the project (3 years) Feasible approach given
- Allows to gradually push protocols to vendors, no big bang approach
- Vendor-neutral, owned by community
"this is the EFSS connector"
The IOP contains multiple components packaged into a K8S chart for easy deployment.
Reva has two purposes:

- Implements vendor-neutral APIs/Protocols for interoperability
- Reference implementation of the CS3APIS
Current State

- Deploying IOP with artificial EFSS
- Testing OCM across deployments
- from CLI
CS3APIS:: CreateOCMCoreShare

GRPC CONNECTOR IN NODEJS

IOP

OCM

REQUEST SAMPLES

```json
{
  "nameWith": "peter.anngirl@example.org",
  "name": "John Doe",
  "description": "This is the Open API Specification file (in YAML).",
  "providerEmail": "example@example.com",
  "contact": "support@example.com",
  "(optional)": 
  "name": "website",
  "(optional)": 
}
```