A possible future configuration of these components

**Motivation**

- One component of a potential GEOSS-AI system, in the continuum between observations and end point research, applications, and decision making, would be one that enables transparent data discovery and access by users. Such a component might be effected via the system’s “data agents.”
- Presumably, some kind of data cataloging has already been implemented, e.g., in the GEOSS Common Infrastructure (GCI).
- Both the agents and cataloging could also leverage existing resources external to the system.
- The system would have some means to accept and integrate user-contributed agents.
- Another component would be one that facilitates browsing/visualization of the data, as well as some basic analyses, i.e., “visualization agents.”
- Three ongoing projects at the NASA Goddard Earth Sciences Data and Information Services Center (GES DISC) provide possible proto-examples of potential data access and visualization components of a cloud-based GEOSS-AI system.

**Proto-examples of GEOSS-AI Components**

**Data Rods Project**

- Original Data Archive
- Longitude (X)
- Removed longstanding barrier to accessing NASA data (i.e., accessing archived time-step array data as point-time series) for selected variables of the North American and Global Land Data Assimilation Systems (NLDAS and GLDAS, respectively) and other NASA data sets.

**Data Rods via GEOSS Project**

- Leveraging GEOSS and as part of GEOSS Water Services Project, to help provide access to data rods for non-NASA users.

**Federated Giovanni Project**

- Giovanni currently provides Web-based exploratory analysis for GES DISC data. Federated Giovanni extends this to 4 other EOSDIS Data Centers.

**Proto-Examples of Data Access and Visualization Components of a Potential Cloud-Based GEOSS-AI System**

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