



NASA Report to Unidata

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GPM Data(!)

- <http://mirador.gsfc.nasa.gov/cgi-bin/mirador/presentNavigation.pl?tree=project&project=GPM>
- yea!...
- ...but Oct 7 end of TRMM PR near realtime data :-)



Big Earth Data Initiative (BEDI)

- Funded for NASA for FY15
- DAACs:
 - *More OPeNDAP*
 - More Aggregation of OPeNDAP
 - More linking of EOS Clearinghouse (ECHO) with OPeNDAP with Global Imagery Browse System
 - *Ergo, more OpenSearch*
- OPeNDAP, The HDF Group
 - Make OPeNDAP work better/faster



ACCESS Projects Leveraging Unidata Interoperability Technology

- [ACCESS 13](#)
- Lynnes, Federated Giovanni
 - Internal format is netCDF; relies on nco, OPenDAP
- Zender, Lynnes et al.: nco for Swath-Like Data
 - subset, quality-mask, shapefile-mask, reproject
“irregular grids”
- Blodgett, Multidisciplinary Open Standard Data Services
- Armstrong, Enhanced Quality Screening



CMAC Proposal Call

COMPUTATIONAL MODELING AND ALGORITHM AND CYBERINFRASTRUCTURE

“...focuses on the continuous development and expansion of previously developed efforts (e.g., http://hec.gsfc.nasa.gov/user/funding/CMAC11_Selections.pdf), with emphasis on the integration between and expansion upon various components.”

Disclaimer: I am a Co-I on 2 existing CMAC projects, likely to seek funding in this call.



Select Earth Science Data Systems Working Groups

- Data Recipes working group
 - Collecting and organizing how-to's
- Vision 2020 working group
 - Drawing Inspiration from sources including Unidata 2018 Strategic Plan
- Data Intensive Architecture working group
- Data Interoperability working group
 - netCDF, CF, ACDD, HDF groups/hierarchies
- ASCII Data for Science



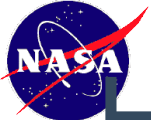
Changes Coming to the EOSDIS User Registration System

Redirection via HTTP Response Codes

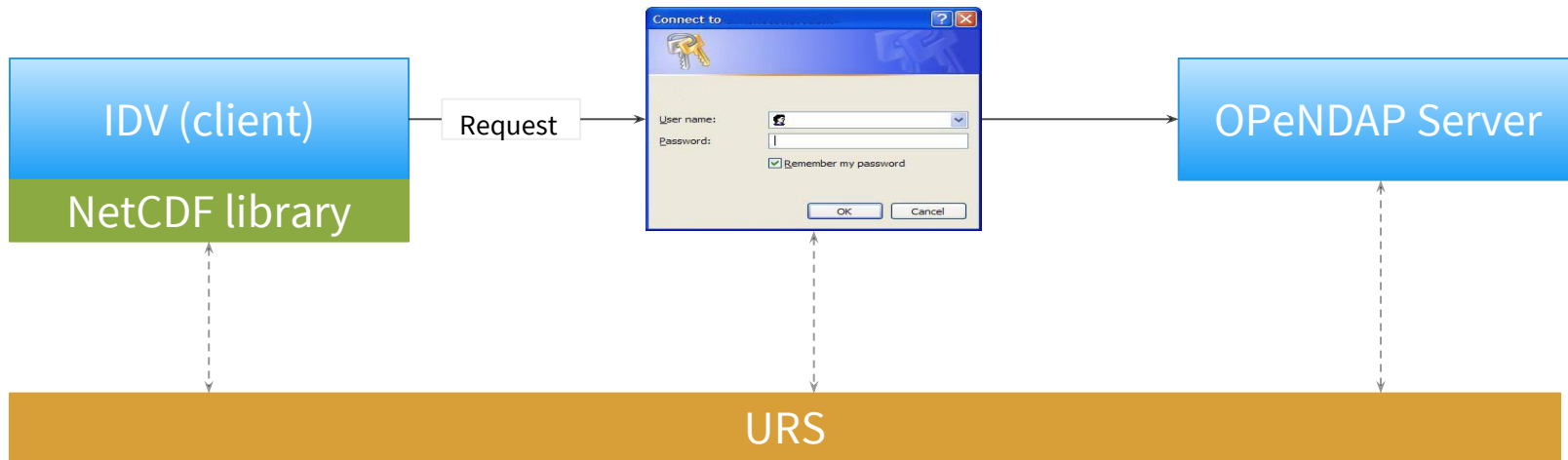


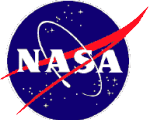
A Few Assumptions...

- IDV (and other similar clients) use netCDF
- Clients (IDV, netCDF, et. al.) support cookies
- netCDF (Java and C versions) support redirection (301) and authentication (401) based on HTTP status codes
- OPeNDAP is URS/OAuth-enabled for authentication
- URS can return a 401 given a specific endpoint or set of request parameters

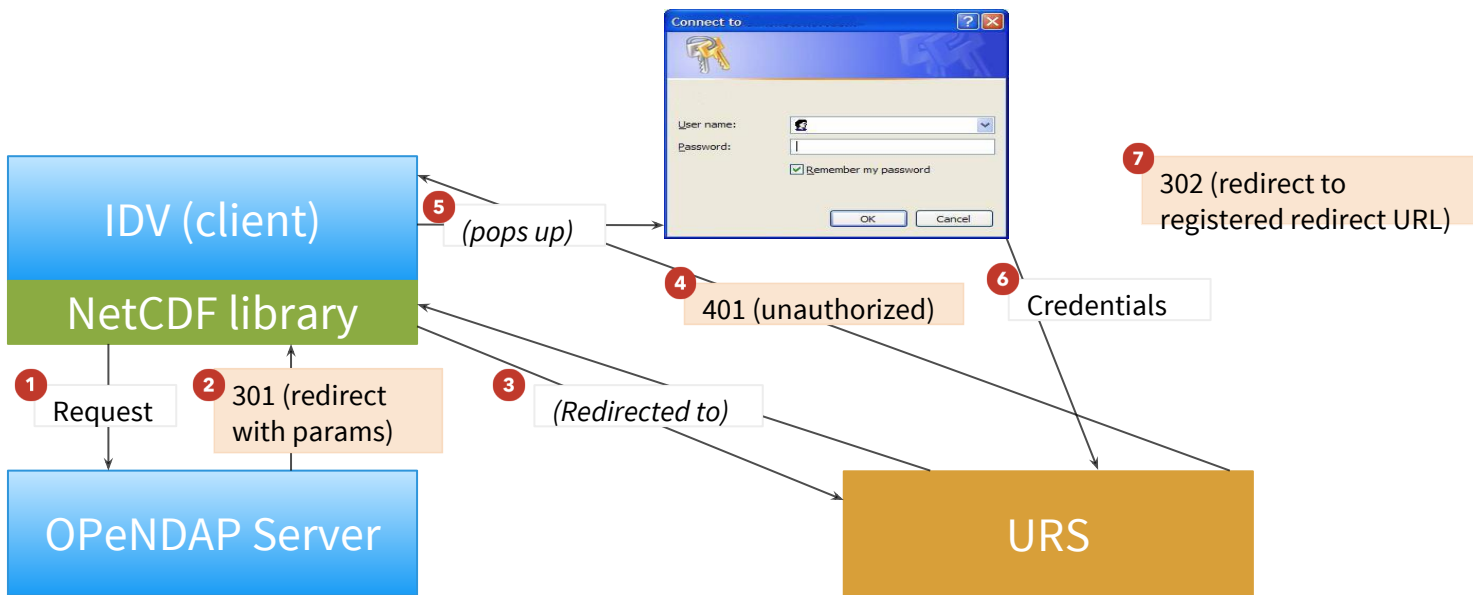


High Level (Pseudo) Workflow





Detailed Workflow



- 1 Original request from NetCDF to OPeNDAP server
- 2 - 3 OPeNDAP redirects client to URS
- 4 URS returns (based on parameters) a 401 unauthorized response to NetCDF
- 5 - 6 NetCDF supplies URS user credentials (via popup login window or configuration)
- 7 URS accepts credentials and redirects client back to the original resource