

Data Access Meeting 2015-03-02

Date

02 Mar 2015

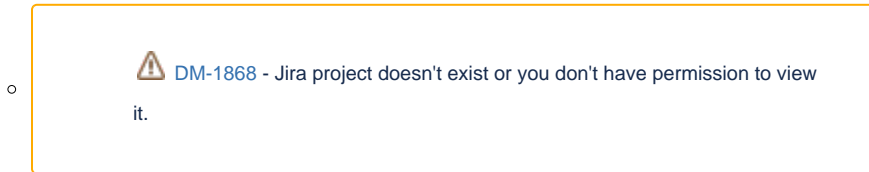
Attendees

- IPAC: [Unknown User \(xiuqin\)](#), [Trey Roby](#), [Gregory Dubois-Felsmann](#), [Tatiana Goldina](#), [Serge Monkewitz](#),
- SLAC: [Andy Salnikov](#), [Brian Van Klaveren](#), [John Gates](#), [Unknown User \(danielw\)](#), [Kian-Tat Lim](#), [Jacek Becla](#)

Discussion items

Structure of JSON results

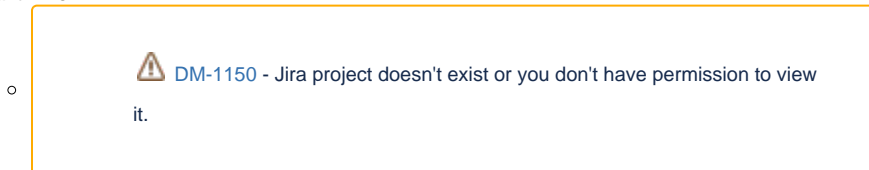
- Relevant links



- [API](#)
- JSON object with extra info is better than arrays
- unofficial standard: response as top level key
- perhaps try to come up with a generic response container object, containing:
 - top level response key
 - pagination information
 - metadata about json object
 - status, eg "no rows returned"
- server or client error, these are tricky (user provided input bad, server down, etc). Sometime it is a problem with application software. Return 500 or 404 type error.
- We should define our own errors that correspond to the special error conditions
- software for validating json exists, not as much as for xml, it is all much looser
- useful for documenting json results:
 - REST+JSON documentation:
 - <http://docs.datacatalog.apiary.io/>
- might be useful to have unit tests to check we are returning what we should
- Will production be using the RESTful API / webservice?
 - webservice will be layered on top of internal services (butler, cutout etc).
 - no compelling argument that production computation should use RESTful interfaces
 - so use the underlying service, don't go through a central webservice
 - need to check if cutout is modeled in storage model as distributed service
 - sending the same image to many nodes == less caching
 - rely on data locality (don't send the same data to many nodes, send to the same)

Fast image search

- relevant links



- SciSQL does not support what we need for searching images
- concerned about indexing (finding fast whether polygons overlap)
- if images of different size, need to pick some coarse level of htm, that is suboptimal
 - can store multiple htm levels
- likely need special index, eg 3-d R-tree
- Talk to mysql GIS experts at: <http://www.percona.com/live/mysql-conference-2015/>
- in Fermi, dealing with "events" that are point, we deal with areas
- science question: what do we need to support in terms of searching / selecting images. E.g., point in image enough? Polygons overlapping images. Jacek will ask [Mario Juric](#). Via JIRA ticket.
- Serge will update JIRA ticket: add notes what to test

Raw images

- Related links



DM-2241 - Jira project doesn't exist or you don't have permission to view it.

- Format?
 - SUI can always request the image as FITS
- Returned data?
 - Raw pixel plus metadata we obtained from obs control system and telescope control system (which will include "where telescope was pointing" – approx WCS)
 - few years later, when we have precise WCS, we might want to return that with image. But might want to call it differently ("augmented raw image")
- Size units?
 - typically amplifier level
 - ok to request smaller than amplifier (although it is usually not useful)
 - There is no such thing as CCD raw image. No plans to do stitching raw images
- Typical uses of raw images? What metadata should go with raw data? Xiuqin will ask [Mario Juric](#). Via JIRA ticket

Next week - Xiuqin will run the meeting