



ESCAPE

European Science Cluster of Astronomy &
Particle physics ESFRI research Infrastructures



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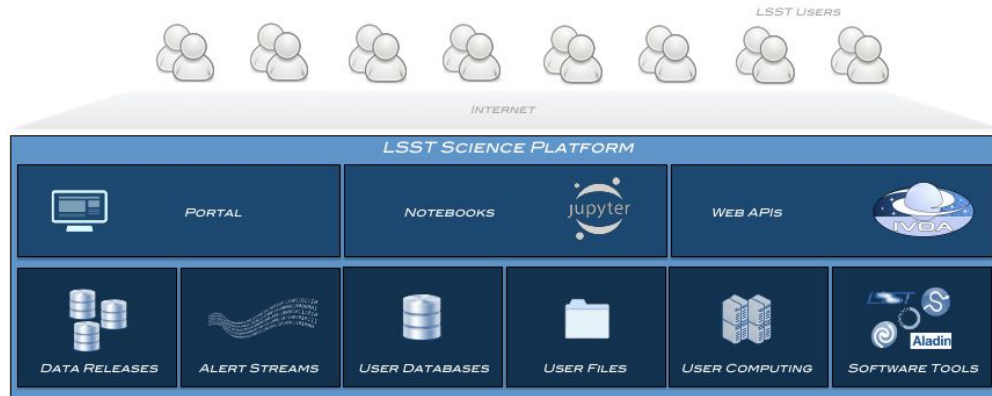
WP5

Rubin Science Platform

ESCAPE meeting - January 18, 2021



Rubin Science Platform (RSP)



- 3 main user interfaces:
 - Web portal
 - Jupyter notebooks
 - Web APIs
- Access to Data Releases (including images) and alert streams



Deployment

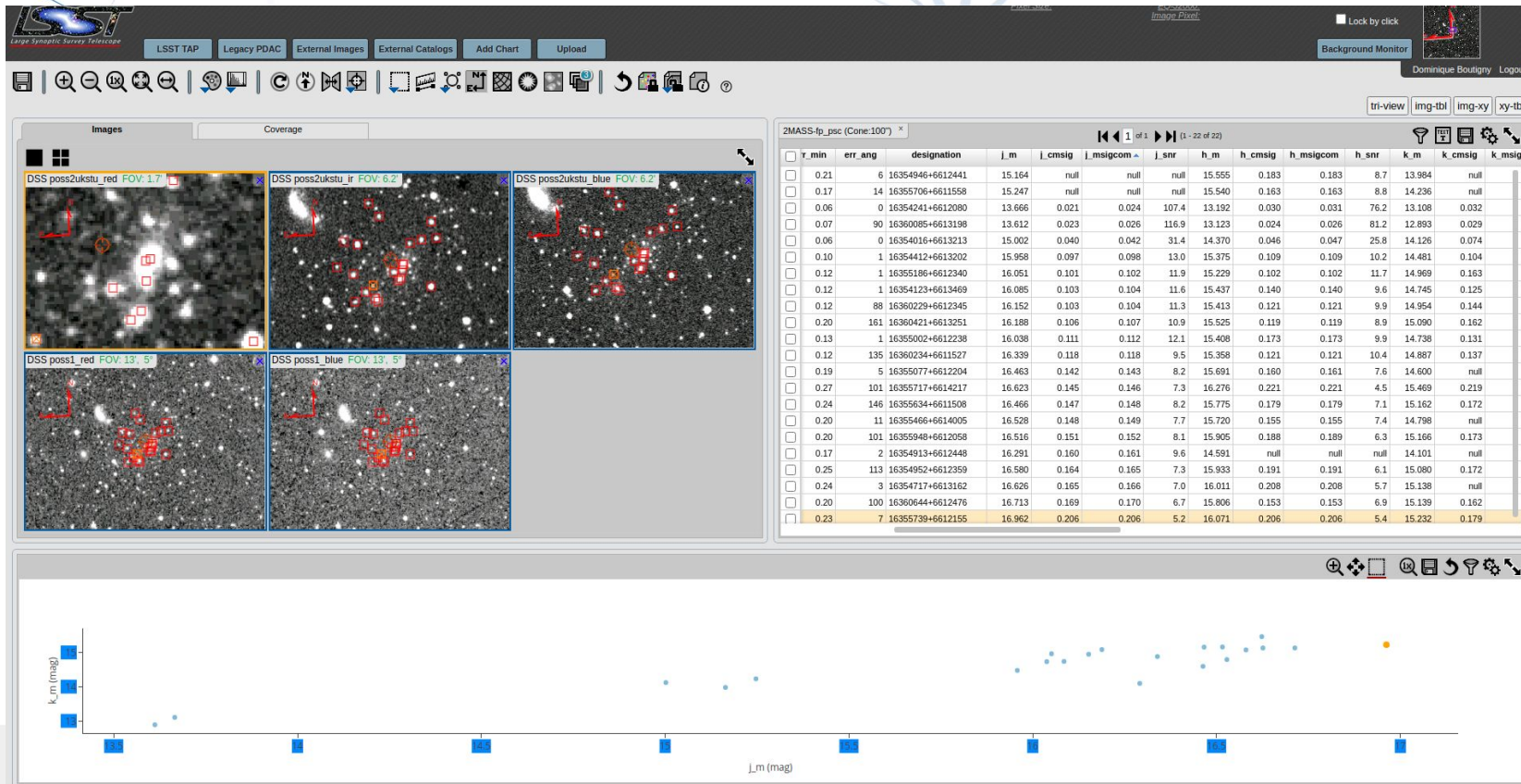
- Deployment code available at:
<https://github.com/lsst-sqre/lsp-deploy>
- Based on docker, kubernetes, HELM and Argo CD
- k8s secrets managed by Vault
- Rubin is maintaining several deployment schemes based on the destination of the Science Platform
 - Current RSP at NCSA - Google cloud for the Rubin Interim Data Facility - Simple 1 node demo using minikube



minikube



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Nublado Jupyter platform

The screenshot displays the Nublado Jupyter platform interface in a web browser. The address bar shows the URL: `minikube.lsst.codes:31337/nb/user/boutigny/lab`. The browser's bookmark bar includes various categories like Apps, Bookmarks, and a list of folders such as GW, LAPP, Google, USA, Diaspar, CC, LSST, LHC, Util, Sciences, Computing, Media, Généalogie, Perso, Hébreu, Astro, Blog, Plantes, and Other bookmarks.

The interface features a left sidebar with a file explorer. It contains a table with the following data:

| Name | Last Modified |
|----------------|---------------|
| dask | 11 hours ago |
| DATA | 11 days ago |
| idleculier | 11 days ago |
| notebooks | 11 hours ago |
| WORK | 11 days ago |
| Untitled.ipynb | 11 hours ago |

The main workspace shows a Jupyter notebook titled "Untitled.ipynb". The notebook has a toolbar with icons for saving, undo, redo, and other editing functions. The code cell is currently empty, displaying only the prompt `[]:`.



Relation with ESCAPE

- The RSP is not limited to the Rubin Observatory
- Can access any dataset / catalog through IVOA
 - Query through TAP service
- Fully open source
- Modular design allows to extend it and to add / replace modules
 - Don't know how easy / difficult it is though



Next steps

- See what the platform can do
- Understand how it works
- Deploy on a larger / scalable infrastructure
 - Openstack at CC-IN2P3
 - Proxmox at LAPP
- Move away from the Rubin vault instance
- Interface with the Qserv database (or others)
- Understand how to connect the RSP to computing resources (batch, HPC...)
- Create an interface with the data lake (WP2)
- Coordinate with other WP5 activities

