

ESA Data Core Services and Features

ESA Datalabs 2022 Workshop

24th November 2022

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EDISOFT

DEFENCE & AEROSPACE TECHNOLOGIES

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ESA Datalabs Core Services – former SEPP (Multi-mission Science Exploitation and Preservation Platform) – system capable of supporting the exploitation and preservation of multi-mission scientific data and products, eradicating the need to have custom vertical solutions for each mission.

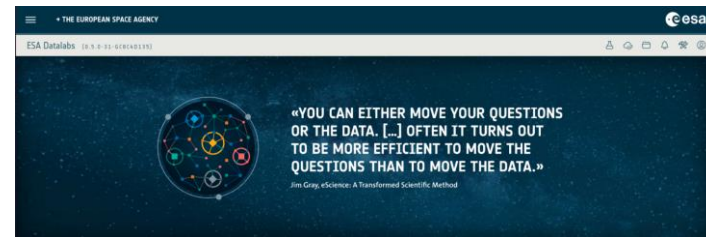
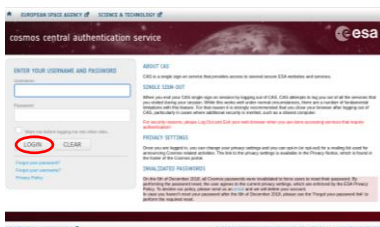
Team: EDISOFT S.A. and UNINOVA

Supported by: ESAC people and the Early Users Group

Advantages of using ESA Datalabs



ESA Datalabs (<http://datalabs.esa.int>) is accessible from every place – only a Web Browser and a Cosmos account are required



Advantages of using ESA Datalabs



Installation of working tools not needed – most used tools available



Mounting of user data volumes supported
(currently only NFS protocol is supported)



Advantages of using ESA Datalabs



Automatic mounting of user data volumes (expected soon)

Automatic mounting of system data volumes (currently only NFS protocol)

Easy access to legacy data

No need to take care about computational resources – managed by ESA datalabs teams


Collaborative work features supported – team work area implemented









ESA DATALABS FEATURES

ESA Datalabs Features – Datalabs











THE EUROPEAN SPACE AGENCY 

ESA Datalabs [0.5.0-31-6C8C4D135]      

Choose Datalab

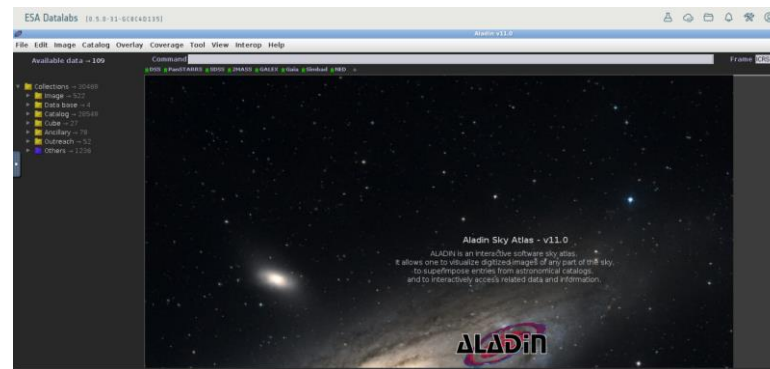
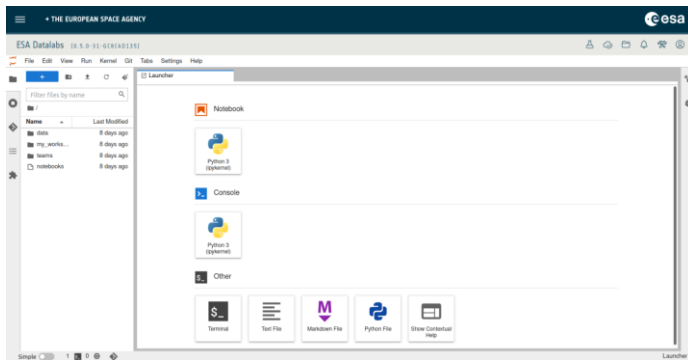
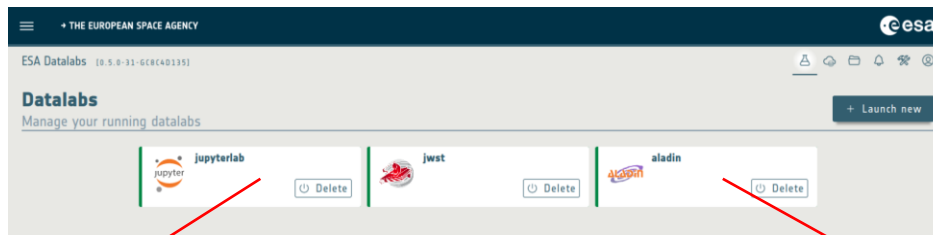
Find a datalab in ESA Datalabs catalog

Filter results

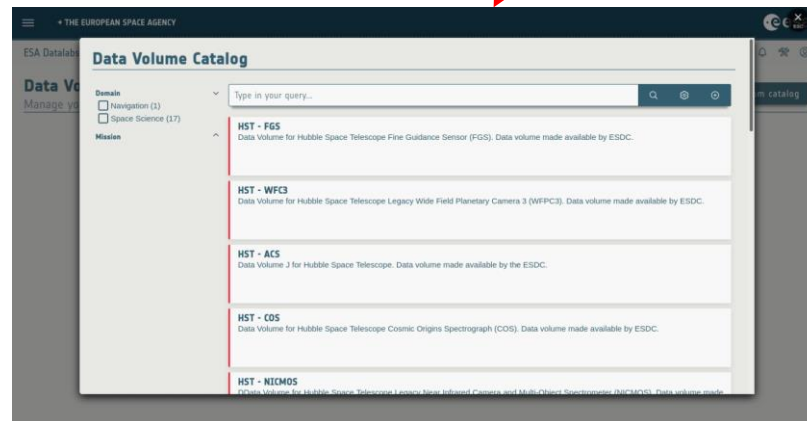
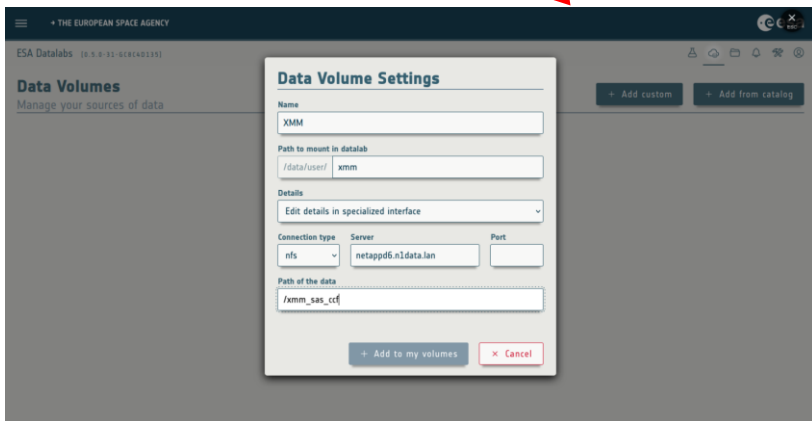
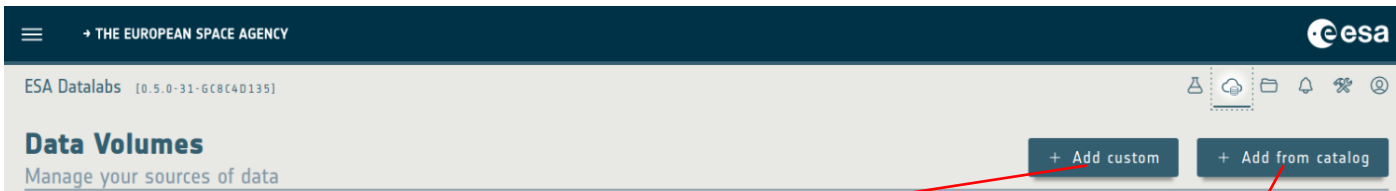
 aladin Aladin is an interactive sky atlas allowing the user to visualize digitized astronomical images or full surveys, superimpose entries from astronomical catalogues or databases, and interactively access related data and information from the <i>Simbad</i> database, the <i>VizieR</i> service and other archives for all known astronomical objects in the field.	 filezilla FileZilla
 fv FV - An image display and visualization tool for astronomical data	 jl-esdc Jupyterlab ESDC
 jl-euclid-dps Euclid DPS JupyterLab	 jl-herschel Herschel JupyterLab
 jl-juice JupyterLab with JUICE moon coverage tool (0.8.0). (with kernels)	 jl-pangaia PanGai JupyterLab



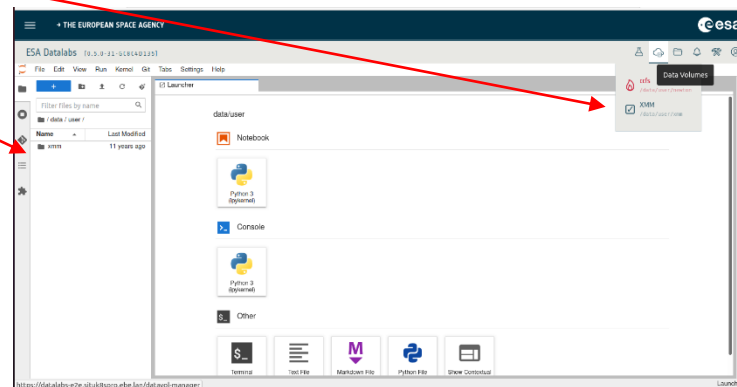
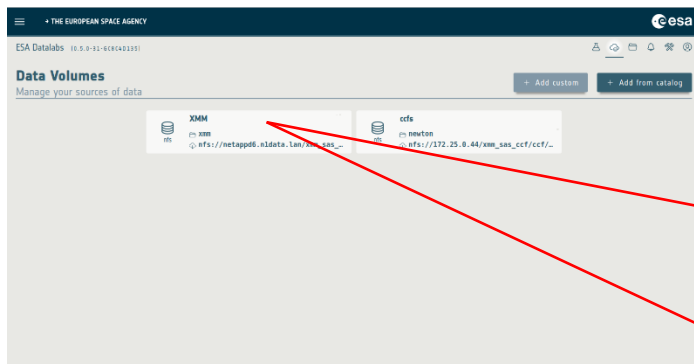
ESA Datalabs Features – Datalabs



ESA Datalabs Features – Data Volumes



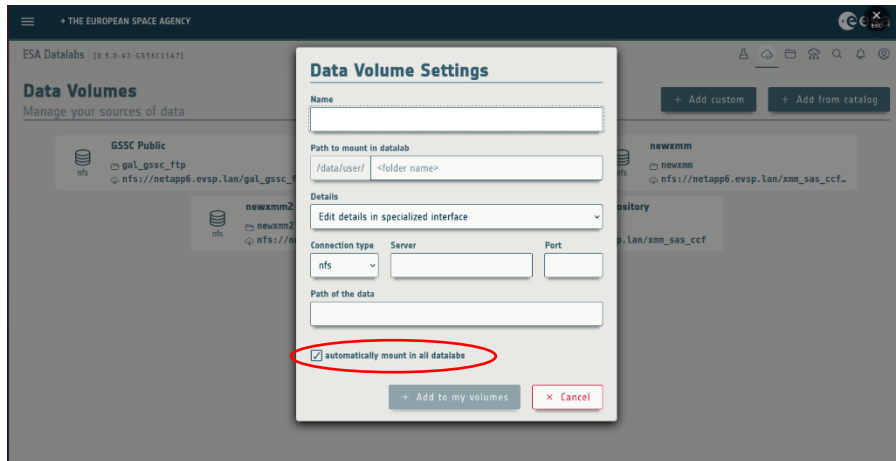
ESA Datalabs Features – Data Volumes



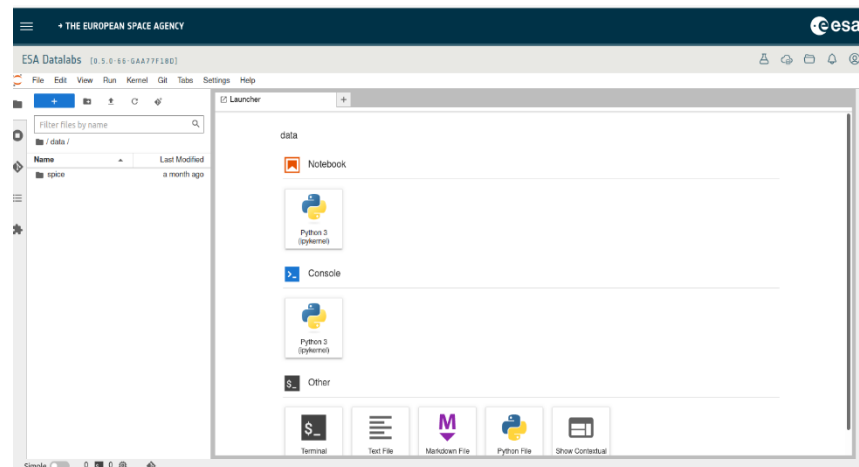
ESA Datalabs Features – Data Volumes



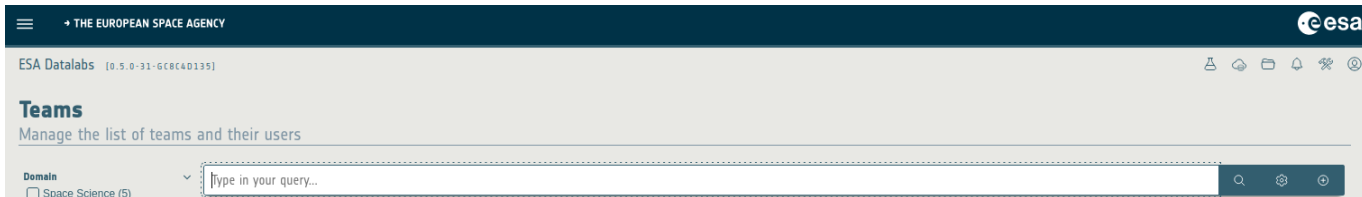
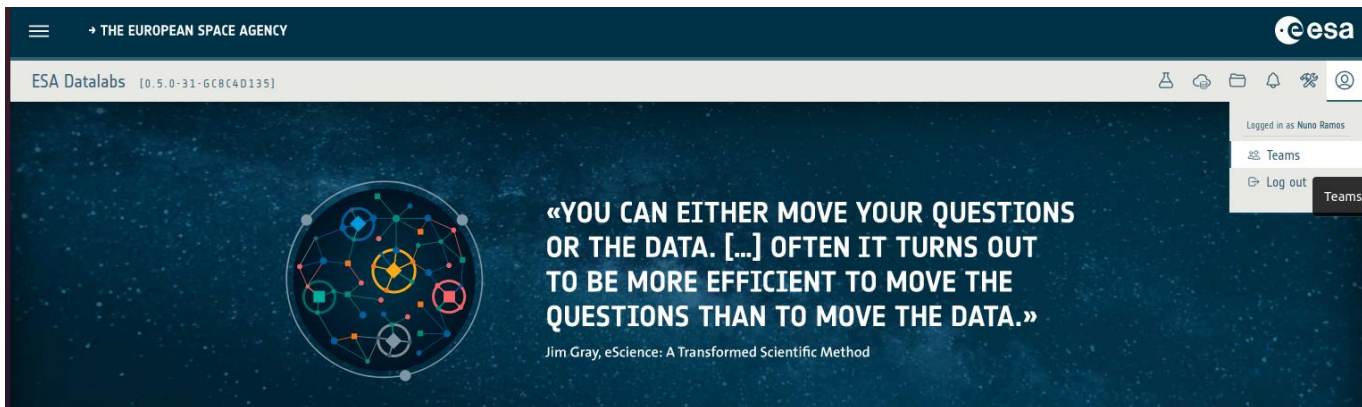
User Volumes Auto-mount



System Volumes Auto-mount



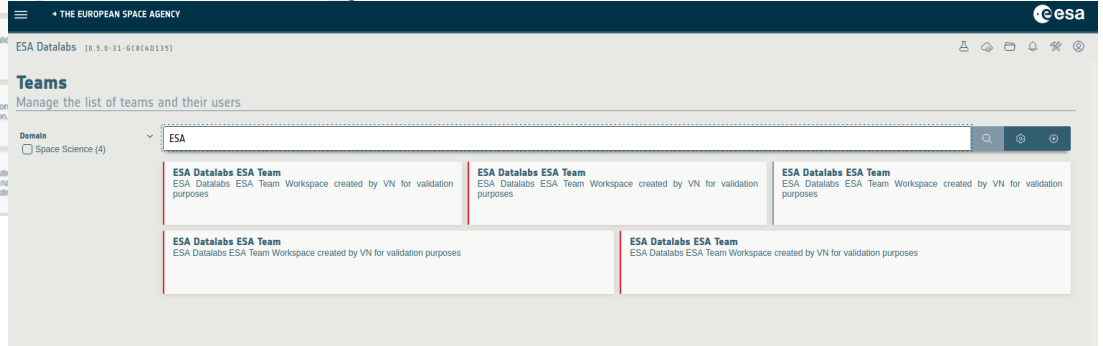
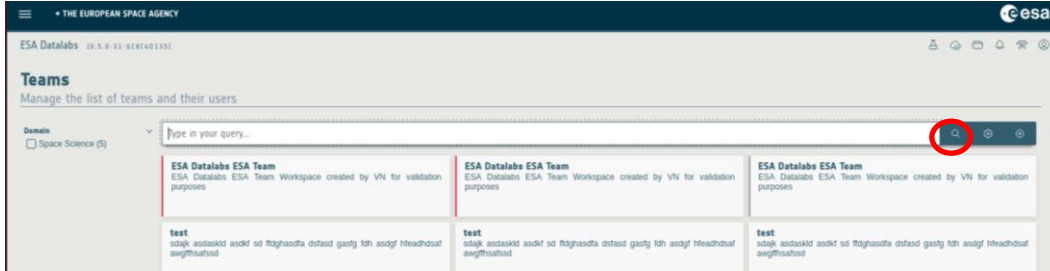
ESA Datalabs Features – Team Management



ESA Datalabs Features – Team Management



Search for a team (using keyword)



ESA Datalabs Features – Team Management



Creating a new team

Team Workspace Settings

Workspace Identifier
UsersManualTeam

Metadata
Additional detailed information about the team

Title
ESA Datalabs Team for User Manual

Short name
UsersManualTeam

Icon
 Upload

Domain
https://data.esa.int/esado/domainGeneral

DCM Type
https://data.esa.int/esado/Team

Description media type
text/plain

Description
ESA Datalabs Team for User Manual

Team Members
Manage access to team 'ESA Datalabs Team for User Manual'

Edit Team Metadata Delete Team

User	Name	Permissions	Actions
nramos	Nuno Ramos	Role: workspace-services/team-manager(UsersManualTeam) • workspace-services/manage-manager(UsersManualTeam) • workspace-services/view(UsersManualTeam)	demote to regular member remove user
		Role: workspace-services/team-member(UsersManualTeam) • workspace-services/view(UsersManualTeam)	

Add manager Add regular member



ESA Datalabs Features – Team Management



Adding a team member

User	Name	Permissions	Actions
nramos	Nuno Ramos	<ul style="list-style-type: none">workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)	<ul style="list-style-type: none">demote to regular memberremove user

User	Full Name
<input checked="" type="checkbox"/> dq	Duarte Quintela

User	Name	Permissions	Actions
dquintel	Duarte Quintela	<ul style="list-style-type: none">workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)workspace-services/team-member(UsersManualTeam)	<ul style="list-style-type: none">demote to regular memberremove user
nramos	Nuno Ramos	<ul style="list-style-type: none">workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)workspace-services/team-manager(UsersManualTeam)	<ul style="list-style-type: none">demote to regular memberremove user
rp001	Ricardo Pedrosa	<ul style="list-style-type: none">workspace-services/team-member(UsersManualTeam)workspace-services/team-member(UsersManualTeam)	<ul style="list-style-type: none">promote to managerremove user

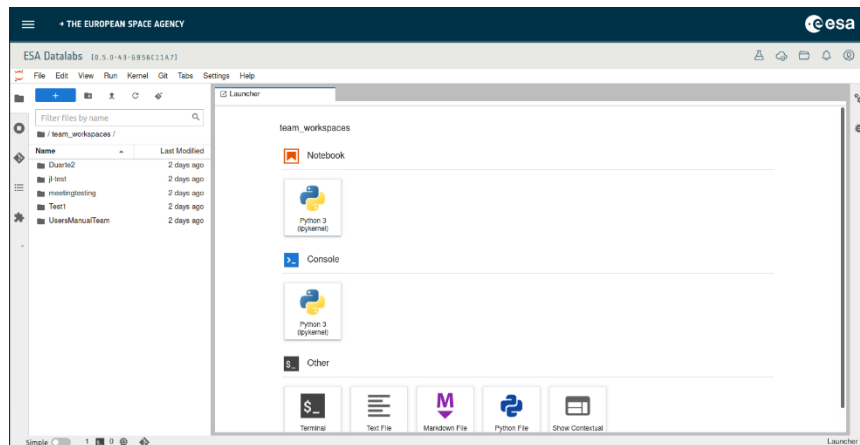
User	Full Name
<input checked="" type="checkbox"/> rp001	Ricardo Pedrosa
<input type="checkbox"/> nvalles	Ricardo Valles
<input type="checkbox"/> rvalle01	Ricardo Valles



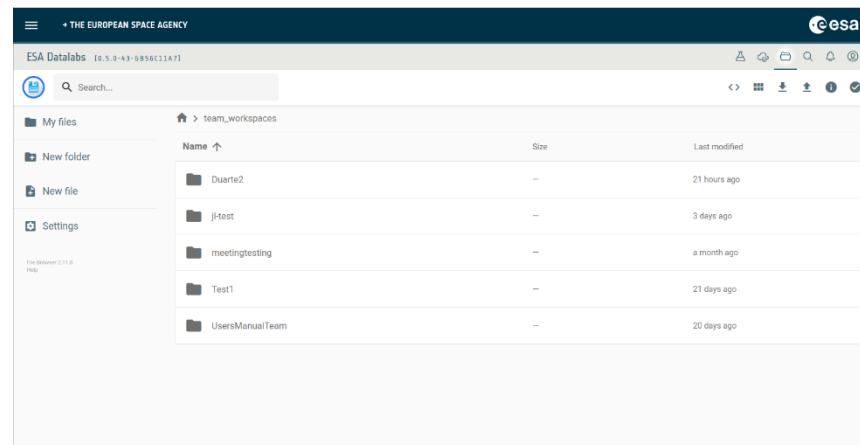
ESA Datalabs Features – Workspaces



JupyterLab



File Browser



WHY CORE SERVICES

ESA Datalabs: Why Core Services?



Provides common infrastructure for other services or applications like

- Data Discovery Portal (ESA's data holdings assets discovery and access)
- PIPEMAN (ESA Datalabs pipelines management system)
- SCI-APPS (Science App Store)



9:30 - 10:15

ESA Datalabs - Core Services: Hands-On Session

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Thank you!