



# Hyperloop Train System

$O^2$  Analysis Tutorial  
November 6th, 2023

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# Hyperloop Train System



- ❑ Train system for  $O^2$ , replacing the LEGO train system
- ❑ Allows organized analysis on the **GRID** and **Analysis Facilities**
- ❑ Fully integrated with  $O^2$ , allowing task configuration
- ❑ Individual workflows - known as wagons - are combined into trains
- ❑ **Skimmed / Derived data** stored for further processing in subsequent trains
- ❑ **Data available:** converted Run 2 data, Run 3 data and MC, Derived data
- ❑ Dedicated views for regular **users** and **operators**

- ❑ **Train support**
  - 24/5 Operation (different timezones)
  - Institutes: 1 in Americas, 2 in Europe, 1 in Asia
  - Shift-type support during working hours
  - Organized feedback sessions

## USER



MyAnalyses

AllAnalyses

Dashboard

## OPERATOR



Train Submission

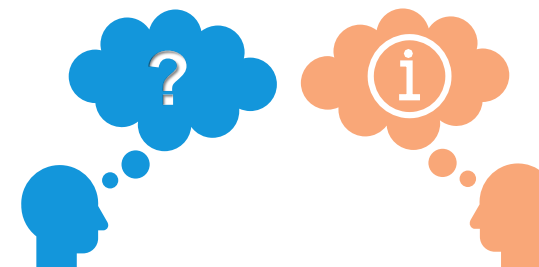
Train Runs

Datasets

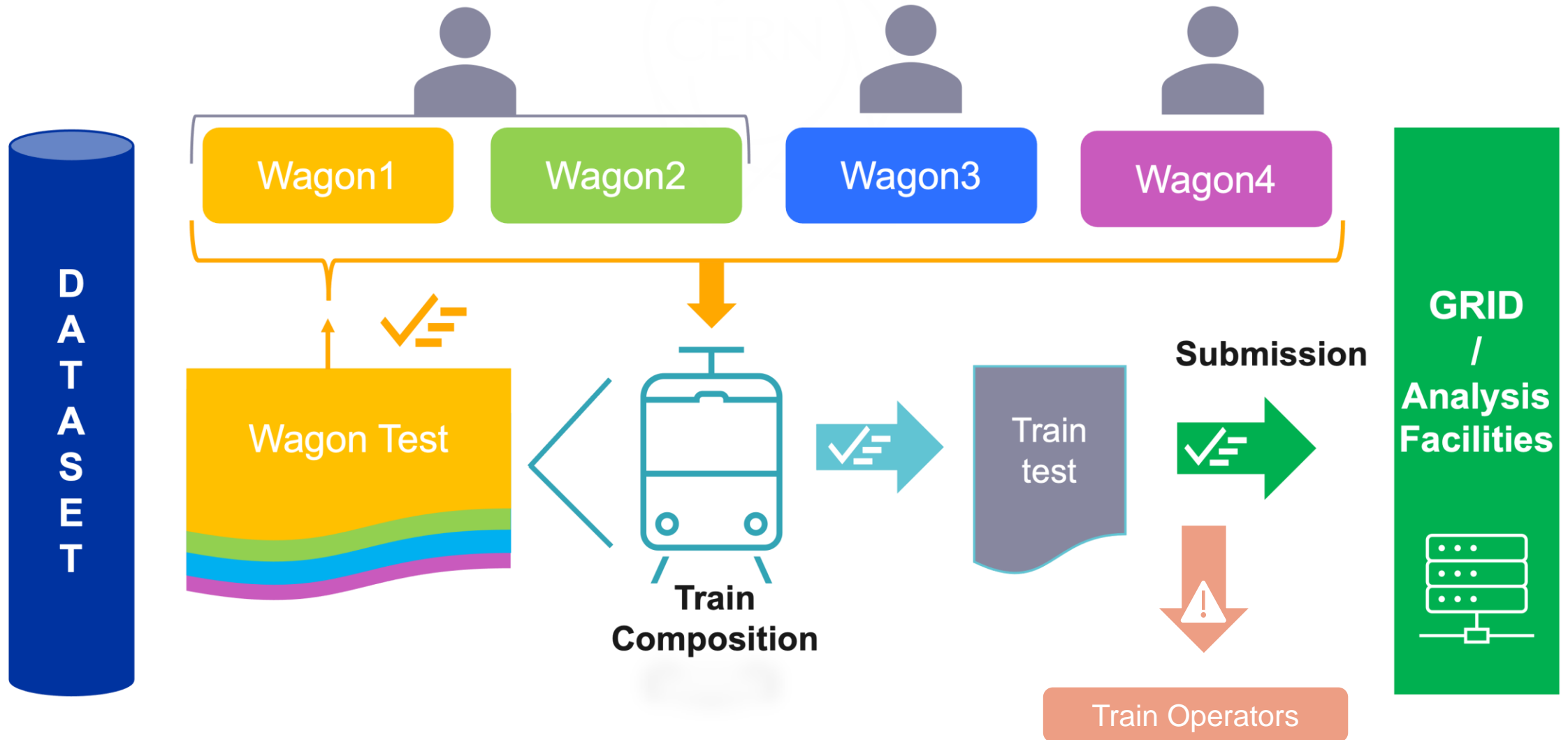
Derived Data

DPG runlists

Trains with issues



# Hyperloop Train System





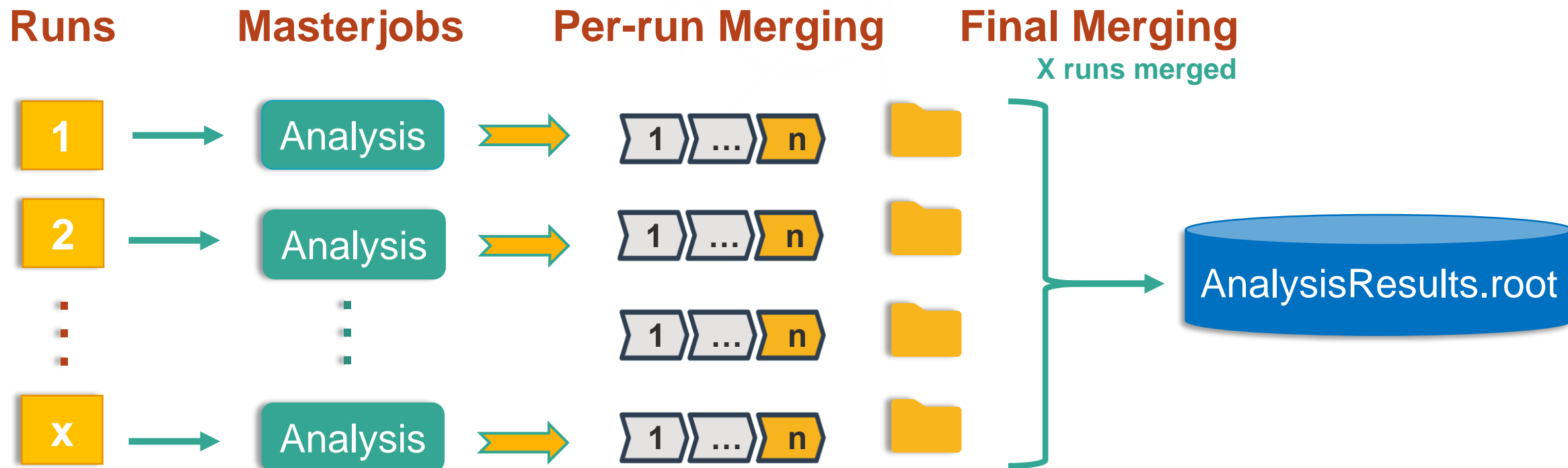
**There are 4 types of trains that can run on Hyperloop:**

1. Analysis train
2. Slim derived data train
3. Derived data train
4. Linked derived data train

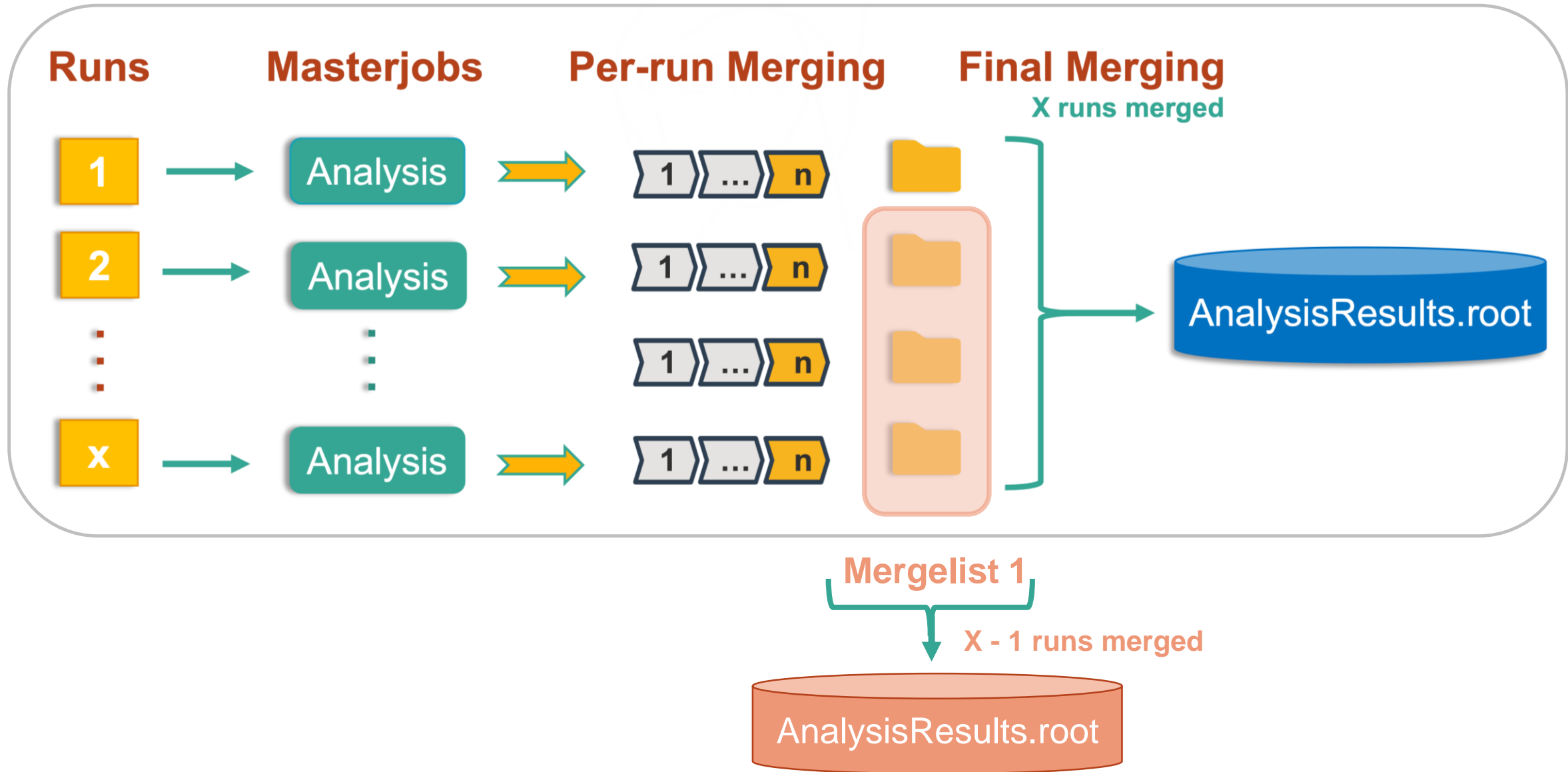
Let's see what are the differences between these train types

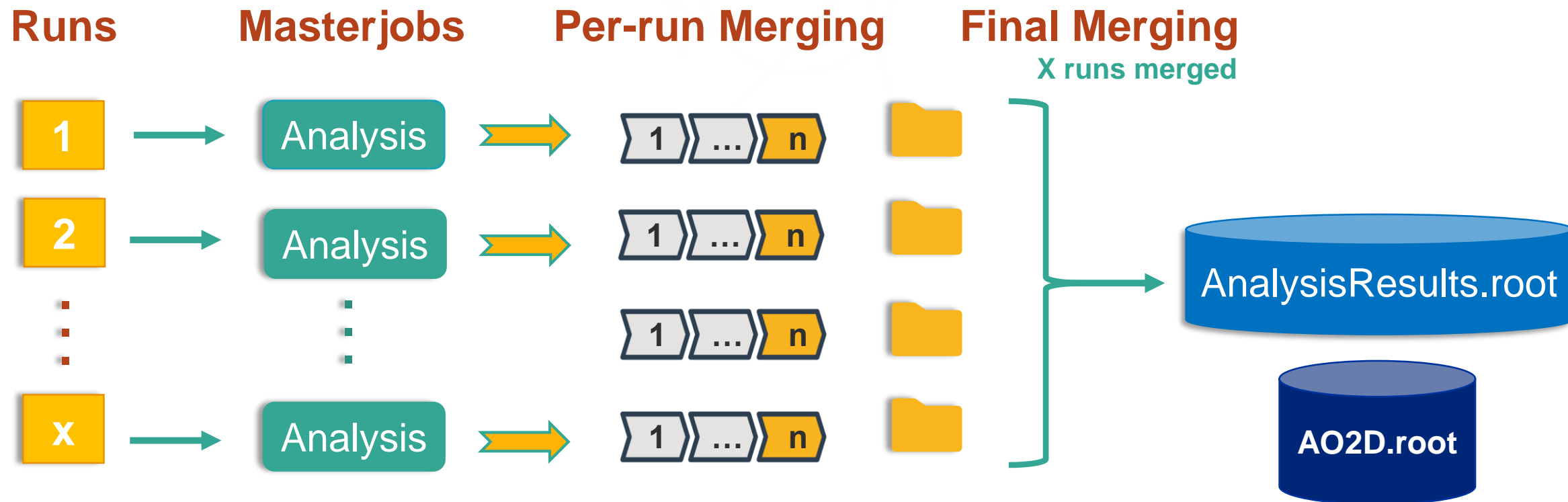






# Analysis Train (mergelists)

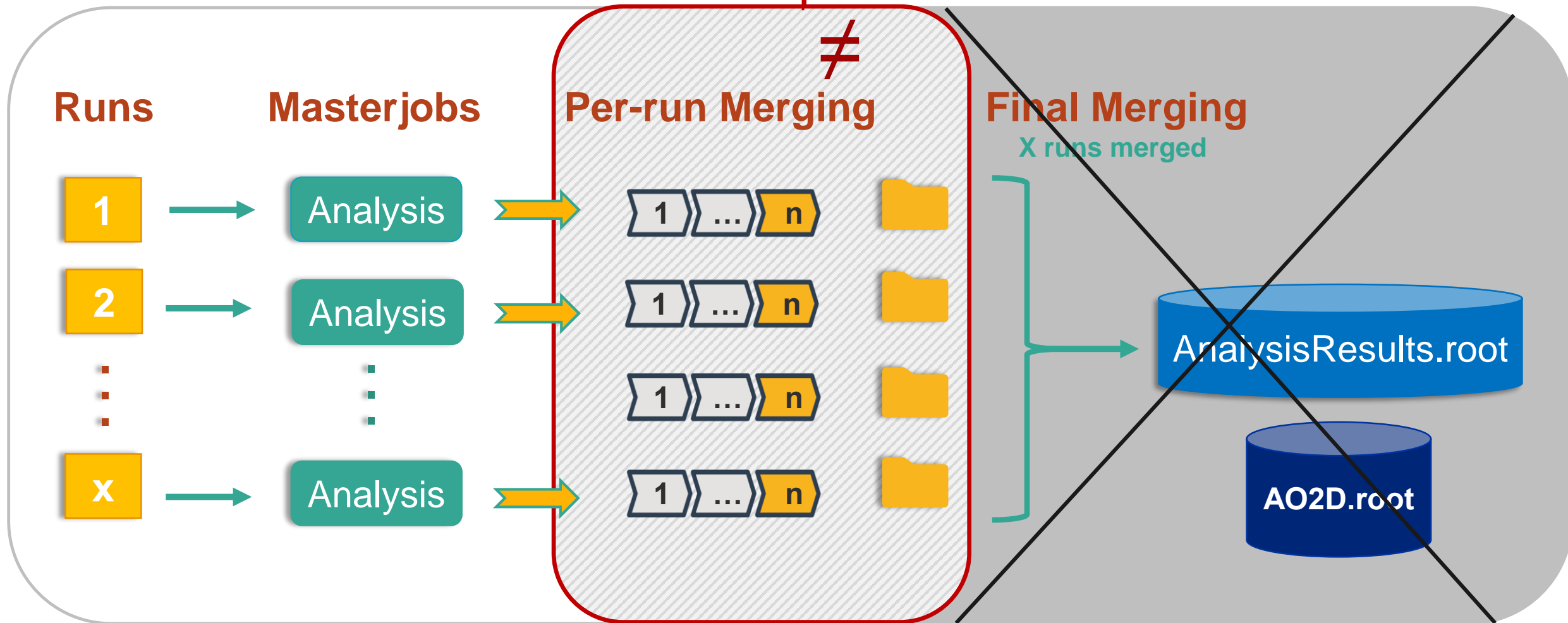


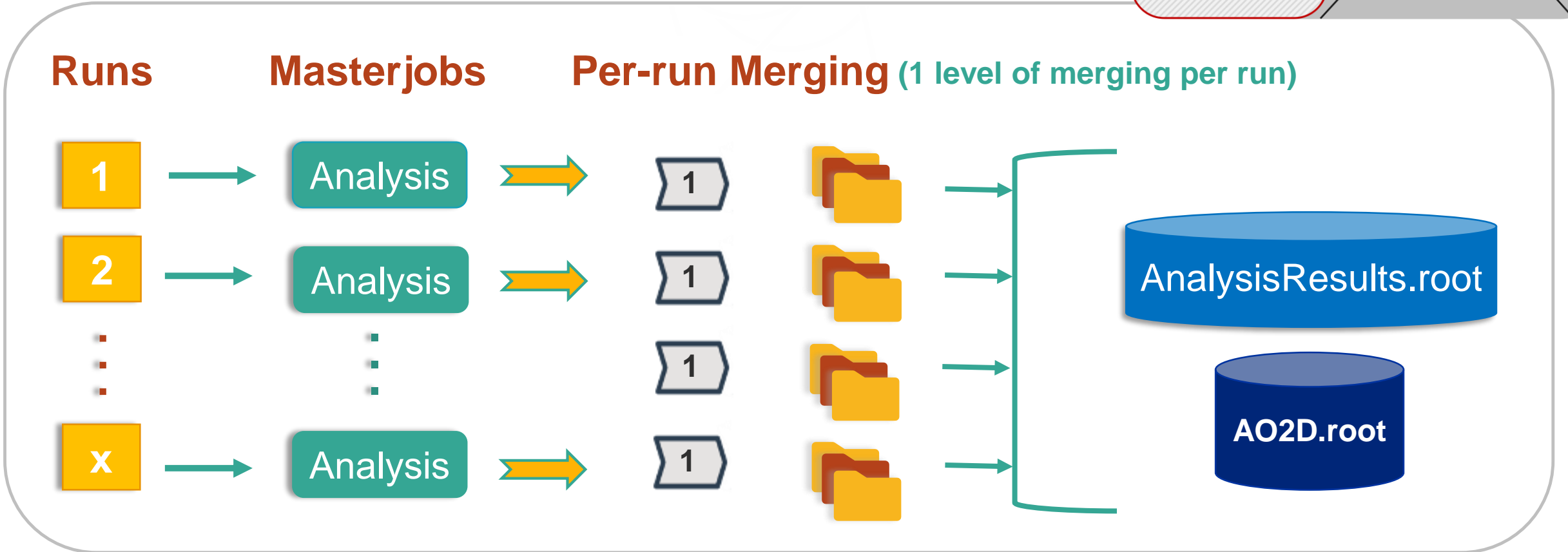
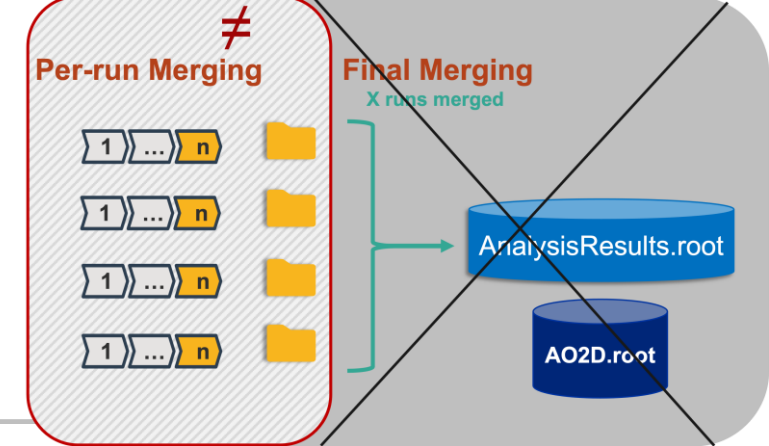


# Derived Data Train

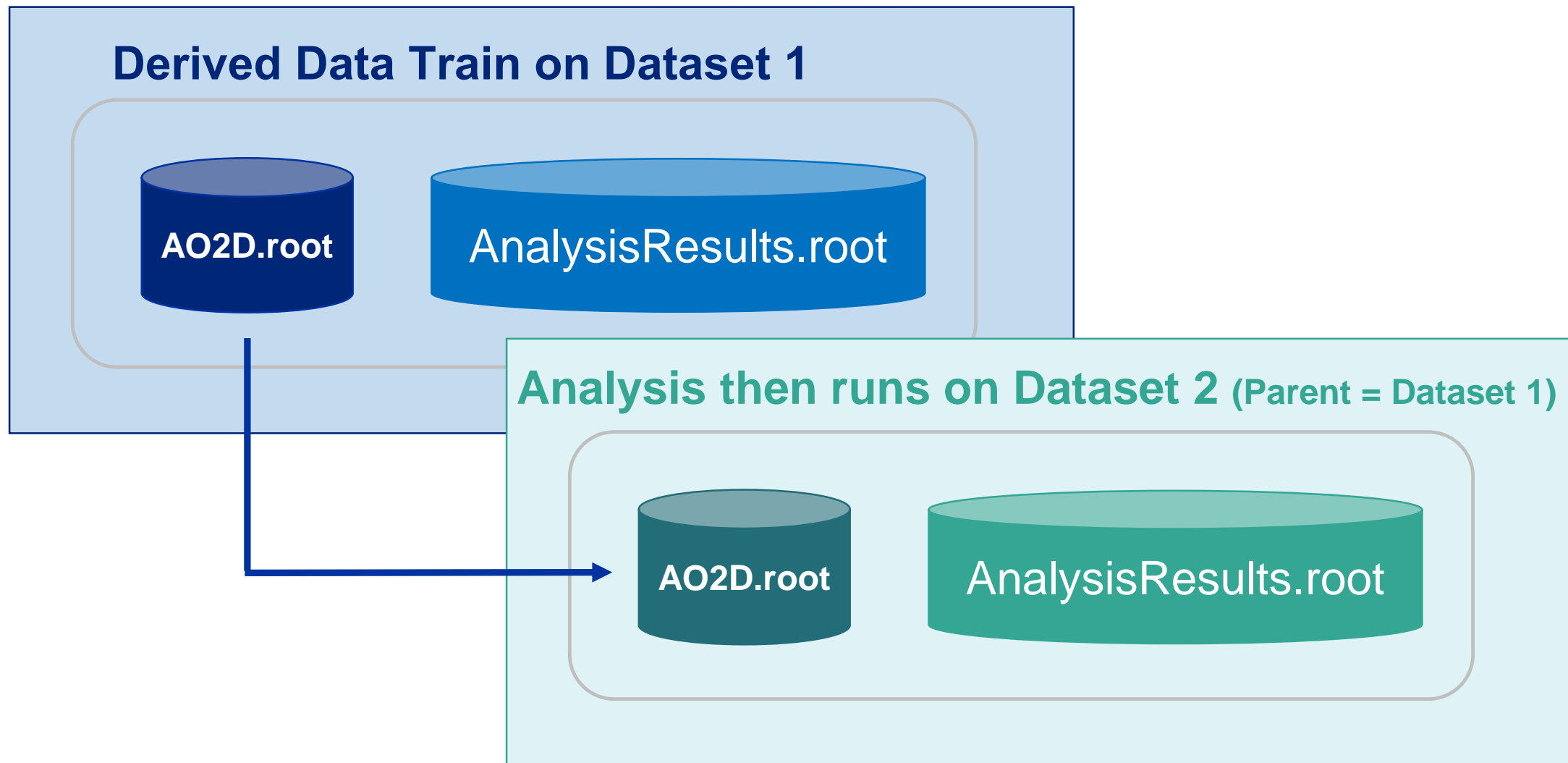


Significant differences!





# Linked Derived Data Train



# Train runs



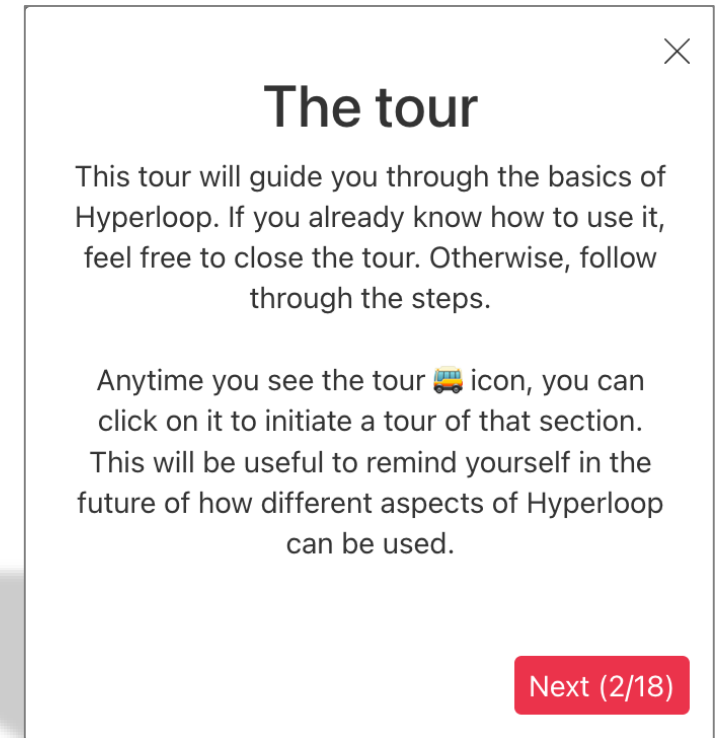
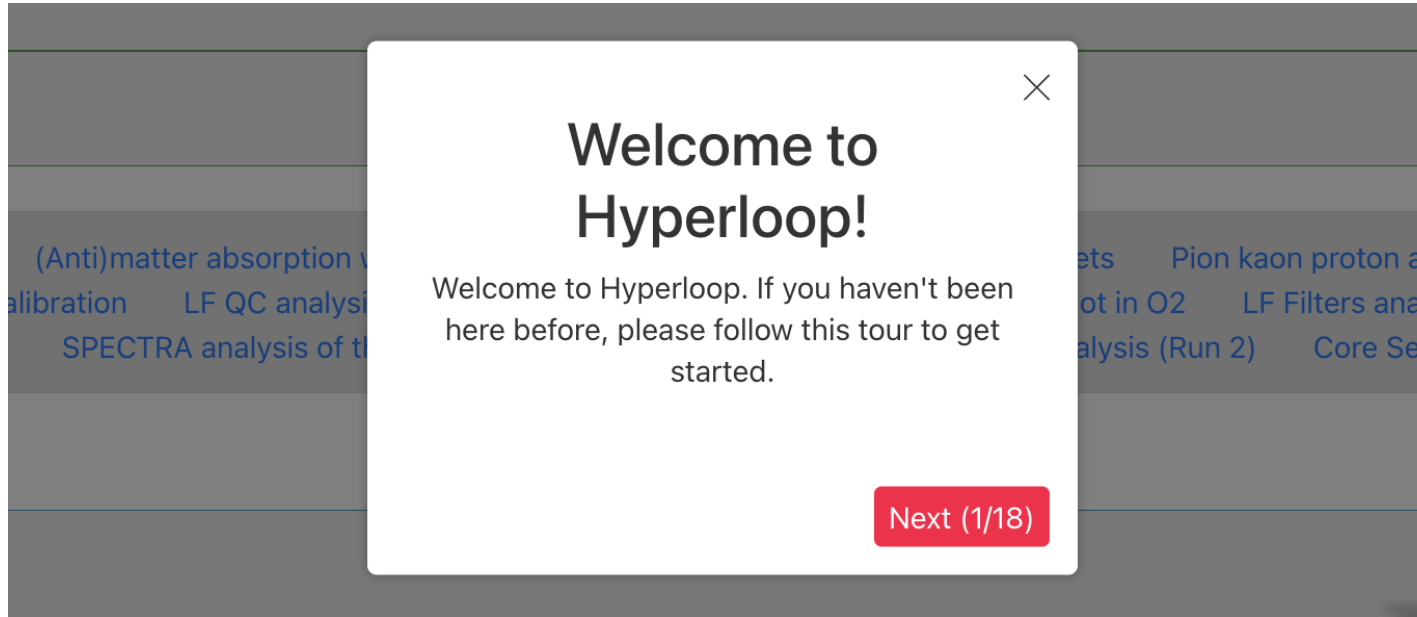
The train type is decided by operators at composition in the Train Submission page


1. **Analysis Train** - is a standard analysis train and no derived data will be produced
2. **Slim Derived Data** - reserved for derived data of **small output size**
  - Similarly to the standard derived data case, this train **will produce derived data** to be used for further analysis
  - The **results will be merged across runs** and are **not available to use in future train runs**
  - The data will be **automatically deleted** after a pre-set period of time
3. **Standard Derived data** - **will produce derived data** to be used for further analysis
  - The **results will not be merged across runs** and can be used **as input for future train runs**
4. **Linked Derived data** - this option is for **derived data which needs to access its parent file when it is processed**
  - The derived data file produced will remember its parent files, inheriting also their storage location
  - The **results will not be merged across runs** and can be **used as input for future train runs**
  - Datasets composed from this train need to have parent access level activated

	Specifics	Results merged across runs	Produces derived data	Can be used as input for future train runs
Analysis train		✓		
Standard derived data			✓	✓
Slim derived data	<ul style="list-style-type: none"> <li>For derived data of small output size</li> <li>Data will be automatically deleted</li> </ul>	✓	✓	
Linked derived data	<ul style="list-style-type: none"> <li>For derived data which needs to access its parent file when it is processed</li> <li>Derived data file produced will remember its parent files, inheriting also their storage location</li> <li>Datasets composed from this train need to have parent access level activated</li> </ul>		✓	✓



# New to Hyperloop? Take the tour!



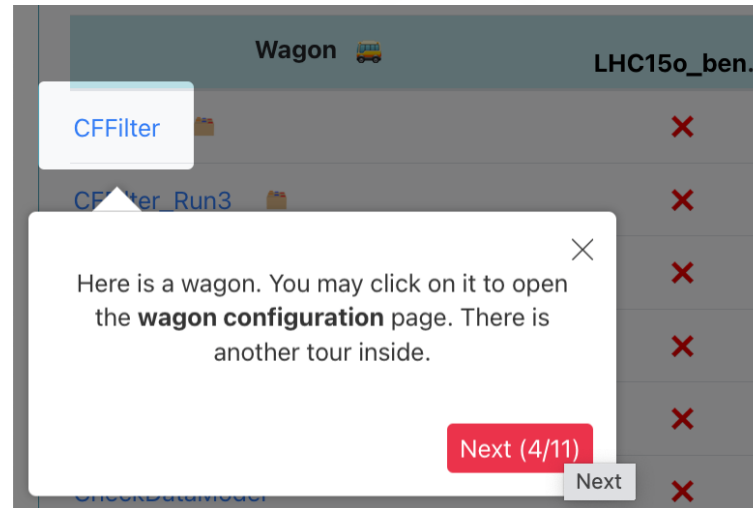
- When opening a page in Hyperloop that you did not visit before, a guided tour will explain key concepts
- Ideal for beginners, but also for refreshing knowledge (**many tours offer direct links to relevant sections of the documentation**)
- Where appropriate, when one tour ends, the next will begin to explain the next section of Hyperloop
- Tours can be exited at any time. Once closed, they will not automatically begin on future page visits
- A tour can be retaken anytime by clicking 

# New to Hyperloop? Take the tour!



## Currently available tours:

- My Analyses page
- Wagon view
- Wagon test view
- Train run view

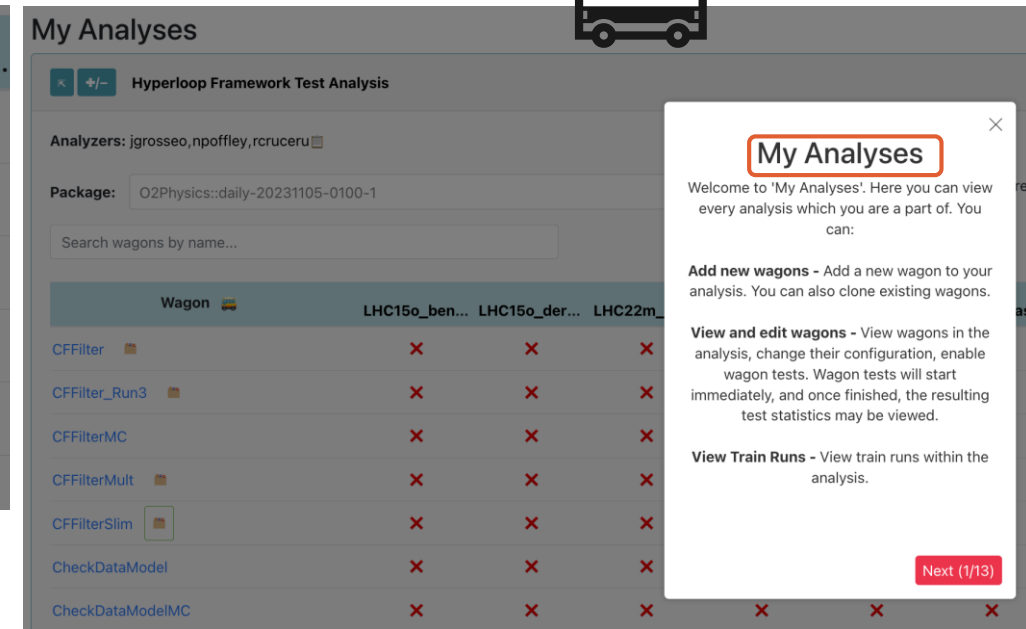


**Wagon** LHC15o\_ben...

CFFilter

Here is a wagon. You may click on it to open the **wagon configuration** page. There is another tour inside.

Next (4/11)

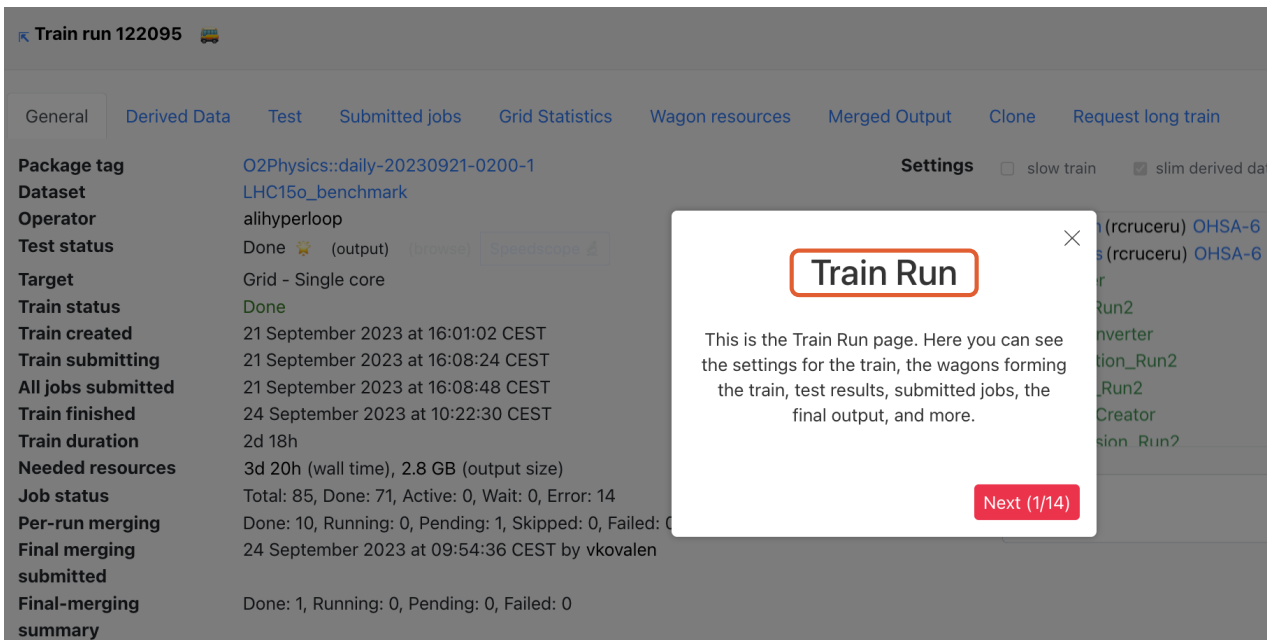


**My Analyses**

Welcome to 'My Analyses'. Here you can view every analysis which you are a part of. You can:

- Add new wagons** - Add a new wagon to your analysis. You can also clone existing wagons.
- View and edit wagons** - View wagons in the analysis, change their configuration, enable wagon tests. Wagon tests will start immediately, and once finished, the resulting test statistics may be viewed.
- View Train Runs** - View train runs within the analysis.

Next (1/13)



**Train run 122095**

General Derived Data Test Submitted jobs Grid Statistics Wagon resources Merged Output Clone Request long train

Package tag O2Physics::daily-20230921-0200-1

Dataset LHC15o\_benchmark

Operator alihyperloop

Test status Done (output) (browse) Speedscope

Target Grid - Single core

Train status Done

Train created 21 September 2023 at 16:01:02 CEST

Train submitting 21 September 2023 at 16:08:24 CEST

All jobs submitted 21 September 2023 at 16:08:48 CEST

Train finished 24 September 2023 at 10:22:30 CEST

Train duration 2d 18h

Needed resources 3d 20h (wall time), 2.8 GB (output size)

Job status Total: 85, Done: 71, Active: 0, Wait: 0, Error: 14

Per-run merging Done: 10, Running: 0, Pending: 1, Skipped: 0, Failed: 0

Final merging submitted 24 September 2023 at 09:54:36 CEST by vkovalen

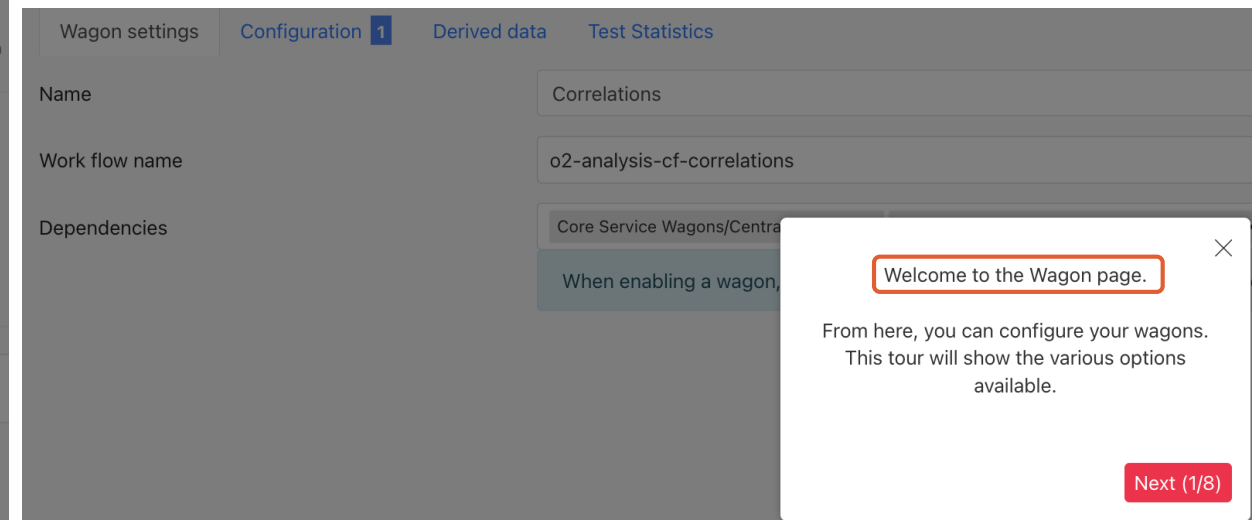
Final-merging Done: 1, Running: 0, Pending: 0, Failed: 0

summary

**Train Run**

This is the Train Run page. Here you can see the settings for the train, the wagons forming the train, test results, submitted jobs, the final output, and more.

Next (1/14)



**Wagon settings** Configuration 1 Derived data Test Statistics

Name Correlations

Work flow name o2-analysis-cf-correlations

Dependencies Core Service Wagons/Centra

When enabling a wagon,

**Welcome to the Wagon page.**

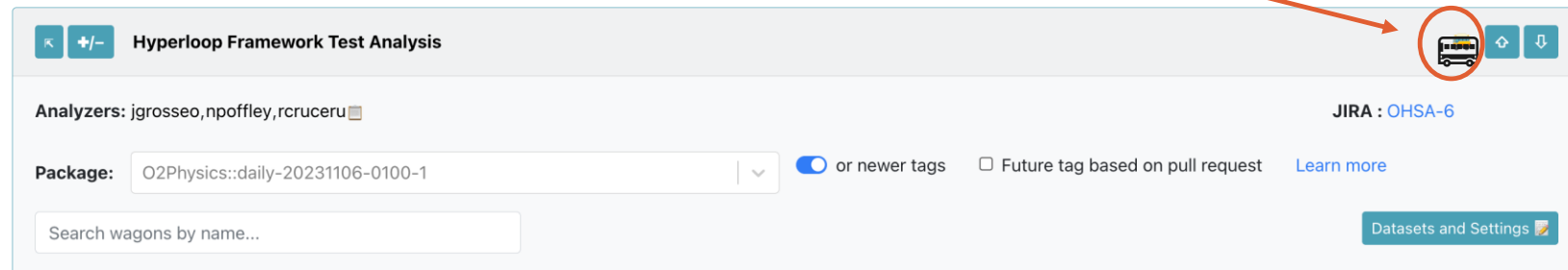
From here, you can configure your wagons. This tour will show the various options available.

Next (1/8)

- Displays all the analyses the user belongs to
- The analyses are defined in JIRA of the respective PWG, along with the users that will be part of them
- Several analyzers can share an analysis
- Datasets are enabled per analysis
- The user decides the package tag

## My Analyses

Click to start the tour



Hyperloop Framework Test Analysis

Analyzers: jgrosseo,npoffley,rcruceru

Package: O2Physics::daily-20231106-0100-1

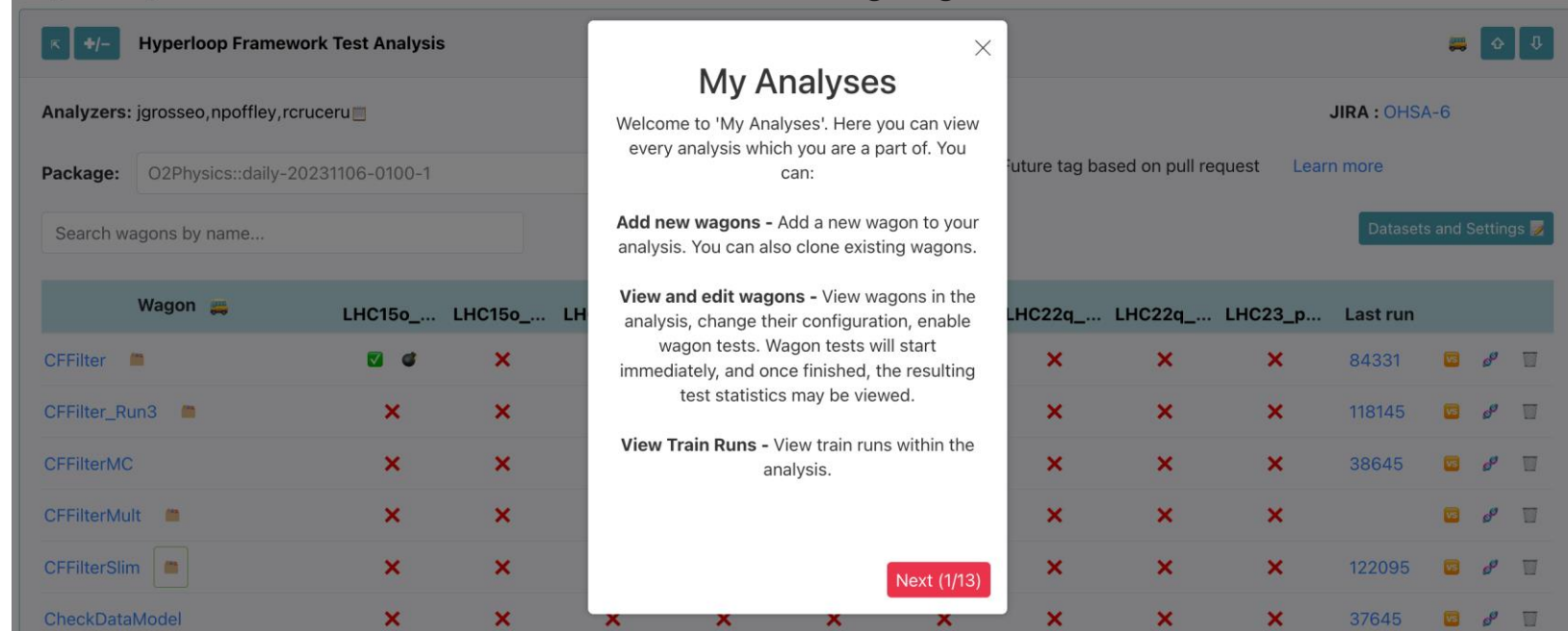
Search wagons by name...

JIRA : OHSA-6

or newer tags Future tag based on pull request Learn more

Datasets and Settings

## My Analyses



Hyperloop Framework Test Analysis

Analyzers: jgrosseo,npoffley,rcruceru

Package: O2Physics::daily-20231106-0100-1

Search wagons by name...

JIRA : OHSA-6

Future tag based on pull request Learn more

Datasets and Settings

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**View Train Runs** - View train runs within the analysis.

Next (1/13)

Wagon	LHC15o_...	LHC15o_...	LHC15o_...	LHC22q_...	LHC22q_...	LHC23_p...	Last run
CFFilter	✓	✗	✗	✗	✗	✗	84331
CFFilter_Run3	✗	✗	✗	✗	✗	✗	118145
CFFilterMC	✗	✗	✗	✗	✗	✗	38645
CFFilterMult	✗	✗	✗	✗	✗	✗	122095
CFFilterSlim	✗	✗	✗	✗	✗	✗	37645
CheckDataModel	✗	✗	✗	✗	✗	✗	



- Datasets are enabled per analysis
- The user decides the package tag

**My Analyses**

HF O2 developments for ALICE3 pp Open HF 2.0 T

Analyzers: apalasci,dthomas,fcolamar,fgrosa,ginnocen,jseo,ldellost,pchrist,skundu,strogolo,vkucera

Package: O2Physics::nightly-20220117-1 or newer tags Future tag based on pull request

Search wagons by name... NEW

Wagon	LHC21d9_...	LHC21d9_...	LHC21d9i...	LHC21d9f...	LHC21d9...	LHC21d9h...	LHC21d9...	Last run
alice3-trackextension	x	x	x	x	x	x	x	18434
hf-candidate-creator-2prong-openhf	x	x	x	x	x	✓	x	18434

PWG-HF / PWGHF-284

## HF O2 developments for ALICE3 pp Open HF 2.0 T

Edit Add comment Create Analysis Paper More Approve to start Go to Dropped Workflow Export

**Details**

Type: Analysis Status: OPEN  
 Priority: Major (View Workflow)  
 Component/s: PWG-HF Resolution: Unresolved  
 Labels: None  
 Run 3 analysis: Yes  
 Data Set: \_\_ placeholder \_\_  
 Public Result: Yes  
 To do list: EMPTY

**People**

Assignee: Andrea Dubla  
 Reporter: Gian Michele Innocenti  
 Analyzers: Antonio Palasciano, Deepa Thomas, Fabio Colamaria, Fabrizio Grosa, Gian Michele Innocenti, Jin Joo Seo, Luigi Dello Stritto, Panos Christakoglou, Sourav Kundu, Stefano Trogolo, Vit Kucera ...



- My Analyses

Click to start the tour

HF O2 developments for ALICE3 pp Open HF 2.0 T

Analyzers: apalasci,dthomas,fcolamar,fgrosa,ginnocen,jseo,ldellost,pchrist,skundu,strogolo,vkucera

JIRA : PWGHF-284

Package: O2Physics::nightly-20220117-1 or newer tags Future tag based on pull request

Search wagons by name...

Datasets and Settings

×

+/-

HF O2 developments for ALICE3 pp Open HF 2.0 T

Receive emails if test wagon fails

Only user who enabled the wagon

Enabled datasets in HF O2 development

LHC21d9\_pp\_test

LHC21d9\_pp\_full

LHC21d9g\_pp

LHC21d9h\_pp

None

Only user who enabled the wagon

All analyzers

Enable dataset

Data

MC

Kr-Kr

Pb-Pb

Xe-Xe

p-Pb

p-p

Anchor

Not anchored

MC Tag

LHC21d9f

Dataset

LHC21d9f\_pp

+ Add to analysis

Done

LHC21d9...

Last run

✗

18434

VS

✗

18434

VS

✗

18147

VS

✗

15031

VS

✗

18147

VS

✗

18434

VS

✗

17068

VS

✗

11365

VS

✗

VS

✗

15031

VS

✗

15031

VS

✗

18147

VS

✗

18147

VS

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My Analyses
All Analyses
Dashboard

AliHyperloop

Train Submission
Train Runs
Datasets
DPG Runlists
?

## My Analyses

<
+/-

HF O2 developments for ALICE3 pp Open HF 2.0 T

Analyzers:
apalasci,dthomas,fcoulamar,fgrosa,ginnocen,jseo,ldellost,pchrist,skundu,strogolo,vkucera

JIRA :
PWGHF-284

Package:
O2Physics::nightly-20220117-1

☒ or newer tags
☐ Future tag based on pull request

Datasets and Settings

Search

O2Physics::nightly-20220117-1
O2Physics::daily-20220116-1557-1
O2Physics::nightly-20220116-1
O2Physics::nightly-20220115-1
O2Physics::nightly-20220114-1
O2Physics::nightly-20220113-1
O2Physics::daily-20220113-1100-1

	d9i...	LHC21d9f...	LHC21d9...	LHC21d9h...	LHC21d9...	Last run
alice3-trac	×	×	×	×	×	18434
hf-candidate	×	×	✓	⚙️	×	18434
hf-candidate	×	×	×	×	×	18147
hf-candidate	×	×	×	×	×	15031
hf-candidate-creator-xicc	×	×	×	×	×	18147
hf-candidate-selector-bPlusToD0Pi	×	×	×	×	×	18434
hf-candidate-selector-d0	×	×	×	×	×	17068
hf-candidate-selector-d0-OLD	×	×	×	×	×	11365
hf-candidate-selector-dplus	×	×	×	×	×	
hf-candidate-selector-lb	×	×	×	×	×	15031
hf-candidate-selector-lc	×	×	×	×	×	15031
hf-candidate-selector-xic	×	×	×	×	×	18147
hf-candidate-selector-xicc	×	×	×	×	×	18147

Raluca Cruceru

Hyperloop Train System

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## Deciding on package tag:

- Choose a tag from the **dropdown** and the wagon will be tested only with that specific tag
- Selecting **or newer tags** will allow the wagon to be included in a train run that has the previously selected tag or a **newer tag** (this is useful to group analysis together in a train)

My Analyses
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### My Analyses

HF O2 developments for ALICE3 pp Open HF 2.0 T

Analyzers: apalasci,dthomas,fcollamar,fgrosa,ginnocen,jseo,ldellost,pchrist,skundu,strogolo,vkcucera
JIRA : PWGHF-284

Package: O2Physics::nightly-20220117-1
☒ or newer tags
☐ Future tag based on pull request

Search v
O2Physics::nightly-20220117-1
O2Physics::daily-20220116-1557-1
O2Physics::nightly-20220116-1
O2Physics::nightly-20220115-1
O2Physics::nightly-20220114-1
O2Physics::nightly-20220113-1
O2Physics::daily-20220113-1100-1

	d9i...	LHC21d9f...	LHC21d9...	LHC21d9h...	LHC21d9...	Last run
alice3-trac	×	×	×	×	×	18434
hf-candida	×	×	✓	✓	×	18434
hf-candida	×	×	×	×	×	18147
hf-candida	×	×	×	×	×	15031
hf-candidate-creator-xicc	×	×	×	×	×	18147
hf-candidate-selector-bPlusToD0Pi	×	×	×	×	×	18434
hf-candidate-selector-d0	×	×	×	×	×	17068
hf-candidate-selector-d0-OLD	×	×	×	×	×	11365
hf-candidate-selector-dplus	×	×	×	×	×	
hf-candidate-selector-lb	×	×	×	×	×	15031
hf-candidate-selector-lc	×	×	×	×	×	15031
hf-candidate-selector-xic	×	×	×	×	×	18147
hf-candidate-selector-xicc	×	×	×	×	×	18147

Datasets and Settings

## Deciding on package tag:

- Choose a tag from the **dropdown** and the wagon will be tested only with that specific tag
- Selecting **or newer tags** will allow the wagon to be included in a train run that has the previously selected tag or a **newer tag** (*this is useful to group analysis together in a train*)
- Future tag based on PR :**
  - The wagon is tested and runs once the pull request is included in a tag
  - Once the PR is part of the tag, the wagon can be tested on that tag or a future tag

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### My Analyses

HF O2 developments for ALICE3 pp Open HF 2.0 T

Analyzers: apalasci,dthomas,fcolamar,fgrosa,ginnocen,jseo,ldellost,pchrist,skundu,strogolo,vkucera
JIRA : PWGHF-284

Package: Select pull request...
☒ Future tag based on pull request
Learn more

Search
#1344 / PWGHF: mass fitter for d2h
#1343 / catch also tracks of particles of other MC collisions
#1342 / TOF PID: dev process to speed up CPU
#1341 / Updates of DGBCCandProducer
#1340 / new corrections were added
#1339 / DPG: update efficiency task
#1338 / flag propagated tracks

	21d9...	LHC21d9h...	LHC21d9...	Last run			
alice3-tra	×	×	×	18434	vs		
hf-candid	×	✓	×	18434	vs		
hf-candid	×	×	×	18147	vs		
hf-candid	×	×	×	15031	vs		
hf-candidate-creator-xicc	×	×	×	18147	vs		
hf-candidate-selector-bPlusToD0Pi	×	×	×	18434	vs		
hf-candidate-selector-d0	×	×	×	17068	vs		
hf-candidate-selector-d0-OLD	×	×	×	11365	vs		
hf-candidate-selector-dplus	×	×	×		vs		
hf-candidate-selector-lb	×	×	×	15031	vs		
hf-candidate-selector-lc	×	×	×	15031	vs		
hf-candidate-selector-xic	×	×	×	18147	vs		
hf-candidate-selector-xicc	×	×	×	18147	vs		



- Wagons defined from  $O^2$  workflows
- Displays the list of train runs per analysis
- The user can:
  - Add/remove wagons
  - Enable/disable wagon > immediate wagon test
  - Clone/compare wagons

My Analyses All Analyses Dashboard AliHyperloop Train Submission Train Runs Datasets DPG Runlists ?

































**O2 Development**


Analyzers: aalkin,eulisse,jgrosseo JIRA : OHSA-2

Package: O2Physics::nightly-20211118-1 or newer tags Future tag based on pull request


Search wagons by name...

Datasets and Settings

Wagon	LHC15o_test	LHC15o_de...	LHC21d9m...	LHC21d9n_...	Last run	
alice3-centrality	×	×	×	×	13705	VS  
alice3-trackextension	×	×	×	×	13705	VS  
CFFilter_WriterTest	✓ 	×	×	×		VS  
Correlations	✓ 	×	×	×		VS  
CorrelationsFilteredOnTheFly	✓ 	×	×	×		VS  
CorrelationsOnDerivedData	×	×	×	×		VS  
hf-candidate-creator-3prong-openhf	×	×	×	×	13705	VS  
hf-candidate-selector-lc	Click to enable 	×	×	×	13705	VS  
hf-task-lc	×	×	×	×	13705	VS  
hf-track-index-skims-creator-2-3-prong-openhf	×	×	×	×	13705	VS  
HistogramsFull	Click to disable 	×	×	×	12328	VS  
SpectraTPCTiny	✓ 	×	×	×		VS  
TrackExtension	×	×	×	×		VS  

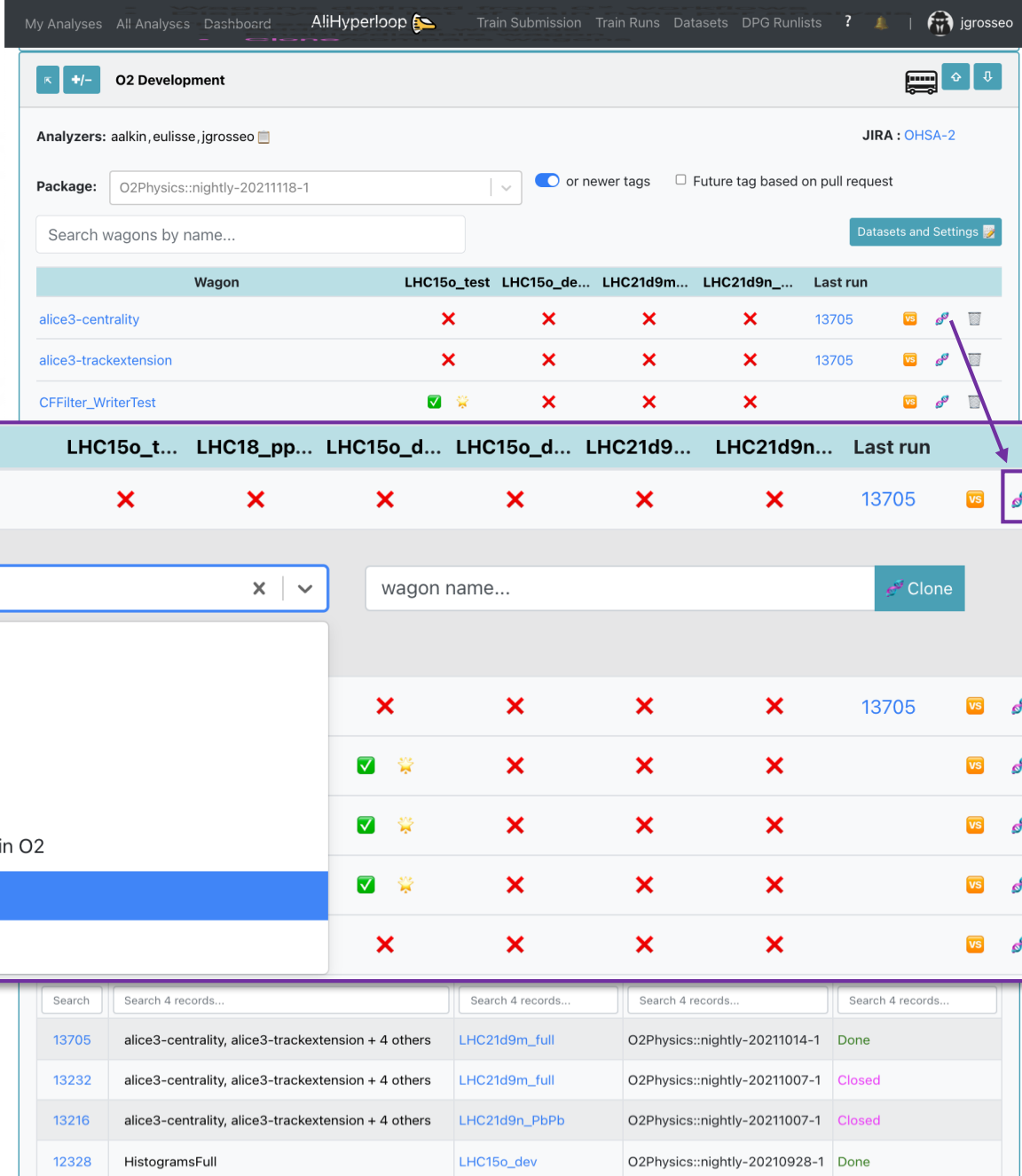
 Add new wagon or clone wagon from other analysis)

**Train Runs**

 Show all history

Train	Wagons	Dataset	Package tag	Status
13705	alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211014-1	Done
13232	alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211007-1	Closed
13216	alice3-centrality, alice3-trackextension + 4 others	LHC21d9n_PbPb	O2Physics::nightly-20211007-1	Closed
12328	HistogramsFull	LHC15o_dev	O2Physics::nightly-20210928-1	Done

- Wagons defined from O<sup>2</sup> workflows
- Displays the list of train runs per analysis
- The user can:
  - Add/remove wagons
  - Enable/disable wagon
  - Clone/compare wagons



The screenshot shows the 'O2 Development' analysis page in the Hyperloop Train System. The page displays a table of wagons and their train runs. A dropdown menu is open, showing a list of available wagons. A red box highlights the 'Clone' button in the top right corner of the wagon table.

Wagon	LHC15o_test	LHC15o_de...	LHC21d9m...	LHC21d9n...	Last run
alice3-centrality	×	×	×	×	13705
alice3-trackextension	×	×	×	×	13705
CFFilter_WriterTest	✓	×	×	×	

Wagon: O2 Development

Core Service Wagons

Service Wagons HF

Hyperloop Framework Test Analysis

O2 Integration Test Analysis

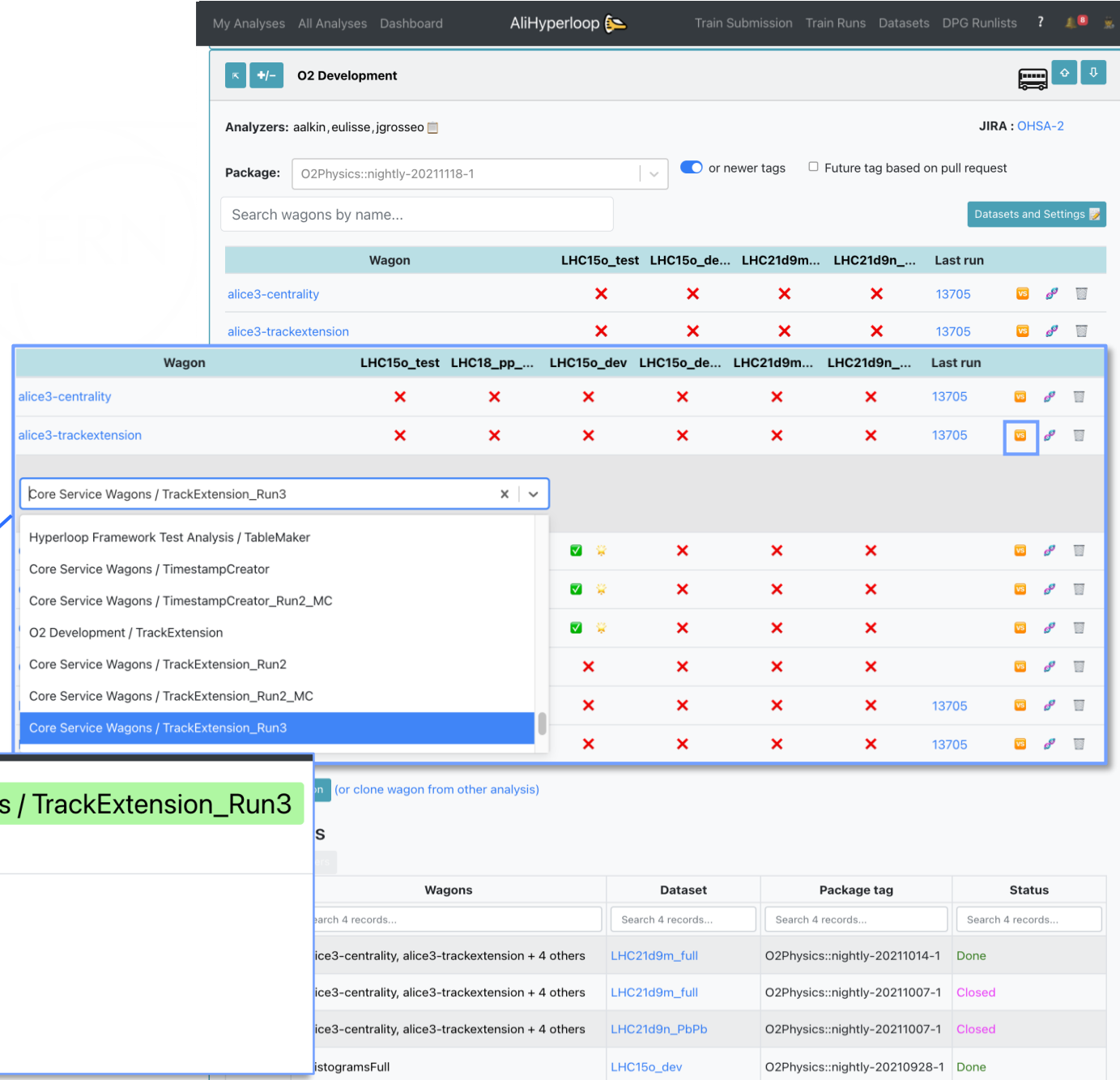
SPECTRA analysis of the spectra with TPC in O2

O2 Development

Pilot beam MC QA

Search	Search 4 records...	Search 4 records...	Search 4 records...	Search 4 records...
13705	alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211014-1	Done
13232	alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211007-1	Closed
13216	alice3-centrality, alice3-trackextension + 4 others	LHC21d9n_PbPb	O2Physics::nightly-20211007-1	Closed
12328	HistogramsFull	LHC15o_dev	O2Physics::nightly-20210928-1	Done

- Wagons defined from  $O^2$  workflows
- Displays the list of train runs per analysis
- The user can:
  - Add/remove wagons
  - Enable/disable wagon
  - Clone/**compare** wagons



The screenshot displays the AliHyperloop web interface. At the top, navigation links include "My Analyses", "All Analyses", "Dashboard", "Train Submission", "Train Runs", "Datasets", and "DPG Runlists". The main section is titled "O2 Development" and shows configuration for "Analyzers: aalkin,eulisse,jgrosseo" and "Package: O2Physics::nightly-20211118-1". A search bar for wagons is present.

Two tables are shown, comparing different wagon configurations. The first table lists "alice3-centrality" and "alice3-trackextension" with status indicators (red X) for various datasets. The second table lists "alice3-centrality" and "alice3-trackextension" with status indicators (green checkmarks) for various datasets. A dropdown menu is open, showing a list of wagons, with "Core Service Wagons / TrackExtension\_Run3" selected.

At the bottom, a comparison view is shown for "O2 Development / alice3-trackextension" vs "Core Service Wagons / TrackExtension\_Run3". The comparison view includes tabs for "Wagon settings", "Configuration", and "Derived data". The "Configuration" tab is active, showing details for the selected wagon, including its name, workflow, and dependencies.

Wagon	LHC15o_test	LHC15o_de...	LHC21d9m...	LHC21d9n...	Last run
alice3-centrality	×	×	×	×	13705
alice3-trackextension	×	×	×	×	13705

Wagon	LHC15o_test	LHC18_pp...	LHC15o_dev	LHC15o_de...	LHC21d9m...	LHC21d9n...	Last run
alice3-centrality	×	×	×	×	×	×	13705
alice3-trackextension	×	×	×	×	×	×	13705

Wagons	Dataset	Package tag	Status
alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211014-1	Done
alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211007-1	Closed
alice3-centrality, alice3-trackextension + 4 others	LHC21d9n_PbPb	O2Physics::nightly-20211007-1	Closed
histogramsFull	LHC15o_dev	O2Physics::nightly-20210928-1	Done

O2 Development

Analyzers: aalkin,eulisse,jgrosseo

JIRA : OHSA-2

Package: O2Physics::nightly-2021118-1

☒ or newer tags
☐ Future tag based on pull request

Datasets and Settings

Wagon	LHC15o_test	LHC15o_de...	LHC21d9m...	LHC21d9n...	Last run
alice3-centrality	✗	✗	✗	✗	13705
alice3-trackextension	✗	✗	✗	✗	13705
CFFilter_WriterTest	✓	✗	✗	✗	
Correlations	✓	✗	✗	✗	
CorrelationsFilteredOnTheFly	✓	✗	✗	✗	
CorrelationsOnDerivedData	✗	✗	✗	✗	
hf-candidate-creator-3prong-openhf	✗	✗	✗	✗	13705
hf-candidate-selector-lc	✗	✗	✗	✗	13705
hf-task-lc	✗	✗	✗	✗	13705
hf-track-index-skims-creator-2-3-prong-openhf	✗	✗	✗	✗	13705
HistogramsFull	✓	✗	✗	✗	12328
SpectraTPCTiny	✓	✗	✗	✗	
TrackExtension	✗	✗	✗	✗	

+ Add new wagon

or clone wagon from other analysis

Train Runs

Clear all filters

Train	Wagons	Dataset	Package tag	
13705	alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211014-1	Done
13232	alice3-centrality, alice3-trackextension + 4 others	LHC21d9m_full	O2Physics::nightly-20211007-1	Closed
13216	alice3-centrality, alice3-trackextension + 4 others	LHC21d9n_PbPb	O2Physics::nightly-20211007-1	Closed
12328	HistogramsFull	LHC15o_dev	O2Physics::nightly-20210928-1	Done

# How to create a wagon

- Go to **My Analyses** page
- Click **Add new wagon** within your analysis
- This will open a pop-up window:
  - Insert wagon name
  - Choose Package tag
  - Select Workflow name
  - Click Save to create your new wagon



Add new wagon in Hyperloop Framework Test Analysis

Name

WagonName ✓

Package

VO\_ALICE@O2Physics::nightly-20221011-1

Work flow name

VO\_ALICE@O2Physics::nightly-20221011-1  
VO\_ALICE@O2Physics::daily-20221010-1400-1  
VO\_ALICE@O2Physics::nightly-20221010-1  
VO\_ALICE@O2Physics::daily-20221010-1000-1  
VO\_ALICE@O2Physics::nightly-20221009-1  
VO\_ALICE@O2Physics::nightly-20221008-1  
VO\_ALICE@O2Physics::nightly-20221007-1

Save

Add new wagon in Hyperloop Framework Test Analysis

Name

WagonName ✓

Package

VO\_ALICE@O2Physics::nightly-20221011-1

Work flow name

o2-analysis tutorial-  
o2-analysis tutorial-jet-task-skim-provider  
o2-analysis tutorial-jetspectra-task-skim-analyser  
o2-analysis tutorial-jet-analysis  
o2-analysis tutorial-configurable-objects  
o2-analysis tutorial-tpcspectra-task-skim-analyser  
o2-analysis tutorial-efficiency-per-run  
o2-analysis tutorial-mc-histograms

Save

Click to start the tour

Documentation

CFFilter

?

Wagon settings

Configuration 1

Derived data 2

Test Statistics

Latest change by **kgrosseo** at 05/10/22, 16:46 CEST

Name

CFFilter

Work flow name

o2-analysis-cf-filter-correlations

Dependencies

Core Service Wagons/TrackSelection

Core Service Wagons/EventSelection

Core Service Wagons/Multiplicity

Core Service Wagons/Centrality

When enabling a wagon, there is no need to enable its dependencies. This is done automatically on train submission.

Save

You can edit a wagon by clicking on the *Wagon* name in *My Analyses* page.

- Analyzers who are part of the analysis can add/edit/enable a wagon
- Add dependencies from service wagons or wagons from the same analysis
  - **Dependencies are automatically enabled when enabling a wagon** (this is different from the LEGO trains)
- Can open the detailed **wagon changelog** in a new tab (allows detailed comparison of wagon configuration for different timestamps)



- Direct link to a read-only view in a new tab: <https://alimonitor.cern.ch/hyperloop/view-wagon/55>
- Used to send to colleagues or to the support list when needed



- Available for wagons, datasets and DPG runlists, this always leads to the history page of the current element

# Service Wagons

- These are wagons which are dependencies to other wagons
- They are created by experts, and can be added as a dependency to a wagon in the Wagon Settings
  - Each PWG can have a service wagon analysis
- They are displayed in a read-only view in the My Analyses page
- The service wagons of the **same type** (e.g. EventSelection) will be reduced to a single wagon once AOD metadata is read by  $O^2$

Core Service Wagons

Experts: ddoibrigk, ekryshen, jgrosseo, raquishp JIRA : OHSW-2

Wagon	Owner
Centrality_Run2	jgrosseo
Centrality_Run2_MC	jgrosseo
EventSelection_Run2	jgrosseo
EventSelection_Run2_MC	jgrosseo
EventSelection_Run2_pp	jgrosseo
EventSelection_Run2_pp_MC	jgrosseo
EventSelection_Run3_MC_pp	jgrosseo
EventSelection_Run3_pp	jgrosseo
LambdaKzeroBuilder	ddoibrigk
Multiplicity_Run2	jgrosseo
Multiplicity_Run2_MC	jgrosseo
Multiplicity_Run3_MC_pp	jgrosseo
Multiplicity_Run3_pp	jgrosseo
PIDTOF	jgrosseo
PIDTOFBeta	jgrosseo
PIDTOFFull	jgrosseo
PIDTPC	jgrosseo
PIDTPCFull	jgrosseo
TimestampCreator	jgrosseo
TimestampCreator_Run2_MC	jgrosseo
TrackExtension_Run2	jgrosseo
TrackExtension_Run2_MC	jgrosseo
TrackExtension_Run3	jgrosseo
TrackSelection_Run2	jgrosseo
TrackSelection_Run2_MC	jgrosseo
TrackSelection_Run3	jgrosseo
WeakDecayIndexer	jgrosseo

**EventSelection** (bracketed group: EventSelection\_Run2, EventSelection\_Run2\_MC, EventSelection\_Run2\_pp, EventSelection\_Run2\_pp\_MC, EventSelection\_Run3\_MC\_pp, EventSelection\_Run3\_pp)

**TrackSelection** (bracketed group: TrackExtension\_Run2, TrackExtension\_Run2\_MC, TrackExtension\_Run3, TrackSelection\_Run2, TrackSelection\_Run2\_MC, TrackSelection\_Run3)



# Wagon Configuration

- Hyperloop imports all the defined configurables of your analysis workflow (defined by C++ code)
- The wagon configuration corresponding to the workflow will be available in the *Base*
- Supports a variety of parameter types defined in task as **Configurable** including *arrays*, *matrices*, *labelled matrices* and *histogram binning*
- Subwagons run the same task with different parameter values. Click **+ New subwagon** to add a new subwagon
- In order to update the base and subwagon configuration with the latest O2Physics version of the workflow, click on the **sync** button
- By **synchronizing** the configuration, the parameters which no longer belong to the workflow will be removed, and the values of the wagon's *Base* will be updated as well if they have not been modified by the user

**Download wagon configuration**

Options5

You have 4 subwagon(s) activated which will run separately.

Subwagons

Wagon settings Configuration 4 Derived data Test Statistics

Sync New subwagon Base Subwagon1 Subwagon2 Subwagon3

Search configurables by name...

Task configurable-object-demo

array

Parameter

Value

Variable length

Help

Delete

cent-binning

Histogram binning

pt-bin-edges

Fixed Width


Variable Width

Inherit from Base

Latest change by rcruceru at 19/04/23, 21:31 CEST


# How to create a Subwagon?




AliHyperloop development  Train Submission Train Runs











Options5 ? x


Wagon settings Configuration **1** Derived data Test Statistics

Latest change by **raquishp** at 12/10/22, 08:47 CEST 

Sync  **+ New subwagon** Base ☒

**configurable-object-demo**

array	 	4	-
		9	-
		3	-
		5	- +
cut.bins	 	4	+
cut.cut	 	3	
cut.cuts	 	1.1 1.2 1.3	
		2.1 2.2 2.389	
		3.1 3.2 3.3	
cut.labels	 	l1	-
		l2	-
		l3	- +

 Save

1. Open the wagon edit view and navigate to the **Configuration** tab
2. Click **+New subwagon**
3. Choose a name
4. Modify the variables of interest
5. Click the **+** button
6. Click Save

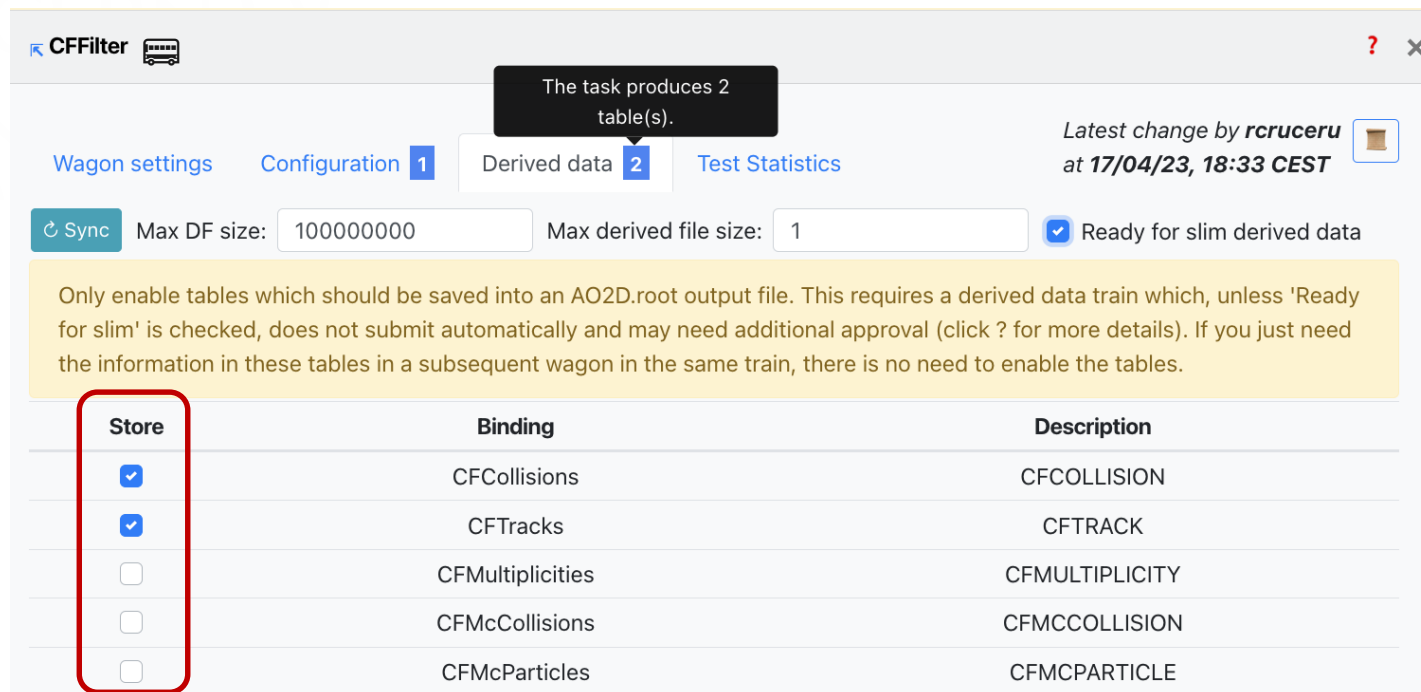
## Note:

- ✓ At least one variable must have a different value from the base
- ✓ A subwagon can't be empty
- ✓ Subwagons can't be identical





- Displays the tables which are produced by the task
- Here you can enable tables which should be saved into an **AO2D.root** output file
- ***This requires a derived data train which, unless 'Ready for slim' is checked, does not submit automatically and may need additional approval***
- ***If you just need the information in these tables in a subsequent wagon in the same train, there is no need to enable the tables***
- ***For derived data of small output size, you can enable the slim derived data option***



The task produces 2 table(s).

Wagon settings Configuration 1 **Derived data 2** Test Statistics

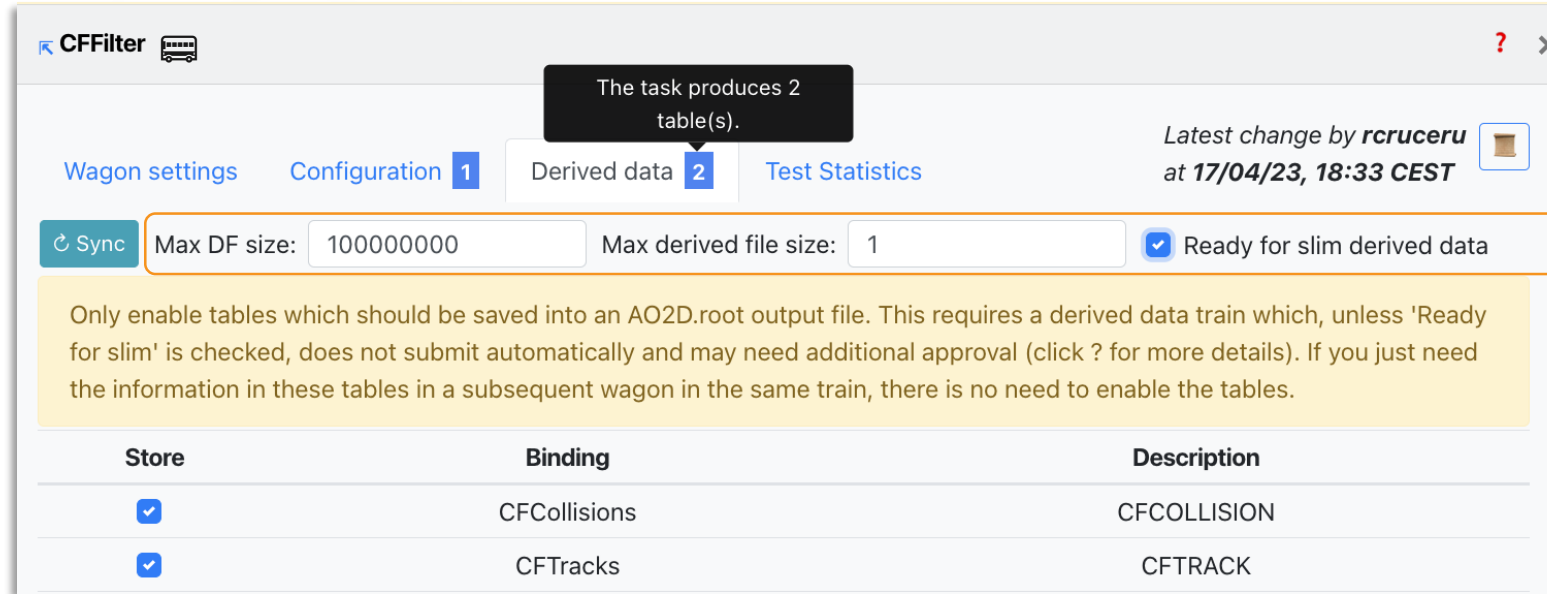
Sync Max DF size: 100000000 Max derived file size: 1 ☒ Ready for slim derived data

Only enable tables which should be saved into an AO2D.root output file. This requires a derived data train which, unless 'Ready for slim' is checked, does not submit automatically and may need additional approval (click ? for more details). If you just need the information in these tables in a subsequent wagon in the same train, there is no need to enable the tables.

Store	Binding	Description
<input checked="" type="checkbox"/>	CFCollisions	CFCOLLISION
<input checked="" type="checkbox"/>	CFTracks	CFTRACK
<input type="checkbox"/>	CFMultiplicities	CFMULTIPLICITY
<input type="checkbox"/>	CFMcCollisions	CFMCCOLLISION
<input type="checkbox"/>	CFMcParticles	CFMCPARTICLE

- In order to **update** the derived data configuration with the latest O2Physics version of the workflow, click on the **Sync button**
- By synchronizing the derived data, the tables which no longer belong to the workflow will be removed, and the values of the tables will be updated

- Reserved for derived data of small output size
- Settings in Derived data tab
  - Max DF size** - sets the maximal dataframe size in the merging step
    - Has to be 0 for not-self contained derived data (which need parent file access)
  - Max derived file size** - Limit for the output file size of the derived data file
    - This is an expert parameter which usually does not have to be changed
    - Only change this value if the processing in subsequent trains takes so long that the jobs fail
    - If set to 0 a good value will be automatically determined



The task produces 2 table(s).

Latest change by *rcruceru* at 17/04/23, 18:33 CEST

Wagon settings Configuration 1 Derived data 2 Test Statistics

Sync Max DF size: 100000000 Max derived file size: 1 ☒ Ready for slim derived data

Only enable tables which should be saved into an AO2D.root output file. This requires a derived data train which, unless 'Ready for slim' is checked, does not submit automatically and may need additional approval (click ? for more details). If you just need the information in these tables in a subsequent wagon in the same train, there is no need to enable the tables.

Store	Binding	Description
<input checked="" type="checkbox"/>	CFCollisions	CFCOLLISION
<input checked="" type="checkbox"/>	CFTracks	CFTRACK

If unsure, please do not edit **max DF size** and **max derived file size**. Contact experts if needed.

- Both max DF size and max derived file size need to be the same for the wagon and its dependencies (which have derived data enabled)
- Check **"Ready for slim derived data"** to enable slim derived data
  - The test will run as slim derived data
  - Wagons (with successful tests) will be included in automatic train composition (you no longer need to request a train on the Operation channel)
  - All wagons (with derived data activated) included in the train need to have the same max DF size & derived file size



- Long term statistics (per Test id) for enabled datasets per analysis

- PSS Memory
- CPU/Wall Time
- Throughput
- Output size

- Direct links to a read-only view of wagon test output by clicking into the graph

<https://alimonitor.cern.ch/hyperloop/wagon-test/test-id>


## Wagon Test 14832

General Test results Test Graphs

**Package tag** O2Physics::daily-20211101-0751-1

**Dataset** LHC15o\_test

**Enabled by** kgrosseo

**Test status** Done  (test output) [Speedscope](#)

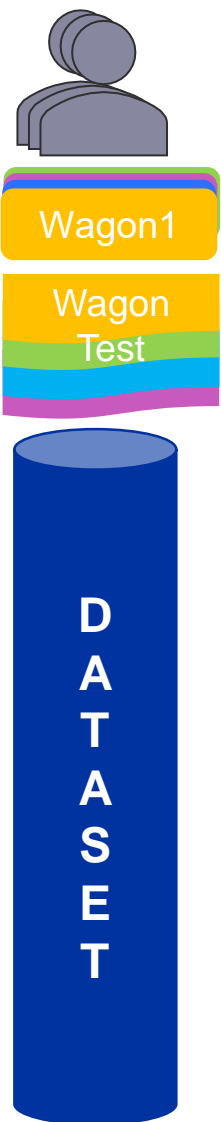
**Start Time** 01 November 2021, 09:39:06

**End Time** 01 November 2021, 09:44:55

**Wagons**

[Correlations](#)  
[Centrality\\_Run2](#)  
[EventSelection\\_Run2](#)  
[Multiplicity\\_Run2](#)  
[TimestampCreator](#)  
[TrackExtension](#)  
[TrackSelection](#)

# Wagon tests



- When enabling a wagon, the test will start immediately

My Analyses All Analyses Dashboard AliHyperloop development Train Submission Train Runs Datasets DPG Runlists ? 6			
CorrelationsFilteredOnTheFly2		×	×
DQTableMaker		×	×
HistogramRegistry		✓ !	×
Histograms		✓ ⚡	×
HistogramsFull		×	×
HistogramsFull2		✓ ⚡	×
integration-test-wagon		×	×

- Successful** wagon tests will be marked with ✨. **Failed** wagon tests will be marked with 💣.
- Wagon tests finished in **Warning** will be marked with ⚠️.
- The types of warnings that can occur (details [here](#)):
  - CPU** usage too large
  - Memory** consumption too large
  - Reduction factor too small (occurs when < 50)
  - Maximal PSS more than 30% larger than average PSS
  - Log output is too large
  - Too many CCDB queries
  - Derived output too large for slim train
  - Unbound indices detected NEW

**Warning**  
Start: 17 October 2021, 19:04:11  
End: 17 October 2021, 19:08:32  
Package: O2Physics::daily-20211017-1152-1  
**CPU usage too large (655 days) for automatic train submission**

**Warning**  
Start: 14 January 2022, 09:46:28  
End: 14 January 2022, 09:50:58  
Package: O2Physics::nightly-20220113-1  
**Memory consumption too large for automatic train submission**  
Click for more details...

**Warning**  
Start: 17 January 2022, 12:49:42  
End: 17 January 2022, 12:54:13  
Package: O2Physics::nightly-20220111-1  
**Maximal PSS more than 30% larger than average PSS**  
Click for more details...

**Failed**  
Start: 13 January 2022, 13:52:35  
End: 13 January 2022, 13:53:15  
Package: O2Physics::nightly-20220113-1  
Click for more details...

Click the icon to open the wagon test result

# Wagon test

- You can open the test output in a new tab by clicking (test output)
- Here you can analyze the:
  - Full configuration
  - Performance metrics
  - Status
  - Standard error
  - Standard output

Test 38239

Click to start the tour

General

Test

Package tag

O2Physics::nightly-20221011-1



Dataset

LHC15o\_dev

Enabled by

alihyperloop

Test status

Done  (output) (browse) Speedscope 

Start Time

11 October 2022 at 04:17:02 CEST

End Time

11 October 2022 at 04:20:19 CEST


Wagons

CFFilter\_WriterTest  
Centrality\_Run2  
EventSelection\_Run2  
Multiplicity\_Run2  
TimestampCreator  
TrackExtension\_Run2  
TrackSelection\_Run2

Directory Listing For [/train-workdir/tests/0003/00038239/] - Up To [/train-workdir/tests/0003]

Filename	Size	Last Modified
<a href="#">merge_test1/</a>		Tue, 11 Oct 2022 02:20:28 GMT
<a href="#">merge_test2/</a>		Tue, 11 Oct 2022 02:20:29 GMT
<a href="#">A02D.root</a>	87057.8 kb	Tue, 11 Oct 2022 02:20:14 GMT
<a href="#">AnalysisResults.root</a>	964.7 kb	Tue, 11 Oct 2022 02:20:15 GMT
<a href="#">OutputDirector.json</a>	0.2 kb	Tue, 11 Oct 2022 02:17:08 GMT
<a href="#">configuration.json</a>	1.5 kb	Tue, 11 Oct 2022 02:17:08 GMT
<a href="#">download.log</a>	1.3 kb	Tue, 11 Oct 2022 02:17:08 GMT
<a href="#">dpl-config.json</a>	2.4 kb	Tue, 11 Oct 2022 02:20:17 GMT
<a href="#">env.sh</a>	21.2 kb	Tue, 11 Oct 2022 02:17:03 GMT
<a href="#">full_config.json</a>	3.8 kb	Tue, 11 Oct 2022 02:17:02 GMT
<a href="#">input_data.txt</a>	1.1 kb	Tue, 11 Oct 2022 02:17:08 GMT
<a href="#">performanceMetrics.json</a>	1792.4 kb	Tue, 11 Oct 2022 02:20:19 GMT
<a href="#">performanceMetrics_processed.json</a>	789.3 kb	Tue, 11 Oct 2022 02:20:27 GMT
<a href="#">profile.linux-perf.txt</a>	116620.1 kb	Tue, 11 Oct 2022 02:20:26 GMT
<a href="#">status.json</a>	0.2 kb	Tue, 11 Oct 2022 02:20:37 GMT
<a href="#">stderr.log</a>	0.0 kb	Tue, 11 Oct 2022 02:17:03 GMT
<a href="#">stdout.log</a>	3731.6 kb	Tue, 11 Oct 2022 02:20:37 GMT
<a href="#">wn.xml</a>	5.2 kb	Tue, 11 Oct 2022 02:17:08 GMT



Test 38408  [Click to start the tour](#)

General Test

Package tagO2Physics::nightly-20221011-1

DatasetLHC22f\_pass1\_tof

Enabled byariedel

Test statusWarning ! (output) (browse)

Start Time11 October 2022 at 14:35:20 CEST

End Time11 October 2022 at 14:40:16 CEST

Wagons

DeuteronLambdaWagonRun3IsTriggerOpenCuts

Show content of AnalysisResults.root in the web browser

Read a ROOT file

JSROOT version 6.3.4 15/02/2022

simple

open.all | close.all | clear

/train-workdir/tests/0003/00038408/

bc-selection-task

hCounterTVX;1

event-selection-task

hColCounterAll;1

hColCounterAcc;1

lambdakzero-builder

hEventCounter;1

hV0Criteria;1

lambdakzero-label-builder

hLabelCounter;1

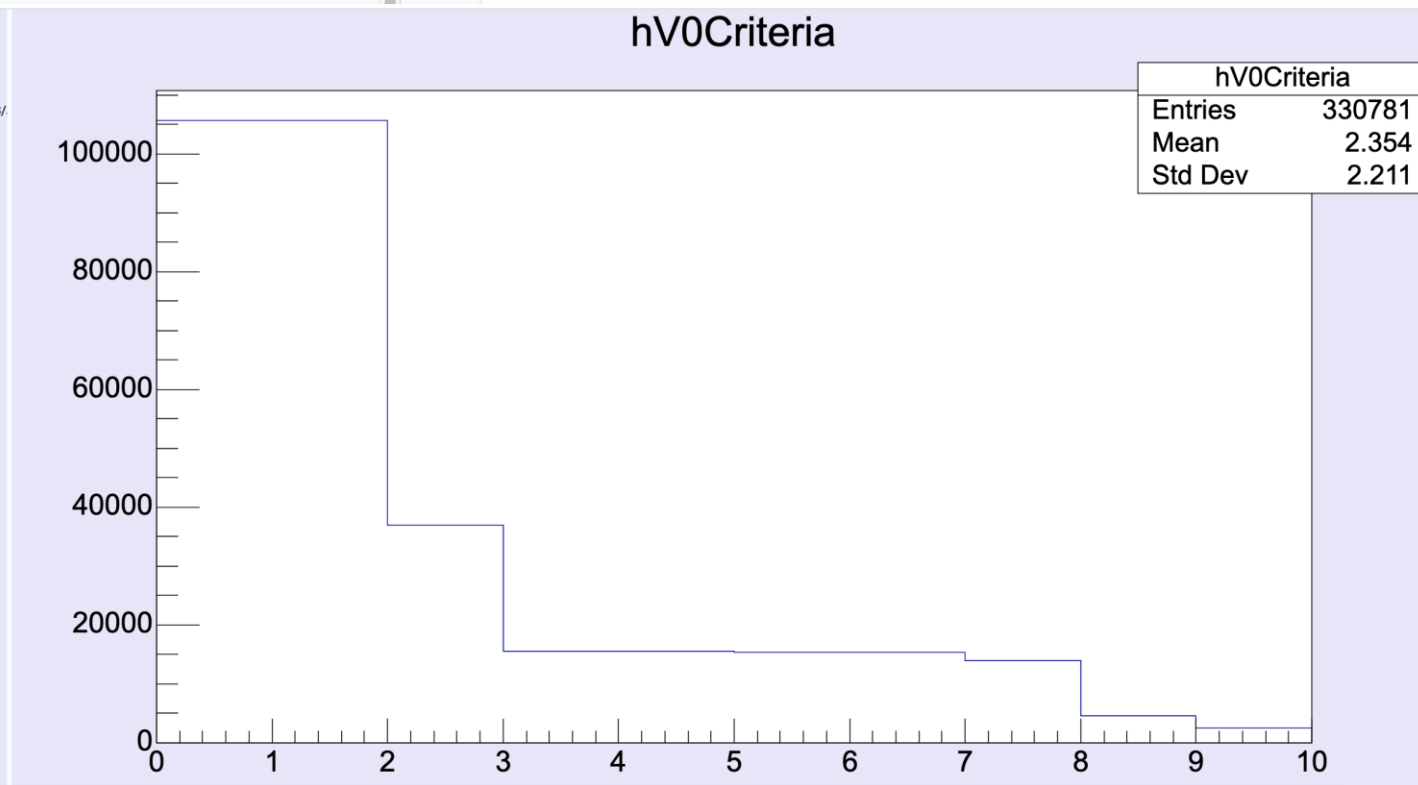
hK0Short;1

hLambda;1

hAntiLambda;1


StreamerInfo

Link “browse” in wagon tests to show content of AnalysisResults.root in the web browser








 **Test 38239** Click to start the tour

General

Test

**Package tag**  
**Dataset**  
**Enabled by**  
**Test status**  
**Start Time**  
**End Time**

O2Physics::nightly-20221011-1  
LHC15o\_dev  
alihyperloop  
Done 🌟 (output) (browse) [Speedscope](#)   
11 October 2022 at 04:17:02 CEST  
11 October 2022 at 04:20:19 CEST


**Wagons**

CFFilter\_WriterTest  
Centrality\_Run2  
EventSelection\_Run2  
Multiplicity\_Run2  
TimestampCreator  
TrackExtension\_Run2  
TrackSelection\_Run2

- Link to the Speedscope view of the profiling of your task (also available in the Train run result)
- Speedscope is a web tool to display the profiling determined using Linux perf

# Wagon test – Derived data



Test 131548

Click to start the tour
?
×

General
Derived Data
Test

Max DF size: 1000000000
Max derived file size: 0

Wagon	Binding	Description
dq-table-reader-run3-pp-electron	DileptonsInfo	RTDILEPTONINFO
dq-table-reader-run3-pp-electron	Dileptons	RTDILEPTON

- Displays the tables which are produced by the task
- Max data frame size and max derived file size

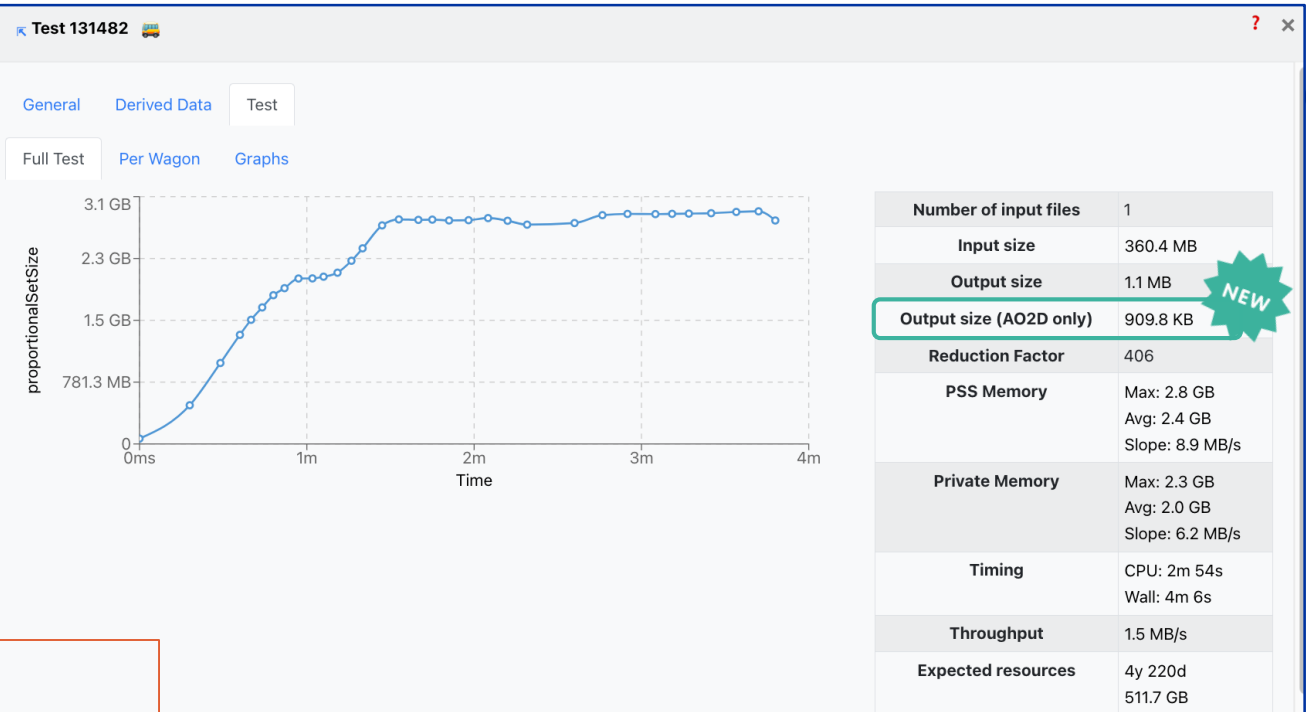




# Wagon test results

## Full Test metrics

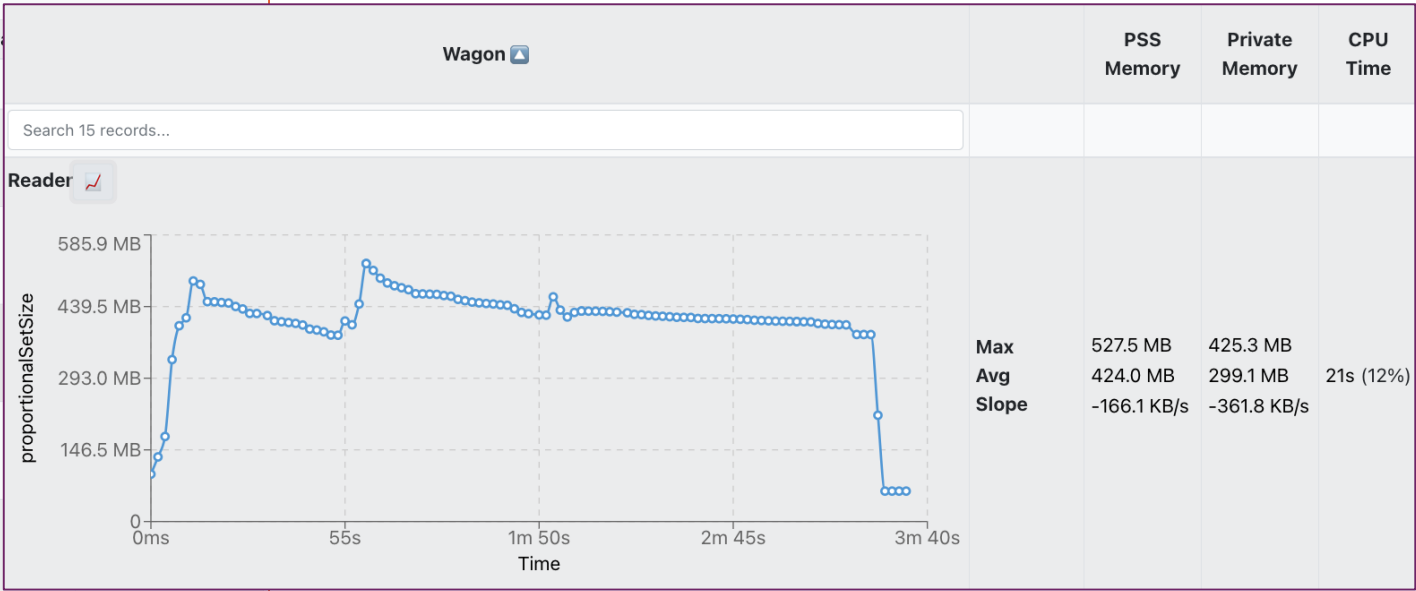
- Expected resources and Interactive graphs



Full TestPer WagonGraphs

Clear all filters

Wagon		PSS Memory	Private Memory	CPU Time	CCDB C
Search 15 records...					
Reader	Max Avg Slope	527.5 MB 424.0 MB -166.1 KB/s	425.3 MB 299.1 MB -361.8 KB/s	21s (12%)	0
bcConverter	Max Avg Slope	22.1 MB 19.0 MB -12.3 KB/s	20.7 MB 17.2 MB -18.5 KB/s	2s (1%)	0
CorrectedFT0	Max Avg Slope	19.0 MB 18.6 MB 4.4 KB/s	18.0 MB 17.9 MB 1.6 KB/s	2s (1%)	0
DQ-DalitzSel	Max Avg Slope	316.9 MB 253.6 MB 1.0 MB/s	254.2 MB 218.3 MB 754.2 KB/s	13s (8%)	1
DQ-TPCPID-DalitzReducedMaker	Max Avg Slope	288.4 MB 225.5 MB 980.2 KB/s	208.1 MB 181.8 MB 550.5 KB/s	15s (9%)	1



# Performance graphs

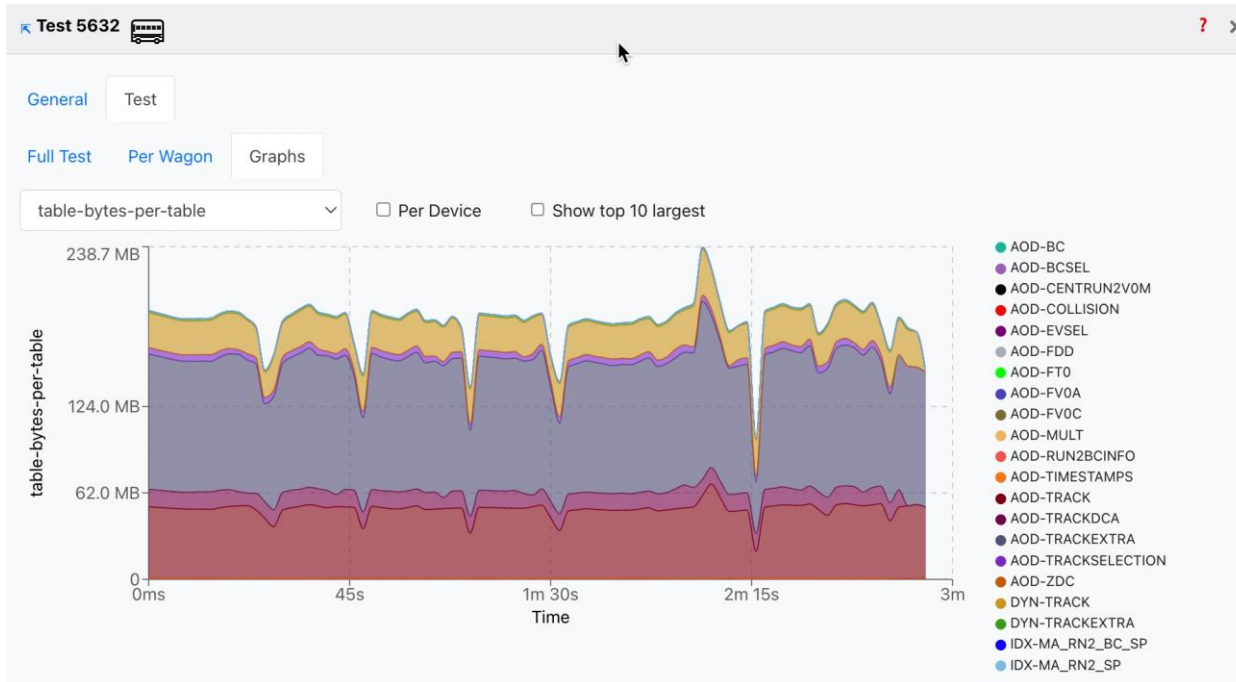
<https://alimonitor.cern.ch/hyperloop/performance-graphs>



☐ Per Device ☒ Show full train ☐ Show top 10 largest

Graphs for local O2 execution

- Interactive graphs
- Check box to see performance per device
- Use the dropdown to select the different types of metrics
- Show / hide full train



- **table-bytes-per-table**
  - Shows the size of the different tables which contain the processed data
- Zooming
- Show 10 largest

## Performance Graphs

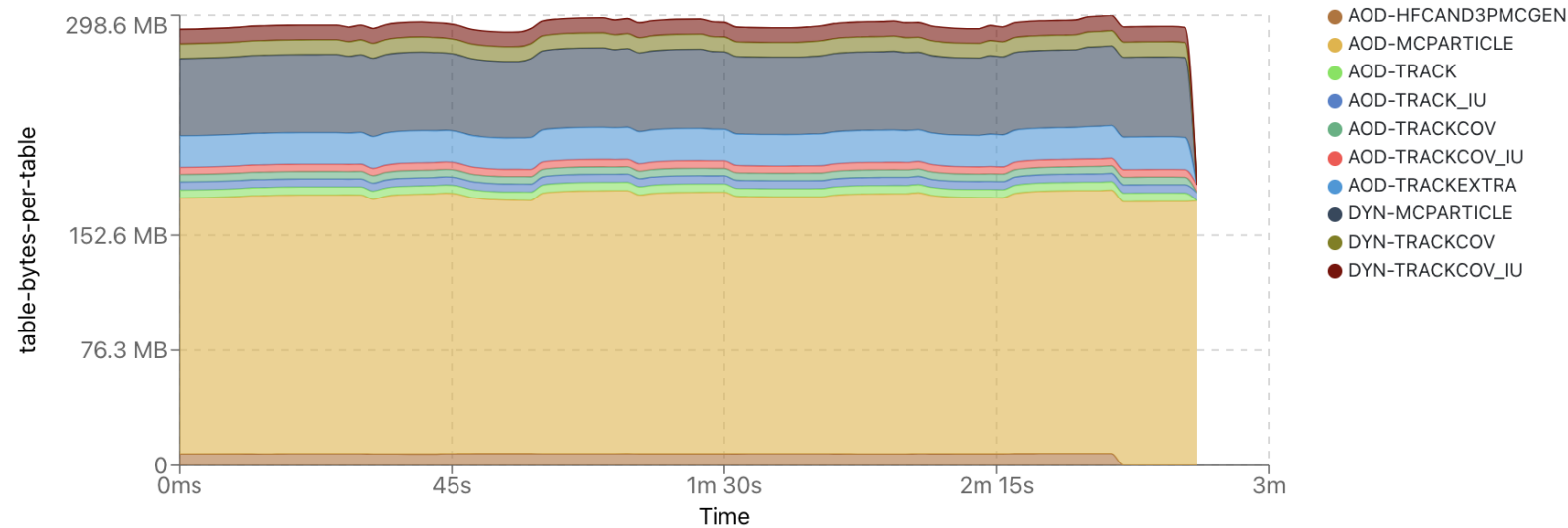
Choose metric file:

Choose file performanceM...processed.json

table-bytes-per-table ▾

☐ Per Device

☒ Show top 10 largest



- You can upload your own local metrics file, and then generate the test graphs specific to this file
- These are the same type of graphs produced in the *Test Graphs* tab of the train run and wagon test

- **Automatic train composition** can be scheduled per dataset – see the schedule in the dataset view

**Automatic Train Composition** [Learn more](#)

Automatic train composition: Scheduled      Maximal CPU time in days: 365      Maximal trains per analysis per week: 14

**Composition schedule (CET):** Monday - 02:00   Monday - 14:00   Tuesday - 02:00   Tuesday - 14:00   Wednesday - 02:00   Wednesday - 14:00

Thursday - 02:00   Thursday - 14:00   Friday - 02:00   Friday - 14:00   Saturday - 02:00   Saturday - 14:00   Sunday - 02:00   Sunday - 14:00

**Composition targets:** Grid - Single core   Grid - 8 core

- Trains will be composed based on *target memory*, *wagon configuration* and *dependencies*
- Automatic **train submission** to **GRID** or **Analysis Facilities**
- **Wagons will not be considered for automatic composition if:**
  - Automatic submission is not enabled for the dataset
  - Derived data output is activated and train is not slim
  - Wagon test finished with warning



Train Support

- **O2 Hyperloop Operation Channel**
- 24/5 Operation (different timezones)
- Institutes: 1 in Americas, 2 in Europe, 1 in Asia

**O2 Hyperloop Operation** ▾ ☆

👤 151   ⭐ 1   📄 [Hyperloop](#) | [Documentation](#)

8:52 AM

Dear train operators, I would like to ask the manual submission of hyperloop trains on `LHC21k6` runlist for the following wagons:

- `qa-imp-par_trkProp_recoMC_isGlobalTrack`
- `qa_event_track_mc_tree_trackprop` with derived data

Thank you very much ✎ Edited

👤 1

My Analyses All Analyses Dashboard AliHyperloop Train Submission Train Runs Datasets DPG Runlists ? 17

## Train Runs

Clear all filters Compare Open

NEW Show last 3 months Ongoing trains Trains with issues

Train	Wagons	Operator	Package	Dataset	Composed	Train status	Test
38000 - 38301	Search 9 records...	Search 9	Search 9 records...	Search 9 records...	07/10/22, 21:42 CEST Off	Done	All
38301	CFFilter,Centrality_Run2,EventSele...	igrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	
38226	UPCCandidateProducer,EventSele...	scostanz	O2Physics::nightly-20221008-1	LHC22m_pass1_subset	10/10/22, 18:16 CEST	Done	
38225	UPCCandidateProducer,EventSele...	scostanz	O2Physics::nightly-20221008-1	LHC22m_pass1_subset	10/10/22, 18:16 CEST	Done	
38193	CFI	igrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	
38192	CFI	igrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	
38158	CFI	igrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	
38153	CFI	igrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	
38009	CFI	igrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	
38001	CFI	igrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	

### Train run 38301

General Derived Data Test Submitted jobs Grid Statistics Wagon resources Clone Request long train

Package tag O2Physics::nightly-20221011-1

Dataset LHC15o\_benchmark

Operator igrosseo

Test status Done

Target Grid - Single core

Train status Done

Train created 10 October 2022 at 18:16:33 CEST

Train submitting 10 October 2022 at 18:21:50 CEST

All jobs submitted 10 October 2022 at 18:22:06 CEST

Train finished 11 October 2022 at 01:13:42 CEST

Train duration 6h 51m

Needed 252d 3h (wall time), 28.0 GB (output size)

resources

Job status Total: 4724, Done: 4378, Active: 0, Wait: 0, Error: 346

Per-run merging Done: 5, Running: 0, Pending: 0, Skipped: 0, Failed: 0

Delete

### Train run 38226

General Derived Data Test Submitted jobs Grid Statistics Wagon resources Clone Request long train

Package tag O2Physics::nightly-20221008-1

Dataset LHC22m\_pass1\_subset

Operator scostanz

Test status Done (output) (browse) Speedscope

Target Grid - Single core

Train status Done

Train created 10 October 2022 at 18:16:33 CEST

Train submitting 10 October 2022 at 18:21:50 CEST

All jobs submitted 10 October 2022 at 18:22:06 CEST

Train finished 11 October 2022 at 01:13:42 CEST

Train duration 6h 51m

Needed 252d 3h (wall time), 28.0 GB (output size)

resources

Job status Total: 4724, Done: 4378, Active: 0, Wait: 0, Error: 346

Per-run merging Done: 5, Running: 0, Pending: 0, Skipped: 0, Failed: 0

Delete

- Displays all the train runs (by default, last 3 months of activity)
- Use the searching and filtering features to find your trains
- Click on the train number to access the train run details
- To open several train runs views, select all the trains of interest and click Open
- To compare two trains, select them in the Compare column and click *Compare*. This will open a new tab displaying the differences between the two trains

**Train Runs**

NEW Show last 3 months Ongoing trains Trains with issues

Clear all filters Compare Open

Train	Wagons	Operator	Package	Dataset	Composed	Train status	Test
38000 - 38301	Search 9 records...	Search 9	Search 9 records...	Search 9 records...	07/10/22, 21:42 CEST Off	Done	All
<input checked="" type="checkbox"/> 38301	CFFilter,Centrality_Run2,EventSele...	kgrosseo	O2Physics::nightly-20221011-1	LHC15o_benchmark	11/10/22, 09:04 CEST	Done	
<input checked="" type="checkbox"/> 38226	UPCCandidateProducer,EventSele...	scostanz	O2Physics::nightly-20221008-1	LHC22m_pass1_subset	10/10/22, 18:16 CEST	Done	
<input type="checkbox"/> 38225	UPCCandidateProducer,EventSele...	scostanz	O2Physics::nightly-20221008-1	LHC22f_pass1_tof	10/10/22, 18:16 CEST	Done	
<input type="checkbox"/> 38193	cf-Multiplicity						
<input type="checkbox"/> 38192	cf-Multiplicity						
<input type="checkbox"/> 38158	CFFilter,Centrality						
<input type="checkbox"/> 38153	CFFilter,Centrality						
<input type="checkbox"/> 38009	CFFilter,Centrality						
<input type="checkbox"/> 38001	Femto-Table						

### Train run 38301 vs 38226

**Package tag** O2Physics::nightly-20221011-1 O2Physics::nightly-20221008-1

**Dataset** LHC15o\_benchmark LHC22m\_pass1\_subset

**Operator** kgrosseo scostanz

**Created** 11 October 2022 at 09:04:59 CEST 10 October 2022 at 18:16:33 CEST

**Settings** ☐ slow train ☒ derived data ☒ automatic submission

Train run 38301	Common	Train run 38226
CFFilter	TimestampCreator	UPCCandidateProducer
Centrality_Run2		EventSelection_Run3_pp
EventSelection_Run2		Multiplicity_Run3_pp
Multiplicity_Run2		PIDTOFBaseRun3
TrackExtension_Run2		PIDTOFFullRun3
TrackSelection_Run2		PIDTPCFull
		TrackPropagation

**Test status** Done (test output) Done (test output)

**Target** Grid - Single core

**Train status** Done


**Train duration** 1h 4m 48.3s 6h 51m 35.2s

- Displays all the train runs (by default, last 3 months of activity)
- Use the searching and filtering features to find your trains
- Click on the train number to access the train run details
- To open several train runs views, select all the trains of interest and click Open
- To compare two trains, select them in the Compare column and click *Compare*. This will open a new tab displaying the differences between the two trains



# Train run view – General




Train run 132324  [Click to start the tour](#)

General | Derived Data | Test | Submitted jobs | Grid Statistics | Wagon resources | Merged Output | Clone

**Package tag** [O2Physics::daily-20231104-0100-1](#)

**Dataset** [LHC16r\\_pass2\\_CENT\\_wSDD](#)

**Operator** vkovalen

**Test status** Done  [\(output\)](#) [\(browse\)](#) [Speedscope](#)

**Target** Grid - Single core

**Train status** Done

**Train created** 04 November 2023 at 17:41:05 CET

**Train submitting** 04 November 2023 at 17:46:59 CET by alihyperloop

**All jobs submitted** 04 November 2023 at 17:48:15 CET

**Train finished** 04 November 2023 at 21:05:30 CET

**Train duration** 3h 17m

**Needed resources** 1d 17h (wall time), 521.1 MB (output size)

**Job status** Total: 225, Done: 206, Active: 0, Wait: 0, Error: 19

**Per-run merging** Done: 45, Running: 0, Pending: 1, Skipped: 0, Failed: 0

**Final merging submitted** 04 November 2023 at 20:55:23 CET by vkovalen

**Final-merging summary** Done: 1, Running: 0, Pending: 0, Failed: 0

**Settings** ☐ slow train ☒ slim derived data ☒ automatic submission

**Wagons**

- EventSelection\_Run2\_pPb PWGDQ-89
- Im-muon-table-maker-ions-run2 PWGDQ-89
- Im-muon-table-reader-ions-run2 (vkovalen) PWGDQ-89
- bcConverter
- CollisionConverter
- FwdTrackExtension
- TimestampCreator
- tracksExtraConverter
- ZDCConverter

**Comment**

**Annotations:**


- Train type** (points to Settings)
- Link to respective JIRA ticket** (points to EventSelection\_Run2\_pPb PWGDQ-89)
- Click here to open the JIRA ticket associated with this wagon** (points to EventSelection\_Run2\_pPb PWGDQ-89)
- dilepton test analysis** (points to Im-muon-table-reader-ions-run2 (vkovalen) PWGDQ-89)
- Analysis the wagon is part of** (points to Im-muon-table-reader-ions-run2 (vkovalen) PWGDQ-89)
- Service wagons** (points to bcConverter, CollisionConverter, FwdTrackExtension, TimestampCreator, tracksExtraConverter, ZDCConverter)
- User wagons** (points to EventSelection\_Run2\_pPb PWGDQ-89, Im-muon-table-maker-ions-run2 PWGDQ-89, Im-muon-table-reader-ions-run2 (vkovalen) PWGDQ-89)

- Direct links to dataset, package tag and participating wagon configuration
- Train settings, progress timeline and current state
- Duration and needed resources

- Job status, per-run merging and final-merging summary
- Direct links to **test output**, **task profiling**, **AnalysisResults.root**, JIRA ticket

# Train run view – Derived data



[Train run 75957](#)

Click to start the tour
?

[General](#)
[Derived Data](#)
[Test](#)
[Submitted jobs](#)
[Grid Statistics](#)
[Clone](#)

Max DF size: 
Max derived file size:

Wagon	Binding	Description
DQ-TPCPID-trkEff-maker-run2	ReducedEvents	REDUCEDEVENT
DQ-TPCPID-trkEff-maker-run2	ReducedTracks	REDUCEDTRACK
DQ-TPCPID-trkEff-maker-run2	ReducedEventsExtended	REEXTENDED
DQ-TPCPID-trkEff-maker-run2	ReducedEventsVtxCov	REVTXCOV

- Displays the activated derived data output
- **Max DF size and max derived file size**



# Train run view – Submitted jobs



Copy the entire list of output directories (regardless of the active filters)

- List of jobs
- Use the **Search box** to search for *PIDs*, *Run number* and *Output directories*
- Download **job json configuration**
- **IO statistics**
- **Stack trace**

Train run 75957

General Derived Data Test Submitted jobs Grid Statistics Clone

IO Statistics Stack trace Copy all output directories

Clear all filters

PID	Run no.	Output directory	Total	Done	Active	Wait	Error	Merging
2840340648	282441	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168887/AOD	2	2	0	0	0	Done
2840340484	282440	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168886	1	1	0	0	0	Skipped
2840340310	282439	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168885	1	1	0	0	0	Skipped
2840340158	282437	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168884	1	1	0	0	0	Skipped
2840339795	282411	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168882	1	1	0	0	0	Skipped
2840339653	282402	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168881	1	1	0	0	0	Skipped
2840339481	282399	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168880	1	1	0	0	0	Skipped
2840339293	282398	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168879	1	1	0	0	0	Skipped

Click here to download the job json configuration.

Download job json configuration buttons

- Search and copy the filtered lists by clicking on the dedicated buttons

# Train run view – Submitted jobs



- IO statistics

Train run 75967

General Test Submitted jobs Grid Statistics Wagon resources Merged Output Clone

IO Statistics Stack trace Copy all output directories

Clear all filters

PID	Run no.	Output directory	Total	Done	Active	Wait	Error	Merging
2840407805	529043	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168943	190	187	0	0	3	Done
2840407804	529039	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168942	598	592	0	0	6	Done
2840407786	529038	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168941	240	224	0	0	16	Done
2840407762	529037	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168940	48	47	0	0	1	Done
		/0016/hy_168939	6	6	0	0	0	Done
		/0016/hy_168938	9	9	0	0	0	Done
		/0016/hy_168937	9	9	0	0	0	Done
		/0016/hy_168936	8	8	0	0	0	Done
		/0016/hy_168935	18	18	0	0	0	Done
		/0016/hy_168934	17	17	0	0	0	Done
		/0016/hy_168933	31	31	0	0	0	Done
		/0016/hy_168932	26	26	0	0	0	Done

IO stats for 12 master jobs executed between 20.04.2023 12:11 and 20.04.2023 13:43 (1:31)

Site activity					SE access		
Site	Job eff.	All files	Local files	Remote files	CERN EOS	CCIN2P3 SE	CNAF SE
<b>CERN</b> 1133 jobs (96.43%)	123.3%	2644 files 7.486 MB/s	2644 (100%) 7.486 MB/s		2644 (100%) 7.486 MB/s		
<b>CCIN2P3</b> 26 jobs (2.213%)	139.4%	61 files 19.3 MB/s	58 (95.08%) 23.83 MB/s	3 (4.918%) 3.244 MB/s	3 (4.918%) 3.244 MB/s	58 (95.08%) 23.83 MB/s	
<b>CNAF</b> 16 jobs (1.362%)	128.4%	38 files 17.02 MB/s	38 (100%) 17.02 MB/s				38 (100%) 17.02 MB/s
<b>TOTAL</b> 1175 jobs	123.7%	2743 files 7.643 MB/s 3.547 TB	2740 (99.89%) 7.652 MB/s 3.544 TB	3 (0.109%) 3.244 MB/s 2.98 GB	2644 (96.5%) 7.486 MB/s 3.424 TB	58 (2.117%) 23.83 MB/s 77.45 GB	38 (1.387%) 17.02 MB/s 45.62 GB

## • Stack trace

Collects the errors from your failed jobs and groups them by error message.



&gt;&gt;

12 9 3 3 2 1 1 1 1 1 1 1 1

&lt;signal handler call removed&gt;

```
[***:internal-dpl-aod-reader]: [***:***][ERROR] Exception caught: Couldn't open file "****"
[***:internal-dpl-aod-reader]: Executable is /cvmfs/alice.cern.ch/el7-x86_64/Packages/O2Physics/nightly-20230418-1/bin/o2-analysis-timestamp
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/O2Physics/nightly-20230418-1/lib/libO2Framework.so: ?? ??:0
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/O2Physics/nightly-20230418-1/lib/libO2Framework.so: o2::framework::DataProcessingDevice::doRun(o2::framework::ServiceRegistryRef)
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/O2Physics/nightly-20230418-1/lib/libO2Framework.so: o2::framework::DataProcessingDevice::Run()
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/FairMQ/v1.4.56-21/lib/libFairMQ.so.1.4: fair::mq::Device::RunWrapper()
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/FairMQ/v1.4.56-21/lib/libFairMQStateMachine.so.1.4: boost::detail::function::void_function_obj_invoker1<std::function<void (fair::mq::State)>, void, fair::mq::Device::RunWrapper()>>()
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/FairMQ/v1.4.56-21/lib/libFairMQStateMachine.so.1.4: boost::signals2::detail::signal_impl<void (fair::mq::State), boost::signals2::optional_last_value<void>, 1, 0, boost::detail::function::void_function_obj_invoker1<std::function<void (fair::mq::State)>, void, fair::mq::Device::RunWrapper()>>()>>()
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/FairMQ/v1.4.56-21/lib/libFairMQStateMachine.so.1.4: fair::mq::fsm::Machine::ProcessWork()
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/FairMQ/v1.4.56-21/lib/libFairMQStateMachine.so.1.4: fair::mq::DeviceRunner::Run()
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/O2Physics/nightly-20230418-1/lib/libO2Framework.so: doChild(int, char**, o2::framework::ServiceRegistry&, o2::framework::RunningWorkflowInfo const&, o2::framework::DataProcessingDevice::doRun(o2::framework::ServiceRegistryRef)
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/O2Physics/nightly-20230418-1/lib/libO2Framework.so: runStateMachine(std::vector<o2::framework::DataProcessorSpec, std::allocator<o2::framework::DataProcessorSpec>> const&, o2::framework::DataProcessingDevice::doRun(o2::framework::ServiceRegistryRef)
[***:internal-dpl-aod-reader]: /cvmfs/alice.cern.ch/el7-x86_64/Packages/O2Physics/nightly-20230418-1/lib/libO2Framework.so: doMain(int, char**, std::vector<o2::framework::DataProcessorSpec, std::allocator<o2::framework::DataProcessorSpec>> const&, o2::framework::DataProcessingDevice::doRun(o2::framework::ServiceRegistryRef)
[***:internal-dpl-aod-reader]: o2-analysis-timestamp() [0x429797]: std::vector<o2::framework::ChannelConfigurationPolicy, std::allocator<o2::framework::ChannelConfigurationPolicy>>::~vector() at stl_vector.h:730
[***:internal-dpl-aod-reader]: o2-analysis-timestamp() [0x4229a7]: main at runDataProcessing.h:243
[***:internal-dpl-aod-reader]: /lib64/libc.so.6: ?? ??:0
[***:internal-dpl-aod-reader]: o2-analysis-timestamp() [0x422a5e]: _start at ????
```

(extracted from stdout.log)

### 3 jobs:

- Masterjob 2839676098
  - 2839680720 (ALICE:UPB:LCG)
- Masterjob 2839676538
  - 2839685979 (ALICE:SARA:LCG)
- 2839686025 (ALICE:SARA:LCG)

Train run 75693



?

General

Derived Data

Test

Submitted jobs

Grid Statistics

Wagon resources

Clone

Request long tr

IO Statistics

Stack trace

Copy all output directories



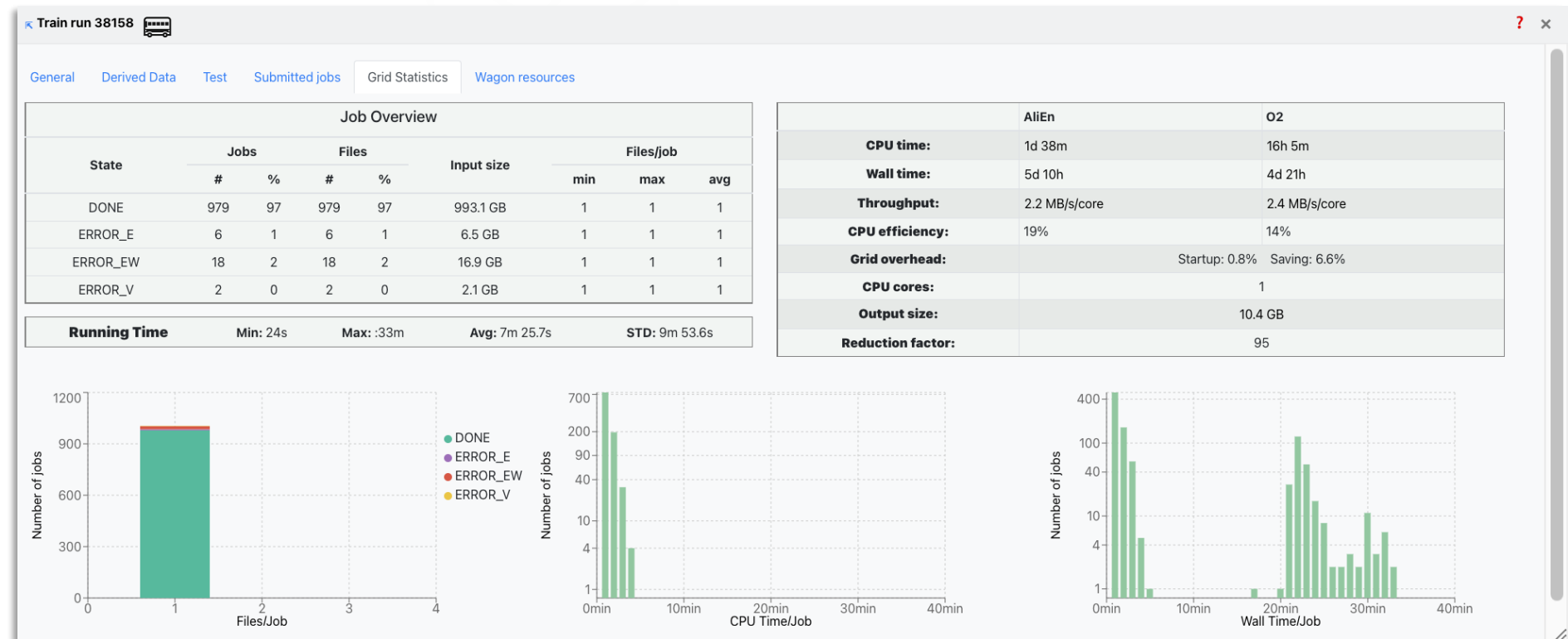
Clear all filters

PID	Run no.	Output directory	Total	Done	Active	Wait	Error	Merging
Search 12	Search 12	Search 12 records...						All
2839676538	528232	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168524/AOD	9080	8793	0	0	287	Done
2839676175	528231	/alice/cern.ch/user/a/alihyperloop/jobs/0016/hy_168523/AOD	164	164	0	0	0	Done
			293	293	0	0	0	Done
			360	358	0	0	2	Done
			459	456	0	0	3	Done
			64	64	0	0	0	Done
			145	145	0	0	0	Done
			60	60	0	0	0	Done

- Summarizes the jobs performance

- Plots:

- Files/Job
- CPU time/Job
- Wall time/Job



# Merged Output

- Displays the jobs status after submitting the train. The mergelists are defined in the *dataset settings*
- When the final merge is started manually by the operator, some of the runs may not be merged
- You can copy the list of **merged runs** or the total **list of runs** by clicking on the (red) number

Train run 67011

General Test Submitted jobs Grid Statistics Wagon resources Merged Output Clone

AnalysisResults.root

	PID	Status	Output directory	Runs
Full train merge	2818434043	Done	/alice/cern.ch/user/a/alihyperloop/outputs/67011/7087 (browse)	25 out of 28
LHC22r_apass2 all/low_rate	2815066400	Done	/alice/cern.ch/user/a/alihyperloop/outputs/67011/7086 (browse)	2 out of 2
LHC22r_apass2 all/all	2818434041	Done	/alice/cern.ch/user/a/alihyperloop/outputs/67011/7085 (browse)	25 out of 28

529066,529067,529077,529078,529084,529088,529116,529117,529128,529129,529208,529209,529210,529237,529242,529248,529252,529270,529306,529310,529317,529320,529324,529338,529341

Productions (1) Learn more

+ Production

LHC22r\_apass2 (LHC22r - apass2 of LHC22r on CPU - 13.6 TeV pp, O2-3464)

all: 529066 529067 529077 529078 529084

Run exclude list

Comma separated list of runs

Mergelists

+ Mergelist

all

low\_rate

all

low\_rate

Comma separated list of runs

529066,529067

# Staged submission – Long train request



- Linked datasets are subsets of a large dataset (set up in the Dataset settings)
- First, a train run needs to be **Done** on a smaller linked dataset before being run on a larger dataset

Train run 132176



General

Derived Data

Test

Submitted jobs

Grid Statistics

Wagon resources

Merged Output

Clone

Request long train

Here you can request to run the same wagon configuration on a larger dataset. The train run needs to be approved before departing.

**Please use the same queue or one with less cores than Wigner - Single core.**

Dataset

LHC22o\_pass4



Target

Grid - Single core



Package tag  
Settings

O2Physics::daily-20231103-0100-1

☐ slow train

Slim derived data



☐ automatic submission



Slim derived data



Slim derived data

Standard derived data

Wagons

(as of 03/11/23, 15:01 CET)

☒ CFFilter (alihyperloop)

☒ integrationTest (alihyperloop)

☐ integrationTestCCDB (alihyperloop)

Compose and request approval

- Any user who is part of the analysis can request a long train
- You can change from slim to standard derived data (recommended if output is large)
- **Approval from the participating analyses PWGs conveners is required in order to submit a long train. Train operators or admins can also approve but usually to be done by the PWG**



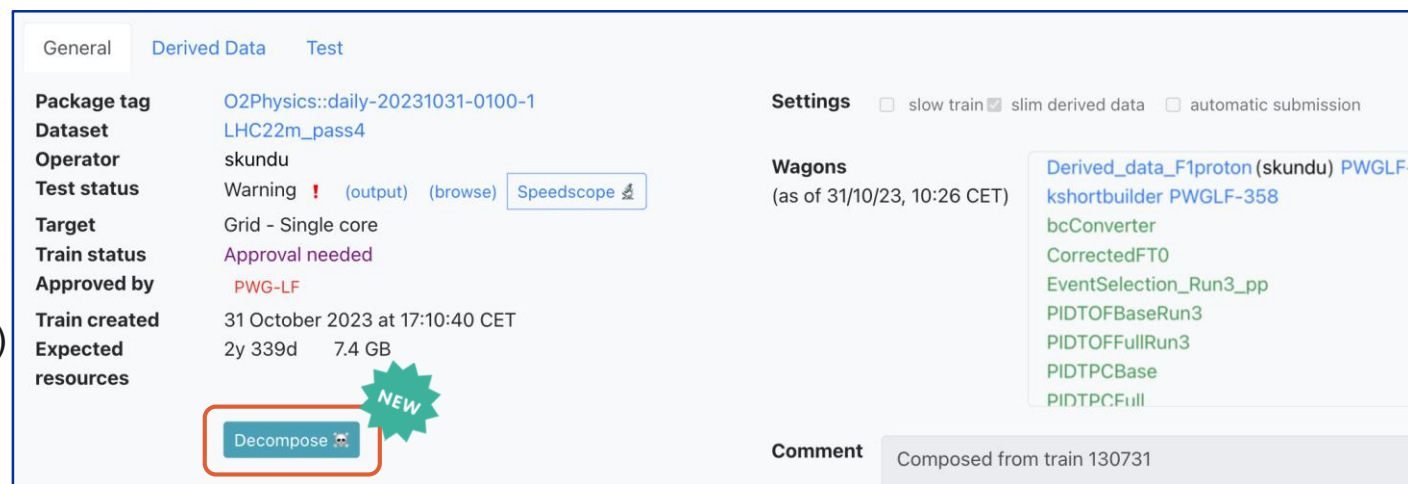
# Staged submission – Long train request



The user can **decompose** their own long train.

You may wish to do this when:

- The wrong wagons were selected to be part of the long train
- The selected train type is incorrect (e.g. slim instead of standard)
- The long train request was created by mistake



General | Derived Data | Test

Package tag: O2Physics::daily-20231031-0100-1  
 Dataset: LHC22m\_pass4  
 Operator: skundu  
 Test status: Warning ! (output) (browse) Speedscope  
 Target: Grid - Single core  
 Train status: Approval needed  
 Approved by: PWG-LF  
 Train created: 31 October 2023 at 17:10:40 CET  
 Expected resources: 2y 339d 7.4 GB

Settings: ☐ slow train ☒ slim derived data ☐ automatic submission

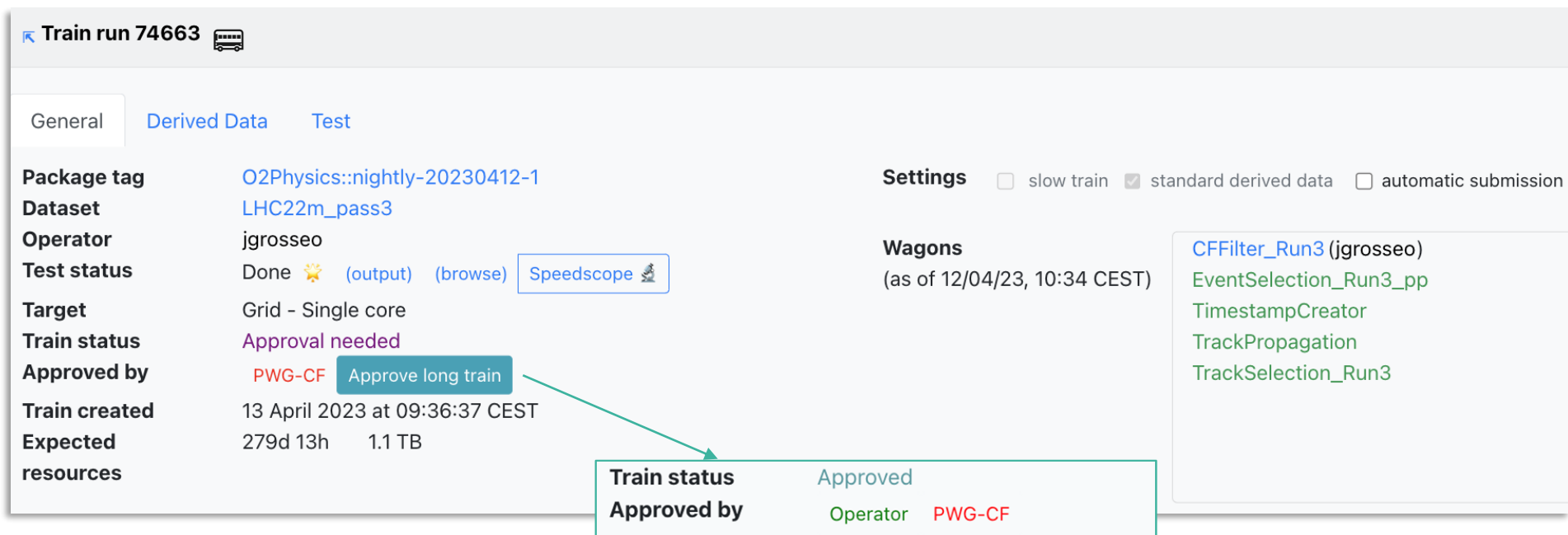
Wagons (as of 31/10/23, 10:26 CET):  
 Derived\_data\_F1proton (skundu) PWGLF-  
 kshortbuilder PWGLF-358  
 bcConverter  
 CorrectedFT0  
 EventSelection\_Run3\_pp  
 PIDTOFBaseRun3  
 PIDTOFFullRun3  
 PIDTPCBase  
 PIDTPCFull

Comment: Composed from train 130731

**Decompose** (NEW)

Once the long train is approved:

- If **Automatic Submission** is enabled and the train test finished *without memory warning* and *within the CPU time limit*, the train is submitted
- **Otherwise**, you may request the submission by the operators on the Operation channel



General | Derived Data | Test

Package tag: O2Physics::nightly-20230412-1  
 Dataset: LHC22m\_pass3  
 Operator: jgrosseo  
 Test status: Done 🌟 (output) (browse) Speedscope  
 Target: Grid - Single core  
 Train status: Approval needed  
 Approved by: PWG-CF Approve long train  
 Train created: 13 April 2023 at 09:36:37 CEST  
 Expected resources: 279d 13h 1.1 TB

Settings: ☐ slow train ☒ standard derived data ☐ automatic submission

Wagons (as of 12/04/23, 10:34 CEST):  
 CFFilter\_Run3 (jgrosseo)  
 EventSelection\_Run3\_pp  
 TimestampCreator  
 TrackPropagation  
 TrackSelection\_Run3

**Train status**: Approved  
**Approved by**: Operator PWG-CF

## Options

- Allowed parent dataset access level (HY)
- Parent datasets (HY) => size with parents

## Dataset sampling NEW

## Linked datasets (staged submission)

## Staging info, dataset size

## Composition schedule

- CPU limit
- Max trains/analysis/week

## Productions

- Link to production details in MonALISA (MC and DATA)
- Production - List of runs (x out of y selected)
- Runs marked as **used** / not used
- Mergelists marked as **activated** / **deactivated**
- Total number of runs per mergelist

### HF\_LHC22b1a\_2P3PDstar (HY)

D0, D+, Ds+, D\*+, Lc->pKpi, Xic->pKpi finding with loose cuts without PV refit  
request by Fabrizio Grosa

#### Options [Learn more](#)

☒ Activated

☒ Run final merging over all runs in this dataset

☒ Dataset sampling

If checked, analysis will run on 5% of this dataset.

Linked Datasets:

Allowed parent dataset access level: 1

Parent datasets: LHC22b1a

#### Analysis Facility Staging [Learn more](#)

Dataset size: 22.5 GB

Dataset size (with parents): 22.8 TB

### LHC22t\_pass3 (DATA)

<https://alice.its.cern.ch/jira/browse/O2-3562>

Edit dataset

#### Options [Learn more](#)

☒ Activated

☒ Run final merging over all runs in this dataset

☒ Dataset sampling

Linked Datasets: LHC22t\_pass3\_small

LHC22t\_pass3\_medium

The linked datasets are a subset of this dataset. Before running on it, a train run on a subset of the data is needed as validation. This dataset will be offered to the user in the "Request long train" tab of a train run that run on a linked dataset. Running on this dataset requires approval. Follow [these instructions](#).

### Analysis (1)

Remove dataset from analysis

+ Add the Dataset to Analysis

Name	Description	PWG name	Analyzers	JIRA Id	Operations
<a href="#">Run 3 test HF analysis</a>		HF	ginnocen,kgajdoso,ldellost,mkabus,vkucera	PWGHE-321	<input checked="" type="checkbox"/>





# Dataset view

- Options
  - Allowed parent dataset access level (HY)
  - Parent datasets (HY) => size with parents
  - Dataset sampling** NEW
- Linked datasets (staged submission)
- Staging info, dataset size
- Composition schedule
  - CPU limit
  - Max trains/analysis/week
- Productions
  - Link to production details in MonALISA (MC and DATA)
  - Production - List of runs (x out of y selected)
  - Runs marked as **used** / not used
  - Mergelists marked as **activated** / **deactivated**
  - Total number of runs per mergelist

## Analysis Facility Staging [Learn more](#)

Dataset size: 11.6 TB      File Pattern: AO2D.root

Staged to: ALICE::GSI::SE2 100%    ALICE::KFKI::EOS 100%

## Automatic Train Composition [Learn more](#)

Automatic train composition: Scheduled      Maximal CPU time in days: 365      Maximal trains per analysis per week: 14

Composition schedule (CET): Monday - 02:00 Monday - 14:00 Tuesday - 02:00 Tuesday - 14:00 Wednesday - 02:00 Wednesday - 14:00  
Thursday - 02:00 Thursday - 14:00 Friday - 02:00 Friday - 14:00 Saturday - 02:00 Saturday - 14:00 Sunday - 02:00 Sunday - 14:00

Composition targets: GSI - 2 core GSI - 4 core Grid - Single core

## Productions (1) [- Collapse All](#)

[+/-](#) LHC22o\_apass3 (LHC22o - apass3 of LHC22o - 13.6 TeV, CPU, O2-3522)

[↶ Production details in MonALISA](#)

Runlist: **all** ■

List of runs (2 out of 32 selected)




527978	527979	528021	528026	528036	528093	528094	528097	528105	528109	528110
528231	528232	528233	528263	528266	528292	528294	528316	528319	528328	528329
528330	528332	528336	528347	528359	528379	528381	528463	528531	528534	

## Mergelists

✓ all (Runs: 2)


✗ all (Runs: 2)


527979 528021

[My Analyses](#) [All Analyses](#) [Dashboard](#) **AliHyperloop**  [Train Submission](#) [Train Runs](#) [Datasets](#) [DPG Runlists](#) [?](#)  10 

✉ Hyperloop Grid jobs do not start as expected at the moment. Issue related to job restrictions for reconstruction. We are investigating... ✕

## Service Analyses



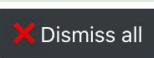
 **Core Service Wagons**

 **Service Wagons HF**

General news / issues concerning the system appear on top of the page and can be dismissed

Look out for new deployments

✉ New deployment done. Please reload the page to get the latest features. ✕

- There are different types of notifications that the user can receive.
- Displayed in the *My Analyses* page and in the *Notifications* page, accessed by clicking  in the menu bar.
- Not all notifications require an action, there can also be updates and warnings
- You can click the  button to remove a notification.
- To remove all the notifications, go to the Notifications page, and click the  button.

My Analyses
All Analyses
Dashboard

AliHyperloop
Train Submission
Train Runs
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## My Analyses


Hyperloop Framework Test Analysis


Analyzers: jgrosseo,rcruceru,raquishp
JIRA : OHS-6


Package: O2Physics::nightly-20221012-1
☒ or newer tags
☐ Future tag based on pull request
[Learn more](#)


You have 14 notification(s) !

Info: The train run "Train run 24523 / " has been removed from the "LHC15o\_derived\_correlations" dataset on "2022-09-12 10:33:02 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)


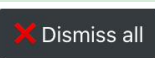
Info: The train run "35025 /" has been added into the "LHC15o\_derived\_correlations" dataset on "2022-09-12 10:33:22 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)



Info: The train run "Train run 35025 / " has been removed from the "LHC15o\_derived\_correlations" dataset on "2022-09-21 22:40:31 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)


Info: The train run "36180 /" has been added into the "LHC15o\_derived\_correlations" dataset on "2022-09-21 22:40:44 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)


Info: The train run "Train run 246 / full" has been removed from the "LHC18g4" dataset on "2022-09-27 09:33:53 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)



## Notifications

 Dismiss all

Info: The train run "399 / full" has been added into the "LHC18g4" dataset on "2022-09-27 09:33:59 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)


The dataset is included in your analysis:

- [Hyperloop Framework Test Analysis](#)

Info: The train run "Train run 246 / full" has been removed from the "LHC18g4" dataset on "2022-09-27 09:33:53 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)


The dataset is included in your analysis:

- [Hyperloop Framework Test Analysis](#)

# Notifications – Service wagons




- **When a service wagon is updated:**
  - Tests are reset: for all enabled wagons that depend on it (e.g. use it as dependency)
  - Users who own wagons that depend on the respective service wagon will receive the following notification, with direct links to:
    - Latest service wagon configuration
    - Dependent wagons' configurations and the analyses they are part of
    - Details of the change in question (wagon changelog)


**Info:** The configuration of the service wagon [EventSelection](#) was adjusted. This is a dependency of your wagon(s): [correlations\\_depends\\_on\\_centrality\\_clone](#). The change was made on "2023-10-13 19:29:55 CET" by "rcruceru". [Details here.](#)

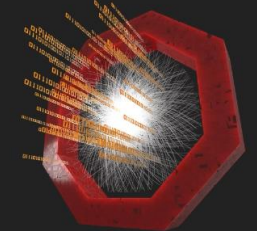


This is relevant to your analysis:

- [HF O2 developments for ALICE3 pp Open HF 2.0 T](#)

- Accessed from the Navbar or everywhere across Hyperloop where you see the  icon
- Can also be accessed from the notifications

My Analyses
All Analyses
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AliHyperloop
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ALICE O2 Analysis framework  
DOCUMENTATION

Search docs...

DOCUMENTATION HOME

Getting started
Writing an analysis task
Running an analysis
Using hyperloop for analysis




1. User Documentation

My Analyses
Creating or joining an analysis
All Analyses
Train Runs

2. Notifications

ALICE O2 documentation
master

## My Analyses

- **My Analyses** is a personalized webpage which displays all the analyses where the user belongs to.
- The analyses display can be expanded/collapsed and reordered with the buttons , , or by dragging and dropping. This configuration is saved per user.
- The user can add/remove, configure and enable/disable wagons in this page.
- The user can add/remove datasets per analysis.
- Receiving emails on wagon test failure can be configured per analysis in **Datasets and Settings** . It can be set to: none, all analyzers or only user who enabled the wagon.


## Service wagons

The *Service wagons* are wagons which are dependencies to other wagons. They are created by experts, and you can add it as a dependency to your wagon in [edit wagon](#).

- For the users, in the *My Analyses* page, there is a read only view of the *Service Analyses* available on the top of the page.
- For the experts, if you need to create *Service wagons*, you need to have an analysis with the project type *O2 Hyperloop Service Wagons (OHSW)* which can be [created in JIRA](#). Once the analysis is created, you can [add a new wagon](#) inside of the analysis available in *My Analyses*.

## Adding and configuring a wagon to an analysis

### 1. Adding a new wagon:

Using the *My Analyses* page, inside of the *Analysis* you want to add the wagon to, click on 

**Info:** The train run "36180 /" has been added into the "LHC15o\_derived\_correlations" dataset on "2022-09-21 22:40:44 CET" by "jgrosseo". [Details here.](#) [Documentation here.](#)

The dataset is included in your analysis:

- [Hyperloop Framework Test Analysis](#)

# Summary



- Make use of the **My Analyses** page to see your analyses, enable *datasets*, and *choose package tag*
- Create / Edit / Delete / Clone / Compare your wagons
- **Enable** your wagons to start the **immediate testing**
- Wait for **automatic composition** (if enabled for the dataset, wagon test is done ✨ and no derived data 📁 , unless slim) **or**
- Request train composition in **O2 Hyperloop Operation**
- Follow up / compare trains in My Analyses or Train runs page
- Checkout the **notifications** (remember not all require action)
- Heads up to the message of the day
- Make use of the **?** button to check the documentation
- When in doubt, hop on the bus! 🚌

## USER



MyAnalyses

AllAnalyses

Dashboard

Train Support

24/5 Operation

## OPERATOR



Train Submission

Train Runs

Datasets

Derived Data

DPG runlists

Trains with issues





# Back-up Slides

## Ongoing Trains from last 2 weeks

(ready, submitted)



☐ Show done and killed [All trains](#) [Trains with issues](#)

Train	Job Status ?	Operator	Package	Dataset	Composed	Train status	Test
<input type="checkbox"/> <div> <div>Search</div> <div>Search 24 records...</div> </div>		<div>Search 24</div>	<div>Search 24</div>	<div>Search 24 records...</div>	<div>07/03/23, 14:01 CET</div> <div>Off</div>	<div>All</div>	<div>All</div>
<input type="checkbox"/> 70223	Total: 4145, Done: 164, Active: 2482, Wait: 1431, Error: 68 Done: 0, Running: 0, Pending: 9, Skipped: 0, Failed: 0 Done: 0, Running: 0, Pending: 1, Failed: 0	alihyperloop	nightly-20230316-1	LHC22p_pass2	17/03/23, 09:01 CET	Submitted	
<input type="checkbox"/> 70222	Total: 2810, Done: 139, Active: 97, Wait: 2573, Error: 1 Done: 0, Running: 0, Pending: 12, Skipped: 0, Failed: 0	rsingh	nightly-20230316-1	LHC22q_pass3	17/03/23, 07:16 CET	Submitted	
<input type="checkbox"/> 70221	Total: 1368, Done: 544, Active: 665, Wait: 18 Done: 0, Running: 0, Pending: 1, Skipped: 0, Failed: 0						
<input type="checkbox"/> 70220	Total: 85, Done: 76, Active: 8, Wait: 0, Error: 0 Done: 5, Running: 1, Pending: 5, Skipped: 0, Failed: 0 Done: 0, Running: 0, Pending: 1, Failed: 0						

## Ongoing Trains from last 2 weeks

(ready, submitted, done, killed)

☒ Show done and killed [All trains](#) [Trains with issues](#)

Train	Job Status ?	Operator	Package	Dataset	Composed	Train status	Test
<input type="checkbox"/> <div> <div>Search</div> <div>Search 295 records...</div> </div>		<div>Search 295</div>	<div>Search 295</div>	<div>Search 295 records...</div>	<div>28/02/23, 17:20 CET</div> <div>Off</div>	<div>Done</div>	<div>All</div>
<input type="checkbox"/> 70211	Total: 63, Done: 60, Active: 0, Wait: 0, Error: 3 Done: 15, Running: 0, Pending: 0, Skipped: 0, Failed: 0 Done: 1, Running: 0, Pending: 0, Failed: 0	alihyperloop	nightly-20230316-1	LHC16i	17/03/23, 00:01 CET	Done	
<input type="checkbox"/> 70202	Total: 2498, Done: 2452, Active: 0, Wait: 0, Error: 46 Done: 1, Running: 0, Pending: 0, Skipped: 0, Failed: 0 Done: 1, Running: 0, Pending: 0, Failed: 0	nvalle	nightly-20230312-1	LHC22p_pass3_subset	16/03/23, 17:20 CET	Done	

- Accessed from Train Runs page
- Shows ongoing trains in the last 2 weeks
- Checkbox to add trains which are done and killed



Accessed from Datasets page

## Datasets

Derived data
☒ Show staging status
 ☐ Show removed datasets
 + Add Dataset

Clear all filters

Name	Description	Type	Size	Staging status
pass3	Search 6 records...	DATA	Search 6 records...	Completed in warning state(99.63% success)
LHC22m_pass3_relval_cpu2	https://alice.its.cern.ch/jira/browse/O2-3540	DATA	13.0 TB	ALICE::GSI::SE2 99.63%
LHC22p_pass3_subset	https://alice.its.cern.ch/jira/browse/O2-3562	DATA	20.8 TB	ALICE::KFKI::EOS 100%
LHC22q_pass3	https://alice.its.cern.ch/jira/browse/O2-3562	DATA	46.1 TB	ALICE::GSI::SE2 100%
LHC22r_pass3_subset	https://alice.its.cern.ch/jira/browse/O2-3562	DATA	29.7 TB	ALICE::GSI::SE2 98.33%
LHC22t_pass3_small	https://alice.its.cern.ch/jira/browse/O2-3562	DATA	25.4 TB	ALICE::KFKI::EOS 100%
PilotBeam_pass3	async pass 3	DATA	80.1 GB	ALICE::GSI::SE2 100% ALICE::KFKI::EOS 99.99%

Accessed from Datasets page

## Datasets

Derived data
☒ Show staging status
 ☐ Show removed datasets
 + Add Dataset

Clear all filters

Name	Description	Type	Size	Staging status
pass3	Search 6 records...	DATA	Search 6 records...	
LHC22m_pass3_relval_cpu2	https://alice.its.cern.ch/jira/browse/O2-3540	DATA	13.0 TB	ALICE::GSI::SE2 99.63%
LHC22p_pass3_subset	https://alice.its.cern.ch/jira/browse/O2-3562	DATA	20.8 TB	ALICE::KFKI::EOS 100%
LHC22q_pass3	https://alice.its.cern.ch/jira/browse/O2-3562	DATA	46.1 TB	ALICE::GSI::SE2 100%

Completed in warning state(99.63% success)

### Transfer requests (add new request)

ID	Path	Target SE	Status	Progress	Files	Total size	Started	Ended
21322.	HY masterjob 2803959817%pattern AO2D.root,2803960202%patter	ALICE::GSI::SE2	- any -					
21322.	HY masterjob 2803960204 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Done		8	24.34 GB	20 Feb 2023 11:05	20 Feb 2023 19:53
21321.	HY masterjob 2803959812 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Error		286	980.8 GB	20 Feb 2023 11:05	20 Feb 2023 21:13
21320.	HY masterjob 2803960203 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Error		358	1.203 TB	20 Feb 2023 11:05	20 Feb 2023 21:08
21319.	HY masterjob 2803960201 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Error		407	1.354 TB	20 Feb 2023 11:05	20 Feb 2023 21:18
21318.	HY masterjob 2803960200 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Done		416	1.377 TB	20 Feb 2023 11:05	21 Feb 2023 00:35
21317.	HY masterjob 2803960202 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Done		415	1.384 TB	20 Feb 2023 11:05	20 Feb 2023 14:07
21316.	HY masterjob 2803960117 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Done		420	1.4 TB	20 Feb 2023 11:05	20 Feb 2023 13:34
21315.	HY masterjob 2803959817 on ALICE::GSI::SE2 filepattern AO2D.root	ALICE::GSI::SE2	Done		420	1.406 TB	20 Feb 2023 11:05	21 Feb 2023 00:35
8 requests					2730	9.106 TB		

ALICE::GSI::SE2 99.63%

ALICE::KFKI::EOS 100%

ALICE::GSI::SE2 100%

ALICE::GSI::SE2 98.33%

ALICE::KFKI::EOS 100%

ALICE::GSI::SE2 100%

ALICE::KFKI::EOS 99.99%

# Dashboard

- Information updated every 10 min
- Added number of composed trains waiting to be submitted

