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Autosubmit Tutorial 2021

v3.13.0 and Autosubmit GUI

The Autosubmit Team

Autosubmit team



Get involved or contact us:	
Autosubmit GitLab:	https://earth.bsc.es/gitlab/es/autosubmit
Autosubmit Mailing List:	autosubmit@bsc.es

Documentation:	
Autosubmit:	http://autosubmit.readthedocs.io
FAQ:	https://autosubmit.readthedocs.io/en/latest/faq.html
GUI:	https://autosubmit.readthedocs.io/en/latest/autosubmit-gui.html

Autosubmit Tutorial 2021

Hands-on: How to run
experiments using Autosubmit

[Link to the tutorial slides](#)

The Autosubmit Team

Hands-on

<https://tinyurl.com/AS-Hands-on-2021>



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Autosubmit Release 3.13.0 - News

The Autosubmit Team

3.13.0 - News summary



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3.13.0 - Summary - Improvements

Improves ... :

General **workflow speedup** due to major rework of the tool.

The **structure** of the **workflow** is now cached on a database (speed up)

Able to run experiments **without size limitations***.

Jobs limits management system (total jobs, number of inner jobs...).

Improvements to recovery of job logs for all types of workflows.

Improvements to **advanced wrappers** and added **Shared-memory (multi-thread) wrappers**.

Failure tolerance.

Safety, validation improvements

Checks that experiment is well configured before run.

Experiments are not longer modifiable by non-owner user.

Improved **Git management** (backups, only-branch downloads...)

Logging system rework and code errors.

3.13.0 - Summary - New Features

[Automatic] **Recover** from errors generated at platform endpoint.

[HOST = mn1,mn2...] Use **multiple hosts** in the same platform. Activable*

[Threads] Speed up improvement. This can be disabled using **DISABLE_RECOVERY_THREADS** in platforms.conf

[New run flag] **Schedule** an experiment to run at specific **time**.

[New run flag] **Schedule** an experiment to run after another **experiment**.

[New run flag] Do a **run** based on a subset of the experiment **members**.

[New command dbfix] **Fix** Autosubmit **db** via a command line.

[New command inspect] Allows to **generate** autosubmit templates **without submit** them.

[New jobs parameter] Allows to load a custom shebang or **modules/** environment script before run the job

[Srun] **Multi-thread** wrappers.

[Presubmission] Acquire **priority** on not-running yet jobs (up to 5). Activable*

[Improved command] **Migrate** an experiment.

[New expdef parameter] **Prioritize** a list of jobs **over** the rest of workflow.

[New jobs parameter] **Tune** dependencies at lower level by **specifying** them by **chunks**.

[New wrapper parameter] Impose **conditions** for **wrapper** formation.

3.13.0 - Wrappers - Configuration

Wrapper configuration is set in autosubmit.conf. [wrapper]

Types Guideline

Vertical: Most appropriate when there are many sequential jobs.

Horizontal: Most appropriate when there are multiple ensemble members. Can be used with machines files or [shared-memory](#).

Horizontal-vertical: Most Appropriated to run [shared-memory](#) and to run different ensembles sequentially.

Vertical-horizontal: To group subsequents jobs with different wallclock.

Parameters

Type: Allows to select an wrapper approach.

JOBS_IN_WRAPPER: Sections that will be included on the wrapper.

MIN_WRAPPED: Minimum wrapper size.

MAX_WRAPPED: Maximum wrapper size.

MACHINEFILES: STANDARD

METHOD: Select between MACHINEFILES or Shared-Memory.

QUEUE: Select the wrapper queue.

POLICY: Select the behaviour of the inner jobs

Strict/Flexible/Mixed

EXPORT: Allows to load env variables before run the wrapper.

3.13.0 - Wrappers - Policies

Flexible

If a wrapper of **MIN_WRAPPED** jobs is not possible, these jobs will be **submitted as individual jobs.**

Strict

If a wrapper of **MIN_WRAPPED** jobs is **not possible**, these jobs will **not be submitted.** Until there are enough ready jobs. **Can cause deadlock.**

Mixed

It **acts like Strict** with the **difference** that the **failed jobs** will be **resubmitted** individually. **Can cause deadlock.**

New Features - Illustrated



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New Features- Srun

[RUN]

FILE = run.sh

DEPENDENCIES = INI RUN-1

PLATFORM = power9

RUNNING = chunk

WALLCLOCK = 02:00

PROCESSORS = 1

THREADS = 8

TASKS = 1

SPLITS = 40

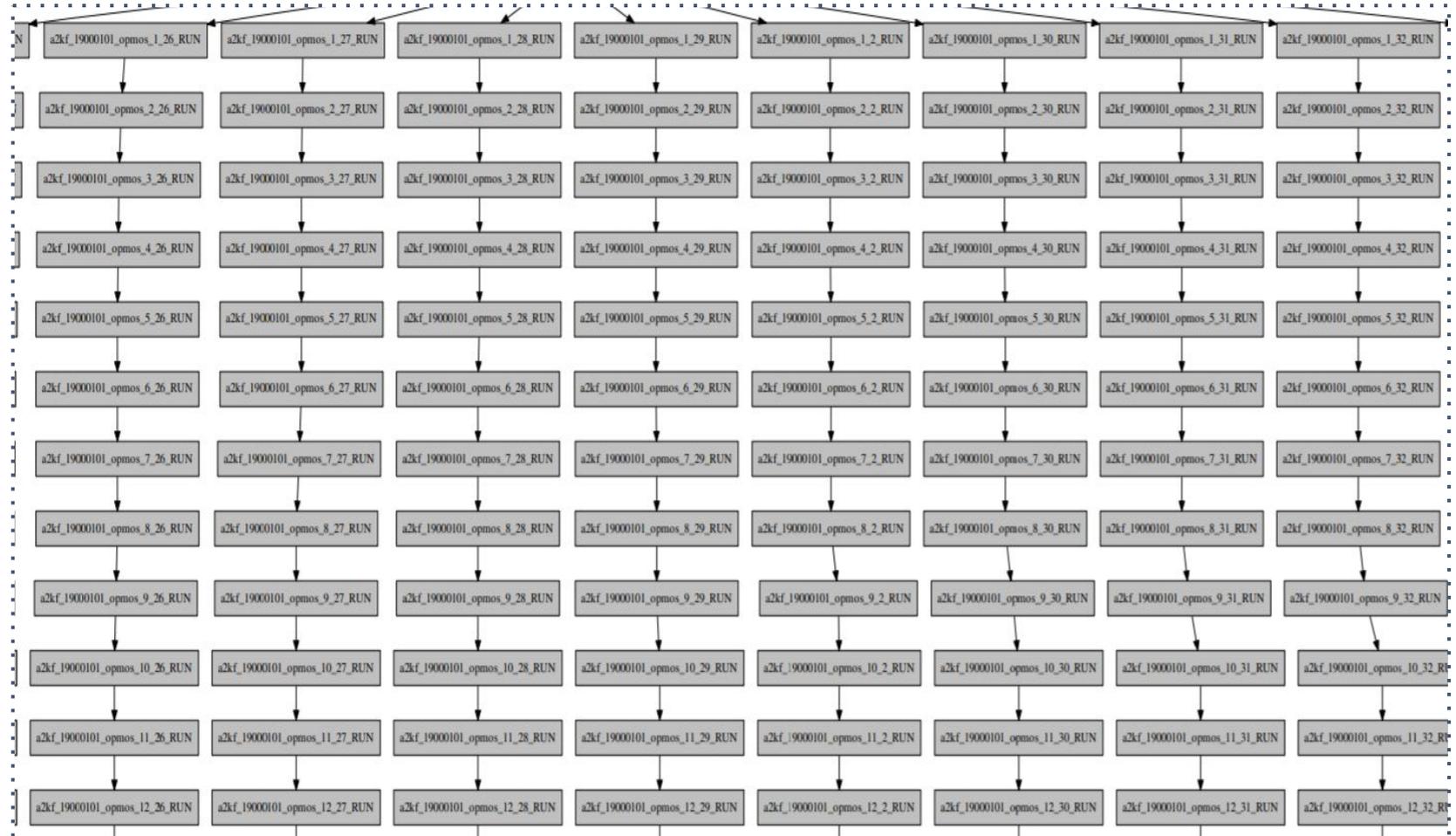
QUEUE = debug

[wrapper]

TYPE = horizontal-vertical

Method = srun

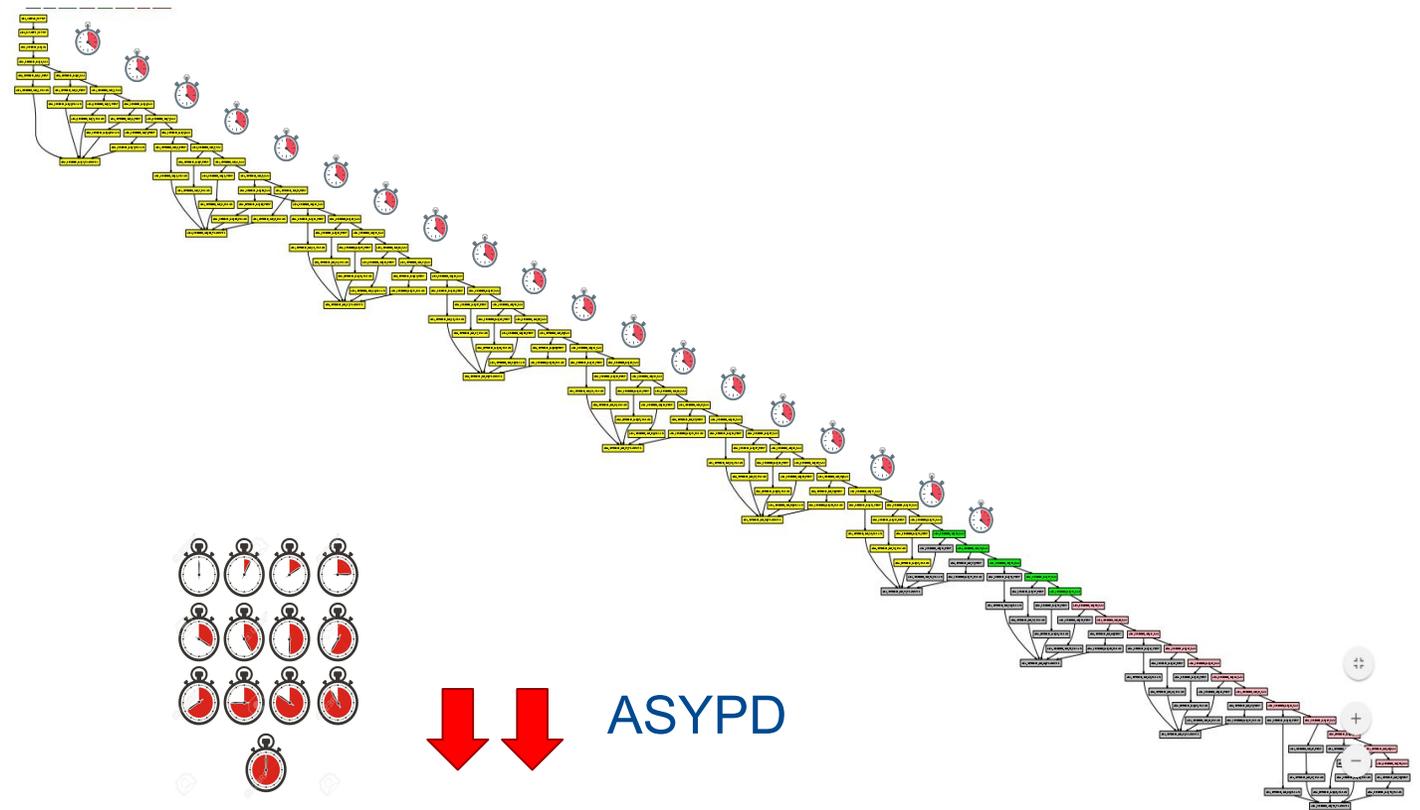
Thread-level parallelism.



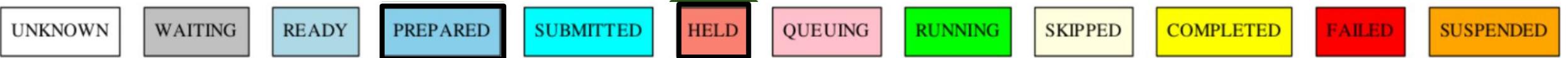
Allows to run serial jobs in different nodes

New Features - Presubmission

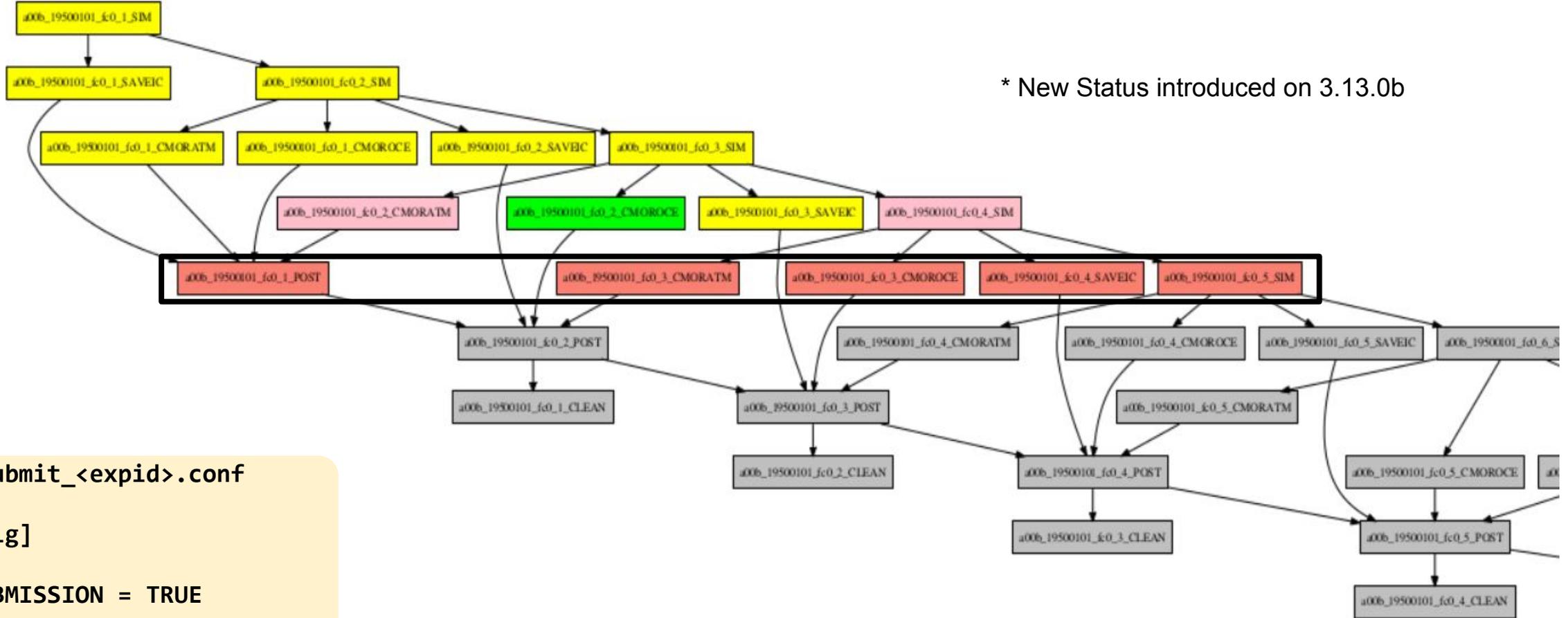
- **Minimize queuing** time.
- By **submitting jobs before** they are prepared to run.
- They are put on **hold** in the queues gaining **priority**.
- Autosubmit will **activate** them.
- **Presubmission** is set on *autosubmit.conf*



New Features - Presubmission(cont)



* New Status introduced on 3.13.0b

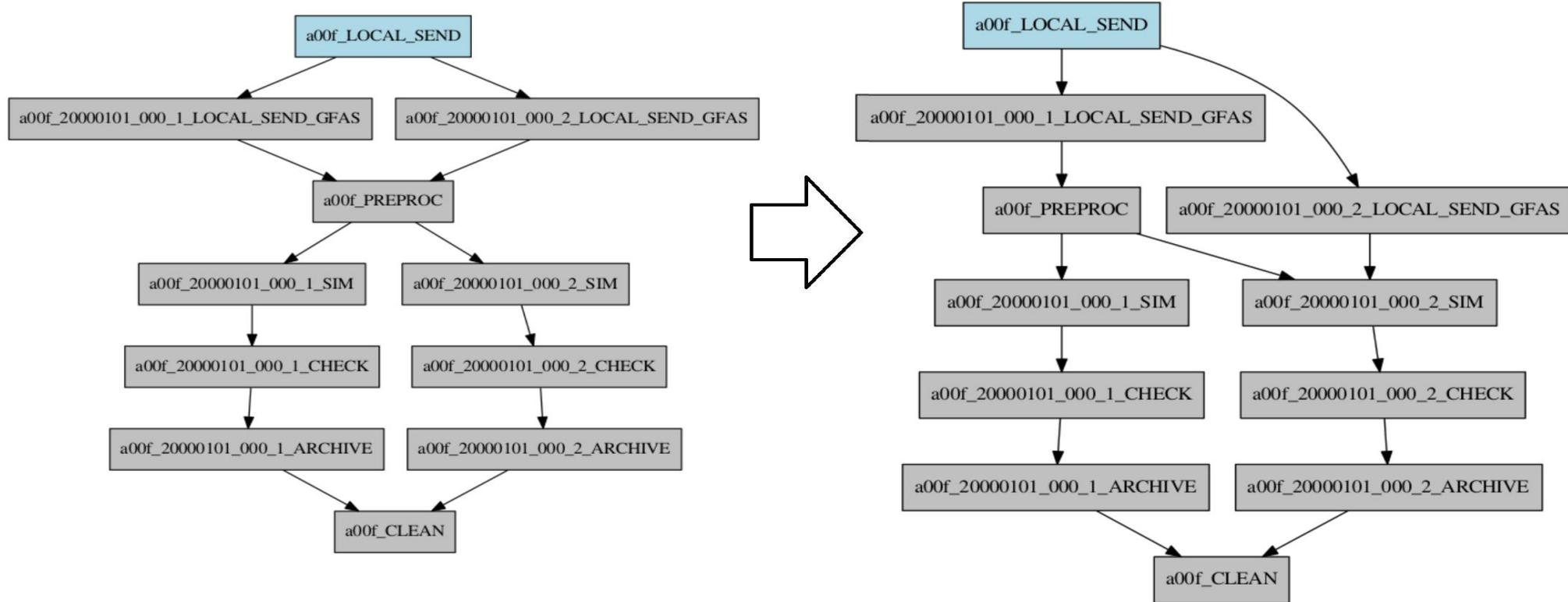


```

autosubmit_<expid>.conf

[config]
...
PRESUBMISSION = TRUE
...
    
```

New Features - Select Chunks



Tune dependencies at lower level by **specifying** them by **chunks**.

```
[PREPROC]
FILE = templates/prepoc.sh
DEPENDENCIES = LOCAL_SEND_GFAS
(...)
SELECT_CHUNKS = LOCAL_SEND_GFAS*1
```

New Features - Migrate

Migrate is a feature that allows to transfer data to another user.

- Allows to transfer data between from different or same group/project.
- Transfers /esarchive user to another user. **#OPTIONAL**
- Requires an temp_transfer_dir accessible for both users. **#MANDATORY**

Configuration Parameters in **each section of platform.conf** that **contains data**.

```
USER_TO = <target_user> # Mandatory
TEMP_DIR = <hpc_temporal_directory> # Mandatory
SAME_USER = False/True # OPTIONAL, default false
PROJECT_TO = <project> # OPTIONAL, if the target_user below to another project
HOST_TO = <cluster_ip> # OPTIONAL, Try to use direct ip.
```

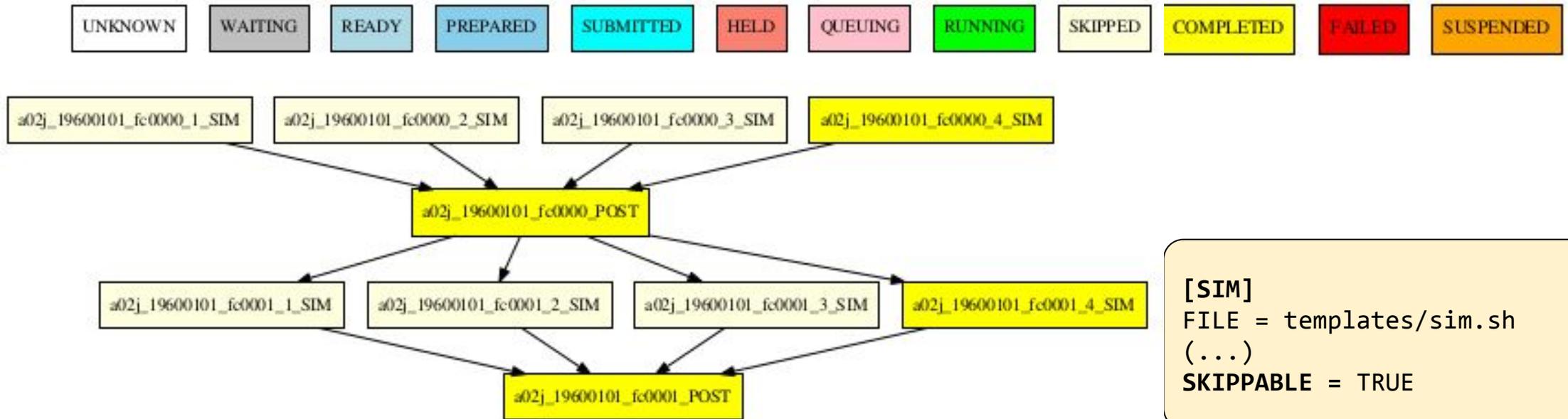
In case of shared filesystem, is advised to only put these parameters **on the one dedicated to transfer data**. (transfer_node in marenostrom4 case.)

USAGE :

```
autosubmit migrate <expid> <--offer> [--only_remote]
autosubmit migrate <expid> <--pickup> [--only_remote]
```

New Features - Skippable jobs

Allows to skip a job of the same section and run the latest one



New Features - Priority jobs (Crossdate-wrappers)

```
[wrapper]
TYPE = horizontal-vertical
MACHINEFILES = STANDARD
JOBS_IN_WRAPPER = SIM&DA
MIN_WRAPPED = 9
POLICY = flexible
CHECK_TIME_WRAPPER = 300
```

```
...
MEMBERS = 00[0-3]
CHUNKSIZEUNIT = day
CHUNKSIZE = 1
NUMCHUNKS = 10
...
```

Configuring a crossdate wrapper.

Copied from **t0kx** experiment.

Configuring priority jobs.

Add TWO_STEP_START parameter into expdef.conf

```
TWO_STEP_START =
```

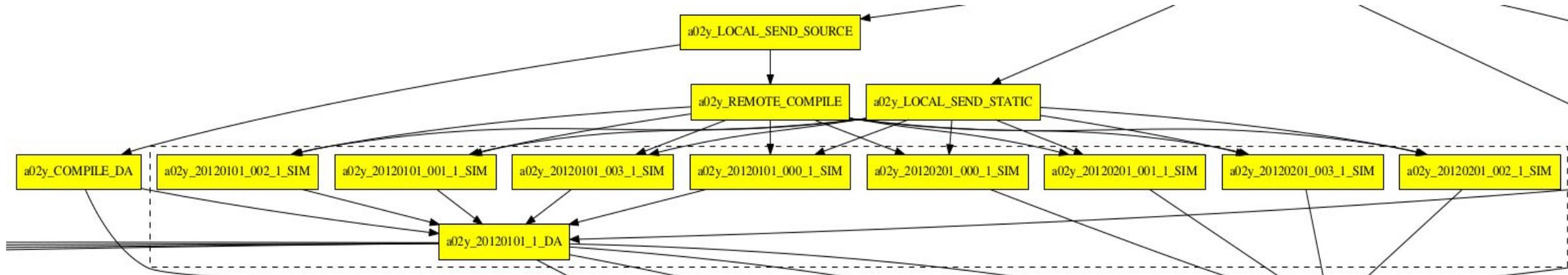
```
20120101_1_DA&LOCAL_SETUP, LOCAL_SEND_SOURCE, REMOTE_COMPILE, LOCAL_SEND_STATIC, LOCAL_SEND_IN  
ITIAL_DA, COMPILE_DA; SIM[20120101 20120201[C:1]]
```

New Features - Priority jobs (Crossdate-wrappers)

With this set-up

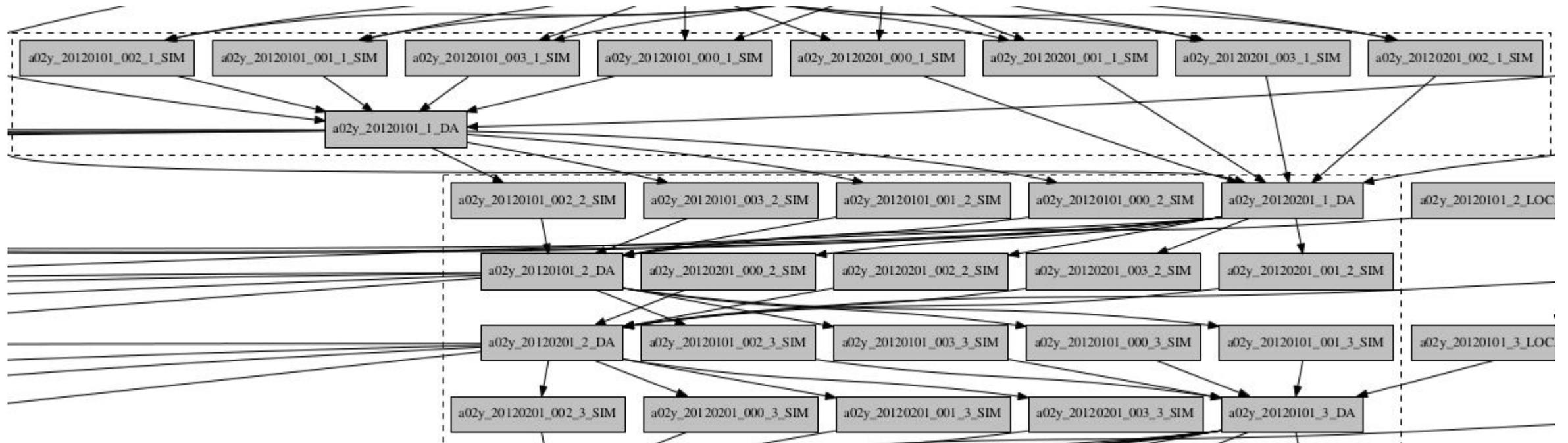
We accomplish that some specific jobs, regardless of if they were wrapped will be completed before the rest of the wrapper.

With the aim of balance the wrapper



New Features - Priority jobs (Crossdate-wrappers)

Run the rest of the workflow inside a bigger wrapper



Autosubmit Graphical User Interface (The GUI)



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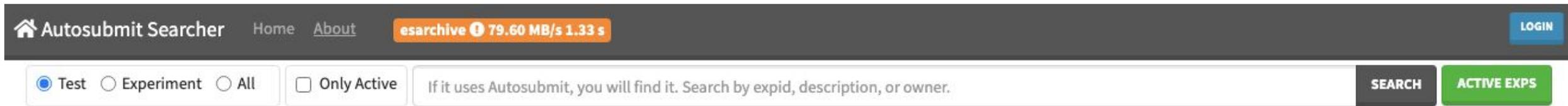
Presentation Structure

- **Autosubmit GUI Main Window**
 - Search
 - Summary data
 - How Autosubmit GUI collects data
- **Experiment Information**
 - Experiment Main Window
 - Experiment Metadata (Header and Footer)
- **Tree Representation**
 - General Description
 - Wrappers Representation
 - Monitoring
 - Filtering
 - Advanced Filter
 - Job Summary
- **Experiment History**
 - Runs of the experiment
 - Job data in Tree View
 - Job Runs

Presentation Structure II

- **Graph Representation**
 - General Description
 - Wrappers Representation
 - Monitoring
 - Job Search
 - Grouped by Date Member
 - Grouped by Status
- **Autosubmit Statistics**
 - General Description
 - Filtering
- **Performance Metrics**
 - Description
- **Quick View**
 - Description
- **FAQ**
- **More Tools**
 - Command generation

Autosubmit GUI Main Window: Search

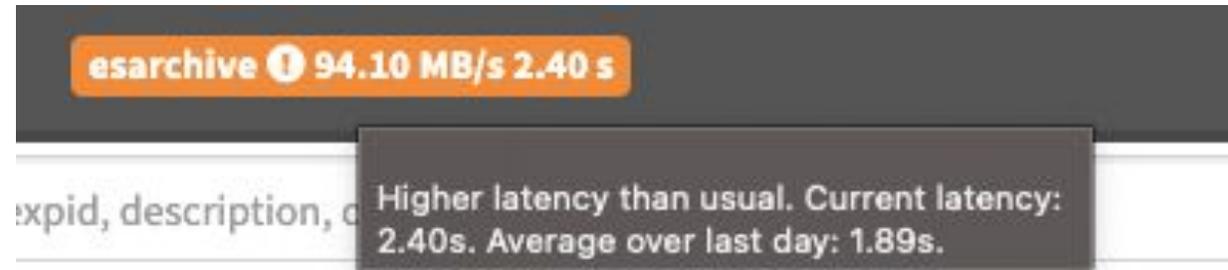


Autosubmit Searcher Home About esarchive 79.60 MB/s 1.33 s LOGIN

Test Experiment All Only Active

If it uses Autosubmit, you will find it. Search by expid, description, or owner. SEARCH ACTIVE EXPS

- Search (with filters)
- Active Exps
- “esarchive” Status (yellow on warning)



esarchive 94.10 MB/s 2.40 s

Higher latency than usual. Current latency: 2.40s. Average over last day: 1.89s.

<https://earth.bsc.es/autosubmitapp/>

Autosubmit GUI Main Window: Search Result

Autosubmit Searcher Home About esarchive 79.60 MB/s 1.33 s LOGIN

Test Experiment All Only Active If it uses Autosubmit, you will find it. Search by expid, description, or owner. SEARCH ACTIVE EXPS

SHOW DETAILED DATA CLEAR 36

Order By: TOTAL JOBS + COMPLETED JOBS + QUEUING JOBS RUNNING JOBS FAILED JOBS WRAPPER

1 2 3 From 1 to 12

a3k6 3 10 107 107 / 1631 ACTIVE
Owner: jmateu HPC: nord3
Jan_s first test
SUMMARY TREE GRAPH QUICK
3.13.0

t0lb 7 7 / 205 ACTIVE
Owner: dbeltran HPC: marenostrom4
[Testing Suite]/EARTH/t0j8
SUMMARY TREE GRAPH QUICK
3.13.0b0 VERTICAL wrapper

a3na 1 32 32 / 95 ACTIVE
Owner: mcosta HPC: marenostrom4
Montse first experiment
SUMMARY TREE GRAPH QUICK
3.13.0

t0lk 2 13 13 / 33 ACTIVE
Owner: dbeltran HPC: marenostrom4
[Testing Suite] Hands-On
SUMMARY TREE GRAPH QUICK
3.13.0 VERTICAL wrapper

a3ow 3 390 390 / 3816 ACTIVE
Owner: hnavarro HPC: marenostrom4
like a3nz
SUMMARY TREE GRAPH QUICK
3.13.0b0

a3pt 3339 3339 / 4867 ACTIVE
Owner: yruprich HPC: marenostrom4
EC-Earth3-CC 1990-control simulation
SUMMARY TREE GRAPH QUICK
3.13.0b0

a3qh 2886 2886 / 3247 ACTIVE
Owner: yruprich HPC: marenostrom4
EC-Earth3-CC piControl simulation without fFire
SUMMARY TREE GRAPH QUICK
3.12.0

t0n2 1 2 2 / 16 ACTIVE
Owner: eferre1 HPC: marenostrom4
weekly test case: ORCA1175 + nudging + surface restoring
SUMMARY TREE GRAPH QUICK
3.13.0b0

t0n3 1 2 2 / 16 ACTIVE
Owner: eferre1 HPC: marenostrom4
weekly test case: T255L91 (IFS only)
SUMMARY TREE GRAPH QUICK
3.13.0b0

- “ACTIVE” experiments listed first.
- Include experiment completion information.
- Quick way to see the status and completion of your experiment.
- Summary information is updated every 3 minutes.
- Experiments using Autosubmit 3.13.0 send update their information instantly.

Autosubmit GUI Main Window: Summary Data

The screenshot shows the main window for experiment 't0k8'. At the top left, the experiment name 't0k8' is displayed. To its right, a progress bar shows '4 / 30' and a green 'ACTIVE' status button. Below this, the owner is listed as 'jberlin' and the HPC as 'marenostrum4'. The tag is 'tag 3.3.3.1 test case: ORCA025L75 (NEMO only) + nudging + surface restoring - CHUNKSIZE=12'. At the bottom, there are four buttons: 'REFRESH', 'TREE', 'GRAPH', and 'QUICK'.

The summary data panel shows overall statistics: 'All : avg. queue 0:22:12 | run 0:48:48'. It includes counts for 'Running: 11', 'Queuing: 4', and 'Failed: 19'. A list of failed jobs is shown, starting with '1. a3hd_20210331_fc00_1_DOWNLOAD_PL_FC' and ending with '13. a3hd_20210313_fc00_1_DOWNLOAD_PL_FC'. A vertical scrollbar is visible on the right side of the list.

3.12.0

The “**More**” button will open the Tree View of the experiment.

The “**Quick**” button will open the Quick View of the experiment, which loads significantly faster.

The summary includes:

- Average Queue Time
- Average Running Time
- Independent metrics for SIM jobs
- List of failed jobs

How do we collect data?

Workers running on short intervals make sure we get **current data most of the time**.

Workers make sure that all information is included. They also make **corrections due to concurrency** conflicts.

Autosubmit v3.13.0 implements **distributed sqlite3 databases** that store the lifecycle of your experiment, while still **preserving the traditional filesystem storage**. We call these distributed databases, the **historical database**.

The historical database keeps records of **all** the runs of your experiment.

The main source of information for experiments not using the latest Autosubmit version is the **file system**.

Experiment Information: Main Window

The screenshot displays the Autosubmit Searcher interface. At the top, the header (1) includes the Autosubmit Searcher logo, navigation links (Home, About), the current experiment name 't07d ACTIVE', and system status 'esarchive 76.80 MB/s 1.71 s'. A search bar is located on the right. Below the header is a navigation bar (2) with tabs for Tree View, Graph, Log, Statistics, Performance, Check View, and FAQ. A control panel (3) contains buttons for CLEAR TREE, SUMMARY, ACTIVATE SELECTION MODE, REFRESH, and START JOB MONITOR. A search and actions panel (4) features a filter string input, FILTER, CLEAR, and CHANGE STATUS buttons. The main area (5) shows a tree view of jobs, with a detailed job information panel (6) on the right. The footer (7) displays system information: 'auto-monarch weekly test case: ONLY_SIM DUST NPS cold start (horizontal-vertical wrapper, no DA) | Branch: master | Hpc: marenostrium4 | Owner: 2359 gmontane | Version: 3.13.0b0 | DB: 15 | #Jobs: 36'.

1. Header
2. Content Tabs
3. Control Panel
4. Search & Actions Panel
5. Tree View
6. Job Selection Information
7. Footer

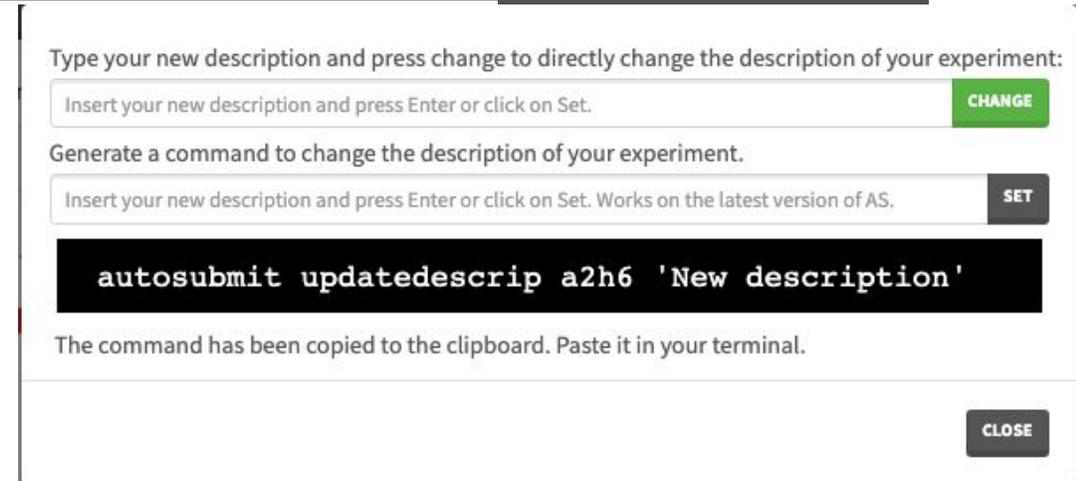


Experiment Header



From left to right:

- **Home:** Takes you to the main page.
- **About:** Some information you might need to know.
- **t07r:** Experiment identifier
- **INACTIVE:** Experiment status, **ACTIVE** if running.
- **Button with clock symbol:** Opens experiment history. Only for Autosubmit **v3.13.0** onwards.
- **Change:** Allows you to change the description or generates command.
- **esarchive:** Current status of /esarchive, if it is yellow, it might be bad news.
- **Search Experiments:** Allows you to search for another experiment.



Experiment Footer

MONARCH - Global Aerosol 1.5 Operational simulation |

| Branch: operational | Hpc: marenostum4 | Owner: 1747 molid | Version: 3.9.0 | DB: NA | #Jobs: 12

Presents the experiment description plus some other relevant data:

- Branch
- Hpc
- Owner
- Autosubmit Version
- DB Version
- Number of Jobs

Tree Representation: General Description

The screenshot displays a web-based job management interface. At the top, there are navigation tabs: "Tree View" (selected), "Graph", "Log", "Statistics", "Performance", "Quick View", and "FAQ". Below these are buttons for "CLEAR TREE", "SUMMARY", and "ACTIVATE SELECTION MODE". A filter string input field is present with "FILTER", "CLEAR", and "CHANGE STATUS" buttons. The main area shows a tree view of jobs, with a detailed view of a specific job on the right.

Tree View Summary:

- a2h6_20141128
 - a2h6_20141128_001 14 / 20 COMPLETED 1 FAILED
 - SIM
 - a2h6_20141128_001_5_SIM #SUSPENDED Wrapped 16231423011603
 - a2h6_20141128_001_4_SIM #SUSPENDED Wrapped 16231423011603
 - a2h6_20141128_001_2_SIM #FAILED ~ (0:00:36) + 0:00:27 Wrapped 16231423011603
 - a2h6_20141128_001_1_SIM #COMPLETED ~ (0:01:27) + 0:00:20 SOURCE Wrapped 16231421471277
 - a2h6_20141128_001_3_SIM #COMPLETED ~ (0:02:23) + 0:00:00 Wrapped 16231423011603
 - DA
 - REDUCE
 - ARCHIVE
 - a2h6_20141128_000 15 / 15 COMPLETED ✓
 - SIM
 - REDUCE
 - a2h6_20141128_000_1_REDUCE #COMPLETED ~ (0:00:35) + 0:00:27 Wrapped 16231423011603
 - a2h6_20141128_000_2_REDUCE #COMPLETED ~ (0:02:19) + 0:00:00 Wrapped 16231423011603
 - a2h6_20141128_000_3_REDUCE #COMPLETED ~ (0:00:27) + 0:00:00 Wrapped 16231423011603
 - a2h6_20141128_000_4_REDUCE #COMPLETED ~ (0:04:08) + 0:00:00 Wrapped 16231423011603
 - a2h6_20141128_000_5_REDUCE #COMPLETED ~ (0:05:09) + 0:00:00 Wrapped 16231423011603
 - ARCHIVE
- a2h6_20150527
 - a2h6_20150527_001 20 / 20 COMPLETED ✓
 - a2h6_20150527_000 15 / 15 COMPLETED ✓
 - Wrapper: a2h6_ASThread_16231423011603_8_44 38 / 44 COMPLETED 1 FAILED
 - Wrapper: a2h6_ASThread_16231421471277_4_6 6 / 6 COMPLETED ✓

Job Details (a2h6_20141128_001_3_SIM):

- Start: 2014 11 30 End: 2014 12 01
- Section: SIM
- Member: 001 Chunk: 3
- Platform: marenostrom4 QoS: bsc_es
- Id: 16242616
- Processors: 1 Wallclock: 00:40
- Queue: 00:02:23 Run: 0:00:00
- Status: COMPLETED OUT: 1 IN: 1
- Submit: 2021-06-08 10:51:48
- Start: 2021-06-08 10:54:11
- Finish: 2021-06-08 10:53:49
- Wrapper: a2h6_ASThread_16231423011603_8_44

- Organized by Date-Member.
- Show Status, Queue Time, Run Time.
- Job Information
- Expand

Job Selection

- **Out:** Next jobs.
- **In:** Previous jobs.
- **Copy out** to clipboard -> Paste
- **Visualize out** (Eye button)
- **Copy err** to clipboard -> Paste
- **Visualize err**

a3fy_22990101_fc0_73_SIM 

Start: 2371 01 01 **End:** 2372 01 01

Section: SIM

Member: fc0 **Chunk:** 73

Platform: marenostrum4 **Id:** 15397272

Processors: 2400 **Wallclock:** 8:00

Queue: 06:57:10 **Run:** 07:03:57

Status: **COMPLETED** **OUT:** 4 **IN:** 2

/esarchive/autosubmit/a3fy/tmp/LOG_a3fy/a3fy **COPY OUT**

/esarchive/autosubmit/a3fy/tmp/LOG_a3fy/a3fy **COPY ERR**

Submit: 2021-04-22 21:16:33 **SYPD:** 3.4

Start: 2021-04-23 04:13:43 **ASYPD:** 1.67

Finish: 2021-04-23 11:17:40

Wrapper:

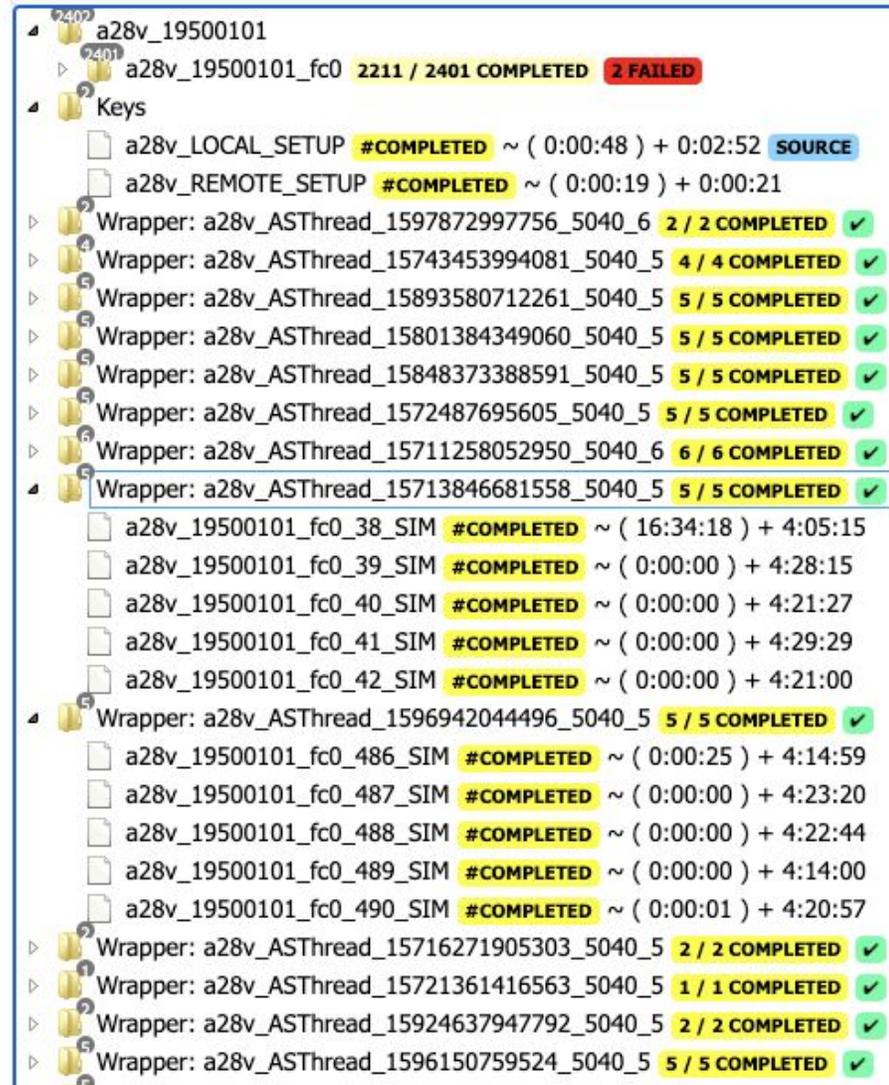
a3fy_ASThread_16191189907866_2400_6

```
Log /esarchive/autosubmit/a3jn/tmp/LOG_a3jn/a3jn_19800101_fc00_1_SIM.20210407170444.out

-> report: Performance report : Whole time from XIOS init and finalize: 3442.95 s
-> report: Performance report : total time spent for XIOS : 392.218 s
-> report: Performance report : time spent for waiting free buffer : 49.094 s
-> report: Performance report : Ratio : 1.42593 %
-> report: Performance report : This ratio must be close to zero. Otherwise it may be useful to increase buffer size or numbers of server
-> report: Memory report : Minimum buffer size required : 270070 bytes
-> report: Memory report : increasing it by a factor will increase performance, depending of the volume of data wrote in file at each time step of the file
-> report: Performance report : Time spent for XIOS : 3446.93
-> report: Performance report : Time spent in processing events : 159.319
-> report: Performance report : Ratio : 4.62205%
-> report: Performance report : Whole time from XIOS init and finalize: 3442.95 s
-> report: Performance report : total time spent for XIOS : 389.942 s-> report: Performance report : Time spent for XIOS : 3446.93
-> report: Performance report : Time spent in processing events : 159.291
-> report: Performance report : Ratio : 4.62123%
-> report: Memory report : Minimum buffer size required : 270070 bytes
-> report: Memory report : increasing it by a factor will increase performance, depending of the volume of data wrote in file at each time step of the file
-> report: Performance report : Time spent for XIOS : 3446.94
-> report: Performance report : Time spent in processing events : 159.285
-> report: Performance report : Ratio : 4.62107%
-> report: Performance report : total time spent for XIOS : 378.862 s
-> report: Performance report : time spent for waiting free buffer : 40.2233 s
-> report: Performance report : Ratio : 1.16828 %
-> report: Performance report : This ratio must be close to zero. Otherwise it may be useful to increase buffer size or numbers of server
-> report: Memory report : Minimum buffer size required : 270070 bytes
-> report: Memory report : increasing it by a factor will increase performance, depending of the volume of data wrote in file at each time step of the file
-> report: Performance report : Time spent for XIOS : 3446.93
-> report: Performance report : Time spent in processing events : 159.291
-> report: Performance report : Ratio : 4.62148%
-> report: Memory report : Minimum buffer size required : 270070 bytes
-> report: Memory report : increasing it by a factor will increase performance, depending of the volume of data wrote in file at each time step of the file
-> report: Performance report : Time spent for XIOS : 3446.94
-> report: Performance report : Time spent in processing events : 159.297
-> report: Performance report : Ratio : 4.6214%
-> report: Performance report : Time spent for XIOS : 3446.94
-> report: Performance report : Time spent in processing events : 159.325
-> report: Performance report : Ratio : 4.62221%
-> report: Performance report : time spent for waiting free buffer : 38.4766 s
-> report: Performance report : Ratio : 1.11755 %
-> report: Performance report : This ratio must be close to zero. Otherwise it may be useful to increase buffer size or numbers of server
-> report: Memory report : Minimum buffer size required : 270070 bytes
-> report: Memory report : increasing it by a factor will increase performance, depending of the volume of data wrote in file at each time step of the file
-> report: Performance report : Time spent for XIOS : 3446.94
-> report: Performance report : Time spent in processing events : 159.299
-> report: Performance report : Ratio : 4.6214%
-> report: Memory report : Minimum buffer size required : 270070 bytes
-> report: Memory report : increasing it by a factor will increase performance, depending of the volume of data wrote in file at each time step of the file
-> report: Performance report : Time spent for XIOS : 3446.94
-> report: Performance report : Time spent in processing events : 159.292
-> report: Performance report : Ratio : 4.62127%
-> report: Performance report : Time spent for XIOS : 3446.93
-> report: Performance report : Time spent in processing events : 159.319
-> report: Performance report : Ratio : 4.62205%
```

Showing last 150 lines.

Tree Representation: Wrappers



One folder per wrapper.

Repeated jobs but same information.

Normalized times.

Tree Representation: Monitoring

CLEAR TREE SUMMARY ACTIVATE SELECTION MODE REFRESH START JOB MONITOR

Total #Jobs: 1057 | Chunk unit: month | Chunk size: 12

a3fy_22990101_fc0_73_SIM

CLEAR TREE SUMMARY ACTIVATE SELECTION MODE STOP JOB MONITOR

Total #Jobs: 17 | Chunk unit: day | Chunk size: 1

t06w_20120101_000_2_PREPROCVAR

Start: 2012 01 02 End: 2012 01 03
Section: PREPROCVAR
Member: 000 Chunk: 2
Platform: marenostrum4 Id: 15435220
Processors: 8 Wallclock: 00:30

Queue: 00:08:41 Run: 00:01:39
Status: RUNNING OUT: 1 IN: 2

/esarchive/autosubmit/t06w/tmp/LOG_t06w/t06w_20120101_000_2 COPY OUT
/esarchive/autosubmit/t06w/tmp/LOG_t06w/t06w_20120101_000_2 COPY ERR

Submit: 2021-04-26 11:26:17 SYPD: 2.39
Start: 2021-04-26 11:34:58

Monitor

Monitoring jobs...

[26/4] 11:35:13: t06w_20120101_000_1_PREPROCVAR to COMPLETED
[26/4] 11:35:13: t06w_20120101_000_2_PREPROCVAR to RUNNING
[26/4] 11:35:13: t06w_20120101_000_1_SIM to QUEUING
[26/4] 11:33:15: t06w_20120101_000_1_PREPROCVAR to RUNNING

- Refresh: Once.
- Start Job Monitor: Intervals 2 * SAFETYSLEEPTIME
- Stop Job Monitor: Stops the worker.
- If allowed, it can send desktop notifications.

earth.bsc.es/autosubmitapp/experiment/t06w

Connection is secure

Your information (for example, passwords or credit card numbers) is private when it is sent to this site. Learn more

Notifications Allow

Certificate (Valid)

Cookies (6 in use)

Site settings

BRAVE BROWSER now

RUNNING : t06w_20120101_000_1_SIM
earth.bsc.es

Tree Representation: Filtering

The image shows two screenshots of a job tree interface. The top screenshot shows a search bar with the text "20120101_000_1" and buttons for "FILTER" and "CLEAR". Below the search bar, a tree structure is displayed. The root node is "t0id_20120101" (14 children). It has a sub-node "t0id_20120101_000" (13 children) with a status bar "4 / 13 COMPLETED 2 QUEUING". Under "t0id_20120101_000", there are six job entries: "t0id_20120101_000_1_LOCAL_SEND_INITIAL" (#COMPLETED ~ (0:00:18) + 0:00:44), "t0id_20120101_000_1_PREPROCVAR" (#COMPLETED ~ (0:44:59) + 0:00:00), "t0id_20120101_000_1_SIM" (#QUEUING ~ (0:00:24)), "t0id_20120101_000_1_REDUCE" (#WAITING), "t0id_20120101_000_1_ARCHIVE" (#WAITING), and "t0id_20120101_000_1_CLEAN" (#WAITING TARGET).

The bottom screenshot shows the same search bar with the text "#QUEU" and buttons for "FILTER" and "CLEAR". The tree structure is filtered to show only jobs with the status "#QUEUING". The root node "t0id_20120101" (14 children) has a sub-node "t0id_20120101_000" (13 children) with a status bar "4 / 13 COMPLETED 2 QUEUING". Under "t0id_20120101_000", there are two job entries: "t0id_20120101_000_1_SIM" (#QUEUING ~ (0:00:24) and "t0id_20120101_000_2_PREPROCVAR" (#QUEUING ~ (0:46:48)).

Filter by string in job name, status, time.

Tree Representation: Advanced Filtering

_fc0*_SIM Filter Clear

- Wrapper: a28v_ASThread_1580844940728_5040_5 **5 / 5 COMPLETED**
 - a28v_19500101_fc0_218_SIM **#COMPLETED** ~ (0:52:06) + 4:13:00
 - a28v_19500101_fc0_219_SIM **#COMPLETED** ~ (0:00:00) + 4:29:23
 - a28v_19500101_fc0_220_SIM **#COMPLETED** ~ (0:00:00) + 4:22:30
 - a28v_19500101_fc0_221_SIM **#COMPLETED** ~ (0:00:00) + 4:30:49
 - a28v_19500101_fc0_222_SIM **#COMPLETED** ~ (0:00:00) + 4:21:28
- Wrapper: a28v_ASThread_15732001146778_5040_5 **5 / 5 COMPLETED**
 - a28v_19500101_fc0_104_SIM **#COMPLETED** ~ (0:00:04) + 4:31:07
 - a28v_19500101_fc0_105_SIM **#COMPLETED** ~ (0:00:01) + 4:24:06
 - a28v_19500101_fc0_106_SIM **#COMPLETED** ~ (0:00:00) + 4:31:03
 - a28v_19500101_fc0_107_SIM **#COMPLETED** ~ (0:00:00) + 4:20:08
 - a28v_19500101_fc0_108_SIM **#COMPLETED** ~ (0:00:00) + 4:32:37
- Wrapper: a28v_ASThread_15797073906366_5040_5 **5 / 5 COMPLETED**
 - a28v_19500101_fc0_192_SIM **#COMPLETED** ~ (4:26:09) + 4:33:46
 - a28v_19500101_fc0_193_SIM **#COMPLETED** ~ (0:00:00) + 4:32:26
 - a28v_19500101_fc0_194_SIM **#COMPLETED** ~ (0:00:00) + 4:05:26
 - a28v_19500101_fc0_195_SIM **#COMPLETED** ~ (0:00:00) + 4:29:30
 - a28v_19500101_fc0_196_SIM **#COMPLETED** ~ (0:00:00) + 4:21:39
- Wrapper: a28v_ASThread_15839621123080_5040_6 **4 / 4 COMPLETED**
 - a28v_19500101_fc0_234_SIM **#COMPLETED** ~ (9:07:45) + 4:27:17
 - a28v_19500101_fc0_235_SIM **#COMPLETED** ~ (0:00:00) + 4:36:19
 - a28v_19500101_fc0_236_SIM **#COMPLETED** ~ (0:00:00) + 4:35:25
 - a28v_19500101_fc0_237_SIM **#COMPLETED** ~ (0:00:00) + 4:27:43
- Wrapper: a28v_ASThread_15795319184706_5040_6 **6 / 6 COMPLETED**
 - a28v_19500101_fc0_181_SIM **#COMPLETED** ~ (0:00:44) + 4:29:37
 - a28v_19500101_fc0_182_SIM **#COMPLETED** ~ (0:00:00) + 4:04:37
 - a28v_19500101_fc0_183_SIM **#COMPLETED** ~ (0:00:00) + 4:29:04
 - a28v_19500101_fc0_184_SIM **#COMPLETED** ~ (0:00:00) + 4:19:11
 - a28v_19500101_fc0_185_SIM **#COMPLETED** ~ (0:00:00) + 4:30:54
 - a28v_19500101_fc0_186_SIM **#COMPLETED** ~ (0:00:01) + 4:21:43
- Wrapper: a28v_ASThread_15700994707505_5040_6 **6 / 6 COMPLETED**

Filter using
wildcard

_30*_SIM Filter Clear

- a28v_19500101
 - a28v_19500101_fc0 **2211 / 2401 COMPLETED 2 FAILED**
 - a28v_19500101_fc0_30_SIM **#COMPLETED** ~ (0:00:00) + 4:22:24 **Wrapped 15711258052950**
 - a28v_19500101_fc0_300_SIM **#COMPLETED** ~ (0:00:05) + 4:51:37 **Wrapped 15854056599921**
 - a28v_19500101_fc0_301_SIM **#COMPLETED** ~ (0:00:05) + 4:30:12 **Wrapped 1585489676549**
 - a28v_19500101_fc0_302_SIM **#COMPLETED** ~ (0:00:01) + 4:04:47 **Wrapped 1585489676549**
 - a28v_19500101_fc0_303_SIM **#COMPLETED** ~ (0:00:00) + 4:27:58 **Wrapped 1585489676549**
 - a28v_19500101_fc0_304_SIM **#COMPLETED** ~ (0:00:00) + 13:03:03 **Wrapped 1585489676549**
 - a28v_19500101_fc0_305_SIM **#COMPLETED** ~ (0:00:00) + 0:00:00 **Wrapped 1585489676549**
 - a28v_19500101_fc0_306_SIM **#COMPLETED** ~ (0:00:00) + 0:00:00 **Wrapped 1585489676549**
 - a28v_19500101_fc0_307_SIM **#COMPLETED** ~ (0:00:47) + 4:31:18 **Wrapped 15893580712261**
 - a28v_19500101_fc0_308_SIM **#COMPLETED** ~ (0:00:00) + 4:28:05 **Wrapped 15893580712261**
 - a28v_19500101_fc0_309_SIM **#COMPLETED** ~ (0:00:00) + 4:19:49 **Wrapped 15893580712261**
 - Wrapper: a28v_ASThread_15893580712261_5040_5 **5 / 5 COMPLETED**
 - a28v_19500101_fc0_307_SIM **#COMPLETED** ~ (0:00:47) + 4:31:18
 - a28v_19500101_fc0_308_SIM **#COMPLETED** ~ (0:00:00) + 4:28:05
 - a28v_19500101_fc0_309_SIM **#COMPLETED** ~ (0:00:00) + 4:19:49
 - Wrapper: a28v_ASThread_15711258052950_5040_6 **6 / 6 COMPLETED**
 - a28v_19500101_fc0_30_SIM **#COMPLETED** ~ (0:00:00) + 4:22:24
 - Wrapper: a28v_ASThread_1585489676549_5040_6 **6 / 6 COMPLETED**
 - a28v_19500101_fc0_301_SIM **#COMPLETED** ~ (0:00:05) + 4:30:12
 - a28v_19500101_fc0_302_SIM **#COMPLETED** ~ (0:00:01) + 4:04:47
 - a28v_19500101_fc0_303_SIM **#COMPLETED** ~ (0:00:00) + 4:27:58
 - a28v_19500101_fc0_304_SIM **#COMPLETED** ~ (0:00:00) + 13:03:03
 - a28v_19500101_fc0_305_SIM **#COMPLETED** ~ (0:00:00) + 0:00:00
 - a28v_19500101_fc0_306_SIM **#COMPLETED** ~ (0:00:00) + 0:00:00
 - Wrapper: a28v_ASThread_15854056599921_5040_2 **1 / 1 COMPLETED**
 - a28v_19500101_fc0_300_SIM **#COMPLETED** ~ (0:00:05) + 4:51:37

Tree Representation: Negation Filter

The screenshot shows a tree view of tasks. At the top, there is a search bar containing the text "ICOMPLETED" and two buttons: "FILTER" and "CLEAR". The tree structure is as follows:

- t0kv_20201101
 - t0kv_20201101_fc2 6 / 31 COMPLETED 1 RUNNING
 - SIM
 - t0kv_20201101_fc2_2_SIM #RUNNING ~ (0:23:33) + 1:14:46
 - t0kv_20201101_fc2_3_SIM #WAITING
 - CMOROCE
 - t0kv_20201101_fc2_2_CMOROCE #WAITING
 - t0kv_20201101_fc2_3_CMOROCE #WAITING
 - CMORATM
 - t0kv_20201101_fc2_1_CMORATM #WAITING
 - t0kv_20201101_fc2_2_CMORATM #WAITING
 - t0kv_20201101_fc2_3_CMORATM #WAITING
 - CMORLPJG
 - t0kv_20201101_fc2_2_CMORLPJG #WAITING
 - t0kv_20201101_fc2_3_CMORLPJG #WAITING
 - CMORTM5
 - t0kv_20201101_fc2_2_CMORTM5 #WAITING
 - t0kv_20201101_fc2_3_CMORTM5 #WAITING
 - POST
 - t0kv_20201101_fc2_1_POST #WAITING
 - t0kv_20201101_fc2_2_POST #WAITING
 - t0kv_20201101_fc2_3_POST #WAITING
 - CLEAN
 - t0kv_20201101_fc2_1_CLEAN #WAITING
 - t0kv_20201101_fc2_2_CLEAN #WAITING
 - t0kv_20201101_fc2_3_CLEAN #WAITING

The screenshot shows a tree view of tasks with a negation filter applied. At the top, there is a search bar containing the text "ICOMPLETED*WAITIN" and two buttons: "FILTER" and "CLEAR". The tree structure is as follows:

- t0kv_20201101
 - t0kv_20201101_fc2 6 / 31 COMPLETED 1 RUNNING
 - SIM
 - t0kv_20201101_fc2_2_SIM #RUNNING ~ (0:23:33) + 1:14:46
 - t0kv_20201101_fc2_CLEAN_MEMBER #SUSPENDED
 - Keys
 - t0kv_PERFORMANCE_METRICS #FAILED ~ (0:01:06) + 0:00:00

The negation “!” filters out those names containing the adjacent string. The wildcard “*” works as an OR when combined with the negation.

Tree Representation: Job Summary



By clicking on the “Summary” button, a window opens (right). On this window:

- Table that shows the **aggregated** data of the current jobs in the tree view grouped by **SECTION** (job type):
 - Section
 - Count
 - Queue Sum
 - Average Queue
 - Run Sum
 - Average Sum
- **Show List of Jobs**: Opens a table containing the list of jobs, fields: Job Name, Queue, Run, Status.

Summary data for t0id
Queue and Run in seconds when exported, blue button. Only COMPLETED or RUNNING jobs are listed.

Aggregated by Job Section: E-

Section	Count	Queue Sum	Average Queue	Run Sum	Average Run
LOCAL_SETUP	1	00:00:13	00:00:13	0:00:00	0:00:00
LOCAL_SEND_INITIAL	2	00:00:35	00:00:18	00:01:28	00:00:44
LOCAL_SEND_SOURCE	1	00:00:15	00:00:15	00:04:46	00:04:46
LOCAL_SEND_STATIC	1	00:00:13	00:00:13	0:00:00	0:00:00
REMOTE_COMPILE	1	0:00:00	0:00:00	00:28:01	00:28:01
PREPROCFIX	1	00:19:59	00:19:59	00:07:25	00:07:25
PREPROCVAR	1	00:44:59	00:44:59	0:00:00	0:00:00

SHOW LIST OF JOBS

CLOSE

Experiment History: Runs



By clicking on the “History” button:

- Shows table of historical information

Runs of **t0id** (The first row represents the current run.)

	RunId	Created	Finish	Submitted	Queuing	Running	Failed	Suspended	Completed	Total	SYPD	ASYPD	ChunkUnit	ChunkSize
	107	2021-04-26-09:34:17		0	1	0	0	0	9	17			day	1
	106	2021-04-23-22:16:25	2021-04-24-23:21:30	0	0	0	0	0	19	19	7.64		day	1
	105	2021-04-16-22:11:19	2021-04-19-11:22:51	0	0	0	0	0	19	19	4.55		day	1
	104	2021-04-09-22:10:39	2021-04-12-09:57:18	0	0	0	0	0	19	19	7.64		day	1
	103	2021-04-02-22:08:01	2021-04-06-09:40:19	0	0	0	0	0	19	19	6.67		day	1
	102	2021-03-26-22:10:33	2021-03-26-23:50:49	0	0	0	0	0	19	19	4.98		day	1

Experiment History: Job Data in Tree View



By clicking on the “Eye” button:

- Shows the job data in the Tree View.
- Reruns +

The screenshot displays the 'Tree View' of an experiment. At the top, there are navigation tabs: Tree View, Graph, Log, Statistics, Performance, Quick View, and FAQ. Below the tabs, a message states: 'Run 2 created on 2021-03-12-10:59:33 | 482 of 1057 jobs completed. This view might contain reruns (incremental + sign on name) or missing information.' A filter string input field with 'FILTER' and 'CLEAR' buttons is present. The tree view shows a hierarchy of jobs under the ID 'a3fy_22990101'. The root job is expanded, showing a summary: '228 / 442 COMPLETED', '180 FAILED', and '9 RUNNING'. Below this, a list of jobs is shown with their status (e.g., #RUNNING, #FAILED, #COMPLETED), estimated time, and wrapped ID. A detailed view on the right for the job 'a3fy_22990101_fc0_38_TRANSFER' shows: Start: 2336 01 01, End: 2337 01 01, Section: TRANSFER, Member: fc0, Chunk: 38, Platform: transfer_node Id: 53236, Processors: 1, Wallclock: 02:00, Queue: 00:00:16, Run: 0:00:00, and Status: FAILED. Below the status, there are 'COPY OUT' and 'COPY ERR' buttons with checkboxes. At the bottom, submission and finish times are listed: Submit: 2021-03-18-17:55:04, Start: 2021-03-18-17:55:20, ASYPD: 59.71, Finish: 2021-03-18-17:55:20.

Experiment History: Job Runs

a3fy_22990101_fc0_38_TRANSFER 

Start: 2336 01 01 **End:** 2337 01 01

Section: TRANSFER

Member: fc0 **Chunk:** 38

By clicking on the “History” button:

- Shows table of previous runs of the job. Can be exported.

Historical data for **a3fy_22990101_fc0_38_TRANSFER**  x

RunId	Counter	JobId	Submit	Start	Finish	Queue	Run	Status	Energy	SYPD	ASYPD	Wallclock	NCpus	NNodes
2	56	40206	2021-03-22-20:14:53	2021-03-22-20:15:19	2021-03-22-20:17:14	0:00:26	0:01:55	COMPLETED	NA	751.3	38.15	02:00	1	0
2	36	38753	2021-03-20-20:23:45	2021-03-20-20:24:03	2021-03-20-20:24:57	0:00:18	0:00:54	FAILED	NA	1600	39.34	02:00	1	0
2	35	29255	2021-03-20-20:22:21	2021-03-20-20:22:48	2021-03-20-20:23:42	0:00:27	0:00:54	FAILED	NA	1600	39.18	02:00	1	0
2	34	21437	2021-03-20-20:20:57	2021-03-20-20:21:26	2021-03-20-20:22:20	0:00:29	0:00:54	FAILED	NA	1600	39.15	02:00	1	0
2	33	36109	2021-03-20-20:11:34	2021-03-20-20:11:54	2021-03-20-20:20:47	0:00:20	0:08:53	FAILED	NA	162.1	32.27	02:00	1	0
2	32	17229	2021-03-20-20:08:01	2021-03-20-20:08:28	2021-03-20-20:08:29	0:00:27	0:00:01	FAILED	NA	86400	40.15	02:00	1	0
2	31	14084	2021-03-20-20:07:31	2021-03-20-20:07:51	2021-03-20-20:07:51	0:00:20	0:00:00 	FAILED	NA		40.3	02:00	1	0

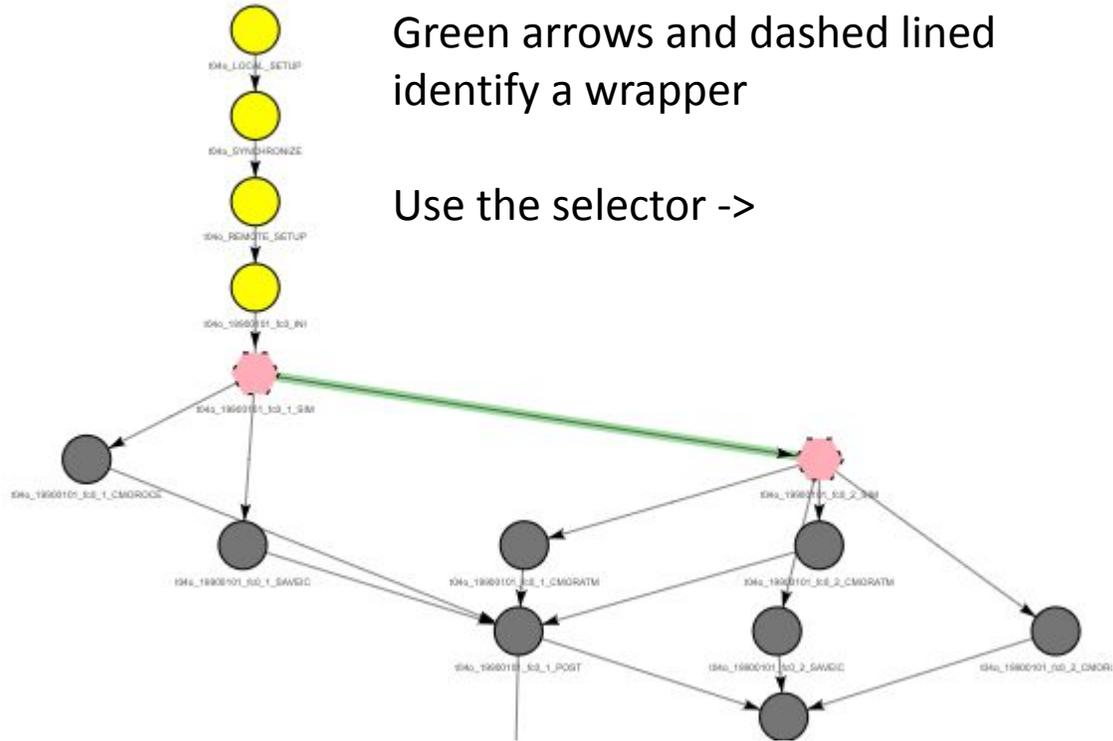
Graph Representation: General Description

- Control Panel
- Graph (Heuristics/GraphViz)
- Job Selection (Same as TreeView)
- Navigation Buttons (Bottom)

The screenshot displays a web-based job management interface. At the top, there are navigation tabs: Tree View, Graph, Log, Statistics, Performance, Quick View, and FAQ. Below these, there are search and status controls, including a 'Job Name (e.g. fc0_1)' field, 'SEARCH BY JOB NAME', and 'CHANGE STATUS' buttons. On the right, there are filters for 'CLASSIC', 'DATE-MEMBER', 'STATUS', 'SUMMARY', and 'ACTIVATE SELECTION MODE'. A summary bar shows 'Max out: 5 | Max in: 5 | Total #Jobs: 32 | Chunk unit: month | Chunk size 12'. The main area is a dependency graph with nodes and arrows. A right-hand panel shows details for a selected job: 'a3k1_32850101_fc0_2_SIM'. It includes fields for Start, End, Section, Member, Platform, Processors, Queue, Run, Status, and Wrappers. At the bottom, there are navigation buttons and a status legend.

Navigation buttons: WAITING READY PREPARED SUBMITTED QUEUING RUNNING COMPLETED FAILED SUSPENDED UNKNOWN HOLD SKIPPED

Graph Representation: Wrappers



Selection Wrappers

WRAPPERS

- ASThread_16184168932169_2400_6
- ASThread_16186890103437_2400_4
- ASThread_16191189907866_2400_6

Graph Representation: Monitoring

Summary | ACTIVATE SELECTION MODE | REFRESH | START JOB MONITOR

Chunk unit: month | Chunk size 12

Selection | Wrappers

a3fy_22990101_fc0_76_SIM ↻

Start: 2374 01 01 End: 2375 01 01

Section: SIM

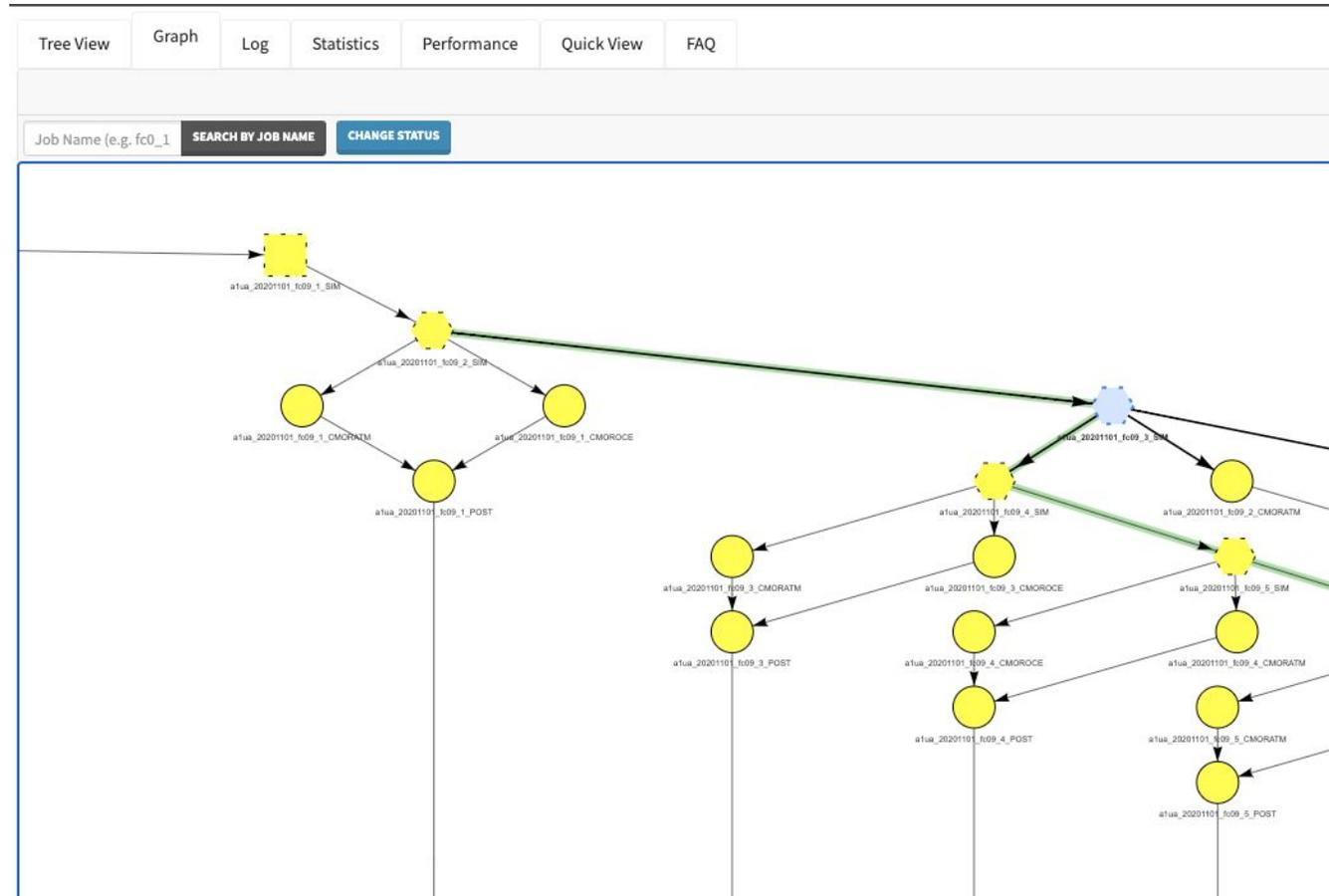
- **Refresh:** Once.
- **Start Job Monitor:** Intervals 2 * SAFETYSLEEPTIME
- **Stop Job Monitor:** Stops monitoring worker.
- If allowed, it can send desktop notifications.

STATUS | SUMMARY | ACTIVATE SELECTION MODE | STOP JOB MONITOR

Chunk unit: month | Chunk size 12

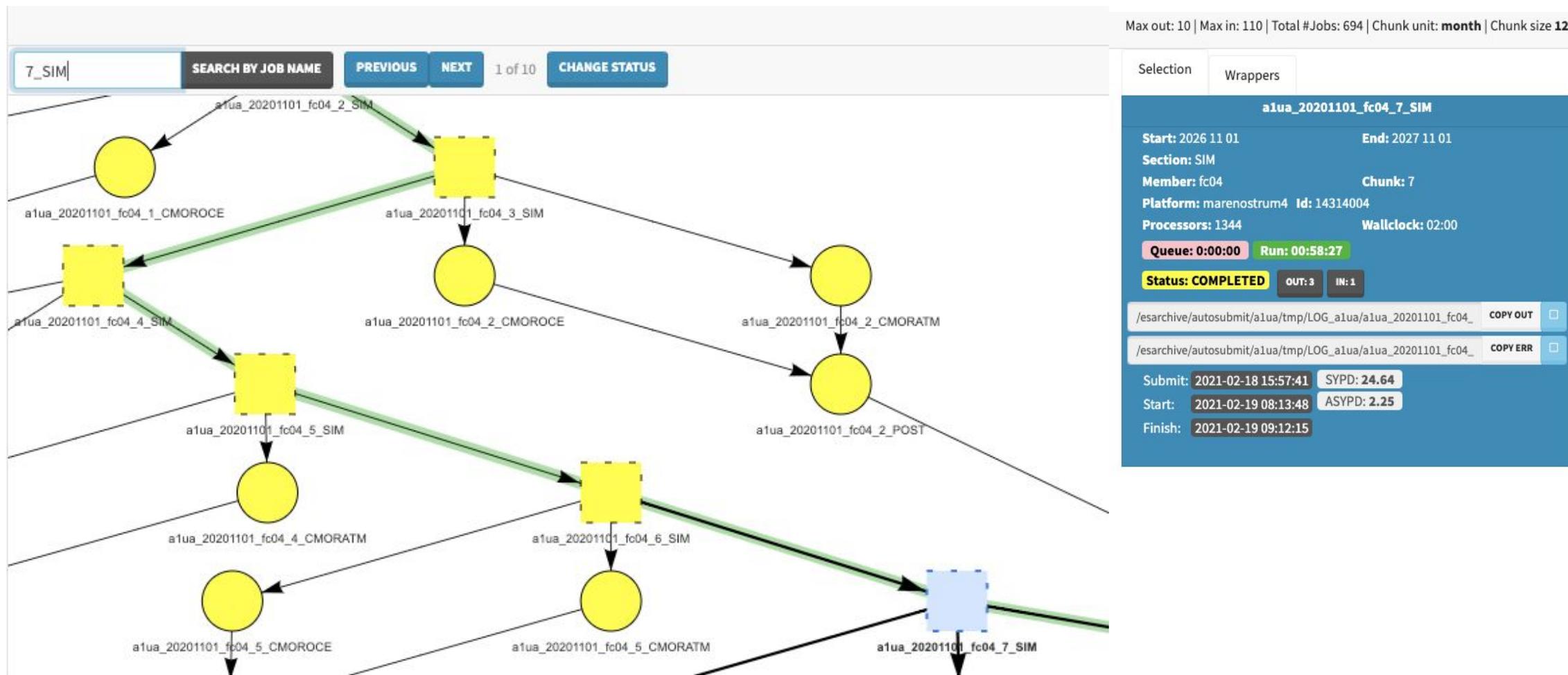
Graph Representation: Job Search I

Search by string in job name -> Generates an internal list of results
Implements wildcards as in the Tree View filter.

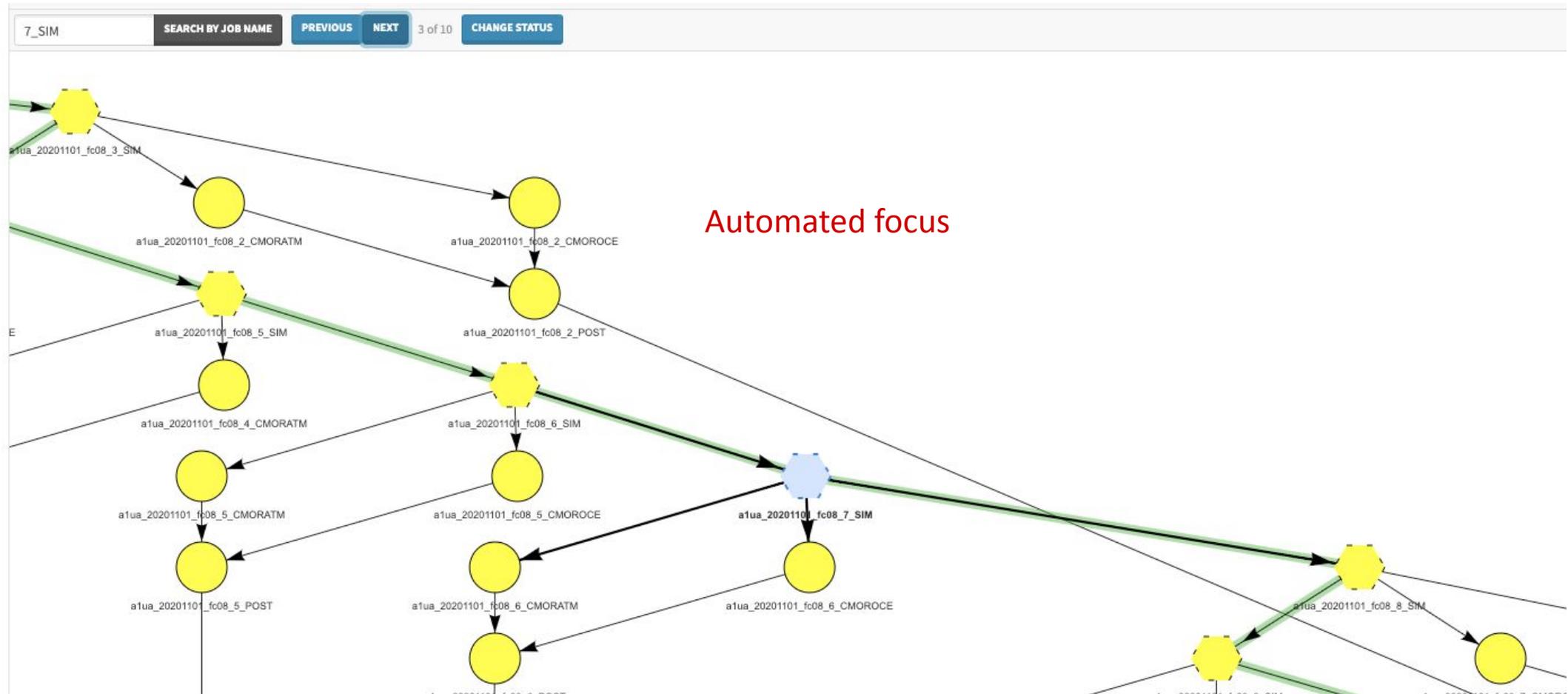


Graph Representation: Job Search II

Navigate through the list of results



Graph Representation: Job Search III

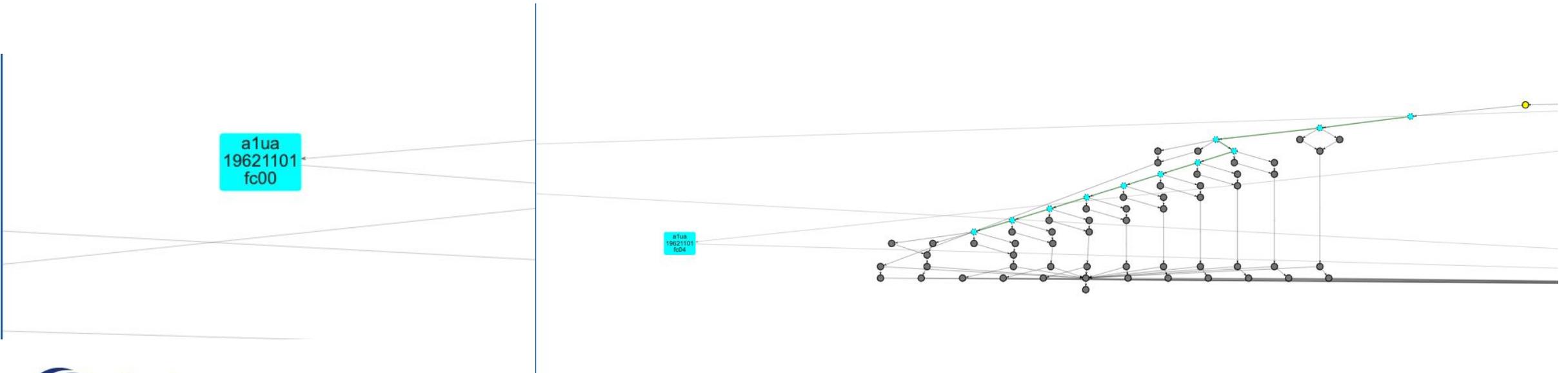
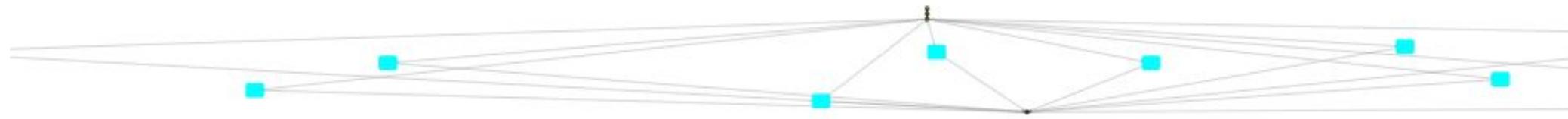


Graph Representation: Grouped by Date-Member

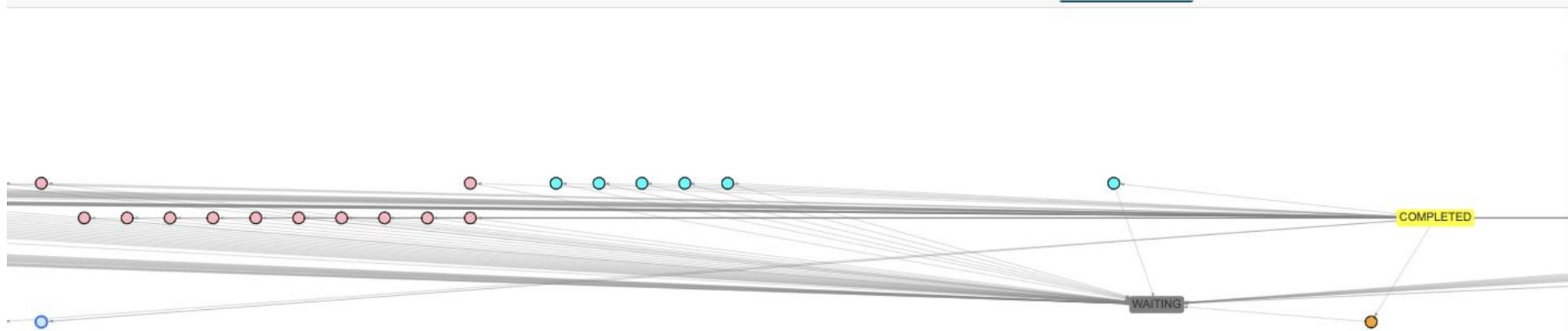
Groups of jobs with same date and member

Relevant color: The color of the most significant status of the jobs inside.

Can be expanded



Graph Representation: Grouped by Status



- Groups of jobs with same status, with exceptions.
- Relevant color.
- Can be expanded by double clicking on a group.

Autosubmit Log: General Description

Tree View Graph **Log** Statistics Performance Quick View FAQ

SHOW LOG

Press **Show Log** to see the last 50 lines of the running log of this experiment. If the experiment is running, the log will update automatically.

Tree View Graph **Log** Statistics Performance Quick View FAQ

HIDE LOG

Logfile: 20190919_125823_run.log (1569361476.4284258) Last Modified: 2019-09-24 21:44:36

```
2019-09-24 23:44:25,647
Jobs ready for local: 0
2019-09-24 23:44:25,855 Number of jobs ready: 0
2019-09-24 23:44:25,855 Number of jobs available: 100
2019-09-24 23:44:25,858
Jobs ready for marenostrom4: 0
2019-09-24 23:44:25,867 Number of jobs ready: 0
2019-09-24 23:44:25,867 Number of jobs available: 100
2019-09-24 23:44:25,874
Jobs ready for transfer_node: 0
2019-09-24 23:44:25,882 Number of jobs ready: 0
2019-09-24 23:44:25,882 Number of jobs available: 100
2019-09-24 23:44:25,886 Saving JobList: /esarchive/autosubmit/a1ua/pkl/job_list_a1ua.pkl
2019-09-24 23:44:25,920 Job list saved
2019-09-24 23:44:30,933 Reloading parameters...
2019-09-24 23:44:30,945 Loading parameters...
2019-09-24 23:44:30,946 Loading project parameters...
2019-09-24 23:44:30,948
1 of 1384 jobs remaining (23:44)
2019-09-24 23:44:30,948 Sleep: 5
2019-09-24 23:44:30,948 Number of retrials: 2
2019-09-24 23:44:30,948 WRAPPER CHECK TIME = 5
2019-09-24 23:44:30,981 Command 'nohup kill -0 22641 >& /dev/null; echo $?': 1
2019-09-24 23:44:30,981 Successful check job command: nohup kill -0 22641 >& /dev/null; echo $?
2019-09-24 23:44:30,982 This job seems to have completed: checking...
2019-09-24 23:44:31,007 Job a1ua_PERFORMANCE_METRICS is COMPLETED
2019-09-24 23:44:31,056 a1ua_PERFORMANCE_METRICS_STAT file have been transferred
```

Autosubmit Statistics: Filter Options

Tree View Graph Log **Statistics** Performance Quick View FAQ

Statistics

Section Hours **GET STATISTICS**

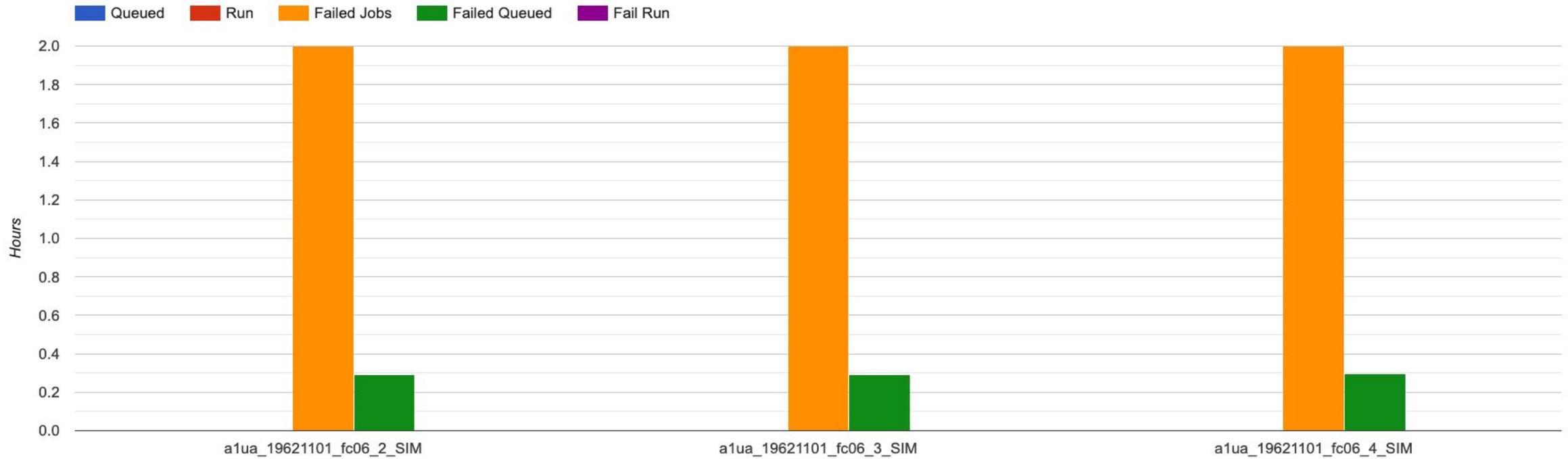
Supply a Section (Type) in the appropriate textbox to filter the jobs that will be included in the query. Also, you can also supply the Hours value that determines how many hours before the current time you want to query. Leave both empty and a query for Any Section since the date of creation of the experiment will be executed.

Press **Get Statistics** to generate the statistics, this will generate a Bar Chart and some extra statistics below. Drag the mouse inside the chart to zoom in; however, zoom in capabilities are not unlimited, so try to narrow your query.

Short value for hours

Section = Job type

Autosubmit Statistics: Results I



Autosubmit Statistics: Results II

Period: 2020-06-15 13:56:00 ~ 2020-06-16 10:56:00

Submitted (#): 6

Run (#): 6

Failed (#): 6

Completed (#): 0

Queueing time (h): 0.0

Expected consumption real (h): 6.0

Expected consumption CPU time (h): 8064.0

Consumption real (h): 0.0

Consumption CPU time (h): 1.49

Consumption (%): 0.02

Performance Metrics: Description

Tree View | Graph | Log | Statistics | Performance | Quick View | FAQ

REFRESH

Parallelization: 768

JPSY: 66403235

SYPD: 17.6498

RSYPD: 3.7339

ASYPD: 1.6092

CHSY: 1044.32

Considered: (99)

#	Job Name	Queue	Run	CHSY	JPSY	Energy	SYPD	ASYPD
1	a34s_19860501_fc0_1_SIM	00:00:08	01:42:14	1308.59	0	0	14.09	12.46
2	a34s_19860501_fc1_1_SIM	02:37:08	01:46:23	1361.71	68040000	68040000	13.54	5.2
3	a34s_19860501_fc2_1_SIM	03:29:17	01:41:22	1297.49	0	0	14.21	4.45
4	a34s_19860501_fc3_1_SIM	05:10:45						
5	a34s_19860501_fc4_1_SIM	06:50:50						
6	a34s_19860501_fc5_1_SIM	04:24:12						

There are some warnings about the calculations of performance metrics:

SHOW WARNINGS

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SHOW WARNINGS

Metrics description:

Parallelization: Total number of cores allocated for the run, per SIM.

JPSY: Energy cost of a simulation, measured in Joules per simulated year.

SYPD: Simulated years per day for the model in a 24 h period.

ASYPD: Actual SYPD, this number should be lower than SYPD due to interruptions, queue wait time, data transfer or issues with the model wo

1. RSYPD | There are no TRANSFER (COMPLETED) jobs in the experiment, we resort to use (COMPLETED) CLEAN jobs to compute RSYPD.
2. Considered | Job a34s_19870501_fc8_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
3. Considered | Job a34s_19861101_fc8_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
4. Considered | Job a34s_19861101_fc9_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
5. Considered | Job a34s_19861101_fc7_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
6. Considered | Job a34s_19861101_fc6_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
7. Considered | Job a34s_19861101_fc5_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
8. Considered | Job a34s_19861101_fc0_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
9. Considered | Job a34s_19861101_fc1_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
10. Considered | Job a34s_19861101_fc2_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
11. Considered | Job a34s_19861101_fc4_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
12. Considered | Job a34s_19861101_fc3_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
13. Considered | Job a34s_19901101_fc4_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
14. Considered | Job a34s_19901101_fc3_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
15. Considered | Job a34s_19901101_fc2_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
16. Considered | Job a34s_19901101_fc1_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
17. Considered | Job a34s_19901101_fc0_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
18. Considered | Job a34s_19871101_fc9_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
19. Considered | Job a34s_19871101_fc7_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.
20. Considered | Job a34s_19871101_fc6_1_SIM (Package) has no energy information and is not going to be considered for energy calculations.

Quick View: Description

The screenshot displays a job monitoring interface with the following components:

- Navigation Bar:** Contains buttons for "Tree View", "Graph", "Log", "Statistics", "Performance", "Quick View" (selected), and "FAQ".
- Summary Bar:** Shows "1631 TOTAL JOBS", "111 COMPLETED", "11 FAILED", "1 RUNNING", and "2 QUEUING". It includes a "Filter string" input field with a "FILTER" button and a "REFRESH" button.
- Job List:** A list of jobs with their names and status tags:
 - a3k6_20190101_000_4_Plots_web #FAILED
 - a3k6_20190101_000_6_Plots_web #FAILED
 - a3k6_20190101_000_7_Plots_web #FAILED
 - a3k6_20190101_000_1_Plots_web #FAILED
 - a3k6_20190101_000_3_Plots_web #FAILED
 - a3k6_20190101_000_14_CollectResultsMap #QUEUING
 - a3k6_20190101_000_2_Plots_web #FAILED
 - a3k6_20190101_000_5_Plots_web #FAILED
 - a3k6_20190101_000_8_Plots_web #FAILED
 - a3k6_20190101_000_9_Plots_web #FAILED
 - a3k6_20190101_000_10_Plots_web #FAILED
 - a3k6_20190101_000_15_Correct_background #SUBMITTED
 - a3k6_20190101_000_13_RegridNetCDF #RUNNING
 - a3k6_20190101_000_11_Plots_web #FAILED

- Fast
- Click on "SHOW".
- Click on "Refresh" to update data.
- Filter by string. Implements "*" and "!" wildcards.
- Navigation buttons.

More tools: Command Generation I

Filter string	FILTER	CLEAR	CHANGE STATUS
<input type="checkbox"/> a3k6_20190101_000_10_Plots_web	#FAILED	~ (0:00:48) + 0:00:31	TARGET
<input type="checkbox"/> a3k6_20190101_000_9_Plots_web	#FAILED	~ (0:00:24) + 0:00:31	TARGET
<input type="checkbox"/> a3k6_20190101_000_8_Plots_web	#FAILED	~ (0:01:04) + 0:00:00	TARGET
<input type="checkbox"/> a3k6_20190101_000_7_Plots_web	#FAILED	~ (0:00:24) + 0:00:27	TARGET
<input type="checkbox"/> a3k6_20190101_000_6_Plots_web	#FAILED	~ (0:00:17) + 0:00:34	TARGET
<input type="checkbox"/> a3k6_20190101_000_5_Plots_web	#FAILED	~ (0:00:38) + 0:00:31	TARGET
<input type="checkbox"/> a3k6_20190101_000_4_Plots_web	#FAILED	~ (0:27:40) + 0:00:34	TARGET
<input type="checkbox"/> a3k6_20190101_000_3_Plots_web	#FAILED	~ (0:27:37) + 0:00:31	TARGET
<input type="checkbox"/> a3k6_20190101_000_2_Plots_web	#FAILED	~ (0:08:06) + 0:00:24	TARGET
<input type="checkbox"/> a3k6_20190101_000_1_Plots_web	#FAILED	~ (0:52:53) + 0:00:34	TARGET
<input type="checkbox"/> a3k6_20190101_000_14_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_15_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_16_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_17_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_18_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_19_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_20_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_21_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_22_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_23_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_24_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_25_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_26_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_27_Plots_web	#WAITING		TARGET
<input type="checkbox"/> a3k6_20190101_000_28_Plots_web	#WAITING		TARGET

1. Hold **Ctrl (Command on MacOS)** and click on the jobs you want to modify, this creates a multi-selection.
2. Click on **Change Status**, a window will open (see below).
3. Click on the target status.

Set status to: READY WAITING COMPLETED SUSPENDED FAILED

Generate file text: READY WAITING COMPLETED SUSPENDED FAILED

CLOSE

More tools: Command Generation II

Set status to: **READY** **WAITING** **COMPLETED** **SUSPENDED** **FAILED**

```
autosubmit setstatus t08c -fl "t08c_20160625_000_1_SIM
t08c_20160625_000_1_REDUCE t08c_20160625_000_1_IT
t08c_20160625_000_1_ARCHIVE t08c_20160625_000_1_CLEAN" -t
COMPLETED -s -nt -np
```

The command has been copied to the clipboard. Paste it in your terminal.

Generate file text: **READY** **WAITING** **COMPLETED** **SUSPENDED** **FAILED**

CLOSE

“**Set status to**” generates a command to execute on autosubmit, it is automatically copied to your clipboard.

Set status to: **READY** **WAITING** **COMPLETED** **SUSPENDED** **FAILED**

Generate file text: **READY** **WAITING** **COMPLETED** **SUSPENDED** **FAILED**

```
t08c_20160625_000_1_SIM COMPLETED
t08c_20160625_000_1_REDUCE COMPLETED
t08c_20160625_000_1_IT COMPLETED
t08c_20160625_000_1_ARCHIVE COMPLETED
t08c_20160625_000_1_CLEAN COMPLETED
```

The text has been copied to the clipboard. Paste it in your status change file.

CLOSE

“**Generate file text**” generates a string that can be used to change the status while Autosubmit is running. It is automatically copied to your clipboard.

More tools: Command Generation IV

SUMMARY **ACTIVATE SELECTION MODE** **REFRESH**

out: 5 | Max in: 3 | Total #Jobs: 24 | Chunk unit:

The Graph and the Tree View also implement the “**Selection Mode**” functionality.

Click on **Activate Selection Model** and then click on the jobs or nodes to add them to your selection.

Then, click on **Generate Command** and proceed as previously described.

The screenshot displays a workflow management interface. On the left, a graph view shows a sequence of nodes connected by arrows. The nodes are represented by circles of different colors: yellow, green, and grey. The nodes are labeled with job IDs and names, such as 't08c_20160625_000_1_LOCAL_SEND_INITIAL', '00_1_PREPROCVAR', '625_000_1_SIM', 'AL_SEND_INITIAL_EMISSIONS', 't08c_20160625_000_2_LOCAL_S', 't08c_20160625_000_2_PREPROCVAR', '25_000_2_SIM', and '000_1_REDUCE'. On the right, a job details panel is open for the job 't08c_20160625_000_1_IT'. The panel shows the following information: Start: 2016 06 25, End: 2016 06 26, Section: IT, Member: 000, Platform: nord3, Processors: 24, Status: WAITING, OUT: 1, IN: 1, Wallclock: 01:00. Below the details, there are two rows with 'NA' and 'COPY OUT' or 'COPY ERR' buttons. On the far right, a 'GENERATE COMMAND' button is visible, and below it, a list of job IDs is shown: 'T08C_20160625_000_2_PREPROCVAR', 'T08C_20160625_000_2_LOCAL_SEND_INITIAL_EMISSIONS', 'T08C_20160625_000_2_HERMESV3_GR', and 'T08C_20160625_000_1_IT'. At the top right of the interface, the text 'Max out: 5 | Max in: 3 | Total #Jobs: 24 | Chunk unit: day | Chunk size 1' is displayed.

URL Automation

URL Automation:

<https://earth.bsc.es/autosubmitapp/experiment/a0yh/graph>

Loads and focus on Graph Representation. Tree View is not loaded.

<https://earth.bsc.es/autosubmitapp/experiment/a29z/light>

Loads and focus on Quick Representation. Tree View is not loaded.

Suggestions



**Barcelona
Supercomputing
Center**

Centro Nacional de Supercomputación

Suggestions

Get involved or contact us:	
Autosubmit GitLab:	https://earth.bsc.es/gitlab/es/autosubmit
Autosubmit Mailing List:	autosubmit@bsc.es



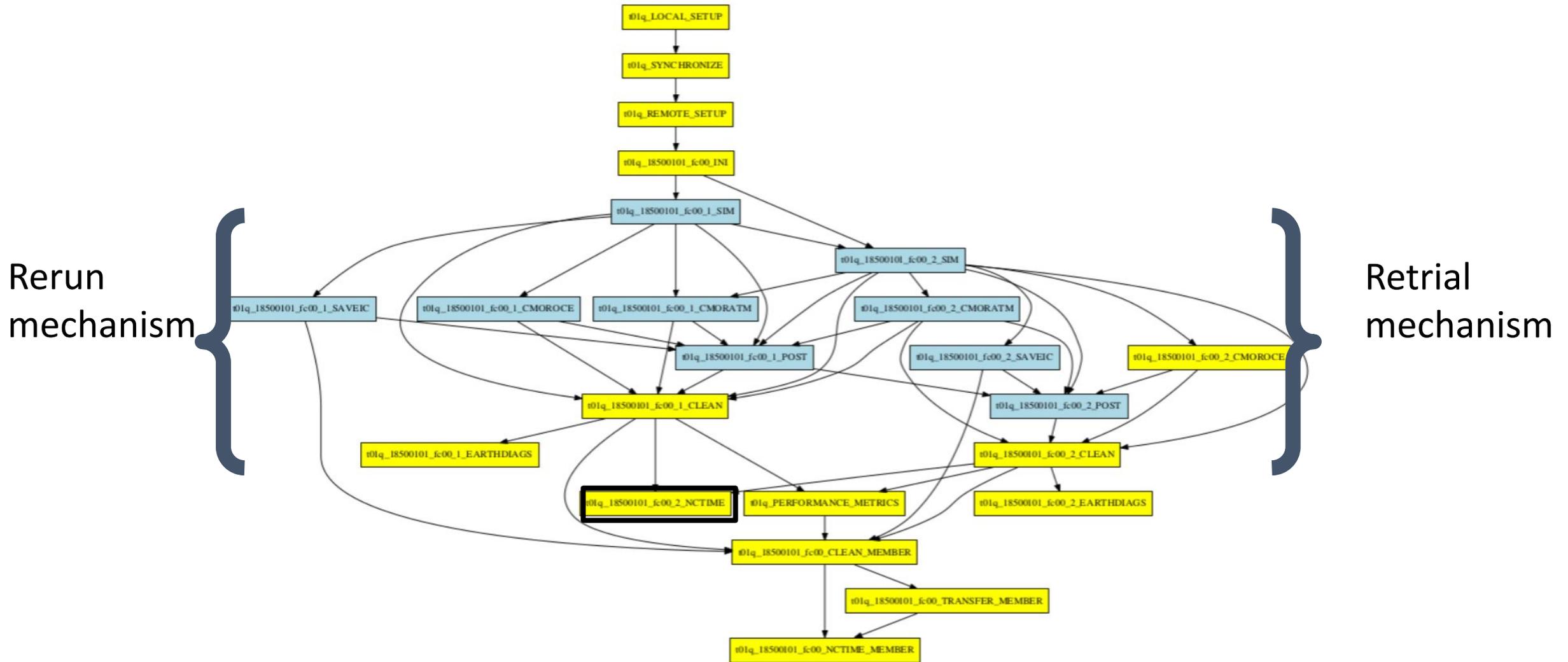
**Barcelona
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Centro Nacional de Supercomputación



Thank you for your time

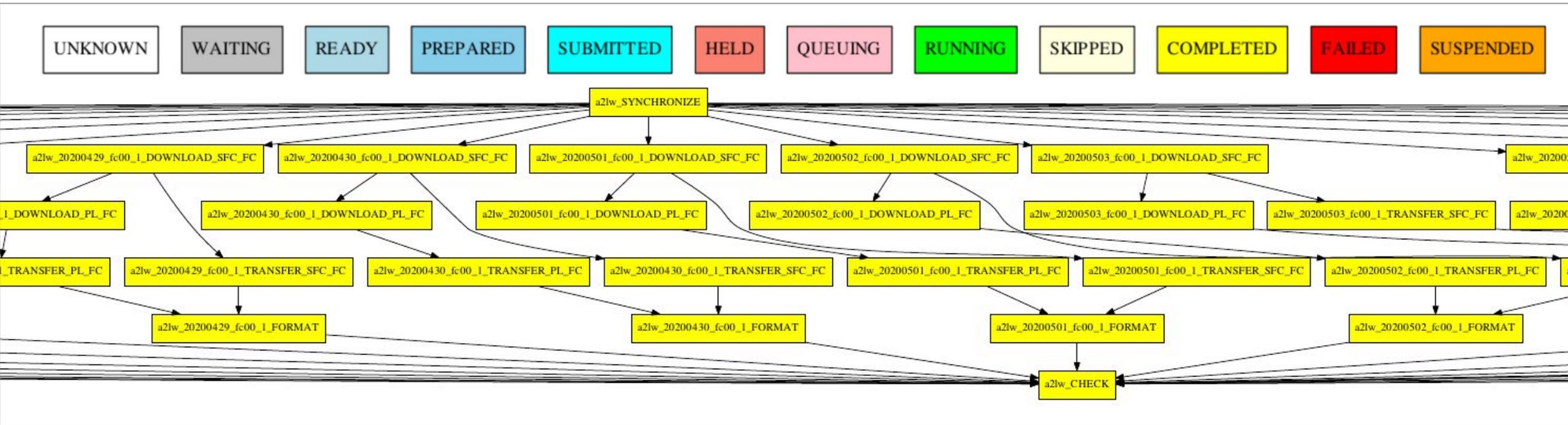
daniel.beltran@bsc.es, miguel.castrillo@bsc.es, wilmer.uruchi@bsc.es

Workflow - Model - Auto-EC-Earth



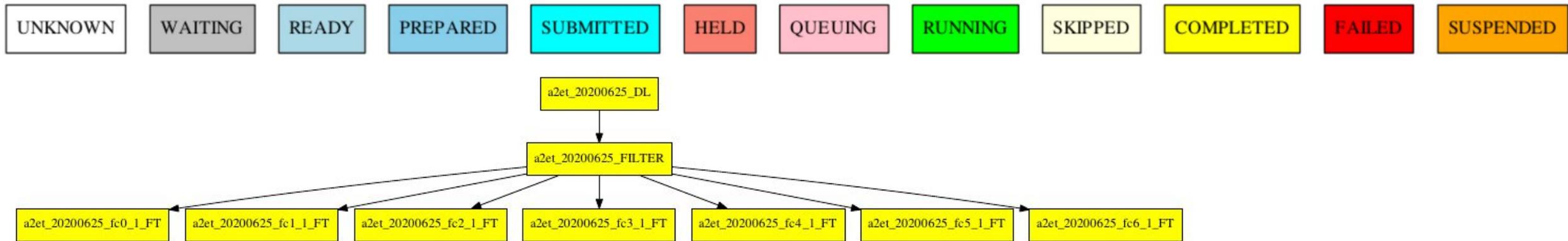
Workflow - Model - Mars

ECMWF MARS data downloader



Workflow - Model - S2S4E

S2S4E operational workflow (data download, formatting, post-processing and visualization)



Workflow - Model - Caliope

