

# SSB AUTOMATION

ABCD update

T2D update

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ABCD

Reminder

Status

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## GOAL

- automate measurement of ATLAS site availability for ATLAS user **analysis**
- at the time being done manually once per month

## ABCD METRIC

- on the level of PanDA resources (siteID)
- metric 10101
  - "PandaResource Status"
  - monitoring of PR states
- metric 10100
  - "SwitcherActions"
  - actions on PR for downtimes of CE/SE

## ABCD status

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- new metric **10102** in test mode:

<https://dashb-atlas-ssb.cern.ch/dashboard/request.py/siteviewhistory?columnid=10102>

- mapping done for every PanDA resource
- if ATLAS site has more PR: logical OR between PRs
  - if at least one PR is online  $\Rightarrow$  site is online
  - if all PRs are offline (one in SD and others in UD)  $\Rightarrow$  site is offline

|      |                 |              |              |
|------|-----------------|--------------|--------------|
| PR1  | online          | offline (SD) | offline (SD) |
| PR2  | offline (SD/UD) | offline (UD) | offline (SD) |
| Site | good            | bad          | grace        |

Table: Example of site with two PRs.

# ABCD mapping

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- notation
  - ON: online
  - BO: brokeroff
  - OFF: offline
  - T: test
- calculation
  - $ALL\_period = 30 \text{ days}$
  - $ALL\_period = GOOD\_period + BAD\_period + NULL\_period$
  - $ratio = GOOD\_period / (ALL\_period - NULL\_period)$

|           |        |            |                     |         |         |
|-----------|--------|------------|---------------------|---------|---------|
| PR status | online | OFF, T, BO | OFF, T, BO          | unknown | ∅ - ON  |
| Switcher2 | ∅      | ∅SCHED     | ∅UNCHED ∅ no_action | ∅       | unknown |
| Mapping   | good   | null       | bad                 | null    | null    |

Table: Example of mapping for one PR.

# ABCD mapping: test period

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- after downtime, switcher sets PR to test only once (only 20min)
  - requested grace period after downtime 60min (configurable) ✓
- ⇒ special time treatment implemented

| PR status | SD              | test(62min)       |                  |                 | online    |
|-----------|-----------------|-------------------|------------------|-----------------|-----------|
| Switcher2 | settooffline_SD | settest_SD(20min) | no_action(40min) | no_action(2min) | no_action |
| Mapping   | null            | null              | null             | bad             | good      |

Table: Example of test > 60min treatment.

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## T2D reminder

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- at the time being: T2 and T2D sites
- new concept implemented: T2D candidate
- metric T2D candidates **10097**:

<http://dashb-atlas-ssb.cern.ch/dashboard/request.py/siteviewhistory?columnid=10097>

- input 484 (sonar large files)



- threshold: 5MB/sec→4MB/sec ✓
- transfer speed in 2 directions: average→minimum ✓
- remove T1s, T3s from the view of T2D candidates metric ✓
- produce metric T2D candidates for medium files
- investigate lack of sonar large files data transfers from/to NIKHEF T1
- after resolution of NIKHEF problem: soft criteria→strict criteria
  - soft criteria: < 3 bad (T2D)
  - strict criteria: > 9 good (T2D)

## Updates

- new ABCD metric (10102) already in testing phase
- first reasonable results expected on 1<sup>st</sup> March
- T2D metric for large files (10097) available

## Plans

- ABCD
  - create two identical ABCD metrics with two IDs
  - change time period to calendar month (to avoid overlap)
- T2D
  - create two metrics: T2D candidates (medium), T2D (large)

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# Backup slides

## What are the inputs?

- info needed from **two** metrics
- metric monitoring **statuses**
  - *online* (jobs can be sent to this site) **good**
  - *offline* (site cannot be used for analysis because PanDA refuses to send the jobs there) **bad**
  - *brokeroff* (analysis queues of the site want to be drained i.e. PanDA does not want to send new work to these queues, but you can send job if you really want) **bad**
  - *test* (test queue before returning to online; PanDA does not send jobs to that queue) **bad**
- metric storing info about **downtimes**
  - scheduled (SD) **bad**  $\mapsto$  **grace mapping**  $\mapsto$  **grace period**
  - unscheduled (UD) **bad**

## Rating A/B/C/D

- **rating A/B/C/D** of sites according to ratio:
  - T1 sites:
    - A ratio  $> 90\%$
    - C ratio between 80% and 90%
    - D ratio  $< 80\%$
  - T2 sites:
    - A T2Ds with ratio  $> 90\%$
    - B T2s (non-T2Ds) with ratio  $> 90\%$
    - C any T2s with ratio between 80% and 90%
    - D any T2 with ratio  $< 80\%$
  - T3 sites:
    - B ratio  $> 90\%$
    - C ratio between 80% and 90%
    - D ratio  $< 80\%$