

Blacklisting overview

- HammerCloud PFT/AFT
- ESblacklist
- Switcher
- DDM

Support: <atlas-adc-autoexclusion-support@cern.ch>

Jaroslava Schovancová
CERN IT

HC PFT/AFT: receive tests

Summary: https://twiki.cern.ch/twiki/bin/viewauth/IT/HammerCloudTutorialATLASsiteAdmins#2_1_4_Integration_with_AGIS

Support: <atlas-adc-hammercloud-support@cern.ch>

How to receive tests at a PanDA queue

1. Have inputs available
 - at any RSE of **Associated DDM Storages: Pilot Read (READ LAN)** in AGIS
2. AGIS configuration of a PanDA queue
 - **hc_param** in ['AutoExclusion', 'OnlyTest']
 - **hc_suite** in ['PFT', 'AFT', 'PFT_MCORE']
 - PQ is not in 'BROKEROFF' nor 'OFFLINE' status

News since the last Jamboree

- if HC inputs available, we can start testing new PQs within 1 hour of adding/enabling in AGIS
- we can test UnifiedQueues
- we do not send any job to PQs with 'BROKEROFF'/'OFFLINE' status ⇒ delay ~1 day to get jobs

HC PFT/AFT: blacklisting

Summary: https://twiki.cern.ch/twiki/bin/viewauth/IT/HammerCloudTutorialATLASsiteAdmins#2_1_1_ATLAS_Automatic_Site_Exclu

Support: <atlas-adc-hammercloud-support@cern.ch>

How to enable blacklisting of a PanDA queue

- **is_default=True** for max 1 PQ of **type=production**, and max 1 PQ of **type=analysis** per PanDA site
 - the “master queue” responsible which PFT/AFT test results we blacklist master + slave PQs of the same PanDA site per PQ type
- **hc_param** in ['AutoExclusion', 'OnlyExclude']
- **hc_suite** in ['PFT', 'AFT']
- Monitoring: <http://hammercloud.cern.ch/hc/app/atlas/siteoverview/select>
- Perceived config: https://hc-ai-core.cern.ch/testdirs/atlas/agis_pandaresources.json

News since the last Jamboree

- **AGIS controller** in production since Feb 2017 ... control static and dynamic PQ parameters from 1 place, i.e. from AGIS
- Procedures for massive blacklisting events https://hcdocs.web.cern.ch/hcdocs/atlas-ops/massive_blacklisting.html

Next steps for HC PFT/AFT blacklisting

- Machine Learning - Anomaly Detection

How to set a PQ status

Summary: <http://atlas-agis.cern.ch/agis/pandablacklisting/list/> ... table for manual status changes & howto!
Support: <atlas-adc-autoexclusion-support@cern.ch>

I want to force my PQ in 'ONLINE'/'TEST'/'BROKEROFF'/'OFFLINE' status

[https://atlas-agis-api.cern.ch/request/pandaqueuestatus/update/set_probestatus/?html&pandaqueue=CE
RN-P1-OpenStack&value=TEST&reason=I+am+testing+something+leave+me+alone&probe=manual&expiration=5h](https://atlas-agis-api.cern.ch/request/pandaqueuestatus/update/set_probestatus/?html&pandaqueue=CE
RN-P1-OpenStack&value=TEST&reason=I+am+testing+something+leave+me+alone&probe=manual&expiration=5h)

- N.B.: you need to set the **expiration** parameter! e.g. **expiration=5h** or **expiration=1d** or **expiration=1w** or **expiration=2018-03-06+11:15:00** (in UTC!)
 - Once the period expires, status rolls back to the previous value
- **pandaqueue** ... name of the PanDA queue (not PanDA resource)
- **value** in ['TEST', 'ONLINE', 'OFFLINE', 'BROKEROFF']
- **reason** is a way to set comment, e.g. you can put 'HC.Test.Me' here, or whatever string you want
- **probe=manual**
- **in case you make a typo or forget about a parameter, do not worry, AGIS will suggest what to fix**
- History log: http://atlas-agis.cern.ch/agis/pandablacklisting/table_view/

How to set a PQ status II

Summary: <http://atlas-agis.cern.ch/agis/pandablacklisting/list/>

Support: <atlas-adc-autoexclusion-support@cern.ch>

I am done with my tests and want HammerCloud/Switcher to take over

https://atlas-agis-api.cern.ch/request/pandaqueuestatus/update/set_probestatus/?html&pandaqueue=CE-RN-P1-OpenStack&value=AUTO&reason=HC.Test.Me&probe=manual

- **expiration** is not compulsory parameter to set AUTO mode!
 - i.e. AUTO may never expire, by default
- **pandaqueue ... name of the PanDA queue (not PanDA resource)**
- **value=AUTO**
- **reason** is a way to set a comment, e.g. you can put 'HC.Test.Me' here, or whatever string you want
 - the "comment" is important for any status other than ONLINE! i.e. TEST, AUTO, ...
- **probe=manual**
- History log: http://atlas-agis.cern.ch/agis/pandablacklisting/table_view/

How to set a PQ status III

Summary: <http://atlas-agis.cern.ch/agis/pandablacklisting/list/>

Support: <atlas-adc-autoexclusion-support@cern.ch>

I have a new default PQ, would like to start testing/blacklisting it

Checklist:

- Are HC inputs available? ⇒ PQ Associated DDM Storages: Pilot Read (READ LAN)
 - if HC inputs missing, get in touch with DDM Ops <atlas-adc-ddm-support@cern.ch>
- Is my new master PQ registered in HC? https://hc-ai-core.cern.ch/testdirs/atlas/agis_pandaresources.json
- Is my new master PQ already getting HC test jobs? <http://hammercloud.cern.ch/hc/app/atlas/siteoverview/select>
 - if no jobs yet, follow up with HC support <atlas-adc-hammercloud-support@cern.ch>
- set the PQ to 'TEST' for a few hours

https://atlas-agis-api.cern.ch/request/pandaqueuestatus/update/set_probestatus/?html&pandaqueue=CE RN-P1-OpenStack&value=TEST&reason=HC.Test.Me&probe=manual&expiration=2h

- set PQ to 'AUTO' for HC and Switcher to take over

https://atlas-agis-api.cern.ch/request/pandaqueuestatus/update/set_probestatus/?html&pandaqueue=CE RN-P1-OpenStack&value=AUTO&reason=HC.Test.Me&probe=manual

Adding a new PQ

Summary: <http://atlas-agis.cern.ch/agis/pandablacklisting/list/>

Support: <atlas-adc-autoexclusion-support@cern.ch>

Checklist:

- Are HC inputs available? ⇒ **PQ Associated DDM Storages: Pilot Read (READ LAN)**
- **hc_param** in ['AutoExclusion', 'OnlyTest', 'OnlyExclusion']
- **hc_suite** in ['PFT', 'AFT', 'PFT_MCORE']
- master (**is_default=True**) vs. slave (**is_default=False**) PQ
 - for a new master, allow for a few hours of running tests there before switching blacklisting to it
- PQ status: no HC jobs to PQs in 'BROKEROFF', 'OFFLINE' states
- Does HC know already about my PQ? https://hc-ai-core.cern.ch/testdirs/atlas/agis_pandaresources.json
- Is my PQ already getting HC test jobs? <http://hammercloud.cern.ch/hc/app/atlas/siteoverview/select>

How fast can I get the first HC jobs?

- within less than 1 hr: HC inputs are available & PQ is not OFFLINE/BROKEROFF
- within 24 hrs: HC inputs are available, but the PQ is OFFLINE/BROKEROFF
- within days to weeks: HC inputs are not available and there is an issue transferring them there

Decommissioning a PQ

Summary: <http://atlas-agis.cern.ch/agis/pandablacklisting/list/>

Support: <atlas-adc-autoexclusion-support@cern.ch>

Checklist:

- If you're decommissioning a PQ at a T1, get in touch with DPAs first <atlas-adc-dpa@cern.ch>
- **is_default:**
 - master PQ: hand over master to another PQ, wait a few hours
 - slave PQ: no wait, proceed to further steps
- Set **hc_param=False**
- Empty **hc_suite**
- PQ status: set 'BROKEROFF' status, wait ~1 day
- Wait for all the jobs to finish running
- Confirm with DPAs that the PQ can be decommissioned
- Set the PQ status to 'OFFLINE', wait a few days
- Disable the PQ in AGIS: set **AGIS internal state** from ACTIVE to **DISABLED**

ESblacklist

Support: <atlas-comp-event-service@cern.ch> and <atlas-adc-hammercloud-support@cern.ch>

ESblacklist: disable EventService jobs at PQs that are consistently failing those

- Based on standard EventService jobs failures
- Introduced in HC in Nov 2017, uses the same infrastructure as HC PFT/AFT blacklisting
- Blacklisting comments: HC.ESblacklist.*
- Idea: disable PQ for ES jobs for a few hours, auto-enable after a fixed period
 - handle transient issues, automate ES operations
 - if issue appears 4x in the past day ⇒ do not auto-enable, notify ES Ops

Next steps for ESblacklist

- Send ESblacklist notifications to the sites (clouds)
- ESblacklist PQs that are failing HC PFT
- Add more rules for ESblacklist
- Functional testing of ObjectStores with StressOS ⇒ see Peter Love's talk *Object store stress testing*

Switcher

Summary: <https://twiki.cern.ch/twiki/bin/viewauth/AtlasComputing/SwitcherBlacklisting>

Support: <atlas-adc-autoexclusion-support@cern.ch>

Switcher: Exclude PQs based on downtime of an underlying SE or CE

- Publish downtime in the usual information system, AGIS will fetch it and pass to Switcher
- Blacklisting comments: set.*.by.Switcher
- AGIS controller probe: **switcher** http://atlas-agis.cern.ch/agis/pandablacklisting/table_view/?&probe=switcher

DDM blacklisting

Summary: <http://atlas-agis.cern.ch/agis/ddmblacklisting/list/>

Support: <atlas-adc-ddm-support@cern.ch>

DDM blacklisting: integrated with AGIS since a long time ago

- based on downtimes
- based on “RSE full” - either over quota, or out of space

Blacklisting overview



- HammerCloud PFT/AFT
- ESblacklist
- Switcher
- DDM

Support: [<atlas-adc-autoexclusion-support@cern.ch>](mailto:atlas-adc-autoexclusion-support@cern.ch)

Jaroslava Schovancová
CERN IT

