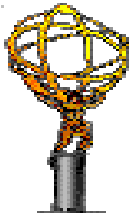# Site Configuration and Support
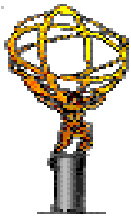
Xin Zhao

ATLAS Sites Jamboree, CERN

5-9 March, 2018

Outline

- Baseline requirements
- The Trend
  - Towards savings of manpower from sites
  - Standardization, with flexibility for efficiency
- AGIS
- Sites Support

*(* This is an update to the [presentation](#) from 2017 Site Jamboree, given by Alessandra Forti.)*

Baseline Requirements (1)

- Computing resource
  - ATLAS VO-ID card: https://operations-portal.egi.eu/vo/view/voname/atlas

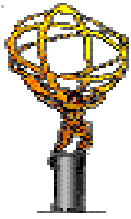|	
Max used physical non-swap i386 memory size	2 GB
Max used physical non-swap x86_64 memory size	2 GB
Max size of scratch space used by jobs	20 GB
Max time of job execution	3120m
Job wall clock time limit	5760m
RAM + swap for each job slot	4 GB
ATLAS software distribution	cvmfs (*)

(* not a hard requirement on the ID card, but almost standard now)
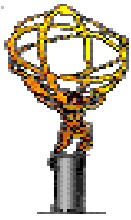
Baseline Requirements (2)

- ## Storage
  - ### ATLAS request …
    - " Deploy the necessary components to allow production quality data access (also from WAN) to the storage through *xrootd* and *HTTP/WebDAV* "
    - DDM team ran a campaign ~ 1.5 years ago, ticketing every site with storage, ends up with a pretty good coverage
      - Still ~20% sites with storage to be done
      - Easier to deploy now, as no need to couple with FAX N2N
    - How about SRM ?
      - ATLAS is now in the position of not using it, sites who don't want it can avoid it
      - Still needed for TAPE storage
  - ### Another option: "diskless" sites
    - Please refer to Stephane's talk from Monday afternoon session

Other Services …

- There are many other services:
  - Batch system, shares between production/analysis job slots, CE, Squid,… not much updates over the past year
    - Shares vs UCORE
      - Sites moving to UCORE don't need to worry about the shares any more
- Migration to CentOS7
  - ATLAS software is validated on CentOS7 or variants OS
  - Grid middleware components from both WLCG and OSG are ready
  - Sites should feel free to upgrade and run PanDA jobs in native CentOS7 environment
  - For more info : CentOS7Readiness twiki
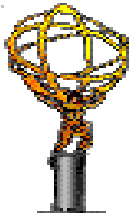
The Trend (1)

- Towards savings of manpower for sites
  - Pilot/ProdSys now handles runaway jobs much better
    - based on better measurement of memory usage, and scout jobs
    - One less thing for sites to worry
  - Unified PanDA queues (See Rod's talk later)
    - Simplify batch system configuration, allocation of different job payloads by ADC
  - Go "diskless"
  - Containerization
    - Allows isolation of host OS from ATLAS job environment
    - Singularity support in pilot2 under development/testing
      - Will allow flexible and minimum requirements on site configuration
    - Container images for PanDA jobs will be provided and distributed by ATLAS
    - Some service images (like Xcache, FTS) may also be available from ATLAS, for sites to run directly
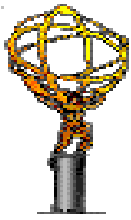
The Trend (2)

- Standardization is less
  - More support from the community, less manpower needed on sites, less load on the operations team
    - Example : batch system
      - Community expertise for more modern BS : HTCondor/SLURM

  - 13/04/2014

Functionality	Torque/Maui	SLURM	HTCondor	USGE/SoGE	LSF
Number of sites	101	10	10	14	7

  - 26/01/2016

Functionality	Torque/Maui	SLURM	HTCondor	USGE/SoGE	LSF
Number of sites	92	14	17	14	6

  - 17/01/2017

Functionality	Torque/Maui	SLURM	HTCondor	USGE/SoGE	LSF
Number of sites	84	15	21	10	5

  - 27/02/2018

Functionality	Torque/Maui	SLURM	HTCondor	USGE/SoGE	LSF
Number of sites	78	18	25	8	5
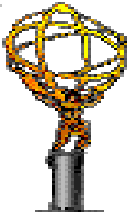
The Trend (2)

- Still keep flexibility for functionality and efficiency
    - Site expertise is valuable asset, wherever available, are encouraged to explore additional functionalities and operational efficiency
        - *with transparency to central ADC operation*
    - Examples
        - "One Box Challenge"
            - Reach for high CPU utilization by concurrently running Simulation jobs on the background with low priority
        - LSM
            - CLI for handling data transfer within a site
            - Allows site admin to implement site-specific transfer mechanism between local SE and WNs, accounting for site architecture and layout
        - hybrid staging model for reprocessing campaign
            - Organized pre-staging for efficient usage of Tape storage
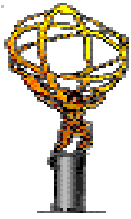
AGIS

- ## The information system
  - ### The "Gorilla" that sits between sites and ADC workflow (jobs/data)
    - source of many questions from both sides --- sites and central operation team
  - ### Evolving all the time, with new workflow introduced and/or new resources added
  - ### Continuously call for cleanup from both sides
    - Recently obsoleted PQ parameters (on top of the list given at the 2017 Site Jamboree)
      - ddm (now 'astorage')
      - Jobmanager
    - Newly added new PQ parameters
      - harder question …
      - Keep documentation updated !
    - Sites : please get rid of obsolete PQs, and other resource endpoints

Sites support (1)

- Want to know what's going on with ADC ?

  - Come to the meetings

  - [CRC reports](#)

  - DPA mailing list: active discussion on operation issues and status updates

    (atlas-adc-dpa@cern.ch)

  - Response to GGUS tickets

ADC Meetings

	Monday	Tuesday	Wednesday	Thursday	Friday
9 am 9:30 am 10:00 am	Morning meeting	Morning meeting DDM Ops	Morning meeting Tier0 News Software News	Morning meeting Central Services DDM Dev	Morning meeting
3 pm	S&C Mgmt meeting			DPA meeting	
4 pm	Technical Coordination Board	ADC Weekly (3:40pm)		WFMS	
5 pm			Event Service Analytics (in rotation)	ProdSys CREM	

Sites support (2)

- Where to look for help if sites have issues ?
  - mailing lists
    - 228 e-groups with the name starting with "atlas-adc-…"

✉	atlas-adc-conveners	Static	ATLAS Computing	aDC conveners	Active
✉	atlas-adc-coordination	Static	ATLAS Computing Operations	ATLAS Distributed Computing Coordination	Active
✉	atlas-adc-coordination-admins	Static	ATLAS Computing Operations	admin group of atlas-adc-coordination	Active
✉	atlas-adc-crc	Static	ATLAS Computing Operations	communication list among the CRC shifters and coordinators	Active
✉	atlas-adc-crc-admin	Static	ATLAS Computing Operations	Admin e-group for atlas-adc-crc e-group	Active
✉	atlas-adc-csirt	Static	ATLAS Computing	ATLAS Distributed Computing Security Team	Active
✉	atlas-adc-cvmfs	Static	ATLAS Computing Operations	deployment and operations of CVMFS in ATLAS	Active
✉	atlas-adc-cvmfs-lxvoadm	Static	ATLAS Computing Operations	ATLAS cvmfs people with access to lxvoadm	Active
✉	atlas-adc-cvmfs-lxvoadm-admins	Static	ATLAS Computing Operations	admin group of atlas-adc-cvmfs-lxvoadm	Active
✉	atlas-adc-daily-operations	Static	ATLAS Computing Operations	distributed computing operations morning coffee meeting	Active
✉	atlas-adc-data-analytics	Static	ATLAS Computing	Analytics for ATLAS Distributed Computing	Active
✉	atlas-adc-data-analytics-admin	Static	ATLAS Computing	ADC Data Analytics Administrators	Active
✉	atlas-adc-db-lxvoadm	Static	ATLAS Computing	lxvoadm access group for Database Domain	Active
✉	atlas-adc-ddm	Static	ATLAS Computing Offline Software	General ATLAS Distributed Computing Data Management	Active
✉	atlas-adc-ddm-lostfiles	Static	ATLAS Computing Operations	Announcements of files lost at sites	Active
✉	atlas-adc-ddm-lostfiles-admins	Static	ATLAS Computing Operations	Admins of the group atlas-adc-ddm-lostfiles	Active
✉	atlas-adc-ddm-lxvoadm	Static	ATLAS Computing Operations	DDM people with access to lxvoadm	Active
✉	atlas-adc-ddm-lxvoadm-admins	Static		admin group of atlas-adc-ddm-lxvoadm	Active
✉	atlas-adc-ddm-support	Static	ATLAS Computing Operations	Support mailing list for ATLAS DDM	Active
✉	atlas-adc-ddmdev-lxvoadm	Static	ATLAS Computing	DDM-dev people with access to lxvoadm	Active
✉	atlas-adc-ddmdev-lxvoadm-admins	Static	ATLAS Computing	admin group of atlas-adc-ddmdev-lxvoadm	Active
✉	atlas-adc-ddmlogin-lxvoadm	Static	ATLAS Computing Operations	people with login-only access to DDM boxes via lxvoadm	Active
✉	atlas-adc-development	Static	ATLAS Computing Operations	ATLAS Distributed Computing - Development Project	Active
✉	atlas-adc-dist-analysis-help	Static	ATLAS Computing Operations	Distributed Analysis Help	Active

Just remember one, and start with it :

atlas-adc-cloud-XX at cern.ch (where XX = [ca,de,es,fr,it,nd,nl,ru,tw,uk,us])

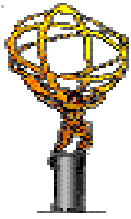# Sites support (3)

- ## Where to look for help if sites have issues ?

  - FAQ twiki --- under development

  - Needs input from sites :
    what other problems
    you often run into ??

    Frequently Asked Questions by Site Responsible/Admin

    - Site/AGIS Configuration
      - How to add a new PanDA queue ?
      - How to configure sitemover for a PanDA queue ?
      - How to enable Event Service jobs on a PanDA queue ?
      - How to enable singularity container jobs on a PanDA queue ?
      - For OSG/US sites only, how to associate CE and local batch queue name to a PanDA queue ?
      -
      -

    - Site operation
      - How to change PanDA queue status ?
      - How to schedule a downtime ?
      - Why is my site not getting any PanDA jobs ?
      -
      -

Questions ?

Xin Zhao, BNL