

Tier-3 Policy

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Overview

- > 80 T3 sites (a guess)
- Variety of flavors:
 - Existing, T1/2 co-located
 - Small non-grid clusters
 - new countries
- Tier-3 policy:
 - To define site requirements and approval procedure
 - To ensure the T3 operation does not affect central services, production

T3 Architectures

- T3 Co-located: T2/T1 shared resources
- T3gs: grid services
 - Full setup (CE,SE), T2 like
 - Partial (SE only, CE only)
- T3g: grid access (client)

Tier-3 Categories

1. High priority production: T2-like jobs
2. Distributed analysis
3. Low priority production: priority<200 (simul only)
4. User directed analysis: no central brokering

Site Requirements

	Category	Cores	Storage	WAN	Support
1	High priority production	50	20TB	1Gb/s	1FTE
2	ATLAS-wide analysis	50	50TB	1Gb/s	1FTE
3	Low priority production	25	20TB	100Mb/s	0.5FTE
4	User directed analysis	25	10TB	100Mb/s	0.25FTE

1: some T2 sites have smaller bandwidth (100Mb/s,500Mb/s)

Sustained transfer rate: 5% of nominal WAN

Site availability: 75% on monthly bases

ARC sites: 1,3 5TB of Storage

Required Architecture

- 1) High priority production: T3c, T3gs
- 2) ATLAS-wide analysis: T3c, T3gs
- 3) Low priority production: T3c, T3gs
- 4) User directed analysis: T3c, T3gs, T3g

Or, grid services required for production...

Tier-3 Approval Procedure (full)

- Candidate site contacts T3 coordinator to establish the initial conditions
- T3 coordinator instructs the site to start the official procedure
- T3 site sends a letter of intent through the ICB funding agency representative to ICB, stating:
 - Resources, support
 - Cloud association
 - Primary focus and desired category
- ICB reviews:
 - Minimal T3 requirements according to T3 category (resources, support, connectivity)
 - Site agreement on the national level through national ATLAS contact person
 - Established funding
 - Cloud association for operational issues and support
- ICB approves site testing phase within ADC

continued

- Testing phase: (T3 technical coordinator)
 - Connectivity and data transfer tests
 - Installation/software validation
 - Testing jobs
 - Tests must be successful for 1 week
- Tests are category dependent: defined by ADC
 - 1-3) full functional tests as for T2s
 - 4) transfer tests only
- ADC approves or recommends a lower category
- ICB approves the site, service level agreement is signed

Technical requirements

- ADC defines the requested services for each category
 - 1-3) same as for T2, apart from blacklisting
 - 4) list of allowed transfer mechanisms, monitoring, blacklisting rules
- Every Tier-3 site must be registered in Atlas central services (AGIS)
- ADC requirements cannot be part of the policy document for frequent changes, but they are provided by a separate document

Support

- ADC does not provide operational support for Tier-3s
- Basic support level is provided by the cloud

Exceptions to full procedure

- Co-located T3s can skip the procedure entirely if they share the T1/T2 resources.
- Existing (integrated) Tier-3 of categories 1-3 can skip the testing phase if confirmed by the ADC
- Cloud representative can act on behalf of the candidate site
- The exceptions must be agreed between
 - Cloud support
 - Tier-3 coordination
 - ICB

TODO

- Prepare: (this month)
 - Policy document
 - Service level agreement template
 - ADC technical requirements document
- To be approved by ICB and computing management (January)

Technical Considerations

- T3c,T3gs: “no” technical issues
- T3g:
 - Transfer throttling
 - Job and transfer monitoring
- Open issues:
 - Lack of transfer control for non-FTS transfers
 - Data management: from the ADC point of view and local site management