T3g batch system and pathena

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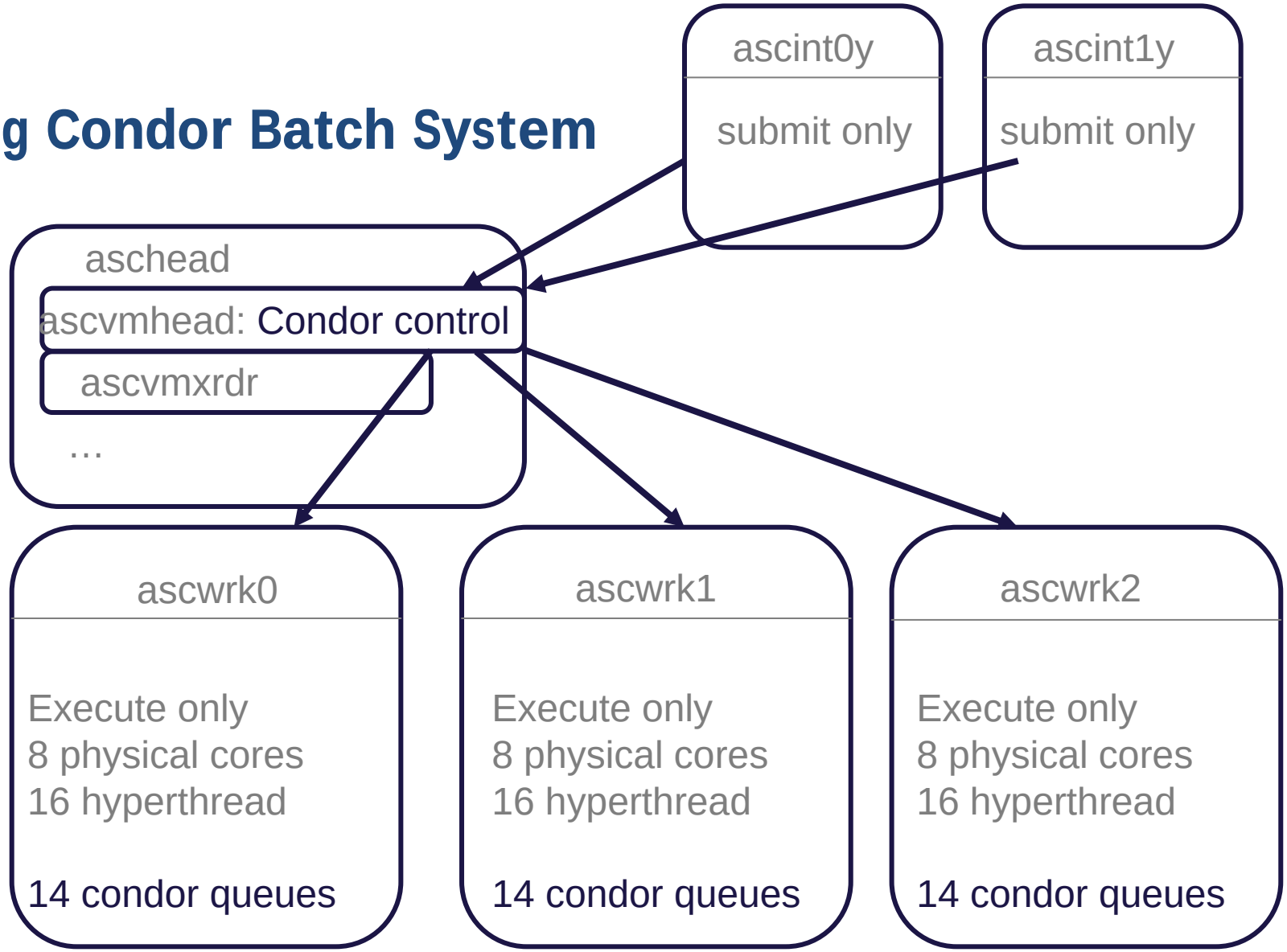
Batch facilities at T3g

- Batch capability of T3g is why you want a T3g at your institute.
- Example: Athena job running at 20 Hz event rate
  - asc* has 42 batch queues (3 Dell R710's)
  - 42 queues running at 20 Hz → process 40 Mevents in 24 hours

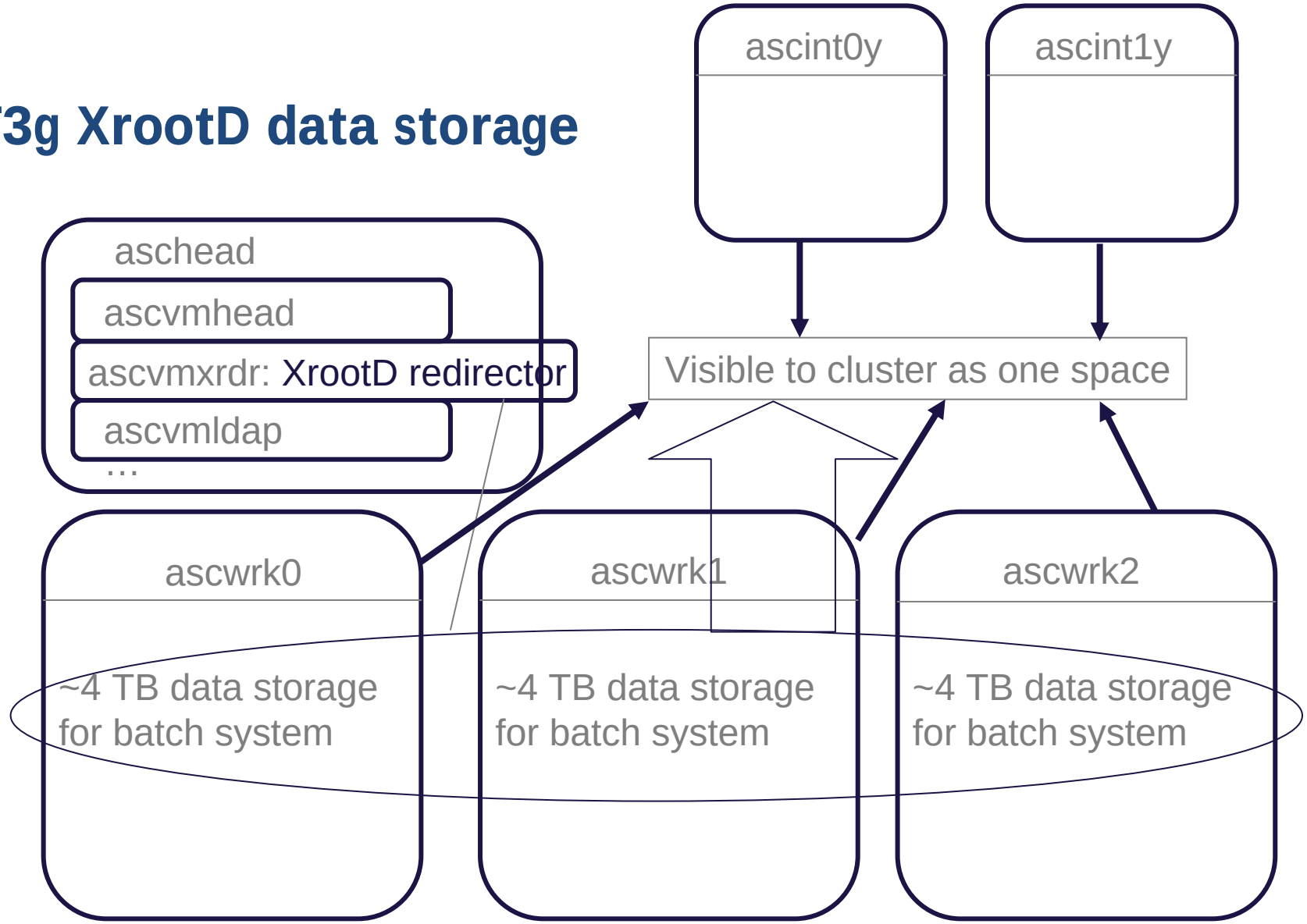
Model at asc* T3g
- Use Condor for batch system
- Use XrootD to manage the data

User interface
- Condor submission system as such
- ArCond (Sergei's talk)
- Panda (pathena)

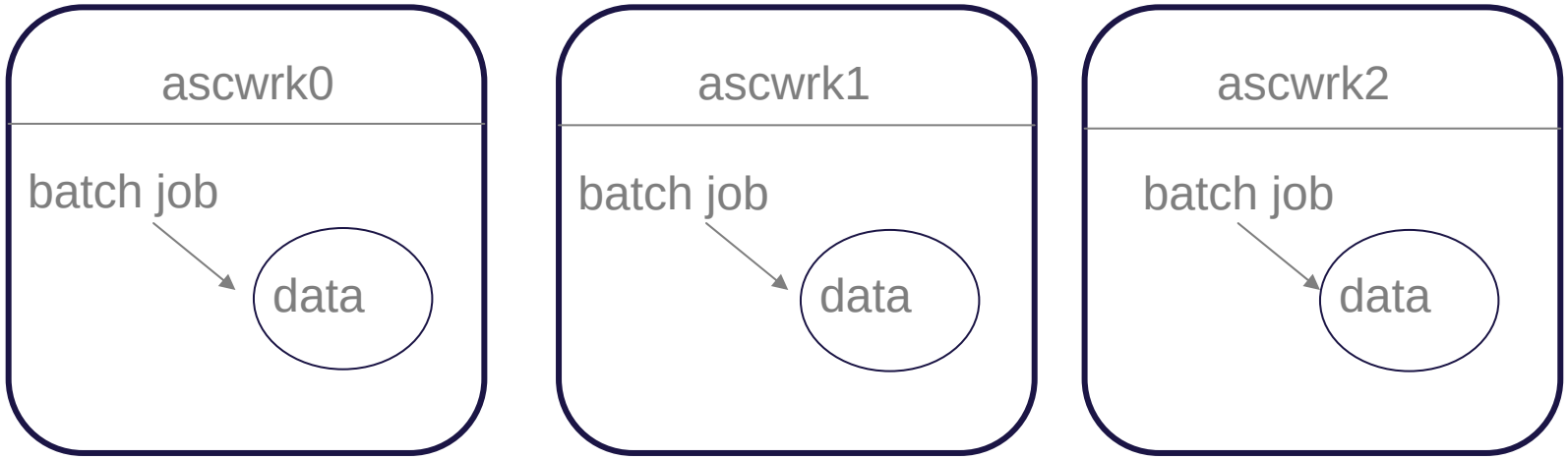
T3g Condor Batch System



T3g XrootD data storage



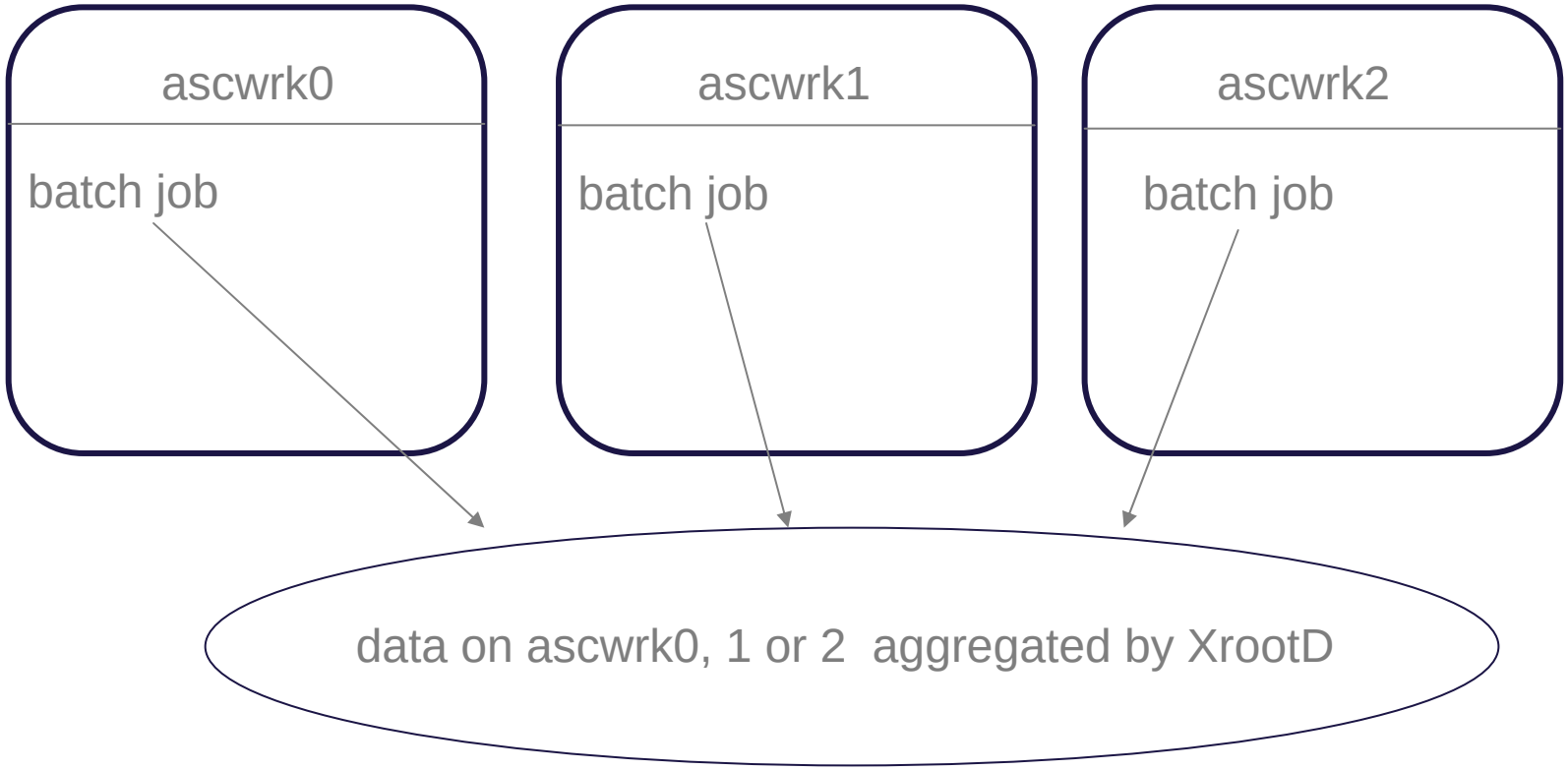
Scenario 1: Batch job accesses locally available data only



- Minimize network traffic
- Reliable (no data movement)
- Scalable with number of workers even for most i/o intensive jobs
- Needs to know where the data really is
- XrootD handles distribution of data sets among workers

ArCond works like this (more in Sergei's talk)

Scenario 2: Batch job accesses data from anywhere



- No need to know where the data is
- Easily extendable to data servers external to worker nodes
- Could hit network limitations. Scalability issues.

Panda for T3

- Torre Wenaus, Paul Nilsson, Tadashi Maeno
- https://twiki.cern.ch/twiki/bin/view/Atlas/PandaTier3
- Extend Pathena, Prun capability to Tier3g.

Normal Pathena

User supply
-working Athena job
-data set known to DQ2

→

Panda server at CERN
-finds data on Grid
-finds Grid site
-submits jobs
-output data registered in DQ2

Tier3 Pathena

User supply
-working Athena job
-location of local data files

→

Panda server at CERN
- submits job to condor at requested T3
- outputs are left at T3

Currently only works in scenario 2 mode. Plans to extend to scenario 1 mode

ANALY_ANLASC site

Panda monitor
Times are in UTC

Panda info and help

Panda job information

Selection parameters:
days:10

Click for help

Jobs - search
States: running, defined, waiting, assigned, activated, finished, failed
Types: analysis, prod, install, test

Quick search
Job
Dataset
Task request
Task status
File

Summaries
Blocks: days
Errors: days
Nodes: days
Usage 1, 3 days

Tasks - search
Generic Task Req
EvGen Task Req
CTBsim Task Req
Task list
New Tag
Bug Report
Task overview query

Datasets - search
Popular datasets
Aborted datasets
Datasets Browser

Datasets Distribution
Data Transfer Request
DaTRI: Requests list

Summary of all jobs for the last 10 days, jobID any in any state at ANALY_ANLASC site Go
Retrieve All

20 jobs. Click job number to see details.
States: defined:1 activated:1 finished:10 failed:5
Users (2): Paul Nilsson:4 Rikutaro Yoshida:16
Releases (2): Atlas-15.6.3:4 Atlas-15.6.6:16
Processing types (1): pathena:20
Job types (3): panda:9 ptest:2 user:9
Transformations (2): buildJob-00-00-03:10 runAthena-00-00-11:10
Sites (1): ANALY_ANLASC:20

Hide Job Sets

Showing 10 jobsets modified from 2010-03-30 12:15 to 2010-03-22 19:00

Job Sets:

User:jobID	Created	Latest	Jobs	Pre-run	Running	Holding	Finished	Failed	buildJob	Site
Paul Nilsson:1220	2010-03-25 11:40	2010-03-25 11:40	2	2					1055610672 libDS	ANALY_ANLASC
	Out:user10.PaulNilsson.25346c6f-260c-40f1-b70d-4e312b68f0cc									
Paul Nilsson:1221	2010-03-25 11:52	2010-03-25 11:52	2				2		1055612825 libDS	ANALY_ANLASC
	Out:user10.PaulNilsson.0ac88520-e595-4607-93b7-fabc158e0868									
Rikutaro Yoshida:312	2010-03-22 22:33	2010-03-22 22:33	2				1	1	1054969403 libDS	ANALY_ANLASC
	Out:user10.RikutaroYoshida.t3test.22Mar.v2									
Rikutaro Yoshida:313	2010-03-25 17:36	2010-03-25 17:36	2				2		1055676010 libDS	ANALY_ANLASC
	Out:user10.RikutaroYoshida.t3test.25Mar.v0									
Rikutaro Yoshida:310	2010-03-22 18:57	2010-03-22 18:57	2					1	1054925196 libDS	ANALY_ANLASC
	Out:user10.RikutaroYoshida.t3test.22Mar.v0									

T3 Panda status

- First successful job ran at ANALY_ANLASC last week.
- We are in the first testing phase.
- Plan to put up anther site ANALY_DUKE
- In discussion with developers about the next steps and timescale.