HTCondorCE - Tier 2 Plans and Activities

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Some Caveats.

- This was supposed to be a chronicle of Lancaster's HTCCE experiences, but we haven't managed to gain many yet.
- Luckily others have been making some progress in this area.
- I apologise if I've left anyone out (particularly the Tier 1).

Why the HTCCE effort?

- "Time is right" to install new CEs (move to C7, CREAM retirement)
- ARC doesn't fit everyone
  - Scaling issues with many jobs, multiple ARCs often required
  - ARC can be difficult to get your head around
- As a wise Ste said, it's good to have more then one solution.

Lancaster
University

Matt's Opnions.

- HTCondorCE comes from a "foreign" ecosystem.
  - Although technically so does ARC...
- BDII, APEL integration efforts ongoing (although things are going well on these fronts).
- As it stands you still need an APEL box.
  - But that's not all that onorous a task.

HTCondor Pros

According to Matt.

- HTCondorCE has a similar "feel" to CREAM.
- Simple, understandable structure.
  HTTCE Frontend <-> (BLAH) <-> LRMS
    - Although I do like (understand) BLAH, so YVMV.
- HTCCE has strong support - it ain't going anywhere.
- A lot of potential for ease of use to any users familiar with condor (condor_submit -> condor_ce_submit)

Current HTCCE status

That I know of.

- Liverpool - The pioneer site, had an HTCondorCE up and running for a while.
- RHUL - Installed an HTCCE in front of an HTC batch, currently testing and debugging.
- Lancaster - HTCCE installed on an SGE submit host.
- Glasgow - Have looked at HTCCE (I think), will look again next time it's quiet (I think).
- Tier 1 - was looking good back in March's technical meeting.
- Anyone else?

I think we could all do with "touching base" on this topic again.

Other HTCCE Activities.

- Ste is working on JSON information "publishing"
  - As there is no glue1 support at all for HTCondorCE this is extra relevant.
- APEL accounting developement ongoing
  - https://twiki.cern.ch/twiki/bin/view/LCG/HtCondorCeAccounting
  - Again due to the lack of glue1 need to implement scaling manually
- Matt is investigating installing the HTCCE clients in cvmfs
  - First attempt failed due to a lot of absolute paths in the clients.

Lancaster specific stuff.

- Installation was easy (but then installing rpms shouldn't be hard!).
- Lancaster doesn't use puppet site-wide so we're attempting our configuration "by hand".
  - Again Ste provided a fantastic resource to help with this.
- Although I'm also considering again using puppet in a standalone configuration as we do with DPM (essentially using the puppet manifest like an old site-info.def).
- We're already running an APEL box so accounting should be okay to set up.
- We don't run a site ARGUS, instead polling the UK server for banning info and implimenting it via lcmaps - it looks like this should be easy to do with HTCCE too.
- Make heavy use of the "local_submit_attribute.sh" mechanism in CREAM, really happy to see that HTCCE provides (almost) exactly the same functionality in a similar format.

RHUL Specific Stuff

- Installed a fresh "full HTCondor ecosystem" - HTCCE on HTC.
- Configured using puppet, on CentOS7, as part of an infrastructure overhaul. 3 nodes, 200-odd cores.
- ARC was looked at, but HTTCE was preferred.
- Good first impressions.
- Ste's documentation a great help, inspired by the Tier 1.
- Polishing of the system (APEL, BDII) awaiting getting jobs running (ATLAS are sending jobs, and that is helping to debug.).
- Shout out to Vip for his highly useful condor_wn scripts.

Miscellaneous Stuff

- Ste notes that only Atlas and LHCB seem to be using the UK HTCCEs - need to make sure it works with other VOs.
  - In theory should work fine with the UK DIRAC, but that works best with the bdii sending out the right info.
  - On the bright side there doesn't seem to be any problems using the HTCCE for these two VOs.
  - One would also imagine that any OSG based VO (using GlideinWMS or similar) would be used to running on HTCCEs.
- We could do with organising our efforts in this area.
- Useful Links-
  - Ste's talk at GridPP42: https://indico.cern.ch/event/780766/contributions/3368058/
  - https://www.gridpp.ac.uk/wiki/Example_Build_of_an_HTCondor-CE_Cluster
  - Technical Meeting on the Tier 1's progress: https://indico.cern.ch/event/809304/
- Anything I've missed?

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