HTCondor-CE Build

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Background

- **HTCondor-CE can replace CREAM or ARC.**
- **It supports HTCondor batch system and others.**
- **As yet, not much take up, hence this talk.**
- **Liverpool has used it since January. No problems as yet. It works well so far with 850 slots.**

Goals

- **Paucity of examples to use to build an instance. So I lay out how we did it at Liverpool.**
- **Two methods are presented. Manual and Puppet.**
- **A bit daunting at first, but it turns out to be pretty easy in actuality.**
- **I had to “do something” to get APEL to work.**

Documentation

- **I've made some draft documentation to support the talk. It'll be on the GridPP Twiki in due course, but it's an Open Office at the moment.**
- **It's here: http://hep.ph.liv.ac.uk/~sjones/**
- **It's called:**
  - ExampleBuildOfHTCondorCE.odt
- **Also PDF:**
  - ExampleBuildOfHTCondorCE.pdf

Manual

- **There is a “kit” to do the manual install.**
  - git clone https://github.com/gridpp/htcce.git
- **It’s got directories sayinh how make a htcondor central manager, a htcondor workernode, a htcondor ce (the main thing) and a test of the system.**
- **There are README.md docs to say what to do for each part of the build.**

Manual

- **For each step, you add yum repos, then add some packages, and then a tar file overlay of config files.**
- **There’s not much config but you’ll have to edit it for your hosts, argus server, etc.**
- **You’ll need hostcert/key for the server.**

Automatic/Puppet

- We use a CERN module for the build.
- It does “almost everything”.
- I assume you’ve already got the batch system going (using the manual steps or otherwise.) I do give some links to help with that.
- So I just cover the CE part.

Automatic/Puppet

- The steps are to:
- install some yum repos,
- install the module (htcondor_ce),
- make some edits to the module that I needed (we use Pupper 3, not 4, etc.)
- then do some extra tasks (certs and wrong file locations, security….)

Automatic/Puppet

- **The module is parameterised, so I say something about Hiera and give some examples on that. You'll have to insert your own settings.**
- **I mention ARGUS integration, which took ages for some reason. And some words about BDII. The BDII provided is slightly off (slot counts) and I give a fix for that in Appendix 1. I give the GOCDB settings as well.**

Bibliography

- There’s a bibliography at the back of the document that lists all the things I found that helped me.
- In particular, it shows how to set up the APEL accounting.
- Since Alistair particularly mentioned this in the agenda, I’m also attaching a document that says a bit more about that.

Further work

- Get the changes I needed to the module into the main line.
- That BDII slot count issue.
- Convert doc to Twiki.
- Get another site setup so we can test APEL independently.
- Create Puppet module to install APEL client for HTCondor-CE.
- Figure out a split head-node version, with batch on one system, CE on another.
- Figure out how to route jobs to (e.g.) “smaller sites” that don’t have a head-node.
- For APEL, fix a problem to circumvent an BDII round trip (more on that in a moment.)
- Find out how to make HTCondor-python bindings search for config under /etc/condor-ce.
- Etc.