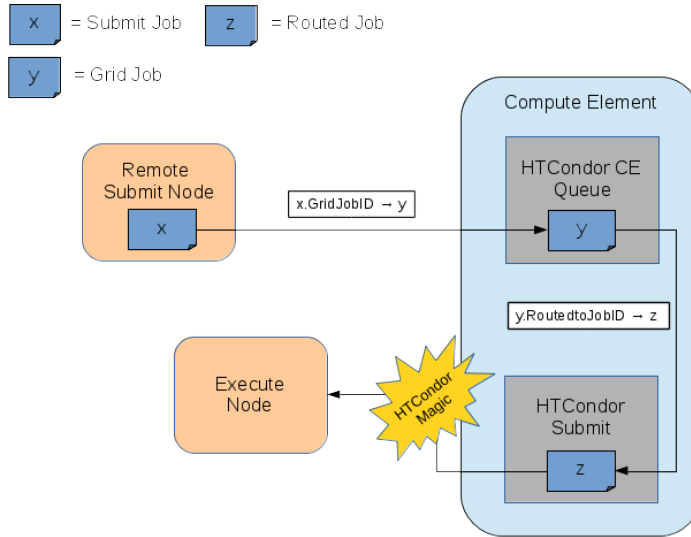


## Tracking Jobs: HTCondor Batch System



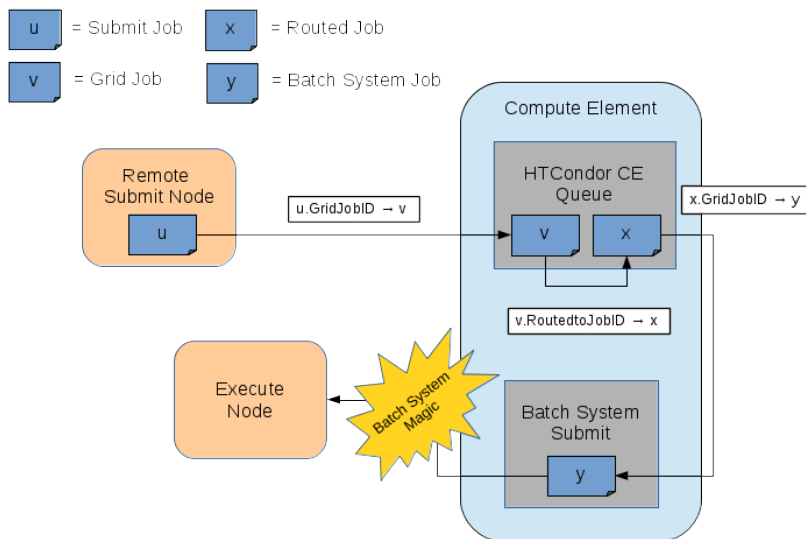
1

03/26/2015

B.Lin, M.Zvada – HTCondor as the job gateway: HTCondor-CE

UWISC, UNL, OSG

## Tracking Jobs: Non-HTCondor Batch System



2

03/26/2015

B.Lin, M.Zvada – HTCondor as the job gateway: HTCondor-CE

UWISC, UNL, OSG

## Debugging with Logs

- Set 'ALL\_DEBUG = D\_FULLDEBUG' in /etc/condor-ce/config.d/99-local.conf
- Non-HTCondor batch systems: Set 'blah\_debug\_save\_submit\_info=/tmp' in /etc/blah.config
- If jobs don't make it to the CE, check the following for errors:
  - /var/log/condor/GridmanagerLog.\* on the submit node
  - /var/log/condor-ce/SchedLog on the CE
- If jobs make it to the CE but don't make it to the submit point, check:
  - HTCondor batch systems: /var/log/condor-ce/JobRouterLog and /var/log/condor/SchedLog
  - Other batch systems: /var/log/condor-ce/JobRouterLog, /var/log/condor-ce/GridmanagerLog.\*, your batch system logs, and files saved in /tmp/bl\_\*

## condor\_ce\_q: Viewing Jobs in the Queue

- View the CE queue and view specific job attributes
- Usage: condor\_ce\_q [options] [Job ID]  
Ex. condor\_ce\_q -f '%s\n' RoutedtoJobID 12.0
- Options:
  - -l: View entire classads
  - -af <attribute>: Print <attribute> nicely formatted, cannot
  - -const: Print jobs that match an expression
  - -f <format> <attribute>: Prints <attribute> with fine control over formatting
- Use condor\_ce\_history for jobs that have left the queue

## condor\_ce\_trace: Testing Job Submission

- A python script that tests end-to-end job submission
- **Usage:** `condor_ce_trace [options] <CE hostname>`  
Ex. `condor_ce_trace -d htcondor-ce`
- **Options:**
  - `-d`: Debugging information, very verbose
  - `-a`: Add attributes to job, useful for testing routes
  - `-n`: Don't cleanup files, useful for viewing submit and log files created by `condor_ce_trace`.

## condor\_ce\_job\_router\_info: Testing Job Routes

- View job routes and compare job ClassAds to routes
- **Usage:** `condor_ce_job_router_info [options]`  
Ex. `condor_ce_job_router_info -config`  
Ex. `condor_ce_job_router_info -match-jobs -ignore-prior-routing -jobads <file>`
- **Options:**
  - `-config`: Print job routes
  - `-match-jobs`: Match jobs against routes
  - `-ignore-prior-routing`: The JobRouter sets attributes after matching so those same jobs don't get routed again. Ignore those attributes.
  - `-jobads`: Specify job ClassAds with a file or stdin

## condor\_ce\_config\_val: Verifying Configuration

- View configuration values and where they're defined
- Usage: `condor_ce_config_val [options]`  
Ex. `condor_ce_config_val -v JOB_ROUTER_ENTRIES`
- Options:
  - `-v`: Show where the value is defined
  - `-config`: List of configuration sources
  - `-dump`: Print all configuration values

## condor\_ping: Verifying access

- Check user mapping and authorization
- Usage: `condor_ping [options]`  
Ex. `condor_ping -name htcondor-ce -pool htcondor-ce:9619 -verbose WRITE`
- Options:
  - `-name`: URI of CE's schedd daemon (generally the hostname of the CE)
  - `-pool`: URI of CE's collector daemon (with default port 9619)
  - `-verbose`: Display verbose output

## Resources

- Overview:  
<https://twiki.opensciencegrid.org/bin/view/Documentation/Release3/HTCondorCEOOverview>
- Install Guide:  
<https://twiki.opensciencegrid.org/bin/view/Documentation/Release3/InstallHTCondorCE>
- Router Recipes  
<https://twiki.opensciencegrid.org/bin/view/Documentation/Release3/JobRouterRecipes>
- Troubleshooting Guide  
<https://twiki.opensciencegrid.org/bin/view/Documentation/Release3/TroubleshootingHTCondorCE>
- Manual Job Submission Guide  
<https://twiki.opensciencegrid.org/bin/view/Documentation/Release3/SubmittingHTCondorCE>
- HTCondor Manual  
<http://research.cs.wisc.edu/htcondor/manual/v8.2/ref.html>

# Questions?

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