HTCondor Annexes
Bursting into the Cloud

Annex means (an) Addition

› An annex is "a building joined to a main building, providing additional space or accommodations"

› An HTCondor annex could provide:

- additional capacity (more execute machines)
- additional capabilities (specialized hardware: GPU, TPU, FPGA)
- additional customization (policies, execution environment)

› Wrote condor_annex to simplify and automate acquiring execute machines from the cloud

CENTER FOR
HIGH THROUGHPUT
COMPUTING

HTCondor

Motivating Example

> To meet a paper deadline, Dr. Needs-Moore needs more cycles in less time than her local pool can provide, and she's willing to spend some money to make that happen.

> But Dr. Needs-Moore isn't a cloud or HTCondor expert.

Easy for Users, Power for Admins

› Allow user to determine when to spend their money
  - annex instances removed after deadline even if machine lost
  - annex instances shut themselves down if idle for too long
  - by default run only the user's jobs, with command-line options for sharing with other users

› Can specify defaults in global configuration

› Can specify configuration files on command-line

HTCondor in the Cloud

› A full HTCondor cluster, not just execute nodes
  - if you don't have a cluster, or don't want to experiment with it
  - if your jobs aren't already in a queue, or are easy to move
  - if you want to make policy changes in the schedd or negotiator

› Upcoming talk from Google about our Marketplace entry

What You'll Need

› An AWS account and its API keys

› A web browser

› An SSH client (like PuTTY)

› An HTCondor pool you can expand

- friendly admin

- a personal condor

- your HTCondor-in-the-Cloud

https://htcondor.readthedocs.io/en/latest/cloud-computing/using-annex-first-time.html

INSTRUCTIONS

Preliminaries

› Do the initial set-up: `condor_annex [-aws-region <region>] -setup`

› Verify that it worked: `condor_annex -check-setup`

Basic Usage

› Create an annex: `condor_annex –name <name> -count`

› Check annex status: `condor_annex status`

› (Submit a job)

› Shut annex down: `condor_off –annex <name>`