



# Installing HTCondor

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Mark Coatsworth  
coatsworth@cs.wisc.edu





# Installing HTCondor: Lots of options!

- Single computer versus a pool of multiple computers
- Linux, Windows, MacOS
- Install from repository, from pre-compiled package, or in a Docker container
- Where do I start?

# Installing HTCondor on a Single Computer



- Focus of this talk: installing HTCondor on a single computer running Linux
  - Look at different methods
- Why run HTCondor on a single computer?
  - New user: test the software, evaluate it, see how it works
  - Experienced user: develop your job pipelines on a personal workstation before sending them to a cluster

# Minicondor, Personal Condor, Docker, oh my!



- Minicondor
  - You control the computer
  - You have administrator (sudo) privileges
  - HTCondor as a service managed by the system
- Personal Condor
  - You are an unprivileged user on the computer
  - You are not an administrator
  - HTCondor as an isolated application managed by the user
- Docker
  - Easy to set up because we provide ready-to-go images
  - All the benefits of root installation, without needing root access



# Minicondor

- Install from repository
- Available for RHEL/CentOS, Debian and Ubuntu Linux
  - This talk will focus on RHEL/CentOS
- Full instructions available at <https://research.cs.wisc.edu/htcondor/instructions/>
  - Follow instructions for Enterprise Linux 7 > Stable



# Personal Condor

- Install from pre-compiled package
- Available for all supported platforms (Linux, Windows, MacOS)
  - This talk will focus on RHEL/CentOS
- Downloads available at <https://research.cs.wisc.edu/htcondor/downloads/>



# Installation from Pre-Compiled Package

```
# Download and extract
wget
https://research.cs.wisc.edu/htcondor/tarball/8.8/8.8.10/release/condor-8.8.
10-x86_64_CentOS7-stripped.tar.gz
tar xvfz condor-8.8.10-x86_64_CentOS7-stripped.tar.gz

# Install HTCondor and run script to set environment variables
./condor-8.8.10-x86_64_CentOS7-stripped/condor_install --local-dir
`pwd`/local --make-personal-condor
. ./condor.sh

# Start
condor_master
```



# Installation from Docker

- Major recent focus for the HTCondor/CHTC team
- Many different flavors of Docker installations
  - Once again, I will focus on a minicondor (single-node) installation for RHEL/CentOS
- HTCondor DockerHub: <https://hub.docker.com/u/htcondor>
  - Follow documentation provided for the **htcondor/mini:el7** image
  - <https://github.com/htcondor/htcondor/blob/master/build/docker/services/README.md>



# Installing HTCondor in a Multi-Node Cluster



- Now you want to setup a real production environment for HTCondor
- Three types of nodes:
  - Submit: where a user submits their jobs
  - Execute: where the jobs actually run
  - Central Manager: matches submit machines to execute resources
- High level approach: Install from repository with some additional configuration
  - <https://htcondor.readthedocs.io/en/stable/admin-manual/quick-start-condor-pool.html>

# Installing HTCondor in a Multi-Node Cluster



- YouTube video for installing a multi-node cluster:  
[https://www.youtube.com/watch?v=cZ\\_DTsuRbk4](https://www.youtube.com/watch?v=cZ_DTsuRbk4)
- Center for High Throughput Computing YouTube channel:  
<https://www.youtube.com/channel/UCd1UBXmZlgB4p85t2tu-gLw/videos>

# The End



- Questions?