Getting HTCondor
Upgrading to HTCondor 9.0
Getting HTCondor

- https://htcondor.org/downloads
Motivation

› Document the ways to get HTCondor without installing
  • Docker (and Singularity) • the cloud • Kubernetes

› Simplify installing HTCondor, make it easier to create secure pools.
  • A new tool for Linux, get_htcondor.
  • Windows improvements in progress.
Pick the method appropriate for the service you’re using.

• Usually works for both privileged and unprivileged users.

Otherwise, if you’re not using a service and are root, or you’re using a service but starting with an existing image, use `get_htcondor`.

Otherwise, use the tarball.
On the web, for new Linux installations only.

$ curl -fsSL https://get.htcondor.com | /bin/bash -s --
# Installing mini HTCondor for Ubuntu focal

# Adding our repository
apt-get update
apt-get install -y gnupg
curl -fsSL https://research.cs.wisc.edu/htcondor/repo/keys/HTCondor-current-Key | apt-key add -
echo "deb [arch=amd64] https://research.cs.wisc.edu/htcondor/repo/ubuntu/current focal main" \
    > /etc/apt/sources.list.d/htcondor.list
echo "deb-src https://research.cs.wisc.edu/htcondor/repo/ubuntu/current focal main" \
    >> /etc/apt/sources.list.d/htcondor.list

...
get_htcondor

› **stand-alone installation:**
  
  • `curl -fsSL https://get.htcondor.com | sudo /bin/bash -s -- --no-dry-run`

› **multi-machine installation:**
  
  • *introduction to the three roles*
  
  • `curl -fsSL https://get.htcondor.com | GET HTCONDOR_PASSWORD="$htcondor_password" sudo /bin/bash -s -- --no-dry-run --central-manager $central_manager_name`
  
  • `curl -fsSL https://get.htcondor.com | GET HTCONDOR_PASSWORD="$htcondor_password" sudo /bin/bash -s -- --no-dry-run --submit $central_manager_name`
  
  • `curl -fsSL https://get.htcondor.com | GET HTCONDOR_PASSWORD="htcondor_password" sudo /bin/bash -s -- --no-dry-run --execute $central_manager_name`
Authentication and Privacy

› stand-alone installation: loopback only

› multi-machine installation
  • authentication: FS or IDTOKENS
  • authorization: by FS or single IDTOKENS ‘condor’ user
  • privacy: all daemon-to-daemon communication is encrypted. All tool-to-daemon communication is encrypted except for read-only connections over the network, e.g., condor_status
Extensions

› Issue an IDTOKEN for each user
   • Use `condor_token_create` -identity

› Issue an IDTOKEN to a remote pool (flock in)
   • Create a token, add its identity to FLOCK_FROM.

› Use an IDTOKEN for a remote pool (flock out)
   • Copy token to /etc/condor/tokens.d.
   • Add its central manager to FLOCK_TO.
Closing

- https://htcondor.org/downloads

Please send feedback! <htcondor-admin@cs.wisc.edu>
Upgrading HTCondor 9.0

› **Upgrading from 8.8**
  • Reminder: no automatic upgrades between stable series.
  • See the instructions.

› **Upgrading from 8.9**
Overview of Issues

› Security
› IDTOKENS (only if you’re already using them in 8.9)
› (mostly 8.8) Other changes
Security Changes

› The default configuration is no longer host-based. THIS MAY BREAK YOUR CONFIGURATION. Options:
  • Reinstall from scratch
  • Reconfigure
  • Revert to host-based security
  • Retain strong security

› Update obsolete configuration (if preserved).
› Read the instructions for details!
Reinstall

› Before upgrading, maybe run and save the output from `condor_config_val -summary`
› Back up your SPOOL
› Uninstall HTCondor, remove configuration
› (see the previous talk)
› Copy non-security configuration back.
Reconfigure

» Remove other security settings.

» On all machines:
  • create signing key
  • and use it to create an IDTOKEN.
Revert

› Read /etc/condor/config.d/00-htcondor-9.0.config
  • Will be reinstalled if missing, so don’t delete it!
› Comment out use security:recommended_v9_0
› Uncomment use security:host_based
› Don’t forget to update obsolete configuration:
  • Set (if necessary) ALLOW_DAEMON (instead of ALLOW_WRITE)
  • Replace (if necessary) HOSTALLOW, HOSTDENY
Retain

› Empty /etc/condor/config.d/00-htcondor-9.0.config
  • Will be reinstalled if missing, so don’t delete it!

› Don’t forget to update obsolete configuration:
  • Set (if necessary) ALLOW_DAEMON (instead of ALLOW_WRITE)
  • Replace (if necessary) HOSTALLOW, HOSTDENY
Upgrading from 8.9

We fixed a bug in 8.9.13 with how IDTOKENS reads its signing key(s).

› Some signing keys will be read differently as a result.
  • An IDTOKEN signed by such a key will no longer work.
  • Use `condor_check_password` to look for this kind of key.
  • You can either truncate the key (making it more vulnerable to a brute-force attack) or make a new key and issue new tokens.
Closing

› Please read the documentation *before* you upgrade!

› Upgrading from 8.8
› Upgrading from 8.9

› Consider putting jobs on hold before the upgrade process.
Questions?

htcondor-admin@cs.wisc.edu

Office hours later today!
New Configuration for Old Clients

› For example, old Python bindings in a virtualenv.
› Old clients don’t understand the new default configuration.
› Two choices:
  • Comment out, paste in results of
    
    ```bash
    condor_config_val use security:recommended_v9_0
    ```
  • Make conditional on HTCondor version:
    ```bash
    if version > 9.0.0
      use security:recommended_v9_0
    endif
    ```