

HTCondor Week 2020 Review to WLCG Grid Deployment Board

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HTCondor Week

- › Brings the HTCondor community together
- › Celebrated 20th Anniversary last year
- › Typically year
 - 3.5 days
 - ~100 in-person attendees
 - ~55 presentations
 - Held annually in Madison, WI each spring

2020



Very bad, would not recommend.

HTCondor Week 2020 (May 19-20)

<http://htcondor.org/HTCondorWeek2020>

Not a typical year!



Held online for first time ever



Shortened

2 days, start later (11am), end earlier (~4pm)

STRATEGIC CLEANUP FOR ZOOM CALLS (and HTCondor Week 2020!)



Attendees (1)

- › 420 registered participants
- › 25 different countries from North America, South America, Europe, Asia, Oceania
 - Australia, Austria, Belgium, Brazil, Canada, China, Colombia, Czech Republic, Finland, France, Germany, Iceland, India, Israel, Italy, Japan, South Korea, Netherlands, Norway, Russia, Spain, Switzerland, Ukraine, United Kingdom, United States, Vietnam

Attendees (2)

- › ~129 different affiliations
 - An organization could "send" more people
- › Affiliations by type approximations:
 - Research / Academic / Universities: ~68
 - Government Labs / Agencies: ~31
 - Industry: ~27
 - Non-profit: ~3

Agenda (1)

- › 17 contributions by 14 speakers over 2 days
- › Timetable divided into 4 equal sections
 - HTCondor Team (CHTC) Presentations
 - User Community Presentations
 - Tutorials
 - Office Hours
- › Plus an online social event during the evening of Day 1 😊

Agenda (2): CHTC Presentations

- › Focused on
 - Our vision moving forward
 - Software updates
 - Upcoming Plans

CHTC Team Presentations

Location: Virtual

- 11:00 **Introduction and Virtual Conference Guidelines 10'**
Speaker: Mark Coatsworth (University of Wisconsin)
Material: [Slides](#)  
- 11:10 **Welcome to HTCondor Week 2020 20'**
Speaker: Miron Livny (UW-Madison CHTC)
Material: [Slides](#) 
- 11:35 **What's new in HTCondor? What is upcoming? 20'**
Speaker: Mr. Todd Tannenbaum (University of Wisconsin)
Material: [Slides](#)  
- 12:00 **Kubernetes in HTCondor 20'**
Speaker: Greg Thain (UW-Madison CHTC)
Material: [Slides](#) 
- 12:25 **HTCondor Security: Philosophy and Administration Changes 20'**
Speaker: Brian Bockelman (University of Nebraska-Lincoln)
Material: [Slides](#) 

What is coming in HTCondor

- › Security changes: shift towards token-based security, OAuth 2 workflow
- › Kubernetes and containerization: ongoing efforts to have HTCondor-CE provision from k8s, make the HTCondor daemons available as pods in a Kubernetes cluster, one-touch Helm chart deployment
- › More updates
 - Python Bindings, GPU management (run multiple jobs on one device), File Transfer (plugins for cloud), sets of jobs and resources

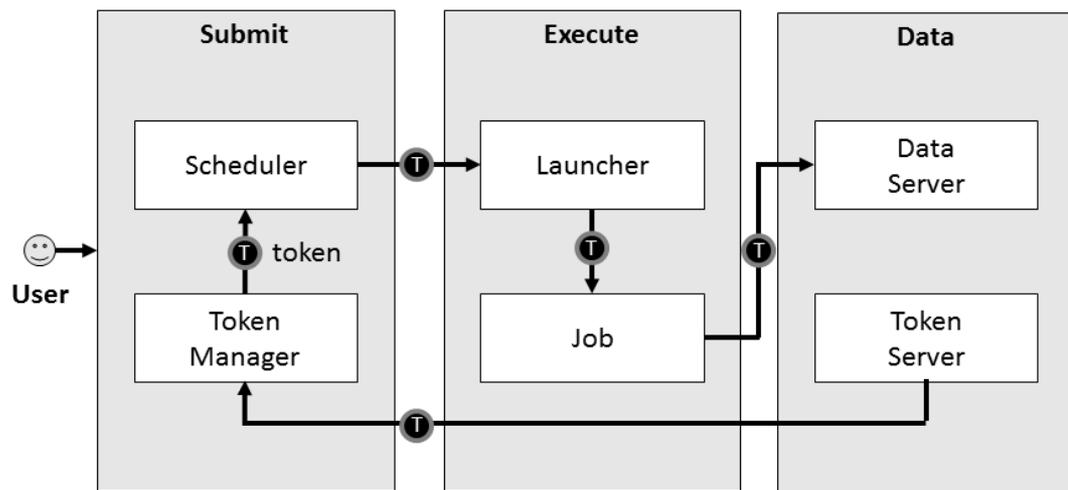
IDTOKENS

Authentication Method

- › Several Authentication Methods
 - File system (FS), SSL, pool password....
- › Adding a new "IDTOKENS" method
 - Administrator can run a command-line tool to create a token to authenticate a new submit node or execute node
 - Users can run a command-line tool to create a token to authenticate as themselves
- › "Promiscuous mode" support

SciTokens: From identity certs to authorization tokens

Ⓢ = token



- › HTCondor has long supported GSI certs
- › Then added Kerberos/AFS tokens w/ CERN, DESY
- › Now adding standardized token support
 - SciTokens (<http://scitokens.org>) for HTCondor-CE, data
 - OAuth 2.0 Workflow → Box, Google Drive, AWS S3, ...

Agenda (3): User Community Presentations

- › Focused on
 - Sharing approaches
 - How they deploy/use
 - What worked, what didn't
 - How they organized HTC computing workloads

External Collaborator Presentations

14:00 **HTCondor and Containers for Batch and Interactive Use 20'**

Speaker: Dr. Oliver Freyermuth (University of Bonn)

Material: [Slides](#) 

14:25 **Use of master-worker and integration with OSG Connect 20'**

Speaker: Roman Zubatyuk (Carnegie-Mellon University)

Material: [Slides](#)  

14:50 **CMS Scheduling Goals in Simple Language 20'**

Speaker: James Letts (University of California San Diego, CMS Project)

Material: [Slides](#) 

15:15 **Applying the PEST++ software to run sensitivity analysis on ecological models with advanced computing resources 20'**

Speaker: Richard Erickson (USGS)

Material: [Slides](#) 

15:40 **DreamWorks Animation Farm Manager & Related Services 20'**

Speaker: David Gardner (DreamWorks)

Material: [Slides](#)  

16:05 **Closing Remarks 10'**

Speaker: Miron Livny (UW-Madison CHTC)

Agenda (4): Tutorials

> Focused on

- Learning how to use current software, best practices, overview of functionalities

User Tutorials

Location: Virtual

- 11:00 **HTCondor Architecture 20'**
Speaker: Mr. Todd Tannenbaum (University of Wisconsin)
Material: [Slides](#)  
- 11:25 **Python Bindings User Tutorial 20'**
Speaker: Josh Karpel (UW-Madison CHTC)
Material: [Slides](#) 
- 11:50 **Using Containers to Run Jobs 20'**
Speaker: Greg Thain (UW-Madison CHTC)
Material: [Slides](#) 
- 12:15 **Submitting Many Jobs 20'**
Speaker: Christina Koch (UW-Madison CHTC)
Material: [Slides](#)  
- 12:40 **Manage Workflows with HTCondor DAGMan 20'**
Speaker: Lauren Michael (UW-Madison CHTC)
Material: [Slides](#)  
- 13:05 **Pegasus Workflows 20'**
Speaker: Karan Vahi (Pegasus Team USC Information Sciences Institute)
Material: [Slides](#) 

Agenda (4): Office Hours

Office Hours

On Wednesday May 20 from 2-4pm CT, we'll hold drop-in office hours. All members of the CHTC team will be in virtual meeting rooms relative to their areas of expertise. Feel free to drop in anytime to ask questions, no appointment needed.

Registered users should expect an email with meeting URLs by the end of Tuesday May 19.

Topic

Conveners

General Questions and Getting Started

Miron Livny, Todd Tannenbaum, Zach Miller,
Carl Edquist, Mark Coatsworth

OSG, HTCondor-CE, WLCG

Brian Lin, Tim Cartwright, Lauren Michael,
Edgar

Submitting and Managing Jobs and Workloads
including File Transfer, DAGMan

Christina Koch, Jess Vera, Ian Ross

Installation and Configuration: Identity
Management, Installation, Scheduling, Monitoring

Brian Bockelman, Aaron Moate, Greg Thain,
Kent Cramer, Tim Theisen

HTCondor APIs: Python, REST

Josh Karpel, Jason Patton, Matyas Selmecci

Clouds, Annex, Integration with HPC

Todd Miller, Jaime Frey, Tim Slauson

Online -vs- Live

› Online Facilities

- WebEx Events platform provided a way for presenters to share screens and panelists to interject; users to chat, show applause, laughs. Questions via "raise hand" and chat. Not recorded.
- Office Hours worked particularly well w/ WebEx Meetings
- Overall smooth, asked all speakers to perform a practice talk week before to understand the technology

› Pro: more attendees from around the world

› Con: lack of f2f networking, "coffee break" discussions

European HTCondor Workshops

- › Serve the European Community
- › Mark your calendar! Monday 21 September to Friday 25 September 2020.
 - <https://indico.cern.ch/e/htcondor2020>
 - Not more than 3 hours per day, most probably between 15:00 h and 18:00 h Paris time
 - Similar format, plus **HTCondor-CE** featured in detail
 - **Submit an abstract!**
- › Sixth edition of the series
 - Past European events at [CERN in December 2014](#), [ALBA in February 2016](#), [DESY in June 2017](#), [RAL in September 2018](#) and [JRC in September 2019](#).

Thank You!

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