



# HTCondor 2020 workshop report

21-25 September 2020 (teleconference only)

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Institut de Física  
d'Altes Energies



Ciemat

Centro de Investigaciones  
Energéticas, Medioambientales  
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# HTCondor Workshops

Held in Europe

Complementary to yearly (~May) HTCondor weeks in Madison (WI)

Number of precursors (Bologna 199x, Milano 2006, ...)

**This series:** CERN Dec-2014, ALBA Feb-2016, DESY Jun-2017, RAL Sep-2018, JRC-Ispra Sep-2019 → **2020 virtual**

Started Mon 21-Sep in the afternoon, finished Fri 25-Sep in the afternoon (remote US friendly / compacted Workshop)

# Workshop September 2020

Originally planned as a face-to-face Workshop, but given the sanitary restrictions we organized it as an **online/virtual event**

**Compact programme:** very dense and full - strict time keeping was enforced

Limited possibilities for questions, comments, discussion during the sessions: a shared document\* was used to help discussions - some points addressed offline

**Zoom** (w/code) and many of its features were used

All sessions were recorded  and integrated into the agenda

Unfortunately, no reception, no social dinner, no coffee provided, no group photo

\* <http://cern.ch/go/KT6N>

# Notes on the virtual WS organization

We defined a **chair**, **co-chair** and a **first officer** for each of the sessions

Each had a set of responsibilities during the session:

- moderating
- guiding/selecting the discussions (raised hands, notes on the doc)
- writing annotations to speakers
- managing session recordings (multiple recordings, just in case of a crash - **it happened!**)

Organizers used a **mattermost channel** - ran in real-time next to the workshop: fundamental to discuss on progress, and select and guide the discussions (given the limited time we had)

We set several **Zoom rooms** for Office hours and granted access to co-hosts

The virtual workshop ran quite smoothly

# Registrants

At the beginning of the Workshop we had **214** registrations, a number that increased during the week up to a total of **256\*** registrants

- 145 from Europe
- 82 from North America
- 21 from Asia
- 4 from Central and South America
- 3 from Africa
- 1 from New Zealand

\* 27 registrants did not consent to be on the participants' list

# Session Attendance

**Peak** session attendance:

- 'Busy' sessions: around 115
- 'Less busy' sessions: around 80

**End-user** targeted sessions attracted most attendees

# Presentations

**43 contributions:** 21 by CHTC team / 20 by users / 2 on logistics

**Total speaking time:** 13 hours 10 minutes [30% less as compared to last WS]

- 7 h 55 min CHTC team, 4 h 50 min users, 25 min logistics/wrap-up
- Not counting discussion, speaker change, ...

Rich, very interesting, programme

- Comprehensive coverage of HTCondor and HTCondor-CE by developers, many helpful tips
- User reports on HTCondor and HTCondor-CE usage in the field, lots of user suggestions much appreciated by HTCondor team

**Agenda, material:** <https://indico.cern.ch/e/htcondor2020>

# Presentations

**CHTC team** covered broad range of topics:

- End-user tutorials
- Basic administration
- Compute element **[with a live installation from scratch that took less than 15'!]**
- Advanced administration, clouds, HPC-APIs, security



# Presentations

**CHTC team** covered broad range of topics:

- State of Distributed High Throughput Computing
- A Users Introduction to HTCondor and Job Submission
  - Manage Workflows with HTCondor DAGMan
- HTCondor Philosophy and Architecture Overview
  - What is new in HTCondor? What is upcoming?
    - Installing HTCondor
- Pslots, draining, backfill: Multicore jobs and what to do with them
  - Classified Ads in HTCondor
- Job Submission Transformations
  - HTCondor-CE Overview
  - HTCondor-CE Configuration
  - HTCondor-CE Live Installation
- HTCondor-CE Troubleshooting
- What is next for the HTCondor-CE?
- HTCondor with Containers and Kubernetes
- HTCondor Annex: Bursting into Clouds
- HTCondor Offline: Running on isolated HPC Systems
- HTCondor's Python API - The Python Bindings
- HTMap: Pythonic High Throughput Computing
- Lightweight Site-Specific Dask Integration for HTCondor at CHTC
  - REST API to HTCondor
- HTCondor Security: Philosophy and Administration Changes
- From Identity-Based Authorization to Capabilities: SciTokens, JWTs, and OAuth
  - Allow HTCondor jobs to securely access services via OAuth token workflow

# Presentations

**User talks** also touching on very varied list of topics

Healthy mixture of 'site report' style talks and in-depth, drill-down of specific items:

CC-IN2P3

INFN-T1

DESY

KIT

U Bonn

GRIF

CERN

PIC

FNAL

NIKHEF

U Glasgow

Google Cloud

GlideinWMS

CMS Submission Infrastructure

CMS Physics Analysis user

Overall, the **CHTC** and **user** presentations were interesting and inspiring, and of excellent quality

# Office hours

Two times four groups during about one hour

18:00	<b>Using HTCondor</b>  <a href="https://cern.zoom.us/j/94530...">https://cern.zoom.us/j/94530...</a> 18:00 - 19:00	<b>Administrating HTCondor at a local site</b>  <a href="https://cern.zoom.us/j/92420...">https://cern.zoom.us/j/92420...</a> 18:00 - 19:00	<b>HTCondor-CE, Grid, and Federation</b>  <a href="https://cern.zoom.us/j/98439...">https://cern.zoom.us/j/98439...</a> 18:00 - 19:00	<b>General Office Hour Lobby</b>  <a href="https://cern.zoom.us/j/9798...">https://cern.zoom.us/j/9798...</a> 18:00 - 19:00
19:00				

**Tuesday:** well attended despite sub-optimal timing

**Thursday:** attendance lower. Some had addressed questions by e-mail to the CHTC team as well

# Survey

A **survey** is being prepared - it will be sent soon to the participants

There will be a workshop follow-up by the organising committee  
and with the CHTC team

Important that we capture the lessons to **learn for future events**

# Next Workshop

CHTC team and organising committee suggest continuing the workshop series

- Complementary to regular HTCondor weeks in Madison (in May each year)
- Travel in Europe easier for many European attendees (if travel is possible at all!)

Targeting similar time slot: **2nd half September 2021**

For a physical workshop, we have two hosting proposals already

- More suggestions / expressions of interest always welcome!

**Input much welcome** – contact any member of the organising committee

# Conclusions

Workshop (series) much appreciated by community and developers alike

No question about continuing the series

Feedback, proposals, criticism? Get in touch!

Interested? **Join us next year!** Hopefully face-to-face!

Thanks to all of the **participants** and **speakers**

Thanks to the **CHTC team** at UW-Madison

- Miron Livny
- Todd Tannenbaum
- Greg Thain
- Mark Coatsworth
- Brian Lin
- Brian Bockelman
- Jason Patton
- Christina Koch
- Lauren Michael
- Jaime Frey
- John Knoeller
- Todd Miller
- Zach Miller
- Matyas Selmecsi



## Organising committee / session chairs

- Christoph Beyer
- Chris Brew
- Catalin Condurache
- Pepe Flix
- Michel Jouvin
- Helge Meinhard
- Todd Tannenbaum
- Gregory Thain

Thanks!  
Questions?