

Science & Technology
Facilities Council



HTCondor Week 2018

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HTCondor?

- From <https://research.cs.wisc.edu/htcondor>
 - “HTCondor is a specialized workload management system for compute-intensive jobs. ...”
- Fully functional and highly scalable and configurable batch scheduler, but also suitable for scavenging cycles “parasitically” on machines with spare CPU
- Project at Center for High-Throughput Computing at Computer Science department at University of Wisconsin in Madison
 - Head: Prof. Miron Livny



HTCondor in WLCG

From Helge's presentation; CERN migration to HTCondor ~75% done

Site	Batch scheduler
CERN	See later
BNL	HTCondor
FNAL	HTCondor
KIT	HTCondor
Nordic T1	Slurm
CC-IN2P3	UGE, considering HTC
RAL	HTCondor
Nikhef	PBS
PIC	Migration to HTC 60% done
CNAF	Migration to HTC started

Site	Batch scheduler
US T2	Mostly HTCondor
LBNL	Slurm
IHEP	HTCondor, (Slurm)
DESY	HTCondor, (Slurm)
FZU	Migration to HTCondor ongoing
U Tokyo	LSF
CSCS	Slurm
GRIF	HTCondor
CoEPP	HTCondor

*From Miron's
welcome talk*

Welcome to



Week #19

(year 34 of our project)

HTCondor Week

“...is an annual event that gives collaborators and users the chance to exchange ideas and experiences, to learn about the latest research, to experience live demos, and to influence our short and long term research and development directions.”

- Always held at UW Madison
- This year, held week after HEPiX Spring Workshop
- 3½ days Monday-Thursday



Schedule

- Monday – Tutorials
 - Morning – Introductory
 - Afternoon – Advanced
- Tuesday & Wednesday – Technical Talks
 - Developers – Upcoming features
 - Site administrators – Experiences and notable work
- Thursday morning – UW Campus Researchers
 - Local users doing science with HTCondor at UW



Attendees

- 102 registered (similar size to HEPiX)
 - 10 from HEPiX community (CERN, CNAF, IN2P3, RAL, IHEP, etc.)
- Demographic:
 - HTCondor developers, local experts and facilitators
 - Administrators of HTCondor pools, large and small
 - End users doing “real science”
- Representing academia, public research and companies
 - Space, biology, chemistry, medicine, earth sciences, gravitational waves...
 - Animation studios, defence, heavy industry...



What James and Helge found interesting

- Support for SciTokens (same framework as for Kerberos support!)
- Support for Docker and Singularity
 - Dedicated *and* Vanilla Universes
- Support for IPv6
- Direct submission into Slurm coming
- Support for Jupyter notebooks with submission to HTCondor



What James and Helge found interesting

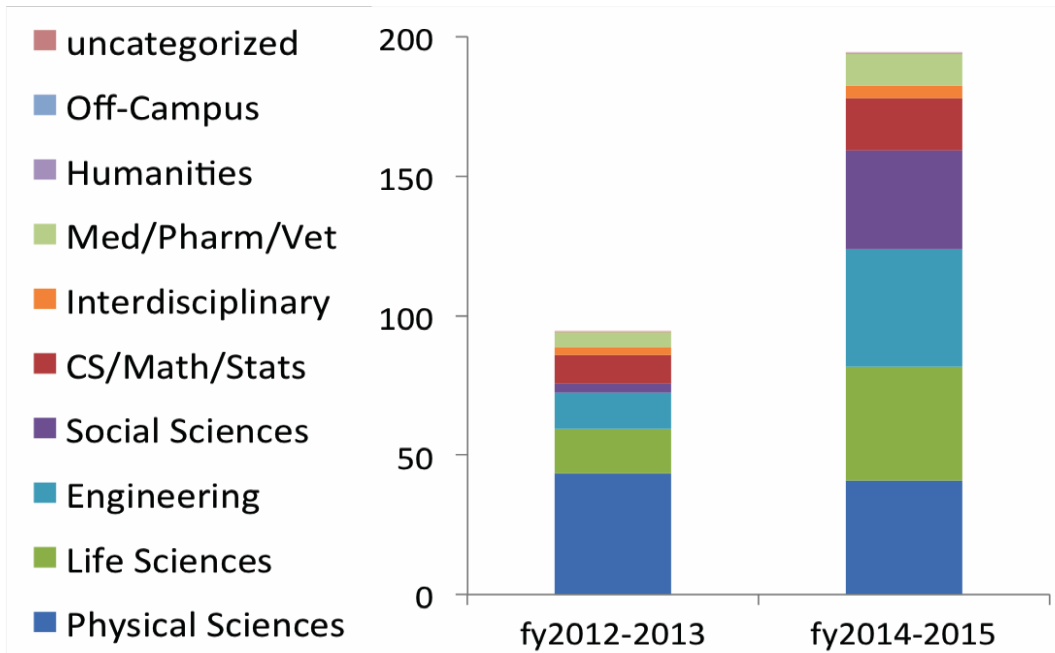
- Work with CERN openlab on Intel Resource Directory Technology
- Better support for GPUs
 - Detection, scheduling and monitoring
- Ability to bypass scheduler and run a job immediately
 - Interactive jobs (e.g. Jupyter notebooks)
- Running pre-emptable jobs while nodes drain
- Annexes for cloud-bursting
- Hearing directly from researchers about their science
- Value and impact of “Facilitators”



Understanding Facilitator Impact



Millions of CPU Hours via CHTC



**Facilitators hired:
Jan 2013, Nov 2014**

From Lauren Michael's talk on Thursday

European HTCondor Workshop

- Started up again in 2014
- Next is Tuesday 4th to Friday 7th September 2018
 - Hosted by Rutherford Appleton Laboratory
 - <https://indico.cern.ch/event/733513/>
- Features “Office Hours” with developers and experts
 - Troubleshooting and consultancy for users and sites



The End.



We hope to see you at RAL in September!



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