

# Nuggets from the European HTCondor Week Workshop

Held at the EC-JRC, Ispra, Italy

24<sup>th</sup> to 27<sup>th</sup> September 2019

Chris Brew

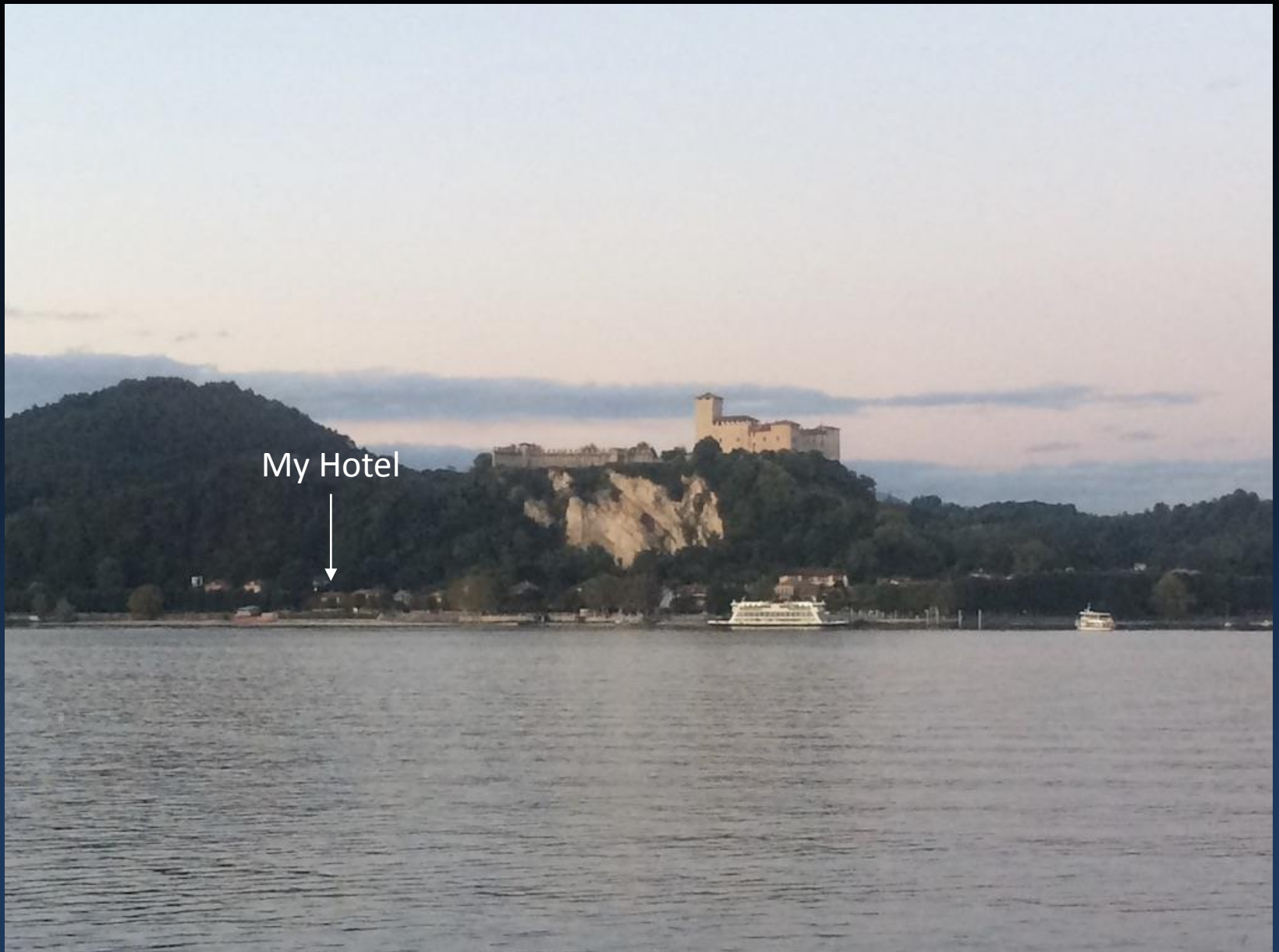


# The workshop

<https://indico.cern.ch/event/817927/timetable/#all.detailed>

- Attendees:
  - 61 registered participants
  - 27 different affiliations
- Presentations:
  - 38 contributions by 21 speakers
  - 19 hours 20 minutes
  - HTCondor team: 12 hours 15 minutes





My Hotel



# Some Highlights

- Authentication and Security
- Maps and Transforms
- Negotiator Config
- HTCondorCE
- Python and Condor/Condor and Python
- Containers and VMs
- Coffee Break Gleanings



# Security

<https://indico.cern.ch/event/817927/contributions/3570551/attachments/1916450/3168528/SecurityBasics.pdf>

- Walkthrough of basic HTCondor security concepts
- User and Daemon Authentication
- Authentication Methods
- Introducing Tokens
- Data Encryption, on wire and/or at rest on WN



# Maps and Transforms

<https://indico.cern.ch/event/817927/contributions/3570542/attachments/1913668/3162964/ScheddTransforms.pdf>

- Limits of SUBMIT\_ATTRS
- Basic Job Policies
- Basic Job Transform
- Locking Attributes
- UserMaps



# Negotiator Configuration

<https://indico.cern.ch/event/817927/contributions/3570509/attachments/1914340/3164391/Negotiator.pdf>

- Good walkthrough of Negotiator options
- Takes you through:
  - Concurrency Limits
  - Submitters and Priorities
  - Shares
  - Accounting Groups



# HTCondorCE

<https://indico.cern.ch/event/817927/timetable/#20190926.detailed>

- Practically a whole day of talks on the HTCondorCE
- Highlights
  - Support moved from OSG to HTCondor team
  - De-OSGed the RPMs, now distributed from the HTCondor repos





# Python and Condor

[https://indico.cern.ch/event/817927/contributions/3570437/attachments/1913787/3163222/PythonBindings\\_Ispra\\_0919.pdf](https://indico.cern.ch/event/817927/contributions/3570437/attachments/1913787/3163222/PythonBindings_Ispra_0919.pdf)

[https://indico.cern.ch/event/817927/contributions/3570469/attachments/1914594/3164806/HTMap\\_HTC\\_Notebooks.pdf](https://indico.cern.ch/event/817927/contributions/3570469/attachments/1914594/3164806/HTMap_HTC_Notebooks.pdf)

- Python Bindings:
  - Two key modules, classad and htcondor
  - Pythonic interfaces to interact with the daemons in a similar way to the CLI
    - Build, submit, monitor, and retrieve jobs
    - Query and modify daemon Configuration
- HTMap
  - Augments python map function to spawn jobs to run the map function



# Python and Condor 2

- `condor_restd`
  - Daemon built on the python bindings to provide a RESTful interface to the pool
- Jupyterhub BatchSpawner
  - Supports condor submission to spawn job to run jupyter notebooks



# Containers and Clouds

<https://indico.cern.ch/event/817927/contributions/3570534/attachments/1916488/3168809/Containers.pdf>

- Containers
  - Built in Containers
    - CGroups, Namespaces, ...
  - Docker Universe
  - Singularity
  - Kuberettes coming
- condor\_annex
  - Fire up (and tear down) worker nodes on cloud



# Coffee Break Gleanings

- Condorbeat
  - Push ClassAds to ElasticSearch
  - <https://github.com/retzkek/condorbeat>
- Only start MCore jobs for 2 cycles after an MCore job finishes
- HTCondor HowTos:
  - <https://htcondor-wiki.cs.wisc.edu/index.cgi/wiki?p=HowToAdminRecipes>





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