



HTCondor Workshop Autumn 2021

Workshop Report

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WLCG Grid Deployment Board
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Background (1)

- Series of workshops in Europe
 - Going back to the 1990s (at least)
 - This series: started 2014 at CERN, five in-person workshops in different locations
 - 2020: first time purely on-line; 2021: restrictions due to pandemic enforced on-line again
 - Needed to turn down again INFN Torino's kind offer to host
 - No travel, no registration fee, easier participation
 - Need to take time zone constraints into account
 - Only few hours good for both Europe and North America (and bad for Asia...)
 - Five days: 20 to 24 September, 15:00 h – 18:00 h each day (CERN time)

Background (2)

- Complementary to the yearly “HTCondor weeks”
 - Usually in May in-person in Madison WI, USA
 - More end-user and developer focused
 - “European” workshops tend to focus more on HTCondor administration

Participants

- 171 registered after the five days (37 more than at the beginning)
 - 100 from Europe, 48 from North America, 15 from Asia, 5 from Latin America, 3 from Africa
- Peak session attendance: 108

Presentations (1): CHTC

- What's new/upcoming in HTCondor
- What to measure and why
- GPU support
- Introducing HTCondor 9.0 for users
- SciTokens in HTCondor 9.0
- HTCondor 9.0 for admins
- Upgrading to HTCondor 9.0
- Self-checkpointing jobs
- What's new/upcoming in HTCondor CE
- Job router transforms
- Write a custom file transfer plugin
- Campus research and facilitation

Digression: New HTCondor Numbering Scheme

- From 9.0 on: <major>.<minor>.<patch>
- Stable: <minor> = 0;
new features: <minor> = 1, 2, 3, ...
- Details:
https://htcondor.org/news/New_HTCondor_Version_Scheme/
or see backup slides

Presentations (2): Users

- Dealing with dynamic and mixed workloads (CNAF)
- New HTCondor monitoring for CNAF
- Auto-scaling in the cloud: Intelligent HTCondor resource management (Google)
- Synthetic populations for personalized policy (EC-JRC)
- Operations in the HTCondor pool at CERN
- Running multiple experiment workflows on heterogeneous resources (RAL)
- HTCondor Integration with Hashicorp Vault for Oauth Credentials (FNAL)
- The CMS Submission Infrastructure deployment
- Operations and Monitoring of the CMS HTCondor pools
- In silico detection of (CRISPR) spacers matching Betacoronaviridae genomes in gut metagenomics sequencing data (SISSA)

Special Sessions

- “Show us your toolbox”: Open stage for administrators showing their favoured tools
 - Very interesting, easily filled much more time than expected
- Office hours
 - Interest in administration and (less) in usage
- Q&A session: Four selected topics with previously distributed material – no presentations
 - HTCondor philosophy and architecture
 - HTCondor Python bindings
 - Negotiator policy and configuration
 - Using IDTokens for authentication in HTCondor 9.0

Other Differences (1)

- 10 minutes for Q&A after each presentation
 - A lot less emphasis on time keeping (even though we managed)
 - ... and a lot more discussion
 - Downside: less talks

Other Differences (2)



Follow-Up

- Complete documentation on Indico: <https://cern.ch/indico/e/htcondor2021>
- All videos of presentations and Q&A sessions available (“Recording” link attached to the contribution in Indico)
 - Not recorded: “Show us your toolbox”; office hours
- Shared document used during sessions for questions, answers, discussion in Indico, too; same for photo
 - As material attached to the event
- Other follow-up to be discussed in the organising committee and within CHTC team
- Survey: Being prepared

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 lined up
 - More suggestions / expressions of interest always welcome!
- Input much welcome – contact me or any other member of the organising committee, or contact the support address (see Indico)

Acknowledgements (1)

- CHTC team at UW-Madison
 - Miron Livny, Todd Tannenbaum, Greg Thain, Mark Coatsworth, Brian Lin, Brian Bockelman, Jason Patton, Christina Koch, Lauren Michael, TJ Knoeller, Todd Miller
- Colleagues of the organising committee
 - Christoph Beyer, Brian Bockelman, Chris Brew, Mark Coatsworth, Catalin Condurache, Pepe Flix, Gabriele Fronzé, Michel Jouvin, Antonio Puertas Gallardo, Todd Tannenbaum, Greg Thain, HM

Acknowledgements (2)

- Speakers
- Participants to discussions, Q&A, ...
- Contributors to “open stage” session
- Support people:
 - CERN’s Indico, VC and video support
 - CERN’s CodiMD service manager
 - Sebastian Lopienski for the photo

Questions / Comments



Backup slides

New HTCondor Version Scheme

Announcement on HTCondor.org



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New HTCondor Version Scheme

September 22, 2021

Starting with HTCondor 9.2.0, HTCondor will adopt a new version scheme to facilitate quicker patch releases. The version number will still retain the MAJOR.MINOR.PATCH form with slightly different meanings.

- The MAJOR number increments for each new Long Term Support (LTS) release. A new LTS release may have backward-incompatible changes and may require updates to configuration files. The current LTS release is 9.0.6. The next one will be 10.0.0.
- The MINOR number increments during the development of new features. This number stays at 0 for LTS releases. The current release is 9.2.0.
- The PATCH number increments when we have targeted fixes. If there is a specific need to be addressed before 9.3.0 is tested and ready, we would issue a 9.2.1 patch release. Patch releases for the LTS are fully reviewed and tested for a seamless upgrade.

These releases will be served out of three repositories.

- The LTS release and its patches (X.0.Z) are in the existing Stable channel.
- The development releases (X.Y.0) are in the existing Current channel.
- A new Updates channel will contain development patch releases (X.Y.Z).

Version Number Changes

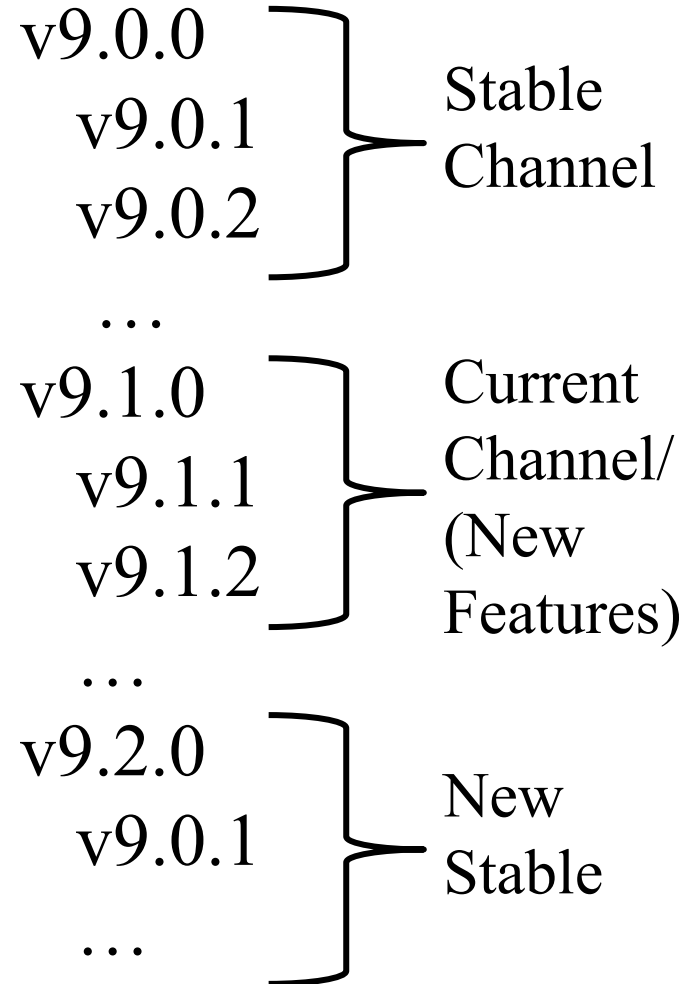
> Historical Version Scheme

<EPIC.MAJOR.MINOR>

- First Digit = "Epic" (incremented pseudo-arbitrarily every several years)
- Second Digit = Major Release (incremented at each new series number every ~12-18 months)
 - Stable Channel (*bug-fixes only series*): second digit is even
 - Current Channel (*new features series*): second digit is odd
- Third Digit = New release in the series

> What about update patches?

v9.1.2.<patch #> ???



Version Number Changes

> New Version Scheme

<MAJOR.MINOR.PATCH>

- Adopts some ideas from semantic versioning (<https://semver.org/>)
- First Digit = Major Release (incremented at each new series number every ~12-18 months)
- Second Digit = Minor Release
 - Long Term Support Release (*bug-fixes only*):
second digit = 0
 - Current Release (*new features*):
second digit > 0
- Third Digit = Update patch

