



Red Hat and Condor and the developer community

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Outline

- Some history
- What is MRG?
- Open source status
- Open source advancement
 - User community
 - Developer community
- **What will make it easier, or possible, for you to contribute to the developer community?**



Some history

- Sixth consecutive Condor Week presentation from Red Hat
- Foundation, back in the mid-aughts
 - Red Hat & Condor Project sign strategic agreement
 - Condor 7.0 released with source
 - Red Hat Madison office opened
- Collaborative development, since the foundation
 - Joint features and software hardening (QE & Sec)
- Features, past present and future
 - VMu, concurrency limits, partitionable slots, git, statistics, deltacloud, hierarchical group quotas, cmake, machine local limits, classad and collector performance, ...



What is MRG?

- Red Hat Enterprise MRG - Messaging, Realtime, Grid
 - Messaging - high-performance, reliable, AMQP messaging
 - Realtime - high-performance, deterministic, low-latency
 - Grid - high-performance and high-throughput computing
- Released version 2.0 and 2.1 over last year
 - Aviary ISV APIs, power management, EC2 enhancements, increased performance, reduced memory, improved utilization, integrated configuration, enhanced management, expanded scale, suspend/resume, Wallaby shell, Plumage, Cluster Suite (HA) integration, Wallaby - Cumin integration
- All based on Condor 7.6 series with 7.7 enhancements
- Bleeding edge packages available in Fedora, e.g. Wallaby & Cumin



Open source status

- Apache License, Version 2.0
 - <http://research.cs.wisc.edu/condor/license.html>
- Ticketing system and community wiki
 - <http://condor-wiki.cs.wisc.edu>
- Source code repository
 - `git clone http://condor-git.cs.wisc.edu/repos/condor.git`
- Downstream packaging in Fedora, Debian, Red Hat Enterprise Linux, plus all Nick LeRoy's favorite distributions
- Accepting contributions small and large



Open source status: Tickets

- This year (29 Apr 2012)
 - 2,946 total (+827 for year)
 - 1,234 defects (305 new)
 - 1,109 enhancements (512 new)
 - Over 1000 defects or enhancements resolved
- By some number of individuals
- From some number of organizations
- Individual and organization data is difficult to collect
- Last year (30 Apr 2011)
 - 2,119 total (+767 for year)
 - 555 defects (266 new)
 - 326 enhancements (181 new)
- By 44 individuals
- From UW, Red Hat, U of Nebraska-Lincoln, CycleComputing, FermiLab, Clemson, Imperial College-London, Wipro



Open source status: Commits

- This year (29 Apr 2012)
 - 2,971 in last year
 - About 8 per day for 366 days
 - Only master branch, more on topics
- By 33 individuals (down 4 from previous)
- From UW, Red Hat, U of Nebraska-Lincoln, U of Chicago, SORS (down 1 from previous)
- Last year (30 Apr 2011)
 - 2,590 in last year
 - About 7 per day for 365 days
 - Just on release branches, more on topic branches
- By 37 individuals (up 5 from previous) **REVISED**
- From UW, Red Hat, U of Nebraska-Lincoln, FermiLab, SORS, UCSD (up from 2 previous)



Open source status: Committers

- This year (to 29 Apr 2012)
 - 444 Greg Thain
 - 317 Karen Miller
 - 316 John (TJ) Knoeller
 - 278 Jaime Frey
 - 226 Dan Bradley
 - 210 Matthew Farrellee
 - 131 Timothy St. Clair
 - 128 Nathan W. Panike
 - 126 Peter MacKinnon
 - 114 Erik Erlandson
 - 114 Alan De Smet
- Last year (to 30 Apr 2011)
 - 330 Jaime Frey
 - 294 Dan Bradley
 - 275 Karen Miller
 - 240 Greg Thain
 - 201 Josh Slauson
 - 169 Matthew Farrellee
 - 128 Nick LeRoy
 - 119 Timothy St. Clair
 - 112 John (TJ) Knoeller
 - 101 Kent Wenger

Karen visible after doc repo merge!



User community

- Dynamic, growing, stable
 - Users join and are supported by the community
 - Users join and are supported through direct engagement
- Thousands of individual users
- Thousands of organizations worldwide
- Condor Week US & EU, Grid schools
- condor-users with hundreds of messages per month
 - <http://dir.gmane.org/gmane.comp.distributed.condor.user>
- Thousands of pools, hundreds of thousands of hosts worldwide
 - <http://research.cs.wisc.edu/condor/map/>



Developer community

- A mature, well-established codebase
 - 5 years or more commit activity
- A very large, active development team
 - 25 or more active developers
- Development activity increasing year-over-year
 - 2+ years old and 25%+ increase in commits in past 12 months compared to previous 12 months
- Source: <http://www.ohloh.net/p/condorproject>
- Relatively static number of individual development contributors and organizations with developers contributing
- The developer community not showing some of the benefits found in the user community



Discovering a question

- Contributing is easy: Wrong
 - Both for the contributor and maintainer
- Only one contributor finds it difficult: Wrong
 - Same for maintainers
- Difficulties are similar: Wrong
 - Everyone's difficulties are cast in a unique light
- Guessed wrong three times, time to step back and ask...



What will make it easier, or possible, for you to contribute to the developer community?



A plan

- Over the next year
 - Answer: How can we stably improve the developer community?
 - Gather community input
 - Current developers and organizations
 - Potential developers and organizations
 - Form a team to evaluate current situation and integrate input
 - Current stakeholders: Red Hat (Matt) and UW (Todd)
 - Answer: What do we want to do? How can we do it?
 - Develop a strategy and implement portions by Condor Week 2013
- **We need your input!**
- **We do not have the answers (yet)!**



I'm serious, your input is important...

What will make it easier, or possible, for you to contribute to the developer community?



Questions raised so far -

- How do I get involved?
- What can I work on?
- How can I become a committer?
- How do I get my contribution in?
- What types of contributions are accepted?
- What is expected of me when contributing?
- What are the rules of engagement?
- What features are coming?



Suggestions so far -

- Maintain a public roadmap, doesn't have to be 100%
- Make public repository the canonical repository
- Evaluate the CLA
- Make condor-devel a first step in communication
- Have developer days / public developer meetings
- Streamline bug reporting process (add and search)
- Visible contributor credit (in commits and version history)
- Publicize **freenode #distcomp** channel
- Establish a release cadence
- Help increase confidence in changes (test suite)



**I want to hear your opinions on Condor's
developer community.**

Find me during Condor Week or email me -

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<http://spinningmatt.wordpress.com>

