

# Large, Fast and In Control: Condor Management Use Cases

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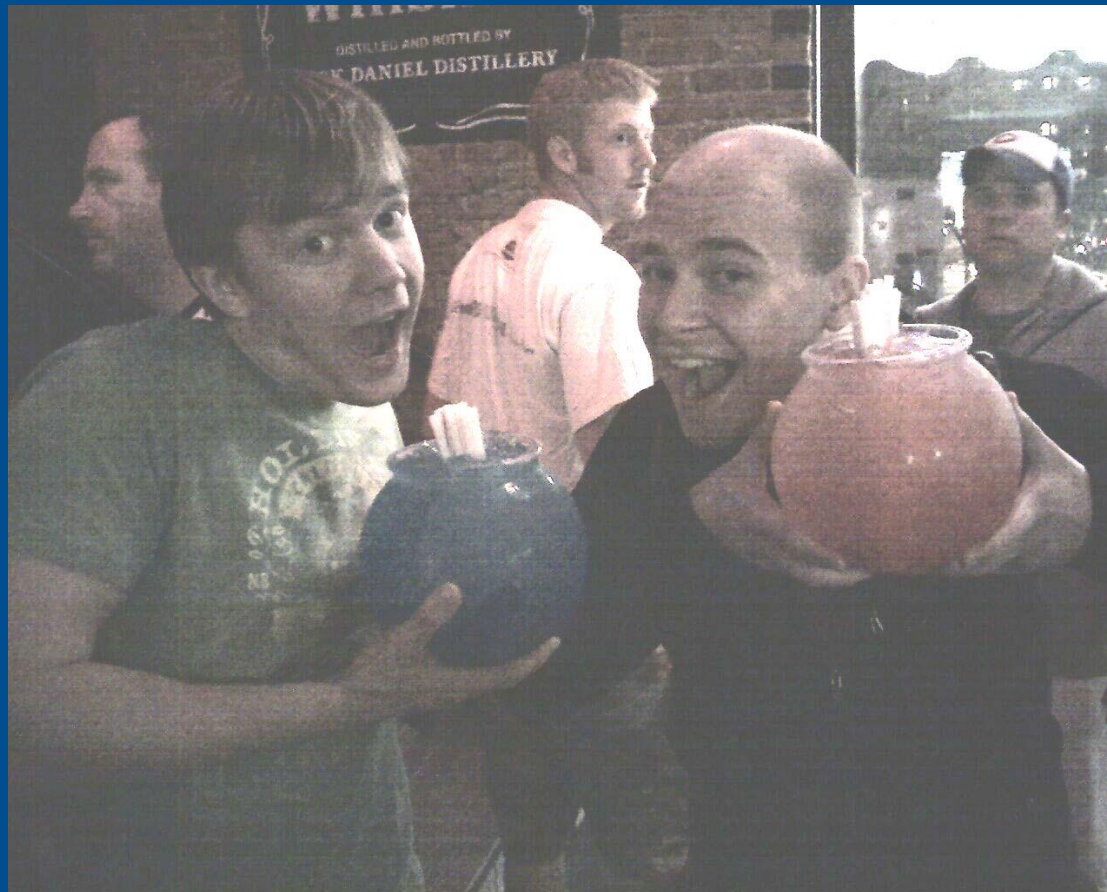
# Condor Management

# Combines Two Things

# Condor (Technology)

# Condor (Use Cases)

# From Condor Community



# I Got Started

# Condor Management Stack for Movies



**We're Passionate About  
both of these things**

# At Cycle Computing

Started in 2005

Leading provider of  
Services, 24/7 Condor Support,  
Training, and Tools

# Universities, Small and Fortune 100 Companies alike

**Install/Manage  
ten node to several thousand  
node pools**

# 2005 Started Developing



# CycleServer

# GUI to Make Management Easy



Built on top of  
J2EE Servlet Container  
Postgresql/Oracle

Leveraging our experience  
working with

# Clients and

# The Condor Team!



# Back to Condor Management

# Definition: manage

“to handle or direct with a degree of skill... to exercise executive, administrative, and supervisory direction of”

# In Control



# Implies Knowledge of Current State

# With Condor Pools

Everyone wants to be  
Large, Fast, and In Control

# In Control of What?

# Condor is many things:

(Not merely) A queue

# Resource Allocator

# Dependency Management



# Configurable Policy Engine

# SysAdmin Tool (Hawkeye)

...

# Should Control Workflows And all Affecting Features

For example

# Job Priority Management

How do I control a job's priority  
based upon its project?

# +AccountingGroup

# Condor Week 2005





# Collaboration with Wisconsin and the production of Disney's TheWild

# Worked with Todd, Derek, & Peter



# Control Job Priorities, and later quota in any Context

But who sets it?

Users? Who guarantees  
policies around when various  
AccountingGroups are used?

# Software Submission Pipelines = A form of management tool

# What other use cases?

# Configuration



PREEMPTION\_REQUIREMENTS =  
RemoteUser != "ME"

# Submission

# Usage Tracking/Reporting

# On Demand Machine Usage

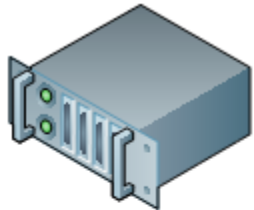
# Job Queue Management

# Pool Monitoring

# Search

# Let's take Configuration





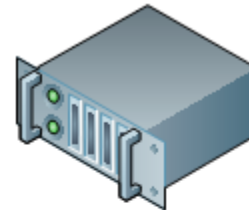
Central Manager



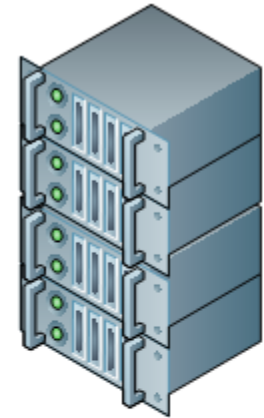
Windows Workstations



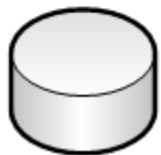
VPN Laptops



Central Manager

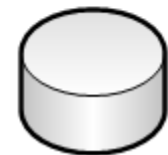


Servers/Schedulers



Shared FS?

How to manage Condor Configuration in a unified way?



Shared FS

Using Files only,  
we ran into several issues

# Version Management (Subversion, CFEngine)

But then what about...

# Testing and Verification of Subsections/policies

Could create many sub-files, or  
templates

LOCAL\_CONFIG\_FILE =  
Workstation.config,  
RANK\_dev.config,  
START\_10min.config,  
JavaVersion1.5.config

But then what about...



# Effect Tracking

(Knowing which machines  
are affected by changes)

# Lastly, Audit Logging

Doing it easily is difficult

Could create/use another agent  
to sit alongside Condor

But

# Want to use Reconfig/Restart

# Without Shared File Systems



# We need a hook

# Configuration With Pipes

```
LOCAL_CONFIG_FILE = /my/config_getter |
```

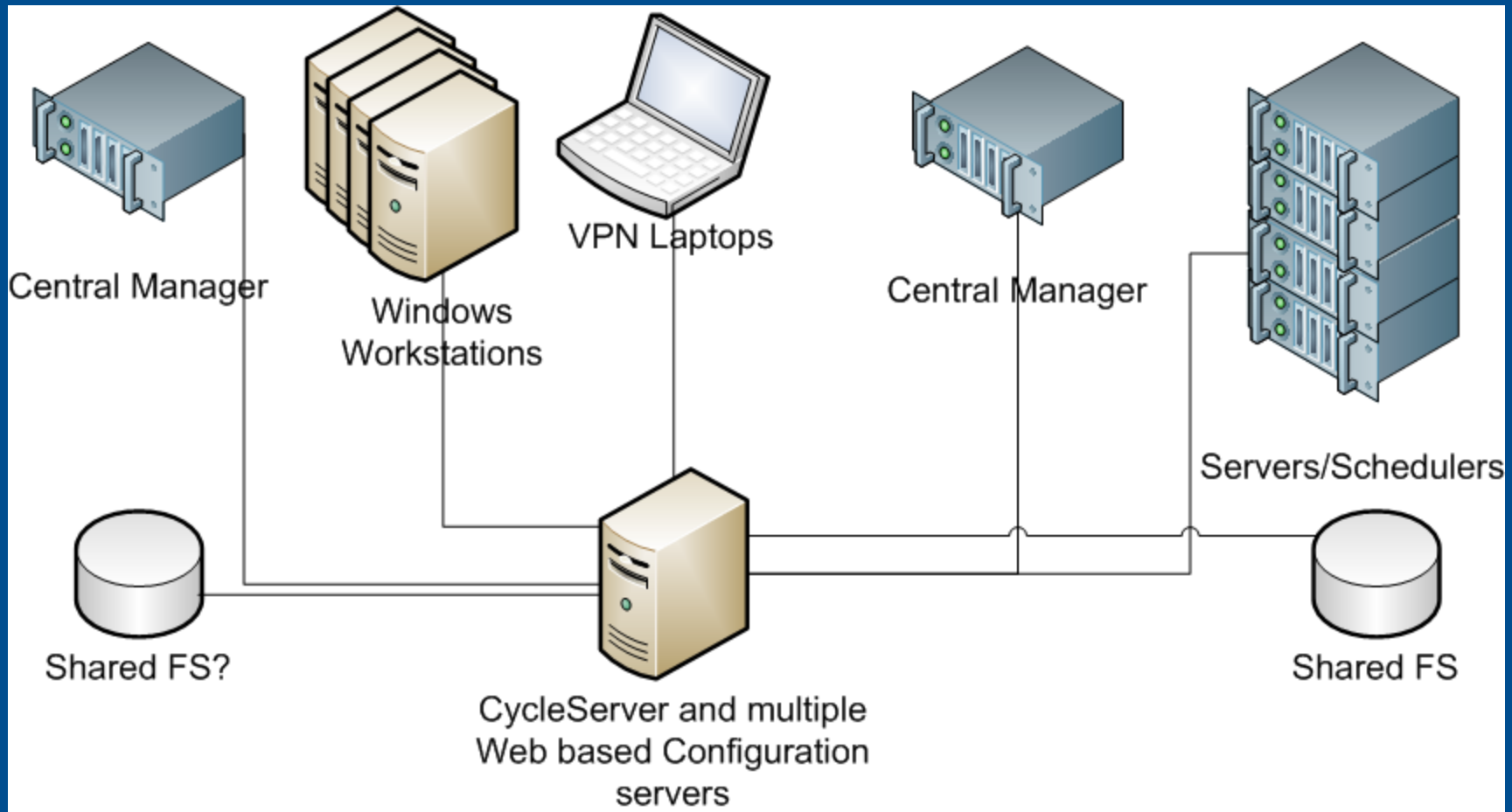
Worked with  
Bob Nordlund and Ian Chesal,  
Talked with Miron

# Cycle Contributed Code

# Another Collaboration with Todd



Takes advantage of  
reconfig/restarts



# Next Problem



# What about managing On Demand hardware needs?

I need to get more hardware for project in a month, and it'll take 2 months to get it approved.

# What do I do while I wait?

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Slashdot stories can be listened to in audio form via an RSS feed, as [read by our own robotic overlord](#).

## Technology: Storm Botnet Subsides For Now

Posted by [timothy](#) on Thursday May 01, @10:01AM  
from the [wait-until-weather-2.0](#) dept.

Stony Stevenson points out an iNews Australia story about the decline of the biggest botnet of recent times, excerpting

"The Storm botnet decreased to just five percent of its original size during April, but overall web-based malware levels increased by 23.3 percent, new monitoring data reveals. MessageLabs' Intelligence Report for April 2008 said that new malicious software removal tools aimed at removing Storm infections were responsible for the sudden reduction in Storm-infected computers."



According to their estimate, Storm-compromised computers are now down to about 100,000 rather than numbers closer to two million.

► [internet, it, security](#) (*tagging beta*)

[Read More...](#) [tech.slashdot.org](#)

19 comments

## IT: DARPA Sponsors a Hunt For Malware In Microchips

Posted by [timothy](#) on Thursday May 01, @09:23AM  
from the [double-barreled-microscope-loaded-for-vermin](#) dept.

Phurge links to an IEEE Spectrum story on an interesting DARPA project with some scary implications about just what it is we don't know about what chips are doing under the surface. It's a difficult problem to find invasive or otherwise malicious capabilities built into a CPU; this project's goal is to see [whether vendors can find such hardware-level spyware in chips](#) like those used in military hardware. Phurge excerpts:

"Recognizing this enormous vulnerability, the DOD recently launched its most ambitious program yet to verify the integrity of the electronics that will underpin future additions to its arsenal. ... In January, the Trust program started its prequalifying rounds by sending to three contractors four identical versions of a chip that contained unspecified malicious circuitry. The teams have until the end of this month to ferret out as many of the devious insertions as they can."

► [security, hardware, military, technology, usa](#) (*tagging beta*)

[Read More...](#) [it.slashdot.org](#)

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## Mobile: German Firms Patent Scented Text Messaging

- Or -

I need 1000 machines for  
only 1 week every 6 months.

- Or -

Our data center is full...



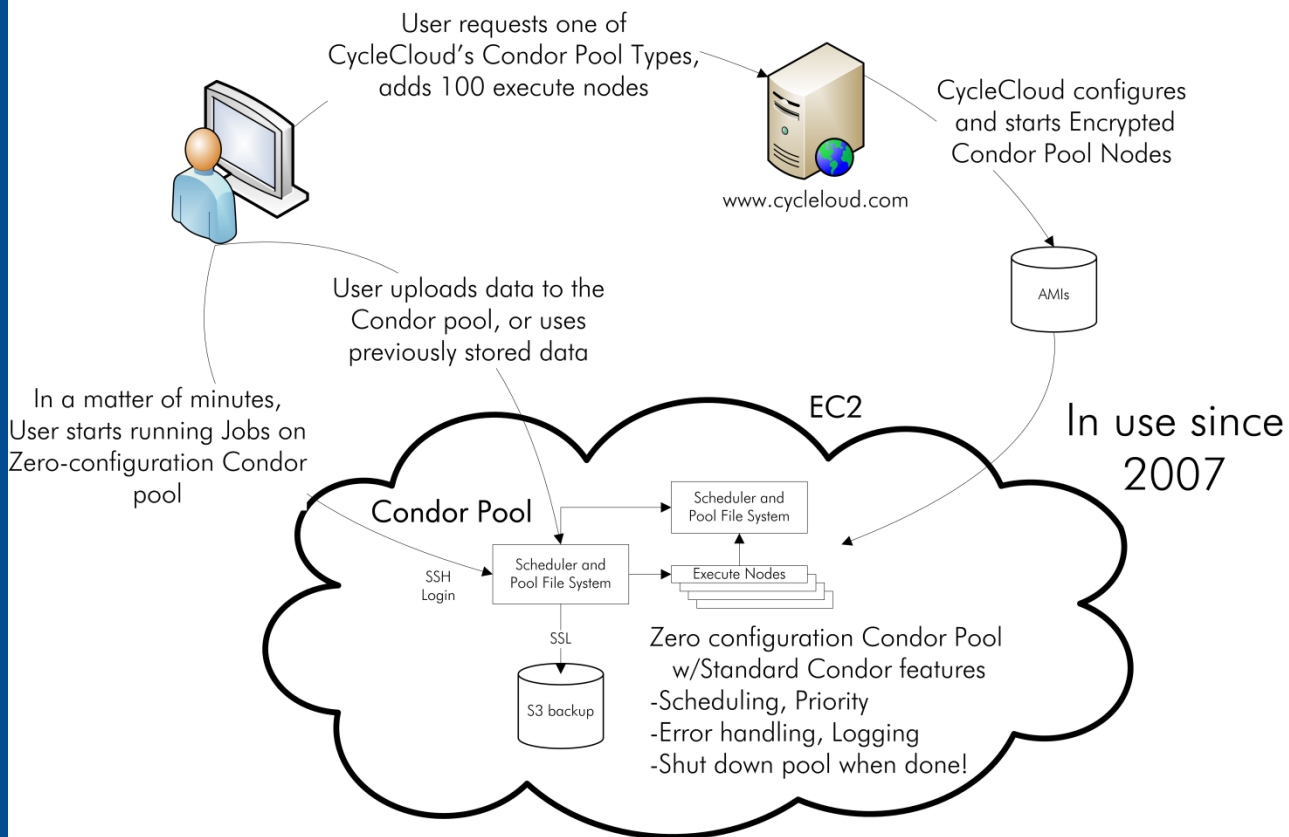
In 2007  CYCLECLOUD

Worked with Amazon to create

First Zero-Configuration  
Condor Pool Service on  
Amazon EC2

# CycleCloud Overview

## CycleCloud: Condor on Demand



# Uses CycleServer

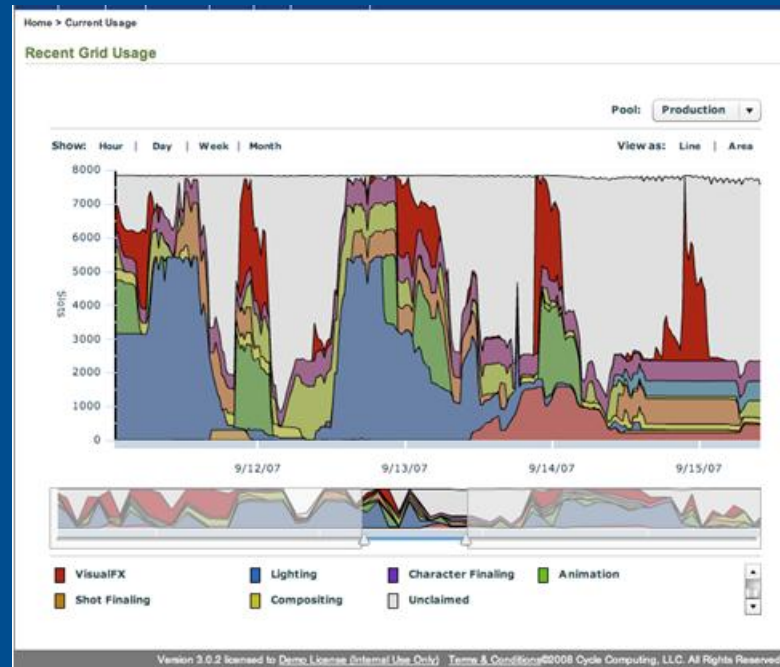
**Manage cloud nodes  
easily, without login**

# What about...

# Usage Tracking and Visualization



# CycleServer



# Job Queue Management



# Pool Monitoring

# Search

# Time for a Demo of Current Release (3.0) and May Release (3.1)

visit

<http://cyclecomputing.com>

Before we do,

These are tools based upon  
use cases we've  
encountered so far

So come talk with us...

Talk with others...



# Help us build user-interfaces to benefit the whole Community



# Thank you

For more information, please contact me at:

jstowe @ cyclecomputing.com