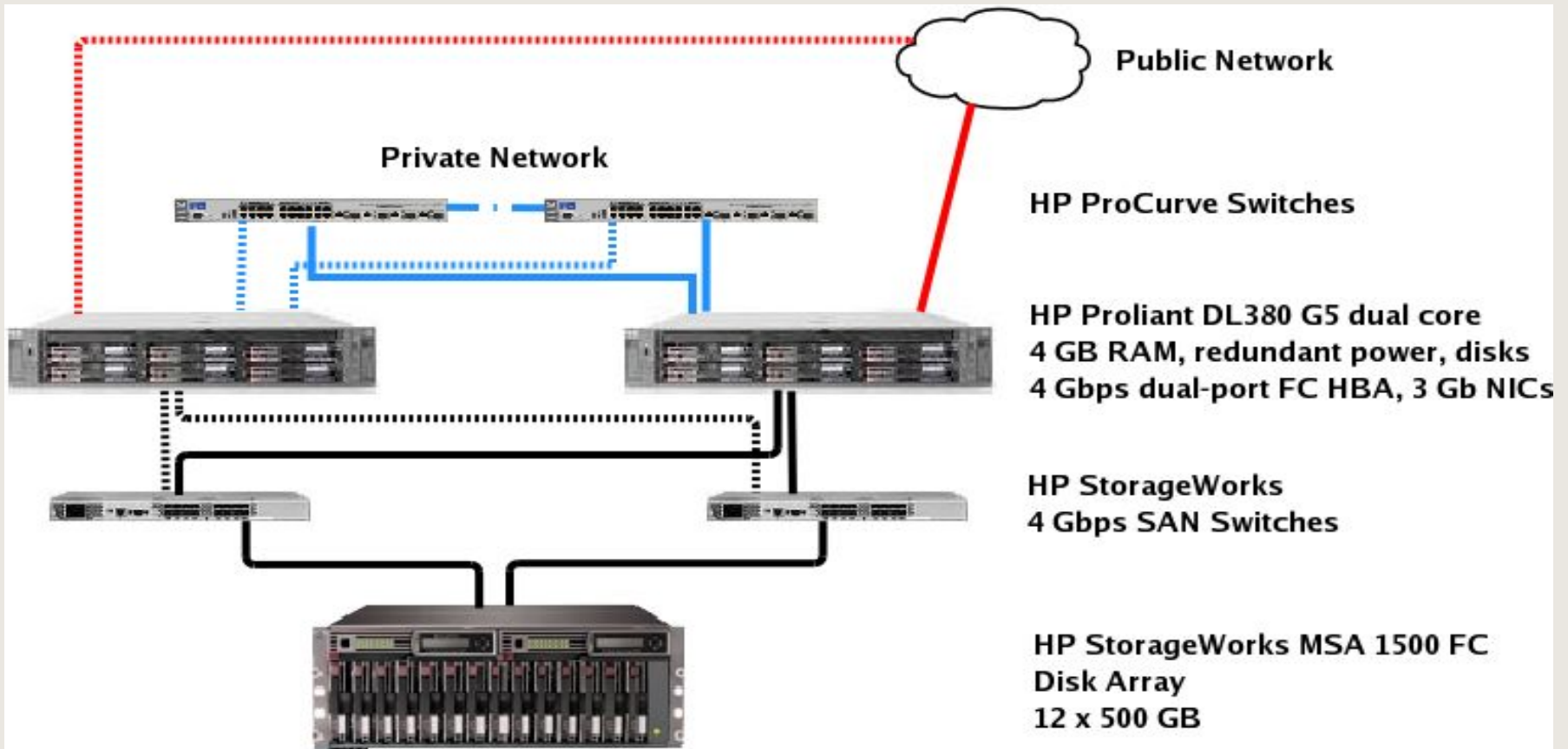


# Database Status

**Andrew Wong ([aywong@triumf.ca](mailto:aywong@triumf.ca))**

# TRIUMF's Oracle RAC



2006 Initial 3D deployment

Databases: Conditions, TAGS & FTS

N.B.: Tier-1 LFC service is on MYSQL

## Node 1 - TR-ORAC

- 3D Conditions instance
- 3D Conditions Streams process

## Node 2 – TR-ORAC2

- 3D Conditions instance
- TAGS connections

\*\*TRIUMF is volunteering to host ATLAS TAGS\*\*

- FroNTier connections
- FTS Production instance
- RMAN backups

## HP StorageWorks MSA1500 FC

### Disk Array – 12 x 500GB

=====

MSA1500\_physicaldrive Status Report on host tr-orac2.triumf.ca:

Tool /usr/sbin/hpacucli ctrl wwn=500508B30092F7B1 physicaldrive all show status

physicaldrive 5:1 (box 5:bay 1, 500.0 GB): OK

physicaldrive 5:2 (box 5:bay 2, 500.0 GB): OK

physicaldrive 5:12 (box 5:bay 12, 500.0 GB, spare): OK

physicaldrive 5:3 (box 5:bay 3, 500.0 GB): OK

physicaldrive 5:4 (box 5:bay 4, 500.0 GB): OK

physicaldrive 5:5 (box 5:bay 5, 500.0 GB): OK

physicaldrive 5:6 (box 5:bay 6, 500.0 GB): OK

physicaldrive 5:7 (box 5:bay 7, 500.0 GB): OK

physicaldrive 5:8 (box 5:bay 8, 500.0 GB): OK

physicaldrive 5:9 (box 5:bay 9, 500.0 GB): OK

physicaldrive 5:10 (box 5:bay 10, 500.0 GB): OK

physicaldrive 5:11 (box 5:bay 11, 500.0 GB): OK

**Backups:** Nightly RMAN jobs

**Support / Monitoring:**

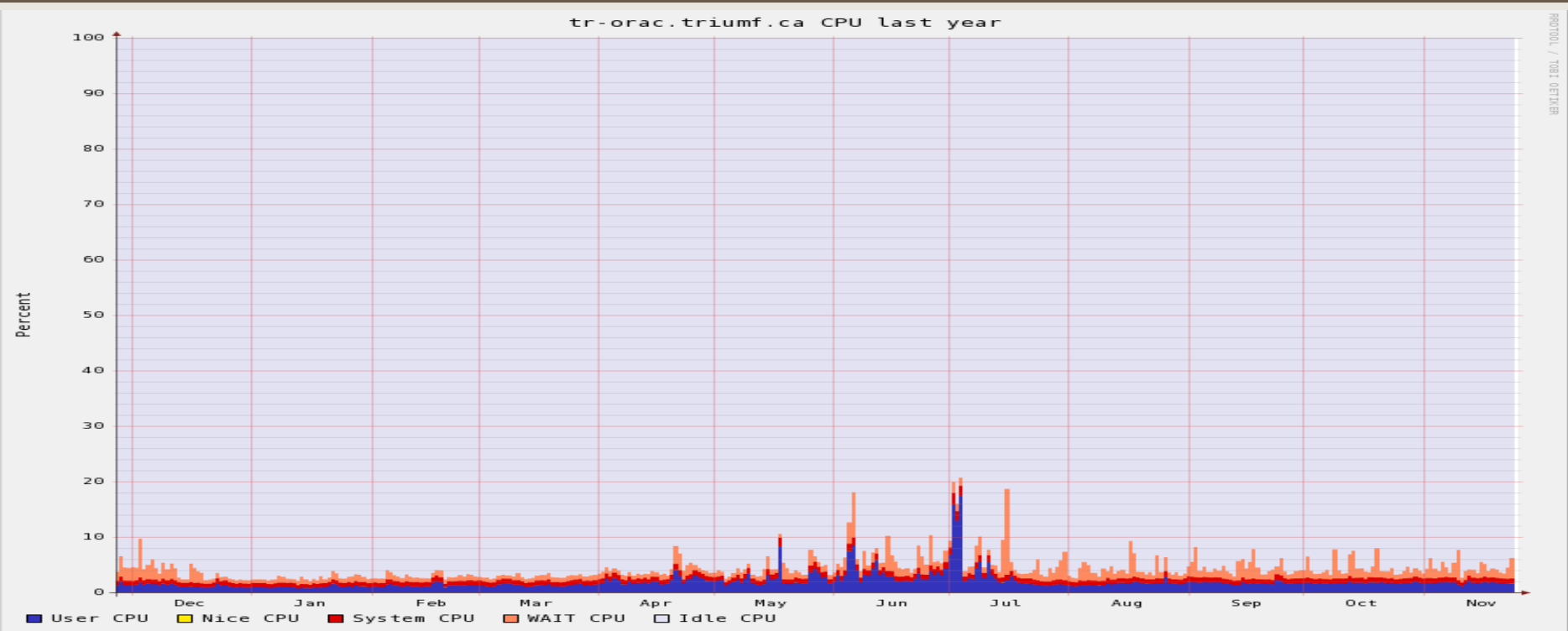
OEM – email alerts (alert.log errors, apply process stopped, etc)

Scripts – CRS, ASM usage

Nagios – ping, ssh, paged if Oracle node is down

Ganglia - <http://gridinfo.triumf.ca/ganglia/>

# Oracle RAC Performance



During 2009, there were many improvements on the ATLAS client / software side.

Results: improved CPU performance on our Oracle RAC

(We are in the process of getting higher performance storage, should reduce WAIT CPU)

Node: [frontier.triumf.ca](http://frontier.triumf.ca)

Configured an existing workernode to become FroNTier / Squid Server

- In production since November 3, 2009
- We are about to do HammerCloud tests
- Plan is for a new FroNTier / Squid server

## For Conditions DB RAC:

Add more storage to current RAC

- Will upgrade to higher performance storage drives

## New FroNTier / Squid Server

- single socket Intel quad-core @ ~3.0 GHz
- 8 GB RAM
- 2 x 300 GB SAS drives 15K rpms (hardware RAID 1)
- SL 5



## **For TAGS DB: (New Oracle RAC)**

2 x single socket Intel quad-core @ ~3.0 GHz

12 GB RAM

SAS system drives 15K rpms (hardware RAID 1)

Fibre-channel based storage array (~ 30TB)

## **New Server For LFC: (will stay on MySQL)**

single socket Intel quad-core @ ~3.0 GHz

8 GB RAM

SAS drives 15K rpms (hardware RAID 1)

**Thank You!**  
***Merci!***