

# FIFE Stakeholders Meeting

Mike Kirby

Aug 7, 2013



# FIFE Stakeholders Agenda

- ✦ Report from NOvA on CVMFS integration
- ✦ centralized build machine - fifebuild01
- ✦ BlueArc usage monitoring and quotas
- ✦ Experiment common UPS/UPD product
- ✦ Any other business



# general business

- ✦ Stakeholders meeting 1st Wednesday of the month, 2:30 pm in the Comitium
- ✦ There will be a public release of the initial FIFE Architecture Committee Report on or before 15-Aug-2013
- ✦ update to jobsub announce was announced on Monday, and will go current later today - please make sure to test these updates (fife-jobsub-announce emails) and give feedback



# NOvA and CVMFS



# experiment product in common UPS/UPD

- request form experiments to have a product in the SCD common UPS area
- want to allow analyzers to simply “setup <project>”
- currently set this up for MINOS, and now have template for other experiments
  - setting up environmental variables
  - making aliases or functions
  - running or sourcing scripts
- [https://cdcvns.fnal.gov/redmine/projects/ifront/wiki/Bootstrap\\_project](https://cdcvns.fnal.gov/redmine/projects/ifront/wiki/Bootstrap_project)
- please contact your liaison to have this setup for your experiment



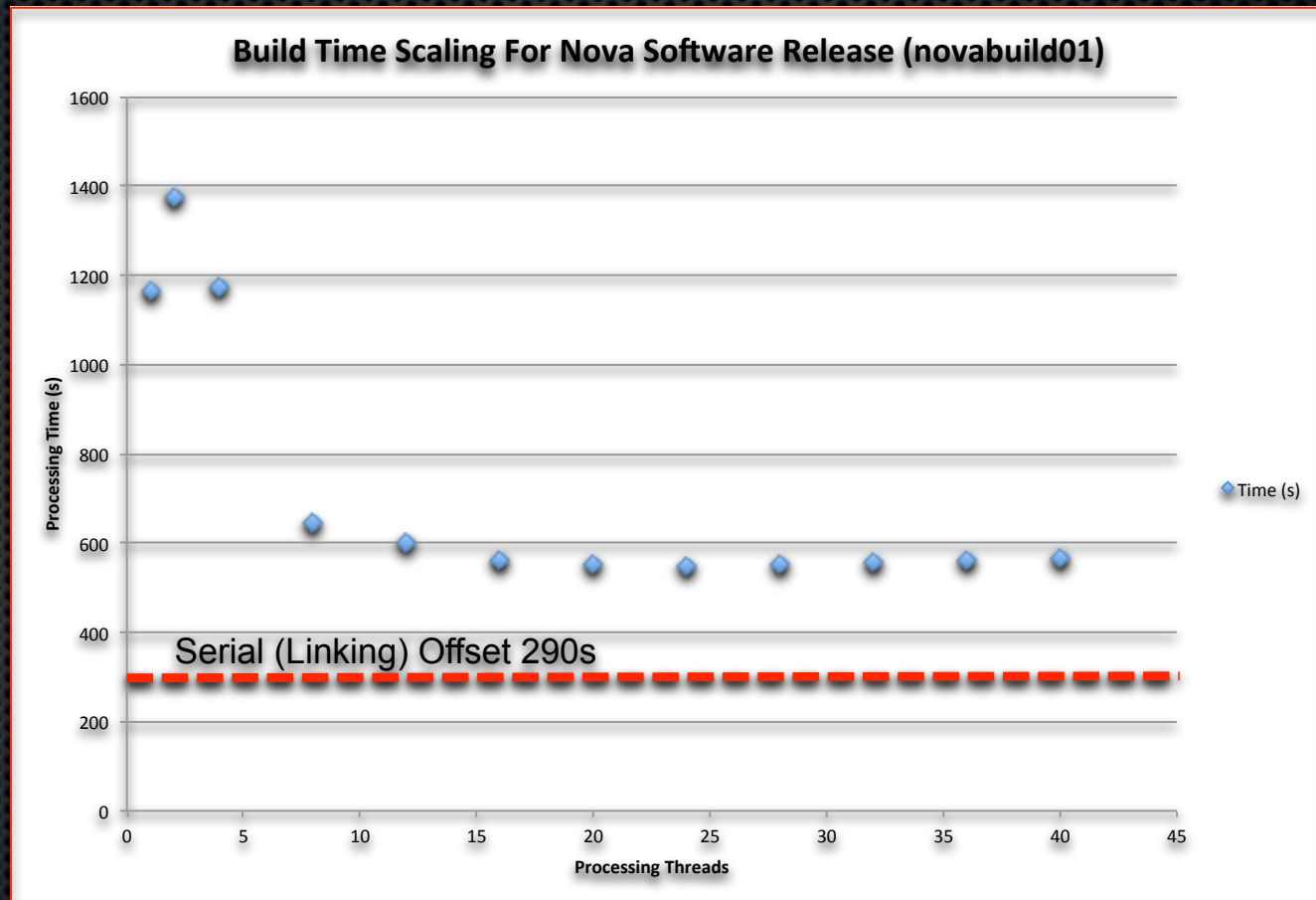
# fifebuild01 machine/service

- ✦ NOvA found that the nightly build was taking a considerable amount of time
- ✦ multiple build options and flavors took ~4 hours
- ✦ wanted to speed up the process not just for convenience but for stability for users
- ✦ utilized both parallel threads and local disk
- ✦ NOvA now building on novabuild01, a 16 core machine with local disk and 40 thread --> ~10 minutes each flavor



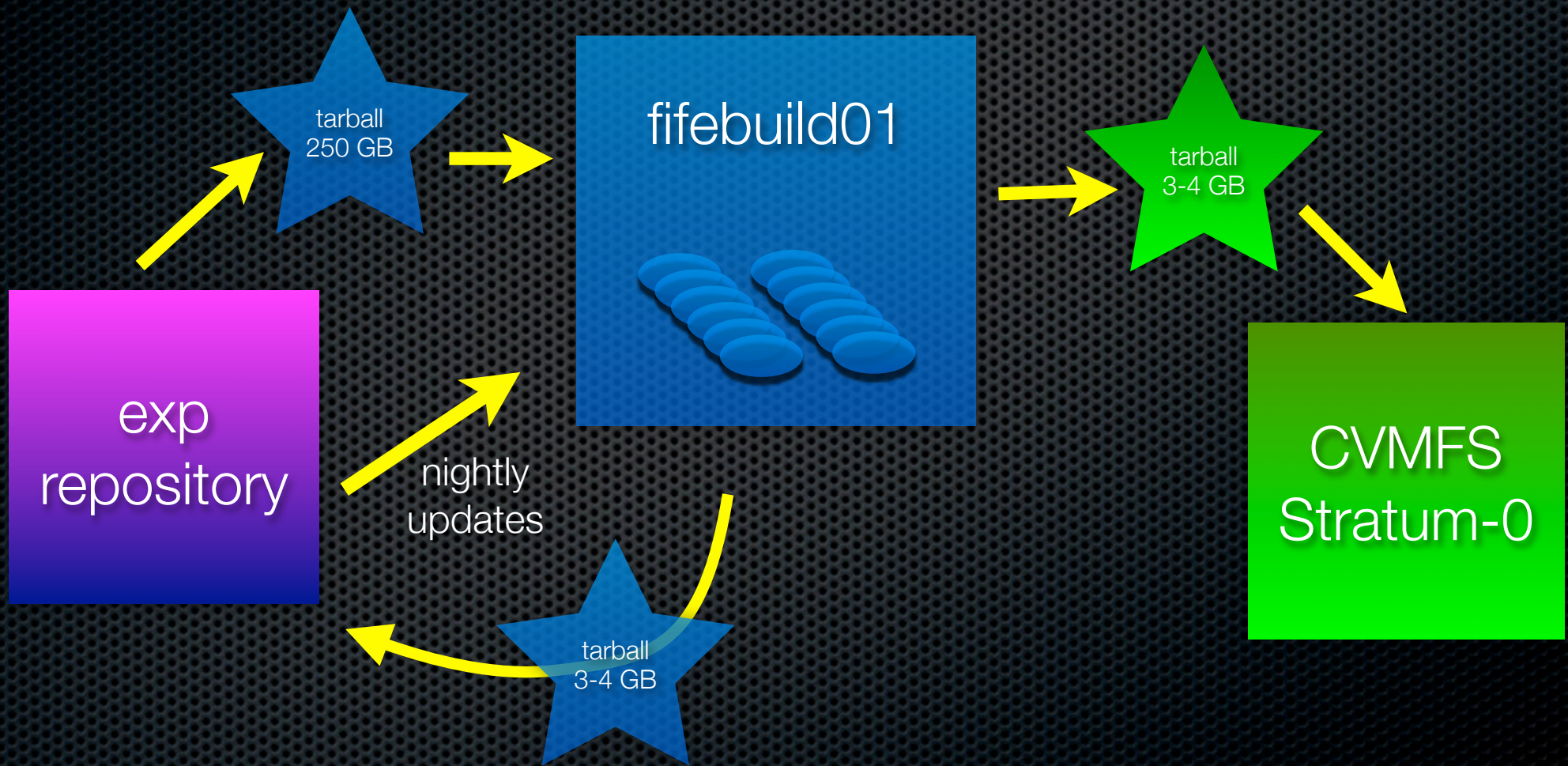
# novabuild01 testing

- ✦ 16 core machine
- ✦ “fencing” of code and serial linking create overhead
- ✦ largest gain is from using local disk
- ✦ still need to potentially do testing on VMs to see if similar performance





# build model for NOvA





# centralized build machine

- ✦ working from the assumption that  $O(10)$  experiments would utilize the build machine
- ✦ plan on 16 or 32 core machine depending on quote
- ✦ 1-2 TB disk for each experiment - maximize spindles for faster disk access - data distributed across RAID array
- ✦ will soon purchase a centralized build machine with this basic hardware capabilities- fifebuild01
- ✦ decision to be made about actual implementation - bare-metal machine or a machine running VMs



# fifebuild01 questions for exp

- ✦ how large is your code distribution? git? cvs? SVN? cmake?
- ✦ external packages that you need to include? what flavors of those packages?
- ✦ everyone using the same art?
- ✦ what OS flavors do you want to build on?
- ✦ how do you want to distribute your code?



# BlueArc disk management

- ✦ Currently information on BlueArc usage and performance is scattered across several webpages and sometimes not detailed
- ✦ request from  $\mu$ BooNE for both quota system and for improved monitoring of disk usage
- ✦ BlueArc quota mechanism can provide both of these
- ✦ incorporate performance monitoring into the BlueArc page for each experiment on <http://fifemon.fnal.gov>



# information available from BlueArc

D	E	F	G	H	I	J
fsname	vivolname	quotatype	UsrGrpName	QuotaSettingGiB	UsageValueGiB	filecount
if-r6sata-5	sns-test	vol	n/a	100	34.3	1068813
if-r6sata-5	miniboone-d	vol	n/a	143360	122880	11645934
minos-app-0	scratch	usr	root	100	2.29E-05	7
minos-app-0	scratch	usr	whitehd	100	80.7	976996
minos-app-0	scratch	usr	jurgenr	100	0	1
minos-app-0	scratch	usr	cpw1	100	0	1
minos-app-0	scratch	usr	rbpatter	100	33.4	116594
minos-app-0	scratch	usr	xbhuang	100	56.2	119324
minos-app-0	scratch	usr	jyuko	100	53.6	18338
minos-app-0	scratch	usr	mbt	100	0	1
minos-app-0	scratch	usr	alklein	100	0.035449219	1310
minos-app-0	scratch	usr	para	100	0	1
minos-app-0	scratch	usr	semenov	100	0	1
minos-app-0	scratch	usr	lisa	100	0	1
minos-app-0	scratch	usr	richa	100	78.8	19958



# questions for the experiments

- ✧ provide group usage, personal usage, quota status
- ✧ performance based on file read and write from interactive node
- ✧ Instructions on what is “slow” and how to react
- ✧ is this information sufficient? sampling rate?



# AOB

- ✦ Next FIFE Stakeholders meeting September 4, 2:30 pm in the Comitium
- ✦ Please contact us for new tools or integration of new resources