

OSG → Windows @ ISU

Brief History: ISU linux farm began producing *BABAR* MC in 2001 (12 cpus, 200 GB)
by 2005 had 41 cpus and 800 GB (and 74 port switch)

In 2006 we decided to transition to OSG for participation in ATLAS

After some delay (lack of manpower!) , 40 cpu cluster is coming up on OSG
any day now!

We will, however, only be contributing 40 cpus ... + another 10-15 in future

And as has already been noted, the need will soon outstrip the anticipated resources!

What to do ? – significantly more resources will cost significant \$\$\$



Early on we realized that there is a considerable amount of un(der)used cpu in our department (helprooms, teaching labs, secretaries, faculty [?], ...)

Most of these, however, run windows

Initial idea: automatically switch machines from windows in the daytime to linux at night and on the weekends

pros: - probably[?] don't need to obtain additional resources (memory)/machine
- Matt had worked out a scheme to automatically do the switching

cons: - miss out on available "quiet time" during the day, other scheduling
- very invasive to the machine (single boot → dual boot)

Next idea: run Windows or Linux as virtual machine on the other (VMware or ~~MS Virtual Server~~)

- my initial preference was for Windows to run virtually on Linux
- Matt's preference was the opposite ...



of course, running Windows virtually on Linux requires OS install on Windows machines – big con! (and the primary basis for Matt’s objection)

With an eye towards perhaps making use of machines in other departments,

want to be minimally invasive !

OSG@home
would be the ideal

There are, of course, complications:

- (1) ATLAS jobs need ~ 1GB: most windows machines don’t have enough spare memory for Windows + VMware + ATLAS (but memory is cheap!) inducement ?
- (2) ATLAS/OSG jobs typically write to the node’s local disk ← invasive ! perhaps can write to (and read from) a local diskserver instead ? Should we explore the “diskless” node operation ?
- (3) How to deploy ? Does someone have to run all over campus with a CD ? Can we “automate” VMware install over the network ?
- (4) Is one NIC/node enough ?



So, where are we now ?

3 machines (sitting on secretaries desk in physics dept.office) have had an extra 1GB added and VMware installed (**ready to test!**)

Nate

Waiting for Linux/condor cluster to start running jobs

Charles will then add these “windows” nodes into the cluster – hopefully answering many of our questions ...

We’ll, of course, have to learn quite a bit as we go

If all goes well, adding ~50 departmental windows machines into our cluster “should” be straightforward

Adding machines in other departments may be practically and politically complicated (Matt will raise the idea at the next monthly IT meeting)

