Batch Virtualization coordination

(and cloud computing at CERN)

Notes from last meeting

- iozone tests follow-up:
    - check read ahead
    - check drop caches
  - Follow-up: possible kernel issue: some VMs developed unkillable processes. After a reboot, the issue was gone.

- cvmfs support: idea is to run on hypervisor + export
  - Follow-up : according to Jakob this will not work. He recommended to run cvmfs on each node. Sharing caches wouldn't work either.

Milestones review

Adjustments needed:
- Availability of people
- New LSF master is late
- No solution for dynamic hosts, may have to go for static configuration

Description	Due
• First virtual machines based on ISF in production system	26/11/2010 → 9/12/2011
• ONE production master ready	6/12/2010
• LSF master replacement	19/11/2010 → Jan 2011
• First dynamic virtual nodes in the production system	29/11/2010 → Jan 2011
• 96 virtual machines in the production system	23/12/2010
• First SLC6 release	17/01/2011 (assumption)
• Migration to SLC6 on hypervisors	23/02/2011
• First SLC6 golden node	14/03/2011
• First SLC6 worker node	15/03/2011

Agenda: Status reports

- ISF status (Belmiro)

    - Master node status

    - Production release preparation

- ONE status (Sebastien, Ulrich)

    - Packaging

    - Master node installation status

- Worker node and lxcloud status: Ulrich

- VM worker node benchmarking: Qiulan

Agenda: Status reports

Worker node status: performance tuning

- enable_ept=0 configured on lxcloud in quattor
- Additional LVM areas on lxcloud (per VM slot):
  - pool
  - cvmfs

Worker node status: performance tuning: /pool

▶ Vm64slc5 has support for external /pool

　▶ Areas already created

　▶ Mounted at contextualization time

　▶ Required changes in LXBATCH

　　▶ Patched LSF rpm with additional script (in preprod)

　　▶ Configuration change on the Grid queues

▶ Under test in batch7

　▶ vmce002 (CREAM) submission works fine

Worker node status: performance tuning: /pool

- ► Timelines:
    - ► Thursday: roll out of new LSF version into preprod
    - ► Monday morning:
        - ► Roll out into prod
        - ► Change of grid queue configuration
    - ► Tuesday: start using of new image in prod

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Worker node status: CVMFS

▶ 2GB cache externally mounted

▶ New LSF attribute "cvmfs"

▶ Will use frontier SQUIDs

▶ Configuration in sync with plus/batch

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Throughput tests

- ▶ 16 vi_10_20 nodes in share_short downgraded to 8 job slots only

- ▶ 2 more hypervisors moved to production with ONE

  - ▶ issue with lease files in one. Under discussion with them

  - ▶ Need to drain existing leases in order to extend the lease file

- ▶ Idea: use final setup of WN, with /pool outside the image and enable_ept=0. One more benchmark running now.

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- Iptables setup in lxcloud:
  - Requires review
  - Right now switched off
  - Updated configuration under test
- Code management:
  - Temporary move of VMIC code into SVN at CERN
- Plans for Xmas:
  - 96 VM in production, half ISF half ONE
  - Ideally vm64slc5 setup with CVMFS
  - Fallback solution vm64slc5kvm (as now)
  - Allow running also long jobs