



IBM Linux Technology Center

September 7, 2006

Xen Testing xm-test



Nivedita Singhvi

xm-test - origin

- Developed by Dan Smith, Sean Dague, others, .. IBM
- Originally: fast, simple isolated set of tests for xm
 - ▶ xend, xm issues
 - ▶ stabilize Xen tree for 3.0 release in 2004
 - ▶ ramdisk; pre-built limited set of tools, apps
 - ▶ clean state between tests
 - ▶ didn't want to debug Linux issues, just Xen issues
 - ▶ easy to use, add tests to
 - ▶ graphical accumulation of submitted results



xm-test – expanded goals

- Expanded goals: hijack xm-test
 - ▶ Functional testing of guest domains
 - ▶ Functional testing of inter-domain traffic, virtual drivers
 - ▶ Stress testing
 - ▶ Regression testing
 - ▶ Sanity check for developers
 - ▶ Easy to add tests; invoke other test suites from



xm-test – running

- `./tools/xm-test` directory
- README, Writing_tests_howto, other documentation
- Python
- Building:
 - ▶ `./autogen; ./configure; make`
- Running:
 - ▶ `./runtest.sh <logfile>`
 - ▶ reports results to <http://xm-test.dague.net>



xm-test - current

- 130 tests currently in xm-test
 - ▶ Domain create, destroy; shutdown, reboot; pause, unpause;
 - ▶ save, restore, migrate
 - ▶ block create, destroy, attach; network, network-attach
 - ▶ vtpm; scheduler (+ credit); console
 - ▶ help, info, list
 - ▶ sysrq, memory management, vcpu-pin, ...

- What's wrong with this picture?
 - ▶ Lots of missing cases!



xm-test : what's needed?

- Identify missing cases/coverage
- Infrastructure (for a start):
 - ▶ adding additional utilities to original set
 - ▶ HVM
 - ▶ Network configuration
 - ▶ Invoking other testsuites....
- Adding test cases; fixing skipped tests, EFAILS
- Wiki page xm-test off XenSource Wiki (task list, ...)



IBM Testing

- Daily testing on xen-unstable
 - ▶ IBM System X platforms (Blades: HS20, x335, x235)
 - ▶ x86-32, x86-32 (PAE), x86-64
 - ▶ x460, HVM (x86-32, x86-64; Linux, Windows)
- Distro release testing
 - ▶ SLES10
 - ▶ RHEL5
- Additional features/patches testing



Test Scalability Issues

- Xen development at furious pace
- No single vendor can keep up with bug fixing
- Cheapest, easiest, fastest to fix at source (developer)
 - ▶ good, simple, test mechanism
 - ▶ easy to add tests
- Leverage community to do Xen testing
 - ▶ common framework
 - ▶ Pool resources

