

# open



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IMPROVE



EVANGELIZE

## OpenSolaris[TM], Xen, and the xVM project

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- **Early access.** A preview of OpenSolaris on Xen based on build 66 was made available in July 2007
- **Part of SXCE.** A port of OpenSolaris to run on Xen 3.0.4-1 hypervisor is now available in Solaris Express: Community Edition starting with build 75a
- **Usability.** Creation of Solaris domUs made easy via Solaris install, jumpstart and virt-install



## Performance Work

- Improving blk I/O barrier support
- *xenstored* state in memory (reduce domain creation time by 40%)
- Dynamic grant table sizing (restore the I/O scalability potential within Solaris)
- hvcopy fix (improve networking performance)
- MSI (once upstream)



# Testing Methodologies

- Testing of development gate – *daily*
  - Functional – Xen (xm-test & \*virt\* tests)
  - Stress – xm-stress, vmstress, badboy, crashme, ...
- Pre-integration testing – *biweekly*
  - Functional, stress and regression (mstc, ism, copyops, devfs, ...) testing
- Performance tests – *biweekly*
  - netperf, iperf, uperf, VDBench, ssbench, specjbb, specjvm, scimark, speccpu\*, ...
- System level tests – *biweekly*
  - Functional & regression testing of Solaris dom0/Solaris domU
  - Will add more non-Solaris dom0 & domU to the test matrix



# Porting Issues

- privcmd
  - mlock vs command parsing
  - need finer grain priviledeges (RBAC?)
- public headers could be more portable
- ABI under-specified (e.g. stack layout and recent syscall bug)



## Futures

- Move to a newer version of the hypervisor (3.1.2)
- Examine performance closely, and then fix it
- Driver domain support
- Higher performance networking IO
  - Inter-domain protocol extensions
  - Crossbow
  - Hybrid IO



## Futures (cont'd)

- Support for more disk image formats
  - *blktap* style approach
- PCI IOV
- Fault management
- Paravirtualized drivers for Solaris
- *and more*



## Sun xVM Brand

- Sun will continue to build on it's virtualization legacy by investing in and creating products around OpenSolaris virtualization
- Sun xVM infrastructure will provide a complete solution for virtualizing and managing your data center
- Sun xVM Server will include work derived from the Xen community
- Sun continues to be very committed to the Xen community

# Sun xVM Brand

Sun xVM Infrastructure

Sun xVM Server  
(Hypervisor Family)



xVM Ops Center  
(Management)

Sun xVM Infrastructure is the complete solution for virtualizing and managing your datacenter.



# Finding out more

- OpenSolaris community
  - [xen-discuss@opensolaris.org](mailto:xen-discuss@opensolaris.org)
  - <http://opensolaris.org/os/community/xen>
  - <irc://irc.oftc.net/solaris-xen>

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## Thank you!

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“open” artwork and icons by chandan:  
<http://blogs.sun.com/chandan>

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