



Developing Beyond localhost

Brian Leonard



<http://blogs.sun.com/observatory>

The Comfy Confines of localhost

- Applications run as you expect
- Applications look and feel as you expect



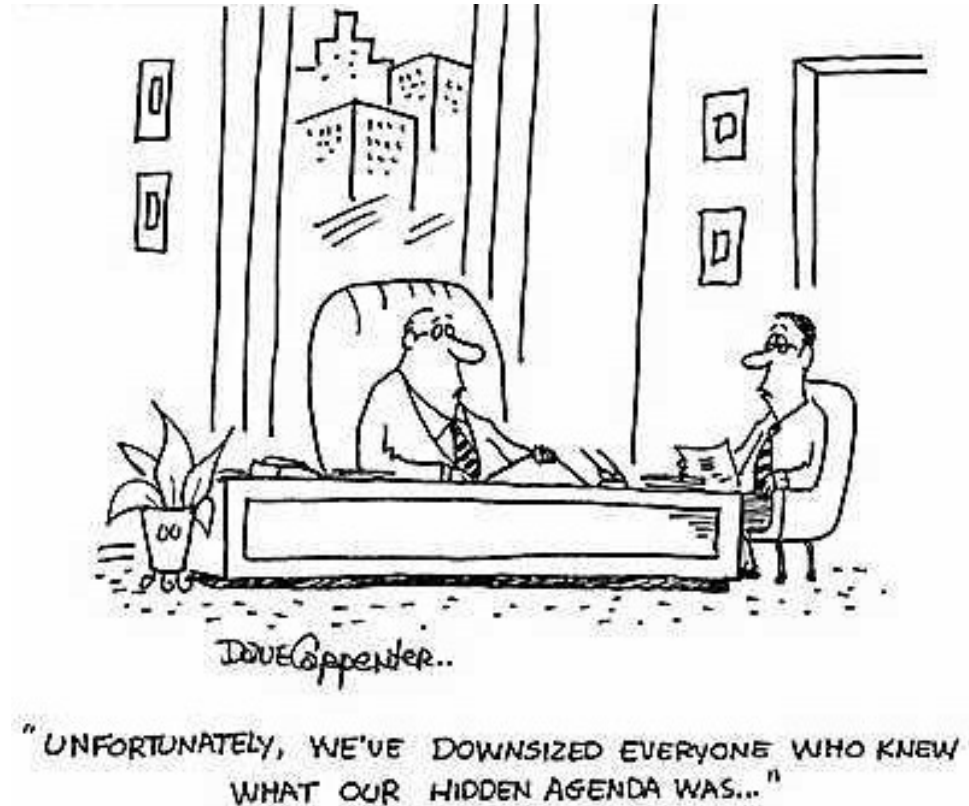
Beyond localhost

- Applications rarely just work
- Both the look and feel may be different from what you expect (or even documented)



Agenda

- Project Development
 - Development Platform
 - Software Stack
- Cross Platform Testing
 - ZFS
 - VirtualBox



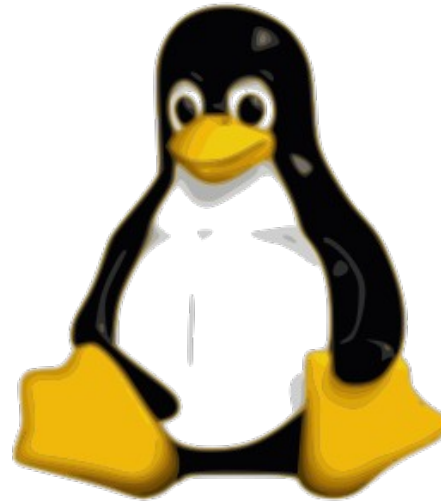
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WE'RE BEARS YOU FOOL,
WE DON'T NEED AGENDAS!

Development Platform?



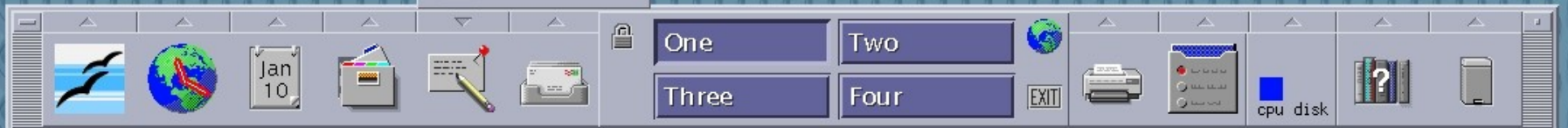
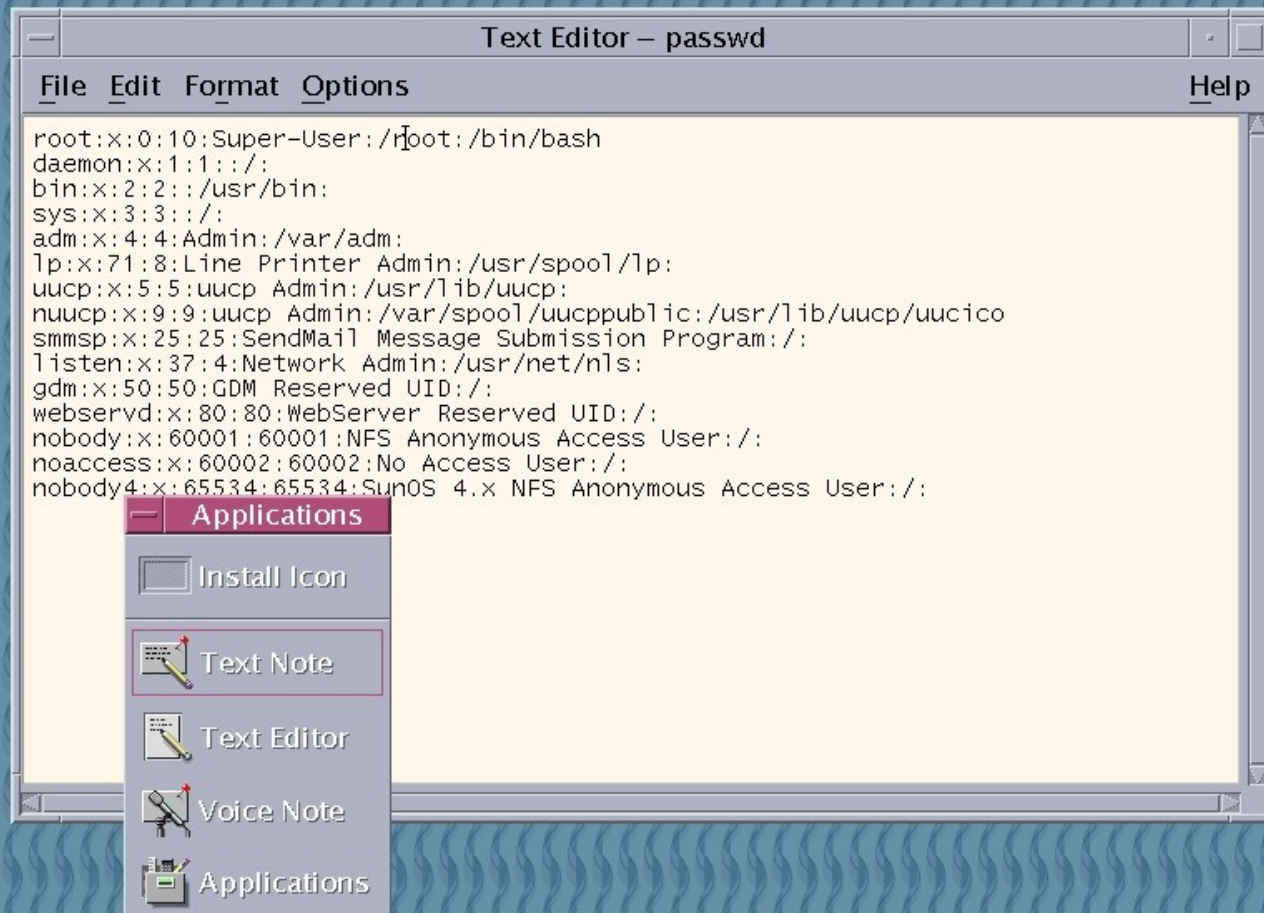
What is OpenSolaris?

A new operating system distribution, based on source code of Solaris

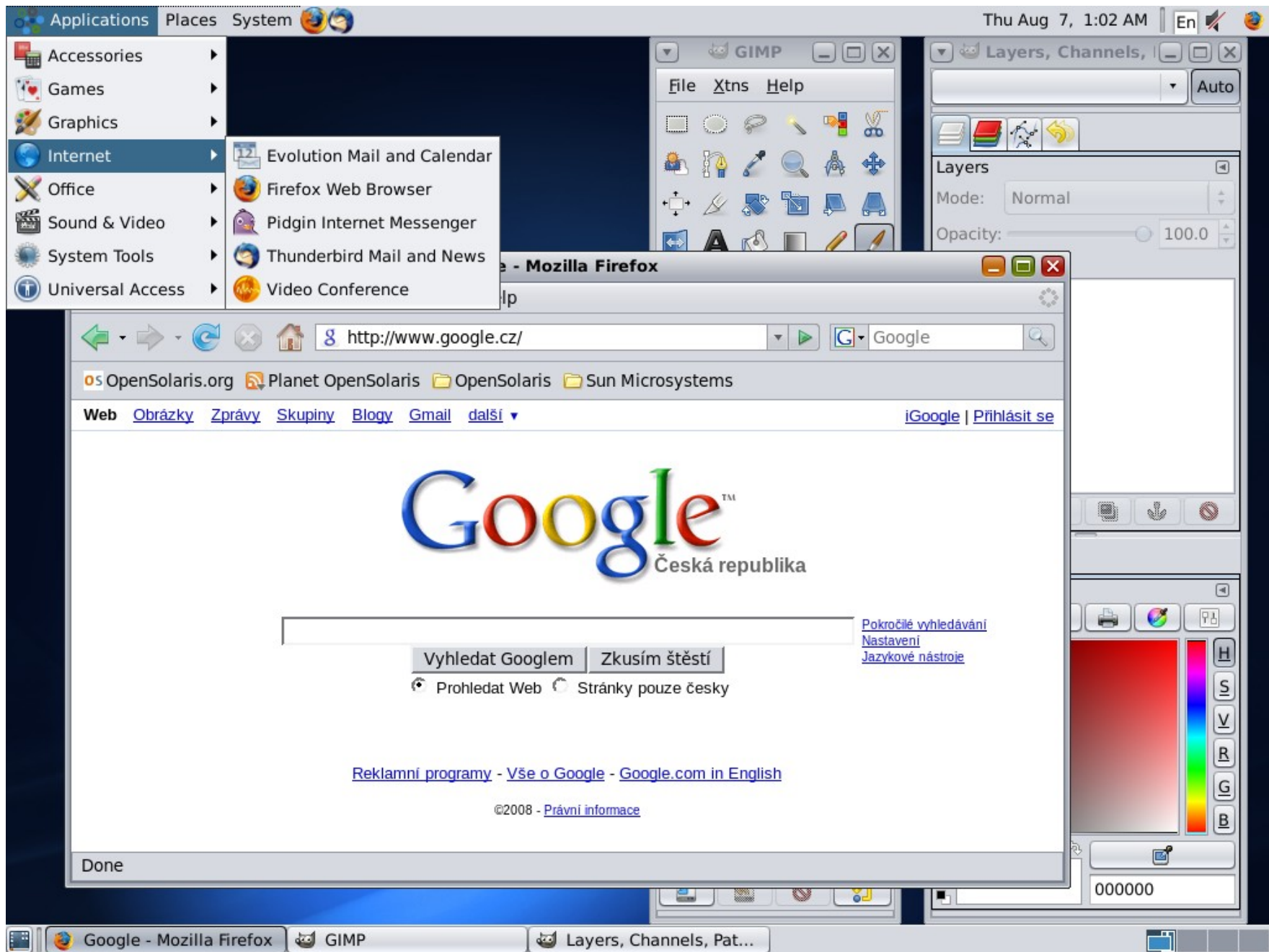


- First release: 2008.05
- Open source and free – Software Libre!
- Redistributable
- Free to use
- Easy to try
- Supported

It's NOT your father's Solaris



It's NOT your father's Solaris



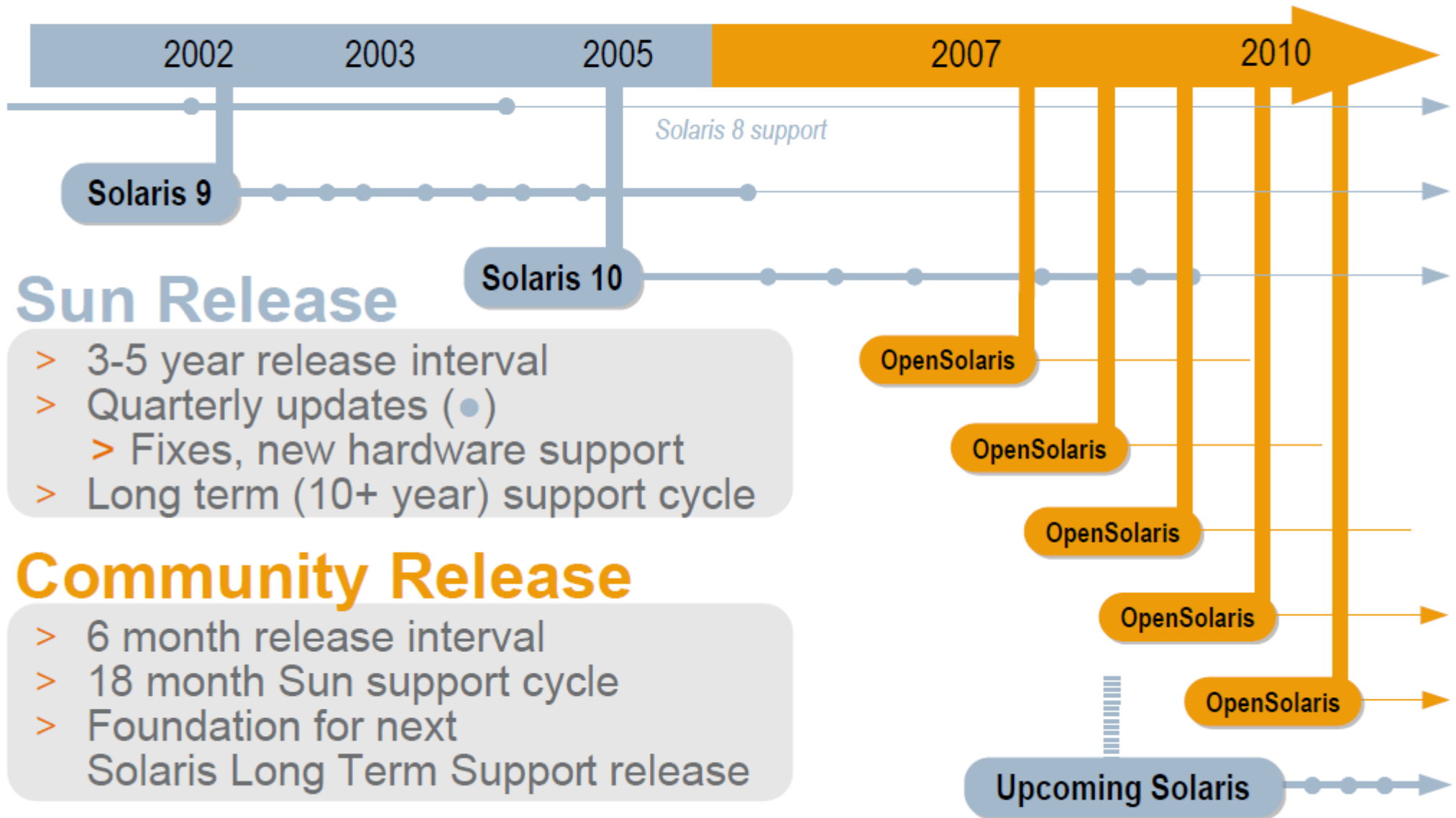
Solaris vs. OpenSolaris



- Enterprise class
- Unmatched level of support
- Long release cycle (3-5 years)
- Web economy
- Latest Solaris innovations
- Short release cycle (every 6 months)

Solaris Release Model

20 Years, One Development Train



Sun Release

- > 3-5 year release interval
- > Quarterly updates (●)
 - > Fixes, new hardware support
- > Long term (10+ year) support cycle

Community Release

- > 6 month release interval
- > 18 month Sun support cycle
- > Foundation for next Solaris Long Term Support release

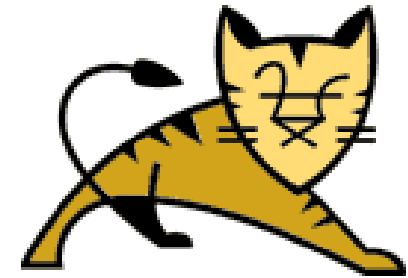
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"Now will everybody please turn to page 5 of the hidden agenda."

Software Development Stack



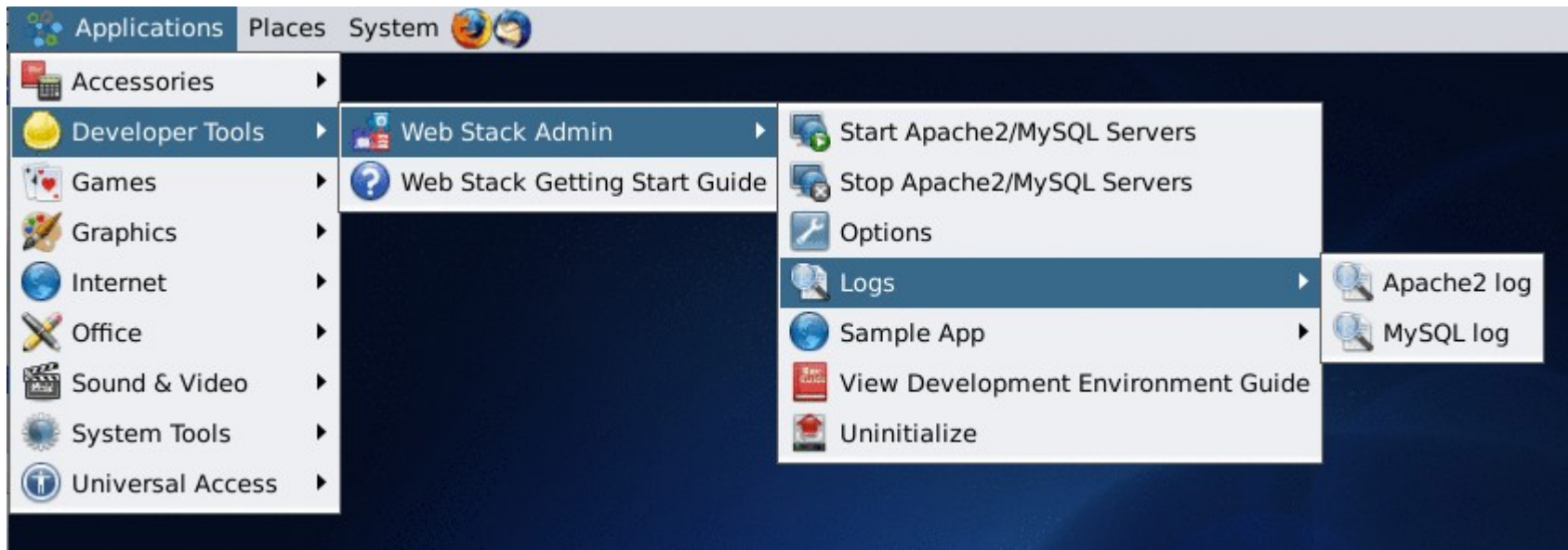
Sun Web Stack

- Apache
- MySQL
- Python
- PHP
- Tomcat

- Subversion
- cvs
- Rails
- PostgreSQL
- NetBeans

Sun Web Stack

- Easy Installation
 - pkg install amp-dev
- Easily Start, Stop and Manage the Stack



- Linux availability coming soon.

Sun Web Stack

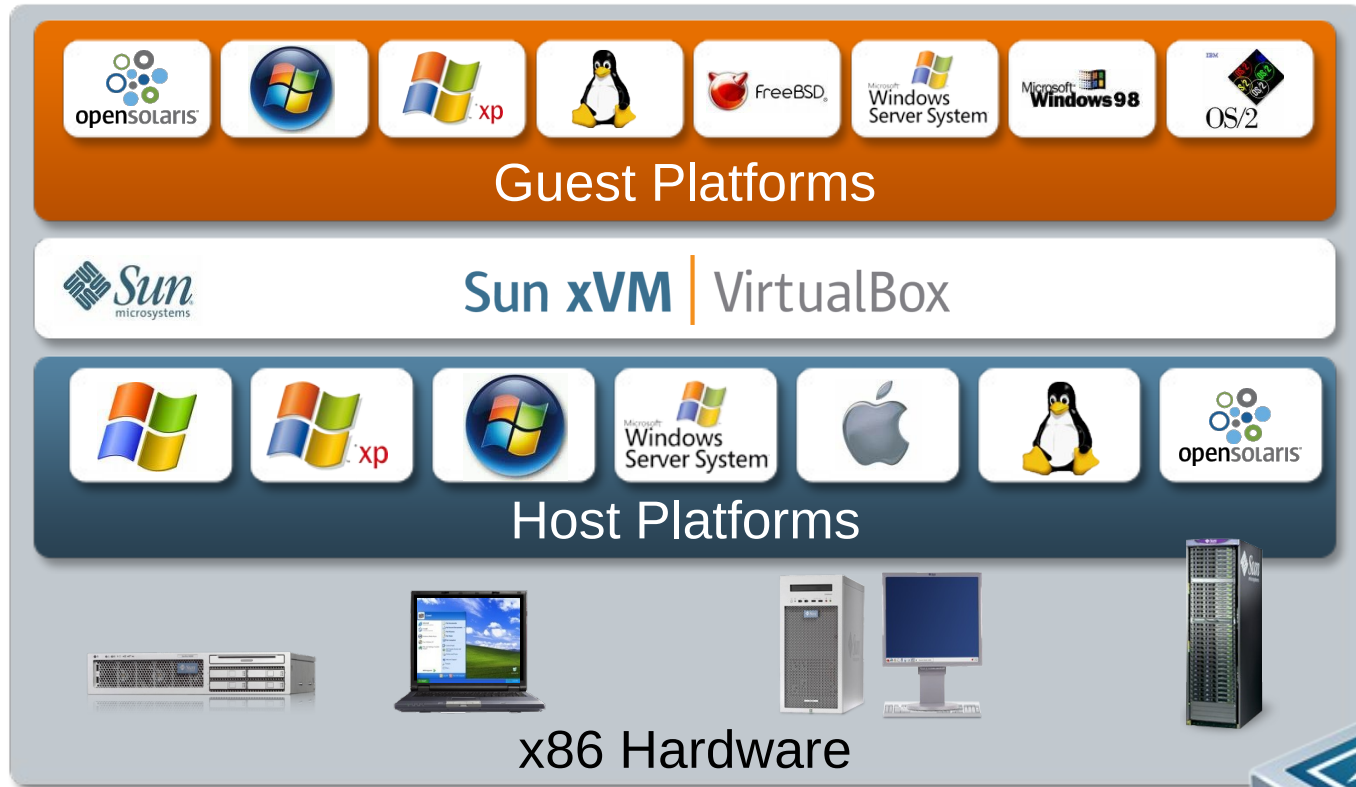
Demo:
Software Development
on the
Sun Web Stack

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 - ZFS



VirtualBox



VirtualBox - History

2001

Connectix
Virtual PC
Ported to
Windows

2003

Microsoft
acquires the
rights to
Virtual PC

2004

Development of
VirtualBox started

2007

GPLv2

2008

Sun acquires
innotek



VirtualBox – Key Features

- Broad Platform Support
- Dynamically resizable desktops
- Full screen mode
- Seamless windows
- Mouse integration
- Shared clipboard and folders
- Save State
- Strong community
 - Get images from virtualbox.wordpress.com



VirtualBox

Demo: VirtualBox



ZFS + VirtualBox



```
bleonard@opensolaris:~$ zfs list -r rpool/virtualbox
```

NAME	USED	AVAIL	REFER	MOUNTPOINT
rpool/virtualbox	19.7G	4.34G	9.38G	/export/home/bleonard/.VirtualBox
rpool/virtualbox@pre-test	0	-	9.38G	-

Sun Web Stack

Demo:
Testing with VirtualBox

Conclusion

- The Sun Web Stack gets you developing quickly.
- With VirtualBox, you don't need access to a data center, or even a network, to test your applications.
- With ZFS, you can ensure your test environment is always pure.



How do I get started?

- Visit www.opensolaris.com
- `pkg install amp-dev`
- Visit www.virtualbox.org



Questions?



bleonard@sun.com



Thank You.

Brian Leonard

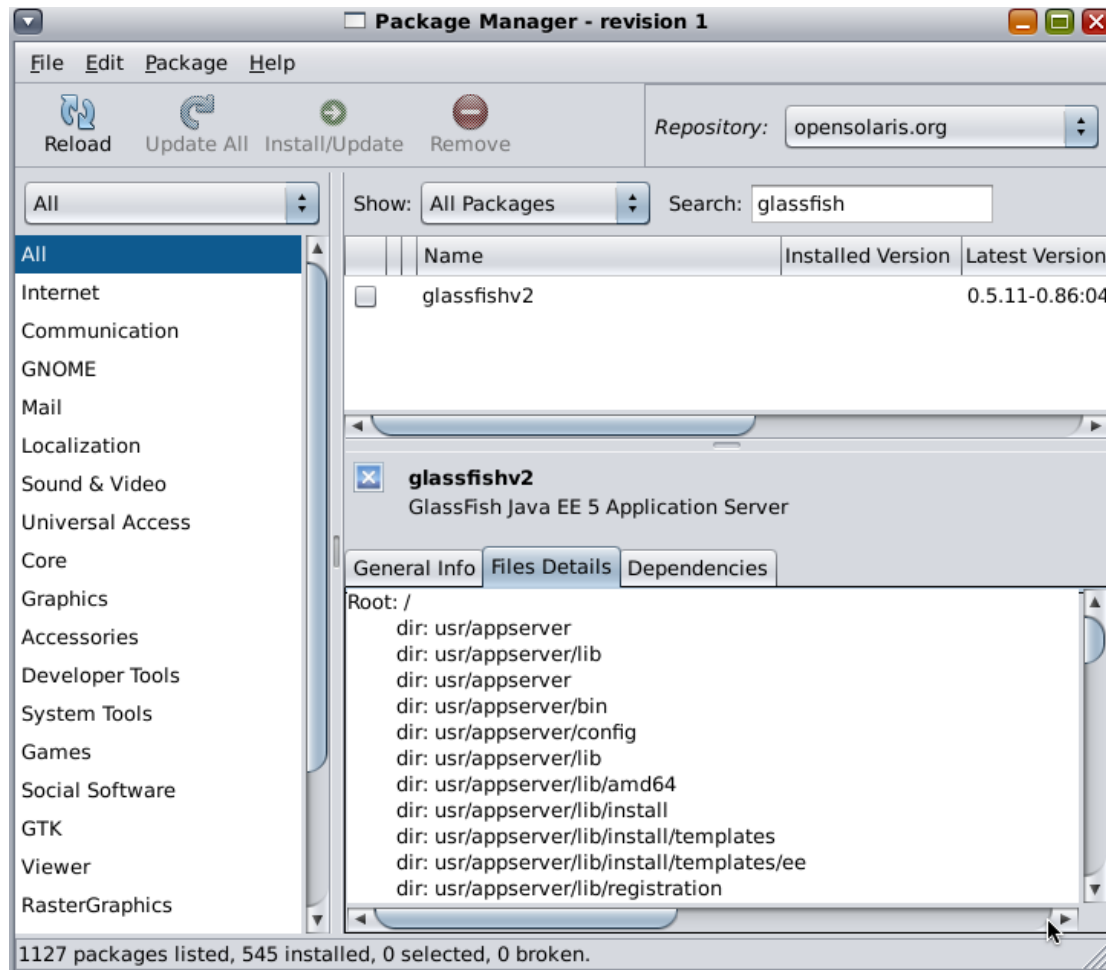


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New OpenSolaris Technology: IPS

IPS – Image Packaging System

- Modern repository-based package delivery



Sun Web Stack

Demo: IPS

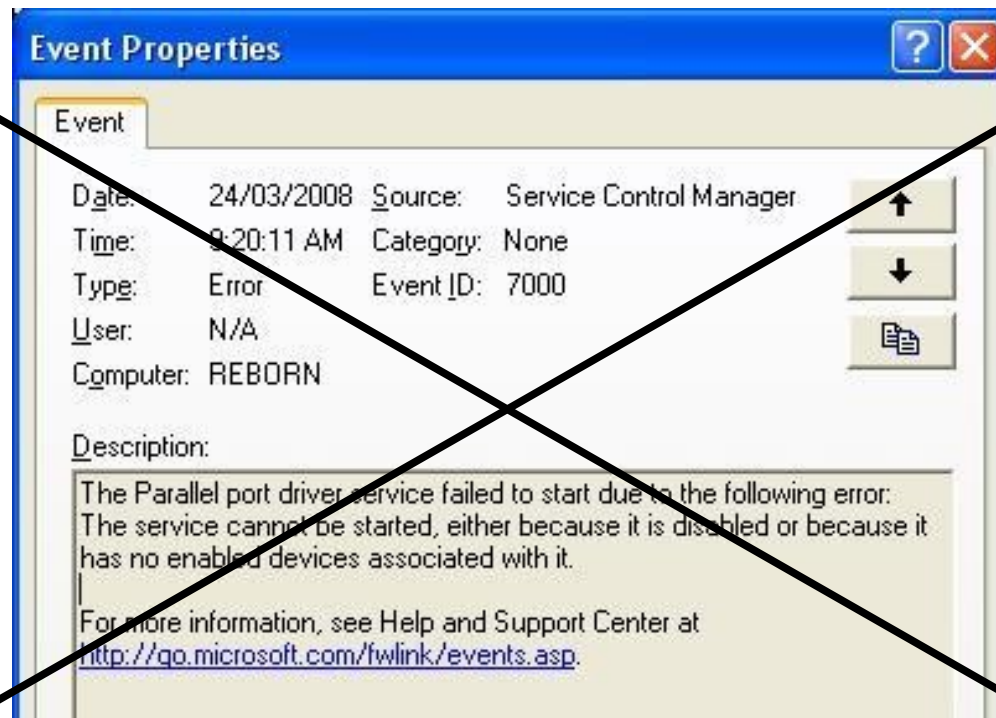
Sun Web Stack

Demo: Sun Web Stack

New OpenSolaris Technology: SMF

SMF – Service Management Facility

- Replaces RC scripts
- Handles dependencies between services
- Fault management



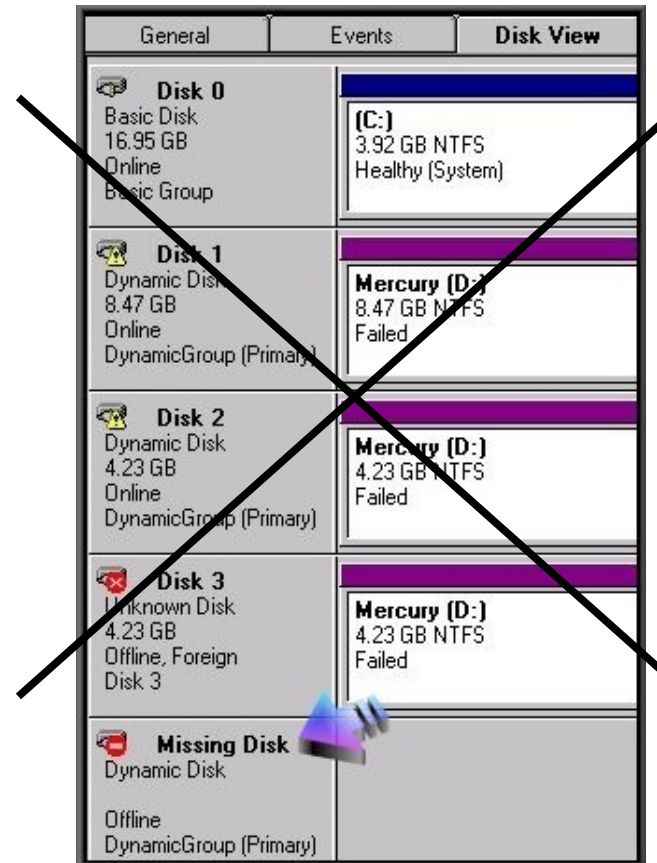
New OpenSolaris Technology: SMF

Demo: SMF

New OpenSolaris Technology: ZFS

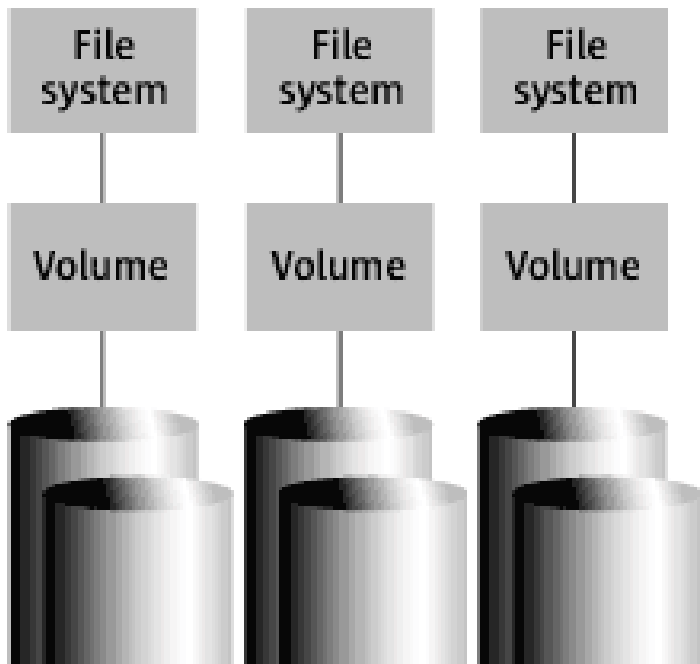
ZFS - Zettabyte File System

- Prevents silent data corruption
 - End-to-end integrity
 - Aggressive checksums
- First 128-bit file system
 - Capacity 1 billion TB
- Instantaneous snapshots
 - Almost zero overhead
 - Easy rollback
- Integrated volume management

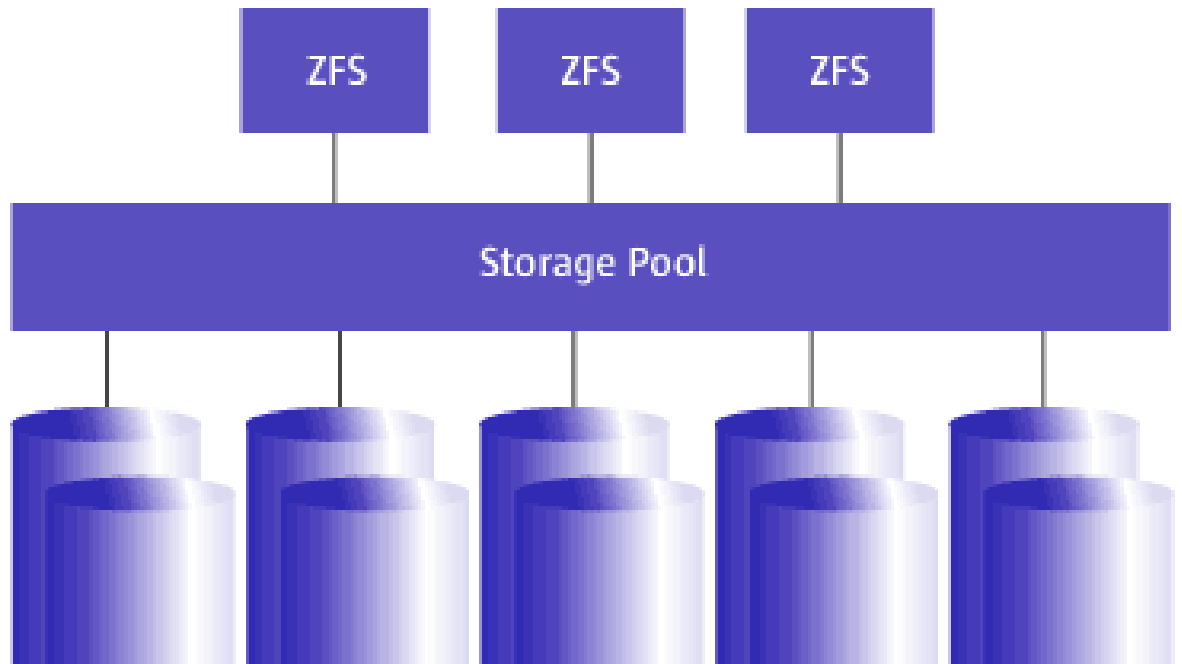


New OpenSolaris Technology: ZFS

Traditional Volumes



ZFS Pooled Storage



New OpenSolaris Technology: ZFS

Demo: ZFS

Interesting technologies: Zones

- Zones / Containers
 - Low overhead virtualization
 - Example: run many Apaches on 1 server

