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USE



IMPROVE



EVANGELIZE

An Introduction to OpenSolaris

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LOPSA Board of Directors



Agenda

- ▶ What is Solaris 10
- ▶ Solaris 10 Features
- ▶ What is Open Solaris
- ▶ Community
- ▶ Collaboration
- ▶ Code
- ▶ Contribution
- ▶ Confusing Options?
- ▶ What Next?



What is Solaris 10

- ▶ Most Revolutionary OS Sun Ever Released
- ▶ 600+ New Features
 - Service Management Facility
 - Containers (Zones)
 - DTrace
 - 64bit X86 and SPARC
 - Fault Management Architecture
 - **Free! (As in Beer)**



SMF – Service Management Facility

- ▶ Advanced Bootstrap Environment
- ▶ Promotes Services (Processes and Dependencies) to First Class Citizens
- ▶ Persistent Service Management
- ▶ `svc://localhost/network/ssh:default`
- ▶ `svc:/milestone/multi-user:default`

Containers (Zones)

- ▶ Isolated Application Environment
- ▶ Enhanced Security, Low Overhead
- ▶ Application Virtualization
- ▶ Resource Management

```
zoneadm list -v
```

ID	NAME	STATUS	PATH
0	global	running	/
1	websvr	running	/zones/websvr



DTrace

- ▶ Dynamic Kernel Tracing
- ▶ Live Instrumentation, Problem Determination
- ▶ C-like Language
- ▶ 60,000 Probes

- ▶ Application Improvements in Hours NOT Days

DTrace - Examples

Files opened by process

```
dtrace -n 'syscall::open*:entry { printf("%s %s",
    execname, copyinstr(arg0)); }
```

Syscall count by program

```
dtrace -n 'syscall::entry { @num[execname] = count(); }
```

Read bytes by process

```
dtrace -n 'sysinfo:::readch { @bytes[execname] =
    sum(arg0); }
```

Write size distribution by process

```
dtrace -n 'sysinfo:::writech { @dist[execname] =
    quantize(arg0); }
```



What is Open Solaris

- ▶ Community: Bringing Together Developers, Administrators, and Users
- ▶ Collaboration: Developers, Administrators, and Users Jointly Solving Problems
- ▶ Code: Open Source, Industry Strength Operating System
- ▶ Contribution: Administrators and Users Improving Through Community, Collaboration, and Code

Community

- ▶ OpenSolaris.org
- ▶ Mailing Lists and Message Boards
- ▶ Blogs
- ▶ Focused Communities and Specific Projects
- ▶ Source Browser
- ▶ Bug Database



Collaboration

- ▶ Direct Access to Sun's Developers
- ▶ Provide Feedback To Help Develop OS Roadmap
- ▶ Discuss With the Creators
 - Bryan Cantrill – Kernel Developer
 - Casper H.S. Dik – Sr. Security Engineer
 - Eric Schrock, Jeff Bonwick, Bill Moore - ZFS
 - Daniel Price – Zones
- ▶ Receive Guidance From The Best
 - Code Reviews
 - Integrations

Code

- ▶ Active Development of Solaris
- ▶ OSI Approved CDDL License
- ▶ Browse Online
- ▶ Download and Build, Free Developer Tools
- ▶ 600+ New Features, 10M Lines of Code
 - Service Management Facility
 - Containers (Zones)
 - DTrace
 - 64bit X86 and SPARC
- ▶ Free! (As in Speech)
- ▶ Only in OpenSolaris: ZFS, BrandZ



Contribution

- ▶ <http://opensolaris.org/os/communities/participation/>
- ▶ Browse the Source, Browse the Bugs
- ▶ Open New Bugs and RFEs
- ▶ Sign up as Contributor
 - http://opensolaris.org/os/about/sun_contributor_agreement
- ▶ Contribute Code
 - http://opensolaris.org/os/bug_reports/oss_bite_size
 - request-sponsor@opensolaris.org

Confusing Options?

- ▶ Solaris 10, Commercial/Free, Support Available
- ▶ Solaris Express, Advanced Features, Limited Support, Monthly Release
- ▶ SX Community Edition/Nevada, Development Tree, Leading Edge, Community Support, Bi-Weekly
- ▶ Distributions with LiveCD Options
 - SchilliX – Joerg Schilling, “Truest” To Solaris With Minimal Changes
 - BeliniX – Solaris with GNU Add-Ons
 - Nexenta – GNU/Solaris, Debian Basis with Solaris Kernel
 - MarTux – SPARC based distribution
- ▶ OpenSolaris, Build 37, Bi-Weekly



What Next?

- ▶ Use – Try It!
- ▶ Collaborate – Join a Mailing List, Community, or Project
- ▶ Improve – Submit Bugs, RFEs, Code, Documentation
- ▶ Evangelize – Tell Your Friends and Relatives



Resources

- ▶ <http://opensolaris.org/os/>
- ▶ <http://blogs.sun.com/>
- ▶ <http://cvs.opensolaris.org/>
- ▶ <http://www.sun.com/bigadmin/>
- ▶ <http://docs.sun.com/>
- ▶ <http://www.blastwave.com/>
- ▶ <http://www.genunix.org/>
- ▶ <http://svn.genunix.org/repos/>
- ▶ <ftp://ftp.berlios.de/pub/schillix/>
- ▶ <http://belinux.sarovar.org/>
- ▶ <http://www.gnusolaris.org/>

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Thank you!

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<http://lopsa.org/blog/2/>

“open” artwork and icons by chandan:

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

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