

# OpenSolaris

## **SOLARIS 10, PLATINUM BETA, AND THE ROAD TO OPENSOLARIS**

(Experiences of a beta tester and pilot participant)

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# *Where we are*

- ◆ Hinxton, near Cambridge
- ◆ Alongside EBI, Sanger



- ◆ Closure July 31<sup>st</sup> /August 24<sup>th</sup>

# *What we do*

- ◆ **Bioinformatics Service**

- ◆ Centralized data
- ◆ Maintain applications
- ◆ User Interfaces
- ◆ Shell/Web Access
- ◆ User Support

- ◆ **Users**

- ◆ 20000 academics
- ◆ Worldwide

# *Solaris History*

## ◆ Usage

- ◆ Mostly Sun Hardware – also SGI/IBM/Dell
- ◆ Mostly Solaris, since 2.2/2.3 in 1994
- ◆ Many problems in the 2.5-2.6 timeframe
- ◆ Solaris 7/8/9 and updates beta
- ◆ Solaris 10 platinum beta 2004

## ◆ x86

- ◆ Dell rackmount – 1999
- ◆ Solaris x86 enthusiasts
- ◆ B100x/B200x, V40z (loan)
- ◆ W2100z (64-bit)

# *Platinum Beta*

- ◆ Production Service

- ◆ Not just test or development
- ◆ Live and Critical

- ◆ Visit Menlo Park!

- ◆ Before and after
- ◆ Meet the engineers
- ◆ Some fantastic talks

- ◆ Dedicated Support

- ◆ Personal engineer
- ◆ Email lists
- ◆ Direct contact with the engineering team



# Systems Tested

## ◆ Sparc

- ◆ SunBlade 100 (install test)
- ◆ SunBlade 2000 (my machine)
- ◆ Multiple E420R, B100s blades
- ◆ V440s, V250
- ◆ V880



## ◆ x86

- ◆ V60x (HT on/off)
- ◆ B100x/B200x, V40z (loan)
- ◆ W2100z (very late)



# *Features (1)*

- ◆ Zones
  - ◆ We like them!
  - ◆ Security, isolation
  - ◆ Testing, development, service consolidation
- ◆ TCP/IP
  - ◆ No obvious improved performance
  - ◆ Significant reduction in CPU load
- ◆ NFSv4
  - ◆ Performance problems early (fixed)
  - ◆ Could be the dark horse



# Features (2)

- ◆ SMF
  - ◆ Integrated late
  - ◆ In production on main mailer now
- ◆ ZFS
  - ◆ Had the opportunity to try it
  - ◆ Some problems and disappointments
- ◆ Java Desktop
  - ◆ Integrated late
  - ◆ Many irritations...
  - ◆ But has great promise...



# *Some strangeness*

- ◆ Live web server in zone
  - ◆ Because the real machine had disk problems
  - ◆ Printer syntax changed!
- ◆ Zones and mnttab
  - ◆ Updated by each zone
  - ◆ Not locked -> bad things happened!
- ◆ Power management
  - ◆ Crash, bang, deadman
  - ◆ dtpower -> system wedged
  - ◆ “Is it OK to panic the system now?”

# *Production Rollout*

- ◆ It works a treat, so deploy!
  - ◆ Main mailer – under smf control
  - ◆ Web server
  - ◆ User front-end in a Zone
  - ◆ Development systems heavily zoned

=====  
159 systems: by OS  
=====

90	5.10
1	5.11
6	5.8
49	5.9
11	9.0
1	WS2.1

# OpenSolaris

- ◆ First rumours
  - ◆ Started talking to Sun May 2004
  - ◆ Tried to talk them out of it!
- ◆ Pilot Invite September 2004
  - ◆ Con-call with Jim, Andy and other customers
  - ◆ Joined up October 2004
- ◆ Sun were serious
  - ◆ Lot of work went into the planning
  - ◆ Not just “throwing it over the wall”



# *OpenSolaris*

- ◆ First peek at the code
  - ◆ CVS browser
  - ◆ Slow and hard to navigate
- ◆ The license – CDDL
  - ◆ Community feedback
  - ◆ OSI approved
  - ◆ Triggered much debate...
- ◆ Initial launch
  - ◆ Media leaks
  - ◆ Just dtrace

# *OpenSolaris*

- ◆ The SCM debate
  - ◆ Teamware - CVS - SVN
- ◆ Compiler support
  - ◆ Getting the Studio group on board
  - ◆ Buildable with gcc
- ◆ Buildable source
  - ◆ Much more useful (can use find and grep)
  - ◆ The mysteries of BFU
  - ◆ Ben Rockwood won the race

# OpenSolaris

## ◆ Visited MPK March 2005

- ◆ Solaris 10 beta wrapup
- ◆ Met the OpenSolaris crew
- ◆ OpenSolaris meetup

## ◆ How to launch

- ◆ Not the corporate gig
- ◆ Some crazy ideas came to naught

## ◆ New facilities

- ◆ Drop dead gorgeous source browser
- ◆ Mailing lists vs. the forum (email won!)
- ◆ Cute furry animals



# *Light the blue touch paper*

- ◆ We are go for launch!
  - ◆ No media leaks
  - ◆ Bring on the blogs
  - ◆ Where's my T-shirt?
- ◆ Processes incomplete
  - ◆ External contributions untested
- ◆ Source incomplete
  - ◆ Need those other consolidations
  - ◆ Crypto and dependencies



# *Fleshing it out*

- ◆ **Completing the source**
  - ◆ Crypto code and dependencies
  - ◆ Further analysis (time ran out)
  - ◆ Other consolidations – including docs
  - ◆ Some stuff will never be released
- ◆ **Allowing contributions**
  - ◆ Find bugs – [bugs.opensolaris.org](http://bugs.opensolaris.org)
  - ◆ Give it time
  - ◆ Get a sponsor – they drive the machinery

# *Getting Involved*

- ◆ [www.opensolaris.org](http://www.opensolaris.org)
- ◆ Discussions – mailing lists
- ◆ Join a community
  - ◆ Wide variety of topics
- ◆ Use the code
- ◆ Run Solaris Express
- ◆ Find and file bugs/rfes
  - ◆ [bugs.opensolaris.org](http://bugs.opensolaris.org)

# *Other irons in the fire*

## ◆ Solaris Express

- ◆ Standard version as before
- ◆ Developer release – biweekly
- ◆ Best way to get OpenSolaris for most

## ◆ ZFS

- ◆ We have 4<sup>th</sup> (?) beta version deployed
- ◆ Not ready yet

*To Sun*

- Thank you