



Binary packages for OpenSolaris

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Intro

- I have installed OpenSolaris (Solaris Express) – where to get software now ?
 - > OOTB
 - > Solaris Freeware (`/usr/sfw`)
 - > Extra
 - > Companion CD (`/opt/sfw`)
 - > Blastwave (`/opt/csw`)
 - > SUN Freeware (`/usr/local`)

Packages intro

- 2 types of packages
 - > cpio archives (`*.pkg`)
 - > for download from Internet
 - > Directory (e.g. Installation CDs)
 - > fast search on filesystems
- `pkg*` utils work on both types
 - > `pkgadd -d [<cpio_arch>|<directory>]`

Package management (1)

- **pkginfo**
 - > lists installed packages with short description
- **pkgadd**
 - > **-d** says where package directory resides
 - > **pkgadd -d ./packages SUNWsshr**
 - > Installs one package from directory packages
 - > **pkgadd -d bla.pkg**
 - > Installs everything from **bla.pkg**
 - > NOTE: **SUNWsshr** is subdirectory of packages/
- **pkgrm**
 - > Removes package from system

Package management (2)

- list of files in given package:

```
grep SUNWcry /var/sadm/install/contents | cut -d" " -f1
```

- To which package given file belongs:

```
cd /var/sadm/pkg && \  
  find . -name pkgmap -exec /usr/sfw/bin/ggrep \  
  -q zonecfg {} \; -print | \  
  awk -F '/' '{ print $5 }'
```

Package structure (1)

- **prototype (4)**
- package directory contains
 - > **pkgmap**
 - > List of package contents
 - > e.g. '1 f kernel/crypto/amd64/aes256 0755 root sys
38280 5947 1107209694'
 - > **pkginfo**
 - > package metadata
 - > **reloc/**
 - > directory structure

Package structure (2)

- > **archive/**
 - > binaries
- > **Install/**
 - > dependencies, install scripts
 - > Copyright, i.*, preremove, depend, postinstall, ...

Solaris freeware (1)

- Out-of-the-box
 - > From Solaris 9 on
 - > Compiled by Sun Studio compiler
 - > support by SUN (Prague folks)
 - > Uses standard Solaris libraries (unlike Blastwave)
 - > Samba, gcc, ant (make for Java), firefox, thunderbird, zebra, apache (/usr/apache), gimp (part of JDS)
 - > Other parts of system depend on it
 - > e.g. JDS

Solaris freeware (2)

- Solaris freeware is a consolidation (SFW gate)
- Official patches exist
- In base system but also as standalone packages
 - > e.g. `SUNWt1su`, `SUNWapch2r`, ...
- Use it !
 - > `export PATH=$PATH:/usr/sfw/bin:/usr/sfw/sbin`
 - > `/usr/sfw/lib/zebra`, ...

Solaris freeware (3)

- Is one of OpenSolaris projects:
 - > Contribute in the same way as to onnv gate:
 1. Find bug && fix bug
 2. find sponsor who will integrate the fix
 3. Provide feedback/bugreport to original software maintainers to fix the bug in the SW itself
 - > <http://opensolaris.org/os/project/sfwnv>

Companion CD (1)

- unsupported by SUN
- From Solaris 8 on
- Downloadable from the web:
 - > <http://www.sun.com/software/solaris/freeware>
 - > Separate packages can be downloaded, not just whole ISO
- Contains various utilities/programs:
 - > `export PATH=$PATH:/opt/sfw/bin:/opt/sfw/sbin`
 - > Wine, xmms, emacs, vim, OpenLDAP, expect, CUPS

Companion CD (2)

- Becoming project currently (*Companion*)
 - > <http://opensolaris.org/os/project/companion>
- Discussion is going on
 - > Join opensolaris-discuss@opensolaris.org
- There will be companion-CD maintainer (SUN)
- Will not be supported by SUN
- Future is not yet clear:
 - > Community project -> opportunity to participate !
 - > Create package, maintain package, ...

Packaging alternatives (non-SUN)

- standalone
 - > Sunfreeware.com
 - > Blastwave.Org
- related to OpenSolaris distributions

SUN freeware (1)

- NOTE: Solaris freeware != SUN freeware
- 14 years old now
 - > Do not get discouraged by web page :-)
 - > <http://www.sunfreeware.com>
- Separate community outside SUN
- Leader of this project will become gatekeeper for Companion project (Steven Christensen)
- Contains all public software you can think of ;-)
 - > Apache, vim, KDE, gnupg, ... (new versions)
 - > `/usr/local/`

SUN freeware (2)

- Overlaps somehow with Companion CD and Solaris freeware (gcc)
 - > But: it is well kept
 - > Fresh versions
 - > Not supported by SUN
 - > Community-like project
- Per-release packages
 - > From Solaris 2.5
 - > Links against libraries in given version (if it can)

Blastwave intro (1)

- Community-like project
 - > You can become maintainer, ...
- <http://www.blastwave.org>
- Does not link against libraries present in system
 - > Only core libraries are used (libc)
 - > Library Doubling
- Automatic install/download
 - > Package signing/verify (via gnupg)
 - > Ala Debian's `apt-get`

Blastwave intro (2)

- Blastwave.Org
 - > non-official, supported by SUN
 - > (SUN donates HW -
<http://www.blastwave.org/sponsors/>)
 - > Contains most used software (cca 1200 packages)
 - > up-to-date
 - > extra tree `/opt/csw`
 - > csw = Community SoftWare

Blastwave setup

- Download pkg-get package

- > `/usr/sfw/bin/wget http://www.blastwave.org/pkg_get.pkg`

- Install it

- > NOTE: it is package stream (viz `pkgadd (1M)`), takže nezadáváte base adresář

- > `pkgadd -d pkg-get.pkg all`

- Set paths

- > `PATH=$PATH:/opt/csw/bin`

- > `MANPATH=$MANPATH:/opt/csw/man`

Blastwave pkg install

- List packages
 - as root (system updates package repo)
`pkg-get -D`
 - resp. given package (argument is actually a regexp)
`pkg-get -D firefox`
- package install (including dependencies)
`pkg-get -i ethereal`
 - Install gnupg package
<http://www.blastwave.org/howto.html>

ALternatives

- Nexenta
 - apt-get, dpkg, ...
 - Solaris with Debian's face
- Belenix
 - Pkgsrc (in progress)
- Schillix
 - Spkg (unofficial, in progress)
- Ibiblio
 - Pkgs, Sunsite

Questions ?

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