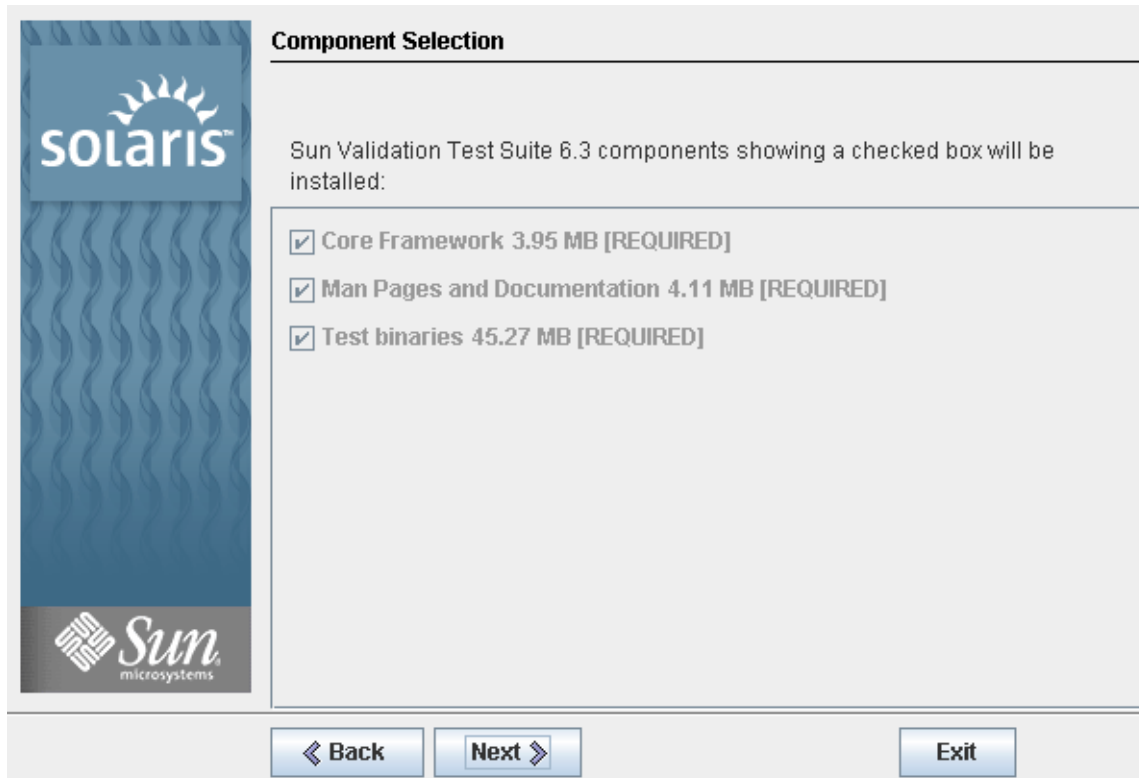


Software Configuration

Installing Software Options - Web Start

- A Component Selection appears:-

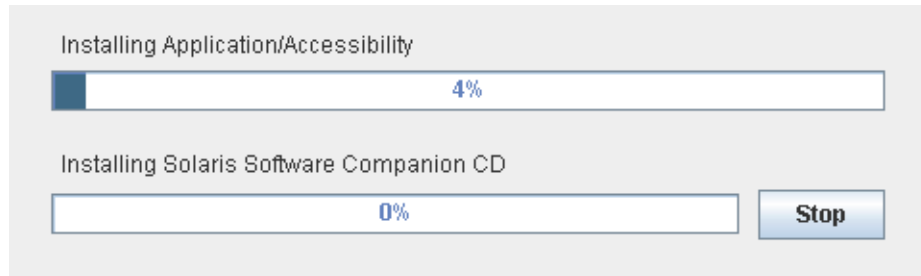


- In this case, you do not get a choice, but you may do with other software installs; click on *Next* to proceed..
- A Summary page appears with details of what is to be installed, click on *Install Now* to complete the process.

Software Configuration

Installing Software Options - Web Start

- A progress meter is displayed for some installs, for example:-



- The tool will indicate when the installation is completed.
- Consult the package documentation to activate and use the products.

Software Configuration

Adding Software - pkgadd

- Some software options can be installed using scripts; these scripts are specific to individual options, so their actions will vary.
- However, you will find that they use the *pkgadd* facility internally to perform installations.
- Because of this, *pkginfo* will still report on all the Sun options loaded.
- If you had to use *pkgadd* manually, a typical example to install the manual pages from a network path might be:-

```
# pkgadd -d /net/yamaha/software/sol10_u5/Solaris_10/Product SUNWman
```

```
Processing package instance <SUNWman> from </net/yamaha/  
software/sol10_u5/Solaris_10/Product>
```

On-Line Manual Pages(sparc) 43.0,REV=69.0

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This appears to be an attempt to install the same architecture and version of a package which is already installed. This installation will attempt to overwrite this package.

Using </usr> as the package base directory.

etc. etc..

- If you omitted the *SUNWman* package name, *pkgadd* would give you a menu of all the packages in the specified directory.

Software Configuration

Adding Software - *pkgadd* Responses

- If you want to avoid interaction with *pkgadd* you can create a file containing any required responses.
- Use the *-r* option with *pkgadd* to use it, for example

```
# pkgadd -r /software/install_info/admin -d . SUNWman
```

- This is an example file (*admin* in the above example)

```
mail=root
```

```
instance=overwrite
```

```
partial=nocheck
```

```
runlevel=nocheck
```

```
idepend=nocheck
```

```
rdepend=nocheck
```

```
space=ask
```

```
setuid=nocheck
```

```
conflict=nocheck
```

```
action=nocheck
```

```
basedir=default
```

- Sometimes (not usually with Sun packages) the package may contain something called a *request* script, which the package author includes to provide custom interaction.
- You can run *pkgask* against the package, which will run the request script and store the answers in a file, for example:-

```
# pkgask -r /tmp/admin -d . SFWmypkg
```

- The file */tmp/admin* will contain the required responses and can be used with *pkgadd* to install the package non-interactively.

Software Configuration

Information about packages; checking packages

- To obtain information about all packages installed:

pkginfo

```

system      IPLTadcon      Administration Server Console
system      IPLTadman      Administration Server Documentation
system      IPLTadmin      Administration Server
system      IPLTcons      Console Client Base
system      IPLTdscon     Directory Server Console
system      IPLTdsman     Directory Server Documentation
.

```

- To obtain information about one specific package:-

pkginfo -l SUNWadmap

```

PKGINST:   SUNWadmap
NAME:      System administration applications
CATEGORY:  system
ARCH:      sparc
VERSION:   11.10,REV=2004.09.30.17.23
BASEDIR:   /
VENDOR:    Sun Microsystems, Inc.
DESC:      Software used to perform system administration tasks
PSTAMP:    install-bldsp-1020040930172347
INSTDATE:  Feb 01 2005 16:07
HOTLINE:   Please contact your local service provider
STATUS:    completely installed
FILES:     69 installed pathnames
           11 shared pathnames
           15 directories
           11 executables
           1507 blocks used (approx)

```

- Perhaps more useful is the *pkgchk* command-

pkgchk SUNWsmbau

```

ERROR: /usr/sfw/sbin/smbd
pathname does not exist

```

- The above command checks the integrity of the *SUNWsmbau* package and has detected a missing file.

Software Configuration

Information about packages; checking packages

- It may also report on files which have been changed (attributes or contents)

```
# pkgchk SUNWzoner
```

```
ERROR: /etc/zones/index
```

```
  modtime <01/21/05 11:45:58 PM> expected <07/03/08  
12:18:19 PM> actual
```

```
  file size <285> expected <384> actual
```

```
  file cksum <23247> expected <31856> actual
```

- Running *pkgchk* on its own checks all packages:-

```
# pkgchk
```

```
ERROR: /boot/grub/menu.lst
```

```
  modtime <09/03/05 08:22:47 PM> expected <01/16/08  
08:07:36 PM> actual
```

```
  file size <1228> expected <1642> actual
```

```
  file cksum <38474> expected <2265> actual
```

```
ERROR: /boot/solaris/bootenv.rc
```

```
  modtime <08/09/07 02:44:45 AM> expected <01/16/08  
08:07:09 PM> actual
```

```
  file size <486> expected <613> actual
```

```
  file cksum <41804> expected <52490> actual
```

```
ERROR: /boot/solaris/devicedb/master
```

```
etc..
```

- Obviously some files change during normal operation.

Software Configuration

Information about packages; checking packages

- *pkgchk* is also useful in other ways:-

```
# pkgchk -l -p /etc/vold.conf
```

Pathname: /etc/vold.conf

Type: edited file

Expected mode: 0444

Expected owner: root

Expected group: bin

Referenced by the following packages:

SUNWcsr

Current status: installed

```
# pkgchk -l -p /opt/sfw/bin/top
```

Pathname: /opt/sfw/bin/top

Type: regular file

Expected mode: 0711

Expected owner: root

Expected group: sys

Expected file size (bytes): 37776

Expected sum(1) of contents: 65463

Expected last modification: Apr 26 13:02:23 2007

Referenced by the following packages:

SFWtop

Current status: installed

- The above examples validate individual paths, and show which packages they are related to.

Software Configuration

Information about packages; checking packages

- You can also list all the files associated with a package:-

```
# pkgchk -v SFWtop
```

```
/opt/sfw
```

```
/opt/sfw/bin
```

```
/opt/sfw/bin/top
```

```
/opt/sfw/man
```

```
/opt/sfw/man/man1
```

```
/opt/sfw/man/man1/top.1
```

- *pkgchk -l* can also be used with a package name as an argument, but the output is extremely verbose.
- The information about installed packages is stored under */var/sadm*, for example */var/sadm/install/contents*, but it is not likely that you will need to access this information directly.
- Some of the sub-directories under */var/sadm* can get very big, but you should not attempt to clear them out as you will be interfering with the package and patching records.

Software Configuration

Removing Software Options, Information about options

- It is also possible to remove options with *pkgrm*, for example:-

```
# pkgrm SUNWgt SUNWgtu
```

```
The following package is currently installed:  
SUNWgt          GT Device Drivers  
                (sparc) 11.0.11
```

```
Do you want to remove this package [y,n,?,q] y
```

```
## Removing installed package instance <SUNWgt>  
## Verifying package dependencies.  
## Processing package information.  
## Removing pathnames in <base> class  
/kernel/drv <shared pathname not removed>  
/kernel <shared pathname not removed>  
/etc/rc2.d/S91gtconfig
```

.. removal proceeds

- There is also a graphical tool called the Solaris Product Registry which is handy for examining software and removing it - we'll look at it shortly.
- Although Solaris 10 has a lot of Open Source software included with it, further packages are available at the Sun Freeware web site <http://www.sunfreeware.com>.
- Much of this is also distributed by Sun as an extra DVD/download called the Solaris Companion Software, and we'll be installing items from this at the end of this section.

Software Configuration

Packages and Zones

- There are options within the pkg commands that are relevant if you have Solaris zones installed.
- These issues are covered in full in the Zones section.

Software Configuration

Obtaining Additional Sun Software

- There is a very useful web resource available to you at Sun's <http://www.sun.com/bigadmin>

The screenshot shows the Sun BigAdmin portal interface. At the top, there's a navigation bar with 'Products & Services' and 'Support & Training' buttons. Below that, a sidebar on the left lists various categories like 'BigList', 'Discussions', 'Docs', 'Education', 'FAQs/HowTos', 'MOTDs', 'Newsletters', 'Patches', 'Products', 'Resources', 'Scripts', 'Services/Support', 'ShellMe', 'Software', 'Suggestions', and 'XPerts'. The main content area features a 'Message Of The Day' section with recent articles, a 'Test drive' advertisement for Solaris 9 OE, and several forum links such as 'Solaris Clustering Forum', 'Solaris x86 Forum', and 'Solaris Kernel Forum'.

- In addition to being a handy Solaris administrators resource, you can locate and download a variety of Sun related software packages.