Oracle Solaris 11 Cheat Sheet for the Image Packaging System

What is Image the Packaging System?

- The Image Packaging System (IPS) is a new network-centric software packaging and delivery system in Oracle Solaris 11. IPS allows efficient, observable, and controllable transitions between known configurations of software content providing administrators with safe system upgrade environments and better control over planned system downtime schedules.
- The ZFS file system is integral to IPS, providing administrators the ability to perform updates on a file system clones on live production systems.
- NOTE: While many IPS commands that query the system (`list`, `info`, `contents`, `search`, `history`) can be performed by any user, commands that make changes to the system image must be performed by adopting an appropriate administrative role.

Understanding the Package FMRI

Each software package is uniquely described by an FMRI (Fault Managed Resource Indicator), for example:
`pkg://solaris/diagnostic/wireshark@1.4.2,5.11-0.174:20110128T0635Z`

FMRI Segment	Description
`solaris`	Publisher
`diagnostic/wireshark`	Package name
`1.4.2`	Component version
`5.11`	Build version
`0.174`	Branch version
`20110128T0635Z`	Package time stamp

Installing Packages and Updating a System

Installing new packages on your system does not require a new boot environment (BE) to be created. However, creating a ZFS snapshot and clone initially consumes no additional space and is an instantaneous operation. So it should be considered as an administrative best practice.

Install a package called `diagnostic/wireshark`:

```
pkg install diagnostic/wireshark
```

Uninstall a package called `diagnostic/wireshark` using a short form of the package name:

```
pkg uninstall wireshark
```

Update all possible packages to the newest version, including all Oracle Solaris zones:

```
pkg update
```

Do a dry run of an update of all possible packages to the newest version:

```
pkg update -nv
```

Update all system packages to the newest version and require a new BE:

```
pkg update --be-name fix-nfs-issue
```

Getting Information or Searching for Packages

List packages currently installed on a system:

```
pkg list
```

Show information about an installed package called `wireshark`:

```
pkg info wireshark
```

Show information about an uninstalled package called `xchat`:

```
pkg info -r xchat
```

Show the contents of an installed package called `wireshark`:

```
pkg contents wireshark
```

Show all PNG files of an installed package called `wireshark`:

```
pkg contents -o path -a path=\*.png wireshark
```

Search all locally installed packages for the match `gcc`:

```
pkg search -l gcc
```

Search all packages in the configured repositories that contain dev header `gcrypt-module.h`:

```
pkg search 'gcrypt-module.h'
```

Search for all packages in the configured repositories that have the classification Web Services/Application and Web Servers:

```
pkg search -o pkg.name 'set:info.classification:*Application
and Web Servers'
```

Search for all packages installed locally that have a dependency on `library/libxml2`:

```
pkg search -l -o pkg.name 'depend::library/libxml2'
```

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Managing Repositories and Publishers

List currently associated publishers:

```
pkg publisher
```

Add a publisher at a specified repository URI:

```
pkg set-publisher -p http://www.example.com/solaris11
```

Add a publisher:

```
pkg set-publisher -g http://www.example.com/solaris11 siteapps
```

Remove a publisher:

```
pkg unset-publisher siteapps
```

Query a repository URI for publisher names and package counts:

```
pkgrepo -s http://pkg.oracle.com/solaris/release info
```

Change to the Oracle Solaris support repository with pre-downloaded certificates and keys from the Oracle Solaris release repository:

```
pkg set-publisher -G http://pkg.oracle.com/solaris/release \
  -g http://pkg.oracle.com/solaris/support -k /path/to/ssl_key \
  -c /path/to/ssl_cert solaris
```

Miscellaneous Commands

Browse package command history (includes graphical Package Manager client):

```
pkg history
```

Purge package command history:

```
pkg purge-history
```

Verify the integrity of the current system image:

```
pkg verify
```

Verify the integrity of installed package called `wireshark`:

```
pkg verify wireshark
```

Fix any errors reported by `pkg verify` on an installed package called `wireshark`:

```
pkg fix wireshark
```

Freeze a package called `wireshark` to prevent any accidental future updates:

```
pkg freeze wireshark
```

Useful Resources

- **Image Packaging System on Oracle Solaris 11**
  http://www.oracle.com/technetwork/server-storage/solaris11/technologies/ips-323421.html
- **Download Oracle Solaris 11**
  http://www.oracle.com/technetwork/server-storage/solaris11/downloads/index.html
- **Oracle Premier Support for Operating Systems**
  http://www.oracle.com/us/support/systems/operating-systems/index.html
- **Oracle Solaris 11 Training**
  http://www.oracle.com/technetwork/server-storage/solaris11/training/index.html

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Contact Us

For more information about Oracle Solaris 11, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative. Last updated: March 15, 2016.

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