

# Oracle Solaris 11 Cheat Sheet for Image Packaging System

## What is Image Packaging System?

- 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 publishers
```

### 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/solaris11/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/solaris11/release \  
-g http://pkg.oracle.com/solaris11/support -k /path/to/ssl_key \  
-c /path/to/ssl_cert solaris
```

## 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>

## 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
```

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## Contact Us

For more information about Oracle Solaris 11, visit [oracle.com](http://oracle.com) or call +1.800.ORACLE1 to speak to an Oracle representative. Last updated: September 29, 2011.



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