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Updating to Oracle Solaris 11.2

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This article details the steps required to update your Oracle Solaris 11 11/11 or 11.1 system to Oracle Solaris 11.2 using the Image Packaging System (IPS), a feature of Oracle Solaris.

Introduction to Updating a System to Oracle Solaris 11.2

In the Oracle Solaris 11 release, the IPS packaging system is used to perform software updates. This simplifies the process of updating a system regardless of whether you are updating single packages or multiple packages as part of an system update.

There are two sources of packages for Oracle Solaris 11 systems. The release repository is for those customers without a support agreement, and the support repository is for those with a support agreement. Each repository requires different steps to complete an OS update. See "Determining Your Starting Point" on page 2 to determine which repository, version of the OS, and SRU you are using. Next, follow the steps in the appropriate procedure in "Updating a System to Oracle Solaris 11.2" on page 5.

Note - There are no update methods or tools available to transition from Oracle Solaris 10 to Oracle Solaris 11 or 11.2. You must either do a fresh installation of Oracle Solaris 11 or migrate your Oracle Solaris 10 OS instances or zones to an Oracle Solaris 11 system. For more information, refer to "Transitioning From Oracle Solaris 10 to Oracle Solaris 11.2".

Updating to Oracle Solaris 11.2 and Zones

All of the zones on your system will automatically be updated when you update the global zone. Make sure that you follow any specific instructions to deal with special packages as noted in the following procedures.

Updating to Oracle Solaris 11.2 and Third-Party Packages

In general, third-party packages are not touched during the update process. Third-party services, and the software they deliver, will only be disturbed by the update process when the service shares configuration files with the OS, or when the files are installed in directories that are written over by the update process. See "File Actions" in "Packaging and Delivering Software With the Image Packaging System in Oracle Solaris 11.2".

Determining Your Starting Point

The steps necessary to update your system are different depending on which repository you are using and on which version of the OS you are running. To help you identify your starting point use the following procedures:

- "How to Identify Which Repository Is in Use" on page 2
- "How to Identify Which OS a System Is Running" on page 3
- "How to Verify Which SRU a System Is Running" on page 3

▼ How to Identify Which Repository Is in Use

● **Check the package publisher definition.**

If you are using an internal repository, then use a URL that identifies the local repository. In this example, the Oracle Solaris support repository is the configured package source.

```
% pkg publisher
PUBLISHER         TYPE     STATUS URI
solaris           origin   online https://pkg.oracle.com/solaris/support/
```

For a system without a support contract and using the Oracle Solaris release repository, the output would look like:

```
% pkg publisher
PUBLISHER         TYPE     STATUS URI
solaris           origin   online http://pkg.oracle.com/solaris/release/
```

▼ How to Identify Which OS a System Is Running

● **Display basic information about the system.**

In this example, Oracle Solaris 11.1 is the installed OS.

```
% uname -a
SunOS solaris 5.11 11.1 sun4v sparc SUNW,T5240
```

▼ How to Verify Which SRU a System Is Running

The following text shows the how to identify which SRU is installed on a system running Oracle Solaris 11.1. There are also examples for:

- An Oracle Solaris 11.1 system without an SRU, see Example 1.
- An Oracle Solaris 11 11/11 system with an SRU, see Example 2.
- An Oracle Solaris 11 11/11 system without an SRU, see Example 3

● **Display the information about pkg:/entire.**

In this example, Oracle Solaris 11.1 with SRU 18.4 installed. The identification of the SRU number is the 18.4 as the third and fourth numbers displayed after Oracle Solaris 11.1 in the Summary and Version lines.

```
% pkg info entire
          Name: entire
       Summary: entire incorporation including Support Repository Update
                (Oracle Solaris 11.1.18.4.0).
   Description: This package constrains system package versions to the same
                build.  WARNING: Proper system update and correct package
                selection depend on the presence of this incorporation.
                Removing this package will result in an unsupported system.  For
                more information see https://support.oracle.com/CSP/main/article
                ?cmd=show&type=NOT&doctype=REFERENCE&id=1501435.1.
      Category: Meta Packages/Incorporations
         State: Installed
     Publisher: solaris
       Version: 0.5.11 (Oracle Solaris 11.1.18.4.0)
 Build Release: 5.11
        Branch: 0.175.1.18.0.4.0
Packaging Date: April 1, 2014 07:58:03 PM
          Size: 5.46 kB
          FMRI: pkg://solaris/entire@0.5.11,5.11-0.175.1.18.0.4.0:20140401T195803Z
```

Example 1 Package Information Displayed for Oracle Solaris 11.1 Without SRUs

If your system has Oracle Solaris 11.1 installed, without any SRUs, the package information will look like the following. Note that the entries after the Build Release line are different from the 11/11 version.

```
% pkg info entire
          Name: entire
       Summary: Incorporation to lock all system packages to the same build
   Description: This package constrains system package versions to the same
                build.  WARNING: Proper system update and correct package
                selection depend on the presence of this incorporation.
                Removing this package will result in an unsupported system.
      Category: Meta Packages/Incorporations
         State: Installed
     Publisher: solaris
       Version: 0.5.11
 Build Release: 5.11
        Branch: 0.175.1.0.0.24.2
Packaging Date: Wed Sep 19 19:01:35 2012
          Size: 5.46 kB
          FMRI: pkg://solaris/entire@0.5.11,5.11-0.175.1.0.0.24.2:20120919T190135Z
```

Example 2 Package Information Displayed for Oracle Solaris 11 11/11 With an SRU

If your system has Oracle Solaris 11 11/11 installed, with a SRU, the package information will look like the following. In this example SRU 10.5 is installed. Note that the entries after the Build Release line are different because of the SRU.

```
% pkg info entire
          Name: entire
       Summary: entire incorporation including Support Repository Update
                (Oracle Solaris 11 11/11 SRU 10.5).
   Description: This package constrains system package versions to the same
                build.  WARNING: Proper system update and correct package
                selection depend on the presence of this incorporation.
                Removing this package will result in an unsupported system.  For
                more information see https://support.oracle.com/CSP/main/article
                ?cmd=show&type=NOT&doctype=REFERENCE&id=1372094.1.
      Category: Meta Packages/Incorporations
         State: Installed
     Publisher: solaris
       Version: 0.5.11 (Oracle Solaris 11 SRU 10.5)
 Build Release: 5.11
        Branch: 0.175.0.10.0.5.0
Packaging Date: Fri Aug 03 18:26:27 2012
          Size: 5.45 kB
          FMRI: pkg://solaris/entire@0.5.11,5.11-0.175.0.10.0.5.0:20120803T182627Z
```

Example 3 Package Information Displayed for Oracle Solaris 11 11/11 Without SRUs

If your system has Oracle Solaris 11 11/11 installed, without any SRUs, the package information looks like:

```
% pkg info entire
          Name: entire
       Summary: Incorporation to lock all system packages to the same build
   Description: This package constrains system package versions to the same
                build.  WARNING: Proper system update and correct package
                selection depend on the presence of this incorporation.
                Removing this package will result in an unsupported system.
      Category: Meta Packages/Incorporations
         State: Installed
     Publisher: solaris
       Version: 0.5.11
 Build Release: 5.11
        Branch: 0.175.0.0.0.2.0
Packaging Date: October 20, 2011 02:38:22 PM
          Size: 5.45 kB
          FMRI: pkg://solaris/entire@0.5.11,5.11-0.175.0.0.0.2.0:20111020T143822Z
```

Updating a System to Oracle Solaris 11.2

Which procedure you should use depends on which OS is installed, which SRU, if any, is installed, and which package repository the system is configured to use.

- If your system is running 11.1 or 11.1 with an SRU, follow the instructions in "How to Update a System Running 11.1 to Oracle Solaris 11.2" on page 5.
- If your system is running 11 11/11 and an SRU, follow the instructions in "How to Update a System Running 11 11/11 with an SRU to Oracle Solaris 11.2" on page 5
- If your system is running 11 11/11 and is using the release repository, follow the instructions in "How to Update a System Running 11 11/11 to Oracle Solaris 11.2 Using the Release Repository" on page 6.

Note - The amount of time it takes to update a system is dependent on many factors, including system and network resources.

▼ How to Update a System Running 11.1 to Oracle Solaris 11.2

If Oracle Solaris 11.1 is installed, with or without SRUs, no special steps are required to update the system.

1.   Become an administrator.

For more information, see "Using Your Assigned Administrative Rights" in "Securing Users and Processes in Oracle Solaris 11.2 ".

2.   Update the system packages.

- If you are using the Oracle Solaris support repository, update the system packages.

  `# pkg update --accept`
- If you are using the Oracle Solaris release repository, review the update's license.

  `# pkg update --license|less`

  If you accept the terms, update the system packages.

  `# pkg update --accept`

3.   Reboot using the updated boot environment.

`# init 6`

▼ How to Update a System Running 11 11/11 with an SRU to Oracle Solaris 11.2

Some of the updates that were made to the 11 11/11 release require manual steps to complete the update process. A consequence of these changes is that you can not update your system with one command and have different steps to do to complete an update to 11.2 depending on which SRU is installed on your system.

Before You Begin Make sure to verify which Oracle Solaris 11 SRU you have installed. For instructions, see "How to Verify Which SRU a System Is Running" on page 3.

1. **Become an administrator.**

   For more information, see "Using Your Assigned Administrative Rights" in "Securing Users and Processes in Oracle Solaris 11.2 ".

2. **For installed SRUs earlier than SRU #10.5, update the system to SRU #10.5.**

   This command creates a new boot environment which includes SRU #10.5. After this update is complete follow the instructions in step 4 to complete the update to 11.2.

   ```
   # pkg update --accept entire@0.5.11,5.11-0.175.0.10
   # reboot
   ```

3. **For installed SRUs from #10.5 and later, update the system to 11.2.**

   a. **SPARC only: For each zone, remove the `ldomsmanager` package.**

   For any SPARC based system that has one or more zones installed, you must perform an additional step. For each zone installed on the system, remove the `pkg:/system/ldoms/ldomsmanager` package as follows:

   ```
   # for z in `zoneadm list`; do zlogin $z pkg uninstall ldomsmanager; done
   ```

   b. **Update the IPS package.**

   ```
   # pkg update package/pkg
   ```

   Due to earlier bugs in some packages, it was possible to incorrectly install those packages on a system. This command removes the following bad packages, if they are installed:

   - x86: `pkg:/consolidation/ldoms/ldoms-incorporation`
   - SPARC:

       `pkg:/consolidation/nvidia/nvidia-incorporation`

       `pkg:/driver/network/ethernet/elxl`

       `pkg:/driver/network/ethernet/pcn`

       `pkg:/driver/network/ethernet/dnet`

       `pkg:/driver/network/ethernet/iprb`

   c. **Update the remaining system packages.**

   ```
   # pkg update --accept
   ```

   d. **Reboot using the updated boot environment.**

   ```
   # init 6
   ```

▼ How to Update a System Running 11 11/11 to Oracle Solaris 11.2 Using the Release Repository

Updating to Oracle Solaris 11.2 is a multistep process due to the requirement that certain system packages must be updated first in order to achieve a successful update for the remaining system packages.

1. **Become an administrator.**

For more information, see "Using Your Assigned Administrative Rights" in "Securing Users and Processes in Oracle Solaris 11.2 ".

2. **Review the update's license.**

   `# pkg update --license|less`

3. **If you agree to the license terms, update the system packages.**

   This command creates a new boot environment.

   `# pkg update --accept`

Note - For systems that cannot directly connect to Oracle's hosted package repositories, download the Oracle Solaris 11.1 Pre-Upgrade Repository Image. This image contains packages that you must update prior to updating to Oracle Solaris 11.2. See http://www.oracle.com/technetwork/server-storage/solaris11/downloads/index.htm for more information. The ISO image contains a README file that describes the necessary steps for constructing the repository and updating to Oracle Solaris 11.2.

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4. **Reboot using the updated boot environment.**

   `# reboot`

5. **SPARC only: For each zone, remove the `ldomsmanager` package.**

   For any SPARC based system that has one or more zones installed, you must perform an additional step. For each zone installed on the system, remove the `pkg:/system/ldoms/ldomsmanager` package as follows:

   `# for z in \`zoneadm list\`; do zlogin $z pkg uninstall ldomsmanager; done`

6. **Update the IPS package.**

   `# pkg update pkg:/package/pkg`

7. **Review the update's license.**

   `# pkg update --license|less`

8. **If you agree with the license terms, update the rest of the packages.**

   `# pkg update --accept`

9. **Reboot using the updated boot environment.**

   `# init 6`

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