Oracle® Solaris 11.1 Release Notes

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Contents

Preface

Oracle Solaris 11.1 Release Notes provides some important installation, update, and runtime information that you should consider before installing or running the Oracle Solaris 11.1 operating system (OS). It describes some known issues in this release, with workarounds where available. It also includes a list of fixed bugs that were documented for the previous release.

For information about new features in this release, see *Oracle Solaris 11.1 What's New*.

For information about the end-of-software support statements, see `http://www.oracle.com/technetwork/systems/end-of-notices/eonsolaris11-392732.html`.

Note – This Oracle Solaris release supports systems that use the SPARC and x86 families of processor architectures. The supported systems appear in the Oracle Solaris OS: Hardware Compatibility Lists. This document cites any implementation differences between the platform types.

Who Should Use This Book

These notes are for users and system administrators who install and use the Oracle Solaris 11.1 OS.

How This Book Is Organized

This document includes the following information:

Chapter 1, "Before You Begin," provides brief information about Oracle Solaris 11.1 and discusses general installation, update, and runtime information that you need to consider before installing or running Oracle Solaris 11.1.

Chapter 2, "Installation Issues," describes issues that you might encounter during the installation of Oracle Solaris 11.1.

Chapter 3, "Update Issues," describes issues that might occur while you are updating to Oracle Solaris 11.1.

Chapter 4, "Runtime Issues," describes issues that might occur while you are running Oracle Solaris 11.1.

Appendix A, "Previously Documented Bugs That Are Fixed in the Oracle Solaris 11.1 Release," lists bugs that were documented in the *Oracle Solaris 11 Release Notes* and have been fixed in the Oracle Solaris 11.1 release.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P–1   Typographic Conventions

Typeface	Description	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your .login file.
		Use ls -a to list all files.
		machine_name% you have mail.
AaBbCc123	What you type, contrasted with onscreen computer output	machine_name% **su**
		Password:
aabbcc123	Placeholder: replace with a real name or value	The command to remove a file is rm *filename*.
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*.
		A *cache* is a copy that is stored locally.
		Do *not* save the file.
		Note: Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows UNIX system prompts and superuser prompts for shells that are included in the Oracle Solaris OS. In command examples, the shell prompt indicates whether the command should be executed by a regular user or a user with privileges.

TABLE P–2   Shell Prompts

Shell	Prompt
Bash shell, Korn shell, and Bourne shell	`$`
Bash shell, Korn shell, and Bourne shell for superuser	`#`
C shell	`machine_name%`
C shell for superuser	`machine_name#`

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Before You Begin

This chapter provides brief information about the Oracle Solaris 11.1 operating system (OS) and discusses general installation, update, and runtime information that you need to consider before installing or running Oracle Solaris 11.1. Note that not every installation, update, and runtime consideration is covered in this chapter.

Note – Oracle's Sun System defects have migrated to Oracle's bug database. As a result, customers with support contracts can now use My Oracle Support (MOS) to search the bug information by using BugDB bug IDs (previously CRs). For more information, see the Sun Systems Defects Move to Oracle's Bug Database (Doc ID 1501467.1) knowledge article that is available on MOS.

About Oracle Solaris 11.1

Oracle Solaris 11.1 is the first update release of Oracle Solaris 11 11/11. Oracle Solaris 11.1 builds on the features of Oracle Solaris 11 for secure and agile deployment of services in large-scale cloud environments and enterprise data centers.

Oracle Solaris 11.1 provides several new features that include simplified administration, rapid application provisioning with designed-in virtualization, data integrity using scalable data management, and advanced protection. For more information about the latest Oracle Solaris 11.1 features, see *Oracle Solaris 11.1 What's New*.

Refer to the documentation listed in the following table when using or updating to the Oracle Solaris 11.1 OS.

TABLE 1–1   Where to Find More Information

Topic	More Information
Installing and setting up Oracle Solaris 11.1	*Installing Oracle Solaris 11.1 Systems*

TABLE 1–1 Where to Find More Information *(Continued)*

Topic	More Information
Establishing an Oracle Solaris 11.1 network	*Introduction to Oracle Solaris 11 Networking*
Administering an Oracle Solaris 11.1 system	*Managing System Information, Processes, and Performance in Oracle Solaris 11.1*
Accessing the support repository	https://pkg-register.oracle.com/
Accessing the initial software release repository	http://pkg.oracle.com/solaris/release/
Accessing bug information in BugDB	Sun Systems Defects Move to Oracle's Bug Database (Doc ID 1501467.1)
End-of-software support statements	http://www.oracle.com/ technetwork/systems/end-of-notices/ eonsolaris11-392732.html
All Oracle Solaris 11.1 documentation	http://docs.oracle.com/cd/E26502_01/index.html

Note – For some hardware configurations, you might need supplemental hardware-specific instructions for installing the Oracle Solaris OS. Verify your hardware documentation for supplemental Oracle Solaris installation documentation.

Installation Considerations

This section provides general information that you need to consider when installing Oracle Solaris 11.1.

System Requirements for Installing Oracle Solaris 11.1

Prior to installing Oracle Solaris 11.1, review the following memory and disk space requirements.

Note – The table lists the minimum and recommended requirements to perform an initial installation of Oracle Solaris 11.1. You might need additional memory and disk space on your installed system.

TABLE 1–2 Installation System Requirements

Installer	Minimum Memory	Minimum Disk Space	Recommended Minimum Disk Space
Automated Installer	1 GB for x86 1.5 GB for SPARC	The minimum disk space needed for an automated installation varies depending on the number and size of the packages that you include in the installation.	13 GB
Live Media	1.5 GB for x86	5 GB	7 GB
Text installer	1 GB for x86 1.5 GB for SPARC	2.9 GB for x86 2.8 GB for SPARC	4.9 GB for x86 4.8 GB for SPARC

For information about the supported systems and implementation differences between the platform types, see the *Oracle Solaris OS: Hardware Compatibility Lists* at http://www.oracle.com/webfolder/technetwork/hcl/index.html.

Initial Root Password Expires After Live Media Installation

After a Live Media installation, the root password is initially set to the same password as the user account that is created during installation, but it is created in an expired state. The first time you assume the root role, you should authenticate using your own password. At this point, you will receive a message that the password for the user root has expired, and you will be requested to provide a new one.

If you are prompted to assume the root role after starting an administrative command from a GNOME menu item, you will be prompted to supply a new root password. If you are using the su command to assume the role, the command sequence will be as follows:

```
$ su
Password:
su: Password for user 'root' has expired
New Password:
Re-enter new Password:
su: password successfully changed for root.
```

SPARC: System Requires Firmware Update to Boot Oracle Solaris 11.1

Some of the SPARC systems require a firmware update in order to boot Oracle Solaris 11.1. On systems that have not been updated, the following error message might be displayed when the system is booted:

```
os-io Cross trap sync timeout:
```

Workaround: Update your affected system's firmware to the version listed in Table 1–3 before you install the Oracle Solaris 11.1 OS. The following table describes the minimum firmware level required for affected SPARC systems when running Oracle Solaris 11.1.

TABLE 1–3   Firmware Levels Required for SPARC Systems

SPARC Platform	Firmware Revision	Patch
T2000	6.7.11	139434-08
T1000	6.7.11	139435-08
Netra T2000	6.7.11	139436-07
Netra CP3060	6.7.11	None
T6300	6.7.11	139438–08
T5120/T5220	7.4.0.b	147307-01
T6320	7.4.0.b	147308-01
Netra T5220	7.4.0.b	147309-01
Netra CP3260	7.4.0.b	None
T5140/T5240	7.4.0.b	147310-01
T5440	7.4.0.b	147311-01
T6340	7.4.0.b	147312-01
Netra T5440	7.4.0.b	147313-01
Netra T6340	7.4.0.b	147314-01
T3-1	8.1.0.c	147315-02
T3-2	8.1.0.c	147316-02
T3-4	8.1.0.c	147317-02
T3-1B	8.1.0.c	147318-02

TABLE 1–3 Firmware Levels Required for SPARC Systems *(Continued)*

SPARC Platform	Firmware Revision	Patch
Netra T3-1	8.1.0.c	147319-02
Netra T3-1B	8.1.0.c	147320-01
Netra T3-1BA	8.1.0.c	None
M3000	1102	12573531
M4000	1102	12573537
M5000	1102	12573539
M8000	1102	12573543
M9000	1102	12573546

Note that T4 systems were released with firmware version 8.1.4 and do not require any firmware upgrade to boot Oracle Solaris 11.1 . For more information about the required firmware levels for SPARC systems, see My Oracle Support.

Oracle VM Server for SPARC: WAN Boot During an Automated Install of Guest Domains Is Slower on Older System Firmware

Users of the SPARC T-Series servers from Oracle might experience a slow WAN boot during an automated installation of a guest domain if they are running an older version of the system firmware.

Workaround: For System Firmware 8.*x*, you must have at least version 8.1.1.b or greater. For System Firmware 7.*x*, you require at least version 7.4.0.d or greater. The following information shows the platforms and the required firmware version.

System Firmware 8.*x* supports the following platforms:

- Netra SPARC T3-1
- Netra SPARC T3-1B
- Sun SPARC T3-1
- Sun SPARC T3-2
- Sun SPARC T3-4
- Sun SPARC T3-1B
- Sun SPARC T4-1
- Sun SPARC T4-1B
- Sun SPARC T4-2
- Sun SPARC T4-4

System Firmware 7.*x* supports the following platforms:

- Sun SPARC Enterprise T5120
- Sun SPARC Enterprise T5140
- Sun SPARC Enterprise T5220
- Sun SPARC Enterprise T5240
- Sun SPARC Enterprise T5440
- Sun Blade T6320 - Sun Blade T6340

The following platforms do not have the required firmware version available:

- Netra CP3260
- Netra SPARC T3-1BA

For more information about specific versions of system firmware, see *Oracle VM Server for SPARC Release Notes* available at: `http://www.oracle.com/technetwork/documentation/vm-sparc-194287.html`.

Update Considerations

This section provides information that you need to consider when updating your system to Oracle Solaris 11.1. If you are transitioning your system from Oracle Solaris 10 to Oracle Solaris 11.1, see "Transitioning From Oracle Solaris 10 to Oracle Solaris 11.1" on page 17.

Updating Your System From Oracle Solaris 11 to Oracle Solaris 11.1

Use the pkg command-line utility to update from Oracle Solaris 11 to Oracle Solaris 11.1. For more information, see the pkg(1) man page.

Note – The update process fails if you are running Oracle Solaris 11 SRU 12 or later with BIND or Fetchmail installed. To overcome this issue, see the workaround for bugs 7203326 and 7200467.

▼ How to Update From Oracle Solaris 11 to Oracle Solaris 11.1

1 Update your Oracle Solaris 11 system with the packages that are needed for the update to Oracle Solaris 11.1.

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

- If your system is under a support contract and not running with Oracle Solaris 11 Support Repository Update 10.4 or later, this command updates the system's software.

■ If your system is not under a support contract, this command updates your system with the packages that are needed to perform the update.

In both cases, a new boot environment is created with the newly updated packages.

2 Reboot the system for the new boot environment to take effect.

```
# reboot
```

3 Ensure that the correct packages are installed on the system.

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

4 Update the system to Oracle Solaris 11.1.

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

A new boot environment is created and the required new packages are installed.

5 Reboot the system for the new boot environment to take effect.

```
# reboot
```

See Also For detailed instructions on updating to Oracle Solaris 11.1, see the following documentation:

■ Updating to Oracle Solaris 11.2
■ How to Update to Oracle Solaris 11.1 Using the Image Packaging System

Transitioning From Oracle Solaris 10 to Oracle Solaris 11.1

You cannot directly update an Oracle Solaris 10 system to Oracle Solaris 11 or Oracle Solaris 11.1. You must perform a fresh installation of Oracle Solaris 11.1 by using the existing installation options. However, you can migrate your Oracle Solaris 10 OS instances or zones to Oracle Solaris 11.1 systems.

For more information, see *Transitioning From Oracle Solaris 10 to Oracle Solaris 11.1*.

Runtime Considerations

This section provides general information that you need to consider while running the Oracle Solaris 11.1 OS.

Java Recommendations

The default Java environment in Oracle Solaris 11.1 is Java 7 Update 7. For the latest features, security, and performance enhancements, customers are urged to update by using the latest Support Repository Update (SRU). The feature enhancements are detailed in the Release Notes for each Java 7 Update. As an example of a significant enhancement to Java 7 for running on the latest Oracle Solaris systems, Java 7 Update 4 introduced the new `OracleUcrypto` Provider, which on SPARC T4 and later platforms, directly accesses the native (in-silicon) encryption capabilities for maximum performance while minimizing the CPU load.

Oracle Solaris 11.1 also ships with Java 6 Update 35. Public updates for Java 6 are no longer issued. See `http://www.oracle.com/technetwork/java/eol-135779.html` for more details. Oracle Premier Support for the Java SE Platform is available. Customers not on a Java support plan and who have not moved to Java 7, are encouraged to review the Java SE support roadmap for additional information about support for previous releases of Java SE.

GCC 4.5.2 Package Does Not Provide `include-fixed` Header Files

The GCC 4.5.2 package does not automatically generate header files in the `include-fixed` GCC install directory. You might see compiler error messages when building applications that include header files that are not ANSI compliant.

Workaround: To generate the affected header files, type the following commands:

```
# processor=‘uname -p‘
# [ $processor = "i386" ] && platform="pc" || platform="oracle"
# /usr/gcc/4.5/lib/gcc/$processor-$platform-solaris2.11/4.5.2/install-tools/mkheaders
```

CLI Message Localization

Command-line interface (CLI) messages are not fully localized. Messages for operating system CLI components are partially localized and no longer installed by default.

Workaround: To see the messages for operating system CLI components, manually install the `system/osnet/locale` package.

/usr/ccs/bin Is a Symbolic Link to /usr/bin

The `/usr/ccs/bin` directory is a symbolic link to `/usr/bin`.

Because of this change, for example, the `/usr/ccs/bin:/usr/gnu/bin:/usr/bin` path in the `PATH` environment variable is now equivalent to `/usr/bin:/usr/gnu/bin`. This change might result in changes to the utilities that are found by `PATH` searches.

If the /usr/ccs/bin change causes issues in locating GNU utilities, the PATH environment variable should be rearranged to place /usr/gnu/bin earlier than /usr/bin or utilities should be invoked with a full path.

Changes to User Password States with the passwd Command (7187165)

Starting with Oracle Solaris 11.1, some of the password state transitions that were not allowed in Oracle Solaris 11 have been restored for authorized users. Specifically, the following password state transitions are now allowed in Oracle Solaris 11.1 with the passwd command:

- Assigning a password to a non UNIX authentication account using passwd *username*.
- Conversion of an account that has a password directly to a non UNIX authentication account.
- Ability to manually lock and unlock an account that is in a non UNIX authentication state. In this case, the passwd -sa command shows NL for the account.

These password state transitions were supported in previous Oracle Solaris releases other than Oracle Solaris 11.

Note – Assigning a new password to an account in the locked state still requires an explicit unlock with the passwd -u command. Also, accounts that are marked as non UNIX authentication accounts with the passwd -N command do not have the failed log in counter increased.

For more information, see the passwd(1) man page.

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Installation Issues

This chapter describes issues that you might encounter during the installation of Oracle Solaris 11.1 and suggests workarounds where available.

Issues When Installing Oracle Solaris 11.1

The following issues might occur during or after the installation of Oracle Solaris 11.1.

Automated Installer Fails to Install on Systems With High Memory and Low Disk Space Allocation (7090030)

When installing Oracle Solaris by using the Automated Installer (AI), the installation might fail if the system has more physical RAM than disk space. The space allocated to swap and dump devices might reduce the available space for installing the OS. The following error message might be displayed:

```
ImageInsufficentSpace: Insufficient disk space available (8.84 GB) for
estimated need (9.46 GB GB) for Root filesystem
```

Workaround: Choose one of the following workarounds:

- If not limited by the size of the disk, allocate more space to the slice being used as a vdev in the root pool.

Note – On x86 systems, if necessary, allocate additional space to the Solaris2 partition.

- Disable the need for a dump and swap volume to be allocated. In the AI manifest, specify the value `true` for the nodump and noswap attributes in the `<logical>` tag of the `<target>` section. For example:

```
<logical noswap="true" nodump="true">
</logical>
```

- Define the zpool and allocate smaller swap and dump sizes in the manifest:

```
<target>
    <disk whole_disk="true" in_zpool="rpool">
        <disk_keyword key="boot_disk"/>
    </disk>
    <logical>
        <zpool name="rpool" root_pool="true">
            <zvol name="swap" use="swap">
                <size val="2gb"/>
            </zvol>
            <zvol name="dump" use="dump">
                <size val="4gb"/>
            </zvol>
        </zpool>
    </logical>
</target>
```

- Disable allocation of one swap or dump device, and allocate a specific size to the remaining device (dump or swap). The following example shows how to disable swap and add a 4 GB dump size:

```
<target>
    <disk whole_disk="true" in_zpool="rpool">
        <disk_keyword key="boot_disk"/>
    </disk>
    <logical noswap="true">
        <zpool name="rpool" root_pool="true">
            <zvol name="dump" use="dump">
                <size val="4gb"/>
            </zvol>
        </zpool>
    </logical>
</target>
```

For more information about how to edit the AI manifest, refer to the ai_manifest(4) man page.

AI Services Created From Oracle Solaris 11 Images Install Oracle Solaris 11.1 (7144329)

The default AI manifest for an install service created from an Oracle Solaris 11 AI image contains the following entry in the `<software_data>` section:

```
<name>pkg:/entire@latest</name>
```

This entry has the effect of installing the latest release of the Oracle Solaris operating system (OS) that is available from the publisher specified in the AI manifest.

If the package repository referenced by the Oracle Solaris 11 AI manifest contains both Oracle Solaris 11 and Oracle Solaris 11.1 system packages, the Oracle Solaris 11 install service installs the Oracle Solaris 11.1 OS instead of Oracle Solaris 11, because that is the latest release of the Oracle Solaris OS available in the repository.

For i386 AI client installations using an Oracle Solaris 11 install service where the referenced package repository contains Oracle Solaris 11.1 system packages, the installation starts but then fails with a PlanCreationException error because of intra-release incompatibilities. The following error message will be displayed:

```
Reason:  Installed version in root image is too old for origin dependency
```

For SPARC AI client installations, the installation does not fail but installs Oracle Solaris 11.1 rather than Oracle Solaris 11.

Note – Installing Oracle Solaris 11.1 from an Oracle Solaris 11 install service is not a supported operation.

Workaround: To ensure that an Oracle Solaris 11 AI install service continues to install the latest version of Oracle Solaris 11 in the specified publisher's repository, perform the following steps:

1. Determine the manifest to modify.

   $ **installadm list -n** *svcname* **-m**

   For example:

   $ **installadm list -n default-i386 -m**

2. Export the manifest to a file.

   $ **pfexec installadm export -n** *svcname* \
   -m *manifest-name* **-o** */path-to-save-manifest*

   For example:

   $ **pfexec installadm export -n default-i386** \
   -m orig_default -o /home/me/orig_default.xml

3. Modify the <name>pkg:/entire@latest</name> line in the saved manifest to specify the Oracle Solaris 11 release.

   The following example specifies the latest version of the Oracle Solaris 11 release that is available in the referenced repository:

   <name>pkg:/entire@0.5.11,5.11-0.175.0</name>

   The version string 0.5.11,5.11-0.175.0 specifies the Oracle Solaris 11 release. The version string 0.5.11,5.11-0.175.1 specifies the Oracle Solaris 11.1 release.

   To install a specific version of the Oracle Solaris 11 release, make the version string more specific. The following example uses the original Oracle Solaris 11 11/11 release:

```
<name>pkg:/entire@0.5.11,5.11-0.175.0.0.0.2.0</name>
```

4. Obtain the value of the publisher origin in the saved manifest.

   The following example is the value from the default AI manifest:

   ```
   <origin name="http://pkg.oracle.com/solaris/release"/>
   ```

5. Verify that the version you want to install is available in the referenced repository.

   ```
   $ pkg list -afvg http://pkg.oracle.com/solaris/release entire@0.5.11,5.11-0.175.0
   ```

6. Update the manifest in the service.

   ```
   $ pfexec installadm update-manifest -n svcname \
   -m manifest-name -f /path-to-save-manifest
   ```

   For example:

   ```
   $ pfexec installadm update-manifest -n default-i386 \
   -m orig_default -f /home/me/orig_default.xml
   ```

SPARC: FMD Errors During Installation of Oracle Solaris on a T-Series Server (16081077)

During the installation of Oracle Solaris 11.1 on a SPARC T4 server, the following warning might be displayed on the console:

```
usbecm0: object not found
```

This warning is not fatal and does not affect the normal operation of the system.

Workaround: Perform the following steps:

1. Identify the Fault Management Resource Identifier (FMRI).

   ```
   # fmadm faulty
   ```

2. Clear the faults and the Fault Management (FM) log file.

   ```
   # fmadm acquit <fmri>
   ```

   ```
   # fmadm flush <fmri>
   ```

For more information, see the "Repairing Faults or Defects" chapter in the Oracle Solaris Administration: Common Tasks guide.

Passing a Directory to a `zoneadm install` Command Drops Profiles With Duplicate Names Under That Tree (7093399)

The zoneadm install command has a -c option that can take a directory as a parameter. This directory can contain subdirectories with system configuration profiles in them.

Due to the flattening of the directory structure, if files with the same name are within the directory structure, then only one of those files is copied to the installed zone.

For example, assume that you have the following directory tree:

```
directory-name/profiles1/sc_profile.xml
directory-name/profiles2/sc_profile.xml
directory-name/profiles3/sc_profile.xml
```

Assume that you then run the following `zoneadm install` command:

```
# zoneadm -z zone install -c directory-name
```

The files in the directory structure are copied to the new zone as if you issued the following commands in sequence:

```
# cp directory-name/profiles1/sc_profile.xml \
        zoneroot/etc/svc/profile/site/sc_profile.xml
# cp directory-name/profiles2/sc_profile.xml \
        zoneroot/etc/svc/profile/site/sc_profile.xml
# cp directory-name/profiles3/sc_profile.xml \
        zoneroot/etc/svc/profile/site/sc_profile.xml
```

As a result, each subsequent copy overwrites the previous copy, leaving only one file. The system therefore is not configured properly after installation.

Workaround: Ensure that each profile, regardless of its location in the directory tree, has a unique name so that profiles will not overwrite each other when copied. For example, assume the following directory structure:

```
directory-name/profiles1/sc_profile_a.xml
directory-name/profiles2/sc_profile_b.xml
directory-name/profiles3/sc_profile_c.xml
```

Executing the `zoneadm` command copies the files to the zone as follows:

```
zoneroot/etc/svc/profile/site/sc_profile_a.xml
zoneroot/etc/svc/profile/site/sc_profile_b.xml
zoneroot/etc/svc/profile/site/sc_profile_c.xml
```

Automated Installer Configuration Profiles Are Openly Accessible From the Web Server (7097115)

The configuration profiles that Automated Installer servers provide to install clients are openly accessible over the network through the web server. Hence, any encrypted passwords that are provided as part of the configuration profiles are not secure.

Workaround: Choose one of the following workarounds:

- Use the IP Filter feature, which helps limit access to the Automated Installer web server port to only specific networks or clients.

  For more information about the IP Filter feature, see "Packet Filtering" in *Oracle Solaris 11 Security Guidelines*.

- During the first boot after installation of a system, log in and change the passwords that were configured by using the Automated Installer. For security, boot the system to single-user mode.

- On SPARC based systems, add the -s option to the boot command.

- On x86 systems, edit the GRUB menu interactively, and append the -s option to the kernel$ command.

Adding New Elements Using the `aimanifest` Command Fails If the Direct Next Element Is Missing (7093788)

Automated Installer manifests are modified from a Derived Manifest script by using the aimanifest command.

When adding a new element or a subtree to an AI manifest using the add or load subcommand of aimanifest, the new element or subtree root might be misplaced among its sibling elements. If all of the following conditions are met, the new element or the root of the subtree is added to the end of the list of sibling elements, even if that is not the correct place:

- Other elements exist under the parent where the new element would be added.

- Other elements with the same tag are not present under the parent where the new element would be added.

- No elements that follow the new element are present.

As a result, the manifest validation might fail. You might see a similar error message when you run AI or in the /system/volatile/install_log file as a failure of the derived manifest module (DMM) checkpoint:

```
16:48:04: aimanifest: INFO: command:add,
path:/auto_install/ai_instance/
target/logical/zpool[@name=rpool]/filesystem@name,
value:zones

16:48:04:    aimanifest: INFO: cmd:success,
validation:Fail,
node:/auto_install[1]/ai_instance[1]/
target[1]/logical[1]/zpool[1]/filesystem[1]

16:48:05  Derived Manifest Module: script completed successfully
```

```
16:48:05  Derived Manifest Module: Manifest header refers to no DTD.

16:48:05  Derived Manifest Module: Validating against DTD:
/usr/share/install/ai.dtd.1

16:48:05  Validation against DTD
/usr/share/install/ai.dtd.1] failed

16:48:05 /system/volatile/manifest.xml:6:0:ERROR:VALID:DTD_CONTENT_MODEL:
Element zpool content does not follow the DTD,
expecting
(vdev* , filesystem* , zvol* , pool_options? , dataset_options? , be?),
got (be filesystem )

16:48:05 Derived Manifest Module: Final manifest failed XML validation

16:48:05 Error occurred during execution of 'derived-manifest' checkpoint.

16:48:05 Aborting: Internal error in InstallEngine

ERROR: an exception occurred.

Derived Manifest Module: Final manifest failed XML validation
```

Workaround: Assemble the AI manifest in a different order or with a different series of add or load subcommands such that new elements or subtrees are added in their proper order. The order is determined by the DTD files in the /usr/share/install directory. The following DTD files are used to validate AI manifests:

- ai.dtd.1
- target.dtd.1
- boot_modes.dtd.1
- software.dtd.1

Add all the origin elements before adding mirror elements. For example, if you are setting up the origin and mirror elements of a publisher, the software.dtd.1 file has the following line, which indicates that mirror elements must come after origin elements:

```
<!ELEMENT publisher (origin+, mirror*)>
```

Automated Installer Fails to Match Target Disks When Using Dual-Path Boot Disk (7079889)

If you install the Oracle Solaris OS on a dual-path FC boot disk, the installation fails with the following errors:

```
2011-08-16 18:41:38,434   InstallationLogger.target-selection DEBUG
Traceback (most recent call last):
File "/usr/lib/python2.6/vendor-packages/solaris_install/auto_
install/checkpoints/target_selection.py", line 3419, in execute
self.select_targets(from_manifest, discovered, dry_run)
```

```
2011-08-16 18:41:38,642 InstallationLogger INFO
Automated Installation Failed

2011-08-16 18:41:38,693 InstallationLogger INFO
Please see logs for more information

2011-08-16 18:41:38,743 InstallationLogger DEBUG
Shutting down Progress Handler
```

Workaround: Disconnect one of the dual-path FC cables.

Multiple AI Service Name Conflicts on AI Servers (7042544)

On AI servers configured to serve multiple networks, the mdns daemon might warn that identical instances of AI service names are registered. The following error message might be displayed:

```
mDNSResponder: [ID 702911 daemon.error]
Client application registered 2 identical instances of service some-service._
OSInstall._tcp.local. port 5555.

mDNSResponder: [ID 702911 daemon.error]
Excessive name conflicts (10) for some-service._
OSInstall._tcp.local. (SRV); rate limiting in effect
```

Note – AI clients can still obtain the necessary information to install.

Workaround: To avoid multiple AI service name conflicts, set the exclusion or inclusion property for the svc:/system/install/server:default SMF service.

The following example shows how to set the all_services/exclude_networks and all_services/networks properties to include all the networks that were configured on the system.

```
# svccfg -s svc:/system/install/server:default \
setprop all_services/exclude_networks = false

# svccfg -s svc:/system/install/server:default \
delprop all_services/networks #1.#1.#1.#1/#1

# svccfg -s svc:/system/install/server:default \
delprop all_services/networks #2.#2.#2.#2/#2

...

# svccfg -s svc:/system/install/server:default \
addprop all_services/networks 0.0.0.0/0
```

```
# svcadm refresh svc:/system/install/server:default
# svcadm restart svc:/system/install/server:default
```

#1.#1.#1.#1/#1 and #2.#2.#2.#2/#2 are the IP addresses for the network interfaces that have been configured.

For more information about mDNS, see "Administering Multicast DNS" in *Working With Naming and Directory Services in Oracle Solaris 11.1*.

Text Installer Displays in English When Another Language Is Chosen (7095437)

When using the text installer on an equivalent of a physical console such as a web-based remote keyboard, video monitor, mouse, or a VirtualBox console, the installer displays text in English even if you have chosen another language during the boot from the install media. The installer displays text in English to avoid a garbled display of non-ASCII characters.

The text installer displays localized text only on an equivalent of a serial console, for example, a service console based on SSH or telnet.

Workaround: None.

Text Installer Does Not Allow Installing Oracle Solaris Into Another Slice in the Existing `Solaris2` Partition (7091267)

The text installer does not allow installation of Oracle Solaris to a slice within an existing `Solaris2` partition. This issue occurs only if you have selected to preserve data on another slice or set of slices within that same partition.

The Select Slice in Fdisk Partition screen of the text installer displays one existing slice in the `Solaris2` partition as having the type `rpool`. You cannot use the F5 key to change the type of an unused slice to `rpool`.

Unless you want to destroy data on the existing `rpool` slice, you have to quit the installer. This issue does not affect other changes in your system.

Workaround: To use the text installer, you must install Oracle Solaris onto a separate disk. You can install into another slice with free space in an existing `Solaris2` partition using the Automated Installer (AI) with a customized manifest. The customized AI manifest specifies the slice to be used for the installation.

For example, to install Oracle Solaris onto an `s11-rpool` root pool on slice 7 of an existing `Solaris2` partition, specify the following in the `targets` section of the customized AI manifest:

```
<target>
    <disk>
        <disk_name name="c3d0" name_type="ctd"/>
            <partition action="use_existing_solaris2">
                <slice name="7" in_zpool="s11-rpool">
                <size val="6144mb"/>
                </slice>
            </partition>
    </disk>
    <logical>
        <zpool name="s11-rpool" is_root="true">
            <filesystem name="export" mountpoint="/export"/>
            <filesystem name="export/home"/>
            <be name="solaris"/>
        </zpool>
    </logical>
</target>
```

`sysconfig` and Text Installer Applications Terminate Unexpectedly From Timezone Screens (7026383)

`sysconfig` and text installer applications might terminate unexpectedly from Timezone screens if you perform either of these operations:

- Press Ctrl + L.
- Press F9 and select the Cancel button.

This issue occurs only when you have selected one of the following time zone regions:

- Africa
- Americas
- Asia
- Europe
- Pacific Ocean

Note – Any selections you made before the applications are terminated are not saved.

Workaround: To avoid this behavior, do not attempt to quit these applications from the Timezone screens. Use the following workarounds:

- If you are running the text installer, you will automatically return to the installation main menu. From the main menu, select the Install Oracle Solaris option to restart the text installer.
- If you are running the `sysconfig` application, do the following:
    1. Log in as `root` with an empty password.
    2. Reboot to resume the interactive configuration process from the beginning.

Installation Fails If Non-ASCII Characters Are Specified in the Real Name Field (7108040)

If you are installing Oracle Solaris by using interactive installers or the sysconfig utility, the installation might fail if non-ASCII characters are specified in the Your Real Name field in the Users screen.

The installation might fail or characters might not be displayed correctly in the steps that follow after specifying the non-ASCII characters in the Users screen.

Workaround: Use only ASCII characters in the Real Name field.

x86: Xorg VESA Driver Does Not Work on Oracle VM VirtualBox If the Extensible Firmware Interface Is Enabled (7157554)

The Xorg VESA driver does not work on Oracle VM VirtualBox if the Extensible Firmware Interface (EFI) is enabled, which means that the Live Media does not boot to Xorg. Therefore, a GUI installation is not possible.

Workaround: Perform the following steps:

1. Install Oracle Solaris 11.1 using the text installer or Automated Installer (AI).
2. Use the pkg command to install the solaris-desktop group package.
3. Install the VirtualBox guest tools that include the VirtualBox Xorg native driver.

For instructions about installing the solaris-desktop group package, see "Adding Software After Live Media Installation" in *Installing Oracle Solaris 11.1 Systems*.

Network-Based Automated Installer Fails on x2100 Platform With nge Drivers (6999502)

If you use the network-based Automated Installer to install Oracle Solaris on an x2100 platform with an nge driver, the following error message might be displayed after a duration of time:

```
kernel$ /s11-173-x86/platform/i86pc/kernel/$ISADIR/unix -B install_media=http://
$serverIP:5555//install/images/s11-x86,install_service=s11-173-x86,install_svc_address=
$serverIP:5555
loading '/s11-173-x86/platform/i86pc/kernel/$ISADIR/unix -B install_media=http://
$serverIP:5555//install/images/s11-x86,install_service=s11-173-x86,install_svc_address=
$serverIP:5555'
module$ /s11-173-x86/platform/i86pc/$ISADIR/boot-archive
```

```
loading ' /s11-173-x86/platform/i86pc/$ISADIR/boot-archive' ...

Error 20: Mulitboot kernel must be loaded before modules

Press any key to continue...
```

This problem occurs in a PXE installation that uses BIOS version 1.1.1 and later, when you use the x2100 BIOS with an nge driver.

Workaround: Choose one of the following workarounds to install Oracle Solaris on an x2100 platform with an nge driver:

- Install Oracle Solaris by using one of the following methods:
    - Automated Installer
    - Live Media
    - Text installer
- Use the bge driver instead of the nge driver.
- Change the BIOS version to version 1.0.9.

x86: 64-bit: DVD Installation Might Fail on Oracle's Sun Fire x4170m3 and x4270m3 Servers (7185764)

When you install Oracle Solaris on Oracle's Sun Fire x4170m3 and x4270m3 servers, the installation might crash intermittently with a bad marshal data error. The reason for this failure is a corrupted solaris.zlib file in the DVD mounted image.

Due to the corrupted file, the read operation will fail on some of the files in the lofi file device in the mounted ISO image. The system displays several error messages during installation.

Workaround: Perform the following steps to disable Virtualization Technology for Directed-IO (VT-d).

1. Restart or power on the server.
2. Press the F2 key when prompted to enter the BIOS Setup utility.
3. In the BIOS IO Menu screen, select IO > IO Virtualization and disable the VT-d setting.

To enable VT-d for the other EHCI controllers after installing Oracle Solaris, perform the following steps:

1. Add the following line to the /kernel/drv/ehci.conf file:

   ```
   iommu-dvma-mode="unity";
   ```
2. Reboot the system.
3. Enable VT-d in the BIOS Setup utility.

Hardware-Related Issues

This section describes hardware-related issues in Oracle Solaris 11.1.

x86: Some Dell Desktops Hard-Hang in UEFI Mode During the Early Kernel Boot Phase (7150035)

A few Dell desktop models, for example, the Precision T1600 and Optiplex 790 models, hard-hang at boot time when booted in the Unified Extensible Firmware Interface (UEFI) mode. This problem is a known Dell firmware issue.

Workaround: To complete the installation, boot the system by specifying the `-B uefirt_disable=1` boot attribute.

- To specify this attribute for a one-time boot, edit the GRUB menu at boot time.
- To make the change permanent, use the `bootadm` command with the `change-entry` subcommand.

  ```
  # bootadm change-entry -i entry-number kargs='-B uefirt_disable=1'
  ```

  After installation, you must run the `bootadm change-entry` command again on the boot environment that the installer created.

Caution – Make sure to run the `bootadm change-entry` command *before* creating any new boot environments to ensure that all new boot environments inherit the same kernel argument strings. Otherwise, you will need to manually change every boot entry that you create. For more information about using the `bootadm` command to make changes to a particular boot entry, see "How to Set Attributes for a Specified Boot Entry in the GRUB Menu" in *Booting and Shutting Down Oracle Solaris 11.1 Systems*.

Note – These workarounds disable UEFI runtime services, meaning that Oracle Solaris cannot set the system's default boot device. As a result, you might have to manually set the system's default boot device after installation. You can do so by using the system's firmware setup utility, for example, the UEFI Boot Manager.

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Update Issues

This chapter describes issues that might occur while you are updating to Oracle Solaris 11.1.

Issues When Updating to Oracle Solaris 11.1

The following problems might occur when you update to Oracle Solaris 11.1.

`syslog` Reports That the `/etc/mail/aliases.db` Alias Database Is Out of Date After an Update (7096745)

On a system where no local aliases (`/etc/mail/aliases`) have been added, after an update to Oracle Solaris 11.1 from previous Oracle Solaris releases, you might see the following log message:

```
hostname sendmail[<pid>]:
[ID 702911 mail.info] alias database /etc/mail/aliases.db out of date
```

This message does not affect your system.

Workaround: Run `/usr/sbin/newaliases` with `root` privileges.

`/var/crash` Content Is Preserved in a Directory When Updating From Oracle Solaris 11 to Oracle Solaris 11.1 (7174490)

When you are updating from Oracle Solaris 11 to Oracle Solaris 11.1, if the `/var/crash` directory is not empty, the `pkg` utility preserves the contents of the directory by moving them to a temporary directory during the update. The following message is displayed:

```
The following unexpected or editable files and directories were
salvaged while executing the requested package operation; they
have been moved to the displayed location in the image:

  var/crash -> /tmp/tmpkh1zTy/var/pkg/lost+found/var/crash-20120906T161348Z
```

where crash-*20120906T161348Z* is the name of the directory including the timestamp. Note that the name of the directory will change depending on the time of the upgrade.

Workaround: Because the files are crash dumps from the system, the system can operate correctly without them. If you want to preserve the files, review the contents of the destination directory and copy the required files back into the /var/crash directory.

64-bit: `iscsiadm` Utility Cannot Remove the Discovery Address (7184125)

If a user upgrades to Oracle Solaris 11.1 and if the iSCSI initiator contains the discovery-address, then after the upgrade the user cannot delete the old discovery-address. The following error message is displayed:

```
iscsiadm: unexpected OS error
iscsiadm: Unable to complete operation
```

Workaround: Before the first reboot to the previous boot environment, remove the discovery-address by using the following command:

```
# iscsiadm remove discovery-address IP-address[:port-number]
```

You can add the new discovery-address after the upgrade.

Update From Oracle Solaris 11 SRU Version 12 or Later to Oracle Solaris 11.1 Fails If Fetchmail Is Installed (7200467)

You cannot update from Oracle Solaris 11 Support Repository Update (SRU) version 12 or later to Oracle Solaris 11.1 if Fetchmail is installed.

Oracle Solaris 11.1 supports Fetchmail version 6.3.21 whereas Oracle Solaris 11 SRU version 12 and later supports Fetchmail version 6.3.22. The update process fails because the supported Fetchmail version is higher in SRU version 12.

Workaround: Choose one of the following workarounds:

- Uninstall Fetchmail before updating your system from SRU version 12 or later to Oracle Solaris 11.1. After completing the update process, reboot your system and install Fetchmail 6.3.21.

- Set the -facet.version-lock.mail/fetchmail option to false in the global zone and local zones where Fetchmail is installed.

  ```
  # pkg change-facet facet.version-lock.mail/fetchmail=false
  ```

- Upgrade from Oracle Solaris 11 SRU version 12.4 or later to Oracle Solaris 11.1 SRU version 1.4 or a later version.

Update From Oracle Solaris 11 SRU Version 12 or Later to Oracle Solaris 11.1 Fails If BIND Is Installed (7203326)

You cannot update from Oracle Solaris 11 Support Repository Update (SRU) version 12 or later to Oracle Solaris 11.1 if BIND is installed.

Workaround: Choose one of the following workarounds:

- Set the facet.version-lock.service/network/dns/bind option to false by using the pkg change-facet command.

  ```
  # pkg change-facet facet.version-lock.service/network/dns/bind=false
  # pkg change-facet facet.version-lock.network/dns/bind=false
  ```

- Upgrade from Oracle Solaris 11 SRU version 12.4 or later to Oracle Solaris 11.1 SRU version 1.4 or a later version.

SPARC: Update From Oracle Solaris 11 SRU 10 Fails on a System With Zones (7192769)

On a SPARC system with zones, an update to Oracle Solaris 11.1 fails if you are running Oracle Solaris 11 SRU 10 or using the update packages from the release repository. The following error message is displayed:

```
pkg sync-linked: No solution was found to satisfy constraints
```

Workaround: Log in to the zone and remove the ldomsmanager package by using the following command:

```
# pkg uninstall ldomsmanager
```

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Runtime Issues

This chapter describes the following known issues while running Oracle Solaris 11.1:

Firmware Issues

This section describes firmware issues in the Oracle Solaris 11.1 release.

x86: Some Systems With BIOS Firmware Do Not Boot If the `EFI_PMBR` Entry in the Master Boot Record Is Not Active (7174841)

Some systems with BIOS firmware will not boot if the `EFI_PMBR` entry in the master boot record, which is the only partition, is not active. After installing Oracle Solaris 11.1, the system does not boot. The following message is displayed:

```
No Active Partition Found
```

Possible Cause 1: The system firmware incorrectly handles the boot disk, because the boot disk is partitioned with the GUID Partition Table (GPT) partitioning scheme.

Workaround 1: Invoke the fdisk program and then activate the Protective Extensible Firmware Interface (EFI) partition on the boot disk.

Possible Cause 2: The system was originally installed in UEFI mode but rebooted in legacy (BIOS) mode.

Workaround 2: Install the system in legacy mode by changing the firmware setup option, for example, by selecting "Boot Mode" or a similar option.

SPARC: GPT Labeled Disk Support

GPT labeled disk support is available on SPARC based systems. The following table describes the supported firmware for SPARC platforms.

SPARC Platform	Firmware
T5	At least version 9.1
M5	At least version 9.1
T4	At least version 8.4

If your SPARC T4, T5, or M5 system has older firmware, perform the following steps to download the updated firmware from My Oracle Support:

1. Sign in to My Oracle Support.
2. Click the Patches & Updates tab.
3. In the Patch Search box, select the Product or Family (Advanced) search option.
4. In the Product is field, enter a partial product name to display a list of possible matches, and then select the product name.
5. Select one or more releases from the Release is drop-down menu.
6. Click the Search button to display a list of available downloads that are listed as patches.
7. Select the patch name that you want to download.

   The download page is displayed.
8. Click Download.

Note – If you do not have permissions to download the patch, see the How Patches and Updates Entitlement Works knowledge article that is available on MOS.

For more information, see "Boot Support for EFI (GPT) Labeled Disks" in *Oracle Solaris 11.1 Administration: ZFS File Systems*.

x86: Booting in UEFI Mode From the ISO Image Is Very Slow

Booting in UEFI mode from the ISO image is very slow, which is a known Oracle VM VirtualBox firmware issue.

Workaround: None.

x86: Oracle Solaris Does Not Boot on Disks With More Than Two-Terabyte LUN/Disk With 4 GB Emulex and Qlogic FC HBA Cards (7187083, 7188696)

On x86 systems, Oracle Solaris does not boot on disks with more than 2 TB LUN/Disk with 4 GB Emulex and Qlogic FC HBA cards.

The following error message is displayed for Emulex FC HBA cards:

```
error: no such device: 07528c2afbec7b00.
Entering rescue mode...
grub rescue>  ls
(hd0) (hd0,gpt9) (hd0,gpt2) (hd0,gpt1) (hd1)
grub rescue>
```

No error message is displayed during the OS boot with Qlogic FC HBA cards. The boot fails silently because disks with more than 2 TB LUNs are invisible to the boot loader.

Workaround: Ensure that the system boot volume is less than 2 TB.

System Configuration Issues

This section describes system configuration issues in the Oracle Solaris 11.1 release.

Custom SMF Site Profiles Should Be Placed in a Subdirectory (7074277)

When an Oracle Solaris instance is unconfigured, the custom SMF site profiles in the /etc/svc/profile/site directory are deleted.

Workaround: During unconfiguration, place the custom site profiles to be preserved in a subdirectory of the /etc/svc/profile/site directory.

`sysconfig configure` **Command With the** `-c` **Option Flattens Directory Tree (7094123)**

For system reconfiguration purposes, the `sysconfig configure` command has a `-c` option that can take a directory as a parameter. This directory can contain subdirectories with system configuration profiles in them.

Due to the flattening of the directory structure, if any files within the directory tree have the same name, then one of these files is used to reconfigure the system. As a result, the system would be partially reconfigured using one of the profiles. For example, assume that you have the following directory structure:

```
directory-name/profiles1/sc_profile.xml
directory-name/profiles2/sc_profile.xml
directory-name/profiles3/sc_profile.xml
```

If you execute the `sysconfig` command with the `-c` option, the system is partially reconfigured by using only one of the profiles.

```
# sysconfig configure -c directory-name
```

Workaround: Ensure that each profile has an unique name regardless of its location in the directory tree. For example:

```
directory-name/profiles1/sc_profile_a.xml
directory-name/profiles2/sc_profile_b.xml
directory-name/profiles3/sc_profile_c.xml
```

SPARC: System Fails to Boot an iSCSI LUN on an iSCSI Storage Array (7148479)

Oracle Solaris fails to boot an iSCSI LUN on an iSCSI storage array. The following error message is displayed:

```
OpenBoot 4.33.5.a, 4096 MB memory installed, Serial #10027306.
Ethernet address 0:b:5d:e2:1:2a, Host ID: 8099012a.

Rebooting with command: boot
100 Mbps full duplex  Link up
Boot device: net:host-ip=10.129.158.53,
iscsi-target-ip=10.129.158.87,
iscsi-target-name=iqn.2002-03.com.pillardata:axiom.ssn.a002880bjb
File and args: kmdb
100 Mbps full duplex  Link up
Can't read disk label.
Can't open disk label package
ERROR: /packages/obp-tftp: Could not open /iscsi-hba/disk
```

```
Evaluating:

Boot load failed

{0} ok
```

Workaround: If the iSCSI boot parameters are too long, modify them as network boot parameters.

For example, the command to perform an iSCSI boot in Open Boot PROM (OBP) mode is:

```
{0} ok boot net:'iSCSI boot parameters'
```

where *net* is a device alias for a value similar to /pci@780/pci@0/pci@1/network@0.

The iSCSI boot string is therefore very long and the string can easily reach the 255–byte limitation.

```
/pci@780/pci@0/pci@1/network@0:host-ip=10.129.158.53,
subnet-mask=255.255.255.0,router-ip=10.129.158.1,iscsi-target-ip=10.129.158.87,
iscsi-target-name=iqn.2002-03.com.pillardata:axiom.ssn.a002880,
iscsi-initiator-id=iqn.1986-03.com.sun:01:002128bd2fa0.
```

To boot your system on an iSCSI LUN, modify the iSCSI boot parameters as network boot parameters.

```
{0} ok setenv network-boot-arguments host-ip=client-IP,
```

```
router-ip=router-ip,subnet-mask=mask-value,iscsi-target-ip=Target-IP,
iscsi-target-name=iqn.1986-03.com.sun:02:iscsiboot,
iscsi-initiator-id=iqn.1986-03.com.sun:01:002128bd2fa0,iscsi-lun=0
```

File System Issues

This section describes file system issues in the Oracle Solaris 11.1 release.

`zfs set/inherit mountpoint` Shows a Failure Message on Oracle Solaris 10 Branded Zones (7195977)

On Oracle Solaris 10 Branded Zones, if you use the following commands to inherit or set the mount point of a dataset, the command will operationally succeed but return an error message:

- `zfs inherit mountpoint`
- `zfs set mountpoint`

The following error message is displayed:

```
ERROR: /usr/sbin/zfs inherit mountpoint zonectr0 exited 1
```

Workaround: Ignore the error message. The command has executed correctly.

System Reboots Continuously Because of a ZFS-Related Panic (7191375)

If your system reboots continuously because of a ZFS storage pool with corrupted space map entries, send a system crash dump to Oracle support for root cause analysis.

The initial or subsequent panic strings begin as follows:

```
zfs: freeing free segment
zfs: allocating allocated segment
```

Any attempt to import and mount the problem pool causes the system to panic.

Workaround: Identify the problem pool and import the pool in read-only mode.

1. Stop the system and boot the system with the `milestone=none` option.

   For SPARC, type the following command:

   ok **boot -m milestone=none**

   For x86, add the `milestone` option to the appropriate GRUB entry:

   -m milestone=none

2. Immediately, rename the `zpool.cache` file to prevent the system from importing non-root pools.

   # **mv /etc/zfs/zpool.cache /etc/zfs/zpool.hold**

   Do not use any ZFS commands that cause the pool information to be loaded.

3. Reboot the system.

   # **reboot**

4. Import each pool one at a time to determine the problem pool.

5. Import the problem pool in read-only mode.

   # **zpool import -o readonly=on** *poolname*

Issues When Replacing or Using New Advanced Format Disk Drives on Oracle Solaris Systems

Disk manufacturers now provide larger capacity disks, also known as advanced format (AF) disks. An AF disk is a hard disk drive whose physical block size exceeds 512 bytes. AF disks use block sizes that are greater than 512 bytes, usually 4096 bytes, but their sizes can vary as follows:

- 4 KB native disk (4kn) – Uses a physical and logical block size of 4 KB
- 512-byte emulation (512e) – Uses a physical block size of 4 KB but reports a logical block size of 512 bytes

Review the following issues if you are considering the purchase of AF disks as new or replacement devices on your Oracle Solaris 11.1 system.

Lack of a Power Safe Feature on Certain Models of Advanced Format 512e Disk Drives Can Result in Data Loss

The failure of certain 512e disk drives to provide a power-safe feature can result in data loss if a power failure occurs during a read-modify-write (rmw) operation.

Workaround: Choose one of the following workarounds:

- Confirm with the disk manufacturer that their 512e devices provide a power safe feature.

  No consistent power safe identification appears on such drives, but they tend to be SATA drives. An indication that they are AF drives does not necessarily mean that they support 512 emulation (512e).
- Do not use these drives on an Oracle Solaris system.

Installation and Boot Support on 4kn Disks on SPARC Systems Requires a Specific PROM Version

Installing and booting Oracle Solaris 11.1 on a 4kn disk on a SPARC system requires a volume table of contents (VTOC) label and PROM version 4.34.0.

Workaround: Choose one of the following workarounds:

- If you want to install and boot Oracle Solaris 11.1 from a 4kn disk, then apply a VTOC label and confirm that your system is running this version.

  For example:

  ```
  # prtconf -pv | grep OBP
    version: 'OBP 4.34.0 ... '
  ```
- Request a firmware upgrade from Oracle support.

For more information about using advanced format disks in Oracle Solaris 11.1, see *Oracle Solaris 11.1 Administration: Devices and File Systems*.

System Administration Issues

This section describes system administration issues in Oracle Solaris 11.1.

RDSv3 Support Is Required for Successful HCA DR Operation (7098279)

The dynamic reconfiguration (DR) operation of an InfiniBand host channel adapter might fail when using the ATTN button or `cfgadm` command.

When using the ATTN button or the `cfgadm` command to DR an Infiniband Network Express Module after the IB networks have been unconfigured, the following error message might be displayed:

```
Seen on console of system:
WARNING: ... failed to detach driver ...
WARNING: ... failed to unconfigure ?
```

Workaround: Choose one of the following workarounds:

- Remove the RDSv3 driver and reboot the system.

  ```
  # rem_drv rdsv3
  # reboot
  ```

  To add the RDSv3 driver back, type the following commands:

  ```
  # add_drv rdsv3
  # reboot
  ```

- Remove the RDSv3 package and reboot the system.

  ```
  # pkg uninstall system/io/infiniband/reliable-datagram-sockets-v3
  # reboot
  ```

  The system might boot up in a different boot environment.

  To restore the RDSv3 package (assuming that a `pkg` repository is available), issue the following commands:

  ```
  # pkg install system/io/infiniband/reliable-datagram-sockets-v3
  # reboot
  ```

- Use the `cfgadm` command depending on the type of IB card that is being dynamically reconfigured. If the IB card is in PCI-EM0 modular option, issue the following commands:

  ```
  # cfgadm -c unconfigure PCI-EM0
  # cfgadm -c disconnect PCI-EM0
  ```

  To add IB back to the system, issue the following commands:

  ```
  # cfgadm -c connect PCI-EM0
  # cfgadm -c configure PCI-EM0
  ```

`zoneadm attach` Command Might Hang With the `-a` and `-n` Options (7089182)

In this release, the hyphen (`-`) symbol cannot be used to specify the `stdin` argument with the `-n` or `-a` options of the `zoneadm attach` command.

Workaround: Do not use the `stdin` argument.

`svccfg validate` Command Fails on a Split Manifest (7054816)

With proper multiple manifest support delivered in Oracle Solaris, the `svccfg validate` command should no longer warn about missing required property groups. However, the `svccfg validate` command fails on a split manifest.

This issue occurs when the instance delivering the manifest does not validate correctly without service methods which are defined at the service level in a separate manifest. The following error message might be displayed:

```
$ svccfg validate /lib/svc/manifest/system/console-login-vts.xml
Required property group missing: FMRI="svc:/system/console-login:vt6";
Name of missing property group="start"; Type of missing property group="method";
Template source="svc:/system/svc/restarter:default";
pg_pattern name="start"; pg_pattern type="method"

Required property group missing: FMRI="svc:/system/console-login:vt6";
Name of missing property group="stop"; Type of missing property group="method";
Template source="svc:/system/svc/restarter:default";
pg_pattern name="stop"; pg_pattern type="method"

Required property group missing: FMRI="svc:/system/console-login:vt5";
Name of missing property group="start"; Type of missing property group="method";
Template source="svc:/system/svc/restarter:default";
pg_pattern name="start"; pg_pattern type="method"

Required property group missing: FMRI="svc:/system/console-login:vt2";
Name of missing property group="stop"; Type of missing property group="method";
Template source="svc:/system/svc/restarter:default";
pg_pattern name="stop"; pg_pattern type="method"

svccfg: Validation failed.
```

The warning is displayed in the `manifest-import` service log file rather than on the console. The warning is not fatal and does not prevent the import of the instance. Once the instance is imported, you can successfully validate the instance manually by using the `svccfg validate` command.

Workaround: Avoid using the `svccfg validate` command on split manifests.

SPARC: System Fails to Boot When SP Is in Degraded Mode (6983290)

On SPARC T3 and T4 systems, when the service processor (SP) is in degraded mode, the host system might fail to reboot.

Workaround: None.

Sporadic Runtime Failures in an OpenMP Application (7088304)

Sporadic segmentation fault or data corruption might occur in an application at runtime in any of the following scenarios:

- The application is parallelized using OpenMP directives
- The application is parallelized automatically by the Oracle Solaris Studio compiler by using the `-xautopar` option
- The application has nested parallel regions

Workaround: If the application does not use OpenMP tasking (`TASK` directive), then set the `__SUNW_MP_SEQ_OMPTASK` environment variable to `TRUE`.

If you are using the C shell (`csh`), type the following command:

```
setenv __SUNW_MP_SEQ_OMPTASK TRUE
```

If you are using the Korn shell (`ksh`), type the following command:

```
__SUNW_MP_SEQ_OMPTASK=TRUE
```

32-bit: `PCSXREG` Triggers `EINVAL` Error for `YMM` and Floating-Point Registers (7187582)

When debugging 32-bit applications, an attempt to set certain registers causes an error in the debugger.

On SPARC, you cannot set the floating-point registers. On x86, you cannot set the YMM registers.

The following error message is displayed:

```
mdb: failed to modify %f50 register: libthread_db call failed unexpectedly

dbx: internal error:
```

```
Cannot set registers --
PCmd::flush(): write of PCSREG PCSXREG fails -- Invalid argument
```

Workaround: None.

Incorrect Disk Can Be Selected by Interactive Installers When Two Disks With the Same `volname` Exist (7195880)

On systems where more than one disk has the same non-blank `volname`, also known as the disk label, the Live Media and text installers might display incorrect disk information and install the OS to the wrong disk.

Note – Disk volume names are blank by default and must be set explicitly by a privileged user.

In the text installer, if a disk with the matching `volname` is selected other than the first disk that is listed in the disk partitioning screen, the displayed partitions or slices will continue to be allocated for the first disk. The first disk will be the selected disk used to install the OS.

In the Live Media installer, selecting any disk with the matching `volname` other than the first disk will cause similar behavior. The first disk is the leftmost icon with the matching `volname` in the disk partitioning screen.

Workaround: Verify that the `volname` of each disk on the system is unique or blank before running the installer.

You can use the `format` command to change or remove a `volname`. For more information, see the `format`(1M) man page.

FCoE Port Is Not Online After Creation (7191873)

If you create an FCoE port by using the `fcadm create-fcoe-port` command, the status of the FCoE port is shown as offline instead of online. You can use the following command to identify the status of the FCoE port:

`fcinfo hba-port -e`

Workaround: To make the FCoE port online, type the following command after you create the FCoE port:

`ifconfig netX plumb`

`asr-notify` Is in Maintenance Mode If Incorrect ASR Properties Are Specified (7195227)

If you provide incorrect Auto Service Request (ASR) properties when installing Oracle Solaris, the `asr-notify` service switches into maintenance mode after successful registration with the `asradm` utility. The `asradm` utility does not clear the installer settings after a successful registration with ASR. No error message is displayed. Manual registration will not fix the problem.

Workaround: Perform the following steps:

1. Remove the `autoreg` group from the `asr-notify:default` service.

   # **svccfg -s asr-notify:default delpg autoreg**

2. Register with the ASR registration utility.

   # **asradm register**

3. Refresh, clear, and enable the `asr-notify` service by using the `svcadm` command.

   # **svcadm refresh asr-notify**
   # **svcadm clear asr-notify**
   # **svcadm enable asr-notfiy**

x86: `cfgadm -c configure` and `hotplug enable` Commands Fail to Configure a Hotplug or PCIe EM Slot (7198763)

The `cfgadm -c configure` and `hotplug enable` commands fail to configure a PCIe hotplug slot on x86 platforms, for example, a PCIe EM slot.

The following error message is displayed for the `cfgadm` command:

cfgadm -c configure *slot-name*

failed to probe the Connection *slot-name*
cfgadm: Hardware specific failure: configure failed

The following error message is displayed for the `hotplug enable` command:

hotplug enable *slot-name*
ERROR: hardware or driver specific failure.

Workaround: Use the `hotplug enable` command with the `-f` option.

hotplug enable -f *connector/slot-name*

For example:

```
# hotplug enable -f Slot1
```

Networking Issues

This section describes the network-related issues in Oracle Solaris 11.1.

SPARC: `IPsec` Packet Might Be Dropped on T2 and T3 Series Platforms (7184712)

On SPARC T2 and T3 platforms, the `IPsec` packet might be dropped if one or more CPUs on the domain are not associated with any control word queue (CWQ). The following error message might be displayed:

```
Thread[3000b87c000] is already bound to CPU[1] which is not associated with any CWQ
```

Workaround: Choose one of the following workarounds:

- Use the `dladm` command to bind the data-links to CPUs that are associated with a CWQ.

    ```
    # dladm set-linkprop -p cpus=comma-separated-list-of-processor-IDs link-name
    ```
- Reconfigure the domain so that all the CPUs on the system are associated with a CWQ.
    1. Check for virtual CPUs (VCPU) and crypto units (MAU) that are on the domain by using the `ldm` command.

        ```
        % ldm ls -l domain-name
        ```

        For more information, see the `ldm`(1) man page.
    2. If CPUs are not associated with a crypto unit, turn the CPU offline by using the `psradm` command.

        ```
        % psradm -f processor-ID
        ```

        For more information, see the `psradm`(1) man page.

System Might Hang When Running the `tshark` Command on an Interface With Network Traffic (7202371)

The system might hang when you run the `tshark` command on an interface with network traffic.

Workaround: Use the `snoop` command instead of `tshark` or `wireshark` command.

Network Is Unreachable for the First Time After an Installation When Switching From Automatic NCP to DefaultFixed NCP (15824547)

During the process of configuring your network after installing Oracle Solaris 11.1, if you switch from the Automatic network configuration profile (NCP) to the DefaultFixed NCP, the network might become unreachable. This behavior occurs upon a system reboot after the installation, during the first switch from the Automatic NCP to the DefaultFixed NCP. The network might be unreachable though the DefaultFixed NCP network configuration is valid.

Note – The behavior can occur in both global and non-global zones.

When you run the ping command, the following message is displayed:

```
# ping 192.168.10.3
ping: send to Network is unreachable
```

The network is not reachable if the system fails to disable the IP Filter service when the default network configuration mode is switched from a reactive NCP to the DefaultFixed NCP. You can run the following commands to check the status of the IP Filter service:

```
# svcs ipfilter
STATE          STIME          FMRI
online         Oct_17              svc:/network/ipfilter:default

# ipfstat -io
block out log all
pass out quick on lo0 all
pass out quick proto udp from any to any port = bootps
block in log all
pass in quick on lo0 all
pass in quick proto udp from any to any port = bootpc

# ipfstat -io6
block out log all
pass out quick on lo0 all
pass out quick proto udp from ::/0 to ::/0 port = dhcpv6-server
pass out quick proto ipv6-icmp from ::/0 to ::/0
block in log all
pass in quick on lo0 all
pass in quick proto udp from ::/0 to ::/0 port = dhcpv6-client
pass in quick proto ipv6-icmp from ::/0 to ::/0
```

Workaround: Refresh the svc:/network/location:default SMF service.

```
# svcadm refresh svc:/network/location:default
```

Desktop Issues

This section describes desktop issues in the Oracle Solaris 11.1 release.

Evolution Application Crashes After New Installation (7077180)

The Evolution email application does not start after installing Oracle Solaris.

Workaround: After installing Evolution, log out and log in again. The application will start successfully.

SPARC: Desktop Issues With USB Keyboard, Mouse, and Physical Monitor (7024285)

When using a physical keyboard, mouse, or monitor, repeated attempts to open and use a terminal window on the Oracle Solaris Desktop can result in loss of characters and mouse control.

This issue might occur because of errors caused by missing microframes. These errors occur when full or low-speed USB 1.0 or 1.1 keyboard and mouse devices are connected to the USB ports on a system under an onboard USB 2.0 hub. However, these errors do not occur when the keyboard and the mouse devices are connected to a system USB port, which is in turn connected to an internal hub that is manually bound to the ohci (USB 1.0 or 1.1) driver.

Note – If you are using a virtual keyboard and mouse, all devices under the hub are forced to run at low speed. The devices will still work, but they run at a lower USB 1.0 or 1.1 speed.

Workaround: Set the value for the ehci-port-forced-to-companion variable in the /kernel/drv/ehci.conf file. The value of this variable is used by the ehci (USB 2.0) driver to release control of a particular port on the USB controller.

The value of the ehci-port-forced-to-companion variable differs based on the type of platform and the type of USB device used. The following table lists the recommended usage of USB connectors and the corresponding value of the ehci-port-forced-to-companion variable.

TABLE 4–1 Recommended Usage of USB Connectors and Values

SPARC Platform	Type of USB Device	Recommended Usage of USB Connectors	Value of the `ehci-port-forced-to-companion` Variable in the `/kernel/drv/ehci.conf` File
T3-1, T3-2, T4-1, T4-2	Physical keyboard or mouse	Use the front USB connector	4
T3-4, T4-4	Physical keyboard or mouse	Use the rear USB connector	3
T3-1, T4-1, T3-2, T4-2, T3-4, T4-4	Virtual keyboard or mouse	None	2

To implement the workaround, perform the following steps:

1. Connect the USB devices.

   The recommended USB connectors for the devices on various platforms are listed in Table 4–1.

2. Set the value of the `ehci-port-forced-to-companion` variable in the `/kernel/drv/ehci.conf` file.

   For example, if the SPARC platform is T3–4 and you are using a physical keyboard, set `ehci-port-forced-to-companion=3`.

   For information about the value that you can set for this variable, see Table 4–1.

3. Reboot the system.

   ```
   # init 6
   ```

D-Bus System Daemon Has a Small File Descriptor Limit for Sun Ray or XDMCP Server Use (7194070)

When using a Sun Ray or an XDMCP server, the D-Bus system daemon uses several file descriptors for each display. The default file descriptor limit of 256 allows only a few simultaneous client connections. A Sun Ray or an XDMCP server running on Oracle Solaris 11.1 will stop managing new displays when the file descriptor limit is exceeded.

The file descriptor limit might exceed after 30 to 40 client connections. This number can vary depending on the type of programs and panel applets used in desktop sessions.

Workaround: Increase the file descriptor limit in the `/lib/svc/method/svc-dbus` file to support Sun Ray or XDMCP use.

Modify line 40 in the `/lib/svc/method/svc-dbus` file from:

```
/usr/lib/dbus-daemon --system
```

to:

```
ulimit -S -n 8192 ; /usr/lib/dbus-daemon --system
```

Graphics and Imaging Issues

This section describes graphics and imaging issues in the Oracle Solaris 11.1 release.

x86: Bitmapped Console Is Not Shown Properly on the NVIDIA Graphics Chipset (7106238)

On some systems with NVIDIA graphics adapters, the text mode console is not shown properly after the Xorg server has run. When you switch from an Xorg server to a text virtual terminal, the console is shown as vertical bars instead of readable characters.

Workaround: Disable the bitmapped console. Instead, use the VGA mode text console.

x86: Bundled Driver Panics When X Server Is Started in UEFI Mode (7116675)

The NVIDIA bundled driver panics when X server is started in the UEFI mode.

Workaround: In the GRUB menu, add the following text before the $multiboot line of the specified boot entry:

```
[...]
cutmem 0x9b000 1M
$multiboot /ROOT/transition/@/$kern $kern -B console=graphics -B $zfs_bootfs
```

To make this change permanent:

1. Create a custom.cfg file in rpool/boot/grub, which is the same directory that contains the grub.cfg file.

   For more information about creating and managing the custom.cfg file, see "Customizing the GRUB Configuration" in *Booting and Shutting Down Oracle Solaris 11.1 Systems*.

2. Copy the menu entry from the grub.cfg file to the custom.cfg file.

   The menu entry in the grub.cfg file looks similar to the following:

   ```
   menuentry "s11sru" {
     insmod part_msdos
     insmod part_sunpc
     insmod part_gpt
   ```

```
insmod zfs

search --no-floppy --fs-uuid --set=root f3d8ef099730bafa
zfs-bootfs /ROOT/s11sru/@/ zfs_bootfs
set kern=/platform/i86pc/kernel/amd64/unix
echo -n "Loading ${root}/ROOT/s11sru/@$kern: "
$multiboot /ROOT/s11sru/@/$kern $kern -B $zfs_bootfs
set gfxpayload="1024x768x32;1024x768x16;800x600x16;
     640x480x16;640x480x15;640x480x32"
insmod gzio
echo -n "Loading ${root}/ROOT/s11sru/@/platform/i86pc/amd64/boot_archive: "
$module /ROOT/s11sru/@/platform/i86pc/amd64/boot_archive
```

3. Add the `cutmem` command before the `$multiboot` entry.

   The information shown in bold in the following example is added to `custom.cfg`.

```
menuentry "s11sru" {
   insmod part_msdos
   insmod part_sunpc
   insmod part_gpt

   insmod zfs
    # Workaround for nVIDIA Driver
        cutmem 0x9b000 1M
    # End Workaround for nVIDIA Driver
   search --no-floppy --fs-uuid --set=root f3d8ef099730bafa
   zfs-bootfs /ROOT/s11sru/@/ zfs_bootfs
   set kern=/platform/i86pc/kernel/amd64/unix
   echo -n "Loading ${root}/ROOT/s11sru/@$kern: "
   $multiboot /ROOT/s11sru/@/$kern $kern -B $zfs_bootfs
   set gfxpayload="1024x768x32;1024x768x16;800x600x16;
        640x480x16;640x480x15;640x480x32"
   insmod gzio
   echo -n "Loading ${root}/ROOT/s11sru/@/platform/i86pc/amd64/boot_archive: "
   $module /ROOT/s11sru/@/platform/i86pc/amd64/boot_archive
```

Performance Issues

This section describes the performance issues in the Oracle Solaris 11.1 release.

x86: ZFS Pool Information Becomes Stale After Running the stmsboot Command With -e Option (7168262)

After running the stmsboot command with the -e option to enable the MPXIO (multipathing) feature on the next boot, there is a short duration of time when the ZFS pool device path information becomes stale. As a result, zpool.cache is not updated properly.

Workaround: Choose one of the following workarounds:

- Reboot the system immediately after running the `stmsboot` command with the `-e` option. Then, reboot the system again.
- Run the `zpool status` command immediately after running the `stmsboot` command with the `-e` option, which manually updates `zpool.cache`.

Performance of an Uncached Random Write Workload on a Pool of SSD Devices Is Low (7185015)

The performance of an uncached random write workload on a ZFS storage pool of solid-state disks (SSD) that support the SCSI `unmap` command is very low.

Workaround: In the `/etc/system` file, add the following line to disable the overhead of ZFS unmap requests:

```
set zfs:zfs_unmap_ignore_size=0
```

Hardware Issues

This section describes hardware issues in the Oracle Solaris 11.1 release.

x86: CPU Power Level Warnings During System Boot (7146341)

Under certain circumstances, the following warnings are displayed during system boot:

```
WARNING: Device /fw/cpu@2 failed to power up.
WARNING: cpudrv_monitor: instance 1: can't raise CPU power level
```

Workaround: Ignore the warnings. They do not affect the normal operation of the system once the system is booted.

SPARC: Devices on PCI Box Cannot Be Configured by `hotplug` on Fujitsu M10 Systems (7196117)

A peripheral component interconnect (PCI) box cannot be fully configured on Fujitsu M10 systems by using the Oracle Solaris Hotplug Framework. The I/O device node configuration is different for every platform and the resource allocation is assigned by `pcicfg_slot` variables with a fixed value.

```
# Fixed values for resource allocation
[ uts/sun4/io/pcicfg.c ]
static int pcicfg_slot_busnums = 8;
static int pcicfg_slot_memsize = 32 * PCICFG_MEMGRAN; /* 32 MB per slot */
static int pcicfg_slot_iosize = 16 * PCICFG_IOGRAN; /* 64 K per slot */
```

The resources for MEM64, MEM32, and I/O devices are allocated by a fixed value for each child device. For example, to configure four child devices, the value of the pcicfg_slot_busnums variable should be set to 32.

However, the Open Boot PROM (OBP) on the Fujitsu M10 platform supports configuration of the PCI box and you can successfully boot Oracle Solaris with the PCI box. The problem is seen only with the Oracle Solaris Hotplug Framework. The OS can boot with the PCI box but is not recognized by hotplug.

Workaround: To configure the system with the PCI box, perform the following steps:

1. In the /etc/system file, set the pcicfg:pcicfg_slot_busnums variable.

    set pcicfg:pcicfg_slot_busnums = 4

2. Reboot the system.

    # **reboot**

Localization Issues

This section describes localization issues in the Oracle Solaris 11.1 release.

Non-GTK Applications Fail to Connect to ATOK Language Engine on Non-UTF-8 Locales (7082766)

Non-GTK applications (X and Java applications) fail to connect to the input method framework when the Internet/Intranet Input Method Framework (IIIMF) is used with the ATOK Japanese language engine on non-UTF-8 locales.

Workaround: Choose one of the following workarounds:

■   Use the IBus input method framework with the Anthy language engine.
■   Use IIIMF with the Wnn language engine.

A

Previously Documented Bugs That Are Fixed in the Oracle Solaris 11.1 Release

This appendix lists bugs that were documented in the *Oracle Solaris 11 Release Notes* and have been fixed in the Oracle Solaris 11.1 release.

For information about accessing bug information in BugDB, see the Sun Systems Defects Move to Oracle's Bug Database (Doc ID 1501467.1) knowledge article that is available on MOS.

Previously Documented Bugs Fixed in This Release

CR Number	Title
7052679	AI Client Boot Fails With `wanboot.conf` Error Because of Restrictive `umask`
7098861	Host Name Criterion Must Exactly Match Host Name Returned by Client to Select Profile
7087888	`installadm create-service` Creates Faulty DHCP Configuration When DNS Is Not Enabled
7090563	`sysconfig create-profile` Fails to Configure Networking for Shared-IP Zones
7097083	`sysconfig create-profile` Does Not Allow the Creation of a Local User Account
7097468	Bitmapped Console Is Not Shown Properly on Intel Graphics Chipset
7095998	x86: Layer Acceleration With NVIDIA Graphics Might Cause Firefox to Exit
7076162	System Panics When Multiple USB Keyboards Are Unplugged at the Same Time
7094923	`dladm show-aggr` Command With the `-s` Option Does Not Work
7100050	`ilomconfig` Service Might Delay System Boot
7107525	`txzonemgr` Cannot Clone a Labeled Zone
7091692	Zone Boot Environment Datasets Should Be Mounted When Zone Is Ready

CR Number	Title
7105597	`ipadm` Command Does Not Work If the `DefaultFixed` Profile Is Not Enabled
7103136	`ipadm` Command
7070912	Disconnecting or Powering off a Connected IEEE-1394 Device Causes System Panic
7097656	SPARC: Net Device and Communication Device Names Are Mapped Incorrectly During Text Installation
7093885	FMA Disk Topology Discovery Might Not Handle Configuration With Mixed Directly Attached and Virtual Disks
7054074	`cxge` Driver Alias Conflicts With an Existing Driver Alias
7075285	System Panics When Utilizing SCSI-2 `reserve` Command With iSCSI or SAS Devices
7028654	`tar` Command Fails to Extract Archive From Tapes
7082198	IBus Language Panels Are Not Shown in Non-Global Workspaces
7082222	IIM Input Method Configuration Tool Runs in Trusted Path
7054074	`cxge` Driver Alias Conflicts With an Existing Driver Alias
7099457	`xterm-256color` Terminal Type Is Not Supported
6988653	Disabling `fc-fabric` SMF Service Disrupts System Boot
7096091	System Might Panic With Incorrect BIOS Entries for CPU Power Management
7101169	Unconfiguration Failure in a Non-Global Zone
7092679	JRE Fails to Detect the System Default Time Zone Setting
6893274	x86: System Panics With an Unowned Mutex
7070558	When the `automount` Service Is Disabled, `useradd` Creates Users With Inaccessible Home Directories
7100859	SPARC: Using Direct I/O to Remove Multiple PCIe Slots From the Primary Domain on a Multisocket T-Series System Might Cause System Panic at Boot Time
7082515	Local Home Directory Might Not Be Mounted
7087781	`datalink-management` Service Times Out on the First Boot After Adding a Virtual Switch to the Control Domain