

## **Oracle Solaris 11.4.36.101.2 Support Repository Update (Oracle Solaris 11.4 SRU 36.101.2) (Doc ID 2801088.1)**

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### APPLIES TO:

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Solaris Operating System - Version 11.4 to 11.4 [Release 11.0]  
Information in this document applies to any platform.

### MAIN CONTENT

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This README describes why you need to apply this SRU, caveats, and other important information that you might need to consider before applying or installing Oracle Solaris 11.4.36.101.2. It also contains general information about Oracle Solaris 11 Support Repository Update (SRU) and instructions about how to manage your local repository.

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## Why Apply Oracle Solaris 11.4.36.101.2

Oracle Solaris 11.4.36.101.2 provides improvements and bug fixes that are applicable for all the Oracle Solaris 11.4 systems. Some of the noteworthy improvements in this SRU include:

- New features and/or modified interfaces:

Add Netwide Assembler (NASM) in Solaris

Deliver asgiref in Solaris

Deliver Python RapidJSON in Solaris

Add rlwrap in Solaris

Root Pool Configuration Service for cloud images

OS install creates root pool with compression=on by default

Zone "description" added to zone config properties

Updated auto-update SMF service which includes:

- shutdown-grace-period property

- new instances for updating stackdb & EHC checks

New checks in Enterprise Health Checks (EHC) for:

- LDoms

- ZFS pools not configured with RAID

NFS v4 client now retries on NFS4ERR\_DELAY responses

statd\_servers property added to statd SMF service

SMB 1.0 disabled by default in native SMB server to improve security

pam\_list filter on source user for use with su(8)

New -u option added to admhist for per user filtering

Improved system version information at login (previously this information was included in /etc/motd)

New -V option added to uname for displaying virtualization environment, -a option was also updated with this information

sstore now allows use of -i with -p

I219-LM11 support added to e1000g driver

CX-5 OCP support added to mlxng driver

Improved creation time for fast lookup in Image Packaging System (IPS) database

Support for auditing LDoms resource reconfiguration events

- GNOME upgrade from 3.34 to 3.38 is completed:

adwaita-icon-theme to 3.38.0 (Bug 32534223)

background-logo-extension to 3.37.3 (Bug 32534203)

cantarell-fonts has been updated to 0.301 (Bug 32755496)

file-roller has been updated to 3.38.1 (Bug 32870583)

gdm has been updated to 3.38.2.1 (Bug 32534206)

gnome-backgrounds to 3.38.0 (Bug 32534216)

gnome-control-center to 3.38.3 (Bug 32534229)

gnome-desktop to 3.38.3 (Bug 32534195)

gnome-getting-started-docs to 3.38.1 (Bug 32755591)

gnome-online-accounts to 3.38.0 (Bug 32534194)

gnome-session to 3.38.0 (Bug 32534197)

gnome-settings-daemon to 3.38.0 (Bug 32534200)

gnome-shell to 3.38.1 (Bug 32534201)

gnome-shell-extensions to 3.38.1 (Bug 32534202)

gnome-system-monitor to 3.38.0 (Bug 32867668)

gvfs has been updated to 1.46.2 (Bug 32805911)

mutter has been updated to 3.38.4 (Bug 32832080)

vte to 0.62.3/gnome-terminal to 3.38.3 (Bug 32818295)

- The updated Java 7 and Java 8 packages are incorporated in the SRU. If the update is performed using the `pkg update entire@<sru number>` command and you have previously unlocked the consolidation/java-8/java-8-incorporation or consolidation/java-7/java-7-incorporation facets, see [Note 5](#) for the details on how to update Java. If the update is performed using the `pkg update` command, or the `pkg update entire@<sru number>` command without the above facets unlocked, these packages will be updated. For more information and bugs fixed, see [Java 8 Update 301 Release Notes](#) and [Java 7 Update 311 Release Notes](#). For further details regarding Java and Oracle Solaris, see [Java Patches for Solaris Packages](#).
- Updated versions plus security fixes:

GNU binutils has been updated to 2.36.1, and addresses a security issue (Bugs 32851566, 32826080)

GNU Tar has been updated to 1.34, and addresses a security issue (Bugs 32730311, 32715133)

ISC DHCP has been updated to 4.4.2-P1, and addresses a security issue (Bugs 32699960, 32925217)

Node.js 12 has been updated to 12.22.1, and addresses a security issue (Bugs 32737588, 32737477)

Node.js 14 has been updated to 14.17.0, and addresses a security issue (Bugs 32906315, 32737477)

Pillow has been updated to 8.2.0, and addresses a security issue (Bugs 33003885, 32993091)

Wireshark has been updated to 3.4.6, and addresses a security issue (Bugs 33063581, 32997993)

c-ares library has been updated to 1.17.1, and addresses a security issue (Bugs 32975879, 32975865)

curl has been updated to 7.76.0, and addresses security issues (Bugs 32735238, 32706668, 32706691)

gnutls has been updated to 3.7.1, and addresses a security issue (Bugs 32769066, 32626069)

libcrypt has been updated to 1.8.8, and addresses a security issue (Bugs 33012663, 33010266)

libX11 has been updated to 1.7.2, and addresses a security issue (Bugs 32983580, 32893695)

nettle has been updated to to 3.7.2 , and addresses a security issue (Bugs 32661816, 32731273)

pylxml has been updated to 4.6.3, and addresses a security issue (Bugs 32688015, 32681223)

python 3.9 has been updated version 3.9.4, and addresses a security issue (Bugs 32762970, 32729699)

stunnel has been updated to 5.59, and addresses a security issue (Bugs 27381401, 32576759)

- Updated versions:

Apache Tomcat has been updated to 8.5.65 (Bug 32773178)

Coverage has been updated to 5.5 (Bug 32934907)

Django 3.2 has been updated to 3.2.4 (Bug 32964629)

GCC 10 has been updated to 10.3.0 (Bug 32767221)

GCC 7 has been updated to 7.5.0 (Bug 32970537)

GCC 9 has been updated to 9.4.0 (Bug 32970580)

GNU debugger has been updated to 10.2 (Bug 32886657)

GNU emacs has been updated to 27.2 (Bug 32776357)

Ghostscript has been updated to 9.54.0 (Bug 32736953)

ICU has been updated to 68.2 (Bug 32971503)

MIT Kerberos has been updated to 1.18 (Bug 32300993)

Twisted has been updated to 21.2.0 (Bug 32574890)

WebOb has been updated to 1.8.7 (Bug 32934937)

bash has been updated to 5.1 (Bug 32936032)

buildbot-worker has been updated to 3.1.1 (Bug 32886604)

colorama has been updated to 0.4.4 (Bug 32714214)

cups-filters has been updated to 1.28.8 (Bug 32757637)

fetchmail has been updated to 6.4.18 (Bug 32779051)

git has been updated to 2.31.1 (Bug 32835883)

gutenprint has been updated to 5.3.4 (Bug 32757592)

hg-git has been updated to 0.10.1 (Bug 32975559)

hplip has been updated to 3.21.2 (Bug 32750707)

idna has been updated to 2.10 (Bug 32934913)

incremental has been updated to 21.3.0 (Bug 32934918)

irssi has been updated to 1.2.3 (Bug 32943100)

json-glib has been updated to 1.6.0 (Bug 32534196)

jsonrpc-lib has been updated to 0.4.2 (Bug 32934922)

lazy-object-proxy has been updated to 1.6.0 (Bug 32934926)

less has been updated to 581.2 (Bug 32827985)

libfastjson has been updated to 0.99.9 (Bug 32946046)

monotonic has been updated to 1.6 (Bug 32934929)

netaddr has been updated to 0.8.0 (Bug 32934931)

nss has been updated to 3.63 (Bug 32742380)

openscap updated to 1.3.4 (Bug 30923392)

p11-kit has been updated to 0.23.22 (Bug 32413683)

pango has been updated to 1.48.4 (Bug 32760814)

pathlib2 has been updated to 2.3.5 (Bug 32934932)

pip has been updated to 20.3.4 (Bug 32907728)

polkit has been updated to 0.118 (Bug 32763416)

poppler has been updated to 21.04 (Bug 32738151)

ptyprocess has been updated to 0.7.0 (Bug 32934935)

pulseaudio has been updated to 14.2 (Bug 32820146)

pyatspi has been updated to 2.38.1 (Bug 32529603)

qpdf has been updated to 10.3.1 (Bug 32745355)

qemu-img has been updated to 6.0.0 (Bug 32956676)

rsyslog has been updated to 8.2104.0 (Bug 32946022)

service\_identity has been updated to 21.1.0 (Bug 32934936)

sortedcontainers has been updated to 2.4.0 (Bug 32895566)

unixodbc has been updated to 2.3.9 (Bug 32949751)

unrar has been updated to 6.0.5 (Bug 31876764)

util-macros has been updated to 1.19.3 (Bug 32853777)

- Security fixes for:

driver/qlt (Bug 32935156)

filesystem/zfs (Bug 32435412)

install/installadm (Bug 32810401)

kernel/icmp (Bug 32169730)

library/openjpeg (Bug 32826059)

python-mod/urllib3 (Bug 32018004)

utility/snoop (Bug 32822798)

For a complete list of bugs fixed in this SRU, see [Bugs Fixed](#).

For the list of Service Alerts that affect each Oracle Solaris 11.4 SRU, see [Important Oracle Solaris 11.4 SRU Issues \(Doc ID 2445150.1\)](#).

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## End-of-Feature (EOF) Notices

This section lists features that will be removed in a future release and features that have been removed in a specific SRU. See also the public EOF document [End of Feature Notices for Oracle Solaris 11](#).

### EOFs Planned for Future Oracle Solaris 11.4 SRUs

The following features or components will be removed in a future Oracle Solaris 11.4 SRU release:

- MySQL 5.6
- freetype-config
- Python 2.7
- pygtk
- Perl 5.22, Perl 5.26
- GNU parted command
- NTFS utilities
- Ruby 2.5
- GCC 7
- SpiderMonkey 38, SpiderMonkey 60
- MCollectives
- Node.js 12
- Wireless WPA supplicant

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### EOFs for Oracle Solaris 11.4.36.101.2

The following features or components are no longer available as of Oracle Solaris 11.4.36.101.2:

- Device Driver Utility
- Direct Rendering Infrastructure (DRI)
- GNOME 2.0 Configuration - GConf
- HTTPing
- Wifi drivers:

arn	rum
atu	uath
iwh	ural
iwk	urtw
iwp	zyd

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### EOF Summary for Oracle Solaris 11.4 SRUs

The following list shows the Oracle Solaris 11.4 SRU in which the feature or component was removed:

- Oracle Solaris 11.4
  - apache-commons-logging
- Oracle Solaris 11.4.9
  - rdiff-backup
  - APR 1.5
  - librsync
  - ocaml
  - PHP 5.6
  - audiocs driver
- Oracle Solaris 11.4.10
  - NVIDIA R304 driver
  - NVIDIA Cg toolkit
- Oracle Solaris 11.4.12

- UUCP
- Automake 1.10
- pywbem
- idnkit2
- Locale Services (g11nsvc) Library
- Oracle Solaris 11.4.13
  - OpenExr
  - Ilmbase
- Oracle Solaris 11.4.18
  - Ruby 2.1 and Ruby 2.3
- Oracle Solaris 11.4.19
  - xscreensaver
- Oracle Solaris 11.4.20
  - Google Go 1.7
- Oracle Solaris 11.4.21
  - Automake 1.11 and Automake 1.15
  - enscript
  - libmng
  - psif driver
  - ICU 59.1
  - MySQL 5.5
- Oracle Solaris 11.4.24
  - Node.js 8
  - Point-to-Point Protocol
- Oracle Solaris 11.4.27
  - Python 2.7, Python 3.4
  - llc2 driver
  - GCC 5
  - NVIDIA R340 graphics driver
  - PHP 7.1
  - Python bindings: libxsl-27 and net-snmp-27
  - All versions of the following Python components:

aioeventlet	os-client-config
amqp	oslo.concurrency
anyjson	oslo.messaging
appdirs	oslo.middleware
cachetools	oslo.service
ceilometerclient	osprofiler
cheetah	pathlib
cliff	pika
contextlib2	pika-pool
d2to1	positional
decorator	posix_ipc
django-appconf	pycadf
eventlet	pydns
filechunkio	pyrabbit
futures	pyscss
futurist	pysmi
greenlet	pysnmp
httplib2	pytest-capturelog
iniparse	pytest-codecheckers
ipython	python-editor
jsonpatch	python-mimeparse
jsonpath-rw	quantumclient
jsonpointer	rcssmin
keystoneauth1	repoze.lru
keystoneclient	requestsexceptions
keystonemiddleware	retrying
kombu	rjsmin
lesscpy	routes
librabbitmq	scp
logutils	simplegeneric
m2crypto	singledispatch
markdown	swift
networkx	swiftclient
neutronclient	tempita
nose-cover3	trollius
openstack-common	unicodcsv
openstacksdk	warlock

- Oracle Solaris 11.4.30
  - Python 3.5
  - Django 1.11
  - RAD Python Client for Python 2.7 and 3.5
  - RRDtool
  - ANTLR
  - gnome-doc-utils
  - Icms
- Oracle Solaris 11.4.33
  - Node.js 10
  - GSSDP, GUPnP, GUPnP-igd
  - telepathy-logger
  - All versions of the following Python components:

cov-core	pyflakes
cssutils	pymemcache
dogpile.cache	pytest-cov
dogpile.core	requests-aws
fixtures	setuptools-git
formencode	sqlalchemy
ipaddr	testresources
ldappool	testscenarios
ldtp	tox
linecache2	traceback2
logilab-common	twisted-web2
paste	waitress
paste.deploy	webtes
pycountry	

- Oracle Solaris 11.4.36
  - Device Driver Utility
  - Direct Rendering Infrastructure (DRI)
  - GNOME 2.0 Configuration - GConf
  - HTTPing
  - Wifi drivers:

arn	rum
atu	uath
iwh	ural
iwk	urtw
iwp	zyd

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## Before Installing Oracle Solaris 11.4.36.101.2

This section provides some information about special installation and runtime instructions that you need to consider before installing or running Oracle Solaris 11.4.36.101.2.

For the list of Service Alerts that affect each Oracle Solaris 11.4 SRU, see [Important Oracle Solaris 11.4 SRU Issues \(Doc ID 2445150.1\)](#).

### **Note 1: Using Memory Reservation Pools for Kernel Zones (Bug 26534188)**

On some more heavily loaded systems that experience memory contention or sufficiently fragmented memory, it can be difficult for an administrator to guarantee that critical Kernel Zones can allocate the memory they need to boot or even reboot. For example, a sufficiently large ZFS ARC may make it difficult for a Kernel Zone to allocate the memory it needs, especially when requiring a larger pagesize.

This may be especially pertinent in multi-tenant environments where the administrator of the Kernel Zone may be different from the host itself and thus should have no knowledge of the memory constraints on the host.

By allowing memory to be reserved ahead of time early during boot when it is more likely that enough memory of the desired pagesize is available, the impact of overall system memory usage on the ability of a Kernel Zone to boot/reboot will be minimized.

Oracle Solaris 11.4.1 adds a new SMF service, `svc:/system/memory-reserve:zones`, which has properties that allow a Solaris administrator to configure the Kernel Zones Memory Reserve Pool (MRP). The service is disabled by default. The

properties are:

**config/size**

- size of the reservation to make (e.g. '64G')

**config/pagesize-policy**

- mimics the zonecfg capped-memory:pagesize-policy  
(acceptable values are 'smallest-only', 'largest-available', and 'largest-only')

**config/type**

- can only be 'solaris-kz'

**config/lgrps**

Enabling the service instance creates the reservation using the MRP and it will go into maintenance with an appropriate reason logged if there is an error or the reservation fails. Disabling the service destroys the reservation if no memory from the reservation is currently allocated. If an attempt is made to disable the service while there is used reserved memory, the service instance will drop to maintenance with an appropriate reason message.

The reservation size can be adjusted and the service refreshed to grow or shrink the reservation. Attempts to shrink the reservation beyond currently used reserved memory will drop the service instance to maintenance with an appropriate message. Other configuration changes will be reflected on reboot or after restarting the service.

To configure a Kernel Zone to allocate its memory from an MRP, a new `zonecfg` property has been introduced, `capped-memory:memory-reserve`. To use this, its value must be set to the MRP management service instance name (e.g. 'zones'). This property cannot be reconfigured live and is only valid for Kernel Zones. In addition, the `capped-memory:memory-reserve` property is mutually exclusive with the `capped-memory:pagesize-policy` property. That is, if an MRP service instance is used, the Kernel Zone will use the pagesize of the MRP that was selected by the configured MRP service `pagesize-policy`. If the `capped-memory:memory-reserve` property is cleared (the default), then the Kernel Zone will allocate from general system memory.

Going forward, using this MRP service and its corresponding `zonecfg` property is the recommended way to ensure Kernel Zones are able to allocate the memory they need to boot. Usage of MRP obviates the need for adjusting ZFS ARC hint `user_reserve_hint_pct`. MRP configured on target hosts can also be used to guarantee successful live migration.

The following example shows how to configure MRP to set aside 64G of 'largest-available' page size of memory for Kernel Zones.

```
# svccfg -s svc:/system/memory-reserve:zones setprop config/size=64g
# svccfg -s svc:/system/memory-reserve:zones setprop config/type=solaris-kz
# svccfg -s svc:/system/memory-reserve:zones setprop config/lgrps=""
# svccfg -s svc:/system/memory-reserve:zones refresh
# svcadm enable svc:/system/memory-reserve:zones
```

The following commands configure 'myzone' Kernel Zone to use 16G of memory from 'zones' MRP:

```
# zonecfg -z myzone info capped-memory
capped-memory:
  physical: 16G
  pagesize-policy: largest-available
# zonecfg -z myzone 'select capped-memory; clear pagesize-policy; set memory-reserve=zones; end; commit'
```

**Note 2: Long pause after upgrading from Oracle Solaris 11.3 to Oracle Solaris 11.4 if /var/tmp is large (Bug 28620304)**

Before updating, first check the size of /var/tmp:

```
du -sdh /var/tmp
```

If it is large (>1GB), the first boot of the new environment may take a very long time. Note: The number of files is also a

factor, e.g. 1000 1MB files would take more time than a 1GB file.

It is therefore recommended that files are evacuated or removed from /var/tmp first; this action must be taken **before** creating an updated boot environment (BE).

If you wish to keep your old files, then on a quiet system before upgrading, do the following:

```
mv /var/tmp /var/tmp.old
mkdir -m 1777 /var/tmp
chown root:sys /var/tmp
```

If Oracle databases are run on this system, please be aware that an important state directory is maintained in /var/tmp. This directory (/var/tmp/.oracle) must be preserved for proper functioning of Oracle databases.

If present beforehand, these directories should be moved back before beginning the upgrade:

```
mv /var/tmp.old/orbit-* /var/tmp
mv /var/tmp.old/keyring-* /var/tmp
mv /var/tmp.old/.oracle /var/tmp
```

Then, after upgrading and rebooting:

```
rm -rf /var/.migrate/tmp
mv /var/tmp.old /var/.migrate/tmp
/lib/svc/share/migrate_shared_files.py /var/.migrate /var/share pseudo-fmri
```

Note: It is not advisable to use /var/tmp as temporary storage as it is shared between BEs.

### **Note 3: Bug metadata for Operating System and Networking components (Bug 28644386)**

In the Oracle Solaris 11.4 SRU releases the bug metadata for Operating System and Networking components will be listed in the onset-incorporation package rather than the individual packages as was the case with Oracle Solaris 11.3. Packages in this incorporation are tightly coupled and are built and tested as a single unit and users are unable to 'unlock' most of these packages to mix and match versions. This simplifies searching for fixes and determining what packages you need to apply to ensure you have a fix, as now a bug search will match a single package - osnet-incorporation. Only the core Operating System and Networking packages are affected by this change; all other areas will continue to have the bug metadata listed in the individual packages.

### **Note 4: Updating to the latest timezone package**

The latest timezone package is available in the support repository at <https://pkg.oracle.com/solaris/support>. It is also available as a separate download at [Timezone Data File Package for Oracle Solaris 11 \(Doc ID 2135137.1\)](#). If a newer version is listed in this document, proceed with performing the following steps to update to the latest timezone package.

Unlock the timezone package from the constraints on the system:

```
# pkg change-facet version-lock.system/data/timezone=false
# pkg update timezone
```

Note: When a package is unlocked, it may no longer be updated when the system is updated depending upon how the update is performed. If the update is performed using the `pkg update entire@<sru number>` command, then the timezone package will not be updated. If the update is performed using the `pkg update` command, then the timezone package will be updated.

Once you have successfully updated the package, you should relock the package:

```
# pkg change-facet version-lock.system/data/timezone=none
```

### **Note 5: Installing updated Java versions**

The latest Java packages are available in the support repository at <https://pkg.oracle.com/solaris/support>. They are also available as a separate download at [Java Patches for Solaris Packages \(Doc ID 1397756.1\)](#). If newer versions are listed in this document, proceed with performing the following steps to update to the latest versions of Java.

You will first need to unlock the Java package from the constraints on the system, and then update the package.

Note: When a package is unlocked, it may no longer be updated when the system is updated depending upon how the

update is performed. If the update is performed using the `pkg update entire@<sru number>` command, then the Java package will not be updated. If the update is performed using the `pkg update` command, then the Java package will be updated.

Unlock the Java 8 package from the constraints on the system:

```
# pkg change-facet version-lock.consolidation/java-8/java-8-incorporation=false
# pkg update java-8-incorporation
```

Once you have successfully updated the package, you should relock the package:

```
# pkg change-facet version-lock.consolidation/java-8/java-8-incorporation=none
```

To update Java 7 packages, unlock the constraints on the system:

```
# pkg change-facet version-lock.consolidation/java-7/java-7-incorporation=false
# pkg update java-7-incorporation@1.7.0.241
```

Once you have successfully updated the package, you should relock the package:

```
# pkg change-facet version-lock.consolidation/java-7/java-7-incorporation=none
```

Note: The version of the package at the end of the FMRI may change when new versions of Java 7 become available.

#### **Note 6: HMP and fwupdate in Oracle Solaris 11.4 SRU**

Note with Oracle Solaris 11.4 the `fwupdate` command will encrypt data sent over the network to ILOM and certificate checking is enabled by default. For more details on `fwupdate` usage, command line options and obtaining SSL certificates, see [Oracle Server CLI Tools for Oracle Solaris 11.4 User's Guide](#). If appropriate, the certification checking can be disabled with the `--no-cert-check` command line option.

#### **Note 7: Updating from OpenSSH 7.5 to OpenSSH 7.7**

The update from OpenSSH 7.5 to OpenSSH 7.7 contains the following potentially incompatible changes:

- `ssh(1)`: delete SSH protocol version 1 support, associated configuration options and documentation.
- `ssh(1)/sshd(8)`: remove support for the `hmac-ripemd160` MAC.
- `ssh(1)/sshd(8)`: remove support for the `arcfour`, `blowfish` and `CAST` ciphers.
- Refuse RSA keys <1024 bits in length and improve reporting for keys that do not meet this requirement.
- `ssh(1)`: do not offer CBC ciphers by default.
- `ssh(1)/sshd(8)`: Drop compatibility support for some very old SSH implementations, including `ssh.com <=2.*` and `OpenSSH <= 3.*`. These versions were all released in or before 2001 and predate the final SSH RFCs. The support in question isn't necessary for RFC-compliant SSH implementations.

#### **Note 8: LDoms commands may fail after upgrading M7/M8 machines to Oracle Solaris 11.4.6 or later if system firmware is out of date (Bug 29305810)**

If you are running LDoms or other software accessing ILOM on SPARC machines installed with Oracle Solaris 11.4.6, the SysFW should have the minimum version of 9.8.

If this is not performed, the LDom commands may fail with:

```
The requested operation could not be performed because the communication
channel between the LDoms Manager and the system controller is down.
The ILOM interconnect may be disabled or down.
```

This may also be seen in the log files:

```
/var/svc/log/network-ilomconfig-interconnect:default.log
/var/svc/log/system-sp-management:default.log
```

with the following message:

```
Could not open bmc device: Resource temporarily unavailable
```

#### **Note 9: /usr/bin/grep command and -w option**

There has been a latent bug within the `/usr/bin/grep` command such that when used with the `-w` option it did not correctly report on the patterns it was supposed to match. This has been present for a while. The bug is now fixed however this may mean that more results are returned to any script that uses the command.

Example 1: Use of `-iw` can return less lines than it should

```
$ cat testfile
pattern
pattern-one
pattern-two
```

Prior to the fix:

```
$ grep -w pattern testfile
pattern
pattern-one
pattern-two
$ grep -iw pattern testfile
pattern
```

Post fix:

```
$ grep -w pattern testfile
pattern
pattern-one
pattern-two
$ grep -iw pattern testfile
pattern
pattern-one
pattern-two
```

Example 2: `grep -w` will omit the last line

```
$ cat testfile
pattern
pattern-one
$ grep pattern testfile
pattern
pattern-one
$ grep -w pattern testfile
pattern
```

Post fix:

```
$ grep -w pattern testfile
pattern
pattern-one
```

Please note that `/usr/xpg4/bin/grep` was not affected by this issue.

**Note 10: FMRI change in support/explorer**

As Explorer is release agnostic, the OS portion of the FMRI will no longer be reported together with that for support/explorer from Explorer 19.2 onwards.

**Note 11: Python 3.7 replacing Python 2.7**

With the EOF of Python 2.7 (see [Python 2.7 Countdown](#)), Python 3.7 is the new default replacement. Python 3.7 has been in the SRU since Oracle Solaris 11.4 SRU 12.

**Note 12: Systems with NVIDIA Fermi GPUs**

Systems with NVIDIA Fermi GPUs need to uninstall `driver/graphics/nvidia` and install `driver/graphics/nvidiaR390`.

**Note 13: Querying the solaris-11-cpu package for list of CVEs**

The `solaris-11-cpu` package which is published for each and every SRU contains a list of the CVEs that have been addressed in the SRUs. The CVE list can be generated by running the following command:

```
# pkg search -o value :info.cve:
```

Or if the package is not installed:

```
# pkg search -r -o value :info.cve:
```

**Note 14: snmpd.conf should be readable only to owner (Bug 30159738)**

When the updated `system/management/snmp/net-snmp` package is installed on an existing Solaris machine, a new file `/etc/net-snmp/snmp/snmpd.conf.new` is created. This new file will have the correct permissions. The original file `/etc/net-snmp/snmp/snmpd.conf` (which could be customized) will not be altered.

Customer/System Administrators have two options to get the fix:

1. Modify the permission of `/etc/net-snmp/snmp/snmpd.conf` as per the permissions of `/etc/net-snmp/snmp/snmpd.conf.new`.
2. Merge the changes from `/etc/net-snmp/snmp/snmpd.conf` to the new file `/etc/net-snmp/snmp/snmpd.conf.new`.

Rename `/etc/net-snmp/snmp/snmpd.conf` as `/etc/net-snmp/snmp/snmpd.conf.old`.

Rename `/etc/net-snmp/snmp/snmpd.conf.new` as `/etc/net-snmp/snmp/snmpd.conf`.

**Note 15: Updates to 11.4 SRU 21 are blocked by instantclient-incorporation (Bug 31069861)**

This issue is documented in [Doc ID 2720920.1](#).

**Note 16: Solaris Server Printing in Oracle Solaris 11.4 SRU 21**

The printing software in Oracle Solaris 11.4 SRU 21 has been updated. See [Migrating to latest Printing software on Oracle Solaris 11.4 SRU 21 and higher](#) for more information.

**Note 17: Grid Infrastructure 19 on Oracle Solaris 11.4 SRU 21**

In order to install Grid Infrastructure 19 on Oracle Solaris 11.4 SRU 21 please ensure you have Grid and DB patched to at least the January 2020 Release Update. See the [Master Note for Database Proactive Patch Program \(Doc ID 756671.1\)](#) for further details.

**Note 18: svc:/network/winbind service and Oracle Solaris 11.4 SRU 21 (31283847)**

If you do not have the `svc:/network/winbind` service enabled and you do not set the `nss_winbind` backend in `nss` (`svc:/system/name-service/switch` service) then you can safely skip this warning.

Look up of non-existing identity in "passwd" or "group" table will hang the name service cache daemon, `nscd`, for approximately 10 minutes. This is because the winbind service daemon, `winbindd`, will re-query `nss-stack` again.

"Hangs of approximately 10 minutes may also be seen after system boot with the above configuration, if services running at system boot time attempt to look up non existing users."

**Note 19: Oracle Solaris 11.4 SRU 24 installation from the text-install ISO fails on systems with low memory (Bug 31492727)**

With the move to Python 3, out of memory issues can be observed when installing or updating to Oracle Solaris 11.4 SRU 24 from a text-install ISO. To mitigate this, a minimum system requirement of 8GB RAM and 2GB of swap is recommended.

**Note 20: Potential nvme performance regressions on Oracle SPARC systems with Hardware BTI Mitigation enabled (31796983)**

Some Oracle SPARC systems with Hardware Branch Target Injection mitigation (`HW_BTI`) enabled may see performance regressions with nvme read/write operations of up to 20% in certain conditions. As stated in the [Protecting Platforms Against Speculative Execution Attacks](#) documentation, this is a potential consequence of enabling this mitigation.

For more information on the potential performance impacts of `HW_BTI`, see [Doc ID 2386271.1](#).

So far, these regressions have not been seen on Fujitsu SPARC or any x86 based systems.

**Note 21: TLS 1.0 and TLS 1.1 are disabled in Apache Web server (Bug 28922797)**

From Oracle Solaris 11.4 SRU 21 onwards, usage of TLS protocol versions 1.0 and 1.1 is intentionally no longer allowed by Apache Web Server.

**Note 22: Removal of TLS1.0 and TLS1.1 from pkg.oracle.com**

Due to security issues and wishing to protect our customers, TLS 1.0 to TLS 1.1 will no longer be supported as an access method to Oracle Solaris repositories on `pkg.oracle.com` from October 2020. This means that any client directly accessing them must be running Oracle Solaris 11.2 or later. Further details can be found in [Doc ID 2708452.1](#).

**Note 23: Known pkg update issues**

Known pkg update issues are documented in [Important Oracle Solaris 11.4 SRU Issues \(Doc ID 2445150.1\)](#). Be sure to read this document for the latest information, particularly if using non C or UTF-8 locales.

**Note 24: GNOME 3.34 in Oracle Solaris 11.4 SRU 27**

The GNOME desktop has been updated in Oracle Solaris 11.4 SRU27 from GNOME 3.24 to GNOME 3.34. Most everything should work as normal, but if you had any customization done to the Solaris desktop, ie. gnome-shell-extensions, those might need to be re-done post update.

Starting with GNOME 3.28, upstream has removed the concept of desktop icons (readily noticeable if you are running gnome-classic with the file-manager, trash-bin icons). If you want to re-enable them, they are available from [extensions.gnome.org](#) as a gnome-shell extension going forward.

**Note 25: WARNING: anon\_resv: firefox attempted to allocate 4194304 pages of anon memory (Bug 31953677)**

Due to bug 31953677, WARNING: anon\_resv: firefox attempted to allocate 4194304 pages of anon memory, Firefox can generate a warning message like the following:

```
Oct 15 12:57:48 testrig1 genunix: [ID 531226 kern.warning] WARNING: anon_resv: process 2212 attempted to al
```

This message can be ignored and will be fixed in a future SRU.

**Note 26: Default python mediator change in Oracle Solaris 11.4 SRU 30**

Starting with Oracle Solaris 11.4 SRU 30, the default 'python' mediator value is now set to python version 3.7 instead of 2.7. If you rely on `/usr/bin/python` being version 2.7, you will need to change the mediator back to that value:

```
# pkg set-mediator -V 2.7 python
```

This change doesn't affect those who explicitly set this mediator before; only the default is affected.

**Note 27: Error installing Oracle Database 12c and 18c on Oracle Solaris 11.4 SRU 27 (32380608)**

Users attempting to install Oracle Database 12c or 18c on Oracle Solaris 11.4 SRU 27 or later may see the following error at the "Create Databases" step of installation:

```
oracle.install.commons.base.prereq.PrereqCheckerJob logTaskOverallResult
INFO: Hard Limit: maximum open file descriptors: This is a prerequisite
condition to test whether the hard limit for maximum open file descriptors is
set correctly.
```

The `-ignorePrereqFailure` flag can be used during install to allow successful installation. Alternatively, the following may be used as a workaround:

```
# echo set rlim_fd_max = 65536 > /etc/system.d/oldfdlimit
# reboot
```

Other versions of Oracle Database are not impacted by this.

**Note 28: 32-bit Pass-Through Volatile FOSS libraries might be removed without warning in Oracle Solaris 11.4 SRU's**

32-bit FOSS libraries with declared interface stability levels of "Pass-Through Volatile" might be removed without warning from Oracle Solaris 11.4 SRUs. This may occur due to changes in the upstream products, or products they depend on, which make delivering 32-bit libraries unsupportable.

**Note 29: Pango 1.46.2**

With the pango update to 1.46.2, users using non-default fonts might experience some issues because of the dropped support for Type1 and bitmap fonts upstream starting in version 1.44.0. Details of this change from the upstream community is discussed in [Pango 1.44 and the removal of support for bitmap fonts](#).

**Note 30: Oracle Solaris Cluster customers will need to update cluster version if updating to Oracle Solaris SRU 33 or later**

Due to changes introduced in Oracle Solaris SRU 33, Oracle Solaris Cluster customers who upgrade to this SRU or higher will also need to upgrade their version of Oracle Solaris Cluster to Oracle Solaris Cluster 4.4 SRU 10 or higher. An optional dependency has been added so that customers who have Oracle Solaris Cluster installed will automatically update Oracle

Solaris Cluster if updating Oracle Solaris past SRU 33. Customers who do not have Oracle Solaris Cluster installed will not be impacted.

**Note 31: /usr/bin/awk mediator link**

From Oracle Solaris 11.4.33 onwards /usr/bin/awk is a mediated link, allowing the administrator to choose if /usr/bin/awk is provided by oawk or nawk. The system default is to use /usr/bin/nawk as /usr/bin/awk.

Note that there are a small number of incompatible behaviors between the oawk and nawk implementations.

**Note 32: Change to uname(1) output in Oracle Solaris 11.4.36**

Starting with Oracle Solaris 11.4.36 the output of the `uname(1)` command when given the '-a' option (to display all fields) will include the current virtualization platform. This can also be explicitly selected by using `'uname -V'`. This is equivalent to the values returned by the `virtinfo(8)` command.

**Note 33: Added support for listing Zone description via zoneadm(8) in future Oracle Solaris 11.4 SRU (ER 32832402)**

The Zone description is usually done by specifying the -d option to "zoneadm list". The one exception is "zoneadm list -p" which produces a machine parsable output. The new enhancement modifies "zoneadm list -p" so it prints the description field as the new rightmost column.

Please note that while "zoneadm list -p" has always been documented as extensible in the zoneadm(8) manual page with regard to the number of columns displayed, care should be taken with existing scripts that have been using this interface. It is recommended to verify that such scripts do not assume a fixed number of columns in the "zoneadm list -p" output.

**Note 34: Removal of wifi drivers and Direct Rendering Infrastructure (DRI) in Oracle Solaris 11.4.36**

With the wifi drivers and Direct Rendering Infrastructure (DRI) being removed in Oracle Solaris 11.4.36, it is recommended that bare metal laptop users investigate alternative methods of installing Solaris such as using VirtualBox.

Solaris users who are currently using the Intel/modesetting Xorg driver to drive the Intel native graphics will notice the change since it will now default to vesa with the DRI removal.

**Note 35: sstore service goes into maintenance post 11.4 SRU 36 upgrade with non default rpool name (Bug 33019544)**

After upgrading to Oracle Solaris 11.4 SRU 36, users with a non default zfs root pool name ('rpool'), may see the `svc:/system/sstore:default` service go into maintenance, with errors similar to the following in the log file:

```
File "/lib/svc/method/svc-sstore", line 216, in dataset_update
  rpool = rc.get_object(zfsmgr.Zpool(), name_pattern)
File "/usr/lib/python3.7/vendor-packages/rad/connect.py", line 483, in get_object
  (str(tgt), ex.get_message())
File "/usr/lib/python3.7/vendor-packages/rad/client.py", line 197, in _raise_error
  raise _Errors[ex._error][1](msg, ex, None, conn)rad.client.NotFoundError: Error getting com.oracle.sola
```

This issue will be resolved in an upcoming SRU.

[Contents](#)

## Bugs Fixed

Each SRU provides bug fixes and incremental changes that are relative to the preceding release, for example Oracle Solaris 11.4. The following additional bugs are fixed in this SRU:

Bug	Synopsis
15775893	SUNBT7149646 pcicfg_mmio_mutex held during call to hat_unload()
15826784	SUNBT7207627 `svcprop -p pg/prop svc:inst' is not the same as `svcprop svc:inst/`
16166033	svcprop(1M): description of default snapshot selection is... obscure
16516457	root pool should be created with compression=on by default
16781730	svccfg listcust and delcust should be consistent with each other.
17206210	cachelist juicing can lead to latency bubbles
17266352	buffer size for rights profiles needs to be at least 8K

17441527	rcm_daemon: IP: replumb failed, Error Interface already exists
17543864	assertion failed in dbuf_create(): level == dn->dn_nlevels - 1
17544872	Deliver tooltalk utilities as 64-bit programs
19698215	linkedimage/zone.py `_zonename()` should sanity check zonename output
20111992	improve MPxIO performance stability upon transport errors
20732429	sstore relative points option does not work as expected if step specified
21020158	html help files in cups for RBAC profiles and authorizations must go
21020791	Add "RO" to res1 field of auth_attr.d files in CUPS
21041837	Remove fpu_exists
21086434	kstat2.h defines symbols conflicting with dtrace reserved words
21438976	applications core dump when tzsync file is zero-length
22691153	running out of disk spaces leaves index.old behind; must remove to update cat.
22932499	ses enumerator core dumps due to invalid element index in fruid page
22969701	massive memory use when dtrace mapping uses 8+ partitions
23040911	elfdump of NT_FDINFO core notes can be made hex dump free
23278411	Support for Sparse files feature
23518674	localtime functions dumps core when posixrules cannot be read
24364356	iscsi system log should provide target info
24437844	unvme(4I) AE Request always gets EIO as ioctl() result even in successful cases
24957517	llvm/clang packages need further decomposition
25030245	Before changing SIGSEGV or SIGBUS handler in libc, issue a membar #sync
25035949	Kerberos contains some man page problems
25290185	REST shows degraded pool as "online"
25503832	cfgadm can print truncated fibre channel error messages
25521140	beadm destroy of multiple BEs sometimes fails
25575624	paging thresholds should take seg_guest memory into account
25593115	ca-certificates goes to maintenance state as it operates on RO FS
25598832	disklog: support for obtaining logs from NVME devices
25598836	Implement firmware plugin to upgrade NVMe end devices
25831102	nvme driver doesn't update inquiry-revision-id after HMP fwupdate(8)
26251016	scsi_vhci messaging for failover with devices not supporting explicit failover
26408214	nvme: header files need to align with NVMe specification version 1.4
26552192	Create ireport when ZFS marks disk as slow
26782267	assertion failed: file: ../../common/fs/zfs/zvol.c, line: 1003
26828253	During reboot testing, Aura7 AIC and SFF gave NVME_FME_CREATE_QUEUE_FAIL error during attach.
27038814	unexpected tele reported on FV network when it was reset
27118196	defect.sunos.eft.unexpected_telemetry reported when USB was reset
27199761	SSH cipher configuration: rijndael-cbc, chacha20-poly1305
27219567	SMB server provides wrong (old) MT-timestamps to clients

27363357	unexpected telemetry for ereport.io.pci.nr "dev:///pci@306/pci@1/network@0"
27381401	Upgrade stunnel to version 5.59
27449984	nvme: controller shutdown should be done in devo_quiesce
27592504	Use of --enable-hardware-acceleration on Solaris/x86 leads to undefined symbols
27654817	ZFSSA KMIP client configuration
27773509	lockd "filesystem in migration" warning is missing important details
27816311	ldom fails to boot over iSCSI after inconsistency in the boot archive
27913383	disallow ssh agent forwarding
27987229	akd hits SIGSEGV at ak_fm_maintenance_in_progress()
28019472	Assertion failed when attempting to remove a meta device
28279267	printf() in Kernel return void: void casting is not needed
28379997	motd should not be used to display Solaris version on login
28555970	ptp invalid domain error should be updated after integration of 26718733
28625248	boot archive file list should not include /etc/certs
28701678	svcadm restart needs to handle services in maintenance state better
28771656	Increase the number of threads statd can use and make it a tunable
28799675	and again: assertion failed: file: ../../common/vm/vm_pfniter.c, line: 319
28802655	Unable to access/ssh to server due to tl_minor_space exhaustion/depletion
28856855	AK CLI date command allows any option to be specified
28907591	memory bug in ksh triggered by typeset -L or -R or -Z
28980051	provide bui timezone display options
28984463	improve 'zfs destroy' failure message
28985698	sa_setup() frees sa_lock without destroying it
29134916	GNU strip fails to set sh_link and sh_info on SPARC64
29185259	assertion failed: zone->zone_vfslst == vfsp, file: ../../common/fs/vfs.c, line: 4096
29233759	Remove Obsolete DSA/DSS User Keys
29312742	SMB three thread deadlock on vnode->v_nbllock rwlock
29342681	suri_unmap() must assert on incorrect teardown argument
29422221	manifest-import doesn't handle mktemp failure
29488241	Only one SMB_TYPE_MEMARRAY entry per system with SMBIOS 3.2
29613842	i_ddi_get_call_stack is expensive
29723888	manpage entry missing for /var/user and /tmp/volatile-user
30114531	Timestamp display can have the sign wrong.
30217237	improve vdev_open() DKIO* behavior when transport errors occur
30318478	client failed to recover from lost open causing mount point dead
30568548	ksh93 typeset -u and typeset -l gives segmentation fault
30679099	Improve regen-patches to produce less git-like results
30734202	Remove Device Driver Utility (DDU) from Solaris - PSARC/2019/169

30774986	remove patches/openpty.patch
30866144	oracle-database-preinstall-19c causes filesystem/local to go to maintenance when installed into alternate BE
30886821	Add FW ORA9 and ORAA for Seagate drive model ST1200IN9SUN1.2T
30895246	bnxt(4D) version logged to system log on driver attach is meaningless
30923392	Upgrade openscap to 1.3.4
30955642	Enabling dns after an upgrade (with disabled dns) fails to mount /etc/resolv.conf
30968297	rpool/VARSHARE/sstore should use lz4 compression
30986482	Automatic Updates for stackdb and ehc
30990484	auditd dumps core with ADI mismatch
30997908	Mixing two interfaces bnxt and i40e in aggregation cause slow performance
31012320	On Upgrade aknsswitch start method failed with 'Error: Unable to archive existing legacy file'
31170978	LDAP reconfiguration should not cause service restart
31184976	OSC-78000 needs updating now swap is encrypted by default.
31188466	Existing oracle user info modified by oracle-database-preinstall-19c package install
31194064	pam_krb5 is unconditionally enabled, even if AD and Kerberos are not enabled
31206577	Use ACPI SPCR table in BIOS for serial port configuration
31224293	pmcs assertion failed: p->state == PMCS_WORK_STATE_NIL
31296345	improve diagnostics for NFS-related page mishandling
31429377	ZS9-2 BUI/Artwork changes
31429394	Create SUNW,maguroZ9 metadata for ZS9-2
31500329	The contents of IDENTIFY DEVICE words (61:60) and (103:100) shall not be used to determine LBA48 support
31504924	Add SFF/U.2 topo NVMe bay/drive to the AK chassis snapshot.
31517412	Add nvme interface type to chassis disk processing
31518938	RPCSEC_GSS should drop connection when dropping NFS requests
31528405	Virtualisation Environment in 'uname -a'
31541665	pkg update (dry-run) not informing about insufficient disk space in the zone in 11.4
31566444	sysobjd dumped after a reboot due to SIGSEGV at sysobjdb_backup_thread
31569739	PVLAN Configuration in Kernel Zone is not working
31595118	Resync SSH options with OSSA, July 2020
31597144	task queue race condition in persistence reserve preempt and reserve ignore SA commands
31658578	Performance counter updates needed for Intel's next generation processor
31671686	desktop-print-management uses the long gone gnome-open
31700883	pkg fix unable to re-generate /etc/ftpd/ftpusers and fails
31786223	parallel access to same kmip context causes crash
31798033	refactor dataset throttling memory allocation
31804897	cannot delete an oci cloud target on a cluster
31814670	mc-fma needs to understand new PMTT rev 2 format

31839265	lm_vp_active() should use avl_find(), not walk the tree 1 at a time
31860153	svcio suppresses literal newline suffix in ^ transform
31876764	Update unrar to version 6.0.5
31895008	fuweb option to skip copy of image/icon files
31905358	solaris_install/manifest_input/editor python sources need to be upgraded to work with Python 3.7
31906333	ZFSSA http/https instances need to set SameSite cookie header
31906407	TLS Compression must be turned off
31920132	Add support for auditing LDoms resource reconfiguration events
31926581	EOF GNOME 2.0 Configuration - GConf
31938517	The smartctl command fails and dumps core on Solaris 11.4.
31948601	badly formed publisher URI leads to mysterious error message
31972503	Kernel Panic - BAD TRAP: type=e (#pf Page fault) rp=ffffe33000bb57f0 addr=30 occurred in module "fct" due to a NULL pointer dereference
31974326	Unable to setup LIO clustering using REST
31985552	Unauthorized BUI attempt to delete a workflow fails silently
31988806	pkcs11_kmip key attribute refresh doesn't always work
31990359	FW/metadata for Intel Arbordale+, and Samsung Eagle2 NVME drives
32018004	Problem with python-mod/urllib3
32020512	Zoom lost when selecting drilldown
32032632	add ability to print raidz map from zdb
32047336	Support updated E6 commands on Paris-C drives
32052534	inetd core in read_instance_cfg()
32062544	libcrypto lint library is missing the RC4 definitions
32099986	::zfs_blkstats and zdb should have a way to report device class usage stats
32117082	self contained send streams with origin included should not duplicate data blocks in the clone substream
32135421	recursive rw_enter in ire_delete_v4()
32137750	assertion failed: (boe == NULL) implies (DVA_GET_GANG(dva))
32139314	provide ddi_copyinstr/ddi_copyoutstr implementation
32146628	remove WiFi drivers
32155761	some sync tasks may be dispatched sooner
32164596	Netapp Metrocluster failback scenario with Emulex 16GB fails
32169730	Problem with kernel/icmp
32177704	handle unexpected telemetry errors on NVMe surprise removal
32202043	EOF of Direct Rendering Infrastructure (DRI): Removal
32210290	fwflash fails on non-production (deviceID == 0x1017) CX-5 running obsolete firmware image
32225058	mpathadm show lu should include LUN number
32225989	Target port goes offline when WWN is migrated to another d_id
32242734	reduce replication reliance on the nas lock during destroy
32245742	GSSAPI context serialization for krb5 mech must be able to process whole context

32246503	Deadlock: cycle in blocking chain panic within function smb_node_release
32258107	IO freeze during storage port failover
32269624	Setting invalid option in share property got typo in error message
32300993	upgrade kerberos to 1.18
32318748	arc rawdata only bufs are immune from eviction
32324956	debug.sys contains message "Keytab contains no suitable keys" on passive head
32332133	"ovmd -s configure" error on VM guest Solaris 11.4_SRU24
32336223	nfs4write() should use an open stream for write to flush dirty pages
32344365	libresolv send_dg() gets stuck in recvfrom()
32344400	Update GNU binutils to 2.35.1
32344488	Problem with utility/gnu-binutils
32363312	Guest panic in disp_getwork() due to NULL lpl_leaf
32371205	pkg update quits silently when there is insufficient space available in NGZ
32379228	All remote snapshots appear to stuck after upgrade (legacy ZFS send)
32380018	ZFS dataset throttles disappear post 31339431
32381404	improve sdattach() behavior when errors occur
32382547	LIO - disk removed with one head down does not have reservation cleared on reinsertion
32385950	unable to remote display GL apps across architectures
32386393	EOF of httping: Removal
32386420	Problem with gnome/security
32397344	Message to abort migration is confusing
32402494	ssh SMF start method should generate more host keys
32410875	kvno mismatch on host key saved in keytab
32412807	panic after esp_update_sa() passes a pointer to an incorrect object as an mblk pointer
32413683	update p11-kit to 0.23.22
32419912	Python 3.9 gmake install occasionally fails
32426003	Integrate CX5 100Gb Firmware 16.28.1002 to AK
32432965	Add instruction mnemonic suffix when no register operands (binutils 2.35.1 support)
32435412	Problem with filesystem/zfs
32441645	Disable SMB 1 support on Solaris SMB server by default.
32453201	Deep copy of CK_MECHANISM structure in metaslot is not so deep as should be
32466052	Add CX5-25G NIC firmware support for ZS9-2 appliance
32466388	pkgrepo verify/fix crash on truncated file
32468519	zfs_ioc_recv does not consider permission check errors for critical received props
32480894	want tx_firsttried_txcg
32483896	akmd_prod_url should be common link to avoid possible redirection issues
32490417	MDB zfs module fails to link with libavl
32490888	Allow public key authentication with FIDO/U2F ecdsa-sk key type
32491486	svc:/system/identity:cert is in maintenance state after upgrade

32497000	identity:cert-expiry should restart identity:cert
32497022	identity:cert should avoid rewrites of existing content
32497653	failure to add a swap volume does not result in the system/swap smf service going into maintenance
32501840	vdev_dtl_load error in error checking
32504088	incorrect ARGUNUSED in ak_cert_init()
32507111	CUPS Web UI doesn't show any jobs after Solaris upgrade from 11.4.20.4.0 to 11.4.27.82.1
32514197	disk-hb: PGR Reservation/Key cleared after firmware upgrade
32522114	nfsd -a failing with "Cannot establish NFS service over : No such file or directory. Exiting"
32522678	STRIPPED head should not have write permission
32525331	svccfg apply dumps core on Solaris provided sample profile
32527662	avoid tar-ing/transferring the duplicate files/directories when backuping to the OCI.
32527884	replication export broken by early update
32529603	Update pyatspi to 2.38.1
32531090	panic: BAD TRAP occurred in module pcicfg due to a NULL pointer dereference
32531239	looping xmlrpc.hardware.sp.online/offline events
32534194	update gnome-online-accounts to 3.38.0
32534195	update gnome-desktop to 3.38.3
32534196	update json-glib to 1.6.0
32534197	update gnome-session to 3.38.0
32534200	update gnome-settings-daemon to 3.38.0
32534201	update gnome-shell to 3.38.1
32534202	update gnome-shell-extensions to 3.38.1
32534203	update background-logo-extension to 3.37.3
32534204	update mutter to 3.38.3
32534206	update gdm to 3.38.2.1
32534216	update gnome-backgrounds to 3.38.0
32534223	update adwaita-icon-theme to 3.38.0
32534229	update gnome-control-center to 3.38.3
32542262	running ztest with adi enabled ztest asserts with kom_getowner(h) == kct
32542950	EOF MySQL 5.6: Move to legacy state
32547164	Update akmd_prod_copyright to follow latest copyright requirement
32549930	using strdup should not build a libzpool that does not work
32555397	Off by one error in sslog_prepopulate_dq causes segv
32560645	Allow creation of an incremental backup with no parent in the cloud
32562870	sudo -i on host with adiheap protection from a pam annotation enabled account yields 'Memory fault'
32566198	EOF Ruby 2.5: Move to legacy state
32569562	CX-5 OCP devices need to be supported
32569999	disk image root pool name changes based on build system configuration

32574230	Add NASM into Solaris
32574890	Update Twisted to 21.2.0
32575461	Non null terminated string in format_stackstr
32575476	Add support for I219-LM11
32575750	sstored coredumps when capturing some DTrace ssids
32576759	Problem with utility/stunnel
32576968	ak_keystore_ssh_init_profile should not embed a list of legal SSH key types
32577513	disk images should reguid the root pool at initial boot
32579605	Deliver asgiref in Solaris
32580823	fcinfo(8) man page needs fixes
32581231	Add SMF service for buildbot-worker
32581232	pkglint man page talks about non-existent ContentChecker class
32586349	memory leak from kmip_get_smf_config()
32590706	Pytest should ship /usr/bin/pytest
32593088	fmadm list producing no output due to proxied case with no fault-list
32593998	Appliance is not booting up with replaced system disk
32596401	format -e should not include CDROM in list of disks
32598195	sar(1) manpage is erroneously updated with Stolen Time Microstate
32603081	drive attach failure during reboot
32603336	akbe needs to invoke aksh with absolute path
32603442	Panic in nfs:authget due to mi->mi_srv = NULL
32603903	logadm warnings for gns.ak and migration.ak
32606024	mdb dtrace_state dcmd broken in 11.4
32606211	failback failed as a filesystem couldn't be unpublished completely
32606999	The auto-update service should support the '-g' option to 'shutdown'
32607154	pmcs injection is missing general interrupt injection point
32607530	::save should have an option not to print dot
32611906	svc-auto-update-reboot will fail to auto-reboot
32613361	auto-update should support multiple instances
32615430	shcomp and supporting shbin exec module broken
32620396	Java application crashes in pkcs11_softtoken when calls C_GenerateRandom
32622997	file(1) should recognize KZ guest core dump
32623056	update interface stability
32625217	snapmgr ignores shutdown request
32625667	single thread waiting on an NFS server can stall thousands of threads in pool_lock_intr()
32625997	Solaris builds over NFS v4/v4.1 mount failing when the server returns NFS4ERR_DELAY
32626069	Problem with library/gnutls
32626328	Already destroyed auto snapshots are not cleaned from snapmgr configuration when RASM is not configured

32627103	dtrace -e reports false error when not run as root
32628308	ice lake aka X9 aux support needs to be reworked
32631404	sigsetjmp() on Intel copies all registers twice
32632489	core_seg failure reporting could do with some tweaks
32633416	Add legacy audit event definition to map to obsolete LDoms auditing implementation
32639381	Support for SMB FSCTL_QUERY_ALLOCATED_RANGES
32639531	Supply an interface describing where system smf manifests live
32640923	zdb -mm metaslab histogram addition
32644746	Unable to send utf-8 string to a RAD module from a Python client
32644887	Zone Description
32645151	Samsung MS1PC2DD3ORA6.4T reports akch_type of cache in st_092
32645649	Need to improve disk enumeration for unexpected SES status
32648831	Disable auto-update:cleanup on the appliance
32649544	cloud backup fails: no memory
32649860	max number of jobs limit is not enforced
32649915	zonecfg - handling values in quotes broken
32650057	fault.io.pciex.device-interr should have retire=0
32650435	ptpd drops a core file if the configured interface is disabled.
32654889	SPARCV9 sigsetjmp() is 4x slower than the 32 bit version
32654988	SPARC libc would like to have some non-faulting load functions
32655592	null dt_mthdl causes seg fault in dt_aggregate_go()
32655601	EOF GCC 7: Move to legacy state
32656283	gdm autologin doesn't work post SRU 27
32656815	vtio panics at boot on OCI E4 VM with 64 OCPU
32661816	Update nettle to 3.7.2
32662045	zoneadm should produce a better errors when migrating configuration failed
32664623	hardlink files are not treated correctly during the incremental backup
32664638	GRUB timeout on OCI disk image unnecessarily long
32665166	ToolTalk should use manifest checks
32669669	PTP internal timers stall if updated too quickly.
32675788	high_pil_adaptive_whitelist needs updating for fixed bugs
32676494	The statistics of project data size is wrong when there are reservations on share level
32678645	ssh-keygen -A tries to generate ed25519 key in FIPS mode
32679243	OSC-60000 root password hash incorrect OVAL boolean logic
32679656	HAT lock contention on process exit leads to loss of service / hangs
32681223	Problem with python-mod/lxml
32681502	Unable to set a deferred breakpoint in a library that will be opened with dlopen
32682543	panic: recursive mutex_enter: nvme_handle_fatal
32682636	assertion failed: head->nc_cid > NVME_CID_MAX, file: ../../common/io/nvme/nvme.c

32688015	Upgrade pylxml to version 4.6.3
32688338	kmip_get_pk11conf leaks memory
32689909	dmods -l aborts early with mdb: Zero bytes allocated with UM_SLEEP: dmods
32690684	zpool iostat -v not printing both cache and meta device stats
32699924	Appliance core dumped and rebooted when importing keytabs on Kerberos service
32699960	Update ISC DHCP to version 4.4.2-P1
32700241	arc_reclaim_thread() can spin on the CPU indefinitely
32703182	akbundle noblock command failure results in bundle failure
32705294	recalling delegation shouldn't block when it's triggered by a v4 request
32706035	Add semantic_puppet module to userland consolidation
32706668	Problem with library/curl
32706691	Problem with library/curl
32708771	FKREMOVED support: ala sd changes for FD
32713578	EHC-ZFS-00100 should updated to reflect slow disk ireport post 26552192
32714214	Update colorama to 0.4.4
32715133	Problem with utility/gtar
32715598	zmutex_destroy should let us destroy what's in our hand
32717937	snmpd dumping core (proxy_got_response) with SIGSEGV while doing snmpwalk
32718431	race between breadline enable and predictor thread when creating new mnodes
32719803	failed import reset package offline status
32720271	zfs send dumps core due to empty fs nvlist
32726608	memory leak (zfs_handle_t) in load_resumable_ds_key_cb
32728170	Solaris server should not restrict use of active optical/active cables
32729699	Problem with utility/python
32729886	Some of the ancient patches were not applied during TX port to CUPS2
32730311	Upgrade GNU Tar version 1.34
32731273	Problem with library/nettle
32732255	Separate json-loader memory leak detection from sstored memory leak detection in sstore tests
32735238	curl: uprev to 7.76.0
32735353	Memory leak in ak_krb5_stash_update()
32735429	potential memory leak in ak_krb5_stash_resume()
32736861	RAD Python _get_private_transport() outputs stderr to the terminal when debug=False
32736953	Upgrade Ghostscript to 9.54.0
32737155	enable_ssh calls redundant 'sshd -c' for generating host keys
32737477	Problem with utility/nodejs
32737580	Upgrade Node.js to version 14.16.1
32737588	Upgrade Node.js to version 12.22.1
32737999	pkg:/developer/gcc-10 should include also dependency on gcc-go package

32738151	Update poppler to 21.04
32739276	use 'fmadm list' instead of 'fmadm faulty'
32739634	several problems in configdrive
32740357	LIO akd memory leaks
32742380	update nss to 3.63
32745355	Update qpdf to version 10.3.1
32745618	Assertion in empty cascade replication update
32746272	Non-existent routines referenced in MIB macros
32746474	Add PCA IAM integration to OCI Object Store implementation
32746489	Add missing OCI Object Store features to ZFSSA implementation of the OCI Compatible Object Store
32750707	update hplip to 3.21.2
32750841	Changes in restrictions with the projmod command are not reflected by su, newtask
32750871	Allow debugging output to file in libdtrace
32752140	Parse failure with VMAPI properties in Idm list output
32752228	libconv should use strerrorname_np() for errno names
32754050	'logins -g' searches supplemental groups but fails to return them
32754585	devi timeout due to segkmem_gc_flush() taking a long time
32755051	metaslot deferred init is obsoleted and should be removed
32755496	update cantarell-fonts to 0.301
32755591	update gnome-getting-started-docs to 3.38.1
32756315	nvme driver should handle CSTS value of -1 better
32756366	avoid calling nvme_set_fatal() for unvme accesses
32756999	Add timezone information to Compliance Statstore
32757592	update gutenprint to 5.3.4
32757637	Upgrade cups-filters to 1.28.8
32758998	ovmtlibrary fails to validate checksum
32759486	Improve the performance of the fast lookup creation
32760814	update pango to 1.48.4
32762807	On system disk replacement akbe sometimes tries to use replaced disk
32762970	Update python 3.9 to version 3.9.4
32763029	inconsistency between account-policy manpage and sources
32763118	make refcount code friendlier for use with kmem caches of containing structures
32763120	dmu_tx should use kmem caches
32763416	update polkit to 0.118
32763874	fmd not always detecting fru add/remove which occurred while shut down
32764838	save the nvme drive klog output in the support bundle
32766690	NVMEX_IOC_ALL_NS define should not have been removed from nvme_def.h
32766788	libc on_fault can be simplified
32767221	Upgrade GCC 10 to version 10.3.0

32768381	mdb can ASSERT in ::printf
32768490	ZFS ehc checks fail if the pool is in a state RAD can't access it
32768560	lo_freevfs() triggers panic: mutex_destroy: not owner
32769040	EHC-ZFS-00120 doesn't know about Terabytes
32769066	update gnutls to 3.7.1
32769233	Failing commands in conditional breakpoints leave mdb in a strange, and useless state
32770719	monitor_server_change thread hang in __s_api_reinit_conn_mgmt_new_config
32773067	saving into a variable called '1' dumps core
32773088	::save no longer prints dot
32773178	Upgrade Apache Tomcat to version 8.5.65
32773249	Problem with gnome/libraries
32773419	akbe parsing of 'zpool status' is very fragile
32775589	duplicate targets when reversing package
32775696	sockfs hardcodes uid/gid to 0
32776357	update GNU emacs to 27.2
32778478	fifo node creation has backdoor entry into zil_commit during replay
32779051	Update fetchmail to 6.4.18
32779690	LIO ak_diskhb.c has a number of file descriptor issues
32779947	The first DISCOVER can ignore the vsan.mask value
32781184	nvme firmware upgrade plugin fails to close :nvme minor node
32782106	x86 hat_page_checkshare() fastpath underestimating mapping counts
32785352	attach(9e) call klog_init(), but detach(9E) missing klog_fini()
32786179	Kerberos principals key-tabs have unknown value for encryption after upgrade to pre-int build for kerberos 1.18
32786203	fpras code can be culled
32787804	Update less to version 581
32788582	panic: BAD TRAP running zones tests on solaris 10 branded zone
32790773	Incorrect memory topology in X9-2L chassis metadata for ZS9-2
32797267	php-fpm cores with sigbus in fpm_event_port_wait
32797661	Intermittent SMB access issues caused by MSRPC security package error after upgrade to OS8.8.31
32799445	Request timeout during netr_server_samlogon does not trigger DC failover
32799509	provide rlwrap
32800150	Execution of last vsan.mask op can linger
32803044	pr_lookup_fdinfordir/pr_readdir_fdinfordir would try to work on Zombies
32803615	admhist -u for per user filtering
32805346	nvme firmware plugin should properly handle dev link
32805911	update gvfs to 1.46.2
32809359	Migrate gtk2 to Python 3.7
32809369	x86 panic_showtrap() call to dump_ttrace() spams ::msgbuf

32809802	Missing dimm-size in fmtopo on X9-2 platform
32810398	Update man pages to reflect Oracle Documentation Style Guide changes
32810401	Problem with install/installadm
32811169	bad mutex panic in lofi_attach_file
32811210	::stp_info mdb command no longer works
32812742	failed quiesce(9E) message should not be using ddi_node_name() to identify driver
32813879	nvme: kstat_create namespace collision
32813886	nvme: NULL pointer panic in nvme_detach
32814827	::bp -D does not default -n to 1
32815514	Upgrade Django 2.2 to version 2.2.20
32818059	led_mgmt should ignore alerts when setting ok2rm state
32818295	update vte to 0.62.3/gnome-terminal to 3.38.3
32818377	Restore fails with exception when EJOB_ZFS expected (legacy ZFS send)
32819729	::bp -D -c ::status leaks the memory containing the evaluation
32820146	update pulseaudio to 14.2
32820656	ssh core dumps in kerberos code
32821686	hment_mapcnt() is racy
32822008	deleting an execute watchpoint doesn't
32822798	Problem with utility/snoop
32822940	ensure keychain is purged from keystore upon dataset destruction
32824902	Implement HTTP tunneling support into buildbot worker
32826059	Problem with library/openjpeg
32826080	Problem with utility/gnu-binutils
32826736	assertion failed: B_FALSE, file: ../../common/io/mac/mac.c
32827177	archiveadm can randomly select port already in use
32827985	Update less to version 581.2
32828065	provide debug observability of the call-stack address cache
32828199	UI stutters in Gnome 3.38
32828615	Many large XML/RPC responses in a single session can deplete akd memory
32829603	vtionet: WARNING: :s, unexpected ip protocol 34525
32831692	EOF mozjs-60: Move to legacy state
32832080	update mutter to 3.38.4
32832135	AK should use ssh-keygen -A to generate missing SSH host keys
32833906	send additional ESC_TOPO_FRU_ADD for present->FRU-info-known transition
32834142	truncate displayed path names for ::spa -v and ::vdev dcmts
32834262	enhance 'slow' telemetry support to cover SCSI FLUSH/SYNCHRONIZE CACHE commands
32834549	rootvp: multiply defined errors seen on console
32835538	Setting a watchpoint with out specifying the size aborts the pipeline
32836972	::kill after the target has exited kills the mdb-helper then mdb will core on exit

32837190	Error message returned by bootadm update-archive command from context.c
32845720	auditd core dumps due to Segmentation fault on x86 systems
32848108	disable use of large pages for NFS vnodes
32848362	Device reservations not set when EBOD is power cycled
32848855	minor updates to several apps
32848861	minor updates to several fonts
32848868	minor updates to several X libraries
32849750	Update documentation with example how to import single GPG key out of bigger keychain
32851566	Update GNU Binutils to 2.36.1
32853777	update util-macros to 1.19.3
32854481	::sysbp, fltbp and sigbp should have a way to list the strings that they accept
32854509	Would like a way to find the id of an added event
32854921	solaris10 brand live mode does not support setting the net property address in Solaris 11.4
32855522	malformed pkg-auto-update.xml causing manifest import to go offline on boot
32855903	libc's on_fault/no_fault need to use "membar #Sync" to catch all ADI issues
32855940	EHC check for pools not configured with RAID
32857515	ld.so.1 printf engine mishandles signed negative 32-bit values
32860705	execsnoop in DTT does not catch posix_spawn processes
32862423	Desktop libraries no longer need to define LOG_AUTHPRIV themselves
32863580	spa_strfree() intolerant of NULL, leading to zdb crash
32866984	Need to audit vdsdev operations
32867668	Update gnome-system-monitor to 3.38.0
32868427	memory leak in zfs_rename_impl()
32868579	bpmmap_get_obj_array() should handle unused entry
32869419	disable ses.so gather of current phy_mgmt_state by default.
32869424	improve smp_transport() delay logic
32870583	Update file-roller to 3.38.1
32870626	Update ISC BIND 9.11.31 bind.license
32871432	EHC-ZFS-00120 Only checks the first pool it finds
32872389	double free in kmip_refresh_pkcs11_obj() when looking for deleted key
32874081	fwflash on CX-5 running too old secure firmware fails in a confusing way
32874535	sendpipe/recvpipe/mtu values not persistent over reboot
32876563	auditd SMF manifest ignores signals and core events; auditd blocks SIGSEGV
32877108	daemon should not block SIGSEGV/SIGBUS only to redirect the signal to the signal thread
32878156	Create EHC checks for recommended control domain resources
32878165	::status after unloading libc.so.1 dumps core
32878933	need ability to expand pools when OCI disks grow
32878946	Only first ssh key is loaded during cloud init

32879009	Need to reconfigure network and iscsi targets when booting from cloned boot disk
32879408	fix ddi_copy* return value mistakes in modctl.c
32881710	Update Django for Python 3.9 to 3.2.2
32881962	pkg crashes while displaying reserved directories error
32881980	Update asgiref to version 3.3.4
32882220	Use after free in readfilter of ipqosconf.c:7657
32882430	EOF Open vSwitch
32883023	shell/zsh and shell/tcsh missing from solaris-small-server
32884821	Potential deadlock when creating or editing replication target
32885637	LIO to use SAS zone locks as quorum device
32886197	zfs_rename_impl() returns before remounting dataset due to a failed nvlist read
32886392	::sort adds the same key twice to an AVL
32886604	Update buildbot-worker to version 3.1.1
32886657	Update GNU debugger to 10.2
32888439	sstore service is in maintenance because pool rpool/VARSHARE/sstore has to be upgraded to set lz4
32890582	disable ntp mode 6 in default configuration
32890634	EOF of MCollectives: Move to legacy state
32893695	Problem with x11/libx11
32895566	Update sortedcontainers to version 2.4.0
32896450	::if malformed statement segv rather than error message
32897167	REST API force option to delete a backup used by a child is broken
32903377	akd shouldn't strip the '/CN=' off from the DirName of ASN-based certificate
32905323	solaris_install.media.enable_ssh fails with no attribute SSHD
32906315	Upgrade Node.js to version 14.17.0
32906548	Create an EHC check for recommended service domain resources
32906562	Create an EHC check for disk services
32906587	EHC tailorable values do not appear in the report correctly
32907728	Update pip to version 20.3.4
32911566	librestart cannot set the project when user is not set: fails to set context with "Out of Memory"
32911703	GNU debugger fails to load core dumps generated by PIE binaries on SPARC
32912870	removal of sccsid and rcsid
32914647	nscd thread hung in sema_wait during recursive getbymember lookup
32917966	Improper grep syntax in /lib/svc/share/pkg5_include.sh causes unnecessary crontab updates
32918227	vdc_open calls taskq_dispatch with TQ_NOQUEUE
32918922	Update Solaris logo to new Redwood design
32919531	Deliver Python RapidJSON in Solaris
32920007	unable to launch iscsi boot without using console or user script
32920009	deliver bandit for Python 3.9
32920077	klld unused processing confused when module not found

32920234	SPARC system panic with: ADI precise mismatch trap in zfs
32924492	libdisklog causing a double memory free
32924884	on_fault() should not use system calls to figure out if it can avoid system calls
32925217	Problem with service/dhcp-server
32926258	pci topo and nexus should create properties that interoperate with pciutils
32929554	man page for 32803615 admhist -u
32931038	LIO should not initialize in avatar AK
32931729	incorrect usage string for ::showrev
32934442	sun-iso-map.xml should list correctly XML predefined entities
32934907	Upgrade Coverage to 5.5
32934913	Upgrade idna to 2.10
32934918	Upgrade incremental to 21.3.0
32934922	Upgrade jsonrpclib to 0.4.2
32934926	Upgrade lazy-object-proxy to 1.6.0
32934929	Upgrade monotonic to 1.6
32934931	Upgrade netaddr to 0.8.0
32934932	Upgrade pathlib2 to 2.3.5
32934935	Upgrade ptyprocess to 0.7.0
32934936	Upgrade service_identity to 21.1.0
32934937	Upgrade WebOb to 1.8.7
32935156	Problem with driver/qlt
32936032	update bash to 5.1
32936333	system/name-service/switch fails with "mount: /etc/svc/volatile//etc/nsswitch.conf: Device busy"
32937314	akbundle failed on ZS9-2 headnode with core.disklog generated
32938113	uname -a core dumping consistently on sparc
32939274	mpathadm should print Logical Unit Number for each individual path in the Paths section
32940724	LTID of Samba 4.13.4 has been changed
32941749	LIO - Add and Improve logs to handle failure scenarios
32941871	kldd can double load kernel dependency specified by path
32943100	Update irssi to version 1.2.3
32946022	Upgrade rsyslog to 8.2104.0
32946046	Upgrade libfastjson to 0.99.9
32949751	update unixodbc to 2.3.9
32949776	yasm doesn't build with autoconf 2.71
32950023	ZFS object set renaming and destruction can block out zvol minor creation for hours
32950677	:d 3 in kdmb caused ABORT in mdb_cmds.c:3081
32950831	lofiadm unable to destroy hotplug device no such device or address
32951312	svcadm: svc:/ is misconfigured (lacks restarter property group)

32955116	pci config space mapping should stop at memory
32956676	Update to qemu-img 6.0.0
32957119	OCI Compliance: Deleted object not replaced by a DM if any previous DM is deleted after overwrite in a versioning suspended bucket
32961025	failure to remount dataset in zfs_rename_impl() hides test dataset's .zfs directory
32962090	OCI Compliance: empty object name in multipart list.
32962105	vhba.DISCOVER can deadlock if AIO support is enabled
32962180	Bare Metal shapes do not like using DHCP to get DNS info
32962297	kldd needs a way to alter default \$CPU token expansion
32962331	vio must be robust if ldc does not announce an LDC_EVT_RESET
32963901	OCI Compliance: Extend fix for 32902731 to work if the previous version of the deleted object is a DM
32964629	Upgrade Django 3.2 to version 3.2.4
32965030	OCI Compliance: object list and list-object-version doesn't list all the object even with --all option
32965999	OCI Compliance: bulk-delete-versions fail to delete few versions with 404 not found error
32966150	missing cloud DNS settings requires manual initial configuration via console
32967348	Abort in-flight upcalls when mountd is not running
32970537	Upgrade GCC 7 to version 7.5.0
32970580	Upgrade GCC 9 to version 9.4.0
32971247	root-pool-config service fails: no response from fmd
32971503	update ICU to 68.2
32973222	Target discovery traceback on OLVM VirtIO disk
32974612	ucodeadm should allow microcode larger than 128k
32975559	Update hg-git to 0.10.1
32975865	Problem with library/c-ares
32975879	Upgrade c-ares library to version 1.17.1
32976397	Some CUPS backends don't work without root permissions
32977796	LIO - shouldn't do failfast ioctl when clearing a key
32981046	Some 'pkg contents' queries break with TypeError
32983580	Update libX11 to 1.7.2
32983757	Replication update fails during configuration backup
32985140	when terminal size is not set, ps(1) outputs a very long line with many spaces
32988258	sk_lock should be scalable rwlock
32993091	Problem with python-mod/pil
32997993	Problem with utility/wireshark
32998686	pkg fix fails to fix binary files replaced with text
32999191	OCI cloud init not setting default properties
32999513	zfs restore of an incremental lun backup onto existing share fails with "share alreadyexists" error
33003885	Upgrade Pillow to version 8.2.0
33004091	Make apache-perl module use perl 5.32

33004342	"sxadm enable kadi" should also turn on the KMF_DEADBEEF bit in kmem_flags
33010266	Problem with library/libgcrypt
33012339	Subversion python bindings are delivered into wrong place
33012663	update libgcrypt to 1.8.8
33015999	Need to harden NVMe drive auto upgrade for mapping fwupdate controller id
33016031	log "ioctl failure" and "zero key" separately and log return code of ioctl()
33018448	Filesystem creation fails with error "OCI API mode and other modes cannot be enabled at the same time"
33020149	auditrecord can't find audit_class info
33020219	Device reservation not cleared on replaced disk after failback
33020271	LIO - Don't "Reserve drives" for every SAS zone lock call
33022021	isdno(4i) man page should have been removed when driver & header were
33025594	panic loop at zfs:dsl_dir_rename_sync during takeover of head running cloud restore jobs
33032440	ak_diskhb_read_resvs() should log/ak_panic when device-returned listlen is > 1
33033112	httpd.conf should be packaged with overlay=allow
33034648	BUI exception when trying to set kmip details with user who has just 'basic' role
33037038	zpool handle pool goes stale on application of a deferred update
33038165	auto-update:stackdb has high propensity of going to maint state on global zone with local zones
33042048	ak_kmip_set_defaults leaks
33054717	Problem with gate-stuff/javavm
33054761	Problem with gate-stuff/javavm
33058120	Buildbot-worker SMF manifest is not valid
33061346	config restore results in ak_panic() on KMIP bits
33061713	LIO - removal of the redundant gcore
33063581	Update Wireshark to version 3.4.6
33065214	usmp_exec truncation in SMP_ACTION_F_DIAGNOSE to USMP_FLAGS_DIAGNOSE
33065242	smp_transport should understand when retry might help
33065382	NVMe fatal error reported on boot after upgrade
33070460	duration change of a locked retention rule after 14 day delay period fails with 500 error.
33074443	kmip_error should be enabled in non-debug build
33080883	Local encryption keys not accessible from peer head
33080917	scrub interval is not updated at AK level
33093926	reduce smp_transport_delay_cmd_usec to pre-32869424 value of zero
33099266	ak_sas_heartbeat missing ak_set_errno(EAK_NONE) prior to goto again
33127823	delay_random() overhead can be reduced
33191619	ak_cert_list leaks public key
33195844	Internal error on Certificate GET, POST and PUT REST calls
33215008	configuration restore panics in ak_keystore_nvl_resume with EEXISTS

For the complete Oracle Solaris 11.4 release history, see [Oracle Solaris 11.4 SRU Index](#).

- [Oracle Solaris 11.4.1.4.0 ReadMe \(Doc ID 2449090.1\)](#)
- [Oracle Solaris 11.4.2.3.0 ReadMe \(Doc ID 2458059.1\)](#)
- [Oracle Solaris 11.4.3.5.0 ReadMe \(Doc ID 2472200.1\)](#)
- [Oracle Solaris 11.4.4.4.0 ReadMe \(Doc ID 2483313.1\)](#)
- [Oracle Solaris 11.4.5.3.0 ReadMe \(Doc ID 2492782.1\)](#)
- [Oracle Solaris 11.4.6.4.0 ReadMe \(Doc ID 2507241.1\)](#)
- [Oracle Solaris 11.4.7.4.0 ReadMe \(Doc ID 2517183.1\)](#)
- [Oracle Solaris 11.4.7.5.0 ReadMe \(Doc ID 2526480.1\)](#)
- [Oracle Solaris 11.4.8.5.0 ReadMe \(Doc ID 2529131.1\)](#)
- [Oracle Solaris 11.4.9.5.0 ReadMe \(Doc ID 2547299.1\)](#)
- [Oracle Solaris 11.4.10.3.0 ReadMe \(Doc ID 2555953.1\)](#)
- [Oracle Solaris 11.4.11.4.0 ReadMe \(Doc ID 2565314.1\)](#)
- [Oracle Solaris 11.4.12.5.0 ReadMe \(Doc ID 2577197.1\)](#)
- [Oracle Solaris 11.4.13.4.0 ReadMe \(Doc ID 2587604.1\)](#)
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- [Oracle Solaris 11.4.18.4.0 ReadMe \(Doc ID 2638296.1\)](#)
- [Oracle Solaris 11.4.19.3.0 ReadMe \(Doc ID 2648236.1\)](#)
- [Oracle Solaris 11.4.20.4.0 ReadMe \(Doc ID 2657243.1\)](#)
- [Oracle Solaris 11.4.21.69.0 ReadMe \(Doc ID 2669880.1\)](#)
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## Packages Updated

The following packages are updated in this SRU:

Package	Summary
archiver/gnu-tar	GNU version of the tar archiving utility
archiver/unrar	Rar archives extractor utility
codec/libogg	ogg bitstream audio codec libraries
communication/im/pidgin	GNOME multi-protocol instant messaging client
compress/lz4	LZ4 compression utility
consolidation/ips/ips-incorporation	Image Packaging System consolidation incorporation
consolidation/osnet/osnet-incorporation	OS/Net consolidation incorporation
database/mysql-56	MySQL 5.6 Database Management System
database/mysql-56/client	MySQL 5.6 Client Executables
database/mysql-56/library	MySQL 5.6 client libraries and plugins

database/mysql-56/tests	MySQL 5.6 testsuite
database/mysql-57	MySQL 5.7 Database Management System
database/mysql-57/client	MySQL 5.7 Client Executables
database/mysql-57/embedded	MySQL 5.7 embedded library
database/mysql-57/library	MySQL 5.7 client libraries and plugins
database/mysql-57/tests	MySQL 5.7 testsuite
database/sqlite-3	SQL database engine library
database/sqlite-3/documentation	SQL database engine library - Documentation
desktop/archive-manager/file-roller	A tool to create and modify archives
desktop/pdf-viewer/gsx	GPL Ghostscript desktop utilities
desktop/pdf-viewer/poppler-viewer	Poppler PDF viewer
desktop/remote-desktop/tigervnc	TigerVNC client
desktop/system-monitor/gnome-system-monitor	The GNOME tool to manage running processes and monitor system resources
developer/build/autoconf/xorg-macros	GNU autoconf macros for X.Org software packages
developer/debug/gdb	GDB, the GNU Debugger
developer/debug/valgrind	Valgrind, debugging and profiling tool
developer/documentation-tool/gtk-doc	A tool to generate API documentation for C code.
developer/gcc	GCC
developer/gcc-10	GCC 10.3
developer/gcc-7	GCC 7.5
developer/gcc-9	GCC 9.4
developer/gcc/gcc-c	GCC - C Compiler
developer/gcc/gcc-c++	GCC - C++ Compiler
developer/gcc/gcc-c++-10	GCC C++ Compiler - 10.3
developer/gcc/gcc-c++-7	GCC C++ Compiler - 7.5
developer/gcc/gcc-c++-9	GCC C++ Compiler - 9.4
developer/gcc/gcc-c-10	GCC C Compiler - 10.3
developer/gcc/gcc-c-7	GCC C Compiler - 7.5
developer/gcc/gcc-c-9	GCC C Compiler - 9.4
developer/gcc/gcc-common-10	GCC Common Development Files - 10.3
developer/gcc/gcc-common-7	GCC Common Development Files - 7.5
developer/gcc/gcc-common-9	GCC Common Development Files - 9.4
developer/gcc/gcc-gfortran	GCC - GNU Fortran Compiler
developer/gcc/gcc-gfortran-10	GCC Fortran Compiler - 10.3
developer/gcc/gcc-gfortran-7	GCC Fortran Compiler - 7.5
developer/gcc/gcc-gfortran-9	GCC Fortran Compiler - 9.4
developer/gcc/gcc-go	GCC - GNU Go Compiler
developer/gcc/gcc-go-10	GCC Go Compiler - 10.3

developer/gcc/gcc-go-9	GCC Go Compiler - 9.4
developer/gcc/gcc-gobjc	GCC - Objective-C Compiler
developer/gcc/gcc-gobjc-10	GCC Objective-C Compiler - 10.3
developer/gcc/gcc-gobjc-7	GCC Objective-C Compiler - 7.5
developer/gcc/gcc-gobjc-9	GCC Objective-C Compiler - 9.4
developer/gnu-binutils	binutils - GNU binutils
developer/gnu-binutils-cross-i386	GNU binutils cross-tools for i386
developer/gnu-binutils-cross-sparc	GNU binutils cross-tools for sparc
developer/icu	International Components for Unicode
developer/java/jdk	Java Platform Standard Edition Development Kit (VERSION) java -version will display 1.7.0_311-b07
developer/java/jdk-7	Java Platform Standard Edition Development Kit (1.7.0_311-b07)
developer/java/jdk-8	Java Platform Standard Edition Development Kit (1.8.0_301-b09)
developer/llvm/clang	clang 11.0.0 runtime - The clang LLVM Compiler
developer/llvm/clang-build	clang 11.0.0 Development Files and Libraries
developer/llvm/clang-libs	clang 11.0.0 libraries - The clang LLVM Compiler
developer/llvm/llvm	LLVM 11.0.0 runtime - The Low Level Virtual Machine
developer/llvm/llvm-build	LLVM 11.0.0 Development Files and Libraries
developer/llvm/llvm-libs	LLVM 11.0.0 libraries - The Low Level Virtual Machine
developer/nasm	Netwide Assembler
developer/opensolaris/pkg5	Dependencies required to build the pkg(7) project
developer/parser/bison	bison - A YACC Replacement
developer/quilt	Quilt - tool to manage series of patches
developer/swig	Simplified Wrapper and Interface Generator
developer/test/buildbot-worker	Worker daemon for the Buildbot continuous integration framework
developer/versioning/git	git - Fast Version Control System
developer/versioning/mercurial/hg-git	Hg-Git Mercurial extension
developer/versioning/mercurial/hg-git-27	Hg-Git Mercurial extension
developer/versioning/mercurial/hg-git-37	Hg-Git Mercurial extension
developer/versioning/subversion	Subversion source code management system
developer/yasm	The Yasm Modular Assembler
diagnostic/scanpci	scanpci and libpciaccess - generic PCI access software
diagnostic/wireshark	Graphical network protocol analyzer
diagnostic/wireshark/tshark	Command-line network protocol analyzer
diagnostic/wireshark/wireshark-common	Libraries and Tools used by Wireshark and TShark Network protocol analyzers
documentation/gnome/gnome-getting-started-docs	Gnome Getting Started Guide
driver/graphics/drm	DRM Kernel Drivers
editor/gnu-emacs	GNU emacs core

editor/gnu-emacs/gnu-emacs-gtk	GNU emacs with X11 support (GTK toolkit)
editor/gnu-emacs/gnu-emacs-lisp	GNU emacs LISP (.el) files
editor/gnu-emacs/gnu-emacs-no-x11	GNU emacs without X Window System support
editor/gnu-emacs/gnu-emacs-x11	GNU emacs with X11 support (Xaw toolkit)
editor/gvim	Vi IMproved (GUI)
editor/vim	Vi IMproved
editor/vim/vim-core	Vi IMproved (core executables)
firmware/system/fallback-boot	Fallback Boot image
gnome/accessibility/accerciser	Interactive Python Accessibility Explorer
gnome/gnome-session	GNOME Session Manager
gnome/gnome-settings-daemon	GNOME Desktop Settings Daemon
gnome/gnome-shell	GNOME 3 User Shell
gnome/gnome-shell-extensions	Gnome Shell Extensions
gnome/gnome-shell/background-logo-extension	background-logo-extension
gnome/preferences/control-center	GNOME's main interface to configure various aspects of the desktop
gnome/theme/adwaita-icon-theme	base icon theme for GNOME
gnome/theme/background/os-backgrounds	Default Oracle Solaris background for the GNOME desktop
gnome/theme/background/os-backgrounds-extra	Extra Oracle Solaris backgrounds for the GNOME desktop
gnome/window-manager/mutter	The GNOME window and compositing manager
group/prerequisite/oracle/oracle-database-os-configuration	Oracle database initial configuration
group/prerequisite/oracle/oracle-database-preinstall-19c	Prerequisite package for Oracle Database 19c
group/prerequisite/oracle/oracle-ebss-server-R12-preinstall	Prerequisite package for Oracle E-Business Suite 12
group/prerequisite/oracle/oracle-rdbms-server-12-1-preinstall	Prerequisite package for Oracle Database 12.1
group/prerequisite/oracle/oracle-rdbms-server-18c-preinstall	Prerequisite package for Oracle Database 18c
group/system/solaris-auto-install	Oracle Solaris Automated Installer Client
group/system/solaris-cloud-guest	Oracle Solaris Cloud Guest
group/system/solaris-desktop	Oracle Solaris Desktop
group/system/solaris-large-server	Oracle Solaris Large Server
group/system/solaris-minimal-server	Oracle Solaris Minimal Server
group/system/solaris-small-server	Oracle Solaris Small Server
image/ghostscript	GPL Ghostscript
image/gnome-backgrounds	Selection of backgrounds for the GNOME desktop
image/graphviz	Graph visualization software
image/graphviz/graphviz-java	Java bindings for Graphviz

image/graphviz/graphviz-lua	Lua bindings for Graphviz
image/graphviz/graphviz-perl	Perl bindings for Graphviz
image/graphviz/graphviz-perl-522	Perl 5.22 bindings for Graphviz
image/graphviz/graphviz-perl-532	Perl 5.32 bindings for Graphviz
image/graphviz/graphviz-php	PHP bindings for Graphviz
image/graphviz/graphviz-php-73	PHP 7.3 bindings for Graphviz
image/graphviz/graphviz-php-74	PHP 7.4 bindings for Graphviz
image/graphviz/graphviz-python	Python bindings for Graphviz
image/graphviz/graphviz-python-27	Python 2.7 bindings for Graphviz
image/graphviz/graphviz-python-37	Python 3.7 bindings for Graphviz
image/graphviz/graphviz-python-39	Python 3.9 bindings for Graphviz
image/graphviz/graphviz-ruby	Ruby bindings for Graphviz
image/graphviz/graphviz-sharp	C# bindings for Graphviz
image/graphviz/graphviz-tcl	Tcl bindings for Graphviz
image/library/librsvg	A library to render SVG files using cairo
image/library/openjpeg2	A library for processing JPEG 2000 data
library/audio/pulseaudio	A sound system for POSIX operating systems
library/c++/sigcpp	Provides a typesafe callback system for standard C++
library/desktop/at-spi2-atk	The Assistive Technology Service Provider Interface (AT-SPI) Accessibility Toolkit
library/desktop/at-spi2-core	The Assistive Technology Service Provider Interface (AT-SPI) Core
library/desktop/c++/pangomm	C++ API for the pango layout library
library/desktop/evolution-data-server	The GNOME backend for contacts, tasks, and calendar information
library/desktop/gdk-pixbuf	GdkPixbuf library for image loading and manipulation
library/desktop/gtk-vnc	A GTK widget for VNC clients
library/desktop/gtk2	GTK+ toolkit Version 2.x
library/desktop/gtk2/gtk-backend-cups	GTK+ 2.x - GIMP toolkit libraries - CUPS Print Backend
library/desktop/gtk3	GTK+, or the GIMP Toolkit, is a multi-platform toolkit for creating graphical user interfaces
library/desktop/gtk3/gtk-backend-cloudprint	GTK+ 3.x - GIMP toolkit libraries - CloudPrint Print Backend
library/desktop/gtk3/gtk-backend-cups	GTK+ 3.x - GIMP toolkit libraries - CUPS Print Backend
library/desktop/p11-kit	Provides a way to load and enumerate PKCS#11 modules.
library/desktop/pango	Pango international text layout library
library/desktop/webkitgtk4	A library port of the WebKit rendering engine
library/gmime-3	MIME messages creation and parsing library v 3
library/gnome/gnome-desktop	Base GNOME Desktop Component Functionality
library/gnome/gnome-online-accounts	A centralized service that allows a set of online accounts to be configured for use with core GNOME applications
library/gnome/gvfs	The GNOME Virtual file system framework

library/gnome/libsecret	A library for storing and retrieving passwords and other secrets
library/gnome/vte3	The GNOME virtual terminal emulator widget library for GTK3+
library/gnutls-3	GNU transport layer security library
library/graphics/libvdpau	VDPAAU: Video Decode and Presentation API for UNIX.
library/icu	International Components for Unicode
library/java/java-demo	Java Sample and Demonstration Applications (VERSION) java -version will display 1.7.0_311-b07
library/java/java-demo-7	Java Sample and Demonstration Applications (1.7.0_311-b07)
library/java/java-demo-8	Java Sample and Demonstration Applications (1.8.0_301-b09)
library/java/subversion	Java bindings for the Subversion SCM
library/json-glib	A library providing serialization and deserialization support for JSON
library/libcares	c-ares - C library for asynchronous DNS requests
library/libiomp5	Intel OpenMP Runtime Library
library/liblogging	liblogging system logger library
library/liblouis	liblouis braille translator and formatter
library/libmozjs-60	Mozilla's SpiderMonkey engine JavaScript library v60
library/liboauth	A library for processing data according to the oAuth standard
library/libproxy	A library that provides automatic proxy configuration management
library/libproxy/libproxy-gnome	Plugin of libproxy to get proxy information for Gnome 3
library/libsigsegv	libsigsegv - handling page faults in user mode
library/libusb-1	A cross-platform user library to access USB devices
library/libxml2	The XML library
library/libxslt	The XSLT library
library/mpfr	GNU MPFR
library/perl-5/openscap	Perl bindings for the Open implementation of SCAP
library/perl-5/openscap-522	Perl 5.22 bindings for the Open implementation of SCAP
library/perl-5/openscap-532	Perl 5.32 bindings for the Open implementation of SCAP
library/perl-5/subversion	Perl bindings for the Subversion SCM
library/perl-5/subversion-522	Perl bindings for the Subversion SCM
library/perl-5/subversion-532	Perl bindings for the Subversion SCM
library/perl-5/sun-solaris	Perl Sun::Solaris Modules
library/perl-5/sun-solaris-522	Perl Sun::Solaris Modules
library/perl-5/sun-solaris-526	Perl Sun::Solaris Modules
library/perl-5/sun-solaris-532	Perl Sun::Solaris Modules
library/print/cups-libs	Common Unix Print System (CUPS) runtime libraries
library/python/asgiref	ASGI specs, helper code, and adapters.
library/python/asgiref-39	ASGI specs, helper code, and adapters.
library/python/astroid	astroid - Python Abstract Syntax Tree New Generation
library/python/astroid-27	astroid - Python Abstract Syntax Tree New Generation

library/python/astroid-37	astroid - Python Abstract Syntax Tree New Generation
library/python/astroid-39	astroid - Python Abstract Syntax Tree New Generation
library/python/colorama	Simple cross-platform colored terminal text in Python.
library/python/colorama-27	Simple cross-platform colored terminal text in Python.
library/python/colorama-37	Simple cross-platform colored terminal text in Python.
library/python/colorama-39	Simple cross-platform colored terminal text in Python.
library/python/coverage	The coverage.py Python code coverage tool
library/python/coverage-27	The coverage.py Python code coverage tool
library/python/coverage-37	The coverage.py Python code coverage tool
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library/python/django	Django Python web framework
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library/python/idna	Internationalized Domain Names in Applications
library/python/idna-27	Internationalized Domain Names in Applications
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library/python/incremental	Python project versioning library.
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library/python/incremental-39	Python project versioning library.
library/python/jsonrpclib	Python implementation of JSON-RPC v2.0
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library/python/lazy-object-proxy	lazy-object-proxy - a fast and thorough lazy object proxy
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library/python/lazy-object-proxy-37	lazy-object-proxy - a fast and thorough lazy object proxy
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library/python/libxml2-37	The XML library - Python 3.7 bindings
library/python/libxml2-39	The XML library - Python 3.9 bindings
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library/python/lxml-39	Pythonic bindings for the lxml2 and libxslt libraries
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library/python/net-snmp-39	The Net-SNMP - Python 3.9 bindings
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library/python/netaddr-27	Python network address manipulation
library/python/netaddr-37	Python network address manipulation
library/python/netaddr-39	Python network address manipulation
library/python/openscap	Python bindings for the Open implementation of SCAP
library/python/openscap-27	Python 2.7 bindings for the Open implementation of SCAP
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library/python/pathlib2	Object-oriented filesystem paths
library/python/pathlib2-27	Object-oriented filesystem paths
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library/python/pillow-37	Python image processing library
library/python/pillow-39	Python image processing library
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library/python/pip-27	A tool for installing and managing Python packages
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library/python/pip-39	A tool for installing and managing Python packages
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library/python/ptyprocess-39	Run a subprocess in a pseudo terminal.
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library/python/pygments-39	A syntax highlighting package written in Python
library/python/pytest	Python testing tool
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library/python/pytest-37	Python testing tool
library/python/pytest-39	Python testing tool
library/python/python-twisted	Event-based framework for internet applications

library/python/python-twisted-27	Event-based framework for internet applications
library/python/python-twisted-37	Event-based framework for internet applications
library/python/python-twisted-39	Event-based framework for internet applications
library/python/rapidjson	Python wrapper around rapidjson encoder/decoder
library/python/rapidjson-37	Python wrapper around rapidjson encoder/decoder
library/python/rapidjson-39	Python wrapper around rapidjson encoder/decoder
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library/python/service_identity-27	Service identity verification for pyOpenSSL & cryptography.
library/python/service_identity-37	Service identity verification for pyOpenSSL & cryptography.
library/python/service_identity-39	Service identity verification for pyOpenSSL & cryptography.
library/python/sortedcontainers	Sorted Containers - Sorted List, Sorted Dict, Sorted Set.
library/python/sortedcontainers-27	Sorted Containers - Sorted List, Sorted Dict, Sorted Set.
library/python/sortedcontainers-37	Sorted Containers - Sorted List, Sorted Dict, Sorted Set.
library/python/sortedcontainers-39	Sorted Containers - Sorted List, Sorted Dict, Sorted Set.
library/python/subversion	Python bindings for the Subversion SCM
library/python/subversion-27	Python bindings for the Subversion SCM
library/python/subversion-37	Python bindings for the Subversion SCM
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library/python/urllib3-37	HTTP library with thread-safe connection pooling, file post, and more.
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library/python/webob-39	WSGI request and response objects
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library/ruby/deep_merge	Recursive Merging for Ruby Hashes.
library/ruby/semantic_puppet	Library of useful tools for working with Semantic Versions and module dependencies.
library/samba/lib smbclient	Library that permits applications to manipulate SMB network resources
library/security/nettle	Nettle - a low-level cryptographic library
library/security/nss	Network Security Services libraries and header files

library/security/openssl	OpenSSL - a Toolkit for Secure Sockets Layer (SSL v2/v3) and Transport Layer (TLS v1) protocols and general purpose cryptographic library
library/security/openssl-1.1	OpenSSL - a Toolkit for Transport Layer (TLS v1+) protocols and general purpose cryptographic library
library/security/openssl/openssl-fips-140	FIPS 140-2 Capable OpenSSL libraries
library/security/pcsc-lite/ccid	Provides smart card reader drivers for pcsc-lite (PC/SC)
library/ooltalk	ToolTalk inter-process communications system
library/unixodbc	The UnixODBC Subsystem and SDK
mail/fetchmail	fetch mail from a POP, IMAP, ETRN, or ODMR-capable server
mail/mutt	The Mutt E-Mail Client
mail/procmail	Mail processing program
mail/thunderbird	Mozilla Thunderbird Email/Newsgroup Client
network/chat/irssi	irssi - a terminal based IRC client
network/dns/bind	BIND DNS tools
network/rsync	fast incremental file transfer utility
network/ssh	OpenSSH client and associated utilities
openscap	Perl bindings for the Open implementation of SCAP
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package/pkg-37	Python 3.7 support modules for the Image Packaging System
package/pkg/depot	IPS Depot
package/pkg/system-repository	IPS System Repository
package/pkg/zones-proxy	System Repository Zone support
print/cups	Common Unix Print System (CUPS)
print/cups/filters	CUPS supplement required on non-Apple platforms
print/filter/gutenprint	Gutenprint - Drivers for Canon, Epson, Lexmark & PCL printers
print/filter/hplip	hplip - HP Linux Printing
print/filter/poppler	Poppler PDF rendering tool
print/filter/qpdf	PDF file processing library/utility
release/name	Solaris Naming Enabler
release/notices	Oracle Solaris notices
runtime/java/jre	Java Platform Standard Edition Runtime Environment (VERSION) java - version will display 1.7.0_311-b07
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runtime/perl-532	Perl
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runtime/tcl-8/tcl-sqlite-3	SQL database engine library - tcl files
security/compliance/openscap	Open implementation of SCAP; a line of standards managed by NIST
security/compliance/openscap/openscap-gconf-probe	gconf probe for the Open implementation of SCAP
security/kerberos-5	Kerberos V5 Support
security/kerberos-5/kdc	Kerberos V5 Key Distribution Center (KDC)
security/sudo	sudo - tool to allow certain tasks to be run as root by ordinary users
service/network/dhcp/isc-dhcp	ISC DHCP Server and Relay Agent.
service/network/dns/bind	BIND DNS name server and configuration tools.
service/network/ntp	Network Time Protocol Daemon v4
service/network/ptp	Precision Time Protocol (PTP) IEEE 1588-2008 (Version 2)
service/network/samba	samba - A Windows SMB/CIFS fileserver for UNIX
service/network/ssh	OpenSSH servers and SSH (Secure Shell) services
service/security/stunnel	An SSL-encrypting socket wrapper
shell/bash	GNU Bourne-Again shell (bash)
shell/expect	expect - Programmed dialogue with other interactive programs
shell/ksh93	Ksh93 - The AT&T Korn Shell
shell/pdsh	pdsh a parallel remote shell utility
shell/rfwrap	Utility for the editing of keyboard input for any command
support/critical-patch-update/solaris-11-cpu	Oracle Solaris 11.4.36.101.2 Critical Patch Update 2021.8-1
system/data/timezone	Timezone Definition
system/display-manager/desktop-startup	Desktop startup scripts in xinitrc.d
system/display-manager/gdm	GNOME Display Manager (GDM)
system/font/misc-ethiopic	Ethiopic language fonts from the Ge'ez Frontiers Foundation
system/font/truetype/cantarell	humanist sans-serif font family
system/font/xorg/iso8859-1	X.Org Foundation X11 iso8859-1 bitmap fonts
system/font/xorg/iso8859-10	X.Org Foundation X11 iso8859-10 bitmap fonts
system/font/xorg/iso8859-11	X.Org Foundation X11 iso8859-11 bitmap fonts
system/font/xorg/iso8859-13	X.Org Foundation X11 iso8859-13 bitmap fonts
system/font/xorg/iso8859-14	X.Org Foundation X11 iso8859-14 bitmap fonts
system/font/xorg/iso8859-15	X.Org Foundation X11 iso8859-15 bitmap fonts
system/font/xorg/iso8859-16	X.Org Foundation X11 iso8859-16 bitmap fonts
system/font/xorg/iso8859-2	X.Org Foundation X11 iso8859-2 bitmap fonts
system/font/xorg/iso8859-3	X.Org Foundation X11 iso8859-3 bitmap fonts

system/font/xorg/iso8859-4	X.Org Foundation X11 iso8859-4 bitmap fonts
system/font/xorg/iso8859-5	X.Org Foundation X11 iso8859-5 bitmap fonts
system/font/xorg/iso8859-7	X.Org Foundation X11 iso8859-7 bitmap fonts
system/font/xorg/iso8859-8	X.Org Foundation X11 iso8859-8 bitmap fonts
system/font/xorg/iso8859-9	X.Org Foundation X11 iso8859-9 bitmap fonts
system/font/xorg/xorg-core	X.Org Foundation X11 core fonts
system/library/accounts-service	AccountsService
system/library/bison-runtime	bison - A YACC Replacement (Runtime Libraries)
system/library/gcc/gcc-c++-runtime	GCC 10.3 - C++ Runtime
system/library/gcc/gcc-c++-runtime-10	GCC 10.3 - C++ Runtime
system/library/gcc/gcc-c++-runtime-7	GCC 7.5 - C++ Runtime
system/library/gcc/gcc-c++-runtime-9	GCC 9.4 - C++ Runtime
system/library/gcc/gcc-c-runtime	GCC 10.3 - C Runtime
system/library/gcc/gcc-c-runtime-10	GCC 10.3 - C Runtime
system/library/gcc/gcc-c-runtime-7	GCC 7.5 - C Runtime
system/library/gcc/gcc-c-runtime-9	GCC 9.4 - C Runtime
system/library/gcc/gcc-gfortran-runtime	GCC 10.3 - Fortran Runtime
system/library/gcc/gcc-gfortran-runtime-10	GCC 10.3 - Fortran Runtime
system/library/gcc/gcc-gfortran-runtime-7	GCC 7.5 - Fortran Runtime
system/library/gcc/gcc-gfortran-runtime-9	GCC 9.4 - Fortran Runtime
system/library/gcc/gcc-go-runtime	GCC 9.4 - Go Runtime
system/library/gcc/gcc-go-runtime-10	GCC 10.3 - Go Runtime
system/library/gcc/gcc-go-runtime-9	GCC 9.4 - Go Runtime
system/library/gcc/gcc-go-runtime16	GCC 10.3 - Go Runtime
system/library/gcc/gcc-gobjc-runtime	GCC 10.3 - Objective-C Runtime
system/library/gcc/gcc-gobjc-runtime-10	GCC 10.3 - Objective-C Runtime
system/library/gcc/gcc-gobjc-runtime-7	GCC 7.5 - Objective-C Runtime
system/library/gcc/gcc-gobjc-runtime-9	GCC 9.4 - Objective-C Runtime
system/library/gcc/gcc-runtime	GCC - GCC Runtime
system/library/gcc/gcc-runtime-10	GCC 10.3 - GCC Runtime
system/library/gcc/gcc-runtime-7	GCC 7.5 - GCC Runtime
system/library/gcc/gcc-runtime-9	GCC 9.4 - GCC Runtime
system/library/hmp-libs	Oracle HMP Libraries
system/library/polkit	polkit authorization toolkit
system/library/security/libgcrypt	libgcrypt - cryptographic library
system/management/biosconfig	Oracle Hardware Management Pack - biosconfig
system/management/cloudbase-init	Portable OpenStack Cloud Initialization Service

system/management/firmware-check	package reserved for future use
system/management/fwupdate	Oracle Hardware Management Pack - fwupdate
system/management/fwupdate/emulex	Emulex OneCommand Manager: CLI and library plugin for fwupdate
system/management/fwupdate/qlogic	QLogic CLI and library plugin for fwupdate
system/management/hmp-snmp	Oracle Hardware Management Pack - SNMP plugins
system/management/hwmgmtcli	Oracle Hardware Management Pack - hwmgmtcli
system/management/hwmgmtd	Oracle Hardware Management Pack - Hardware Agent
system/management/ilomconfig	ILOM Configuration Utility
system/management/ipmitool	ipmitool - utility for controlling IPMI-enabled devices
system/management/mcollective	MCollective - framework for building server orchestration.
system/management/raidconfig	Oracle Hardware Management Pack - raidconfig
system/management/snmp/net-snmp	Net-SNMP Agent files and libraries
system/management/snmp/net-snmp/addons	Net-SNMP addon libraries
system/management/snmp/net-snmp/demo	Net-SNMP demo modules
system/management/ubiosconfig	Oracle Hardware Management Pack - ubiosconfig
system/network/avahi	Avahi client and bridge to mdns
system/network/avahi/gui	Avahi client GUI libs/utils
system/qemu-img	QEMU disk image utility
system/rsyslog	reliable and extended syslogd
system/storage/nvme-utilities	NVMeExpress(nvme) utility
system/storage/smartmontools	S.M.A.R.T. Disk Inspection and Monitoring Tools
terminal/gnome-terminal	Gnome Terminal
terminal/resize	resize - adjust terminal settings to current window size
terminal/xterm	xterm - terminal emulator for X
text/less	pager program similar to more
web/browser/firefox	Mozilla Firefox Web browser
web/curl	The CURL Network Utility and Library
web/data/firefox-bookmarks	Firefox's default bookmark
web/java-servlet/tomcat-8	Tomcat Servlet/JSP Container
web/java-servlet/tomcat-8/tomcat-admin	Tomcat Servlet/JSP Container - admin applications
web/java-servlet/tomcat-8/tomcat-examples	Tomcat Servlet/JSP Container - example applications
web/php-73	PHP scripting language
web/php-74	PHP scripting language
web/php-80	PHP scripting language
web/proxy/privoxy	Privacy-enhancing, ad-removing web proxy
web/proxy/squid	Squid Web Proxy Cache
web/server/apache-24	Apache Web Server V2.4

web/server/apache-24/module/apache-dbd	SQL database connections plugin for Apache Web Server V2.4
web/server/apache-24/module/apache-gss	Kerberos authenticating plugin for Apache Web Server V2.4
web/server/apache-24/module/apache-ldap	LDAP support plugins for Apache Web Server V2.4
web/server/apache-24/module/apache-lua	Lua support plugin for Apache Web Server V2.4
web/server/apache-24/module/apache-perl	Perl plugin for Apache Web Server V2.4
web/server/apache-24/module/apache-ssl	SSL (default) support plugin for Apache Web Server V2.4
web/server/apache-24/module/apache-ssl-fips-140	SSL FIPS 140-2 support plugin for Apache Web Server V2.4
web/server/apache-24/module/apache-subversion	Subversion modules for Apache 2.4 httpd
web/server/lighttpd-14	The Lighttpd Web Server
x11/compatibility/links-svid	X Window System SVID compatibility links
x11/compatibility/links-xorg	X Window System platform compatibility links
x11/diagnostic/intel-gpu-tools	Intel graphics driver debug tools
x11/header/x11-protocols	X Window System protocol definitions
x11/keyboard/xkbcomp	X Keyboard Extension data compiler
x11/library/libdrm	Direct Rendering Module (DRM) client libraries/interface
x11/library/libepoxy	library for handling OpenGL function pointer management
x11/library/libx11	libX11 - X11 core protocol client library
x11/library/libxres	libXRes - X-Resource extension client library
x11/library/mesa	Mesa - open-source implementation of the OpenGL specification
x11/library/toolkit/libxaw7	libXaw7 - X Athena Widgets Toolkit (current/X11R7 version)
x11/modeline-utilities	Utilities for generating modelines
x11/server/xdmx	Xdmx - Distributed Multihead X
x11/server/xephyr	Xephyr - X server displaying to a window on a pre-existing X display
x11/server/xorg	Xorg - X11R7 X server
x11/server/xorg/driver/xorg-video	Xorg server video drivers group
x11/server/xorg/driver/xorg-video-ati	xf86-video-ati - ATI/AMD Radeon video driver for the Xorg X server
x11/server/xorg/driver/xorg-video-intel	xf86-video-intel - Intel integrated graphics chipset driver for the Xorg X server
x11/server/xserver-common	X server common files
x11/server/xvfb	Xvfb - virtual framebuffer X server
x11/server/xvnc	TigerVNC X11/VNC server
x11/x11-server-utilities	X11 server state utilities
x11/xfs	xfs - X Font Server

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## Superseded IDRs

When a bug fix that is included in an Interim Diagnostic Relief (IDR) is addressed in a SRU, the IDR is superseded. Prior to updating this SRU, you do not necessarily need to remove the IDR that has been superseded. Running the pkg update command updates the system to the latest SRU and removes the relevant IDR from the system. However, the update fails if an IDR exists in the system and the IDR has not been superseded.

The following IDRs are superseded in this SRU:

- 2722.1
- 3450.1
- 3475.1
- 3522.1
- 3554.1
- 3590.1
- 3617.1
- 3655.1
- 3697.1
- 3736.1
- 3775.1
- 3789.1
- 3811.1
- 3812.1
- 3872.1
- 3897.1
- 3903.2
- 3950.1
- 4000.1
- 4015.1
- 4016.1
- 4059.1
- 4080.1
- 4102.1
- 4104.1
- 4140.1
- 4162.1
- 4201.1
- 4202.1
- 4256.1
- 4300.1
- 4312.1
- 4335.1
- 4362.1
- 4407.1
- 4441.1
- 4454.1
- 4465.1
- 4467.3
- 4507.1
- 4519.1
- 4529.5
- 4550.1
- 4583.1
- 4590.1
- 4624.1
- 4632.2
- 4643.1
- 4644.1
- 4645.1
- 4656.1
- 4679.1
- 4684.1

- 4698.1
- 4708.1
- 4722.2
- 4725.1
- 4728.1
- 4731.2
- 4738.1
- 4752.2
- 4754.1
- 4755.2
- 4768.1
- 4772.1
- 4774.1
- 4776.2
- 4786.1
- 4787.1
- 4789.1
- 4790.1
- 4794.1
- 4804.1
- 4805.1
- 4806.1
- 4808.1
- 4811.1
- 4817.1
- 4826.1
- 4827.1
- 4833.1
- 4839.1
- 4844.1
- 4847.1
- 4849.1
- 4856.1
- 4866.1
- 4871.1

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## About Oracle Solaris 11 Support Repository Updates

Oracle Solaris 11 uses the Image Packaging System (IPS) repository to update all packages that are available in your system. Customers with a support contract have access to the support repository to periodically update their Oracle Solaris 11 systems. Updates from the Oracle Solaris 11 support repository are available as support repository updates (SRUs) and each SRU provides a comprehensive set of important bug fixes and enhancements. Oracle Solaris updates and SRUs together provide a high quality, long-term support train for all Oracle Solaris 11 customers.

The update path for Oracle Solaris 11 11/11 users is to update to Oracle Solaris 11.4 and apply subsequent SRUs. For the complete list of Oracle Solaris 11.4 SRUs and downloads, see [Oracle Solaris 11.4 SRU Index](#).

Some important points to consider before applying or installing SRUs:

- SRUs can be installed on systems covered by an appropriate Oracle support contract.
- SRUs are updates to Oracle Solaris, but are not complete images. They provide bug fixes and incremental changes that are relative to the preceding release, for example Oracle Solaris 11.4.
- The SRU repository must include the base packages for the Oracle Solaris 11 Update that they apply to.
- If a subset of the SRUs are added to a repository, only those SRUs can be installed provided that the corresponding Oracle Solaris 11 Update base packages are included in the repository.
- If the base packages for the relevant Oracle Solaris 11 Update are not included in the repository containing the SRUs, failures will occur during various packaging operations.
- SRUs are released and available for download on a monthly basis.
- The release date of every third SRU coincides with Oracle's quarterly Critical Patch Update (CPU). The [CPU Documentation](#) references security vulnerabilities fixed in each SRU. This Critical Patch Update Advisory lists all relevant Oracle products.

To see the latest CPU, click the Critical Patch Update listed in the table. To see the security vulnerabilities that are fixed in recent Oracle Solaris SRUs, scroll down in the CPU document and click the "Oracle and Sun Systems Products Suite" link. This document also has a reference section to historical information for older Oracle Solaris SRUs.

- SRUs must be applied during proactive maintenance to prevent issues, or when asked by Oracle Support for reactive break/fix maintenance situations. Customers should schedule such maintenance windows at least in line with the Oracle Critical Patch Update cycle, or more frequently as required by the industry and/or company compliance requirements. Note also that at times Oracle may release security vulnerability fixes outside of the normal Critical Patch Update cycle.
- If a system has an Interim Diagnostic Relief (IDR) installed, check if the issues addressed by the IDR are fixed in the SRU that you plan to install. If the issues are not fixed, you need to request a new IDR for that SRU several weeks in advance of the planned maintenance window.
- The SRU zip files on MOS provide an alternative download option to synchronize network based repository.

For latest support products news, and SRU availability email notifications, use the [My Oracle Support Hot Topics E-Mail](#) feature.

For a complete list of Oracle Solaris 11.4 SRUs and downloads, see [Oracle Solaris 11.4 SRU Index](#).

For instructions about applying SRUs to a system and managing a package repository, see [Managing The Repository. Contents](#)

## Determining the Oracle Solaris Version Installed on Your System

To check the Oracle Solaris version installed on your system, use the pkg list entire command.

```
# pkg list entire
NAME (PUBLISHER)  VERSION
entire            11.4-11.4.1.0.1.3.0
```

Oracle Solaris 11.4 SRU versions use a different naming convention than Oracle Solaris 11.3 SRU. It follows the 7-digit Release.Update.SRU.reserved.reserved.Build.Respin format. In the example, 11.4-11.4.1.0.1.3.0 indicates Oracle Solaris 11.4, SRU version 1, reserved 0, reserved 1, build 3, and no respin.

For more information, see the [Oracle Solaris 11 package branch version scheme. Contents](#)

## Managing the Repository

Some important points to consider before applying or installing the repository zip file:

- The minimum OS level required for the system to run this repository is Oracle Solaris 11.1.
- The repository is provided as zip files. They contain only the latest revision of IPS packages that have been added or changed since the initial release of Oracle Solaris 11.4. The destination repository for the SRU must, at a minimum, contain the 11.4 GA packages; otherwise the verification of the repository will report missing dependency errors.
- This SRU is provided in two parts: Oracle Solaris IPS Repository Installation Guide and Oracle Solaris IPS Repository. The Oracle Solaris IPS Repository Installation Guide contains the install script and readme files. The Oracle Solaris IPS Repository contains the zip files of the repository. You must download both parts from [MOS](#) to add the packages to an existing repository.
- The zip file associated with this README must be used in conjunction with an existing local copy of the Oracle Solaris support repository.
- It is necessary to have a valid solaris publisher set before performing an update. For instructions to create an Oracle Solaris 11.4 package repository, see [Copying and Creating Oracle Solaris 11.4 Package Repositories](#).

The example commands listed in this section should be executed with root privileges or by using sudo(1M) or pfexec(1) commands.

### How to Update Your Local Repository

Download the SRU's IPS Repository Installation Guide and IPS Repository patches from MOS.

Perform the following steps to update your local system with the contents of the SRU zip file:

1. Become an administrator.

For more information, see [How to Use Your Assigned Administrative Rights in Securing Users and Processes in Oracle Solaris 11.4](#).

2. Verify locale setting.

Verify that the locale setting is set to either C or en\_US.UTF-8.

```
$ locale
```

If it isn't one of the two recommended settings, update it now:

```
$ export LANG=C
```

3. Run the `install-repo.ksh` script that is included in the IPS Repository Installation Guide patch to update your existing repository.

```
$ install-repo.ksh [-c] [-v] -d full_path_to_existing_s11_4_repo
```

For example:

```
$ install-repo.ksh -c -v -d /export/support-repo
```

4. If the repository is managed by `pkgserv`, restart the appropriate service.

```
$ svcadm restart svc:/application/pkg/server:your_repo_instance
```

5. If an existing repository is not set, add the repository to the system.

```
$ pkg set-publisher -g file:///full_path_to_existing_s11_4_repo solaris
```

6. Update the packages.

```
$ pkg update
```

For more information about using the `install-repo.ksh` script, see the `README-zipped-repo.txt` file.

For more information about managing your repository, see the following resources:

- [Updating and Maintaining Oracle Solaris 11](#)
- [Oracle Solaris 11 Image Packaging System \(IPS\) Frequently Asked Questions \(FAQ\)](#)

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## Oracle Solaris Repository Reorganization

Over the past few years the release and particularly the support repositories for Oracle Solaris have grown considerably as new releases and SRUs have been added. Users who copy our entire repositories via `pkgrecv` may be downloading many packages that they will not need and this leads to increased download times. Packages for Oracle Solaris 11.2 and older releases are no longer available from the support and release repositories.

However, we realize that some folks might still need access to this (rather old) software and so that can be accessed via two new repositories:

```
http://pkg.oracle.com/solaris/legacy/release
https://pkg.oracle.com/solaris/legacy/support
```

Note: You can configure these repositories as before, just specifying the new URI/Origins. For the legacy/support repository, use your existing certificate/key pair.

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## Further Assistance

The documentation for Oracle Solaris 11.4 can be found at: [Oracle Solaris 11.4 Information Library](#).

If you have a support plan with Oracle, please contact your service representative for further assistance. Community discussion of this product can be found at:

Oracle Solaris Installation, Booting, and Patching\_(MOSC)

Source code for open source software components in Oracle Solaris can be found at: [Source Code for Open Source Software Components: Oracle Solaris Contents](#)

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◀ Didn't find what you are looking for? ▶