

# Oracle® Database

## Database Release Notes



18c  
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The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

Oracle Database Database Release Notes, 18c

E89587-12

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# Preface

This document describes last-minute features and changes that are not included in the Oracle Database Documentation Library for Oracle Database 18c.

Starting with Oracle Database 18c, the readme and platform-specific release notes have been combined into one document. The first chapter of this document contains generic information. Subsequent chapters of this document contain platform-specific information. The last chapter of this document contains last-minute changes not included in the Oracle Database documentation library.

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Resources](#)
- [Conventions](#)

## Audience

This document is relevant only to Oracle Database 18c and documents new features, changes, unsupported products, preinstallation requirements, generic and platform-specific bug fixes, and known issues that are not included in the Oracle Database documentation library.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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## Related Resources

Refer to the following documentation for more information related to this release:

- <http://docs.oracle.com/en/database/database.html>
- For licensing information, refer to *Oracle Database Licensing Information User Manual*.

- Additional readme or release notes files also exist. Refer to [Other Readmes](#), [Release Notes](#), or [Installation Guides](#).

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.



# 1

## Purpose of These Release Notes

This topic briefly describes the purpose of these release notes.

Updates to this document can occur after it is released. Check for updates to this document and view other Oracle documentation at:

<http://docs.oracle.com/en/database/database.html>

For licensing information, refer to *Oracle Database Licensing Information User Manual*.

Additional readme or release notes files also exist. Refer to the [Other Readmes, Release Notes, or Installation Guides](#).

# 2

## Issues Affecting All Platforms for Oracle Database 18c

These topics contain last-minute features and changes that affect all platforms for Oracle Database 18c.

- [Compatibility, Upgrading, Downgrading, and Installation](#)  
This section describes compatibility, upgrading, downgrading, and installation topics for Oracle Database 18c.
- [Features Not Available or Restricted](#)  
This topic describes features that are not available or restricted in Oracle Database 18c.
- [Deprecated and Desupported Features for Oracle Database](#)  
This topic describes deprecated and desupported features for Oracle Database 18c.
- [Other Readmes, Release Notes, or Installation Guides](#)  
There are additional documents for Oracle products that are associated with this Oracle Database release.
- [Open Bugs Affecting All Platforms](#)  
This section describes known bugs in Oracle Database 18c that affect all platforms.

### Compatibility, Upgrading, Downgrading, and Installation

This section describes compatibility, upgrading, downgrading, and installation topics for Oracle Database 18c.

- [Downgrading Oracle Database 18c to Oracle Database 11g Release 2 \(11.2.0.3\) Results in Errors When Running utlrp.sql](#)  
This topic describes the `ORA-00600` error that can occur when downgrading from Oracle Database 18c to Oracle Database 11g.

### Downgrading Oracle Database 18c to Oracle Database 11g Release 2 (11.2.0.3) Results in Errors When Running utlrp.sql

This topic describes the `ORA-00600` error that can occur when downgrading from Oracle Database 18c to Oracle Database 11g.

If SQLJ types are present when downgrading from Oracle Database 18c to Oracle Database 11g Release 2 (11.2.0.3), then the following `ORA-00600` error can occur when running `utlrp.sql` to recompile invalid objects after running `catrelod.sql` (reference Bug 16230705):

```
ORA-00600: internal error code, arguments: [16211]
```

Apply the patch for this bug and recompile the type using the `ALTER TYPE COMPILE` statement.

## Features Not Available or Restricted

This topic describes features that are not available or restricted in Oracle Database 18c.

Review this list of components and features that are not available or are restricted in this release:

- In Analytic Workspace Manager in Oracle Database 18c, the **Filter** option is no longer available on the Views: Data tab for a dimension.  
If you require this functionality, then use the Oracle Database 12c, Release 1 (12.1) version of Analytic Workspace Manager.
- Zero Data Loss Recovery Appliance release Oracle Database 12c Release 2 (12.2) does not support backups from protected databases using Oracle Database 18c.

Recovery Appliance support for Oracle Database 18c protected databases is not yet available.

## Deprecated and Desupported Features for Oracle Database

This topic describes deprecated and desupported features for Oracle Database 18c.

Oracle Database 18c introduces behavior changes for your database in addition to new features. Changes in behavior include deprecated and desupported initialization parameters, options, syntax, and the deprecation and desupport of features and components. For more information, see the *Oracle Database Upgrade Guide*.

### Terminal Release of Oracle Streams

Oracle Database 18c is the terminal release for Oracle Streams support. Oracle Streams will be desupported from Oracle Database 19c onwards.

Oracle Streams was deprecated in Oracle Database 12c Release 1 (12.1). It does not support features introduced in Oracle Database 12c and later releases, including the multitenant architecture, the LONG VARCHAR data type, long identifiers, and other features. Oracle GoldenGate is the replication solution for Oracle Database.

## Other Readmes, Release Notes, or Installation Guides

There are additional documents for Oracle products that are associated with this Oracle Database release.

Refer to the following Oracle products and the location of their associated readme, release notes, or installation guide for additional information:

**Table 2-1 Other Oracle Products Documentation**

Product	Document
Oracle Application Express	<i>Oracle Application Express Release Notes and the Oracle Application Express Installation Guide.</i>
Oracle Multimedia	<i>ORACLE_HOME/ord/im/admin/README.txt</i>
Oracle ODBC Driver	<i>Oracle ODBC Driver Release Notes</i>
Oracle SQL Developer	<i>ORACLE_HOME/sqldeveloper/readme.html</i>
Pro*C	<i>Pro*C/C++ Release Notes</i>
Pro*COBOL	<i>Pro*COBOL Release Notes</i>
SQL*Plus	<i>SQL*Plus Release Notes</i>

## Open Bugs Affecting All Platforms

This section describes known bugs in Oracle Database 18c that affect all platforms.

- [PL/SQL Known Bugs](#)  
These are the PL/SQL bugs in Oracle Database 18c.
- [Oracle Automatic Storage Management \(Oracle ASM\) Known Bugs](#)  
These are the Oracle Automatic Storage Management (Oracle ASM) bugs in Oracle Database 18c.
- [Oracle ASM Cluster File System \(Oracle ACFS\) Known Bugs](#)  
These are the Oracle Automatic Storage Management (Oracle ASM) Cluster File System (Oracle ACFS) bugs in Oracle Database 18c.
- [Oracle Database Configuration Assistant \(DBCA\) Known Bugs](#)  
These are the Oracle Database Configuration Assistant (DBCA) bugs in Oracle Database 18c.
- [Oracle Database Enterprise Edition Known Bugs](#)  
These are the Oracle Database Enterprise Edition bugs in Oracle Database 18c.
- [Oracle Grid Infrastructure Known Bugs](#)  
These are the Oracle Grid Infrastructure bugs in Oracle Database 18c.
- [Oracle Universal Installer Known Bugs](#)  
These are the Oracle Universal Installer (OUI) bugs in Oracle Database 18c.

### PL/SQL Known Bugs

These are the PL/SQL bugs in Oracle Database 18c.

- [Bug 5910872](#)

### Bug 5910872

In Oracle Database releases prior to 18c, the PL/SQL compiler collected metadata for a PL/SQL package type argument and all of its nested types, and inserted that data into dictionary tables such that the data could be viewed using the `ALL`, `DBA`, and

USER\_ARGUMENTS user views. For instance, consider the following type declarations in the package NestedTypesExample:

```
Type Level2Record is RECORD (Field1 NUMBER); Type Level1Collection is
TABLE of
Level2Record index by binary_integer; Type Level0Record is RECORD (Field1
Level1Collection); Procedure NestedTypesProc (Param1 Level0Record);
```

When the ALL, DBA, and USER\_ARGUMENTS user views are queried, the top-level type of the NestedTypeProc procedure, parameter Param1, Level0Record, is returned along with an expanded description of all the nested types within Level0Record.

```
SQL> select argument_name,type_subname,position,sequence,data_level from
user_arguments where object_name='NESTEDTYPESPROC';
```

ARGUMENT_NAME	TYPE_SUBNAME	POSITION	SEQUENCE	DATA_LEVEL
PARAM1	LEVEL0RECORD	1	1	0
FIELD1	LEVEL1COLLECTION	1	2	1
	LEVEL2RECORD	1	3	2
FIELD1		1	4	3

This metadata is stored because the PL/SQL package type descriptive metadata was not user accessible in the way that metadata is accessible for top-level object types. With top-level object types and collections, you can query ALL\_TYPES and the associated user views, ALL\_TYPE\_ATTRS and ALL\_COLL\_TYPES, to obtain type metadata. However, before Oracle Database 12c Release 1 (12.1), type metadata for PL/SQL package types, such as records and packaged collections, could not be obtained. Therefore, function or procedure parameters that referenced those PL/SQL package types resulted in publishing all of the metadata about these types in the ARGUMENTS views, including any nested types.

Deeply nested types can consume extensive memory in the SYS tablespace. Also, because there is no way to share the type metadata in the ARGUMENTS views, each parameter with deeply nested types requires its own redundant copy of the type metadata. Copious amounts of metadata in the ARGUMENTS views and SYS tablespace can lead to various issues, including PL/SQL compiler performance degradation. The degradation occurs because of the time it takes PL/SQL to update rows in the underlying dictionary tables.

#### Workaround:

In Oracle Database 12c Release 1 (12.1), PL/SQL introduced enhanced support for package types, including the new user views, ALL\_PLSQL\_TYPES, ALL\_PLSQL\_TYPE\_ATTRS, and ALL\_PLSQL\_COLL\_TYPES. As the names imply, these views allow users to query metadata about PL/SQL package types.

Because of the package type support that was added with Oracle Database 12c Release 1 (12.1), there was no longer a need for the PL/SQL compiler to insert large amounts of descriptive metadata into the ARGUMENTS views. A single row of metadata that includes the type name was all that was required in the ARGUMENTS views for each parameter type. You can obtain a full description of the type name, and any nested types, in a query against the PL/SQL type views.

Beginning with Oracle Database 18c, the `ARGUMENTS` views contain fewer rows. In particular, only top-level (`DATA_LEVEL=0`) items are stored in the `ARGUMENTS` views.

For instance, the query shown returns the following reduced number of rows (only those rows where `DATA_LEVEL=0`) when run in Oracle Database 18c:

ARGUMENT_NAME	TYPE_SUBNAME	POSITION	SEQUENCE	DATA_LEVEL
PARAM1	LEVEL0RECORD	1	1	0

`OCIDescribeAny()` is based on the same metadata used by the `ARGUMENTS` views. `OCIDescribeAny()` also returns a single row for each parameter type, instead of the multiple rows commonly returned before the change in Oracle Database 12c Release 1 (12.1).

`ALL`, `DBA`, and `USER_ARGUMENTS` user views also contain a new column type, `TYPE_OBJECT_TYPE`. To determine the type of the type described by `TYPE_OWNER`, `TYPE_NAME` and `TYPE_SUBNAME`, use the `TYPE_OBJECT_TYPE` column. The possible values include `TABLE`, `VIEW`, `PACKAGE`, and `TYPE`.

If you require the previous behavior for collecting argument metadata, then you can set events to `events='10946, level 65536'`. Setting this event reverts the `ARGUMENTS` views to the behavior in Oracle Database releases earlier than Oracle Database 18c, in which `DATA_LEVEL` can be greater than 0, and descriptive metadata for the type and any nested types are included in the view. If you make this change, then you must recompile the affected packages after you set the event. When you recompile the affected packages, the compiler recollects the additional metadata. This event also reverts `OCIDescribeAny()` to the behavior in releases earlier than Oracle Database 18c.

Starting in Oracle Database 12c Release 1 (12.1.0.2), if you entered a procedure with no arguments, then the `ARGUMENTS` views did not have any rows. This is an additional change separate from the row reduction change to the `ARGUMENTS` views. Before Oracle Database 12c Release 1 (12.1.0.2), a procedure with no arguments was presented as a single row in the `ARGUMENTS` views.

## Oracle Automatic Storage Management (Oracle ASM) Known Bugs

These are the Oracle Automatic Storage Management (Oracle ASM) bugs in Oracle Database 18c.

- [Bug 12332603](#)

### Bug 12332603

Oracle Automatic Storage Management (Oracle ASM) loses the rolling migration state if Cluster Ready Services (CRS) shuts down on all nodes and the initial version of Oracle ASM is earlier than Oracle Database 12c Release 1 (12.1.0.2).

#### Workaround:

Consider the following scenario of 4 nodes (`node1`, `node2`, `node3`, and `node4`) that are at Oracle Database 11g Release 2 (11.2.0.4) and that are being upgraded to Oracle Database 18c:

- node1 and node2 are upgraded to 18c and running.
- node3 and node4 are still at 11.2.0.4 and running.

Now, consider that there is an outage where all CRS stacks are down which leaves the cluster in a heterogeneous state (for example, two nodes at 11.2.0.4 and two nodes at 18c). To proceed with the upgrade, start nodes still at 11.2.0.4 only (for example, node3 or node4, or both) and execute the following command on the Oracle ASM instance on node3 or node4, or both before starting any 18c nodes:

```
ALTER SYSTEM START ROLLING MIGRATION TO '18.0.0'
```

Continue the upgrade procedure as already documented from this point forward.

Note that before executing the preceding step to bring the Oracle ASM cluster back into rolling migration, you cannot start two nodes of different versions in the cluster. If you do so, then one of the Oracle ASM versions fail with either the ORA-15153 or ORA-15163 error message.

## Oracle ASM Cluster File System (Oracle ACFS) Known Bugs

These are the Oracle Automatic Storage Management (Oracle ASM) Cluster File System (Oracle ACFS) bugs in Oracle Database 18c.

- [Bug 24501993](#)
- [Bug 24509867](#)

### Bug 24501993

Use Case 1:

Security, encryption, and auditing are already enabled on the file system, and snap-based replication needs to be initialized with the specified tags. If replication is enabled for the specified tags and security, encryption and auditing are also enabled, and if the security directory is not tagged with one of the specified tags, then replication fails.

Use Case 2:

Replication is initialized with the specified tags, and security, encryption and auditing need to be initialized. If snap-based replication is initialized with tags that do not replicate the files in the security directory, then an attempt to enable security, encryption, and auditing fails.

#### Workaround for Use Case 1:

Tag the security directory with the one of the specified tags for the replication.

#### Workaround for Use Case 2:

1. Pause the replication.
2. Enable security, encryption, and auditing and add a tag that is specified for the replication to the security directory recursively running as Oracle ACFS Security administrator.
3. Resume the replication.

## Bug 24509867

If Oracle ACFS security, encryption, or auditing are enabled and if a user creates a snapshot and directly invokes `acfsutil snap dup create` or `acfsutil snap dup apply` to apply the snapshot, then the apply command fails even though no error is reported.

**Workaround:**

Do not enable Oracle ACFS security, encryption, or auditing if you are directly running the following command `acfsutil snap dup create` or `acfsutil snap dup apply`.

## Oracle Database Configuration Assistant (DBCA) Known Bugs

These are the Oracle Database Configuration Assistant (DBCA) bugs in Oracle Database 18c.

- [Bug 27217146](#)
- [Bug 27237306](#)

## Bug 27217146

Oracle Database Configuration Assistant (DBCA) can encounter the following error during creation of the Grid Infrastructure Management Repository (GIMR).

```
PRCD-1000 : Database _mgmtdb already exists
```

This could be due to an earlier failed repository creation.

**Workaround:**

Run following commands in Oracle Grid Infrastructure home:

```
srvctl stop mgmtdb -f  
srvctl remove mgmtdb -f
```

## Bug 27237306

During the creation of a pluggable database (PDB) from an existing PDB on Oracle Managed Files (OMF), you can edit the database location in the Oracle Database Configuration Assistant (DBCA) user interface. This enables you to change the location of the database files during PDB creation, implying that the location can be changed. This is incorrect because the PDB is always created with the database files in the same location as the source PDB, and you cannot modify the database location.

**Workaround:**

Do not edit the default database location value. OMF creates the new PDB with the default database location value only.



## Oracle Database Enterprise Edition Known Bugs

These are the Oracle Database Enterprise Edition bugs in Oracle Database 18c.

- [Bug 23569490](#)
- [Bug 23713504](#)
- [Bug 24291322](#)
- [Bug 24322363](#)
- [Bug 27254644](#)

### Bug 23569490

If you have a large number of collections and are working with clients earlier than Oracle Database 12c Release 2 (12.2), then you need a larger object cache, due to a change in snapshot size and thus a need for collection image conversion.

**Workaround:**

You can set the object cache size using the `OBJECT_CACHE_OPTIMAL_SIZE` initialization parameter. This is set to a low value by default.

Based on the number of collections and object types used in the application, the size required can be found by using this formula:

```
max(20K * Number of Collection Types, 5K * Object type)
```

### Bug 23713504

The service-oriented buffer cache access optimization feature continuously monitors data block reads from disk or inter-node block transfers and performs data-dependent caching using this information. If there are no recent data block reads or transfers, then data-dependent caching does not work in the case of service relocation. This can happen if all of the blocks queried are already in the buffer cache and, therefore, no new blocks are read or transferred.

**Workaround:**

None.

### Bug 24291322

Symbolic links are not allowed in the directory object paths or filenames when opening BFILES. The entire directory path and filename is checked and the following error is returned if symbolic links are found:

```
ORA-22288: file or LOB operation FILEOPEN failed soft link in path
```

**Workaround:**

If the database directory object or filename that you are trying to open contains symbolic links, then change it to provide the real path and filename.

## Bug 24322363

Software-only images are the only type of images supported with persistent home paths that are provisioned using Rapid Home Provisioning (RHP). Images created from existing working copies or homes are not supported for provisioning homes with a persistent home path.

**Workaround:**

Use images created from software-only installations.

## Bug 27254644

During the Oracle Scheduler agent register database process (`schagent - registerdatabase`), you could encounter the following warning message:

```
"Warning: The JKS keystore uses a proprietary format. It is recommended to migrate to PKCS12 which is an industry standard format using..."
```

**Workaround:**

This warning message is due to a new Java runtime update. There is no change in the Oracle Scheduler agent usage of keystores (`jks` files). You can ignore this warning message.

## Oracle Grid Infrastructure Known Bugs

These are the Oracle Grid Infrastructure bugs in Oracle Database 18c.

- [Bug 21559133](#)

## Bug 21559133

This issue affects rolling upgrades from Oracle Grid Infrastructure 12c Release 1 (12.1) to Oracle Grid Infrastructure 18c of Oracle Clusterware standard Cluster with Oracle ASM. A node running Oracle Grid Infrastructure 12c Release 1 (12.1) cannot join the cluster after the first node has been upgraded to Oracle Grid Infrastructure 18c. The nodes running Oracle Grid Infrastructure 12c Release 1 (12.1) that are in `ONLINE` status continue to be members of the cluster.

**Workaround:**

Upgrade Oracle Grid Infrastructure from 12c Release 1 (12.1) to Oracle Grid Infrastructure 18c on the failed node.

## Oracle Universal Installer Known Bugs

These are the Oracle Universal Installer (OUI) bugs in Oracle Database 18c.

You should also review [Compatibility, Upgrading, Downgrading, and Installation](#) for other issues related to installation and upgrades.

- [Bug 8666656](#)

- [Bug 18336219](#)
- [Bug 23006768](#)
- [Bug 27080535](#)
- [Bug 27120934](#)

## Bug 8666656

Do not use the Oracle Universal Installer (OUI) `runInstaller` script that resides in the Oracle home (`ORACLE_HOME/oui/bin/setup.exe`) to install Oracle Database 18c releases, Oracle Grid Infrastructure for a cluster, and Oracle Database Client.

### **Workaround:**

Refer to the installation guide of the respective product for instructions on how to install the product.

## Bug 18336219

Oracle Database installer does not check if the password specified for `ASMSNMP` on the Specify Management Options screen is correct. If you proceed with the configuration and specify an incorrect password, then Oracle Enterprise Manager Cloud Control cannot discover details and monitor the Oracle ASM instance.

### **Workaround #1:**

Ensure that the correct password (the same password specified earlier during the Oracle Grid Infrastructure for a cluster installation) is specified in the Specify Management Options screen of Oracle Database installer.

### **Workaround #2:**

On the Oracle Enterprise Manager Cloud Control portal, navigate to the Oracle ASM credentials screen and update the password for `ASMSNMP`. Once the password is saved on Oracle Enterprise Manager Cloud Control, the Oracle ASM monitoring starts working.

## Bug 23006768

When installing an Oracle RAC database on an Oracle Member Cluster for Database that is configured to use an Oracle ASM service of an Oracle Domain Services Cluster (DSC) and, if the network selected for `ASM` or `ASM & Private` usage is not of the same type as the ASM network of the DSC, then the database instance terminates with the following error:

```
IOS hit ORA-00600: internal error code, arguments: [kfias_creg!net]
```

### **Workaround:**

During the installation of the Oracle Member Cluster for Database, choose the network interface for `ASM` or `ASM & Private` so that it is on the same network as the Oracle ASM network of the DSC.

## Bug 27080535

When deinstalling the Oracle Grid Infrastructure for a standalone server home with an Oracle Management Server configuration, the `emConfig.txt` file in `ORACLE_BASE/admin/emca` is not deleted.

### **Workaround:**

To remove the `emConfig.txt` file, run the following command:

```
rm -rf $ORACLE_BASE/admin/emca/emConfig.txt
```

During the last `ORACLE_HOME` deinstallation, to remove `ORACLE_BASE`, run the following command after the deinstallation tool exits:

```
rm -rf $ORACLE_BASE
```

## Bug 27120934

After downgrading Oracle Clusterware using the Grid Setup Wizard, from Oracle Database 18c to Oracle Clusterware release 12.1 or release 11.2, the unused data files of the Oracle Grid Infrastructure Management Repository (GIMR) of the 18c Oracle Grid Infrastructure home could still be present in the disk group.

### **Workaround:**

Before starting the downgrade procedure using the Grid Setup Wizard, delete the GIMR database using the following command:

```
<Active_GI_HOME>/bin/dbca -silent -deleteDatabase -sourceDB -MGMTDB
```

# 3

## Issues Affecting Linux for Oracle Database 18c

These topics contain last-minute features and changes for Linux for Oracle Database 18c.

- [Unsupported Products for Linux](#)  
This topic describes products or features that are unavailable for Oracle Database 18c.
- [Product Support](#)  
This topic describes the supported products or features for Oracle Database 18c.
- [Linking Applications with Oracle Client Libraries for Linux](#)  
You must use the dynamic Oracle client libraries to link the client code on Linux.
- [Preinstallation Requirements for the Linux Platform](#)  
Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.
- [Installation, Configuration, and Upgrade Issues for Linux](#)  
This topic describes information about issues that affect Oracle Database installation, configuration, and upgrade.
- [Open Bugs Affecting Linux](#)  
These topics contain last-minute features and changes for Oracle Database 18c.

### Unsupported Products for Linux

This topic describes products or features that are unavailable for Oracle Database 18c.

In addition to the list of unavailable products or features in this release of Oracle Database 18c, the following product is not supported for Linux:

- IPv6 Networks Support  
The IPv6 based IP addresses to configure the private networks for a cluster is not supported on IBM: Linux on System z. It is currently under testing and the support will be announced after testing is successfully complete.

Refer to the list of unavailable products or features for all platforms in Oracle Database 18c.



#### See Also:

[Features Not Available or Restricted](#)

## Product Support

This topic describes the supported products or features for Oracle Database 18c.

The supported products or features are:

- Database Smart Flash Cache Support  
Database Smart Flash Cache is supported on Oracle Linux.
- Oracle ACFS and Oracle ADVM Support  
Although Oracle ADVM supports raw disks in Oracle Automatic Storage Management disk groups, Oracle ADVM device special files created through raw are not supported; Oracle ADVM only supports block device special files.  
For the latest information about supported platforms and releases, see the Note 1369107.1 on My Oracle Support at <https://support.oracle.com>
- Oracle ASM Filter Driver Support  
Oracle Automatic Storage Management Filter Driver (Oracle ASMFDF) is supported only on Linux x86-64.
- Share-based Instance Caging  
Share-based Instance Caging is supported on Oracle Linux.

## Linking Applications with Oracle Client Libraries for Linux

You must use the dynamic Oracle client libraries to link the client code on Linux.

Do not link the static Oracle client libraries.

## Preinstallation Requirements for the Linux Platform

Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.

## Installation, Configuration, and Upgrade Issues for Linux

This topic describes information about issues that affect Oracle Database installation, configuration, and upgrade.

- [Bug 28153162](#)
- [Bug 28237088](#)
- [Bug 28745602](#)
- [Bug 28897417](#)

### Bug 28153162

After upgrading to Oracle Database 18c, Oracle Cluster Health Advisor (CHA) does not monitor databases that were configured in 12c Release 2 (12.2). This applies to standard cluster configurations only.

**Workaround:**

Manually re-enable monitoring all databases after an upgrade using the command:

```
GI_HOME/bin/chactl monitor database -db db_unique_name [-model  
model_name]
```

Repeat for all databases that need monitoring.

## Bug 28237088

During the rollback from an 18.3 Release Update (RU) to Oracle Database 18c for Member Cluster, the following post-patch error occurs:

```
Database connect failed with: ORA-12154: TNS:could not resolve the connect  
identifier specified (DBD ERROR: OCIServerAttach)
```

**Workaround:**

Perform these 18.3 Release Update (RU) reapply steps immediately after the rollback to recover from post-patch rollback errors:

```
$GI_HOME/perl/bin/perl -I$GI_HOME/perl/lib -I$GI_HOME/crs/  
install $GI_HOME/crs/install/rootcrs.pl -prepatch -nonrolling -rollback  
  
$GI_HOME/perl/bin/perl -I$GI_HOME/perl/lib -I$GI_HOME/crs/  
install $GI_HOME/crs/install/rootcrs.pl -postpatch -nonrolling -rollback  
  
opatchauto rollback -nonrolling
```

## Bug 28745602

Creation of Grid Naming Service (GNS) client data manifest file from a standalone cluster using the command `srvctl export gns -clientdata <manifest_xml_file> -role client` fails with the following error:

```
"java.lang.StackOverflowError: operating system stack overflow  
error message:  
./srvctl export gns -clientdata /scratch/gnswrap.xml -role client  
Exception in thread "main" java.lang.StackOverflowError: operating system  
stack overflow
```

**Workaround:**

Update the `srvctl` command by adding `-Xms2048k` to `JAVA_STACK_SIZE` so that `JAVA_STACK_SIZE="-Xss2048k -Xms2048k` on IBM: Linux on System Z.

## Bug 28897417

Installing 32-bit Oracle Database Client software on IBM: Linux on System Z fails with Java core dump and returns the following error:

```
Unhandled exception  
Type=Segmentation error vmState=0x00052fff
```

**Workaround:**

Export the environment variable `IBM_JAVA_OPTIONS` to `-Xjit:disableInvariantArgumentPreexistence` and launch the installer.

For example,

```
$ export IBM_JAVA_OPTIONS="-Xjit:disableInvariantArgumentPreexistence"
$ runInstaller
```

## Open Bugs Affecting Linux

These topics contain last-minute features and changes for Oracle Database 18c.

- [Bug 21546793](#)
- [Bug 26708302](#)
- [Bug 24939744](#)
- [Bug 26929665](#)

### Bug 21546793

When creating a database on Linux Container, Database Configuration Assistant (DBCA) incorrectly shows the available memory of the host server instead of the Linux Container on the Specify Configuration Options page. When you choose to allocate the percentage of memory based on the value shown, the database creation fails in case where the total consumable memory for that Linux Container is less than the allocated memory.

**Workaround:**

You must allocate physical memory for the database according to the configuration of the Linux Container system.

### Bug 26708302

Deinstallation of Oracle Real Application Clusters (Oracle RAC) home on shared Network Attached Storage (NAS) fails to delete the directory `$ORACLE_HOME/deinstall` and returns the following error:

```
Failed to delete the directory $ORACLE_HOME/deinstall. Either user has no permission to delete or it is in use.
```

**Workaround:**

Manually delete the `$ORACLE_HOME/deinstall` folder as either the Oracle RAC owner or as root.

### Bug 24939744

The Cairo package in Oracle R Enterprise fails to load on SUSE Linux Enterprise Server 12 when the `libtiff.so.3` version is missing.

**Workaround:**



Create a symlink for `libtiff.so.3` from `libtiff5.so.5`.

## Bug 26929665

Oracle Cluster Health Advisor (CHA) models fail to restore in the Oracle Grid Infrastructure Management Repository (GIMR) after downgrading Oracle Grid Infrastructure on a member cluster to Oracle Database 12c Release 2 (12.2).

### Workaround:

Perform the following steps:

1. Run the `R$GI_HOME/bin/srvctl stop cha` command.
2. Run the `$GI_HOME/bin/chactl import model \ -file $GI_HOME/cha/model/os_gold.svm -name DEFAULT_CLUSTER`
3. Run the `$GI_HOME/bin/chactl import model \ -file $GI_HOME/cha/model/db_gold.svm -name DEFAULT_DB`
4. Run the `$GI_HOME/bin/srvctl start cha` command.

# 4

## Issues Affecting Oracle Solaris for Oracle Database 18c

These topics contain last-minute features and changes for Oracle Solaris for Oracle Database 18c.

- [Unsupported Products for Oracle Solaris](#)  
In addition to the list of unavailable products or features in this release of Oracle Database 18c, the following product is not supported for Oracle Solaris:
- [Product Support](#)  
These are the supported products or features for Oracle Database 18c:
- [Linking Applications with Oracle Client Libraries for Oracle Solaris](#)  
You must use the dynamic Oracle client libraries to link the client code on Oracle Solaris.
- [Preinstallation Requirements for Oracle Solaris](#)  
Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.
- [Installation, Configuration, and Upgrade Issues for Oracle Solaris](#)  
These topics describe information about issues that affect Oracle Database installation, configuration, and upgrade.
- [Open Bugs Affecting Oracle Solaris](#)  
This topic contains last-minute features and changes for Oracle Database 18c.

### Unsupported Products for Oracle Solaris

In addition to the list of unavailable products or features in this release of Oracle Database 18c, the following product is not supported for Oracle Solaris:

- Net Configuration Assistant Support

Refer to the list of unavailable products or features for all platforms in Oracle Database 18c.



#### See Also:

[Features Not Available or Restricted](#)

### Product Support

These are the supported products or features for Oracle Database 18c:

- Oracle Solaris Support on SPARC

Oracle Database 18c is supported on Oracle Solaris on SPARC (64-bit).

- Database Smart Flash Cache Support

Database Smart Flash Cache is supported on Oracle Solaris.

- Oracle ACFS and Oracle ADVM Support

Although Oracle ADVM supports raw disks in Oracle Automatic Storage Management disk groups, Oracle ADVM device special files created through raw are not supported; Oracle ADVM only supports block device special files.

For the latest information about supported platforms and releases, see the Note 1369107.1 on My Oracle Support at <https://support.oracle.com>

## Linking Applications with Oracle Client Libraries for Oracle Solaris

You must use the dynamic Oracle client libraries to link the client code on Oracle Solaris.

Do not link the static Oracle client libraries.

## Preinstallation Requirements for Oracle Solaris

Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.

## Installation, Configuration, and Upgrade Issues for Oracle Solaris

These topics describe information about issues that affect Oracle Database installation, configuration, and upgrade.

- [Bug 21800407](#)
- [Bug 24355490](#)
- [Bug 28175678](#)

### Bug 21800407

When installing Oracle Database for English and Japanese environments, the background font incorrectly displays yellow color for the Oracle Universal Installer (OUI), Database Configuration Assistant (DBCA), and Database Upgrade Assistant (DBUA) pages.

**Workaround:**

Prior to installing Oracle Database, run the following command:

```
export _JAVA_OPTIONS='-Dsun.java2d.xrender=false'
```

## Bug 24355490

When installing or upgrading an Oracle Grid Infrastructure home on Oracle Solaris 10, if the desired software location resides under a soft link, then the Oracle Grid Infrastructure installer incorrectly sets the physical path as the software location.

### Workaround:

Perform the following steps:

1. Set the Oracle Grid Infrastructure installer specifying the complete path to the desired Oracle home path:

```
Complete Oracle home path/gridSetup.sh
```

2. Proceed with the Oracle Grid Infrastructure installation.

## Bug 28175678

When you relink product executables manually in the Oracle Database home or Oracle Grid Infrastructure home by using either the `relink`, `relink all`, or `relink as_installed` commands, these commands fail with the following error:

```
ld.so.1: getcrshome: fatal: libons.so: open failed: No such file or  
directory sh: line 4: 17756: Killed
```

```
INFO:
```

```
ld.so.1: skgxpinfo: fatal: libons.so: open failed: No such file or  
directory
```

### Workaround:

Before you run either the `relink`, `relink all`, or `relink as_installed` commands, set the `LD_LIBRARY_PATH` to `$ORACLE_HOME/lib: $export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$ORACLE_HOME/lib`

## Open Bugs Affecting Oracle Solaris

This topic contains last-minute features and changes for Oracle Database 18c.

- [Bug 24438496](#)

## Bug 24438496

If you want to run the Visual COBOL 2.2 applications using the `rtsora` command, then relink `rtsora` in `ORACLE_HOME`.

### Workaround:

Perform the following steps to run the Visual COBOL 2.2 applications:

1. Verify if the `COBMODE` and `COBDIR` variables refer to the directory where Visual COBOL is installed and `LD_LIBRARY_PATH` and `PATH` variables contain the `COBDIR` and `COBIDR/lib` directories, respectively.

2. Relink the `rtsora` command in `ORACLE_HOME`.

```
cd $ORACLE_HOME/precomp/lib  
make -f ins_precomp.mk relink EXENAME=rtsora
```

3. Run the Visual COBOL 2.2 applications.

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## Issues Affecting Microsoft Windows for Oracle Database 18c

These topics contain last-minute features and changes for Microsoft Windows for Oracle Database 18c.

- [Unsupported Products for Microsoft Windows](#)  
There are no unsupported Microsoft Windows-specific products at this time.
- [Product Support](#)  
This is the supported product or feature for Oracle Database 18c.
- [Linking Applications with Oracle Client Libraries for Microsoft Windows](#)  
You must use the dynamic Oracle client libraries to link the client code on Microsoft Windows.
- [Preinstallation Requirements for Microsoft Windows](#)  
Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.
- [Installation, Configuration, and Upgrade Issues for Microsoft Windows](#)  
These topics describe information about issues that affect Oracle Database installation, configuration, and upgrade.

### Unsupported Products for Microsoft Windows

There are no unsupported Microsoft Windows-specific products at this time.

Refer to the list of unavailable products or features for all platforms in Oracle Database 18c.



#### See Also:

[Features Not Available or Restricted](#)

### Product Support

This is the supported product or feature for Oracle Database 18c.

- [Oracle ACFS and Oracle ADVM Support](#)  
Although Oracle ADVM supports raw disks in Oracle Automatic Storage Management disk groups, Oracle ADVM device special files created through raw are not supported; Oracle ADVM only supports block device special files.

For the latest information about supported platforms and releases, see the Note 1369107.1 on My Oracle Support at <https://support.oracle.com>

## Linking Applications with Oracle Client Libraries for Microsoft Windows

You must use the dynamic Oracle client libraries to link the client code on Microsoft Windows.

Do not link the static Oracle client libraries.

## Preinstallation Requirements for Microsoft Windows

Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.

## Installation, Configuration, and Upgrade Issues for Microsoft Windows

These topics describe information about issues that affect Oracle Database installation, configuration, and upgrade.

- [Bug 20918120](#)
- [Bug 21325903](#)
- [Bug 22579138](#)
- [Bug 23630511](#)
- [Bug 27421278](#)
- [Bug 28190735](#)
- [Bug 28340338](#)
- [Bug 28377614](#)
- [Bug 28430201](#)

### Bug 20918120

Installing Oracle Real Application Clusters Database home with a Group Managed Services Account (gMSA) as the Oracle home user, fails with the following error if the gMSA name consists of more than 15 characters (including the domain name):

```
[INS-32101] Specified Oracle Home user does not exist
```

**Workaround:**

Use a gMSA name (including the domain name) that consists of less than 15 characters.

## Bug 21325903

The deinstallation operation fails to remove Oracle home and displays `file in use` errors because the services and processes running from Oracle home are not removed completely before Oracle home removal.

**Workaround:**

Manually remove the Oracle home.

## Bug 22579138

When installing the Oracle Database Examples software on an Oracle Database Client home (32-bit), you encounter the following error:

```
SEVERE: [FATAL] [INS-52001] Oracle Database Examples can only be installed  
into an existing Oracle Database Home of version 12.2.0.1.0.
```

**Workaround:**

Restart the Oracle Database Examples installer with the `-skipOHCCompatibilityCheck` switch and proceed with the installation.

## Bug 23630511

If you run the deinstallation tool from the 12.2 installation media to remove the Oracle software from an existing 11.2.0.4 Oracle home, then the deinstallation tool stops responding.

**Workaround:**

Ensure that you run the deinstallation tool from the same release to remove the Oracle software. You should not run the deinstallation tool from a later release to remove the Oracle software from an earlier release.

## Bug 27421278

During an Oracle Grid Infrastructure upgrade on Microsoft Windows Server 2012, if the DLL path is set to an unexpected value, then the upgrade fails with an ASMCMD-8102 error.

**Workaround:**

Perform the following steps:

1. Exit out of the installer, if running.
2. Manually upgrade Oracle Grid Infrastructure by running `gridSetup.bat -upgrade` on all nodes.
3. After the completion of step 2 on all nodes, launch the installer to run the configuration tools by running `gridSetup.bat -executeConfigTools`.



## Bug 28190735

In the absence of the necessary domain access privileges, Oracle Grid Infrastructure and Oracle Database installers cannot verify if the specified Oracle Home User is an administrator in each of the nodes in the following scenarios:

1. Install user is a local user and Oracle Home User belongs to a domain.
2. Install user is a domain user, but belongs to a domain different from that of the Oracle Home User, and the domains involved do not have the required trust relationships between them.

If the Oracle Home user directly belongs to the Administrators group, then the Oracle Grid Infrastructure installer detects and flags an error. If the Oracle Home User belongs to the Administrators group through an indirect group membership, where the Oracle Home User belongs to a domain group, that is indirectly part of the Administrators group, then the Oracle Grid Infrastructure and Oracle Database installers fail to detect such indirect membership to the Administrators group in the absence of the necessary domain access privileges, and allow the installation to continue. The installer proceeds to the next step after writing the following log in the `installActions<date-time>.out` file:

```
PRCZ-1007 : Unable to determine if user "<domain Oracle Home User>" has  
Windows administrator authority.  
WSE-000015: Unable to get list of groups to which the user belongs.  
O/S-Error: (OS 5) Access is denied.
```

### Workaround:

Verify and ensure that the chosen Oracle Home User is not an administrator, even by indirect membership to the Administrators group in any of the nodes. Ignore the prerequisite check failure "Verify Oracle Home Service User" and proceed with the installation.

## Bug 28340338

Start Database Configuration Assistant (DBCA) to create database using `TypicalModeUI` page on an Oracle home installed on Oracle Automatic Storage Management Cluster File System (Oracle ACFS). If you change the storage type from Oracle Automatic Storage Management (Oracle ASM) to File System (FS), then DBCA initializes the default value for the database file and Fast Recovery Area (FRA) location. If you create the database without changing the default value, then the following error occurs:

```
PRCT-1121 : Execution of acfsutil failed on local node with result  
acfsutil info fs: CLSU-00107: operating system function: NtCreateFile;  
failed with error data: 2; at location: OOF2_2".
```

### Workaround:

Enter the correct location value in Database files location and Fast Recovery Area (FRA) after changing the storage type combo box from Oracle ASM to File System (FS) in `TypicalModeUI` page.

## Bug 28377614

During an upgrade from Oracle Grid Infrastructure 12c Release 2 (12.2) to Oracle Grid Infrastructure 18c, or downgrade from Oracle Grid Infrastructure 18c to Oracle Grid Infrastructure 12c Release 2 (12.2), Cluster Health Monitor (CHM) is not usable and returns the following error:

```
CRS-9125-Error dumpnodeview: Node name rws00gdk is unknown or invalid.
```

### Workaround:

If CHM does not work during an upgrade from Oracle Grid Infrastructure 12c Release 2 (12.2) to Oracle Grid Infrastructure 18c, then perform these steps:

1. Stop `crf` resource on all nodes using `crsctl stop res ora.crf -init`.
2. Run the following commands on all nodes in a cluster:

```
rm $ORACLE_BASE\crsdata\<hostname>\crf\db\json\localdump.hdr
rm $ORACLE_BASE\crsdata\<hostname>\crf\db\proc\localdump.hdr
```
3. Start `crf` resource on all nodes using `crsctl start res ora.crf -init`.

If CHM does not work during a downgrade from Oracle Grid Infrastructure 18c to Oracle Grid Infrastructure 12c Release 2 (12.2), then perform these steps:

1. Stop `crf` resource on all nodes using `crsctl stop res ora.crf -init`.
2. Run the following commands on all nodes in a cluster:

```
rm $ORACLE_HOME\crf\db\<hostname>\json\localdump.hdr
rm $ORACLE_HOME\crf\db\<hostname>\proc\localdump.hdr
```
3. Start `crf` resource on all nodes using `crsctl start res ora.crf -init`.

## Bug 28430201

This issue is specific to Oracle Database 18c 32-bit Client and not Oracle Database 18c 64-bit Server and Oracle Database 18c 64-bit Client. Oracle Database 18c 32-bit Client requires Microsoft Visual Studio 2013 runtime. During installation, the installer installs a runtime based on Microsoft Visual Studio 2013 Update 4, version 12.0.30501. The latest version of Microsoft Visual Studio 2013 is Update 5, version 12.0.40660.

### Workaround:

Download and install the latest Microsoft Visual C++ 2013 Redistributable (x86) - 12.0.40660 for Oracle Database 18c 32-bit Client from <https://support.microsoft.com/en-in/help/3179560/update-for-visual-c-2013-and-visual-c-redistributable-package>.

The installer installs the latest version Microsoft Visual Studio 2013 Update 5, version 12.0.40660 by replacing Microsoft Visual Studio 2013 Update 4, version 12.0.30501 that comes with Oracle Database 18c Client installer.

# 6

## Issues Affecting HP-UX Itanium for Oracle Database 18c

These topics contain last-minute features and changes for HP-UX Itanium for Oracle Database 18c.

- [Unsupported Products for HP-UX Itanium](#)  
In addition to the list of unavailable products or features in this release of Oracle Database 18c, the following products and features are not supported:
- [Product Support](#)  
There are no supported products or features for Oracle Database 18c on HP-UX Itanium at this time.
- [Linking Applications with Oracle Client Libraries for HP-UX Itanium](#)  
You must use the dynamic Oracle client libraries to link the client code on HP-UX Itanium.
- [Preinstallation Requirements for HP-UX Itanium](#)  
Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.
- [Installation, Configuration, and Upgrade Issues for HP-UX Itanium](#)  
This topic describes information about issues that affect Oracle Database installation, configuration, and upgrade.

### Unsupported Products for HP-UX Itanium

In addition to the list of unavailable products or features in this release of Oracle Database 18c, the following products and features are not supported:

- Database Smart Flash Cache Support
- Oracle ASM Filter Driver Support

Refer to the list of unavailable products or features for all platforms in Oracle Database 18c.



#### See Also:

[Features Not Available or Restricted](#)

### Product Support

There are no supported products or features for Oracle Database 18c on HP-UX Itanium at this time.

## Linking Applications with Oracle Client Libraries for HP-UX Itanium

You must use the dynamic Oracle client libraries to link the client code on HP-UX Itanium.

Do not link the static Oracle client libraries.

## Preinstallation Requirements for HP-UX Itanium

Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.

## Installation, Configuration, and Upgrade Issues for HP-UX Itanium

This topic describes information about issues that affect Oracle Database installation, configuration, and upgrade.

- [Bug 27367949](#)
- [Bug 28340043](#)

### Bug 27367949

In some Oracle Database installation scenarios, Database Upgrade Assistant (DBUA) reports a prerequisite checks failure, and returns the following error:

```
Oracle OLAP API UPGRADED 18.1.0.0.0 00:00:18
Upgrade Datapatch Error: prereq checks failed!
Upgrade Datapatch 00:00:37
```

Further `catupgrd_datapatch_normal.log` returns the following error:

```
Connecting to database...OK
Gathering database info...done
Bootstrapping registry and package to current versions...done
Error: prereq checks failed!
verify_queryable_inventory returned ORA-20001: Latest xml inventory is not
loaded into table
Prereq check failed, exiting without installing any patches.
```

#### **Workaround:**

Start DBUA as a user with the same group ID as that of the Oracle user that owns the Oracle Database 18c Oracle home.

For example, if the user `asmadmin` is the group owner of the Oracle home on your system, change the user primary group to the `asmadmin` group using `newgrp`:

```
bash-4.3$ ls -l $ORACLE_HOME/bin/oracle
-rwsr-s--x 1 oracle asmadmin 1133380232 Feb 14 00:36 bin/oracle
bash-4.3$ newgrp asmadmin
bash-4.3$ $ORACLE_HOME/bin/dbua
```

## Bug 28340043

In some Oracle Database installation scenarios, creating database using Database Configuration Assistant (DBCA) results in `INVALID JAVAVM` component or database upgrade using Database Upgrade Assistant (DBUA) reports a prerequisite checks failure and returns the following error:

```
Oracle OLAP API UPGRADED 18.1.0.0.0 00:00:18
Upgrade Datapatch Error: prereq checks failed!
Upgrade Datapatch 00:00:37
```

Further `catupgrd_datapatch_normal.log` returns the following error:

```
Connecting to database...OK
Gathering database info...done
Bootstrapping registry and package to current versions...done
Error: prereq checks failed!
verify_queryable_inventory returned ORA-20001: Latest xml inventory is not
loaded into table
Prereq check failed, exiting without installing any patches.
```

### Workaround:

Start DBCA or DBUA as a user with the same group ID as that of the Oracle user that owns the Oracle Database 18c Oracle home.

For example, if the user `asmadmin` is the group owner of the Oracle home on your system, change the user primary group to the `asmadmin` group using `newgrp`:

```
bash-4.3$ ls -l $ORACLE_HOME/bin/oracle
-rwsr-s--x 1 oracle asmadmin 1133380232 Feb 14 00:36 bin/oracle
bash-4.3$ newgrp asmadmin
bash-4.3$ $ORACLE_HOME/bin/dbua
```

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## Issues Affecting the IBM AIX on POWER Systems Platform for Oracle Database 18c

These topics contain last-minute features and changes for Oracle Database 18c.

- [Unsupported Products for the IBM AIX on POWER Systems Platform](#)
- [Linking Applications with Oracle Client Libraries for the IBM AIX on POWER Systems Platform](#)
- [Preinstallation Requirements for the IBM AIX on POWER Systems Platform](#)
- [Installation, Configuration, and Upgrade Issues for the IBM AIX on POWER Systems Platform](#)
- [Open Bugs Affecting the IBM AIX on POWER Systems Platform](#)

### Unsupported Products for the IBM AIX on POWER Systems Platform

There are no unsupported products for the IBM AIX on POWER Systems Platform at this time. Refer to the list of unavailable products or features for all platforms in Oracle Database 18c.



#### See Also:

[Features Not Available or Restricted](#)

### Linking Applications with Oracle Client Libraries for the IBM AIX on POWER Systems Platform

You must use the dynamic Oracle client libraries to link the client code on Linux. Do not link the static Oracle client libraries.

### Preinstallation Requirements for the IBM AIX on POWER Systems Platform

Refer to the installation guides for the preinstallation requirements for Oracle Database 18c.

# Installation, Configuration, and Upgrade Issues for the IBM AIX on POWER Systems Platform

There are no installation, configuration, and upgrade issues at the time of this release of Oracle Database 18c.

- [Bug 28745602](#)
- [Bug 28390266](#)
- [Bug 29053538](#)

## Bug 28745602

Creation of Grid Naming Service (GNS) client data manifest file from a standalone cluster using the command `srvctl export gns -clientdata <manifest_xml_file> -role client` fails with the following error:

```
"java.lang.StackOverflowError: operating system stack overflow
error message:
./srvctl export gns -clientdata /scratch/gnswrap.xml -role client
Exception in thread "main" java.lang.StackOverflowError: operating system
stack overflow
```

### Workaround:

Update the `srvctl` command by adding `-Xms2048k` to `JAVA_STACK_SIZE` so that `JAVA_STACK_SIZE="-Xss2048k -Xms2048k`.

## Bug 28390266

Running Cluster Verification Utility (CVU) resource causes memory consumption.

### Workaround:

To reduce or prevent memory leak or memory consumption in CVU resource:

Install a patch in AIX systems to address a memory leak observed in the `pthread` library. IBM provides a list of Authorized Program Analysis Report (APAR) numbers for different versions.

The list of APAR numbers, AIX release or Technology Levels (TLs) are:

AIX Release/ TL Number	APAR Number
AIX 6.1 TL09	IJ11198
AIX 7.1 TL04	IJ11193
AIX 7.1 TL05	IJ11195
AIX 7.2 TL01	IJ11194
AIX 7.2 TL02	IJ11196

AIX 7.2 TL03

IJ11197

---

## Bug 29053538

Starting with Oracle Database 18c, Oracle database instance at startup loads `libora_netlib.so`. This library has dependencies on IBM XL Fortran runtime libraries. If they are not installed on the system, startup fails with the following error:

```
ORA-40238: invalid linear algebra shared library
```

### **Workaround:**

Install XL Fortran Runtime for AIX Fix Pack 10 (February 2018 PTF) for 15.1.

Download and install XL Fortran Runtime for AIX Fix Pack 10 (February 2018 PTF) for 15.1 from:

<https://www-01.ibm.com/support/docview.wss?uid=swg24044611>

## Open Bugs Affecting the IBM AIX on POWER Systems Platform

These topics contain last-minute features and changes for Oracle Database 18c.



# 8

## Documentation Corrections and Additions

These topics contain corrections and additions to documentation.

- [Oracle Database 2 Day + Performance Tuning Guide \(E83714\)](#)
- [Oracle Database Utilities \(E89587\)](#)

### Oracle Database 2 Day + Performance Tuning Guide (E83714)

In Section 9.3 “Using the AWR Compare Periods Reports” in Chapter 9 “Resolving Performance Degradation Over Time”, the following two new subsections have been added to the Automatic Workload Repository (AWR) Compare Periods report in 18.1:

- Top Process Types by Wait Class  
This section shows the top process types ordered by wait class.
- Top Process Types by CPU Used  
This section shows the top process types ordered by CPU time.

### Oracle Database Utilities (E89587)

Oracle Database Utilities for Oracle Database 18c has been updated with the following restrictions:

- For the `ACCESS_METHOD` parameter for Data Pump Export (Chapter 2):  
"The `ACCESS_METHOD` parameter for Data Pump Export is not valid for transportable tablespace jobs."
- For the `TRANSPORT_TABLESPACES` parameter for Data Pump Export (Chapter 2):  
"Transportable tablespace jobs do not support the `ACCESS_METHOD` parameter for Data Pump Export."
- For the `ACCESS_METHOD` parameter for Data Pump Import (Chapter 3):  
"The `ACCESS_METHOD` parameter for Data Pump Import is not valid for transportable tablespace jobs."
- For the `TRANSPORT_TABLESPACES` parameter for Data Pump Import (Chapter 3):  
"Transportable tablespace jobs do not support the `ACCESS_METHOD` parameter for Data Pump Import."