Oracle® Cloud

Known Issues for Oracle Database Exadata Express Cloud Service

Release 19.3
E73597-21
May 2020

Oracle Cloud Known Issues for Oracle Database Exadata Express Cloud Service, Release 19.3

E73597-21

Contents

Preface

Known Issues for Oracle Database Exadata Express Cloud Service describes known issues and feature limitations for Oracle Database Exadata Express Cloud Service (also referred to as Exadata Express).

Topics:

Related Resources

Many different resources are available to you.

See Oracle Database Exadata Express Cloud Service online for documentation, videos, tutorials, and other resources.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	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.

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Feature Restrictions and Limitations

This section lists the feature restrictions and limitations associated with this release of Oracle Database Exadata Express Cloud Service. While these Oracle Database features are not currently available in Exadata Express, the intent is to enable many of them in a future release.

Additional restrictions are also described in Lockdown and Restrictions in *Using Oracle Database Exadata Express Cloud Service*.

- **Oracle Database Net Services (SQL*Net) Connection Timeout**

  Client connections to your Exadata Express cloud database automatically disconnects after 30 minutes of idle time. This timeout interval cannot be changed. To keep your client connections alive, make sure they execute an operation on the database at least once during each 30-minute period.

- **File System Access**

  Access to the host file system is disabled.

- **Database Sharding**

  Database sharding is not supported.

- **Java**

  Java functionality in Oracle Database is disabled, with the exception of the prepackaged Java-based implementations required for features such as XML DB.

- **Oracle Database Features on Microsoft Windows**

  Oracle Database features specific to Microsoft Windows are not supported when running on Exadata Express (for example, Oracle Database Extensions for .NET). You can connect to Exadata Express from a Windows system without any problem, but database features specific to the Windows operating system cannot be used.

- **Data Pump**

  Data Pump Import and Data Pump Export are currently not available.

- **Legacy Database Export/Import**

  Legacy database export/import is not supported. The host file system cannot be accessed from Exadata Express.

- **SQL*Loader**

  The conventional path load method is functional, however `REF` columns cannot be loaded. The direct path load method is not supported.

- **PDB Features**

  Pluggable database (PDB) features such as unplug/plug and hot clone are not supported in this initial release.

- **Enterprise Manager**

You cannot use Enterprise Manager to manage a PDB running in Exadata Express.

- **LogMiner**

  LogMiner is not available.

- **Logical Standby (Data Guard)**

  PDBs cannot be set up for logical standby.

- **DBMS_ROLLING**

  The `DBMS_ROLLING` PL/SQL package is not available.

- **DBMS_LOGSTDBY**

  The `DBMS_LOGSTDBY` PL/SQL package is not available.

- **Extended Data Types and Column-Level Collation**

  Setting the initialization parameter `MAX_STRING_SIZE` to the value `EXTENDED` is not supported. As a result, the following functionality is not available:

  - Extended data types: the new size limit of 32767 bytes for `VARCHAR2`, `NVARCHAR2`, and `RAW` columns
  - Data-bound collation: collation declarations for table columns, cluster columns, tables, views, and materialized views
  - JSON data population: cannot populate JSON data into In-Memory Column Store using the memory optimized format.

- **Oracle Forms**

  Using Exadata Express as the back-end database for Oracle Forms is not supported.

- **Oracle Multimedia**

  Oracle Multimedia is not supported.

- **Oracle Text**

  - The `FILE_DATASTORE` and `URL_DATASTORE` datastore types are not supported.
  - Due to permissions restrictions, the `CTX_AUTO_OPTIMIZE_STATUS` view and certain other views that start with `CTX_` cannot be viewed by `CTXSYS` users.
  - The `CTX_OUTPUT.START_LOG` and `CTX_OUTPUT.START_QUERY_LOG` procedures are not available.

- **Spatial and Graph**

  The Spatial and Graph option is not supported in this initial release.

- **Advanced Analytics**

  The Data Mining SQL functions, part of Oracle Advanced Analytics option, are supported. The R interface and the Oracle Data Miner GUI, also part of Oracle Advanced Analytics option, are not supported.

- **Parallel Query**

  The parallel query option is disabled.

- **Exadata Smart Scan and Exadata Hybrid Columnar Compression (HCC)**

Exadata Smart Scan is not supported in this initial release. Exadata HCC is supported.

- **Data at Rest Encryption**

  Data at rest in Exadata Express is transparently encrypted by Oracle Advanced Security Transparent Data Encryption (TDE), however, you do not have the ability to directly rotate the master key for your PDB or open or close your PDB keystore. These important operations are performed by Oracle on a periodic basis. Also, Key Vault cannot be connected to Exadata Express.

- **Database Vault**

  Database Vault cannot be enabled in the PDB.

- **Real Application Security (RAS)**

  RAS is not supported in Exadata Express. Also, Oracle Virtual Private Database (VPD) and Data Redaction cannot create policies on container database (CDB) common objects.

- **Flashback**

  `FLASHBACK DATABASE` is not available; `FLASHBACK TABLE` generally works.

  Flashback Data Archive (Total Recall) is not supported.

- **PL/SQL Debugger**

  Use of the `DBMS_DEBUG_JDWP` package is not supported. This means that the functionality for the GUI debugging of database PL/SQL code, exposed by SQL Developer and other tools, is unavailable.

- **Database Tracing**

  You cannot set events to trace, generate trace files, or use view-based tracing.

- **Native XA versus PL/SQL XA**

  Native XA is not supported in Exadata Express, which has implications for the JDBC Thin driver. Because the JDBC Thin driver uses the Native XA protocol by default, you need to disable Native XA using `setNativeXA(false)` on your connection object. The JDBC OCI (Thick) driver is not impacted, because it does not use Native XA by default.

- **Oracle Database In-Memory**

  The In-Memory Column Store is supported just on the X50IM and X1000IM shapes, and the size of the In-Memory column is limited to 5 GB and 10 GB respectively. For In-Memory expressions, only two values are supported for the `INMEMORY_EXPRESSIONS_USAGE` initialization parameter: `STATIC_ONLY` and `DISABLE`.

- **In-Memory Join Groups**

  In-memory join groups are limited to a maximum of 5 columns per group.

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Known Issues

This section lists known issues associated with this release of Oracle Database Exadata Express Cloud Service, organized by category.

Topics

Access and Privileges

This section describes issues associated with access and privileges.

Topics

Database Users Cannot Access Objects in SYS

Due to the PDB lockdown profile in Exadata Express, database users with system privileges that usually allow access to any view or table in the `SYS` schema cannot access those objects unless they have a privilege grant for the specific object. For example, having the `SELECT ANY DICTIONARY` database privilege does not allow a user or role to query V$ views as you might expect.

Workaround

Use the built-in `PDB_ADMIN` user to grant `SELECT` or `READ` privileges on the desired V$ views to database users or roles who need to run such queries.

DBMS_SYSTEM Not Accessible

The `DBMS_SYSTEM` package is not accessible. The package contains procedures for setting special internal trace events that can help diagnose and debug serious database problems.

Workaround

Contact Oracle Support for assistance.

DBMS_XSTREAM* Privilege Cannot be Granted to Exadata Express Users

Exadata Express administrators cannot grant the `DBMS_XSTREAM*` privilege to Exadata Express users. The XStream feature is not supported for Exadata Express users.

Dictionary Table Privileges Cannot be Granted to Exadata Express Users

Exadata Express administrators and users cannot be granted privileges to access dictionary tables.

Workaround

Select from dictionary view instead of the dictionary table directly.

GRANT BECOME USER TO Local Users Not Supported

The `BECOME USER` privilege cannot be granted to local users. `GRANT BECOME USER TO *local_user*` fails if attempted.

GRANT CREATE CREDENTIAL TO Local Users Not Supported

The `CREATE CREDENTIAL` privilege cannot be granted to local users. `GRANT CREATE CREDENTIAL TO *local_user*` fails if attempted.

Granting DBMS_MDX_INTERNAL to Users Not Supported

Granting the `DBMS_MDX_INTERNAL` role to users fails with `ORA-01924: role 'DBMS_MDX_INTERNAL' not granted or does not exist`. This role cannot be granted.

GRANT EXECUTE ON DBMS_TRANSFORM TO Local Users Not Supported

The `EXECUTE ON DBMS_TRANSFORM` privilege cannot be granted to local users. `GRANT EXECUTE ON DBMS_TRANSFORM TO *local_user*` fails if attempted.

Granting EXP_FULL_DATABASE to Users Not Supported

Granting the `EXP_FULL_DATABASE` role to users fails with `ORA-01924: role 'EXP_FULL_DATABASE' not granted or does not exist`. This role cannot be granted.

GRANT FLASHBACK ANY TABLE TO Local Users Not Supported

The `FLASHBACK ANY TABLE` privilege cannot be granted to local users. `GRANT FLASHBACK ANY TABLE TO *local_user*` fails if attempted.

GRANT KEEP DATE TIME TO Local Users Not Supported

The `KEEP DATE TIME` privilege cannot be granted to local users. `GRANT KEEP DATE TIME TO *local_user*` fails if attempted.

GRANT SCHEDULER_ADMIN TO Local Users Not Supported

The SCHEDULER_ADMIN privilege cannot be granted to local users. GRANT SCHEDULER_ADMIN TO *local_user* fails if attempted.

Granting SELECT ON DATABASE_PROPERTIES to Users Not Supported

Granting the SELECT ON DATABASE_PROPERTIES role to users fails with ORA-01031: insufficient privileges. This role cannot be granted.

GRANT TRANSLATE ANY SQL TO Local Users Not Supported

The TRANSLATE ANY SQL privilege cannot be granted to local users. GRANT TRANSLATE ANY SQL TO *local_user* fails if attempted.

Local Users with PDB_DBA Role Cannot Access Audit Packages

Local users with the PDB_DBA role cannot access the following audit packages:

- DBMS_AUDIT_MGMT
- DBMS_AUDIT_UTIL
- DBMS_FGA

The EXECUTE privilege on these packages is not granted to this role.

Workaround

The AUDIT_ADMIN role has EXECUTE privileges for these packages and can grant access to other users.

PDB Administrators Cannot Use Editions Created by Other Users

Users with the PDB_ADMIN role cannot use editions created by other users.

Workaround

The user who created the edition should grant use to the PDB_ADMIN user:

```
grant use on edition edition_name to pdb_admin with grant option;
```

Where *edition_name* is the edition to which use is being granted.

UNLIMITED TABLESPACE Privilege Cannot be Granted to PDB_DBA Role

The UNLIMITED TABLESPACE privilege cannot be granted to users with the PDB_DBA role.

Users Cannot Grant Edition Privileges to PDB_DBA Role

Local user `u1` with the `PDB_DBA` role (not `PDB_ADMIN`) cannot grant the `'use on edition'` privilege to another user `u2`, so that user `u2` can use the edition created by user `u1`. This is expected behavior.

Workaround

The best practice for this situation is to have an EBR admin user (can be `PDB_ADMIN`) who creates and drops editions and grants privileges to anyone who might need use.

Data Encryption

This section describes issues associated with data encryption.

Topics

ADMINISTER KEY MANAGEMENT Fails in Cloud Setup

The `ADMINISTER KEY MANAGEMENT` statement fails in Cloud setup.

External Keystore Location is Case Sensitive

The external keystore location is case sensitive. By default, executing any SQL statement that contains a string in single quotes displays the string in the dictionary view in UPPER CASE.

Workaround

To avoid any confusion, use double quotes in the SQL command string to clearly indicate the string's case.

Data Management

This section describes issues associated with data management.

Topics

Calling C External Procedures from PL/SQL Not Supported

The `extproc` agent is not supported in the Cloud environment. Calling C external procedures from PL/SQL will fail.

EXPLAIN PLAN on SELECT Query Using Dictionary Views Not Supported

Using `EXPLAIN PLAN` for a `SELECT` query referencing dictionary views fails with `ORA-01039: insufficient privileges on underlying objects of the view`. Note that the `SELECT` query itself will pass when executed. Only `EXPLAIN PLAN` with `SELECT` queries referencing dictionary views will fail.

ORADEBUG Not Accessible

The `ORADEBUG` utility is not accessible.

Original Export/Import Not Supported

Original Export/Import is not supported and fails with an error if attempted. The OPCODE might be missing in the error message. The `expdp` and `impdp` Data Pump commands also are not supported.

Users Cannot Create External Tables

Users cannot create external tables. The `extproc` agent is not supported, and creating external tables will fail.

Workaround

Use the standard `CREATE TABLE` statement.

Users Cannot See Explain Plan for Underlying Objects of a View

Users do not have the privileges necessary to see the explain plan for underlying objects of a view, such as tables.

Data Mining

This section describes issues associated with data mining.

Topics

Inconsistent Naming of O-Cluster Algorithm

The o-cluster algorithm name used in a PL/SQL statement is slightly different from the quoted string used for creating the o-cluster algorithm.

`dbms_data_mining.algo_oclusterALGO_O_CLUSTERALGO_OCLUSTER`

Workaround

Change `ALGO_O_CLUSTER` to `ALGO_OCLUSTER` to make it consistent with the PL/SQL constant `dbms_data_mining.algo_ocluster`.

Partitioned Model Functional Specification Clarification for SVD Settings

SVD solver can be set to SSVD or STEIGEN solver. Both settings work for the following:

- `svds_random_seed`
- `svds_over_sampling`
- `svds_power_iterations`

Development — General

This section describes issues associated with development. The following features and data types are not supported in this release.

Topics

Features and Data Types Not Supported (General)

The following features and data types are not supported in Exadata Express.

- Advanced Queuing (AQ) Notifications

  AQ PL/SQL Notifications are supported. Native AQ notification support from APIs such as OCI, JDBC, and so on are not supported.
- Application Continuity
- `BFILE` data type
- Client Result Cache
- Change Query Notification
- Database Link (DBlink)

  Exadata Express cannot be the target of an incoming DBlink. Outgoing DBlinks from Exadata Express are not allowed. Also, any DBlink functionality is not supported.

- Database Resident Connection Pool (DRCP)
- Fast Application Notification (FAN)
- Input bind of objects

  Input bind of objects (for example, using the `DML` statement with object binds) is not supported. Retrieving objects (for example, using `SELECT` to retrieve object values) is supported.
- Real Application Security (RAS)
- Runtime Load Balancing (RLB)
- Transparent Application Failover (TAF)
- Switching between containers using `'alter session set container'`
- XA

  Oracle XA is not supported. Both one-phase commit (1pc) and two-phase commit (2pc) are not supported.
- XML DB HTTP, FTP, and WebDAV services

  The Oracle XML DB HTTP, FTP, and WebDAV services are not available. Setting these port numbers won't raise an error but also won't have any effect.

Data Type BFILE Not Supported

`CREATE DIRECTORY` is not supported, therefore the data type `BFILE`, which depends on `CREATE DIRECTORY`, cannot be used.

Development — ASP.NET Providers

This section describes issues associated with ASP.NET providers development.

Topics

Features Not Supported (ASP.NET Providers)

Oracle Providers for ASP.NET do not support the following features when connecting to Exadata Express:

- Any authentication besides username/password
- `OracleCacheDependency` class and Continuous Query Notification
- `OracleSiteMapProvider` class
- Oracle Data Provider for .NET, Unmanaged Driver

Development — JDBC

This section describes issues associated with JDBC development.

Topics

Binding of XMLType in OCI and JDBC for Inbound Operations Not Supported

Binding of `XMLType` in OCI and JDBC for inbound operations is not supported.

Workaround

Send the XML content using a LOB (BLOB or CLOB) and then use an `XMLType` constructor to convert the LOB to an `XMLTYPE`. For example, instead of coding "`insert into MY_XMLTABLE values (:1)`" and binding an `XMLType`, you need to code "`Insert MY_XMLTABLE values (XMLTYPE(:1))`" and bind a CLOB or BLOB. See the `XMLTYPE` documentation for more details about the supported forms of the `XMLTYPE` constructor.

JDBC Object Bind Not Supported

The JDBC feature for supporting object bind is not available for Exadata Express.

As a result, `ResultSet.insertRow()`, `ResultSet.updateRow()`, and `SensitiveScrollableResultSet` also are not supported, because they rely on object bind.

JDBC OCI Native XA Support

Similar to the JDBC OCI driver, the JDBC Thin driver also provides support for Native XA. However, the JDBC Thin driver provides support for Native XA by default, unlike the JDBC OCI driver, in which support for Native XA is not enabled by default.

JDBC Thin Client Does Not Support XA Feature

The JDBC Thin client does not support the XA feature. An exception is thrown if this feature is used.

Native XA (Including 1pc and 2pc) Not Supported for JDBC

For JDBC, Native XA whether 1pc or 2pc is not supported by Exadata Express, while Non-Native XA is supported.

Selection of Anytype Not Supported for JDBC Thin

Binding an `anytype` to an `INSERT` or `UPDATE` is not supported for the JDBC Thin.

Selection of Nested Columns Not Supported for JDBC OCI8 Driver

Binding a nested column to an `INSERT` or `UPDATE` is not supported for the JDBC drivers.

Development — OCI

This section describes issues associated with OCI development.

Topics

Features Not Supported (OCI)

The following OCI-related features are not supported in Exadata Express:

- Advanced Queuing (AQ)

  AQ OCI calls are not supported. AQ PL/SQL APIs are supported.
- OCI V7 APIs
- OCI XStream functions
- Navigational object access — the following functions are not supported:
  - OCI flush or refresh functions
    - `OCICacheFlush()`
    - `OCICacheFlushRefresh()`
    - `OCIObjectFlush()`
    - `OCIObjectFlushRefresh()`
    - `OCIObjectRefresh()`
  - OCI miscellaneous object functions
    - `OCIObjectLock()`
    - `OCIObjectLockNoWait()`
    - `OCIObjectMakeObjectRef()`
    - `OCIObjectGetPrimaryKeyTypeRef()`
    - `OCIObjectGetObjectRef()` — if the object is not transient and is a primary key reference

  - OCI Type Interface functions
    - `OCITypeAddAttr()`
    - `OCITypeBeginCreate()`
    - `OCITypeEndCreate()`
    - `OCITypeSetBuiltin()`
    - `OCITypeSetCollection()`

Development — ODBC

This section describes issues associated with ODBC development.

Topics

- SQLPrepare() and SQLExecDirect() Calls Fail for Read-Only Connections (ODBC)

SQLPrepare() and SQLExecDirect() Calls Fail for Read-Only Connections (ODBC)

When connecting with read-only access, the `SQLPrepare()` call fails due to a restriction in Exadata Express. The `SQLExecDirect()` call also fails for the same reason.

Workaround

Use write access instead of read-only access. There are a number of ways to setup the write access in an ODBC application.

For example:

- On Linux, set `ATTRIBUTES=W` in `.odbc.ini` configuration file.
- On Windows, uncheck Read-Only Connection in utility `odbcad32`.
- In an application, you can do one of the following:
  - Pass in `DBA=w` instead of `DBA=R` as the parameter in SQLDriverConnect() function call.
  - Pass in `SQL_ATTR_ACCESS_MODE` and `SQL_MODE_READ_ONLY` parameters in `SQLSetConnectAttr()` function call.

Development — ODP.NET

This section describes issues associated with ODP.NET development.

Topics

- Features Not Supported (ODP.NET)
- Connection Request Encounters "ORA-28865: SSL connection closed" Error Intermittently

Features Not Supported (ODP.NET)

Managed and unmanaged ODP.NET do not support the following features when connecting to Exadata Express:

- .NET Bulk Copy
- Advanced Queuing (AQ)
- Any authentication besides username/password
- Application Continuity
- Client Result Cache
- Continuous Query Notification
- Data types:
  - `BFILE`
  - User-defined types when using `IN` or `IN OUT` parameter binding

    User-defined types include objects, collections (`VARRAY` and nested table), and references.
  - `VARCHAR2` with increased size limit to 32 KB

    `VARCHAR2` of sizes up to 4 KB are supported.
  - `XMLType` when using `IN` or `IN OUT` parameter binding
- Distributed transactions
- Fast Application Notification (FAN)

  Features that rely on FAN, such as planned outage, runtime connection load balancing, and fast connection failover are not supported. In ODP.NET 12.1 or earlier, an error is received if FAN is turned on.
- Sharding
- Database Resident Connection Pooling

Connection Request Encounters "ORA-28865: SSL connection closed" Error Intermittently

The error `ORA-28865: SSL connection closed` may be encountered intermittently when trying to establish simultaneous connections or in transient load scenarios.

Workaround

If you're using ODP.NET, Managed Driver, decrease the `Incr Pool Size` connection string attribute value one at a time until you no longer see this error when trying to establish connections. Decreasing the `Min Pool Size` connection string attribute value may also help to reduce the number of connections initially created when a connection pool is created, which reduces the possibility of encountering this error.

If you're using ODP.NET, Unmanaged Driver, decrease the `Min Pool Size` connection string attribute value to reduce the number of connections initially created for the connection pool. With ODP.NET, Unmanaged Driver 12.1.0.2 or later, adding the

RETRY_COUNT and RETRY_DELAY settings in the descriptors of tnsnames.ora may also help. For RETRY_COUNT, start with a value of 1 and tune upwards as needed. Choose a reasonable value for RETRY_DELAY so the server isn't throttled with retries.

Development — OLE DB

This section describes issues associated with OLE DB development.

Topics

Features Not Supported (OLE DB)

Oracle Provider for OLE DB does not support the following features when connecting to Exadata Express:

- IRowsetFastLoad interface
- Any authentication besides username/password
- Client Result Cache
- Data types:
  - BFILE
  - VARCHAR2 with increased size limit to 32 KB

    VARCHAR2 of sizes up to 4 KB are supported.
- Distributed transactions

Development — Oracle Developer Tools for Visual Studio

This section describes issues associated with Oracle Developer Tools for Visual Studio.

Topics

Features Not Supported (Oracle Developer Tools for Visual Studio)

Oracle Developer Tools for Visual Studio does not support the following features when connecting to Exadata Express:

- Connecting as SYSDBA or SYSTEM role
- Connecting using the EZConnect connection type
- Debugging stored procedures or functions
- Running a stored procedure or function with an XMLTYPE IN or IN OUT parameter — this results in error ORA-24445: object type input parameter in TTC RPC not allowed by the security policy configured on the database.
- Oracle Performance Analyzer
- New ADDM task

- New AWR snapshot
- 32 KB `VARCHAR2` data type

Development — PL/SQL, SQL, SQLJ

This section describes issues associated with PL/SQL, SQL, and SQLJ development.

Topics

PL/SQL Packages Not Accessible

The following PL/SQL packages are not accessible in Exadata Express:

- `APEX_INSTANCE_ADMIN`
- `DBMS_CDC_PUBLISH`
- `DBMS_CHANGE_NOTIFICATION`
- `DBMS_CQ_NOTIFICATION`
- `DBMS_DST`
- `DBMS_MONITOR`
- `DBMS_PDB`
- `DBMS_PROPAGATION_ADM`
- `DBMS_REPAIR`
- `DBMS_SERVICE`
- `DBMS_SPACE_ADMIN`
- `DBMS_SYS_SQL`

DBMS_AUDIT_MGMT.CLEAN_AUDIT_TRAIL Package Ignores Container GUID

The `DBMS_AUDIT_MGMT.CLEAN_AUDIT_TRAIL` PI/SQL package ignores `CONTAINER_GUID`. The `CONTAINER_GUID` parameter has been deprecated. However, the parameter is still supported for backward compatibility.

DBMS_DDL.ALTER_TABLE_NOT_REFERENCEABLE and ALTER_TABLE_REFERENCEABLE Procedures Not Accessible

The `DBMS_DDL.ALTER_TABLE_NOT_REFERENCEABLE` and `ALTER_TABLE_REFERENCEABLE` procedures are not accessible to `CLOUDSERVICE` user in the Cloud environment.

Object and OPAQUE Types Not Supported

Object and OPAQUE types are not supported and fail with `ORA-00600: internal error code, arguments`.

Development — APEX, REST

This section describes issues associated with Oracle Application Express (APEX) and REST.

Topics:

APEX RESTful Services Do Not Work in New Workspaces

Oracle Application Express (APEX) Instance Administration interface allows the user to create additional APEX workspaces. At this time, these workspaces do not support RESTful services that can be created using SQL Workshop - RESTful Services interface. Any request to such web service returns a 404 Not Found error.

Workaround

Use the Oracle REST Data Services (ORDS)-based RESTful web services instead of creating web services in new APEX workspaces. Alternatively, create web services in the default pre-created APEX workspace.

Oracle Application Express 18.1 Ability to Build RESTFul Web Services in ORDS Not Supported

Oracle APEX 18.1, first available in August 2018, introduces the ability to build and manage RESTful web services in the Oracle REST Data Services (ORDS) repository from the SQL Workshop. At this time, this functionality is not enabled in Exadata Express and the "Minimum version of ORDS not met" warning is displayed on the RESTful Services page.

Workaround:

Continue using ORDS PLSQL API or SQL Developer to build and maintain RESTful web services.

Oracle Application Express and RESTful Services Do Not Work After Changing Time Zone

Oracle Application Express (APEX) and RESTful services stop working after changing the database time zone. All web requests to APEX and RESTful services return 404 Not Found error.

Workaround

Change the database time zone back to UTC (+00:00) and restart the database. Time zones other than UTC are not supported by Exadata Express.

Networking

This section describes issues associated with networking.

Topics

Database Connections with Wallet Location Directories Containing Parenthesis Not Supported

The `DIRECTORY` setting in the `WALLET_LOCATION` parameter does not support values that contain parenthesis characters for Exadata Express connections. `WALLET_LOCATION` is set in the profile configuration file `sqlnet.ora`. This restriction applies only to OCI-based drivers, such as unmanaged ODP.NET and JDBC Type 2.

For example, the following generates an error due to the parenthesis characters in the directory location:

```
WALLET_LOCATION=(SOURCE=(METHOD=file)
       (METHOD_DATA=(DIRECTORY="C:\Program Files (x86)\Oracle")))
```

Workaround

Use the Windows 8.3 file name convention to reference directories containing parenthesis. For example, `"C:\PROGRA~2\Oracle"` can be substituted for `"C:\Program Files (x86)\Oracle"` because it uses the 8.3 file name convention:

```
WALLET_LOCATION=(SOURCE=(METHOD=file)
       (METHOD_DATA=(DIRECTORY="C:\PROGRA~2\Oracle")))
```

Microsoft Certificate Stores Not Supported

Microsoft Certificate Stores (MCS) are repositories for storing digital certificates and their associated properties. Exadata Express does not support MCS. Using MCS to access Exadata Express results in `ORA-12570: TNS:packet reader failure`. This

restriction applies only to OCI-based drivers, such as unmanaged ODP.NET and JDBC Type 2.

Performance

This section describes issues associated with performance.

Topics

- SYNC.INIT and SYNC.WAIT Not Accessible

SYNC.INIT and SYNC.WAIT Not Accessible

The `SYNC` PL/SQL package does not exist in a Cloud CDB. `SYNC.INIT` and `SYNC.WAIT` fail if attempted from `PDB_ADMIN` user.

Precompilers

This section describes issues associated with precompilers.

Topics

- Precompilation with COMMON_PARSER Not Supported
- Precompiler Issues with Online Mode and User ID
- Precompiler plan_baseline Options Not Supported

Precompilation with COMMON_PARSER Not Supported

Running the Pro*C/C++ and Pro*COBOL precompilers with the `COMMON_PARSER=YES` option fails. Precompilation using other options succeeds.

Workaround

Use an option other than `COMMON_PARSER` for precompilation.

Precompiler Issues with Online Mode and User ID

The online mode and user ID options cannot be used with precompilers due to restrictions in Exadata Express.

Precompiler plan_baseline Options Not Supported

The following command line options are a limitation of `pro*c` and `pro*cob` in Exadata Express:

- `plan_baseline`
- `plan_enabled`
- `plan_fixed`
- `plan_prefix`
- `plan_run`

Recovery

This section describes issues associated with recovery.

Topics

Flashback Database Operation

The Flashback Database operation is currently not supported. If the PDB_ADMIN attempts to issue SQL commands to perform this operation it will fail.