# Oracle® Application Express

Release Notes

Release 3.2

**E13365-01**

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These *Release Notes* contain important information not included in the Oracle Application Express documentation. For the most current information, refer to updates of this document, which are located at the following Web site:

http://www.oracle.com/technology/documentation/

For a complete description of each new 3.2 feature, please see What's New in Oracle Application Express in the *Oracle Database Application Express User's Guide*.

This document contains these topics:

- Limiting the Procedures Invoked through mod_plsql
- Additional Steps Required to Downgrade from Release 3.2 to 3.1
- Components and Features Not Supported
- Open Bugs and Known Issues
- Documentation Accessibility

## Limiting the Procedures Invoked through mod_plsql

The value of the character set portion of PlsqlNLSLanguage in the configuration of the `mod_plsql` Database Access Descriptor (DAD) must be set to `AL32UTF8`, regardless of the underlying database character set.

The Database Access Descriptor now contains a parameter for `PlsqlRequestValidationFunction`. The purpose of this parameter is to limit the number of procedures which can be invoked through `mod_plsql`. By default, the only procedures permitted are the public entry points of Oracle Application Express. This can be extended using the validation functions shipped with Oracle Application Express. To learn more, see "Restricting Access to Oracle Application Express by Database Access Descriptor (DAD)" in *Oracle Database Application Express User's Guide*.

Enabling the `PlsqlRequestValidationFunction` for a Database Access Descriptor may cause existing applications which relied upon publicly executable procedures to fail. You may choose to either omit the `PlsqlRequestValidationFunction` from the Database Access Descriptor definition, or follow the recommended approach of extending the supplied validation function.

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## Additional Steps Required to Downgrade from Release 3.2 to 3.1

If you are performing a downgrade from 3.2 back to 3.1, as described in the Installation Guide, section titled "A.3.1 Reverting to a Previous Release After a Failed Upgrade Installation" you must perform additional steps to successfully downgrade.

1. Change your working directory to the apex directory on the filesystem that includes the 3.1 version source.

2. Start SQL*Plus and connect to the database where Oracle Application Express is installed as SYS specifying the SYSDBA role:

   On Windows:

   ```
   SYSTEM_DRIVE:\ sqlplus /nolog
   SQL> SQL> CONNECT SYS as SYSDBA
   Enter password: SYS_password
   ```

   On UNIX and Linux:

   ```
   $ sqlplus /nolog
   SQL> SQL> CONNECT SYS as SYSDBA
   Enter password: SYS_password
   ```

3. Execute the following command:

   ```
   @apexvalidate x x FLOWS_030100
   ```

4. Change your working directory to apex/core in the 3.1 source.

5. Start SQL*Plus and connect to the database where Oracle Application Express is installed as SYS specifying the SYSDBA role:

   On Windows:

   ```
   SYSTEM_DRIVE:\ sqlplus /nolog
   SQL> SQL> CONNECT SYS as SYSDBA
   Enter password: SYS_password
   ```

   On UNIX and Linux:

   ```
   $ sqlplus /nolog
   SQL> SQL> CONNECT SYS as SYSDBA
   Enter password: SYS_password
   ```

6. Execute the following commands:

   ```
   @wwv_flow_val.plb
   @wwv_dbms_sql.sql
   @wwv_dbms_sql.plb
   ```

# Components and Features Not Supported

The following are not supported in Oracle Application Express, release 3.2.

## Web Browsers Not Supported

The following Web browsers are not supported:

- Netscape Communicator 7.2 or higher
- Mozilla 1.7 or higher

- Google Chrome 1.0 or higher

> **See Also:** "Supported Web Browsers" on page 3

## No Support for Running in an EBCDIC Character Set

Oracle Application Express does not support an EBCDIC character set. The value of the character set in the configuration of the `mod_plsql` Database Access Descriptor (DAD) must be set to `AL32UTF8`, regardless of the underlying database character set.

> **See Also:** "Limiting the Procedures Invoked through mod_plsql" on page 1

# Open Bugs and Known Issues

This section describes bugs and known issues for Oracle Application Express:

- Access Denied When Validating Migration Export File
- Supported Web Browsers
- Editing Scripts with Multibyte Characters in the First Line
- Problems with SVG Charts
- Problems with Queries Containing a Bind Variable and a String with Two Dashes
- Importing Spreadsheet Data Containing Quotation Marks
- Creating an Item with Multibyte Characters
- Runtime Errors in an Application Imported from a Previous Release
- Enabling Network Services in Oracle Database 11g
- Issues with HTML Editor Item Type
- DBA Authentication Restrictions
- Exporter Tool Support for Microsoft Access
- Issue with Online Help Table of Contents

## Access Denied When Validating Migration Export File

If you enter invalid text in the Migration Export File field in the first step of the Create Project wizard, you might receive an Access Denied error and the progress bar might persist. This may occur when you are using Internet Explorer 6.0 on Windows XP.

**Workaround:**

Use either the Browse option or enter the full path manually. Be sure to enter a valid SQL script and path in this field.

## Supported Web Browsers

To view or develop Oracle Application Express applications, Web browsers must support JavaScript and the HTML 4.0 and CSS 1.0 standards. The following browsers meet this requirement:

- Microsoft Internet Explorer 6.0 or higher (Windows only)

- Firefox 1.0 or higher

> **See Also:** "Web Browsers Not Supported" on page 2

## Editing Scripts with Multibyte Characters in the First Line

SQL scripts containing multibyte characters cannot be edited in the SQL Script editor if multibyte characters occur in the first line. Note that this issue does not occur when using Internet Explorer 7.0 and Firefox 1.5.0 or higher.

**Workaround**:

This issue most often occurs when the first line of the script contains multibyte characters. You can correct this problem by adding a new first line containing non-multibyte characters, for example two hyphens (--), and making sure the line containing multibyte characters moves to the second line.

## Problems with SVG Charts

If you experience problems with an SVG chart, try migrating the chart to a Flash chart.

To migrate an SVG chart to Flash:

1. Navigate to the appropriate Page Definition.

2. Under Regions, click the region name. The region name displays to the left of SVG Chart.

3. On the Region Definition, click **Migrate SVG Chart to Flash Chart** on the Tasks list.

4. Click **Migrate**.

> **See Also:** "Creating Charts" in *Oracle Database Application Express User's Guide*

## Problems with Queries Containing a Bind Variable and a String with Two Dashes

Creating a report region based on a query that contains a string with two dashes may hinder the Application Express Engine's ability to handle item bind variable references. Consider the following example:

```
SELECT ename, job, sal, comm, deptno
FROM   emp
WHERE instr ('-'||'-dash-'||'-','uu') = 0
AND deptno = :P18_X
AND 1 = 1
```

**Workaround**:

You can correct this behavior by changing the bind variable format. For example, to correct this issue in the previous example you would change `:P18_X` to `v('P18_X')`.

## Importing Spreadsheet Data Containing Quotation Marks

If you import spreadsheet data by copying and pasting and a column value contains a double quotation mark, the data will not import correctly (for example, `54" Plasma Flat Screen`). To avoid this problem, you have two options:

- Option 1:
    a. Save the data in a delimited format (such as comma-delimited (.csv) or tab-delimited).
    b. Use Import Text Data wizard to upload and import the saved file.
- Option 2:
    a. Replace the quotation mark with two double quotation marks as shown in the following example:

       ```
       54"" Plasma Flat Screen
       ```

    b. Use the Import Spreadsheet Data wizard to import the file.

## Creating an Item with Multibyte Characters

If you create a form on a table or view using a wizard and the included column name contains multibyte characters, the name of the new item will contain multibyte characters.

This issue is tracked with Oracle bug 3393090.

**Workaround**:

To correct this problem, when you create new items on the Page Definition use alphanumeric characters A_Z, 0-9 and '_' for the item names. You may also need to changes item names to alphanumeric before you apply changes to the item.

## Runtime Errors in an Application Imported from a Previous Release

If you export an application from an earlier Oracle Application Express release and then import and install it using the installation pages in Application Builder, in rare situations you may encounter runtime errors after the application installs.

These errors often manifest themselves as PL/SQL parser or execution errors pertaining to blocks of PL/SQL code embedded within application components. The installation process sometimes splits strings greater than 200 characters into multiple lines. For example, lines may split between PL/SQL keywords, or at other places that cause parsing errors.

**Workaround**:

If you encounter these types of errors and suspect the installation process has split large strings:

1. Isolate the failing component containing the suspect PL/SQL within the application by editing the failing page in Application Builder.

2. Locate the blocks of code that appear to split incorrectly.

3. Attempt to split the blocks of code in more appropriate places, or insert white space with the lines until no runtime errors are observed.

4. Export the application, import the export file, and then reinstall it.

5. Retain the new export file as a permanent backup copy.

## Enabling Network Services in Oracle Database 11*g*

By default, the ability to interact with network services is disabled in Oracle Database 11*g* release 1 (11.1). Therefore, if you are running Oracle Application Express with Oracle Database 11*g* release 1 (11.1), you need to use the new DBMS_NETWORK_ACL_ADMIN package to grant connect privileges to any host for the APEX_030200 database user. Failing to grant these privileges results in issues with:

- Sending outbound mail in Oracle Application Express.

  Users can call methods from the APEX_MAIL package, but issues arise when sending outbound email.

- Using Web services in Oracle Application Express.

- PDF/report printing.

- Searching for content in online Help (that is, using the Find link).

Topics in this section include:

- Granting Connect Privileges to a Host

- Granting Connect Privileges to a Local Host

- Troubleshooting an Invalid ACL Error

> **Tip:** To run the examples described in this section, the compatible initialization parameter of the database must be set to at least 11.1.0.0.0. By default an 11*g* database will already have the parameter set properly, but a database upgraded to 11*g* from a prior version may not. See "Creating and Configuring an Oracle Database" in *Oracle Database Administrator's Guide* for information about changing database initialization parameters.

### Granting Connect Privileges to a Host

The following example demonstrates how to grant connect privileges to any host for the APEX_030200 database user.

```
DECLARE
  ACL_PATH  VARCHAR2(4000);
  ACL_ID    RAW(16);
BEGIN
  -- Look for the ACL currently assigned to '*' and give APEX_030200
  -- the "connect" privilege if APEX_030200 does not have the privilege yet.

  SELECT ACL INTO ACL_PATH FROM DBA_NETWORK_ACLS
   WHERE HOST = '*' AND LOWER_PORT IS NULL AND UPPER_PORT IS NULL;

  -- Before checking the privilege, make sure that the ACL is valid
  -- (for example, does not contain stale references to dropped users).
  -- If it does, the following exception will be raised:
  --
  -- ORA-44416: Invalid ACL: Unresolved principal 'APEX_030200'
  -- ORA-06512: at "XDB.DBMS_XDBZ", line ...
  --
  SELECT SYS_OP_R2O(extractValue(P.RES, '/Resource/XMLRef')) INTO ACL_ID
    FROM XDB.XDB$ACL A, PATH_VIEW P
   WHERE extractValue(P.RES, '/Resource/XMLRef') = REF(A) AND
         EQUALS_PATH(P.RES, ACL_PATH) = 1;
```

```
    DBMS_XDBZ.ValidateACL(ACL_ID);
     IF DBMS_NETWORK_ACL_ADMIN.CHECK_PRIVILEGE(ACL_PATH, 'APEX_030200',
        'connect') IS NULL THEN
         DBMS_NETWORK_ACL_ADMIN.ADD_PRIVILEGE(ACL_PATH,
        'APEX_030200', TRUE, 'connect');
     END IF;

EXCEPTION
  -- When no ACL has been assigned to '*'.
  WHEN NO_DATA_FOUND THEN
  DBMS_NETWORK_ACL_ADMIN.CREATE_ACL('power_users.xml',
    'ACL that lets power users to connect to everywhere',
    'APEX_030200', TRUE, 'connect');
  DBMS_NETWORK_ACL_ADMIN.ASSIGN_ACL('power_users.xml','*');
END;
/
COMMIT;
```

### Granting Connect Privileges to a Local Host

The following example is a less privileged demonstration of how to access resources
on a local host. This example would enable indexing of Oracle Application Express
Online Help and could possibly enable email and PDF printing if those servers were
also on the local host.

```
DECLARE
  ACL_PATH  VARCHAR2(4000);
  ACL_ID    RAW(16);
BEGIN
  -- Look for the ACL currently assigned to 'localhost' and give APEX_030200
  -- the "connect" privilege if APEX_030200 does not have the privilege yet.
  SELECT ACL INTO ACL_PATH FROM DBA_NETWORK_ACLS
   WHERE HOST = 'localhost' AND LOWER_PORT IS NULL AND UPPER_PORT IS NULL;

  -- Before checking the privilege, make sure that the ACL is valid
  -- (for example, does not contain stale references to dropped users).
  -- If it does, the following exception will be raised:
  --
  -- ORA-44416: Invalid ACL: Unresolved principal 'APEX_030200'
  -- ORA-06512: at "XDB.DBMS_XDBZ", line ...
  --

  SELECT SYS_OP_R2O(extractValue(P.RES, '/Resource/XMLRef')) INTO ACL_ID
    FROM XDB.XDB$ACL A, PATH_VIEW P
   WHERE extractValue(P.RES, '/Resource/XMLRef') = REF(A) AND
         EQUALS_PATH(P.RES, ACL_PATH) = 1;

  DBMS_XDBZ.ValidateACL(ACL_ID);
   IF DBMS_NETWORK_ACL_ADMIN.CHECK_PRIVILEGE(ACL_PATH, 'APEX_030200',
      'connect') IS NULL THEN
       DBMS_NETWORK_ACL_ADMIN.ADD_PRIVILEGE(ACL_PATH,
      'APEX_030200', TRUE, 'connect');
   END IF;

EXCEPTION
  -- When no ACL has been assigned to 'localhost'.
  WHEN NO_DATA_FOUND THEN
  DBMS_NETWORK_ACL_ADMIN.CREATE_ACL('local-access-users.xml',
    'ACL that lets power users to connect to everywhere',
```

```
     'APEX_030200', TRUE, 'connect');
   DBMS_NETWORK_ACL_ADMIN.ASSIGN_ACL('local-access-users.xml','localhost');
END;
/
COMMIT;
```

### Troubleshooting an Invalid ACL Error

If you receive an `ORA-44416: Invalid ACL` error after running the previous script, use the following query to identify the invalid ACL:

```
REM Show the dangling references to dropped users in the ACL that is assigned
REM to '*'.

SELECT ACL, PRINCIPAL
  FROM DBA_NETWORK_ACLS NACL, XDS_ACE ACE
 WHERE HOST = '*' AND LOWER_PORT IS NULL AND UPPER_PORT IS NULL AND
       NACL.ACLID = ACE.ACLID AND
       NOT EXISTS (SELECT NULL FROM ALL_USERS WHERE USERNAME = PRINCIPAL);
```

Next, run the following code to fix the ACL:

```
DECLARE
  ACL_ID   RAW(16);
  CNT      NUMBER;
BEGIN
  -- Look for the object ID of the ACL currently assigned to '*'
  SELECT ACLID INTO ACL_ID FROM DBA_NETWORK_ACLS
   WHERE HOST = '*' AND LOWER_PORT IS NULL AND UPPER_PORT IS NULL;

  -- If just some users referenced in the ACL are invalid, remove just those
  -- users in the ACL. Otherwise, drop the ACL completely.
  SELECT COUNT(PRINCIPAL) INTO CNT FROM XDS_ACE
   WHERE ACLID = ACL_ID AND
         EXISTS (SELECT NULL FROM ALL_USERS WHERE USERNAME = PRINCIPAL);

  IF (CNT > 0) THEN

    FOR R IN (SELECT PRINCIPAL FROM XDS_ACE
                WHERE ACLID = ACL_ID AND
                      NOT EXISTS (SELECT NULL FROM ALL_USERS
                                    WHERE USERNAME = PRINCIPAL)) LOOP
      UPDATE XDB.XDB$ACL
        SET OBJECT_VALUE =
              DELETEXML(OBJECT_VALUE,
                        '/ACL/ACE[PRINCIPAL="'||R.PRINCIPAL||'"]')
       WHERE OBJECT_ID = ACL_ID;
    END LOOP;

  ELSE
    DELETE FROM XDB.XDB$ACL WHERE OBJECT_ID = ACL_ID;
  END IF;

END;
/

REM commit the changes.

COMMIT;
```

Once the ACL has been fixed, you need to run the first script in this section to apply the ACL to the APEX_030200 user. See "Granting Connect Privileges to a Host" on page -6.

## Issues with HTML Editor Item Type

Users may encounter unexpected results when using the item type HTML Editor Standard and the Find functionality. When using an item of type HTML Editor Standard with a Firefox browser, the cursor must be placed at the beginning of the text for the Find feature to function properly. In certain situations, the Find functionality may incorrectly report that the text is not found.

## DBA Authentication Restrictions

The following restriction applies to features in Oracle Application Express that require DBA authentication (for example, the Session report on the Database Monitor page). The DBA account used for authentication must not require double-quoting. In other words, it cannot be lower or mixed case.

## Exporter Tool Support for Microsoft Access

When migrating a Microsoft Access application to an Oracle Application Express application, you export your Microsoft Access metadata using the Exporter tool. Note that Exporter Tool for Microsoft Access supports Microsoft Access 97, Microsoft Access 2000, Microsoft Access 2002, Microsoft Access 2003, and Microsoft Access 2007.

## Issue with Online Help Table of Contents

The table of contents does not always highlight the topic being viewed in the right pane. This occurs when a user navigates from one help topic to another using links within the topic, rather than using the table of contents to navigate. This issue is being tracked by bug 8198833.

# Documentation Accessibility

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