

# Oracle® Application Express

Release Notes

Release 3.2

E11944-01

July 2009

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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 Application Express Application Builder User's Guide*.

This document contains these topics:

- [Configuration Requirements](#)
- [Checking for the Most Current Release](#)
- [New Features](#)
- [Components and Features Not Supported](#)
- [Open Bugs and Known Issues](#)
- [Documentation Accessibility](#)

## Configuration Requirements

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 Application Express Application Builder 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.

## Checking for the Most Current Release

Oracle Application Express is released more frequently than the Oracle Database. To view information about or download a more current release, refer to:

[http://www.oracle.com/technology/products/database/application\\_express/index.html](http://www.oracle.com/technology/products/database/application_express/index.html)

## New Features

This section describes new features of Oracle Application Express that are not documented elsewhere.

This section contains the following topics:

- [AnyChart AnyGantt Flash Gantt and AnyChart AnyMap](#)

### AnyChart AnyGantt Flash Gantt and AnyChart AnyMap

This release of Oracle Application Express includes the AnyChart AnyGantt Flash Gantt Component and the AnyChart AnyMap extension. These products are not exposed through the Oracle Application Express user interface, but can be used programatically in any Oracle Application Express application. To learn more, see:

- AnyChart AnyGantt Flash Gantt Component:  
<http://www.anychart.com/products/anygantt/overview/>
- AnyChart AnyMap extension:  
<http://www.anychart.com/products/anymap/overview/>

For specifics about the XML structures necessary to use these products, see:

- AnyChart AnyGantt Flash Gantt Component:  
<http://anychart.com/products/anygantt/docs/>
- AnyChart AnyMap extension:  
<http://anychart.com/products/anymap/docs/>

Please note that to use these products, you must manually enter the necessary XML code into the Custom XML property of the chart.

## 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 -4

## 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:** ["Configuration Requirements"](#) on page 1

## Open Bugs and Known Issues

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

- [Problem Applying the Oracle Application Express 3.2.1 Patch Set Against Oracle Database Release 11.1.0.7](#)
- [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](#)
- [Enabling Indexing of Online Help in Oracle Database 11gR2 and Higher](#)
- [Issues with HTML Editor Item Type](#)
- [DBA Authentication Restrictions](#)
- [Exporter Tool Support for Microsoft Access](#)
- [Issue with Online Help Table of Contents](#)
- [Incorrect Default Tablespace when Creating New Database Users through Application Express Administration Services](#)

## Problem Applying the Oracle Application Express 3.2.1 Patch Set Against Oracle Database Release 11.1.0.7

When applying the Oracle Application Express 3.2.1 patch set against an Oracle Database release 11.1.0.7, you may encounter the error `ORA-00600: internal error code, arguments: [kgiinb_invalid_obj]`. This will be recorded in the generated patch set installation log, `apxpatch.log`.

### Workaround:

If you encounter this error, you should download and apply the patch for database bug 7420394 from Oracle MetaLink, and then attempt to install the Oracle Application Express 3.2.1 patch set again.

## 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 Application Express Application Builder 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 change 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 11g

By default, the ability to interact with network services is disabled in Oracle Database 11g release 1 (11.1). Therefore, if you are running Oracle Application Express with Oracle Database 11g 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 11g database will already have the parameter set properly, but a database upgraded to 11g 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_R20(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_R20(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 =
    DELETXML(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.

## Enabling Indexing of Online Help in Oracle Database 11gR2 and Higher

The ability to search Oracle Application Express online Help is accomplished through Oracle Text and a URL datastore. There is a change in the default behavior and permissions to use an Oracle Text URL datastore in database 11gR2 and higher.

If users attempt to search Oracle Application Express online Help in Oracle database 11gR2 and encounter the following error, then the permission to use an Oracle Text URL datastore has not been granted to database user APEX\_030200.

```

ORA-29855: error occurred in the execution of ODCIINDEXCREATE routine
ORA-20000: Oracle Text error:
DRG-10758: index owner does not have the privilege to use file or URL datastore

```

To enable the indexing of online Help in Oracle Application Express, the permission to use an Oracle Text URL datastore must be granted to the APEX\_030200 database user. This is accomplished by assigning this specific privilege to a database role and then granting this role to the APEX\_030200 database user.

To determine if the ability to use an Oracle Text URL datastore is already granted to a database role:

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

- On Windows:

```

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

```

- On UNIX and Linux:

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

**2. Run the following command:**

```
SELECT par_value FROM ctxsys.ctx_parameters WHERE par_name = 'FILE_ACCESS_
ROLE';
```

This returns either NULL or the database role which is granted the ability to use an Oracle Text URL datastore.

**3. If no value is returned by step 2, then create a new database role as shown in the following example:**

```
CREATE ROLE APEX_URL_DATASTORE_ROLE;
```

**4. Grant this role to the database user APEX\_030200 with the following statement:**

```
GRANT APEX_URL_DATASTORE_ROLE to APEX_030200;
```

If step 2 returned a value, use this database role name instead of the example *APEX\_URL\_DATASTORE\_ROLE*.

**5. Lastly, if step 2 did not return a value, then use the Oracle Text API to grant permission to the newly created database role with the following statement:**

```
EXEC ctxsys.ctx_adm.set_parameter('file_access_role', 'APEX_URL_DATASTORE_
ROLE');
```

## 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.

## **Incorrect Default Tablespace when Creating New Database Users through Application Express Administration Services**

When creating a new database user through the in Application Express Administration Services, if the default tablespace is not specified in all uppercase, then the default tablespace for the newly created user will be the USERS tablespace and the newly created user will not have any quota on the USERS tablespace. To avoid this situation, ensure that the default tablespace value is specified in all uppercase.

To recover from this situation, a database administrator can alter the default tablespace for the newly created database user and also assign quota on the correct tablespace.

This issue is tracked with Oracle bug 8669412.

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Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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