## Contents

Send Us Your Comments

Preface

1 Oracle Diagnostics Framework Overview

   Introduction.................................................................................................................. 1-1
   Accessing the User Interface....................................................................................... 1-4
   Diagnosing an Issue..................................................................................................... 1-5
   Reporting..................................................................................................................... 1-9
   Security....................................................................................................................... 1-10
   Configuration............................................................................................................ 1-13

2 Using Oracle Diagnostics Framework

   Introduction.................................................................................................................. 2-1
   Diagnostic Tests......................................................................................................... 2-1
      Selecting a Diagnostic Test..................................................................................... 2-2
      Executing a Test.................................................................................................... 2-4
      Executing a Test Set.............................................................................................. 2-4
      Entering Test Set Inputs....................................................................................... 2-5
      Saving a Test Set.................................................................................................. 2-6
      Viewing Test Sets................................................................................................ 2-6
      Uploading a Test Set............................................................................................. 2-7
      Scheduling a Diagnostic Test.............................................................................. 2-7
      Scheduling a Diagnostic Test Set....................................................................... 2-7
   Viewing Reports in Oracle Diagnostics Framework............................................. 2-7
      View Reports......................................................................................................... 2-8
A Known Limitations

Known Limitations........................................................................... A-1
Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document. Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Oracle E-Business Suite Release Online Documentation CD available on My Oracle Support and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: appsdoc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.
Preface

Intended Audience


This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Computer desktop application usage and terminology.

If you have never used Oracle E-Business Suite, we suggest you attend one or more of the Oracle E-Business Suite training classes available through Oracle University.

See Related Information Sources on page viii for more Oracle E-Business Suite product information.

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.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Structure

1 Oracle Diagnostics Framework Overview
2 Using Oracle Diagnostics Framework
Related Information Sources

This book is included in the Oracle E-Business Suite Documentation Library. If this guide refers you to other Oracle E-Business Suite documentation, use only the latest Release 12.2 versions of those guides.

Online Documentation

All Oracle E-Business Suite documentation is available online (HTML or PDF).

- **Online Help** - Online help patches (HTML) are available on My Oracle Support.

- **Oracle E-Business Suite Documentation Library** - This library, which is included in the Oracle E-Business Suite software distribution, provides PDF documentation as of the time of each release.


- **Release Notes** - For information about changes in this release, including new features, known issues, and other details, see the release notes for the relevant product, available on My Oracle Support.


Related Guides

You should have the following related books on hand. Depending on the requirements of your particular installation, you may also need additional manuals or guides.

**Oracle E-Business Suite Concepts**

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12, or contemplating significant changes to a configuration. After describing the Oracle E-Business Suite architecture and technology stack, it focuses on strategic topics, giving a broad outline of the actions needed to achieve a particular goal, plus the installation and configuration choices that may be available.

**Oracle E-Business Suite User’s Guide**

This guide explains how to navigate, enter and query data, and run concurrent requests
using the user interface (UI) of Oracle E-Business Suite. This guide also includes information on setting user profiles and customizing the UI.

**Oracle E-Business Suite Maintenance Guide**

This guide explains how to patch an Oracle E-Business Suite system, describing the adop patching utility and providing guidelines and tips for performing typical patching operations. It also describes maintenance strategies and tools that can help keep a system running smoothly.

**Oracle E-Business Suite Security Guide**

This guide contains information on a comprehensive range of security-related topics, including access control, user management, function security, data security, and auditing. It also describes how Oracle E-Business Suite can be integrated into a single sign-on environment.

**Oracle E-Business Suite Setup Guide**

This guide contains information on system configuration tasks that are carried out either after installation or whenever there is a significant change to the system. The activities described include defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help.

**Oracle E-Business Suite Developer's Guide**

This guide contains the coding standards followed by the Oracle E-Business Suite development staff. It describes the Oracle Application Object Library components needed to implement the Oracle E-Business Suite user interface described in the Oracle E-Business Suite User Interface Standards for Forms-Based Products. It provides information to help you build your custom Oracle Forms Developer forms so that they integrate with Oracle E-Business Suite. In addition, this guide has information for customizations in features such as concurrent programs, flexfields, messages, and logging.

**Integration Repository**

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the Oracle E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

**Do Not Use Database Tools to Modify Oracle E-Business Suite Data**

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.
Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.
Oracle Diagnostics Framework Overview

Introduction
Oracle Diagnostics Framework provides the infrastructure to execute diagnostic tests either for troubleshooting or for simply sanity-checking the Oracle E-Business Suite instance periodically or after applying any patch.

Oracle E-Business Suite Diagnostics provides application specific troubleshooting tools that can help shorten problem-resolution time. Oracle E-Business Diagnostics has two major components. They are:

- Oracle Diagnostics Framework
- Actual diagnostic tests related to individual functional areas

This guide primarily explains how to use the infrastructure. No guidance or explanation is provided about any particular diagnostics test. See My Oracle Support if you are looking for the details of a particular diagnostic test.

Target Audience
The target audience for this manual includes the following:

System Administrators
As a system administrator, running diagnostic tests allows you to check the health of your system. You can use diagnostic tests to identify and resolve problems related to:

- Environment
- Post-installation setup
- Customization
• Any other functional problems

If you cannot successfully resolve the problem on your own, you can send the report generated by the tests to Oracle Support.

**Implementation Engineers**

When performing implementations, you are advised to run diagnostics after every installation or patching process to confirm that the environment is set up correctly and there are no outstanding issues to be resolved.

**Application Developers and Consultants**

You can use this manual to learn how to extend the diagnostic tests provided by Oracle.

**Features**

Features include:

• Easy and user-friendly UI to diagnose issues by executing tests

• Logical grouping of tests based on functionality

• Simultaneous execution of multiple tests to diagnose an issue

• Capability to view and download a report

• Generation of reports in any format supported by Oracle XML Publisher

• Scheduling of diagnostic tests

• Ability to schedule test sets

• Integration with Role-Based Access Control (RBAC) to execute tests securely

• Ability to save and reuse test input values

• Support for long-running tests

• Support for large-volume reports

• Tracking of execution requests using unique request names

• Purging of old logs

• Support for a set of applications that can be valid for a given test

• Support for custom and localized applications to execute diagnostic tests
• Preference profile options for setting default applications and a default report format

• Performance profile options for setting collection thresholds, SQL block size, and worker thread count

• With XML-type tests, no system downtime is needed

Benefits

Benefits include:

• Identify problems at customer’s site

• Suggest possible fixes to resolve the problems

• Generate a detailed report which Oracle support and development teams can analyze for further troubleshooting

Terminology

Here is a list of terms used in this manual.

Application

Application refers to any application that is bundled in Oracle E-Business Suite.

Group

An ordered set of one or more related tests based on functionality. Every application has one or more groups.

Test

The actual program that is run to diagnose the problem.

Test Set

A logical grouping of tests across applications and groups that can be used to diagnose a particular business transaction.

Architecture

The architecture for the Oracle Diagnostics Framework constitutes of the following components:

• Standards for diagnostic tests in Java or PL/SQL
• Security layer implemented using Role-Based Access Control (RBAC) as implemented in Oracle User Management

• An execution engine to execute the test

• An API to generate the test report

• A user interface for configuration, execution, and viewing the detailed report results

• Facility to download the report

**Accessing the User Interface**

Oracle Diagnostics Framework provides a very user-friendly web based interface. The UI is secured using function security and requires a specific responsibility to access the UI namely **Application Diagnostics**. This responsibility has three menus:

• Diagnose - To execute and schedule a test

• View Reports - To view the reports of diagnostic tests

• Configure - To configure diagnostics

**Note:** There is no other way to access the Oracle Diagnostics Framework; all other paths are disabled.

Now Diagnostics supports four types of tests, which are:

• Java

• PL/SQL

• XML

• Declarative - In this case the diagnostic logic can be configured using the user interface, so no coding is required to diagnose an issue.

**In-Context Diagnostics Support**

The In-context Diagnostics feature uses the inline popup feature in Oracle Application Framework to enable end users to run diagnostic tests from within a product page. If this feature is enabled for a product, an end user with the proper privileges can enter input for a diagnostic test, execute the test, and view the result/report from a current product page without navigating to the Oracle Diagnostics Framework pages to run the test. Note that the user must have the Applications Diagnostics responsibility and
executions privileges for the particular test to run the test.

**Diagnosing an Issue**

This section describes methods on how to use Oracle Diagnostics Framework to troubleshoot an issue.

**By Executing a Test**

Click on the Application Diagnostics responsibility from the Oracle E-Business Suite home page. You will see three menus. Select the menu **Diagnose**, which will take you to a page where you can see the available diagnostic tests under each application as a hierarchy. By default, tests under an application by the name **HTML Platform** are displayed. You can select any other application by clicking the **Select Application** button, which will open up a list of values (LOV). Search using application name or application short name. Searching with wild cards is supported. Also, you can enter multiple search criteria separated by comma (,). From the list displayed, select one or more applications.

This LOV lists all the available diagnostic tests under the selected applications as a hierarchy. Only the tests under the first group of the last selected application will be expanded. You can expand the hierarchy based on your needs.

Select the diagnostic test you want to execute and click on the **Execute** button, which takes you to the request submission page. You are prompted for the following:

- **Request Name** - A unique name that can be used to track this request. The system will generate a default value. The user can override it.

- Indicate whether a downloadable report is needed or not by checking a **check box**.

- **Report Format** - For tests written using reporting APIs in Release 12.1 and later, the report format can be specified. The Report Format dropdown list is shown only if you have selected the check box for a downloadable report; and the available formats are HTML, PDF, EXCEL and RTF. For legacy tests the report format remains HTML.

- **Test Inputs** - Inputs for the tests if needed.

Enter the needed values and click the **Submit** button. The results page will be displayed, showing the progress. Click on the **Refresh** button if the execution is still in progress. Once the test execution is complete, you can view the report online or download it.

**By Executing Multiple Tests**

Sometimes it will be required to execute multiple tests across applications to diagnose an issue looking from a business perspective. You can bundle a bunch of tests and
execute them as part of a single request. This is called as a Test Set. To create a test set, select multiple applications and select the needed tests from the hierarchy and click on the Add to batch button. In the next page all the selected tests will be listed. If you want to add more tests to the test set, click on the Add more tests button. You can also remove tests if they were added inadvertently.

Click on the icon in the column Test Inputs to enter input values for each test. You can enter multiple sets of inputs. You can either enter fresh set of inputs values or select from available pre-configured inputs (input values that are stored in the database for reuse; see the Configuration section for more details). Click on Apply after entering the values. Coming back to the previous page the icon in the column Inputs Available will become a green tick indicating that the inputs were entered for that particular test.

If you opt for a downloadable report then the Download Format column will appear. Enter a valid request name and submit the request. You are then redirected to the View Reports page where the details of the request are shown as a hierarchy. Click on the links available to see the progress of individual test executions. Once the request is completed, you can either view/download the report of individual execution or download the report for the entire request (See the section Reporting for more details).

Instead of executing the test, you can save the test set for future use. See the Test Set section for more details.

Test Set

Selecting multiple tests every time to diagnose an issue can be cumbersome, so Oracle Diagnostics provides the facility to save the selection for reuse. It is saved as an XML file in the database and includes the input values entered. Confidential inputs (like passwords) are stored in encrypted form.

After selecting the tests and configuring the input values, click on Save Test Set, give the test set a unique name, and save it.

Test Set pages can be directly accessed through the subtab by the same name under the Diagnose tab. You can search for test sets using the name; wild card searches are supported.

You can execute the test set, edit it to add/remove tests or change the input values of any existing tests, duplicate it to create a new one with any changes needed, or delete it.

Another useful feature is to download the test set as an XML file to a local hard drive. Once downloaded the selection can be ported to another instance and can be uploaded using the Upload Test Set button.

Executing a test with multiple set of inputs

If you want to execute a single test with multiple set of input values, you can use the test set feature. This usage is like a test set with a single test.
Synchronous Execution

Execution of diagnostic tests always occurs in a separate thread. The main thread is used to update users with progress in the user interface. However, there are some tests that cannot be executed in a separate thread due to technical reasons associated with the diagnostic logic (like a dependency on an HTTP request or response). Such tests cannot be executed as part of a test set nor can they be scheduled. These tests can be executed as single tests. These tests should be marked according to development guidelines so that the Oracle Diagnostics Framework can identify them at runtime and execute them in the main thread itself.

Scheduling a Test

Scheduling of tests is done via the Concurrent Processing infrastructure. The concurrent request cannot be submitted separately; it must be run only from the Oracle Diagnostics Framework UI.

Click on the Application Diagnostics responsibility from the Oracle E-Business Suite home page. From the three menus, select the menu Diagnose. Select the test and click on the Schedule button. Provide the request name and specify whether a downloadable report is needed or not. Inputs for scheduled tests cannot be given "on the fly" because the execution might happen at a future time. Therefore the engine uses pre-configured input values that are stored in the database. Clicking on the Submit button takes you to the Concurrent Processing pages where more details related to scheduling can be entered before submitting the request. Once the request is submitted, you will be redirected to the Scheduling subtab under the View Reports tab. You can monitor the progress using this page (see the section Reporting for more details). If you schedule the test to be repeated, then the system appends the Concurrent Processing request ID to the request name, making each request unique.

Scheduling a Test Set

Scheduling of test sets is done through the Concurrent Processing infrastructure. The concurrent request to schedule test sets cannot be submitted separately; it must be run only from the Oracle Diagnostics Framework user interface.

To schedule a test set, select the Application Diagnostics responsibility from the Oracle E-Business Suite home page. From the three menu options, select the menu Diagnose. Select two or more tests and click on the Execute button or click on the Add to batch button. Provide the request name and specify whether a downloadable report is needed or not.

The system will use the test input values stored as part of the test set XML file while executing the test. If there is no input, the system will take the pre-configured inputs stored in the database. If neither of them is available, the test will be skipped during execution of the test set.

A user can create a test set, specifying inputs for the tests as required, and then schedule
the test set.

Inputs for a test set can be entered when it is created or updated. A test set can be scheduled to execute immediately or at a future time. Clicking on the Save Test Set button takes you to the Test Set Details page where you can enter a name for the test set and enters a description before clicking the Apply button. Once you are on the View Test Sets page, clicking on the Schedule icon takes you to Concurrent Processing pages where more details related to scheduling can be entered before submitting the request. Once the request is submitted, you will be redirected to the Scheduling subtab under the View Reports tab. You can monitor the progress using this page (see the section Reporting, page 1-9 for more details). If you schedule the test to be repeated, then the system appends the Concurrent Processing request ID to the request name, making each request unique.

Customization Support

Oracle Diagnostic Framework now makes it possible for users with custom responsibilities to run diagnostic tests. For example, applications that have been cloned from a seeded Oracle application can include these custom responsibilities. Also, customers running localizations can create a custom role and a custom grant that map to an Oracle seeded application. Once these tasks are done, the system will recognize the mapping between custom/localized applications and seeded applications. The responsibility LOV provided by the framework will show the responsibilities of the user associated with custom applications.

Setting up for the execution of tests using custom responsibility with a seeded application includes these tasks:

- Create a new role one per seeded application that needs to be customized.
  - The Role Code uses ODF_CUSTOM_<Seeded Application Short Name>_Role format.
  - Note that Oracle User Management updates the role name by prepending 'UMX_' to the role code entered (when the role is created).

- Create a grant to this role using the following information:
  - Set Grantee Type to 'Group Of Users'
  - Set Grantee to 'ODF_CUSTOM_<Seeded Application Short Name>_ROLE'
  - Set Object to 'ODF_CUSTOMIZATION_OBJ'
  - Set 'ODF_EXECUTION_PS'
  - Set Data Context Type to 'Instance'
• Set Instance Primary Key to ‘<Custom Application Short Name>’

Once this setup is done, the system will recognize mapping between custom/localized applications and seeded applications. The responsibility LOV provided by the framework will start showing the responsibilities of the user associated with custom applications.

Reporting

Click on the Application Diagnostics responsibility from the Oracle E-Business Suite home page. From the three menus, select the menu View Reports. You can search for the reports of diagnostic tests using a simple search or an advanced search. In a simple search, you use the request name. Wild card searches are not supported. In an advanced search, you can provide multiple criteria like test details, dates, status, and so on.

The results of the search are displayed as a hierarchy with different columns which show counts for total execution, success, failure, warning, in-progress and in-queue. Except for the in-queue count, you can click the count link and drill down to see the details. In-queue means the test execution has not yet started and the test is in queue. A refresh button appears if the execution is in queue or the execution/downloadable report generation is in progress.

If the search was conducted using the request name, you can download all the reports, which are part of the request, as a single ZIP file. Otherwise you have to drill down and download each report individually.

Scheduling

You can specifically search for scheduled tests using the Scheduling subtab under View Reports. A search can be conducted based on the dates or the concurrent request ID, as well as the request name using wildcard support. The results are shown in a table. A refresh icon is available to refresh the data. In the table are columns with diagnostics request name and the concurrent request ID. Both of these are links that can be used to drill down for details. The diagnostics request name gives you the details of the diagnostic execution and the concurrent request ID will give details on the concurrent request. In the diagnostic request name column, the link will not be enabled until the execution of the request is completed.

Purging

Use the concurrent program Delete Diagnostic Logs to purge the old logs. You can specify values for the two parameters:

• Days Expire - Logs older than this will be deleted.

• Application short names - Logs of the applications listed will be purged. Specify a comma-separated list of values.
• Only Aborted/Long Pending - If Yes, only logs of executions in aborted status or pending status for long durations will be purged.

You can specify a value of either parameter or a combination.

Security

Overview

Security in diagnostics is implemented at two levels, UI and data. The UI is secured using function security and the content as well as actions available within each page is controlled using data security.

Function Security

Using function security, only users with Application Diagnostics responsibility will be able to access the UI for diagnostics.

Data Security

Data security is achieved using Role-Based Access Control (RBAC). The actions that a user can perform are grouped into different categories. Roles are created and Grants are given to each role to perform different categories of actions. The section below describes the implementation data security. We assume that the user has some basic understanding of RBAC. Please see Overview of Oracle User Management, Oracle E-Business Suite Security Guide to learn more.

Sensitivity

Sensitivity is an attribute of the test that indicates the kind of data it is dealing with. There are three levels - High, Medium and Low.

Permission

A permission is, as the name suggests, the permission to do an action. There are four permissions in diagnostics.

• Execute a test
• View the report of an execution
• Pre-configure inputs for a test
• Configure diagnostics

Permission sets

This is a logical grouping of permissions. Grants are given using permission sets. There
are three permission sets in diagnostics

- Execution permission set
  - Execute a test
  - Pre-configure inputs

- Reporting permission set
  - View report of an execution

- Configuration permission set
  - Configure diagnostics

The execution permission set has the permission to execute a diagnostic test and pre-configure input values for the test.

The reporting permission set has the permission to view the detailed report of an execution. The reporting permission set is a child of execution permission set so that any user who has the latter will also get the former. It is possible to change this configuration (see the section Customizing Security, page 1-13).

The configuration permission set has the permission to configure diagnostics.

**Roles**

Diagnostics comes with three roles. A user must have any one of these roles to do diagnosis. All three roles have the **Application Diagnostics** responsibility attached to it so that UI access is available by default. Following are the three roles:

- Diagnostics Super User - Has unrestricted execution and configuration access
  
  - Application Super User - Is able to execute any high or medium sensitivity test, if he or she has a valid responsibility either in the application under which the test is registered or in any of the application, which is configured as valid for test.

  - Application End User - is able to execute any medium sensitivity test, if he or she has a valid responsibility either in the application under which the test is registered or in any of the application, which is configured as valid for test.

  - Users with any diagnostic role can access low sensitivity tests registered under any application.

The following security matrix table below gives a detailed picture:

**Security Matrix**

The following table describes how Oracle Diagnostic Framework functions can be used
Select, Execute Tests, View Execution Results

Scheduling

View Reports

Configure Test Input Values

View Registered Applications, Groups, and Tests

Register Applications, Create/Edit/Delete Tests and Groups

<table>
<thead>
<tr>
<th>Function</th>
<th>Diagnostics Super User</th>
<th>Application Super User</th>
<th>Application End User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select, Execute Tests, View Execution Results</td>
<td>Yes</td>
<td>High, medium, and low sensitivity tests if the user has a responsibility in any valid application of the test; otherwise, only low sensitivity tests.</td>
<td>Medium and low sensitivity tests if the user has a responsibility in any valid application of the test; otherwise, only low sensitivity tests.</td>
</tr>
<tr>
<td>Scheduling</td>
<td>Same as Execution</td>
<td>Same as Execution</td>
<td>Same as Execution</td>
</tr>
<tr>
<td>View Reports</td>
<td>Same as Execution</td>
<td>Same as Execution</td>
<td>Same as Execution</td>
</tr>
<tr>
<td>Configure Test Input Values</td>
<td>Same as Execution</td>
<td>Same as Execution</td>
<td>Same as Execution</td>
</tr>
<tr>
<td>View Registered Applications, Groups, and Tests</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Register Applications, Create/Edit/Delete Tests and Groups</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Grants**

Grants are used to give access to different roles. The JTF_DIAGNOSTIC_TEST table is used to give execution/reporting grants while the JTF_DIAGNOSTIC_APP table is used to give configuration grants. Diagnostics ships four grants:

- **Diagnostic Super User Execution Grant** - Gives Execution Permission Set to all instances of JTF_DIAGNOSTIC_TEST table.
- **Diagnostic Super User Configuration Grant** - Gives Configuration Permission Set to all instances of JTF_DIAGNOSTIC_APP.
- **Application Super User Execution Grant** - Gives Execution Permission Set to an instance set of JTF_DIAGNOSTIC_TEST. The instance set is called **Diagnostics Execution Instance Set**. Its predicate takes two parameters. Parameter 1 is the sensitivities allowed for its own application. Parameter 2 is the sensitivities allowed for other applications. In this case Parameter 1 is 4 and Parameter 2 is 2. (Value 4
stands for all sensitivities. Value 3 stands for medium and low. Value 2 stands for only low.)

- **Application End User Execution Grant** - Gives Execution Permission Set to an instance set of JTF_DIAGNOSTIC_TEST. The instance set is called **Diagnostics Execution Instance Set**. Its predicate takes two parameters. In this case Parameter 1 is 3 and Parameter 2 is 2.

### Customizing Security

The security model can be customized if you do not want to use the roles out of the box. To do this, perform the following steps. Note that you should follow this procedure separately for execution and for configuration; that is, create separate roles, permission sets, and grants for execution and for configuration.

1. Create a new role.
2. Attach the Application Diagnostics responsibility to this role.
3. Create a new permission set with all desired permissions.
4. Give a grant to this role using the Diagnostic Execution instance set.
5. Assign the role to the user.

### HTML Platform

This application is a non-secure application and all users have full access to all tests under it. This application is used to diagnose the issues related to security if security is not working properly.

### Configuration

This section briefly describes the tasks involved in configuring Oracle Diagnostics Framework. For more information on these tasks, see the next chapter.

### Register Application

Tests are owned by applications. Each application must be registered. Use the Register Application page to register applications.

### Valid Applications for a Test

It is possible to define a set of applications for which a test is valid. This task can be done using the configuration UI. This is applicable only to high- and medium-sensitivity tests. Low-sensitivity tests are valid for all applications. The values that are
hardcoded in the existing tests are moved to the database by a migration concurrent program called "Diagnostics Patching CP". During an upgrade, this concurrent program is run automatically as part of the upgrade process. Once the upgrade is complete, please make sure that this concurrent program was executed successfully. The short name of this concurrent program is "DIAGPATCHINGCP". If this concurrent program has not been run, then you can run it manually.

Create/Edit/Delete/Re-Order Groups

Tests in an application can be organized into groups. Use these pages to manage your groups.

**Note:** Seeded groups cannot be edited or deleted by end users.

Create/Edit/Delete/Re-Order Tests

Use these pages to create, edit, delete, and re-order your tests.

**Note:** Seeded tests cannot be edited or deleted by end users.

Pre-Configured Inputs

Pre-configured inputs are input values for a test entered during configuration, prior to running the test.
Using Oracle Diagnostics Framework

Introduction

Oracle Diagnostics Framework pages are available through the Applications Diagnostics responsibility. From this responsibility, you can access three types of functions:

- Running Diagnostic Tests, page 2-1
- Viewing Reports in Oracle Diagnostics Framework, page 2-7
- Configuring Diagnostic Tests, page 2-14

In addition, profile options used by Oracle E-Business Suite are described at the end of this chapter.

Diagnostic Tests

Oracle Diagnostics Framework provides several methods for running diagnostic tests: executing a single test, executing a test set, or scheduling a test through Standard Request Submission. Tasks include:

- Selecting a Diagnostic Test, page 2-2
- Executing a Test, page 2-4
- Executing a Test Set, page 2-4
- Entering Test Set Inputs, page 2-5
- Saving a Test Set, page 2-6
- Viewing Test Sets, page 2-6
• Uploading Test Set, page 2-7
• Scheduling a Diagnostic Test, page 2-7
• Scheduling a Diagnostic Test Set, page 2-7

Selecting a Diagnostic Test

You can select diagnostic tests to execute using the Diagnostics Tests page.  

**Note:** Only tests which you have permissions to execute will be listed in the HGrid table.

Click on the **Select Application** button to populate the HGrid table with registered applications. To find an application, enter an application name or partial application name with wildcard(s) and click the **Go** button. Alternatively you can search on "Application Short Name". Multiple application names or short names are allowed, but must be separated by commas.

Each registered test will show a Select check box to be used when selecting a test to execute.

Click on **Focus** to drill down on an application or group.

Additional details are shown:

• The Tests column shows the application name, group name, and related tests that are available to execute.

• Descriptions of the tests are given with input parameters, if any.
• The Last Status column indicates the last completion status of the test:
  • Success (tick mark) - Last Test Execution Successful.
  • Normal Error (cross mark) - Last Test Execution completed with normal Error.
  • Severe Error (square) - Last Test execution completed with severe Error.
  • Warning (exclamation mark) - Last Test Execution completed with warnings.
  • Not Run Yet (square icon) - The test has not yet run to completion.
  • Failed (dot icon) - Unexpected error occurred/unknown exception during test execution.

• Last Execution Time shows the date and time when the test was last executed.
• Last Failure Time shows the date and time of the last failed execution.

Click on the **Execute** button to execute one or more tests. If multiple tests are selected and the **Execute** button is clicked, the action is treated as clicking the **Add to batch** button.

Click on the **Add to batch** button to execute one or more tests or to create a test set.

To run the test with pre-configured inputs, select the test and click **Add to batch**. Click on the Test Inputs link and select the pre-configured inputs.

Click on the **Schedule** button to schedule the execution of a test using concurrent manager scheduling. Only one test can be scheduled at a time.

Click on **Select All** to select all tests shown for an application.

Click on the **Select None** to deselect all tests selected for an application.

Click on **Expand All** to view all tests for the queried application.

Click on **Collapse All** to view no tests for the queried application.
Executing a Test

Execute a test using the Execute Test page.

You can choose to accept the defaulted request name or enter another request name.

You can check the Generate downloadable report box if you want a downloadable report. This check box does not appear for legacy tests where HTML is the only supported format.

If the Generate downloadable report box is checked, select the download format from the list. If the test requires Inputs this page prompts you to enter the input parameters.

Click the **Cancel** button to cancel the execution of a test.

Click the **Submit** button to execute the test.

Executing a Test Set

Execute test sets using the Execute Test Set page.

The Request Details region includes the following options:

- Request Name - Accept the default request name or enter your own request name.

- Generate Downloadable Report - When this box is checked, the report becomes available for download and you can select the format of the downloaded report. The data format can be selected for individual tests.

The Selected Tests region includes the following options:

- **Remove** button - Select the tests to be removed from the test set execution.

- **Add more tests** button - Add additional tests to the test set execution.

- Select All - Select all tests in a test set.

- Select None - Deselect all tests in a test set.
• Application - The applications for the test set execution.

• Group - The relevant groups for the test set execution.

• Test - The Names of tests in a test set execution.

• Download Format - This option appears if you checked "Generate downloadable report" above. Select the format for the report.

• Test Input - This option appears for tests that require input. Click on the Input icon to enter your input parameters.

• Inputs Available - This option appears for tests that require input. An icon of an X indicates that input parameters are required. An icon of a check mark indicates that the test input parameters have been entered. A lock icon indicates the current user does not have privileges to configure inputs.

Click **Cancel** to cancel your changes and return to the Select Test page.

Click **Save Test Set** to save the test set in the resulting page. You will be prompted for the name and description of the test and to save the test set to your local file system.

Click **Submit** to execute the test set.

### Entering Test Set Inputs

You can configure your test set input using the Enter Test Set Inputs page.

The Test Details region includes:

- Application - the application name associated with the test.
- Test - the name of the test.
- Group - name of the group with which the test is associated.
- Test Executable - the name of the test executable.

The Pre-Configured Inputs region shows all input parameters with the exception of Confidential Inputs.

The Custom Inputs region shows all input parameters that can be entered; mandatory input parameters are prefixed with an asterisk.

You can click on the **Add another row** button to add input parameters.

You can click on the **Remove** button to delete configured inputs.

Use the **Cancel** button to return to the Execute Test Set page.

Use the **Apply** button to save the inputs you entered.
Saving a Test Set

You can save a test set using the Save Test Sets page.
Enter the following information:

• Test Set Name

• Test Set Description

Click the Apply button to save the Test Set.
You can click the Cancel button to return to the Execute Test Set Page.

Viewing Test Sets

View information on your test sets with the View Test Sets page.
You can search for a test set by entering a specific Test Set Name or by entering part of a Test Set Name with a wild character as prefix or a suffix.
The results region includes the following:

• Test Set Name - the user-entered test set name.

• Description - the user-entered description of the test set.

Click on the Execute icon to submit a Test Set.
Click on the Schedule icon to schedule a Test Set.
Click on the pencil icon to edit a Test Set.
Click on the Duplicate icon to copy a Test Set.
Click on the Download icon to save a Test Set to a local file system.
Click on the Trash Can icon to delete a Test Set.
Click on the **Upload Test Set** button to upload a test set from a local file system into the database.

### Uploading a Test Set

You can upload a test set using the Upload Test Set page.

Click on the **Browse** button to search for the test set in your local file system. Once you select the test set, you can upload it to the Diagnostics database so it will be available for execution.

Click on the **Upload** button to save the test set from a local file system into the database.

Click on the **Cancel** button to return to View Test Set page.

### Scheduling a Diagnostic Test

Schedule a diagnostic test to run using Standard Request Submission (SRS).

You can choose to accept the defaulted Request Name or enter another request name.

The Downloadable Format option will be displayed for both tests and test sets that have implemented the new reporting libraries. By default, the check box for Generate downloadable format is checked.

For individual tests, you can use the list to choose the desired format. Alternatively, you can deselect the box and skip the download option all together.

For Test Sets, the download format selection is available at the individual test level during scheduling.

### Scheduling a Diagnostic Test Set

You can schedule a test set like you would a single test. For more information on test sets, see: Diagnosing an Issue, page 1-5.

You can schedule a test set from the Diagnose tab, Test Set subtab. Search for the test set you want, then click on the Schedule icon for that test set. You can then schedule the test set to run using Standard Request Submission (SRS). See Schedule Diagnostics Test, page 2-7 for more information.

### Viewing Reports in Oracle Diagnostics Framework

You can view reports and test results using these pages:

- View Reports, page 2-8
- View Test Results, page 2-10
- View Report, page 2-12
View Reports

You can search for reports using this page.

Search on the request name to show the report details. Note that the request name is case-sensitive and searching with wildcard characters is not supported.

Click the Go button to retrieve the report for the request name entered.

Click the Advanced Search button to increase your search options to find a report. Search options include:

- Application - search for all the tests that have been executed for a specific application.
- Group - search for all the tests that have been executed for a specific group.
- Test Executable Name - search for all the tests that have been executed for a specific test execution name.

You can search on the Test Execution Status in combination with an Application, Group, Test Execution Name, From Date, and To Date. You can also search for only those executions in the current session to retrieve tests with statuses of Success, Failure, Warning, In Progress, In Queue, or All Statuses.

Additional search criteria are:

- From Date
- To Date
- You can click on the check box to view only the test executions within a current
Click the Go button to retrieve the report(s) for the advanced search option used.

Within the Results region, you can:

- Click on Expand All to view the reports as a result of the search entered.
- Click on Collapse All to minimize the viewing of reports.
- Click on Focus to drill down on an application or group.
- Click on All Applications to remove the focus and view all applications as a result of the search criteria. Tests shows the application name, group name, and related tests as a result of the search criteria. Applications and Groups can be collapsed or expanded.

In addition, the following details are shown:

- **Tests** shows the application, group name, and related tests as a result of the search criteria. Applications and Groups can be collapsed or expanded.
- **Total Executions** shows the number of times a test has been executed as a result of the search criteria. If the count is greater than zero then you can drill down to view the individual reports.
- **Success** shows the number of times a test has completed without warnings or failures. If the count is greater than zero then you can drill down to view the individual reports.
- **Warnings** shows the number of times a test has completed with warnings. If the count is greater than zero then you can drill down to view the individual reports.
- **Failures** shows the number of times a test has completed with failures. If the count is greater than zero then you can drill down to view the individual reports.
- **In Progress** shows the number of tests whose execution is in progress or whose downloadable report generation is in progress.
- **In Queue** shows the number of tests that are in the queue and scheduled to execute.

You can download the report of an entire request if you had searched for it using the request name.

You can use the Refresh button to refresh the data on the page.
View Test Results

View test results using this page.

The View Execution Results page shows the Request Name initially after the test or test set is executed, or if the page was navigated to from a search using the request name.

The Test Details region includes:

- Application - the application name associated with the test
- Test - the name of the test
- Group - the name of the group the test is associated with
- Test Executable - the name of the test executable

After a request is submitted, the Request Details region is included on this page. This region includes:

- Submitted On - the date and time the test was submitted.
- Status - the current status of test (Running, Completed).
- Last Refreshed On - the date and time when the page was refreshed for the last time.
- Elapsed Time - Time elapsed since the test has been submitted for execution until the request/page has been last refreshed.

Execution Details region includes:
• Execution Time - the date and time the test was executed.

• View Report - shows a check mark if the report is available to view, shows a clock if the test is still executing, or shows an 'X' meaning the test completed with warnings and/or errors. Once the report is available to view, you can click on the check or 'X' icon to get details.

• Download Report - shows a check mark if the report is available to download, shows a clock if the test is still being formatted for download, or shows an 'X' meaning no downloadable report available. Once the report is available to download, you can click on the check icon to download it.

For reports written with reporting APIs available in Release 12.1 and later, a Global Data region is shown. This region includes a Global Data Element section with the following information:

• FND Version
• IZU Version
• Applications Technology Version
• Application Name
• LOV Version Info
• Test Name
• Test Executable Name
• Test Version
• XML Engine Version
• Instance Name
• Database Host
• Database Version
• Database NLS Language
• Database NLS Character Set

The Execution Details section of this region includes:

• Executed By
• Request Name
• Date
• Time taken
• Result
• Number of Error Messages
• Number of Warning Messages

The Execution Details region includes test inputs, if applicable, with the exception of confidential inputs.

The **Return to Select Test** button takes you back to the tests selection page.

The **Refresh** button is used to refresh the page with the latest status of the execution and report generation.

**View Report**

![View Log Details]

You can view the report of a specific execution of a test using this page.

The Execution Details region includes:

• Application - the application name associated with the test.

• Executed by - the name of user who submitted the test.

• Group - the name of the group with which the test is associated.

• Result - the result of the diagnostic test, that is, success or failure.

• Test - the name of the test.
• Time Taken - the total elapsed time for the test execution.
• Date - the date and time the test was executed.
• Test Class Version - the version of the test.

The Inputs region lists all of the input parameters used to execute the test.
The Report region shows all details of the report.
The Return to Execution Results link returns you back to the View Reports page.
Use the Download Report button to download the report to your local PC. If the report generation is still in progress, a Refresh button appears instead. Refresh the page to check the report generation status.
Use the Upload to Support button to upload the report to Oracle Support. You will be prompted to enter a My Oracle Support Service Request Number and to upload the downloaded report from your PC.

Scheduled Tests

You can view the Scheduled Tests using this page.
You can search for a test using the Request Name (with wildcard support with "%") , the Request ID, or the date submitted.
The Tests Results table includes the information described below.
The Request Name shows all requests that have been executed, running, or scheduled which match the provided search criteria only. No data is displayed by default.
Clicking on the request name takes you to the View Report screen.
The Request ID is the concurrent request ID assigned to the scheduled test. Clicking on the request ID link takes you to a concurrent manager request summary screen which allows you to review the concurrent processing log file.

In addition, the following information is shown:

- Start Time shows the date and time a test is scheduled to start.
- Requestor shows the user ID of the person who scheduled the test.
- Phase shows the concurrent manager phase (pending, running, and so on).
- Status shows the concurrent manager status (scheduled, normal, and so on).

**Configuring Oracle E-Business Suite Diagnostics Tests**

Use these pages to configure your Oracle E-Business Suite Diagnostics tests:

- View Registered Applications, page 2-15
- Register Application, page 2-15
- View Groups, page 2-16
- Create Group, page 2-17
- Edit Group, page 2-17
- Reorder Group, page 2-17
- View Tests, page 2-18
- View Test Details, page 2-19
- View Test Inputs, page 2-19
- Create Test, page 2-20
- Edit Test, page 2-21
- Reorder Tests, page 2-21
View Registered Applications

You can view all the applications registered under Oracle E-Business Suite Diagnostics in this page.

Search can be conducted based on application short name or application name.

Select an application and click on the View Groups button to view the groups under each application.

Click the Register button to register any new application. This action is restricted to only those users who have configuration privileges.

Register Application

You can register a new application in this page. The list of unregistered applications will be displayed in the list of values.

Click the **Apply** button to register a new application.

You can click the **Cancel** button to cancel registering application.
View Groups

You can view all the groups registered under an application using this page.

If you have come to this page from the View Registered Applications page, then the selected application will be shown in the LOV field.

Alternatively, you can come directly to this page through the Groups subtab.

A search can be conducted using the application name and group name. If the group name is left blank all the groups under the application will be displayed.

Details shown include the number of registered test under each group.

Click on the Update icon to update the details of the group. This action is restricted to only those users who have configuration privileges.

Click on the Delete icon to delete the group. This action is restricted to only those users who have configuration privileges.

Click on the Reorder button to change the order in which the groups are organized under the parent application. This action is restricted to only those users who have configuration privileges.

Click on the Create Group button to create a new group. This action is restricted to only those users who have configuration privileges.

Click on the View Tests button to view all the tests registered under this group.

**Note:** Seeded groups cannot be edited or deleted by end users.
Create Group
Create groups using this page.
Select the application name using the list of values.
Enter the new group name.
You can choose to accept the auto-generated order sequence or select a previously-used user-defined sequence number.
Click Cancel to cancel the group creation process.
Click Apply to save your work.

Edit Group
You can change the name of a group.
You can change the placement of a given group in the group order of its parent application.

Reorder Group
You can reorder groups using this page.
Select the group to change the order in which the groups are organized under the parent application.
Select a group and click on the "Move to the top" icon to move the selected group to the top of the list.
Select a group and click on the Up icon to move the selected group up one in the list.
Select a group and click on the Down icon to move selected group down one in the list.
Select a group and click on the "Move to the bottom" icon to move the selected group to the bottom of the list.
Click Cancel to cancel the reordering of the groups.
Click Apply to commit the reordering of the groups.
View Tests

You can view all the tests registered under a group.

If you have navigated to this page from the View Groups page, then the selected application and group will be shown in the LOV field.

You can directly navigate to this page through the Tests subtab.

A search can be conducted using the Application name and Group name. If the program name field is left blank, then all the program names under the group will be displayed.

Click on the View Input values button to view current input values and to add additional rows. This button will be enabled only if the user has permission to execute the test.

Click on the Create Test button to create a new test. This action is restricted to only those users who have configuration privileges.

Click on the Reorder Tests button to change the order in which the tests are organized under the group. This action is restricted to only those users who have configuration privileges.

Details shown include:

- Tests under the specific group.
- Radio button to view input values for tests with inputs.
- Order indicates the test sequence number within a group.
• The user-friendly test name.

• The program name associated with the test.

• The test type; either Java, PL/SQL or XML.

• The sensitivity associated to a specific test.

The following are actions that are restricted to only those users with configuration privileges.

• Click on the eyeglasses icon to view test details.

• Click on the pencil icon to edit a test.

• Click on the Delete icon to delete the test.

  **Note:** Seeded tests cannot be edited or deleted by end users.

**View Test Details**

Test details shown include:

• The name of the application for which the test is registered.

• The name of the group for which the test is registered.

• The program name associated with the registered test.

• The test type; either Java, PL/SQL, or XML.

• The sensitivity associated with the specific test.

• The order indicates the test sequence number within a group.

• The end date of the test.

In addition, the following information is shown:

• Valid applications for the registered test, listed by application short name and application name.

**View Test Inputs**

You can view or add input values using this page.

Details shown include:
• Name of the application for which the test is registered.
• Group for which the test is registered.
• Registered test name.
• Program name associated with the registered test.

Click on the **Add another row** button to add additional inputs.
Click on the **Remove** button to delete configured inputs.
Click on the **Cancel** button to cancel any changes.
Click on the **Apply** button to save your changes.

**Create Test**

Create diagnostic tests using this page.
Select the Application Name using the LOV.
You can change the Group Name using the LOV.
Enter a Program Name:
• For a Java Test by entering the fully-qualified Java class name.
• For a PL/SQL Test, the package must be in the APPS schema.
• For an XML Test, the XML file must reside in the JAVA_TOP in the corresponding product folder. Example:
  oracle/apps/fnd/oam/diagnostics/tests/sampleXMLTest.xml

  **Note:** This placement is similar to that for registering a Java test except the forward slash (/) must be used as the separator.

Select the Test Type that matches the corresponding program name. Valid test types are Java, PL/SQL, or XML.

You can optionally check the Do Not Validate test program box. If checked, the framework will not try to validate the executable; otherwise the framework will try to load the test and see if it is adhering to diagnostics standards.

Select the Sensitivity Type of low, medium, or high depending on the sensitivity of a test.

You can optionally specify an End Date for your test.

You can accept the default order test sequence number or select a previously-used order test sequence number.

Click on the **Cancel** button to cancel your changes.

Click on the **Apply** button to save your changes.

---

**Edit Test**

Edit a test using this page.

The following fields are shown:

• The name of the application for which the test is registered.

• The name of the group for which the test is registered.

• The registered test name.

• The program name associated with the registered test.

• The type of test: PL/SQL, Java, XML, or Declarative.

Click on Sensitivity in the action list to change the security sensitivity of the test.
Click on Order in the action list to change the order of the test within the group.
Optionally update the End Date value.

---

**Reorder Tests**

You can reorder tests using this page.
Select the test and change the order in which the tests are organized under a group.

- Select a test or tests and click on the "Move selected tests to top of list" icon to move selected items to the top of the list.

- Select a test or tests and click on the Up icon to move selected items up one in the list.

- Select a test or tests and click on the Down icon to move selected items down one in the list.

- Select a test or tests and click on the "Move selected tests to bottom of list" icon to move selected items to the bottom of the list.

Click on the **Cancel** button to cancel your changes.

Click on the **Apply** button to commit your changes.

---

### Profile Options

You can configure your system with the following profile options. After changing the values, you must sign out and clear the cache. All these profiles are at the site level. User-level profiles are not supported currently.

### Preference Profile Options

The Preference profile options are:

#### Favorite Application

The Favorite Application profile option allows users to set a default application; once set the default application will show on the Diagnose page. Only one favorite application is supported. The Favorite Application profile option for Oracle Diagnostics is case sensitive and expects upper case.

The internal name is `OAM_DIAG_FAVOURITE_APPLICATION`.

Valid values are application short names.

#### Default Reporting Format

The Default Reporting Format profile option feature allows users to set a default report format. Valid values are:

- `excel` - Microsoft Excel spreadsheet format
- `html` - Hyper Text Markup Language format
- `pdf` - Portable Document Format
• ‘rtf’ - Rich Text Format

The internal name is OAM_DIAG_DEFAULT_REPORT_FORMAT.

Performance Profile Options

The performance-related profile options are:

Collection Threshold

The Collection Threshold profile option allows users to set the number of reports nodes that must be kept in memory before being saved to the database. This threshold helps support huge volume diagnostic reports. If the number of components in the report exceeds this threshold, then the report is moved to the database to free up memory.

Set this profile to the threshold number of components before saving to the database.

The internal name is OAM_DIAG_COLLECTION_THRESHOLD.

SQL Block Size

The SQL Block Size profile option allows users to set the number of records that are fetched from the database in executing a query. This limit is used while displaying tabular data. Fetching all the data and keeping it in memory will cause performance issues.

Set this profile to the desired maximum number of rows fetched by any SQL query.

The internal name is OAM_DIAG_SQL_BLOCK_SIZE.

Worker Thread Count

The Worker Thread Count profile option allows users to increase the number of concurrent threads used by the executing engine to execute a request.

The internal name is OAM_DIAG_WORKER_THREAD_COUNT.
Known Limitations

Known limitations of the Oracle Diagnostics Framework are:

Creation/Editing of Declarative Tests

The framework does not support the creation of new declarative tests or allow the editing of existing declarative tests. Only execution is allowed.

File Types for Tests

Currently the only acceptable file types (to be used as test types) are Java, PL/SQL, and XML.