Oracle® Enterprise Transaction Controls Governor

Implementation Guide

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Primary Authors: Mark Stebelton, Vickie Lee

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Preface

This Preface introduces the guides and other information sources available to help you more effectively use Oracle Fusion Applications.

This *Implementation Guide* is meant to provide helpful guidance on the usage of the product. Think of this document as a combination FAQ and helpful "Tips and Tricks."

It is a supplement to the official product documentation (such as the *User Guide* and *Installation Guide*), and is not intended to replace it. If discrepancies exist between this *Implementation Guide* and the official product documentation, the guidance and functional commentary provided by official documents supersede any that may be written here.

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1

Enterprise Transaction Controls Governor Setup Overview

Oracle Enterprise Transaction Controls Governor (ETCG) is a control-authoring and -handling solution that works across heterogeneous platforms to detect issues that exist at the transaction level.

ETCG is one of several applications that share an Enterprise Governance, Risk and Compliance (GRC) platform. ETCG and Application Access Controls Governor run as a Continuous Control Monitoring (CCM) module in the GRC platform. (They are also members of a set of applications known collectively as "Oracle Advanced Controls.") Another application — Enterprise Governance, Risk and Compliance Manager — may implement a Financial Governance module and other, user-defined modules in the GRC platform. As you set up ETCG, you will use software tools specific to it as well as software tools common to it and other GRC applications.

ETCG enables its users to create models and controls that define risk that transactions may present. A model or control specifies semantic business objects (BO), which supply transaction data; business objects correspond to what a business user would expect to see within an ERP environment. ETCG then finds results or incidents — transactions that are suspect because they meet the criteria defined in the model or control. Model results are considered "temporary" because the suspect transactions are replaced each time the model is run. Control results — known as incident results — are "permanent" no matter how often the control is run.

Because ETCG was designed with rapid implementations in mind, a set of prebuilt models provided by Oracle may be used as a starting point to create models and subsequently deploy controls for immediate transaction analysis. The delivered model files provide models that support rapid implementation of transaction analysis around common end-to-end business processes. These include Order-to-Cash, Procure-to-Pay, Financials, and Human Resources.

Consider the guidelines in this chapter as you set up ETCG for your organization.

Diagnostic Steps

Enterprise Transaction Controls Governor has been designed to be incredibly scalable by means of hardware configuration. This means ETCG performance can often be improved via a hardware change rather than an ETCG software change.

Touch points of ETCG include several areas that span hardware, software, and network variables. Refer to the *Hardware Requirement* tab of the *Oracle Governance, Risk, and Compliance Certifications Document* for the recommended and supported hardware configurations.

Any deviation from these recommendations may result in unforeseen issues and would cause additional time and require additional resources during the implementation.

It is highly recommended during implementation planning that sufficient time be allocated for setting up, testing, and troubleshooting environment-specific issues that occur commonly with the many combinations of environments available.

The following is a high-level recommendation for diagnostic steps during environment setup and implementation:

1. Work with Oracle Consulting or an Oracle partner service provider to evaluate your environment and options for a GRC installation.
    a. Consider creating Development, Test, and Production instances. It is highly recommended that the environments for these instances be similar to one another, as varying environments could cause unexpected issues.
    b. Search for any patches that may need to be applied.
2. Refer to the *Certifications Document* for recommended and supported hardware configurations.
3. Look on My Oracle Support for known environment variable issues.
4. Follow the *Oracle Enterprise Governance, Risk and Compliance Installation Guide* to install GRC.
5. Verify that areas of the application are working (see the *Oracle Enterprise Transaction Controls Governor User Guide* or *Oracle Enterprise Governance, Risk and Compliance User Guide* for more information).
    a. Create a datasource (a connection to a database used by a business-management application over which ETCG is to exercise control). As part of working with a datasource, you may synchronize data — capture recent changes in the data stored on the datasource.
    b. Prior to creating and running a transaction model, you must first synchronize AACG data against the datasource, which normalizes user data. However, ETCG synchronization (unlike AACG) cannot run until at least one model is created and saved.

       After the AACG synchronization has successfully completed, create a simple transaction model to test (for example, Supplier business object where the creation date is greater than *mm/dd/yyyy*).
    c. Synchronize ETCG data from your datasource.
    d. Return to your model and select Run (or Run in Background) to view results.
    e. View the transaction-analysis results.
6. Continue setups as recommended in this *Implementation Guide*.

Setup Checklist

To set up Enterprise Transaction Controls Governor, complete the steps in the following checklist. You must complete the steps identified as required; complete each optional step only if you want to use the functionality implemented by that step.

Each step is described in further detail later in this document. Moreover, the description for each step includes a reference to a section and chapter of the *ETCG User Guide* or *GRC User Guide*, in which you can find full information about the procedures for completing each step.

Administrative Setup

☐ 1 **Required:** Connect your instance of GRC to its database. Typically, connectivity values are set during installation; you would update the values only if your configuration needs to change. See the *GRC Installation Guide* for more information.

☐ 2 **Required:** Configure connections to datasources for instances of the business applications (such as Oracle EBS or PeopleSoft) that are to be subject to control by ETCG. Optionally, select a datasource to be used as the ETCG default. See "Configuring Datasources" in the Application Datasources and Libraries chapter of the *GRC User Guide*.

☐ 3 **Optional:** Define perspective hierarchies, each of which is a set of related values that define a context in which GRC objects may exist. Individual perspective values may be assigned to individual models, controls, and incidents (control violations). Perspectives may then be used for reporting and filtering (for example, a user may generate a report about all controls associated with a particular perspective value). Perspectives are also instrumental in GRC security: data roles define the data to which individual users are granted access, and if associated with perspective values, these roles grant access only to models, controls, and incidents associated with those values.

GRC Perspective Management enables you to create (or edit) perspectives. Or, Data Migration enables you to import them from a template. (Oracle supplies an import template that includes Business Process and Risk perspectives. You may edit these, or create others, for import.)

System perspectives for Datasource, Business Object, and CCM Type are used for securing data. These are not accessible in Perspective Management and cannot be modified directly. Their values are assigned automatically as you choose to create either transaction or access models, and select datasources and business objects for them.

☐ 4 **Optional:** Define job, duty, and data roles. In brief, a duty role defines a set of privileges, a data role defines a set of data, and a job role combines duty and data roles to define access that can be granted to users. GRC is seeded with a comprehensive set of roles; copy the seeded roles and use the copies. (The seeded roles cannot be edited.) For complete instructions on working with GRC roles, see the *Enterprise Governance, Risk and Compliance Security Implementation Guide*, as well as the "Security Management" chapter of the *GRC User Guide*.

- ☐ **5** **Required**: Define ETCG users and grant them roles. GRC comes with one configured user, for which both the user name and password are *admin*. This user has rights to all GRC features. Log on as the admin user to create other roles and users. See the *GRC Security Implementation Guide* and the "Security Management" chapter of the *GRC User Guide*.
- ☐ **6** **Optional:** Configure notifications. When a control generates incidents, ETCG may notify the result investigators via your company's email system. For this to happen, establish a connection to your company's SMTP server, and schedule notifications to be sent. This may be done at any time during implementation, but keep in mind that during initial implementation a higher volume of incidents is usually generated. See "Configuring Notifications" in the Application Configuration Management chapter of the *GRC User Guide*.

Create Models and View Results

- ☐ **7** **Optional:** Load model content. An ETCG import utility enables users to upload prebuilt models (model template files) created by Oracle or by other users (and an export utility enables users to make their own models available to others). Models delivered for E-Business Suite or PeopleSoft may be loaded to support rapid implementation of transaction analysis. See "Exporting and Importing Models and Templates" in the Creating and Managing Models chapter of the *ETCG User Guide*.
- ☐ **8** **Required:** Define transaction models (or copy/edit those loaded in step 7). A model may select business objects for review and define the conditions for that review. A model may mix differing business objects — for example, both Oracle Suppliers and Purchase Orders. It may include business objects from more than one business-management system, for example defining equivalent business objects in two Oracle E-Business Suite environments. See "Using a Model or Template to Create a New Model" and "Creating a Transaction Model" in the Creating and Managing Models chapter of the *ETCG User Guide*.
- ☐ **9** **Optional:** Create custom business objects. There may be times you have data that is external to your datasource, such as a list of suppliers you are blocked from doing business with, that you wish to leverage within the modeling and analysis tool. See "Using Custom Objects" in the Creating and Managing Models chapter of the *ETCG User Guide*.
- ☐ **10** **Required:** View and analyze results your transaction models generate. A view results program may be run immediately or in the background. See "Viewing or Exporting Model Results" in the Creating and Managing Models chapter of the *ETCG User Guide*.

Manage Controls

- ☐ **11** **Required:** Create transaction controls. Deploy controls from models to generate permanent incident results that can be tracked as they are accepted, rejected, or remediated. (Depending upon your GRC goals, the process of creating a control from a model is really optional; but

creating a control is the only way to generate permanent incident results for tracking and auditing.) As a part of the create transaction control action, the following steps can apply:

- Assigning a control priority is **required**. This is a number value to identify the importance of the control. When setting priorities, you should establish a consistent usage within your organization, taking into account your GRC goals and level of risk to the company for the control. The priority indicator can be used to help focus on higher areas of remediation via the Manage Incidents Results grid and reporting tools.
- Selecting at least one datasource for a control is **required**.
- **Optional:** Assign perspective values. For each control, one set of perspective values applies to the control itself. The control inherits these values from the model on which it is based, although a user may add to the inherited values while creating the control. A second set of perspective values characterizes and secures incidents the control generates; these values are selected as the control is created.

  See "Selecting Perspectives" in the *ETCG User Guide*, and the Perspective Management chapter in the *GRC User Guide*.
- **Required:** Select result investigators for controls. Perspective values selected for a control determine which users are eligible to be result investigators — those whose data roles are associated with matching perspective values. By default, each control designates all eligible users as result investigators; you can retain that selection, or choose one of those users.

  See "Selecting Perspective Values and Result Investigators" in the Creating and Managing Continuous Controls chapter of the *ETCG User Guide*.
- Add any optional comments to the control, or associate the control to one that is related.

See "Creating Transaction Controls" in the Creating and Managing Continuous Controls chapter of the *ETCG User Guide*.

☐ **12** **Required:** Run control analysis. Selecting the Run action causes ETCG to identify and create incident results for selected controls. Alternatively, you can set up a schedule for the control to run on a regular basis in the future.

Consider synchronizing the transaction data first to ensure that business-management-system data is current and the incidents generated are up to date.

See "Running Controls" in the Creating and Managing Continuous Controls chapter of the *ETCG User Guide*.

Manage Incidents and Remediate

☐ 13 **Required:** Manage incident results and remediate. Incident results can be accessed by users associated with perspective values that match perspective values assigned to the incident (including values for the Datasource and CCM Type system perspectives). Result investigators are sent a worklist, and any eligible user can navigate to the Manage Incident Result page to analyze, report, and remediate incidents to which he or she has access.

See the Resolving Incidents chapter of the *ETCG User Guide*.

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Administration Setup

You need to create and set up one or more datasources in the Manage Application Datasources page (available in the GRC Setup and Administration tasks). The datasources you set up depend on factors such as your company's current mandates, risk tolerances, and compliance goals. Considerations include the need to connect to development instances and test instances, and to analyze data across multiple homogeneous instances and/or heterogeneous platforms. Below are instructions for the administration steps outlined in the ETCG Setup Checklist from Chapter 1. (There are references to other sections of this guide for more detailed instructions.)

Managing Application Data

Before you begin setting up your datasources, consider your environment and your goals. Do you run transaction analysis against multiple applications? For instance, do you connect to one application for Financials and another for Human Resources? Are these on the same platform? Will you analyze transactions across multiple platforms or even cross-platform? By carefully evaluating your business needs, you can create the necessary datasources so that when models are loaded or created, they will be able to run against the appropriate datasources.

See the Application Datasources and Libraries chapter of the *GRC User Guide*.

Managing Application Configurations

Once you have identified your datasources, evaluate the amount of historical data you will require as part of your transaction analysis and determine how era-dating can be used in your organization, defined under the Manage Application Configurations page.

As part of defining properties (in the Manage Application Configurations page), it is recommended you set an analysis start date by enabling era-based ETL optimization for ETCG. This causes ETCG data synchronization to operate only on data that was last updated after the specified date (meaning that no data updated prior to the analysis start date is loaded into GRC). The date used here can have a direct impact on performance because it affects the amount of data synchronized.

There are some very important points you must consider as a part of your era-based setting:

- The analysis start date is a mechanism used for limiting the record set that is synchronized (such as for space limitations), and applies to all datasources and data business objects.
- There is no way to apply this setting to a specific set of transaction business objects or datasources. Instead, it applies to all or none.
- You should initially set this analysis start date in a test environment, to improve your ETCG testing experience. But eventually you should test the date itself to determine whether there is an analysis start date that works for your organization.
- The reason this analysis start date should be included as part of your test plans is because its setting can directly impact the transactions identified as potential suspects, in some cases ignoring them entirely when they should not be ignored. Below is a use-case example you should reference to evaluate and verify the impact the date will have on your model (and eventually control) results. Use dates and business objects that make sense to you.

  1. Set Analysis Start Date to 1/1/2010.
  2. Create a model using both Supplier and Payables Invoice business objects.

     Most of the Supplier data has not been updated in the source ERP system in a long time because it does not change very frequently. The Invoices are current in the last month because transactions are updated daily.
  3. View results of the model. You find zero data rows are returned, but know there should have been at least a few suspects.

     The limitation is the era-date feature, because it applies to all business objects — whether they are infrequently updated (like setup or operational information like supplier) or not (transaction data).

     The supplier details related to the invoice transactions in this use case was never transferred to ETCG, because the last time suppliers were updated was before the analysis start date. The era date applies to both datasource records — supplier and invoice — and joining them together in a model may not bring back the current invoice records.

     If this is the case with your model, evaluate whether you require the additional setup or operational business object (such as Supplier) used together in a model with a transaction object. The transaction objects may already contain enough basic attributes to accommodate your models and controls.

***Note**: Era-based ETL does not apply to AACG.*

As you define application configurations, you may consider other questions, such as the following: Will you require various languages? Will you need to supply data to Oracle Fusion GRC Intelligence (GRCI) for reporting purposes? What kind of password security does your company require?

By carefully evaluating your business needs, you can configure your application for best performance and reporting.

See the *Enterprise Governance, Risk and Compliance Installation Guide* for more information on configuring GRC properties.

Managing Perspective Hierarchies

A perspective is a set of related values that define a context in which ETCG objects may exist. Values are hierarchical — they have parent/child relationships to one another. Individual values may be associated with individual models, continuous controls, or incident results, in effect cataloging them.

For example, an Organization perspective might contain values that map the structure of your company. Divisions, for instance, might be immediate children of the organization; each division might be the parent of a set of operating units; and so on. This would enable the company to associate individual models, controls, or incidents with the divisions, units, or other corporate entities to which they apply.

Perspectives also play a part in determining which users have access to any of these objects — those whose job roles contain data roles associated with perspective values that match the values selected for the object. (Users must also have duty roles granting privileges to work with the object.)

At minimum, each model is automatically assigned values for CCM Type, Business Object, and Datasource system perspectives. These values represent selections made by the user who creates the model — whether it is an access or transaction model, and the datasources and business objects selected for it. Thus, at minimum, a model is restricted to users whose data roles include matching values for system perspectives.

However, a user who creates a model may assign other perspective values to it, further restricting its availability. Each control is developed from a model, and inherits the perspective values assigned to that model; this set applies to the control itself. So before you develop models, consider configuring perspectives that can be used to determine which users will have access not only to models, but also to controls.

A user who creates a control may add to the values it inherits from the model on which it is based, and selects a second set of perspective values for it. This second set applies to incidents generated by the control, and determine which users are eligible to investigate incidents. (Incidents also inherit CCM Type and Datasource values from the control.) You may consider creating perspectives to secure incidents while you create those that secure models and controls. Or you may wait until you are ready to convert models into controls, when you may have a better idea of who should resolve incidents generated by controls.

(Even after models and controls are created, or incidents are generated, you can edit them to modify any of the sets of perspectives associated with them.)

GRC Perspective Management enables you to create (or edit) perspectives. Or, Data Migration enables you to import them from a template (see chapter 3). Once created, a perspective hierarchy becomes available for use with objects of a given type only after it is associated with that type in a GRC Manage Module Perspectives page. For information on managing perspectives and associating them with objects, see the *GRC User Guide*.

A note about the association between models and perspectives: A template model is a shell from which models may be developed. Although access to a model is limited to users with appropriate permissions (users whose roles cite perspective values that match those selected for a model), a template is intended to be available to any user. Thus a template is, in effect, a model that lacks associations with datasources or perspective values, but is otherwise fully configured.

When you create the association between a perspective and an object in Manage Module Perspectives, you may configure the perspective to be required — at least one perspective value must be selected for each object of the associated type. However, requiring any perspective for the model object would require that perspective values be selected for templates, and so templates would no longer be available to any user. To retain templates' universal availability, do not select the Required option for any perspective you associate with the CCM model object in Manage Module Perspectives.

Managing Roles

Before you begin setting up your roles, consider who will use ETCG (and GRC), and for what purposes. Seeded data, duty, and job roles are provided as templates. Common practice is to copy seeded roles and modify them as required.

Examples of roles may include:

- Auditors — May be able to review generated incidents and view model results.
- Internal Controls Group — May help review/create models and controls, view results, and run reports.
- Business Area/Application Owners — May conduct a variety of activities such as creating models and viewing results, defining perspectives and assigning result investigators, deploying controls and monitoring incident remediation, and running reports.
- System Administrator — May set up datasources, application configuration, notification configurations, and perform other administrative tasks.
- Remediation User — May analyze incidents and update status during remediation.

See the *Enterprise Governance, Risk and Compliance Security Implementation Guide*, as well as the "Security Management" chapter of the *GRC User Guide*.

Managing Users

Before you begin creating users — during the role-creation process — you should have considered who will use ETCG (and GRC), and for what purposes. Also evaluate roles for ETCG in conjunction with access to business objects and datasources. Consider a naming convention for user names and apply one or more roles to each user as appropriate.

See the "Security Management" chapter of the *GRC User Guide*.

Managing Notification Configurations

Notification schedules determine how often users are notified when worklists are generated. (A worklist is both a record of an incident that requires investigation, and a link to the page on which its status may be set. Each user's worklists are displayed on his GRC home page.) When a control generates new incident results, GRC also gen-

erates new worklists. Each result investigator designated by the control is sent a consolidated email message, showing all worklists awaiting attention. Before creating a notification schedule, consider how often incidents will be generated, and how immediate is the need to review or fix those incidents.

See “Configuring Notifications” in the Application Configuration Management chapter of the *GRC User Guide*.

About ETL Synchronization

To maximize performance and handle cross-platform analysis, ETCG employs synchronization — it extracts transaction data from ERP systems and loads that data into its own database. For efficiency purposes, a synchronization operation collects transaction data that applies only to the business objects and datasources used by existing models. Therefore, synchronization can be run only after at least one model has been created and saved.

ETL synchronization may be run on demand, or it may be scheduled to run at regular intervals from the Manage Application Datasources page under Setup and Administration. Various factors dictate how often either on-demand or scheduled synchronization should occur.

In general, whenever data within ETCG is believed to have aged substantially beyond equivalent data in a datasource, ETL synchronization should occur before transaction analysis is run against that datasource. Transaction data changes daily, so a daily ETL synchronization is recommended if transaction analysis is also performed daily.

If, for another example, your company evaluates transactions on a monthly basis, then you may need to run the synchronization process only once a month.

Keep in mind that if necessary, you can always run an on-demand ETL synchronization from the Manage Application Datasources grid within Setup and Administration. However, if you are testing a new model that contains a business object that has never been used before, you can run synchronization against this new model via the Manage Transaction Models grid. The ETL job will run against any business object in the model that has never been previously synchronized. The ETL job must be completed before the transaction analysis is performed.

See “Synchronizing Data” and “Model-Data Synchronization” in the *ETCG User Guide*.

3

Importing Perspectives

As an alternative to configuring perspective hierarchies in GRC Perspective Management, you may use a Data Migration feature to import perspectives and their values. Data Migration is especially useful for mass creation of perspectives. To use this feature, load perspective data into a "template" (an Excel spreadsheet), and then run an import process against the template.

Apart from system perspectives used for security, no perspectives are seeded with the Continuous Control Monitoring (CCM) module. However, Oracle offers a template that defines two perspectives — Business Process and Risk. You may accept these as they are defined or edit them. You may find it useful to begin with this template as an example for creating your own perspectives and values.

Preparing a Perspective File

The template file for a perspective import consists of three worksheets:

- Perspective: This worksheet contains information needed to create perspectives that, once imported, can be found in Perspective Management (under Tools in the GRC Navigator). Information from the Perspective worksheet populates the Definition section of the page.
- PerspectiveItem: This worksheet contains information needed to establish perspective values. Once imported, these values appear in the Hierarchy tab of the Hierarchy Details section of the Perspective Management page.
- PerspectiveHierarchy: This worksheet determines the hierarchical structure of the perspective. For example, for the Business Process perspective, a Business Process value exists at the highest level, also known as the "root." All other values defined for the Business Process perspective appear as children of the root value. It is possible to have multiple levels in a hierarchy.

The seeded template is called Business Process and Risk Perspective Template.xml. Use it (as is, or with perspectives or values added or deleted) to perform an "initial load" — one for which all data in the file is new to the GRC instance. (You can perform any number of initial loads, but only for all-new perspectives. Any data existing in the target GRC instance must be removed from the template.)

Or, generate a template from your GRC instance and use it for an "incremental load" — one that adds values to perspectives that already exist on the GRC instance.

Individual records within worksheets may contain two ID values. For example, the Perspective worksheet contains both a PERSP_TREE_ID and a PERSP_TREE_SYSTEM_ID column. For any column whose heading contains the phrase SYSTEM_ID, be aware:

- For an initial load, in which all data is new, SYSTEM_ID cells must be blank.
- For an incremental load, in which you add values to already-existing perspectives, the SYSTEM_ID for a piece of existing data contains an encrypted value; do not change it. The SYSTEM_ID for any new piece of data must once again be blank.

You will provide values for other (non-system) IDs, as described in the following procedures.

The following examples demonstrate how to make changes to a template. Note, in particular, that although you can delete values or perspectives from a template, you cannot use Data Migration to delete values or perspectives from those that already exist on a GRC instance.

Adding Values

Define a new value in the PerspectiveItem worksheet, and use the PerspectiveHierarchy worksheet to define its place in a perspective already defined in the Perspective worksheet.

For example, assume you want to add the value "Information Technology" to the Business Process perspective in the Business Process and Risk Perspective Template.xml file.

1. In the PerspectiveItem worksheet, create the new value:
   a. Copy a row in which the PERSP_TYPE_CODE value identifies the perspective to which you want to add a value. (In this example, select a Business Process row — one in which PERSP_TYPE_CODE = GRC_PERSP_BUSINESS_PROCESS). Paste the copy as the last row.
   b. Change entries in the NAME and DESCRIPTION cells to those appropriate for the new value . (In this example, the NAME value is "Information Technology.")
   c. Change the PERSP_ITEM_ID to a unique numeric value.
2. In the PerspectiveHierarchy worksheet, define the new value's place in the hierarchy of values (in this example, a child of the root value).
   a. Again, copy a row in which the PERSP_TYPE_CODE value identifies the perspective with which you are working (GRC_PERSP_BUSINESS_PROCESS in this example). Paste it as the last row.
   b. Change the value in the CHILD_NAME cell to match the value you added (in step 1b) to the NAME cell of the PerspectiveItem worksheet. (In this example, the value is "Information Technology.")
3. Save the file. Follow verification steps described in "Saving the XML File" (page 3-5).

Adding Perspectives

Use all three worksheets to define a perspective, define the values it will contain, and define their hierarchical relationships.

For example, assume you want to add a new perspective called "Organization." Its root value will also be "Organization"; its next level is to contain the values "EMEA Unit" and "NA Unit"; each of these is to have Accounting and Production departments as children.

To create this perspective hierarchy:

1. Enter information about the perspective itself in the Perspective worksheet:
   - **a** Copy an existing row and paste it as the last row.
   - **b** Change values in the NAME and DESCRIPTION cells to those you desire. (In this example, the NAME value would be "Organization.")
   - **c** Change the PERSP_TYPE_CODE to a unique value. In this example, that value might be GRC_PERSP_ORG.

     Note, however, that before you import the template, you must use the GRC Manage Lookup Tables feature to create this value as a lookup of the GRCM_PERSPECTIVE_TYPE lookup type. See the *GRC User Guide* for information on managing lookup tables.
   - **d** Change the PERSP_TREE_ID to a unique numeric value.
2. In the PerspectiveItem worksheet, enter information about the root (highest level) value in the perspective hierarchy.
   - **a** Copy an existing row and paste it as the last row.
   - **b** Change the values in the NAME and DESCRIPTION cells to appropriate new values. (In this example, the name would be "Organization.")
   - **c** Change the PERSP_TYPE_CODE to match the one used in the Perspective worksheet (GRC_PERSP_ORG in this example; see step 1c).
   - **d** Change the PERSP_ITEM_ID to a unique numeric value.
3. In the PerspectiveItem worksheet, enter information about all other values in the perspective hierarchy:
   - **a** Copy the row you created in step 2 and paste it as the last row.
   - **b** Change the values in the NAME and DESCRIPTION cells to appropriate new values. (In this example, one name value would be "EMEA Unit.")
   - **c** Change the PERSP_ITEM_ID to a unique numeric value.
   - **d** Repeat these steps for each value you want to add to the perspective hierarchy. (In this example, other name values would include "EMEA Accounting," "EMEA Production," "NA Unit," "NA Accounting," and "NA Production," each in its own row.)
4. In the PerspectiveHierarchy worksheet, establish the relationship between your root value and one of its immediate child values.
   - **a** In the PerspectiveHierarchy worksheet, copy an existing row and paste it as the last row.

b. Set PERSP_ITEM_NAME to the name of the root value you created in step 2 ("Organization" in this example).

c. Set CHILD_NAME to the name of a value that you created in step 3, and that is to be an immediate child of the root value (for example, "EMEA Unit").

d. Set TREE_NAME to name of the perspective you created in step 1 ("Organization" in this example).

e. Because the value you selected as PERSP_ITEM_NAME (step 4b) is the root, set ROOT to Y.

5. Repeat step 4 for all other values that are to be immediate children of the root. (In this example, create a parent/child relationship between "Organization" and "NA Unit.")

6. Define relationships for values at other levels:

a. In the PerspectiveHierarchy worksheet, copy an existing row and paste it as the last row.

b. Set PERSP_ITEM_NAME to the name of a perspective value that is to be the parent of another value (for example, "EMEA Unit").

c. Set CHILD_NAME to the name of the value that is to be the child of the value you just selected (for example, "EMEA Accounting").

d. Set TREE_NAME to name of the perspective you created in step 1 ("Organization" in this example).

e. Because the value you selected as PERSP_ITEM_NAME is not the root, set ROOT to N.

f. Repeat these steps for other lower-level relationships (in this example, "EMEA Unit" to "EMEA Production," and "NA Unit" to each of "NA Accounting" and "NA Production").

7. Save the file. Follow verification steps described in "Saving the XML File" (page 3-5).

Deleting Values

To remove a value from a perspective, delete the row defining the value from the PerspectiveItem worksheet. From the PerspectiveHierarchy worksheet, delete any rows defining its relationships to other values.

For example, assume you want to delete the value "Logistics" from the Business Process perspective in the Business Process and Risk Perspective Template.xml file:

1. In the PerspectiveItem worksheet, find and delete the row with the Logistics value.

2. In the PerspectiveHierarchy worksheet, find and delete the row with the Logistics value.

3. Save the file. Follow verification steps described in "Saving the XML File" (page 3-5).

Or, use all three worksheets to delete an entire perspective — the perspective itself, its values, and its relationships. For example, assume you want to delete the Risk perspective from the Business Process and Risk Perspective Template.xml file:

1. In the Perspective worksheet, find and delete the row that defines the perspective you want to delete (in this example, the row with the Risk value).
2. In the PerspectiveItem worksheet, delete all rows in which the PERSP_TYPE_CODE value identifies the perspective you deleted in step 1 (in this example, rows in which this value equals GRC_PERSP_CCM_RISK_TYPE).
3. In the PerspectiveHierarchy worksheet, delete all rows in which the PERSP_ITEM_NAME value identifies the perspective you deleted in step 1 (in this example, Risk).
4. Save the file. Follow verification steps described in "Saving the XML File" (below).

Adding New Values to Existing Perspectives

Once perspectives exist on a GRC instance, you can use Data Migration to add new values to them (although you cannot update existing values). First, export perspectives to which you what to add values; this creates an XML file to be edited. Add values to that file. (You will use the "Incremental Load" option to import the file to the same instance from which you exported it, because the Incremental Load option matches on encrypted IDs in the XML file.)

1. Log on to GRC. In its Navigator, select Setup and Administration in the Tools menu, and then select Data Migration among the Module Management tasks.
2. Click the Create Import Template button.
3. In a Create Import Template pop-up, choose the "With Data — Perspectives Only" option, and click the OK button.
4. GRC generates an XML file. Save it to your machine and open it.
5. Follow the procedure described in "Adding Values" (page 3-2) to add values to existing perspectives.
6. Save the file. Follow verification steps described in "Saving the XML File" (below).

Saving the XML File

When preparing the XML, be sure of the following:

- Render the PERSP_TYPE_CODE in capital letters with no spaces.
- NAME values cannot exceed 150 characters.
- Be sure all required values are populated. (Each column header declares whether a value is required.)
- Be sure all values respect the data required type. (Each column header defines the data type.)
- If perspectives have user defined attributes (UDAs) these may need to be populated.
- Avoid using any special characters, including carriage returns.

- Be sure there are no duplicates in the NAME and ID columns in all the worksheets.
- Remove any formatting or formulas you may have added to the worksheet.
- Remove all data filters, if any, from each worksheet.
- Be sure the template is saved as XML Spreadsheet (2003 Excel) or XML Spreadsheet 2003 (*.xml).

In addition, consider the following suggestions:

- Take a backup of the database just prior to running the import process and after all the setup and configuration is complete. This provides the ability to restore the instance and back out the imported data if the data load is not to your satisfaction.
- It is good practice to make a copy of the XML file generated as a backup before adding or changing the data within it in.
- After importing any new perspectives, ensure desired objects such as model, control and result have been associated.
- Ensure that a user is defined to have access to view all the imported data.

Importing the Perspective File

To run the import process:

1. Log on to GRC. In its Navigator, select Setup and Administration in the Tools menu, and then select Data Migration among the Module Management tasks.
2. In the Available Modules grid, select the CCM module. Then click the Import Data File button.
3. In an Import File window, click the Browse button, and navigate to the location of the import file. Select the file, so that its name appears in the field to the left of the Browse button.
4. In the Import File window, select an import method:
   - Select Initial Load if all data contained in the import file is new to the module (even if other perspective data already exists in the module).
   - Select Incremental Load if the import file contains any records that add values to perspectives already existing in the module. (The file may also contain data that is new to the module.)
5. Click the Import button. A message presents a job number. Note the number, then close the message (click on its OK button).
6. Navigate to the GRC Manage Jobs page. (Select Manage Jobs among the Setup tasks in the Navigator.)
7. In the Manage Jobs page, locate the row displaying the job ID you noted in step 5. In its Message cell, click on the Job Completed link.
8. A Job Detail window opens. In it, click on the Job Results link.
9. Review import statistics, including the number of imported records and validation errors. (If validation errors occur, no data is imported. You would need to correct the errors in the import file, then perform the import once again. You can export validation errors to Excel so that correcting the import file is easier.)

4

Create Models (and Templates) and View Results

You may decide to load the prebuilt models (templates) provided by Oracle for transaction models, or create your own. By doing so, you will have a number of analysis models to be reviewed with appropriate business owners, and compared against the company's goals for governance, risk, and compliance (GRC). It will probably be necessary to use a combination of delivered models and new models you create and edit.

During this phase of implementation, you must consider all available features of the application to assist with your GRC goals, the transaction controls you might require, and the users who will work with Enterprise Transaction Controls Governor. Consider the following:

- If you plan to deploy controls, defining a model to create a control is a required step.
- Models may be beneficial for your internal and external auditing requirements. Auditors can be granted access to the Manage Models page to perform some of their own analysis without disturbing the controls you have in place.
- Evaluate the main differences between models and controls to determine if the model will eventually be deployed as a control:
  - Model results generated during analysis represent a snapshot in time, or temporary results, because they are replaced each time the model is run. Control runs track permanent results (known as incident results) that cannot be deleted and require a more formal analysis and remediation process.
  - Controls contain additional criteria that models do not, such as status, priority, result investigator, and comments.
  - Because models are used as part of control setup, or as an analysis tool by auditors and business owners, models can be deleted by users with appropriate access, but controls cannot.

At this point, you should have a good idea of the GRC or business-performance goals of the company and know what areas of the business should be focused on. Reviewing each model and its content is necessary to ensure that the goals of the company are being met. There are several ways to approach defining models. A common approach is outlined in the following steps:

1. Identify GRC goals of the company.

2. Load the set of prebuilt models as models.
3. Hold workshops with subject-matter experts (SMEs) to review models.
4. Create or edit models as needed.
5. Generate and analyze the data results for model.
6. Perform any initial remediation where possible.
7. Validate and refine models.
8. Optionally, convert models to templates by importing as template for shared, global use if needed.

(This chapter contains references to more detailed instruction in other user guides.)

Import Available Model Content (Templates)

A model is available to those users whose data roles specify perspective values that match values assigned to the model. A model, however, may be imported as a template, which is not secured by perspectives. A template is a permanent record of a model that is viewable by all ETCG users — all users have access to templates. (See page 2-3.)

When users create new models, and those models have been validated (their results have been proved to be effective), consider converting them to templates if they are to be shared with other users. Alternatively, allow the model to be shared among users whose data roles grant access.

Converting models to templates involves exporting models to a file as templates, and then importing them as templates from the file. These operations are performed in the Manage Models page. When a template is imported, it appears in the Templates tab of the Library in the Create Transaction Model or Edit Transaction Model page. (A template is the shell of a model. It contains no description, datasource, or perspective values. The user fills in that information, and then saves it with a unique model name.)

When you use this template feature, consider the following:

- User role security for business objects. A user must have access to business object used in the template; if not, the template will not be available to the user. The sensitivity of data may determine the demand to share models as templates within your organization.
- Requirements to share models. As part of your GRC goals and requirements, evaluate how many users build models and perform transaction analysis. Next, consider whether their models overlap very little or extensively. The volume of users may dictate how many templates you use, or how frequently you use this template feature.
- Testing environment versus production environment. When you are in your test environment, you are not as concerned with the number of templates created by all your users. Any user that has update access to the Manage Models page can import models as templates. But you need to carefully evaluate your requirements and processes in your production environment; once models are imported as templates they *cannot* be deleted. (There is no tool or action available to remove the template from the library in the Create Transaction Model page.)

See “Exporting and Importing Models and Templates” in the Creating and Managing Models chapter of the *ETCG User Guide*.

Create Models

As mentioned above, you will probably find the need to create new models to have sufficient coverage of your company’s GRC goals. You could start with one of the prebuilt models (or templates) and edit it as a new model, or create a new model from scratch. Models can be created at any time, and their logic modified or altered to arrive at the desired rules and data attributes necessary to assist you in identifying and evaluating suspect data in your transaction system. This becomes even more important if the model is to be deployed as a control, because once the control is created, the model logic and result display (attributes) cannot be changed.

To create models efficiently, it’s important to understand how ETCG synchronization (ETL) works. When a previously unused business object is added to a model, you can manually run an ETL process against the model by selecting the Synchronize action from the Manage Transaction Models grid. This will collect data for the new business object from the defined datasource. If you intend to use one or more new business objects as you create or edit any number of models, you could initiate the ETL process first. Do this in either of two ways:

- Create an initialization or “pseudo” model — one that contains all business objects you plan to use in models, and applies at least one filter in the model logic (for example, for the Supplier business object, Supplier ID is not blank). Even though it is not the intent to run an analysis job against this model, you should select at least one attribute from each business object in the Result Display region, so that ETL can run for business objects you plan to use. After saving this model, initiate the synchronization process by accessing Manage Application Datasources in Setup and Administration. You may choose to do this over several days (or at least overnight) prior to building the models you really want to create.
- Build and save your actual models with all their business logic. You can run synchronization via the Manage Transaction Models page for models containing business objects that have never been used or synchronized. Alternatively, select Manage Application Datasources in Setup and Administration and run transaction ETL for the selected datasource. ETL processes for ETCG synchronization are queued in Manage Jobs (a page available under GRC Setup and Administration tools).

There are several key things to consider when defining models:

- Select all the necessary business objects.
- Use the right datasources.
- To perform initial data and control-requirements testing, attempt to “over-filter” at first — define model filters so that results are limited to a manageable number of rows.
- For complex models, consider whether you need to limit the amount of time spent on any one filter during model testing and analysis by enabling the Allocated Analysis Time Per Filter flag at the model level.

- Select only the most important attributes in the Result Display. (An attribute is an individual piece of transaction data owned by a business object — for example Supplier Name in the Supplier business object.) Selecting only necessary attributes directly impacts the amount of suspect data rows that might be returned. For example, if you select the Purchase Order ID attribute from the Purchase Order business object, far fewer results are returned for analysis, because the suspect data is aggregated to the header level — such as Purchase Order ID — instead of the individual line/detail rows that make up the purchase order (such as attribute Line ID).

See the use cases in the appendix of this document to refer to various model-definition examples. Also see "Creating a Transaction Model" in the Creating and Managing Models chapter of the *ETCG User Guide*.

Business Objects

When defining transaction models, select one or more business objects related to the transaction data in your source system that you wish to analyze. (Each user's data roles determine the business objects to which the user has access; other business objects are not available.)

If selected objects are logically unrelated, a warning message indicates this as you attempt to save the model. In many cases, you may find only one or two business objects are necessary to analyze and research suspect results. As an example:

- When using the Payables Invoice business object, include the Supplier business object to use the Supplier Name attribute.
- When you use the Payment business object in a model, it already contains the Supplier Name attribute and does not require the additional Supplier business object.

Many delivered business objects are common across datasource types (platforms), but some are platform specific. Additionally, within a business object that is common across platforms (for example, PeopleSoft and EBS), there can be both common attributes and platform-specific attributes. As an example, a Business Unit attribute is specific to a PeopleSoft transaction, whereas attributes like ID and Name can be common in the business object.

***Note**: When your organization requires business objects or attributes that are not currently available, contact Oracle to learn how to extend the delivered content to meet your needs.*

Datasources

In general (excluding any customizations) the current release of ETCG supports the following datasources:

- Oracle E-Business Suite releases 12.1 and 11.5.10.2 are delivered integrations that include adapter and metadata.
- PeopleSoft Enterprise Financials 9.1 is a delivered integration that includes adapter and metadata.

***Note**: For PeopleSoft 9.1, the adapter and metadata are supported only against datasources that use an Oracle database.*

- Grcc, which is used in conjunction with the "User" and "Access Entitlement" business objects. (The datasource basically points to itself to leverage access-oriented object information stored in GRC.)
- XLS datasource, which is used in conjunction with spreadsheets you may have leveraged to create your own custom objects.

It is not necessary to define either the Grcc or XLS datasources under the Manage Application Datasources page. These are system-delivered datasources that appear as options in your Create Transaction Model or Edit Transaction Model page.

When creating a new model, but after selecting your desired business objects, select required datasources for the model under the Manage Datasource button on the Create Transaction Model page. (Each user's data roles determine the datasources to which the user has access; other datasources are not available.)

It is imperative to select your datasource before you proceed to defining the Model Logic and Result Display regions because some of the available attributes can be platform specific. Selecting the datasource exposes the common and platform specific attributes available for that datasource type.

***Note:** Select a datasource to be used as the EGCG default in the Manage Application Datasources page under Setup and Administration. This setting will automatically apply the default datasource and display the available attributes when business objects are added to new or revised models.*

Model Logic

As you create an ETCG model, you define "filters," each of which defines risk and selects transactions that satisfy the definition. At its most basic, a filter consists of an attribute, a "condition" (a mathematical or other operator), and usually a third term. At a high level, there are three filter types: standard (general), function, and pattern.

Standard filters are the most flexible and frequently used. They support all combinations of conditions in conjunction with objects, attributes, and values to identify specific source records that may appear suspicious as defined by the combination of filters used. In special cases, the definition of a standard filter will create a system-generated grouping object, which can be used in subsequent filters (standard, function, and pattern) to further fine-tune your model. The situations where a standard filter creates this grouping object include using the Similar and Similar to conditions, in addition to using an Equals condition between the same business object and attribute on the left and right sides of the condition. For example, if you were trying to identify duplicate invoices by supplier, but with different invoice dates, you might create the following three filters:

- Filter 1: Payables Invoice object, where Supplier ID equals the Supplier ID on the same object.
- Filter 2: Payables Invoice object, where the Invoice ID equals the Invoice ID on the same object.

- Filter 3: Use the new grouping object, which is labeled as "Equals[Payables Invoice.Supplier ID AND Payables Invoice.Invoice Amount]." Use the "Does not equal" condition to set Invoice Date not equal to Invoice Date on this same grouping object.

Using the first two filters above in sequence together in the model logic creates the system-generated grouping object. This special grouping object can be used with any subsequent filter. It is important to note that Filter 3 demonstrates a use case for a "Does not equal" condition between the same object and attribute on the left and right sides of the condition. You cannot perform the same filter use case between a delivered or custom object; you must use a system-generated grouping object to perform a "Does not equal" between the same object and attribute.

To review an example, see Use Case 8 in the Appendix of this document.

Function Filters apply a sort of aggregate rule against an object and attribute you choose to group on. These function types include sum, average, count, inclusive, and exclusive. For example, you can group on the Supplier Name for the Payment object, and identify a sum function where Payment Amount by supplier is greater than a defined value. (The function filter also creates a system-generated grouping object that can be used in subsequent filters.)

Pattern filters are statistical algorithms applied to identify baselines and anomalies in data. Two delivered patterns are currently available: Mean and Benford. Pattern filters can be used in conjunction with other filters. If at first your pattern model does not return any graph data points/suspect transactions, try lowering threshold numbers.

When more than one filter is added, an AND relationship is the default. For the general and function filters, you can drag a filter alongside another to create an OR relationship.

The "Group Filters" option is used to combine filters into one logical element.

Conditions

For the general and function filters:

- Available conditions vary depending upon the attribute selected for the filter.
- The complete list of conditions includes: Less than, Less than or equal to, Greater than, Greater than or equal to, Equals, Does not equal, In, Not in, Between, Is blank, Is not blank, Different than, Contains, Does not contain, Is not related to, Similar, Similar to, Starts with, Ends with, and Expresses. Except for the Is blank, Is not blank, and Different than conditions, additional criteria are required, such as value or an object and its attribute.
- Examples of their usage might include:
  - Use "Greater than" with two attributes like Amount Paid and Invoice Amount (such as Amount Paid Greater than Invoice Amount).
  - Use the "Contains" condition in conjunction with text attributes. As an example, define the filter for a Description attribute that includes value *Miscellaneous*. This value may be case sensitive, if a Match Case advanced option is selected.

– Use “Similar” to analyze and group similar data rows across a single attribute, based on a percent similar, which only considers data groups that have more than one similar value when the “Include unique data rows” is *unchecked*. For example, use “Similar” on Supplier or Customer Name (using a high percent similar value) to identify duplicates or names that are similar.

  Use “Similar to” to analyze and group similar data rows across two attributes, in the same or a different business object, based on a percent similar, and with the “Include unique data rows” *unchecked* to consider groups that have more than one similar value. (In most cases, 80 percent similar or higher should be used to avoid a lot of false positives for the “Similar” and “Similar to” conditions.)

– Another way to use “Similar to” is to create a link, or a relationship, between two objects and attributes that are not currently related. This is especially true when analyzing custom business objects created from external data. (To review an example, see the Use Case 5 in the Appendix of this document.)

– Use the “Starts with” or “Ends with” condition in conjunction with text or numeric attributes. As an example, define the filter for a Name attribute that “Starts with” the value *Super*. This value may be case sensitive, if a Match Case advanced object is selected. When using the “Ends with” condition in conjunction with a numeric attribute, define a filter for an Amount attribute that “Ends with” 0. This value can ignore values after the decimal if an “Ignore after floating point” advanced option is selected.

– The “Equals” condition can be used with any attribute type, where an attribute is either equal to another attribute or a specific value. The “Equals” condition is also used to identify attributes that are identical across data records. As mentioned above, the “Equals” condition can be used for the same business object and attribute, where the object and attribute are the same on both the left and right side of the “Equals” condition. For example, to identify duplicate (same) Invoice IDs, apply a filter where the Invoice ID attribute of the Payables Invoice business object is equal to itself. (In this filter use case, a system-generated grouping object is available for use in subsequent filters. To review an example, see the Use Case 8 in the Appendix of this document.)

– As with the “Equals” condition, the “Does not equals” condition can be used with any attribute type, where an attribute is either not equal to another attribute or a specific value. The “Does not equals” condition can also be used with the system generated object for Equals, where you can identify situations where certain attributes are the same, but others are not equal. You cannot use a “Does not equals” between the same business object and attribute, it must use the described system-generated object from another Equals filter. For example, the Payables Invoice ID and Supplier may be equal, but you want to find data records where from that data set the Operating Unit is different (does not equal). Use the system generated grouping object — Equals[Payables Invoice.Invoice ID — to define your “Does not equal” condition against the Operating Unit attribute. (To review an example, see the Use Case 8 in the Appendix of this document.)

- Use the "Different than" to analyze data rows not similar across two attributes, in the same or a different business object, based on a percent different than. (If you are trying to analyze data using this condition between the same business object and attribute, you need to use a system generated grouping object. Therefore, it requires another filter first that creates this grouping object, such as filters containing similar, similar to, function, or equals between the same object and attribute.)
- Use one of the five available functions types in a function filter — Average, Count, Sum, Inclusive, and Exclusive. For example, use Sum to add together Invoice Amounts and define a business object/attribute filter to indicate how data is aggregated (such as aggregating invoices by Remit to Supplier Name from the Payables Invoice business object).

Advanced Options

As part of the general and function filter types, there is an Advanced Options expandable region. (Pattern filters do not support the Advanced Options region.) Depending upon the condition being used, the options include:

- Include unique data rows, which is used in conjunction with the Similar and Similar to conditions.
- Similar word, which is used in conjunction with the Similar and Similar to conditions for a standard (general) filter on a string type attribute.
- Apply condition across the same data row, which applies when the same business object is used on both sides of the condition.
- Over interval, which applies only to a function filter using a date attribute. (To review an example, see the Use Case 7 in the Appendix of this document.)
- Enable synonyms, which is used in conjunction with the Equals and Contains conditions for a standard (general) filter on a string type attribute.
- Match case which forces the value entered to recognize case sensitivity.
- Ignore leading and trailing spaces, which ignores spaces.
- Time component options to date attributes for standard (general) filters include:
  - Include time with date
  - Apply range of time
  - Apply day of week

  Note: *Time for this advance option is dependent on availability from the database source. The default for missing time when selected is 00:00:00.*
- Ignore after floating point, which ignores values after the decimal point when the Begin with condition is used on an amount attribute type.
- Partial Match, which is available to filters that create system-generated objects. These include function filters; similar and similar to filters; and equals filters, when the business object and attribute are identical on both sides of the condition. The sets of data identified by the filter perform a full match, but a partial match option is available. See "Using Filters That Return Sets of Values" in the Creating and Managing Models chapter of the *ETCG User Guide*.
- Exclude, which applies to both general and function filters.

Result Display

In the Result Display region of the Create Transaction Model page, select attributes you want to include as part of your result set. Keep in mind the number of attributes selected can affect the performance of generating the list of suspect transactions, and the number of rows created.

If you are eventually going to deploy this model as a control, it is important to assign a key or important attribute as the first in the list. This value will appear in an Incident Information field of the Manage Issue Results page to facilitate analysis, sorting, filtering and reporting of generated incidents.

Select Perspectives

Select perspective values that categorize and secure the model. A perspective may be configured to be required for an object. If so, a user cannot save the object without selecting a value for the required perspective. So that templates remain available to all users, it's recommended that no perspective be configured as required for the model object, but perspectives may be required, for example, for controls that inherit values from models.

When perspectives values are assigned to objects, only users whose data roles are associated with matching perspective values can gain access to those objects. By default, Datasource, Business Object, and CCM Type system perspectives apply to each model, and are inherited by controls developed from a model. (See "Managing Perspective Hierarchies" on page 2-3.)

Create Custom Business Objects

At times, you may want to use data from sources other than those registered within GRC as a custom business object, which can be used by itself, with other delivered business objects, or in conjunction with the Expresses condition. To a limited extent, you can do this by utilizing the custom business object capabilities within the Create Transaction Model page.

In brief, you would create an object in an .xml file format and import it into ETCG. Most likely, this would involve exporting data to some initial format, such as Excel, potentially doing some data manipulation, and then saving that to the .xml file format. This is fully documented in the *ETCG User Guide*. However, it's important to note that due diligence must be taken in making sure the data type is properly defined in the column header and that all formatting must be removed from the document before converting to .xml.

When the custom business object is imported, the user is prompted to assign a type, such as Financials or Procurement. This type is important, as it determines who can access the custom business object. For instance, if you assign the Financials type to a custom object, ensure first that you have a data role granting access to the Financials type. Otherwise, you will not have access to the custom object after you import it.

See "Using Custom Objects" in the Creating and Managing Models chapter of the *ETCG User Guide*.

View and Analyze Model Results

Use the model results as an opportunity to perform any auditing analysis of transaction data, identify potential risk and fraud to make corrections if possible, and use the model to define and test proposed controls.

Use the online view result grid to analyze the model data, or extract it to Excel to save your finding, perform further analysis, and distribute information to other users.

This phase allows you an opportunity to modify your models, their logic, and attribute requirements if you will use them as controls. If you intend to deploy a model as a control in order to track permanent incident results, continue to the next step of setting up perspectives and assigning result investigators.

As a part of the model results generated from the defined model, you will find extra columns providing additional information for your analysis and reporting needs. These include the following:

- Function. The column and value are displayed when using a function filter in your model, providing the result of the applied function type. For example, if you used Count in a function filter, the count value is displayed for the corresponding data record.
- Interval. The column and value are displayed when a function filter in your model groups on a date attribute, and has applied the "Over Interval" advanced option in the filter. The value represents the interval — or date range — the corresponding function value represents. For example, if you used Sum in a function filter, and applied a successive interval type for quarters in 2012 (three-month units from 01/01/2012 – 12/31/2012), a sum value will represent one of the four quarterly date ranges — interval — displayed in this column.
- Similar and Similar to. The column and value displayed in results is the value that makes the records similar, such as the number or text string that represents the percent similar defined by filter. Sorting on this similar column value will provide information on records that were discovered and related based on the defined similar or similar to filter.
- Equals. The column and value displayed in results is visible when the "Equals" condition is used and the same business object and attribute are used on both the left and right sides of the condition. Additionally, when "Equals" is used in more than one sequential filter, the combined filters are concatenated into a single column. You may see more than one "Equals" column in the results when these types of filters are separated by another standard or function filter, when Equals filters are separated in an OR relationship, or when the Equals filters use different business objects in the filter definition.
- Grouping. This identifies a grouping filter and attribute defined as a filter in the Model Logic region when the model was defined. This would include function filters and filters that use the Similar or Similar to condition, or Equals when the business object and attribute are the same on both sides of the condition. (For example, if a model has a filter that locates supplier names that are 80 percent similar, this value would show the condition and its related business object and attribute.)

- Grouping Value. If you have grouping information you may also have a grouping value. The value represents the criteria that caused the record to be generated and grouped to related results or incidents. (For example, if a model has a filter with a Similar condition, the value displayed in the Similar column is also displayed in the grouping value column.)
- Incident Information. This value is the first attribute selected in the Result Display region when the model was built. It is key if the model is deployed as a control, because it can be used for sorting, filtering, and reporting in the grid; choose a meaningful attribute as the first in list.

Note: *The additional columns displayed in the model results also apply to controls. They are displayed in the incident results.*

See "Viewing or Exporting Results" in the Creating and Managing Models chapter of the *ETCG User Guide*.

5

Assign Perspectives and Result Investigators

Before deploying any model as a control, you should evaluate your perspective and result investigator requirements. Think about who will be involved in the review process when incidents are generated and how to categorize your controls. (This chapter contains references to more detailed instruction in other user guides.)

At this point, you are just about ready to deploy your models as controls. Before you do, think about who will be involved in the investigation process when incidents are generated. You may need to perform some additional perspective configuration, so that you can assign perspective values to the controls you create, and so direct the incidents they generate to users whose roles specify matching perspective values.

Each control is assigned two sets of perspective values. One applies to the control itself, and the other applies to incidents the control generates. The control inherits the first set from the model upon which it is based (although you may add values to this set). You select the second set — the one that applies to incidents — as you create the control. (After the control is created, you can also edit either set of perspective values.)

Perspectives assigned to your controls allow you to filter those controls (and any incidents they generate) by the perspective values you define. For instance, if you have controls handled by certain regions in your company, it may make sense to create a new perspective called Region. In that perspective you may have values such as North America, South America, and Europe. It is possible, for instance, that you have different people in charge of investigating incidents for the violations that happen in the North and South American regions than you do in the Europe region. You may choose to deploy a similar control with different conditions focusing on specific operating units that fall within those regions.

Continuing with that example, you would be able to then apply different result investigators to each control. You may have an Internal Controls group in charge of reviewing controls in Europe and a different group in charge of reviewing controls in North and South America. Different result investigators could be created and assigned to the appropriate controls.

Another implementation approach might be to assign all incident results generated by the control to a "result manager," who reviews incident results and assigns them to appropriate investigators. For instance, a result manager in charge of "Americas" might assign some incidents for that region to investigator Jsmith, and other inci-

dents to investigator Ataylor. This approach would require the result manager to have an Assign Incident Result privilege.

Yet another approach might be to set the result investigator to All Eligible Users. It would be up to the users to determine which incident results they own, and act on them. So even though Jsmith and Ataylor can both see the incidents, Jsmith knows which incidents he is in charge of, and Ataylor knows which incidents she is in charge of.

6

Manage Controls

A transaction control specifies circumstances under which transactions entail risk and so require review. When the control is run, it generates incidents for the transactions that exceed the defined risk. These incidents are considered permanent. As mentioned earlier, you use a valid model as the foundation to create your transaction control. (This chapter contains references to more detailed instruction in other user guides.)

Create Controls

Select models that have been tested and refined before creating a control. The process of using a model to create a control behaves like a copy action; once the control is created, updates to the original model have no impact to the control. Model components (name, description, objects, logic, attributes, and perspectives) are copied into the control as the first step. The control then captures additional information such as priority, status, datasource, related controls, result management perspective assignment (result investigator), and the ability to add any comments to the control that you define. Once a control is created and updated, and analysis is run, permanent incidents are created.

After the control is run, you can update the control elements as necessary — such as priorities, perspectives, comments, and result investigator — one control at a time or en masse.

You can create a control from a defined or pattern model. Note, however, that a pattern model generates graphic results, but when a control is generated from the pattern model, the graph is unavailable. It is advised that you use caution in using a pattern model deployed as a control unless you have done some extensive analysis working with the model. When a pattern model is deployed as a control, one incident is created per unique row for all the rows underlying the data points in your graph. Incidents basically represent a single transaction from your ERP system, and you could potentially end up with a high volume of incidents that might be hard to analyze and manage.

See “Creating Transaction Controls” in the Creating and Managing Continuous Controls chapter of the *ETCG User Guide*.

Assign Priorities

In the Priority field, a user creating a control enters a number that expresses the importance of the control (and related incidents) in comparison with others. You should establish a set of priority values and enforce consistent usage within your organization.

Select Datasources

As a user creates a control, he must select one or more datasources for it. (Even if this is to be the datasource already selected for the model from which the control is developed, the user must actively select the datasource for the control.)

Assign Perspectives

A perspective (once again) is a set of related values, and individual values may be associated with individual models, controls, or incidents. Each control may have two sets of perspective values: "Control Perspectives" values characterize and secure the control itself. These are inherited from the model upon which the control is based, although a user can add to them while creating the control. "Result Management Perspective Assignment" values characterize and secure incidents the control generates; a user selects these values while creating the control.

Each incident inherits, from the control that generates it, values for the CCM Type and Datasources system perspectives. The assignment of other perspective values is optional, but can be very beneficial for the analysis and remediation of incidents. One can use these values for sorting, filtering, and reporting. In addition, they determine which users have access to the incidents (see "Assign Result Investigator," below).

Assign Result Investigator

A "result investigator" looks into incidents and assigns a status to each that reflects what is done to resolve it. Initially, the control that generates a set of incidents also designates the result investigators for those incidents. Each investigator receives a worklist when incidents occur.

The perspective values assigned to an incident determine the users who are eligible to serve as result investigators for that incident. Initially, each incident inherits perspective values from the control that generates it — not only values for the CCM Type and Datasources system perspectives, but also those selected as Result Management Perspective Assignment values for the control.

By default, the control selects, as result investigators, all users whose job roles include data roles with matching perspective values (and duty roles that authorize working with incidents). The user who creates a control may accept this "All Eligible Users" setting, or may select one among the eligible users.

Other Control Considerations

A control's status is Active (the default) or Inactive. If a control is inactivated after generating incidents, they are set automatically to a Control Inactive status.

Other optional control elements include comments regarding the control.

Run Control Analysis

You are now ready to run the analysis for your selected controls, to generate incidents and begin your formal remediation process. New incidents created during this process are assigned the status of Assigned.

Some additional information you should understand about the transaction control and the incidents it generates is as follows:

- Each incident created is assigned a unique identifier.
- Each incident contains only one transaction record.
- You must have appropriate data access to see the incidents in your Manage Incident Results grid.
- The Manage Incident Results grid displays some attributes from the transaction control logic that will assist you during analysis and reporting for remediation. They include Incident Information, Grouping, and Grouping Value. (Any additional columns outside these three are also generated in the incident results for filters like similar, similar to, function, interval on function, and equals across the same business object and attribute, but are included in the incident details and not available in the grid.)

See “Running Controls” in the Creating and Managing Continuous Controls chapter of the *ETCG User Guide*.

7

Manage Incidents and Remediate

Transaction analysis identifies transactions that meet the criteria of the deployed controls. These transactions are only suspect. They may or may not represent actual violations. Additional review and research of the results may result in any of the following conclusions:

- A transaction involves error or fraud. If so, other upstream controls should be employed to reduce the risk of the occurrence of such transactions in the future.
- A transaction was a known and accepted deviation from general corporate policy, and appropriate approvals and sign-offs were obtained.
- A transaction was acceptable in the context of its occurrence. This may be deemed a false-positive and may warrant the modification of the model logic.

If suspect transactions are deemed to be in violation of the control environment, then remediation steps are required. Involving the appropriate people during remediation is imperative. Remediation within transaction analysis is not the same as it is for other types of violations, such as segregation of duties (SOD). Transactions cannot be removed from the system — they will continue to exist. Remediation comes in the form of identifying appropriate preventive and upstream controls and potentially entering in adjusted transactions and modifying previously submitted reports.

You can approach remediation in various ways; some are outlined below. These approaches facilitate analysis and remediation, but may need adjustment based on your company's goals for governance, risk, and compliance.

See "Viewing Controls or Incidents in Summary" in the Resolving Incidents chapter of the *ETCG User Guide*.

Remediation Flow

The transaction analysis and remediation lifecycle incorporates the following four high-level phases, which represent the various areas of analysis and remediation opportunities as part of your GRC goals.

Define Models and Logic

Creating and working with models provides you the ability to perform auditing requirements, testing of delivered content or new models, and transaction analysis to

identify risk and perform some initial remediation. Models can even be used for some potential housekeeping or maintenance of transaction data or transaction setups.

Modify Models

During the model-modification phase, edit your models to prepare for creating controls. You would probably want to re-run a model and analyze the data results to validate, and perform any final logic changes or remediation prior to signing off with users and deploying as a control to track permanent incidents.

Deploy Controls

When creating and running controls, assign priorities that might designate higher-risk areas to focus on. Assign perspectives to categorize and secure incident results generated by the transaction control. Based on these perspectives, select an eligible result investigator to be sent worklists when new incident results are generated.

Remediate

The more formal remediation process is performed under Result Management — Manage Incident Results. By sorting and filtering in the online grid, and generating necessary reports to assist in the analysis, users can take action against the incident results created when the transaction control is run.

Remediation Checklist

The following checklist provides a more detailed list of where remediation steps can be performed across the application processes for ETCG. When you are ready to begin remediation, log on to ETCG and work through these steps. Where you begin your remediation in this checklist depends on whether you are in initial evaluation (identifying models and reviewing initial suspects), or you have controls deployed and are analyzing the incidents they generate. (This chapter contains references to more detailed instruction in other user guides.)

Define Models and Logic

☐ 1 Run transaction analysis for *all* key models (defined and pattern).

Loading all the prebuilt models, creating new models in critical business processes and activities, and running transaction analysis will provide a quick view of your company's overall transaction health and provide a basis for beginning analysis and prioritization.

If there are areas of high risk, and yet specific defined models cannot be identified, running some pattern analysis on the related business objects may provide enough information to start.

Make sure models are structured properly. If initial results generate significant volume, the logic of your model may not be fine-grained

enough. For example, it's better to focus on higher-dollar-value items first, so perhaps the value of your amount threshold is increased.

See "Creating a Transaction Model" in the Creating and Managing Models chapter of the *ETCG User Guide*.

☐ **2** Evaluate highest risk, priority, and volume.

Focus on areas with the highest risk, priority, and volume. Depending on your company's GRC goals, determine focus areas to begin analyzing. Focusing on key areas allows you to close up your greatest areas of risk and reduce the possibility that additional transaction violations will occur in the future.

☐ **3** Investigate transaction results and source.

Just because a transaction record is generated based on your model logic, doesn't necessarily mean there is a problem in your environment. Remember that these are just suspect transactions and therefore further investigation is required.

☐ **4** Analyze using on-line tools and distribute.

Use on-line tools to analyze results; for example, export model results to Excel or other spreadsheet applications. These tools enable users to perform complex analysis using functions and pivot tables, and share the reports created.

Various users should review and act on the results that are generated. Generally, for example, different business owners are interested when different models are violated. Since a model relates to specific business objects, assigning the results to these owners should be straightforward.

See "Viewing or Exporting Results" in the Creating and Managing Models chapter of the *ETCG User Guide*.

Modify Models

☐ **5** Run and re-analyze transaction results.

After a period of time once the necessary upstream controls have been put in place, review the transactions as of that point in time forward. This will provide the necessary data points to determine if additional remediation activities are necessary.

☐ **6** Validate that models are ready to deploy as controls.

Perform many of the same steps identified in the first business process area – Define Models and Logic.

Once you are satisfied with a model to be used as a control, you are ready to deploy the control to use the more formal tracking of transaction risks.

Deploy Controls

☐ **7** Assign and update priorities, perspectives, and result investigators.

Assign the appropriate result investigators who are involved in the remediation process. Assigning standard priorities and relevant perspective values will help facilitate users' remediation of incident results when the control is created and run.

See "Creating Transaction Controls" in the Creating and Managing Continuous Controls chapter of the *ETCG User Guide*.

☐ **8** Monitor control and incident result status.

Use various online tools to monitor the remediation process of your controls:

- If GRCI is implemented (and your roles permit you access to it), you may find an Intelligence tab in both the Manage Controls and Manage Incident Results work areas. There, graphical analysis and drill-down reports are available.
- Under the Manage Controls task, there is a Controls Dashboard that provides graphs to assist in your control analysis.
- Under the Manage Incidents task, there is an Incidents Dashboard that provides graphs to assist in your incident analysis.
- Use the Manage Controls grid to sort, filter, and report.
- Use the Manage Incident Results grid to sort, filter, and report.

See the Resolving Incidents chapter of the *ETCG User Guide*.

☐ **9** Extract control and incident data or run reports.

For transaction controls and their incidents, the following is a list of available reports provided in GRC:

- Control Detail Extract Report
- Incident by Control Summary Extract Report
- Incident Summary Extract Report
- Transaction Incident Details Extract Report

These reports are also available via Reports Management.

See the Reporting chapter of the *GRC User Guide*.

Remediation

☐ **10** Review, analyze, and update incidents, including status.

Use the grid under Manage Incident Results task to perform some initial online analysis such as sorting, filtering, and reporting. Update one or many incidents at the same time to make changes to status, perspectives, or result investigator assignments, or to add comments or attachments.

The following are the status options:

- Assigned. This is auto assigned for further review when control incident is created.
- Remediation. Select this to indicate additional follow-up action is required.
- Accepted. Select this to indicate no follow-up action is required.
- Resolved. This is used as a follow up state to "Remediate." No further action is necessary.
- Control Inactive. This is not available for selection, but is auto assigned if the Control is inactivated or a datasource is removed from a Control.

Generally, incidents at the Assigned or Remediate status are considered pending, and those at the Accepted, Resolved, or Control Inactive status are considered closed (although this can depend upon whether an incident is "saved" or "submitted" as it is assigned a new status).

See the Resolving Incidents chapter of the *ETCG User Guide*.

☐ **11** Evaluate highest risk, priority, and volume.

This is the same as Step 2 above, except you may edit and add comments to transaction incidents, and they are tracked and recorded and cannot be deleted. Again, focus on areas with the highest risk, priority, volume, and GRC goals to determine where to begin analyzing. Focusing on key areas allows you to close up your greatest areas of risk and reduce the possibility that additional transaction violations will occur in the future.

To assist you in identifying higher risk and priorities, access the Intelligence tab (if available) for graphical analysis and drill-down reports.

☐ **12** Extract control and incident data or run reports.

For transaction incidents, you will want to leverage the same incident reports mentioned in Step 9 above, or continue to use the online grid to perform some sorting, filtering, and analysis.

See the Reporting chapter of the *GRC User Guide*.

☐ **13** Investigate transaction incidents and propose/perform changes.

Just because a transaction incident is generated, this does not mean there is a problem in your environment. Any incidents that do not require further investigation should be set to Accepted status. When the Manage Incidents Results grid is refreshed, only pending incidents (incident results in an In Investigation state) are displayed, to minimize the amount of data you work with in the grid. You can still access all incident results by changing your search criteria. Any transaction incidents that are suspect and require further investigation should be set to Remediate.

As mentioned earlier, transactions cannot be removed from your ERP

system. Therefore, remediation comes in the form of identifying appropriate preventive and upstream controls and potentially entering in adjusted transactions and modifying previously submitted reports.

A

Appendix

This appendix provides additional information on ETCG, such as troubleshooting tips, use cases, and lists of delivered business objects and pattern mappings.

Troubleshoot Custom Objects (xml)

When on the Create Transaction Model page, you can import your custom object via an .xml file. If your custom object import is failing, consider the following:

- Refer to the *ETCG User Guide* under "Using Custom Objects" and use the formatting conventions as a checklist. For example, check the first row header since it is used to identify each attribute for the object. The header becomes the attribute name, and spaces should not be used.
- File size may impact your ability to import. If you are working with a large amount of data, consider importing a zip file version of the xml document.
- In addition to ensuring that you've satisfied the formatting rules listed in the *ETCG User Guide*, consider removing any font-related formatting as well, such as colored cells and bold text.
- In the event your custom object indicates a successful import, but no attributes appear for the object, double check any date format. For example, edit one date cell to ensure that it uses the supported format (*mm/dd/yyyy*), and use the MS Word Format Painter to apply that format to the other date cells.

Use Case 1: Maintenance of Operational Data

The following two examples are provided to show how you can use ETCG to perform maintenance on operational data using the delivered business objects.

Similar Supplier Names

Your ERP datasource may have rules to validate and verify that supplier naming conventions do not permit duplications or similarities. In ETCG, you can also create a model to perform this type of maintenance across one or two attributes you select.

This use case includes the Supplier business object to demonstrate maintenance across supplier names.

Start by creating a new model and assigning a unique name and description.

This model uses only one business object — Supplier, using the delivered PeopleSoft Financials 9.1 datasource. Criteria to be configured in the Manage Datasource window include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
Supplier	Name of PeopleSoft datasource	PeopleSoft	9.1	true/false

Define a filter that uses the Similar condition to analyze a single attribute, Supplier Name. If you use a higher Percent Similar value, you reduce the number of data rows returned, but require a closer or duplicate name match. By default the "Include unique data rows" field under Advanced Options is *unchecked*, indicating a match is required to bring in the supplier name. Checking it would return every supplier name, even if it did not have a similar match.

The filter criteria include:

No.	Field	Common
Filter 1	Object	Supplier
	Attribute	Supplier Name
	Condition	Similar
	Percent Similar	95%
	Advanced Options: Include unique data rows	<unchecked>

For the data result set, select enough attributes to assist in evaluation of the data. In this example of the supplier maintenance use case, you may only require attributes like Supplier Name, Supplier ID, and Set ID.

Audit of Recent Supplier Updates

You may want to audit recent updates to your ERP datasource on operational data, such as to supplier data. In ETCG, you can create a model to identify supplier records updated within a recent amount of time. This use case includes the Supplier business object to demonstrate audit of recent updates to operational data.

Start by creating a new model and assigning a unique name and description.

This model uses only one business object — Supplier, using the delivered EBS 12.1 datasource. Criteria to be configured in the Manage Datasource window include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
Supplier	Name of EBS datasource	EBS	12.1	true/false

Define a filter that uses the Relative Value against the last updated date in order to identify updates made within the last 30 days. The filter criteria might include:

No.	Field	Common
Filter 1	Object	Supplier
	Attribute	Last Updated Date
	Condition	Greater than
	Type	Relative Value
	Value and Units	30 Days

For the data result set, select enough attributes to assist in evaluation of the data. In this example of the recent updates to supplier, you may only require attributes like Supplier Name, Supplier ID, Last Updated Date, and Last Updated By User (or Last Updated By Name).

***Note**: Currently, only EBS consistently supports the use of the created and last updated information like date and user; PeopleSoft does not. In the event you require attributes that are not supported in the delivered business objects, contact Oracle to learn how to extend the delivered content to meet your needs. Additionally, when you use your EBS datasource and you include the Created By User or the Last Updated By User attribute from a business object as part of your data result set, you can select an additional attribute that includes the Created By Name or Last Updated By Name, respectively. Created By Name and Last Updated By Name are the only attributes that provide a user name translation.*

Use Case 2: Sensitive Access Model

The intent of sensitive access models (SAM) is to provide visibility to transactions that certain users have made, based on the access granted them through specific access points. For example, an organization may want to track what supplier or payment transactions have been impacted by users who have been granted a specified super user role.

Sensitive access models are special cases of ETCG models. They automatically relate the access-oriented objects defined in the model with the included transaction objects. Sensitive access models have certain requirements in the construct of the model to achieve the desired results.

Prerequisite: You must perform access synchronization for your ERP datasources. (Do so from the Datasources tab of the Manage Application Data page, available under Administration Management in the Tasks list.) The sensitive access model type leverages and requires the access model hierarchy graph generated through this process, and more specifically, utilizes a single data store to normalize data into one global user data store — namely the 'User' business object.

***Note:** For the PeopleSoft 9.1 adapter and metadata, the sensitivity access model is not supported in conjunction with the delivered business objects. Currently, only EBS consistently supports the use of the created and last updated information like date and user; PeopleSoft does not. In the event you require attributes that are not supported in the delivered business objects, contact Oracle to learn how to extend the delivered content to meet your needs.*

Start by creating a new model and assigning a unique name and description.

Business objects for this model include User, Access Point, and an object that contains information about the type of transaction you want to investigate — for example Supplier, if you want to track those who use a Superuser responsibility to edit supplier records.

Complete these steps to create the model:

1. Add the Access Point business object to the model canvas. This would be to specify the access point assigned directly to users in the application. For example, in EBS 12.1, this could be identified by a specific authorization type like responsibility.
2. Add the User business object to the model canvas.
3. Add a transaction business object to the model canvas. For example, add Supplier to see which users have used Superuser responsibility to edit suppliers.
4. Manage the business object datasources.
   a. Assign the access-related business object (User) to the Grcc datasource. *(**Note**: The Grcc datasource is system-defined, and in this case appears as an option only when you assign the datasource for the User business object.)*
   b. Assign the Access Point and transaction-related business objects to the target datasource.

   For example, you might set values in the Manage Datasource window as follows:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
User	Grcc	Grcc	8.x	false
Access Point	Name of EBS datasource	EBS	12.1	true/false
Supplier	Name of EBS datasource	EBS	12.1	true/false

5. Create necessary filters. You need to specify an Access Point name and type for the value. For example, base the analysis on the Payables Superuser responsibility. Filter criteria might include:

No.	Field	Common
Filter 1	Object	Access Point
	Attribute	Access Point Name
	Condition	Equals
	Value	Payables Superuser <or authorization name/type that makes sense in your organization>

For the data result set, select enough attributes to assist in the evaluation. This sensitive-access example identifies records updated by a super user responsibility, and so you may require attributes like Supplier Name and Supplier ID, but also include the Last Updated By User and Last Updated Date attributes, since the data analysis applies to updates (specifically, the last-updated-by user).

Use Case 3: Segregation of Duties

This segregation of duties (SOD) use case demonstrates how an ETCG model can identify privilege conflict. In this example, a model locates users who have created a supplier and paid that same supplier.

Note: *For the PeopleSoft 9.1 adapter and metadata, the segregation of duties model is not supported in conjunction with the delivered business objects. Currently, only EBS consistently supports user with authorization values in a transaction model; PeopleSoft does not. Contact Oracle to learn how to extend the delivered capabilities.*

Start by creating a new model and assigning a unique name and description.

Business objects for this model include Supplier and Payment, using the delivered Oracle 12.1 datasource. Criteria to be configured in the Manage Datasource window include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
Payment	Name of EBS datasource	EBS	12.1	true/false
Supplier	Name of EBS datasource	EBS	12.1	true/false

Define two filters not only to identify where a user has both created a supplier and paid that supplier, but also to force the data results to a specific time frame. In this use case, the first filter recommends using a date greater than some recent date defined by the user. When you apply more than one filter, it is recommended that your first filter be the one that can eliminate the greatest number of data rows from processing. The filter criteria include values shown in the following table:

No.	Field	Common
Filter 1	Object	Supplier
	Attribute	Created Date
	Condition	Greater than
	Type	Fixed value*
	Value	<recent *mm/dd/yyyy* date>
Filter 2	Object	Supplier
	Attribute	Created by User
	Condition	Equals
	Type	Object
	Object	Payment
	Attribute	Created by User

* You might consider using a relative value for the date instead of fixed, especially if you plan to use and run the model or control in production on a regular basis, like monthly. Using a relative value for date allows you to define a value in units as it relates to the system date; for example in this case 30 Days would look for suppliers created in the last 30 days.

For the data result set, select enough attributes to assist in evaluation of the data, such as Supplier Name, Created Date/By User for both business objects, Last Updated

Date/By User for both business objects, Payment Date, Payment Amount and Currency, and a Payment identifier like Check Number.

Use Case 4: Combine SOD with Sensitive Access

This use case will show how Use Case 3 can be combined with sensitive access information (as documented under Use Case 2 above).

Note: *As indicated in Use Case 2, the PeopleSoft 9.1 adapter and metadata are not supported in conjunction with the delivered business objects.*

Start from Manage Model and duplicate the SOD model. Select the Edit action for this newly created model. Rename the model and update the description.

All existing business objects, filters, and attributes apply from previous use case. You'll also add the following business objects to this new model: User and Access Point. For the User object, the datasource points to Grcc. (The User is an SOD type and stores global users of all source systems; the data for the model comes from the GRC application you are working in.) The datasource criteria would include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
User	Grcc datasource	Grcc	8.*x*	true/false
Access Point	Name of EBS datasource	EBS	12.1	true/false

Define an additional filter to select a specific name and type of access point, such as Purchasing Superuser responsibility, which exists within your organization that might apply. The filter criteria include values shown in the following table:

No.	Field	Common
Filter 3	Object	Access Point
	Attribute	Access Point Name
	Condition	Equals
	Value	<e.g., Purchasing Superuser>

Use Case 5: Custom Object with Delivered Business Object

A user can import a spreadsheet (.xml file) to use as a custom business object. Custom objects can be used by themselves, or with delivered business objects. You can establish a relationship between two objects by establishing a "Similar to" condition between two related attributes. In this example, the custom object primarily represents a list of suppliers with which the company no longer wishes to do business; this will be compared to a Remit to Supplier Name attribute from the Payment business object to verify none have recently been paid.

A user can import a spreadsheet (.xml file) to use as a custom business object for analysis purposes. These custom objects can be used by themselves, but they can also be used with a delivered business object, where you can establish a relationship between two attributes using the "Similar to" condition. In this use-case example, the

custom object primarily represents a list of suppliers with which the company no longer wishes to do business; this will be compared to a Remit to Supplier Name attribute from the Payment business object to verify none have recently been paid.

Start by importing the new custom object on the Create Transaction Model page. You might want to test this custom business object in a model by itself and run data results, to verify all attributes and data rows were imported successfully.

After testing and verifying the new custom object is valid, create a new model using this object and the delivered Payment business object. In this case, use the Manage Datasource window to associate the delivered Oracle 12.1 datasource with the Payment business object, but associate XLS Datasource to the custom object. The datasource criteria include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
Suppliers—Do Not Contact	XLS datasource	XLS	XLS	false
Payment	Name of EBS datasource	EBS	12.1	true/false

Define a filter using the "Similar to" condition to establish a relationship between two attributes in the two business objects: the Name attribute in the Suppliers—Do Not Contact custom object, and the Remit to Supplier Name attribute in the Payment object. For Percent Similar, a higher value will reduce the number of data rows returned, but require a closer name match. The "Include unique data rows" field is *unchecked*, indicating a match is required to bring in the name. Checking it would return every name, even if it did not have a "similar to" match. The filter criteria include values shown in the following table:

No.	Field	Common
Filter 1	Object	Suppliers—Do Not Contact
	Attribute	Name
	Condition	Similar to
	Object	Payment
	Attribute	Remit to Supplier Name
	Percent Similar	90%
	Advanced Options: Include unique data rows	<unchecked>

For the data result set, select enough attributes to assist in evaluation of the data, including the custom objects Name and the Payment Remit to Supplier Name in this case.

Note: *When you use a custom business object with a delivered object, "Similar to" is the only condition that establishes a relationship between the two. If you use the Expresses condition (which requires a custom business object) to capture sentiment analysis such as profanity, harassment, or other improper references against string attributes, this condition also establishes a relationship between two custom business objects, or a delivered object.*

Use Case 6: Using the Inclusive Function

You may want to create a model to analyze your ERP datasource for expense reports that contain suspicious combinations for the same expense report ID and employee. In ETCG, you can create a model to perform an analysis against expense reports where the employee has reported expenses for taxi, car rental, and mileage all in the same report. This use case includes the Expense Report business object and demonstrates the use of the Inclusive function.

Start by creating a new model and assigning a unique name and description.

This model uses only one business object — Expense Report — and the delivered Oracle 12.1 datasource. Criteria to be configured in the Manage Datasource window include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
Expense Report	Name of EBS Datasource	EBS	12.1	true/false

Define a function filter grouped by Header ID (expense report ID in EBS). Use the Inclusive function to analyze expense reports that contain certain combinations. For example, you may want to identify expense reports that look suspect because they contain *taxi*, *car rental*, and *mileage* all in the same expense report. The Inclusive function identifies text strings you define, such as the value *car* to pick up items described as car rental or rental car. For the value, enter all combinations that might cause a suspicious expense report, delimited by semicolons (;).

The function criteria include values shown in the following table:

No.	Field	Common
Filter	Object	Expense Report
	Attribute	Header ID
When	Function	Inclusive
	Object	Expense Report
	Attribute	Accounting: Item Description
	Condition	In (this is the only available condition)
	Value	taxi;car;mileage

Any time an expense report contains items that include a taxi, car rental, and recorded mileage, the report is included in the result set. Select enough attributes to assist in the evaluation of the data.

Note: *Alternatively, the Exclusive function behaves differently. You list values that should be together but are not. For example, if you list taxi, hotel, and airfare together, only one of them need be defined in the report, and at least one or more are not. Only one must be listed in the value field to be picked up in result data.*

Use Case 7: Using Successive Interval with Sum Function

This use case demonstrates how to apply the "Over Interval" advanced option, which is available only to a function filter that groups values by date. The example uses a "Successive" setting for the option to group results into entirely distinct date ranges, defines those ranges as three-month periods (i.e., quarters), and calculates the sum of payment amounts during each quarter.

Start by creating a new model and assigning a unique name and description.

Business objects for this model include Payment, using the delivered Oracle 12.1 datasource. Criteria to be configured in the Manage Datasource window include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
Payment	Name of EBS Datasource	EBS	12.1	true/false

Define a function whose Filter line groups by the Date attribute of the Payment object. (This is the attribute that enables the use of the Over Interval Advanced Option.) The function's When line specifies the Sum function, as well as the Payment Amount attribute of the Payment object. Finally the Over Interval advanced option is set to "Successive" (as opposed to "Overlap") and defines the distinct periods for which payment amounts are to summed: three-month periods over the course of a calendar year. (Given this definition, you will expect to see four groups in your data results or incidents — namely, three-month units for the one-year period, each representing a quarter.)

The function criteria include values shown in the following table:

No.	Field	Common
Filter	Object	Payment
	Attribute	Date
When	Function	Sum
	Object	Payment
	Attribute	Payment Amount
	Condition	Greater than
	Value	0
Advance Options	Over Interval	*Checked*
	Interval Type	Successive
	Interval	3
	Units	Months
	Start	01/01/12
	End	12/31/12

Because the above advanced-option definition is used, the following date ranges are returned and will be available in an Interval column of your results. A corresponding Sum column will indicate the aggregate amount for the given date range.

- 01/01/12 – 03/31/12
- 04/01/12 – 06/30/12
- 07/01/12 – 09/30/12
- 10/01/152 – 12/31/12

To analyze the data result set, select enough attributes to assist in the evaluation of the data, such as Supplier Name, Payment ID, Date, Payment Amount, and Currency.

Use Case 8: Matching (Equals) on the Same Attribute Value

This example demonstrate how an ETCG model identifies exact matches across records to create sets of records. A model filter states that an attribute of a business object equals itself, and return values consist of sets, in each of which that attribute equals the same value. In this example, a model locates records that have the same Invoice ID, Invoice Amount, and Supplier, but indicate different Operating Units.

Start by creating a new model and assigning a unique name and description.

Business objects for this model include Payables Invoice, using the delivered Oracle 12.1 datasource. Criteria to be configured in the Manage Datasource window include:

Business Object Name	Datasource Name	Datasource Type <display>	Version <display>	Default <display>
Payables Invoice	Name of EBS Datasource	EBS	12.1	true/false

Define four filters as follows: 1) Invoice ID is the same, 2) invoice amount is the same, 3) supplier ID is the same, and 4) operating unit is different. This use case can assist in identifying invoices billed that are redundant between operating units in the organization. The first three filters apply an Equals condition between the same business objects and attributes, creating a system-generated grouping object to be used in a subsequent filter. Within each set identified in the system-generated grouping object, the last filter identifies data records that have different operating units. The filter criteria include values shown in the following table:

No.	Field	Common
Filter 1	Object	Payables Invoice
	Attribute	Invoice ID
	Condition	Equals
	Type	Object
	Object	Payables Invoice
	Attribute	Invoice ID

No.	Field	Common
Filter 2	Object	Payables Invoice
	Attribute	Invoice Amount
	Condition	Equals
	Type	Object
	Object	Payables Invoice
	Attribute	Invoice Amount
Filter 3	Object	Payables Invoice
	Attribute	Supplier ID
	Condition	Equals
	Type	Object
	Object	Payables Invoice
	Attribute	Supplier ID
Filter 4	Object	Equals[Payables Invoice.Invoice ID AND Payables Invoice.Invoice Amount AND Payables Invoice.Supplier ID]
	Attribute	Operating Unit ID
	Condition	Does not equal*
	Type	Object
	Object	Equals[Payables Invoice.Invoice ID AND Payables Invoice.Invoice Amount AND Payables Invoice.Supplier ID]
	Attribute	Operating Unit ID

*For you to use the "Does not equal" condition between the same object and attribute, you must precede it with at least one filter that uses the Equals condition. The three sequential Equals filters create a system-generated grouping object because they are for the same business object, and they form a sequential AND relationship. They would be separate grouping objects if Equals were separated by another standard or function filter, separated by an OR condition, or filters using different business objects with the Equals condition.

For the data result set, select enough attributes to assist in evaluation of the data, such as Supplier ID, Invoice Description, Invoice ID, Invoice Amount, Invoice Currency, Date, Payment Status, and Operating Unit ID.

Examples of Prebuilt Models

As a part of your implementation, evaluate some of the prebuilt models (model templates) in your test environment. The .xml file you would use to import them contains models that are part of the same/common business area, such as Order to Cash (OTC) and Procure to Pay (PTP).

Even though they have been packaged by being exported as model templates, you can import the prebuilt models as models or templates. This enables you to map your datasource and test them as models first, before importing them as templates

that provide a starting point or form that becomes available only via the Templates Library option.

The following is only an example of available prebuilt models:

- Payments with Void Check Date
- Invoices without a Purchase Order
- Amount Paid Greater than Invoice Amount
- Payment Remit to Supplier — Configuration Override

Note: *The delivered prebuilt models should be imported via the Manage Transaction Models page. They are packaged as a model/template file type. You cannot use that file to import them as controls through Manage Controls. The prebuilt models are intended to be imported as models first so that you can review them, modify them if necessary, and test them before deploying them as controls in your environment.*

List of Delivered Business Objects

The following tables provides a list of all business objects that are available in the current release across platforms.

Note*: Additional business objects may be added or modified as necessary by Oracle. Since business objects can be uploaded in GRC they are not dependent on a subsequent release of the product but rather can be "hot-deployed."*

Oracle E-Business Suite 12.1

The following is a table of delivered business objects for EBS 12.1.

#	Business Object Name	Type
1	Access Entitlements	Segregation of Duties
2	Access Grants	System Configuration
3	Access Point	Segregation of Duties
4	Access Set	Financials
5	Account Derivation Rules	Financials
6	Accounting Attribute Assignments	Financials
7	Accounting Calendar	Financials
8	Accounting Event Class Options	Financials
9	Accounting Events	Financials
10	Accounting Flexfield Definition	Financials
11	Accounting Flexfield Qualifier	System Configuration
12	Accounting Flexfield Segments	Financials
13	Accounting Periods	Financials
14	Acknowledgment	Financials
15	Application	Human Capital Management
16	Application Accounting Definition	Financials

#	Business Object Name	Type
17	Application Data Group	Human Capital Management
18	Application Request Group	Human Capital Management
19	Application User	Human Capital Management
20	Asset Book Controls	Financials
21	Asset Calendars	Financials
22	Asset Categories	Financials
23	Asset Ceilings	Financials
24	Asset Distribution Sets	Financials
25	Asset Fiscal Years	Financials
26	Asset Insurance Policy Details	Financials
27	Asset Locations	Financials
28	Asset Maintenance Details	Financials
29	Asset Physical Inventory	Financials
30	Asset Price Indexes	Financials
31	Asset Schedule Maintenance Events	Financials
32	Asset System Controls	Financials
33	Assets Workbench	Financials
34	Audit Group Data	System Configuration
35	Auto-Post Criteria Set	Financials
36	Bank	Financials
37	Bank Account	Financials
38	Bank Account Transfer	Financials
39	Bank Branch	Financials
40	Bank Statement	Financials
41	Bills of Material Parameters	Financials
42	Bonus Depreciation Rules	Financials
43	Business (Operating) Unit	Financials
44	Business Group	Financials
45	Buyer	Procurement
46	Cash Transaction Subtype	Financials
47	Charge Schedule	Financials
48	Chart Of Accounts	Financials
49	Columns	System Configuration
50	Common Lookups	System Configuration
51	Concurrent Requests	System Configuration
52	Conversion Rate Types	Financials
53	Cross Validation Rules	Financials
54	Currencies	Financials
55	Currency Rate Types	Financials
56	Customer	Financials

#	Business Object Name	Type
57	Customer Account (Site) Contact	Customer Relationship Management
58	Customer Account Sites	Customer Relationship Management
59	Customer Accounts	Customer Relationship Management
60	Customer Payment Methods	Customer Relationship Management
61	Cycle Count	Supply Chain Management
62	Depreciation Methods	Financials
63	Document Actions History	Procurement
64	Document Attachment Functions	Financials
65	Document Sequence	System Configuration
66	Document Sequence Assignment	System Configuration
67	Documents	Financials
68	EBS Access Condition	Segregation of Duties
69	EBS Function	Authorization
70	EBS Menu	Authorization
71	EBS Responsibility	Authorization
72	EBS Role	Authorization
73	Employee Job Assignment	Human Capital Management
74	Expense Location	Financials
75	Expense Policy	Financials
76	Expense Report	Financials
77	Expense Report Credit Card Transactions	Financials
78	Expense Report Template	Financials
79	Expense Setup: General	Financials
80	External Bank Account	Financials
81	External Payee	Financials
82	Flexfield Security Rules	System Configuration
83	Flexfield Segment Values	System Configuration
84	Form Custom Property List	System Configuration
85	Form Custom Property Value	System Configuration
86	Form Functions	System Configuration
87	Form Personalizations	System Configuration
88	Forms	System Configuration
89	General Ledger	Financials
90	General Ledger Accounts	Financials
91	General Ledger Data Access Sets	Financials
92	Human Resources Organization	Human Capital Management
93	Incentive Compensation Transaction	Financials
94	Information Types Security	Human Capital Management
95	Installation Data	System Configuration

#	Business Object Name	Type
96	Intercompany Accounts	Financials
97	Internal Payer	Financials
92	Inventory Accounting Periods	Supply Chain Management
99	Inventory Transactions	Supply Chain Management
100	Item	Supply Chain Management
101	Item Category	Supply Chain Management
102	Item Category Set	Supply Chain Management
103	Item Cost	Supply Chain Management
104	Item Status	Supply Chain Management
105	Item Supplier	Supply Chain Management
106	Item Supplier Site	Supply Chain Management
107	Job	Human Capital Management
108	Job Category Association	Human Capital Management
109	Job Group	Human Capital Management
110	Journal Authorization Limits	Financials
111	Journal Auto-Reversal	Financials
112	Journal Encumbrance Types	Financials
113	Journal Entry	Financials
114	Journal Entry Category Definition	Financials
115	Journal Entry Source Definition	Financials
116	Journal Import References	Financials
117	Journal Mass Allocation	Financials
118	Language	System Configuration
119	Ledger Balancing Segment Values	Financials
120	Ledger Set	Financials
121	Ledger Setup: General	Financials
122	Ledger Steps Details	Financials
123	Legal Entity	Financials
124	Legal Entity Configurator	Financials
125	Lockbox Transmission File	Financials
126	Mass Transfer	Financials
127	Menus	System Configuration
128	Objects	System Configuration
129	Oracle User Data	System Configuration
130	Order Line Sets	Customer Relationship Management
131	Order Management Credit Check Rules	Financials
132	Order Management Credit Profiles	Financials
133	Order Management Customer Profile Classes	Financials

#	Business Object Name	Type
134	Order Management Document Categories	Financials
135	Order Management Document Datatypes	Financials
136	Order Management Holds	Financials
137	Order Management Import Sources	Financials
138	Order Management Payment Types	Financials
139	Order Management Security Processing Constraints	Financials
140	Order Management Shipping Tolerances	Financials
141	Order Management System Parameters	Financials
142	Order Management Transaction Type	Customer Relationship Management
143	Organization Information	Supply Chain Management
144	Organization Location	Human Capital Management
145	Organization Parameters	Supply Chain Management
146	Payables Aging Period	Financials
147	Payables Employee Signing Limits	Financials
148	Payables Invoice	Financials
149	Payables Invoice Approval History	Financials
150	Payables Invoice Detail	Financials
151	Payables Invoice Hold	Financials
152	Payables Invoice Hold Codes	Financials
153	Payables Invoice Tolerance Set	Financials
154	Payables Payment Administrator	Financials
155	Payables Payment Schedule	Financials
156	Payables Payment Term	Financials
157	Payables Procurement Card	Financials
158	Payables Procurement Card Code For Exception Use	Financials
159	Payables Setup: General	Financials
160	Payables Setup: Invoice	Financials
161	Payables Setup: Payments	Financials
162	Payables Setup: Tax	Financials
163	Payables System Setup	Financials
164	Payment	Financials
165	Payment Card	Financials
166	Payment Code: Bank Instruction Code	Financials
167	Payment Code: Delivery Channel Code	Financials

#	Business Object Name	Type
168	Payment Code: Payment Reason Code	Financials
169	Payment Disbursement	Financials
170	Payment Instruments	Financials
171	Payment Interest Rates	Financials
172	Payment Method	Financials
173	Payroll Definition	Human Capital Management
174	Payroll Element	Human Capital Management
175	Payroll Element Entries	Human Capital Management
176	Payroll Element Link	Human Capital Management
177	Payroll Payment Method	Human Capital Management
178	Period Types	Financials
179	Periodic Alerts	System Configuration
180	Person	Human Capital Management
181	Personal Profile Values	System Configuration
182	Physical Inventory Item	Supply Chain Management
183	Position	Human Capital Management
184	Position Hierarchy	Human Capital Management
185	Post Accounting Programs	Financials
186	Price List and Modifiers	Supply Chain Management
187	Pricing Agreements	Supply Chain Management
188	Procurement Card Statement	Financials
189	Pseudo Period Rates	Financials
190	Purchase Order	Procurement
191	Purchase Order Line Location	Procurement
192	Purchase Order Releases	Procurement
193	Purchase Order Revision History	Procurement
194	Purchasing Approval Assignments	Procurement
195	Purchasing Approval Group	Procurement
196	Purchasing Approved Supplier	Procurement
197	Purchasing Approved Supplier List Statuses	Procurement
198	Purchasing Change Order Tolerances	Procurement
199	Purchasing Contract Revision History	Procurement
200	Purchasing Contracts	Procurement
201	Purchasing Cost Factors	Procurement
202	Purchasing Document Types	Procurement
203	Purchasing Expense Account Rules	Procurement
204	Purchasing Hazard Class	Procurement
205	Purchasing Line Type	Procurement

#	Business Object Name	Type
206	Purchasing Notification Controls	Procurement
207	Purchasing Receiving Options	Procurement
208	Purchasing Setup: General	Financials
209	Purchasing UN (United Nations) Number	Procurement
210	Receipt	Procurement
211	Receivables Accounting Rules	Financials
212	Receivables Activities	Financials
213	Receivables Aging Buckets	Financials
214	Receivables Application Rule Set	Financials
215	Receivables Approval Limits	Financials
206	Receivables Auto-Cash Rule Set	Financials
217	Receivables Batch Source	Financials
218	Receivables Grouping Rules	Financials
219	Receivables Invoice	Financials
220	Receivables Location	Financials
221	Receivables Lockbox	Financials
222	Receivables Payment Schedule	Financials
223	Receivables Payment Term	Financials
224	Receivables Receipt Batch	Financials
225	Receivables Receipt Class	Financials
226	Receivables Receipt Method	Financials
227	Receivables Receipt Remittance Batch	Financials
228	Receivables Receipt Source	Financials
229	Receivables Standard Receipt	Financials
230	Receivables System Option	Financials
231	Receivables Transaction Type	Financials
232	Request Sets	System Configuration
233	Requisition	Procurement
234	Resource Groups	Customer Relationship Management
235	Resource Roles	Customer Relationship Management
236	Resource Teams	Customer Relationship Management
237	Resources	Customer Relationship Management
238	Responsibility	System Configuration
239	Role Hierarchy	System Configuration
240	Roles	System Configuration
241	Sales Credit Type	Customer Relationship Management
242	Sales Order	Customer Relationship Management
243	Security Groups	System Configuration
244	Security Profile Assignment	Human Capital Management

#	Business Object Name	Type
245	Security Profile Organization	Human Capital Management
246	Security Profile Organization List	Human Capital Management
247	Security Profiles	Human Capital Management
248	Server Group	Customer Relationship Management
249	Ship Customer Goods	Financials
250	Shipping Deliveries	Financials
251	Special Calendar	Financials
252	Subledger Accounting Custom Source	Financials
253	Subledger Accounting Methods	Financials
254	Subledger Accounting Source	Financials
255	Subledger Application	Financials
256	Subledger Event Entity	Financials
257	Subledger Event Model	Financials
258	Subledger Journal Entry	Financials
259	Subledger Journal Line Types	Financials
260	Subledger Journal Lines Definitions	Financials
261	Subledger Journal Entry Descriptions	Financials
262	Supplier	Financials
263	Supplier Bank Account Change Request	Procurement
264	Supplier Contacts	Financials
265	Supplier Onboard Configuration	Procurement
266	Supplier Purchase Order Change Request	Procurement
267	Supplier Site Location	Financials
268	Suspense Account	Financials
269	System Profile Options	System Configuration
270	System Profile Values	System Configuration
271	Tables	System Configuration
272	Tax Jurisdictions	Financials
273	Tax Options	Financials
274	Tax Rates	Financials
275	Tax Recovery Rates	Financials
276	Tax Registration: First Party Legal Establishment	Financials
277	Taxes	Financials
278	Territory	Customer Relationship Management
279	Transaction Account Definition	Financials
280	Transaction Account Types	Financials
281	Transaction Calendar	Financials

#	Business Object Name	Type
282	Transaction Reason	Supply Chain Management
283	User	Authorization
284	User Operating Unit Preferences	System Configuration
285	User Role Assignments	System Configuration
286	Warehouse Management Global Parameters	Financials
287	Warehouse Management Pick Slip Grouping Rules	Financials
288	Warehouse Management Release Sequence Rules	Financials
289	Warehouse Management Report Sets	Financials
290	Warehouse Management Ship Confirm Rules	Financials
291	Warehouse Management Shipping Parameters	Financials
292	Withholding Tax Group	Financials
293	Workflow Activity	Customer Relationship Management

Oracle E-Business Suite 11.5.10.2

The following is a table of delivered business objects for EBS 11.5.10.2.

#	Business Object Name	Type
1	Access Entitlements	Segregation of Duties
2	Access Point	Segregation of Duties
3	Accounting Events	Financials
4	Accounting Flexfield Definition	Financials
5	Application	Human Capital Management
6	Application Data Group	Human Capital Management
7	Application Request Group	Human Capital Management
8	Application User	Human Capital Management
9	Bank Account	Financials
10	Bank Branch	Financials
11	Bank Charges	Financials
12	Bank Statement	Financials
13	Business Group	Financials
14	Business (Operating) Unit	Financials
15	Buyer	Procurement
16	Customer	Financials
17	Customer Account (Site) Contact	Customer Relationship Management
18	Customer Account Sites	Customer Relationship Management
19	Customer Accounts	Customer Relationship Management

#	Business Object Name	Type
20	Document Sequence	System Configuration
21	EBS Access Condition	Segregation of Duties
22	EBS Function	Authorization
23	EBS Menu	Authorization
24	EBS Responsibility	Authorization
25	EBS Role	Authorization
26	Expense Location	Financials
27	Expense Policy	Financials
28	Expense Report	Financials
29	Expense Report Template	Financials
30	Expense Setup: General	Financials
31	Flexfield Segment Values	System Configuration
32	General Ledger	Financials
33	General Ledger Accounts	Financials
34	Human Resources Organization	Human Capital Management
35	Item	Supply Chain Management
36	Item Category	Supply Chain Management
37	Item Category Set	Supply Chain Management
38	Item Cost	Supply Chain Management
39	Item Status	Supply Chain Management
40	Journal Entry	Financials
41	Journal Entry Category Definition	Financials
42	Journal Entry Source Definition	Financials
43	Ledger Setup: General	Financials
44	Ledger Steps Details	Financials
45	Legal Entity	Financials
46	Lockbox Transmission File	Financials
47	Order Line Sets	Customer Relationship Management
48	Order Management Transaction Type	Customer Relationship Management
49	Organization Location	Human Capital Management
50	Organization Parameters	Supply Chain Management
51	Payables Aging Period	Financials
52	Payables Invoice	Financials
53	Payables Invoice Approval History	Financials
54	Payables Invoice Detail	Financials
55	Payables Invoice Hold	Financials
56	Payables Invoice Tolerance Set	Financials
57	Payables Payment Term	Financials
58	Payables Procurement Card	Financials
59	Payables Procurement Card Code For Exception Use	Financials

#	Business Object Name	Type
60	Payables Setup: General	Financials
61	Payables Setup: Invoice	Financials
62	Payables Setup: Payments	Financials
63	Payables Setup: Tax	Financials
64	Payment	Financials
65	Person	Human Capital Management
66	Price List and Modifiers	Supply Chain Management
67	Pricing Agreements	Supply Chain Management
68	Procurement Card Statement	Financials
69	Procurement Setup: Accounting	Financials
70	Purchase Order	Procurement
71	Purchase Order Line Location	Procurement
72	Purchase Order Releases	Procurement
73	Purchase Order Revision History	Procurement
74	Purchasing Approved Supplier	Procurement
75	Purchasing Contract Revision History	Procurement
76	Purchasing Contracts	Procurement
77	Purchasing Hazard Class	Procurement
78	Purchasing Line Type	Procurement
79	Purchasing Setup: General	Financials
80	Purchasing UN (United Nations) Number	Procurement
81	Receipt	Procurement
82	Receivables Activities	Financials
83	Receivables Application Rule Set	Financials
84	Receivables Auto-Cash Rule Set	Financials
85	Receivables Batch Source	Financials
86	Receivables Grouping Rules	Financials
87	Receivables Invoice	Financials
88	Receivables Location	Financials
89	Receivables Lockbox	Financials
90	Receivables Payment Schedule	Financials
91	Receivables Payment Term	Financials
92	Receivables Receipt Batch	Financials
93	Receivables Receipt Class	Financials
94	Receivables Receipt Method	Financials
95	Receivables Receipt Remittance Batch	Financials
96	Receivables Receipt Source	Financials
97	Receivables Standard Receipt	Financials
98	Receivables System Option	Financials

#	Business Object Name	Type
99	Receivables Transaction Type	Financials
100	Requisition	Procurement
101	Resources	Customer Relationship Management
102	Sales Credit Type	Customer Relationship Management
103	Sales Order	Customer Relationship Management
104	Server Group	Customer Relationship Management
105	Special Calendar	Financials
106	Subledger Event Model	Financials
107	Subledger Journal Entry	Financials
108	Supplier	Financials
109	Supplier Bank Account Change Request	Procurement
110	Supplier Contacts	Financials
111	Supplier Purchase Order Change Request	Procurement
112	Supplier Site Location	Financials
113	Territory	Customer Relationship Management
114	Transaction Reason	Supply Chain Management
115	User	Authorization
116	Withholding Tax Group	Financials

PeopleSoft Enterprise Financials 9.1

The following is a table of delivered business objects for PeopleSoft 9.1.

***Note**: For the PeopleSoft 9.1 adapter and metadata, the area of delivered content focuses on the procure-to-pay, expenses, and financial setup objects.*

#	Business Object Name	Type
1	Access Entitlements	Segregation of Duties
2	Access Point	Segregation of Duties
3	Accounting Periods	Financials
4	Alternate Account	Financials
5	Bank	Financials
6	Bank Account	Financials
7	Bank Account Transfer	Financials
8	Bank Branch	Financials
9	Bank Statement	Financials
10	Bank Transfer Charge Code	Financials
11	Budget Reference	Financials
12	Business (Operating) Unit	Financials
13	Buyer	Procurement
14	Class	Financials
15	Department	Financials

#	Business Object Name	Type
16	Employee Expense Profile	Financials
17	Expense Approval Assignments	Financials
18	Expense Approval Routing List	Financials
19	Expense Approver Profile	Financials
20	Expense Cash Advance	Financials
21	Expense Cash Advance Payment	Financials
22	Expense Location	Financials
23	Expense Location Amount	Financials
24	Expense My Wallet	Financials
25	Expense Options	Financials
26	Expense Policy	Financials
27	Expense Refinement Template	Financials
28	Expense Report	Financials
29	Expense Report Payment	Financials
30	Expense Risk Template	Financials
31	Expense Setup: General	Financials
32	Expense Transaction Definition	Financials
33	Expense Travel Authorization	Financials
34	Expense Types	Financials
35	External Bank Account	Financials
36	Fund Code	Financials
37	General Ledger	Financials
38	General Ledger Accounts	Financials
39	Item	Supply Chain Management
40	Item Category	Supply Chain Management
41	Item Cost	Supply Chain Management
42	Journal Entry	Financials
43	Journal Entry Source Definition	Financials
44	Ledgers For A Unit	Financials
45	Lockbox Transmission File	Financials
46	Order Management Transaction Type	Customer Relationship Management
47	Organization Location	Human Capital Management
48	Payables Aging Period	Financials
49	Payables Invoice	Financials
50	Payables Invoice Detail	Financials
51	Payables Invoice Tolerance Set	Financials
52	Payables Payment Term	Financials
53	Payables Procurement Card	Financials
54	Payables Setup: General	Financials
55	Payables Setup: Invoice	Financials
56	Payables Setup: Payments	Financials
57	Payables Setup: Tax	Financials

#	Business Object Name	Type
58	Payment	Financials
59	Payment Code: Payment Reason Code	Financials
60	PeopleSoft Access Condition	Segregation of Duties
61	PeopleSoft Menu	Authorization
62	PeopleSoft Page	Authorization
63	PeopleSoft Permission List	Authorization
64	PeopleSoft Role	Authorization
65	Price List and Modifiers	Supply Chain Management
66	Pricing Agreements	Supply Chain Management
67	Procurement Card Statement	Financials
68	Procurement Setup: Accounting	Financials
69	Procurement Setup: Tax Accounting	Financials
70	Product	Financials
71	Program Code	Financials
72	Project	Financials
73	Purchase Order	Procurement
74	Purchase Order Change History	Procurement
75	Purchase Order Line Location	Procurement
76	Purchasing Approved Supplier	Procurement
77	Purchasing Contract Change History	Procurement
78	Purchasing Contracts	Procurement
79	Purchasing Hazard Class	Procurement
80	Purchasing Setup: General	Financials
81	Receipt	Procurement
82	Receivables Invoice	Financials
83	Receivables Location	Financials
84	Receivables Lockbox	Financials
85	Receivables Payment Schedule	Financials
86	Receivables Payment Term	Financials
87	Receivables Payment Terms Timing	Financials
88	Receivables Receipt Batch	Financials
89	Receivables Standard Receipt	Financials
90	Receivables System Option	Financials
91	Requisition	Procurement
92	Requisition Change Order	Procurement
93	Requisition Distribution	Procurement
94	Sales Order	Customer Relationship Management
95	Scenario	Financials
96	Set ID	Financials
97	Statistics Code	Financials
98	Subledger Journal Entry: Accounts Payable	Financials

#	Business Object Name	Type
99	Subledger Journal Entry: Accounts Receivable	Financials
100	Supplier	Financials
101	Supplier Contacts	Financials
102	Supplier Site Location	Financials
103	User	Authorization
104	Withholding Tax Group	Financials

Examples of Delivered Pattern Mapping

The following is only a sampling of supported business objects and attributes with pattern mappings. Attributes and Variance by vary across supported platforms when a pattern filter is used.

Pattern	Business Object	Attribute	Variance By (Mean Only)
Mean	Payment	Cleared Amount Gross Paid Amount Late Charges Payment Amount Remit to Supplier ID	Business Unit Supplier Name Created Date Created By User Last Updated By User Last Updated Date
Mean	Payable Invoice	Invoice Amount Miscellaneous Operating Unit ID	Supplier ID Created Date Created By User Last Updated By User Last Updated Date
Mean	Purchase Order	Line: Price Line: Quantity Prepaid Amount	Status Supplier ID Created Date Created By User Last Updated By User Last Updated Date
Mean	Supplier	Invoice Limit Amount	Supplier Name Supplier ID Created Date Created By User Last Updated By User Last Updated Date
Benford	Payment	Cleared Amount Gross Paid Amount Late Charges Payment Amount Remit to Supplier ID	n/a
Benford	Purchase Order	Line: Price Line: Quantity Prepaid Amount	n/a
Benford	Supplier	Invoice Limit Amount	n/a