Oracle
Sales Cloud
Securing Oracle Sales Cloud

Release 12
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# Oracle Sales Cloud

## Securing Oracle Sales Cloud

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Preface

This preface introduces information sources that can help you use the application.

Oracle Applications Help

Use the help icon to access Oracle Applications Help in the application. If you don’t see any help icons on your page, click the Show Help icon in the global header. Not all pages have help icons. You can also access Oracle Applications Help at https://fusionhelp.oracle.com.

Using Applications Help

Watch: This video tutorial shows you how to find help and use help features.

Additional Resources

- **Community:** Use Oracle Applications Customer Connect to get information from experts at Oracle, the partner community, and other users.

- **Guides and Videos:** Go to the Oracle Help Center to find guides and videos.

- **Training:** Take courses on Oracle Cloud from Oracle University.

Documentation Accessibility

For information about Oracle’s commitment to accessibility, see the Oracle Accessibility Program.

Comments and Suggestions

Please give us feedback about Oracle Applications Help and guides! You can send e-mail to: oracle_fusion_applications_help_ww_grp@oracle.com.
1 About This Guide

Audience and Scope

This guide is intended for anyone who is involved in implementing and administering security for Oracle Sales Cloud. Some of the tasks described in this guide are performed only or mainly during implementation of Oracle Sales Cloud. Most, however, can be performed at any time and as new requirements emerge. This guide provides information about:

- How role-based access control is implemented in Oracle Sales Cloud.
- How users gain visibility to object data.
- How to create and manage application users, and how to provision users with roles to provide them with access to application functions and data.
- How to set up, manage, and use the Security Console.
- How to customize security artifacts, such as security policies and roles.

During implementation, you can perform security-related tasks:

- By selecting the Security Console on the home page, then selecting the appropriate Security Console page
- By selecting Setup and Maintenance on the home page, then searching for the task on the Setup and Maintenance work area
- By opening tasks directly from an implementation project provided by Oracle
- By accessing an appropriate work area from the Navigator

Once the implementation is complete, you can perform most security-related tasks from the Security Console.

Related Guides

The following table lists related guides used during the implementation and administration of Oracle Sales Cloud.

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### Title | Description
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Oracle Sales Cloud Creating and Administering Analytics | Explains how to view and work with analytics and reports.
Oracle Sales Cloud Implementing Customer Data Management | Describes how to get started with the implementation of Customer Data Management capabilities such as duplicate identification, duplicate resolution, address validation, and data enrichment.

**Related Topics**
- Oracle Help Center
2 Authentication

Authentication and Identity Management

This topic describes the authentication and identity management services provided by Oracle for Cloud Applications.

Standard Authentication for Cloud Applications

Authentication, the process of verifying that a user is who they claim to be, is applied to all users, automated agents, or Web services that access an Oracle Cloud application. User credentials are checked at login and access is then granted or denied. In the standard method of authentication provided for Oracle Cloud environments, authentication providers validate user and application access based on a user name-password combination. Authentication providers also make user identity information available to other Cloud components when needed.

Identity Store

The Oracle Cloud authentication providers access the LDAP identity store, which is a logical repository of enterprise user identity data. Your LDAP directory stores definitions of LDAP user accounts.

In general, changes you make to user accounts are automatically synchronized between Oracle Sales Cloud and your LDAP directory server. However, you must also run processes on a daily basis to manage information exchange between your application and your LDAP directory server. For information, see the chapter about setting up application security.

Single Sign-On Authentication

Single Sign-On authentication, which enables users to sign in once but access multiple applications, is optionally available for Oracle Sales Cloud user authentication.

If your enterprise has moved from a traditional on-premises environment to an Oracle Cloud implementation, you might want to use your existing identity management solution for authenticating your employees in Oracle Sales Cloud, and might also want to provide a Single Sign-On experience. Implementing federated Single Sign-On allows you to provide users with Single Sign-On access to applications and systems located across organizational boundaries. For additional information, see Oracle Applications Cloud Service Entitlements (2004494.1) on My Oracle Support at https://support.oracle.com.

Note: Single Sign-On authentication is available on all platforms used to access the Sales Cloud application, including Oracle Mobile platforms, and is also available for Web services.
3 Authorization with Role-Based Access Control

Role-Based Access Control

When you receive your Oracle Cloud application, access to its functionality and data is secured using the industry-standard framework for authorization, role-based access control. You must implement the role-based access controls provided by Oracle Sales Cloud so that users have appropriate access to Oracle Sales Cloud data and functions.

In a role-based access control model, users are assigned roles, and roles are assigned access privileges to protected resources. The relationship between users, roles, and privileges is shown in the following figure.

In Oracle Sales Cloud, users gain access to application data and functions when you assign them roles, which correspond to the job functions in your organization.

Users can have any number of different roles concurrently, and this combination of roles determines the user's level of access to protected system resources. For example, a user might be assigned the Sales Manager role, the Sales Analyst role, and the Employee role. In this case, the user has the following access:

- As an employee, the user can access employee functions and data.
- As a sales manager, the user can access sales manager functions and data.
- As a sales analyst, the user can access sales analysis functions and data.

When the user logs into Oracle Sales Cloud and is successfully authenticated, a user session is established and all the roles assigned to the user are loaded into the session repository. Oracle Sales Cloud determines the set of privileges to application resources that are provided by the roles, then grants the user the most permissive level of access.

You can assign roles to a user manually, when you create the user, or automatically, by creating role provisioning rules.

Related Topics

- Provisioning Job and Abstract Roles to Users: Explained
Predefined Sales Roles

Many job and abstract roles are predefined in Oracle Sales Cloud. The following are the main predefined Sales job roles:

- Channel Account Manager
- Channel Operations Manager
- Channel Sales Manager
- Customer Contract Administrator
- Customer Data Steward
- Customer Relationship Management Application Administrator
- Data Steward Manager
- Enterprise Contract Administrator
- Enterprise Contract Manager
- Marketing Manager
- Marketing Operations Manager
- Marketing VP
- Master Data Management Application Administrator
- Partner Administrator
- Partner Sales Manager
- Partner Sales Representative
- Sales Administrator
- Sales Analyst
- Sales Catalog Administrator
- Sales Lead Qualifier
- Sales Manager
- Sales Representative
- Sales VP
- Supplier Contract Administrator

You also assign the following abstract roles to Oracle Sales Cloud users who are employees so they can carry out their work:

- Employee
- Resource

These predefined roles are part of the Oracle Sales Cloud security reference implementation. The security reference implementation is a predefined set of security definitions that you can use as supplied.
Role Types

This topic describes the roles provided by Oracle Sales Cloud and explains how they work together to provide users with permissions to application resources. Oracle Sales Cloud provides the following types of roles:

- Job roles
- Abstract roles
- Duty roles

The permissions each role provides are described in security reference manuals available on http://docs.oracle.com.

Job Roles

Job roles represent the job functions in your organization. Sales Representative and Sales Manager are examples of predefined job roles. You can also create custom job roles.

Job roles provide users with the permissions they need to perform activities specific to their jobs. For example, providing a user with the Sales Manager job role permits the user to manage salespeople within the organization, follow up on leads, generate revenue within a territory, build a pipeline, manage territory forecasts, and assist salespeople in closing deals. You can assign job roles directly to users.

Abstract Roles

Abstract roles represent a worker’s functions in the enterprise independently of the job they do. The following are examples of abstract roles used in Oracle Sales:

- Employee
- Resource

Abstract roles permit users to perform functions that span across the different jobs in the enterprise. For example, users who are employees must be provisioned with the Employee abstract role, so they can update their employee profiles and pictures. For Oracle Sales Cloud, you must also provision users with the Resource abstract role, so they can be assigned as a sales resource to work on leads, opportunities, and other sales tasks. You can assign abstract roles directly to users. You can also create custom abstract roles.

Duty Roles

Job and abstract roles permit users to carry out actions by virtue of the duty roles they include. Each predefined duty role consists of a logical grouping of privileges that represents the individual duties that users perform as part of their job. Duty roles are composed of security policies which grant access to work areas, dashboards, task flows, application pages, reports, batch programs, and so on.

Job roles and abstract roles inherit duty roles. For example, the Sales Manager job role inherits the Sales Lead Follow Up duty and the Sales Forecasting Management duty. The Sales Lead Follow Up duty makes it possible for managers to work with leads. The Sales Forecasting Management duty enables the management of sales forecasts.

Duty roles can also inherit other duty roles. They’re part of the security reference implementation, and are the building blocks of custom job and abstract roles. You can also create custom duty roles.

You can’t assign duty roles directly to users.
About Role Hierarchies and Inheritance

This topic describes how users inherit roles and privileges and introduces the Oracle Sales Cloud role hierarchy. In Oracle Sales Cloud, each role can be linked to other roles in a parent-child format to form a hierarchy of roles. As illustrated in the following figure, users are assigned job and abstract roles, which inherit duty roles and their associated privileges. Duty roles in turn can inherit privileges from subordinate duty roles. You can explore the complete structure of a job or abstract role on the Security Console.

Role hierarchies allow privileges to be grouped to represent a feature set in Oracle Sales Cloud, which simplifies feature management. Role hierarchies also provide privilege granularity and facilitate role reuse. For example, each role hierarchy beneath the job role represents a feature that is available through the job role to the user. Roles at lower levels of the hierarchy represent functionality that the feature requires. If this functionality is required by other features, the role that provides the functionality can be shared across roles.

⚠️ Note: Having many levels in a role hierarchy is not recommended. Deep role hierarchies are difficult to manage, and modification of the privileges in roles that are heavily reused can cause undesired consequences in other features.
Role Inheritance Example

This example shows how roles and privileges are inherited for a user, Tom Green, assigned the Sales Manager job role. The following figure shows a few representative duty roles.

In this example, an employee sales manager, Tom Green, is provisioned with the roles required to do the job: the Sales Manager job role, and the Employee and Resource abstract roles. Roles are inherited as follows:

- The Sales Manager job role inherits duty roles including the Sales Party Management duty role and the Opportunity Sales Manager duty role.
- Duty roles inherit other duty roles. For example, the Sales Party Management duty inherits the Sales Party Review duty and the Trading Community Import Batch Management duty, as well as many privileges.
- The duty roles can be associated with functional security policies and data security policies. For example, the inherited Sales Party Review duty includes security policies that specify which application pages sales managers can access to export assets.
Security Policies

Duty roles are associated with two types of security policies: functional security policies and data security policies. Security policies define the privileges provided by the duty role to access specific application resources. This topic describes both types of security policy.

**Note:** The privileges provided by each duty role are described in the security reference manuals available on http://docs.oracle.com.

**Functional Policies**

Functional policies permit an individual who is assigned a duty role to access different user interface elements, Web services, tasks flows, and other functions. For example, a sales manager who has the Delete Opportunity functional policy will be able to view and click the Delete button. Removing that policy removes the button from view. A functional policy is made up of the following:

- A duty role name. The name of the duty where the policy applies, for example, Opportunity Sales Manager.
- A functional privilege that specifies the application features that are being secured, for example, View Opportunity.

In the security reference manuals, functional privileges are listed in the Privileges section.

**Data Security Policies**

Data security policies specify the duty roles that can perform a specified action on an object, and the conditions under which the action can be carried out. A data security policy is composed of:

- A duty role name. The name of the duty where the policy applies. For example, Opportunity Sales Manager.
- A data privilege that defines the action being performed. For example, View Opportunity.
- The condition that must be met for access to be granted. For example, sales managers can view opportunities provided they are in the management chain or are members of the sales team on the opportunity.

If the View All condition is specified, the duty role provides access to all data of the relevant type.

Each data security policy represents an underlying SQL query. The application evaluates the query at run time, and permits access to data that meets the condition. Data privileges are listed in the Data Security Policies section of the security reference manuals.

**Policy Store**

The policy store is the repository of all roles for Oracle Cloud Applications. The policy store is also where the security policies defined for each role are stored. The Security Console is a tool for managing the policy store for Oracle Cloud applications.

**Security Customization: Points to Consider**

If the predefined security reference implementation doesn’t fully represent your enterprise, then you can make changes. For example, the predefined Sales Representative job role includes sales forecasting privileges. If some business groups in your
organization have the sales managers do forecasting, not the sales representatives, then you can create a custom Sales Representative role without those privileges.

During implementation, you evaluate the predefined roles and decide whether changes are needed. If changes are required, then you can either create a custom role from scratch or copy a predefined role and edit the copy as required. You can perform both tasks on the Security Console.

You can identify predefined roles easily by their role codes, which all have the prefix ORA_. For example, the role code of the Sales Representative application job role is ORA_ZBS_SALES_REPRESENTATIVE_JOB.

All predefined roles are granted many function security privileges and data security policies. They also inherit duty roles. To make minor changes to a role, copying the predefined role and editing the copy is the more efficient approach. Creating roles from scratch is most successful when the role has very few privileges and you can identify them easily.

**Missing Enterprise Jobs**

If jobs exist in your enterprise that aren’t represented in the security reference implementation, then you create custom job roles. Add duty roles to custom job roles, as appropriate.

**Predefined Roles with Different Privileges**

If the privileges for a predefined job role don’t match the corresponding job in your enterprise, then you create a custom version of the role. If you copy the predefined role, then you can edit the copy to add or remove duty roles, function security privileges, and data security policies, as appropriate.

**Predefined Roles with Missing Privileges**

If the privileges for a job aren’t defined in the security reference implementation, then you create custom duty roles. The typical implementation doesn’t use custom duty roles.

**Reviewing Predefined Roles**

This topic describes the ways in which you can access information about predefined roles. This information can help you to identify which users need each role and whether to make any changes before provisioning roles.

**Security Console**

On the Security Console, you can:

- Review the role hierarchy of any job, abstract, or duty role.
- Extract the role hierarchy to a spreadsheet.
- Identify the function security privileges and data security policies granted to a role.
- Compare roles to identify differences.

💡 **Tip:** The role codes of all predefined roles have the prefix ORA_.
Reports
You can run the User and Role Access Audit Report to produce an XML-format report of the function security privileges and data security policies for a specified role, all roles, a specified user, or all users.

Security Reference Manuals
Two manuals describe the security reference implementation for Oracle Sales Cloud users:

- The Oracle Applications Cloud Security Reference for Common Features includes descriptions of all predefined security data that's common to Oracle Fusion Applications.
- The Oracle Sales Cloud Security Reference includes descriptions of all predefined security data for Oracle Sales Cloud.

Both manuals contain a section for each predefined job and abstract role. For each role, you can review:

- Duty roles
- Role hierarchy
- Function security privileges
- Data security policies

You can access the security reference manuals on cloud.oracle.com. From the menu select Resources - Documentation - Applications. Select Sales Cloud, then Books.

Oracle Cloud Applications Security Console
The Security Console is an easy-to-use administrative work area where you perform most security-management tasks. This topic introduces the Security Console and describes how to access it.

Security Console Functions
Use the Security Console to:

- Review role hierarchies and role analytics.
- Create and manage custom job, abstract, and duty roles.
- Review the roles assigned to users.
- Perform user management tasks, including resetting user passwords and updating user e-mail addresses.

\[\textbf{Note:}\] You use the Manage Users work area, not the Security Console, to create users and to provision users with roles.

- Compare roles.
- Simulate the Navigator for a user or role.
- Manage the default format of user names and the enterprise password policy.
- Manage notifications for user-lifecycle events, such as password expiration.
• Manage PGP and X.509 certificates for data encryption and decryption.

Note: Oracle Sales Cloud does not use certificate functionality.

• Set up federation, and synchronize user and role information between Oracle Applications Security and Microsoft Active Directory, if appropriate.

Accessing the Security Console
You must have the IT Security Manager job role to access the Security Console. You open the Security Console by selecting Tools - Security Console from the home page or Navigator. These tasks, performed in the Setup and Maintenance work area, also open the Security Console:

• Manage Job Roles
• Manage Duties
• Manage Data Security Policies
4 Data Sharing Mechanisms and Object Visibility

Data Sharing Mechanisms

This chapter describes how users gain visibility to various objects in Oracle Sales Cloud. The conditions specified in data security policies control visibility to record-level data associated with a schema object, such as an opportunity. Conditions can use the following components as mechanisms for sharing data, provided that the sharing mechanism is applicable for the object:

- Team
- Partner team
- Territory
- Resource hierarchy
- Business unit

For example, for the Opportunity object, data can be shared through team membership, through the resource hierarchy, or through territory membership.

How Users Gain Access to Opportunities

This topic explains how the security reference implementation provided by Oracle determines who can access what opportunity information in your sales organization.

Whether or not you can access a particular opportunity depends on your membership in the resource and territory hierarchies. You can access an opportunity if:

- You create the opportunity.
- You are on the opportunity sales team.
- The opportunity owner or sales team member is your direct or indirect report in the resource hierarchy.
- You are the owner or are a member of the territory assigned to the opportunity.
- You are the owner or member of an ancestor territory of the territory assigned to the opportunity.
- You are assigned to a territory for the account associated with the opportunity.
- You are assigned to a territory that is an ancestor of the territory for the account associated with the opportunity.

Salespeople can see all opportunities related to their accounts. However, access differs between territory members and opportunity members:

- An opportunity owner gets full access to the opportunity, which includes the ability to edit as well as add and remove team members.
- Owners and members of territories or of ancestor territories assigned to the account of the opportunity get read-only access to the opportunity and are not added to the opportunity sales team.
- Owners and members of territories assigned to the opportunity product lines are added as a distinct list of territories to the opportunity sales team. Owners and members of these territories get full access to the opportunity.
Depending on a profile option, either only the owner or all the members of the territory are added as resources to the opportunity sales team. Regardless of the access level for these members as a resource on the opportunity team, they always have full access.

Owners and members of ancestor territories of the territory assigned to the opportunity do not get added to the opportunity sales team but they always get full access.

The following figure illustrates some of the different ways you can gain access to an opportunity:

- Named agents in the diagram (A, B, and C) can access the opportunity.
- Unnamed agents (highlighted in yellow) cannot access the opportunity.
- Sales managers can access the opportunity because a salesperson in their management chain has access.
This figure shows who in a sales hierarchy can access an opportunity.

- Agent A can access the opportunity because she created it. When you create an opportunity, you are the initial owner.
- Agent B can access the opportunity because he is on the sales team.
- Agent C can access the opportunity because he is the owner of the NW territory.
- Sales managers who are higher up in the management chain can also see the opportunity because access is provided through the resource hierarchy. Agent C’s manager can access the opportunity information, but agent C’s colleagues cannot.
- Sales administrators can access the opportunity.
Note: Access using accounts is not shown in this figure.

Special Access

Some access is not affected by the management hierarchy and membership in sales teams or territories. This special access includes:

- Administrators: Users assigned the Sales Administrator job role get full access to opportunities and other objects. This access is based on their privileges, regardless of where the administrators are in the management hierarchy. Administrators do not have to be on the sales team or members of territories.
- Deal Protection: Salespeople assigned to an opportunity retain the sales credit on an opportunity even if they are moved to another opportunity.

How Users Gain Access to Leads

This topic explains how the security reference implementation provided by Oracle Sales Cloud determines who can access lead information in your sales organization.

Qualified leads are assigned to a sales team based on sales territories. Unqualified leads are assigned to individual lead qualifiers either manually or based on rules defined in the assignment manager engine. Whether or not you can access a particular lead depends on your membership in the resource and territory hierarchies.

You can access a lead if:

- You are the lead owner.
- The lead owner is your direct or indirect report in the resource hierarchy.
- You are a member of the lead sales team.
- Resources in the management hierarchy of a newly added lead sales team member have the same level of access to the sales leads as the team member.
- You are the owner of the territory the lead is assigned to or of ancestor territories.
- You are a member of the sales territories assigned to the lead.

Multiple Business Units and Data Access

This topic describes how implementing multiple business unit functionality affects access to object transactional data.

A business unit (BU) is a unit of an enterprise that performs one or more business functions, such as Sales or Marketing. In Oracle Sales Cloud, a BU primarily provides a means of separating or sharing setup data and controlling transactional data access within an enterprise. By default, an enterprise structure is created as a single business unit to which all users belong. However, you can create additional BUs if required.

Users are associated with a business unit through their resource organization membership. Resource organizations are mapped to one or more BUs. When a Sales Cloud user is created, the user is assigned to a resource organization, and thereby gains access to each BU that is mapped to the resource organization. For example, users can access relevant
transactional data associated with their primary BU, but might also have access to relevant transactional data in other BUs through their resource organization.

**Note:** When you create a user in Oracle Sales Cloud, you specify a business unit for the user. However, only the BUs associated with the user’s resource organization are relevant in determining the BUs a user can access. If a BU is not specified for a resource organization, the default business unit is used.

Within Oracle Sales Cloud, the opportunity and lead business objects support the use of multiple business units. When you create an object that supports multiple business units, such as an opportunity, you specify the BU to associate with the object.

### Object Access in a Single Business Unit Environment (Default)

In this type of implementation, all users can access master data, such as product or account information, by default. In addition, access to transactional data for objects such as opportunities, contracts or leads, is determined as follows:

- Sales administrators can access transactional data for all objects.
- Sales users gain access to transactional data for an object through one of the following methods:
  - They have been granted full access to the object
  - Through territory or team membership
  - Through the resource management hierarchy

Full access to an object is provided through data security policies that include a condition of All Values. The following table provides additional information about other methods of object access.

<table>
<thead>
<tr>
<th>Type of Object Access</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Territory membership</strong></td>
<td>You gain access to an object if:</td>
</tr>
<tr>
<td></td>
<td>- You are the owner or member of the territory that is assigned to the object.</td>
</tr>
<tr>
<td></td>
<td>- You are the owner or member of an ancestor territory of the territory assigned to the object.</td>
</tr>
<tr>
<td></td>
<td>- Your direct or indirect report in the resource hierarchy is the owner or member of the territory assigned to the object.</td>
</tr>
<tr>
<td></td>
<td>- Your direct or indirect report in the resource hierarchy is the owner or member of an ancestor territory of the territory assigned to the object.</td>
</tr>
<tr>
<td><strong>Team membership</strong></td>
<td>You gain access to an object if:</td>
</tr>
<tr>
<td></td>
<td>- You are a member of the sales team assigned to the object.</td>
</tr>
<tr>
<td></td>
<td>- Your direct or indirect report in the resource hierarchy is a member of the sales team assigned to the object.</td>
</tr>
<tr>
<td></td>
<td>- You are a member of the partner team assigned to the object.</td>
</tr>
</tbody>
</table>
Object Access in a Multiple Business Unit Environment

In a multiple business unit environment, access to objects and data is influenced by the business unit the user belongs to. In this type of implementation, access to transactional data for objects, such as opportunities or leads, is determined as follows:

- Sales administrators can access transactional data for all objects that are associated with the business unit or units to which the administrators are assigned.

- Sales users access to transactional data for an object is the same in multiple BU environments and single BU environments. That is, sales users can access object data across BU boundaries provided that they have valid access to the object by means of territory or team membership, through the resource hierarchy, or by being granted full access to the object.

Business unit assignment can, however, indirectly affect a user’s access to object transactional data. In a multiple BU environment, BUs are available as territory dimensions and can be included as part of the territory coverage definition for the assignment of transactions. A sales user gains access to object data through territory membership. If BU is specified as a territory dimension, then the user’s access to data is limited to objects which, when they were created, were assigned to the same BU that is assigned to the user’s territory team.
5 Setting Up Applications Security

Security Synchronization Processes and Preferences

During implementation, the initial user, or a setup user with the IT Security Manager job role, must perform a number of tasks to prepare the application security environment. These tasks include running processes to import and synchronize data in the Oracle Fusion Applications Security tables, and setting options to control the default operation of functionality relating to security. To set up application security, you perform the tasks in the following task lists:

- Define Synchronization of Users and Roles from LDAP
- Define Security Synchronization Processes and Preferences

This topic introduces the tasks in these task lists and describes them in more detail in this chapter.

Run User and Roles Synchronization Process

This task runs a process that copies data from the LDAP directory to Oracle Fusion Applications Security tables.

Import Users and Roles into Application Security

This task runs a process that initializes and maintains the Oracle Fusion Applications Security tables. You’re recommended to schedule this process to run daily.

Import User Login History

This task runs a process that imports the history of user access to Oracle Fusion Applications. This information is required by the Inactive Users Report.

Manage Application Security Preferences

This task opens the Administration tab of the Security Console. Select the appropriate tab of the security console to set enterprise-wide preferences that affect users, roles, and notifications to application users.

Synchronizing User and Role Information

You run the process Retrieve Latest LDAP Changes once during implementation. This process copies data from the LDAP directory to the Oracle Fusion Applications Security tables. Thereafter, the data is synchronized automatically. To run this process, perform the task Run User and Roles Synchronization Process as described in this topic.
Running the Retrieve Latest LDAP Changes Process

Follow these steps:

1. Sign in to the application as a setup user.
2. Select **Navigator - Setup and Maintenance** to open the Setup and Maintenance work area.
3. Search for and select the Run User and Roles Synchronization Process task.
   - The process submission page for the Retrieve Latest LDAP Changes process opens.
4. Click **Submit**.
5. Click **OK** to close the confirmation message.

Importing Users and Roles into Applications Security

To implement security, you must use the Security Console. Before you can use the Security Console, you must initialize the Oracle Fusion Applications Security tables with existing user and role information. To initialize these tables, you perform the Import Users and Roles into Application Security task. This topic describes how to perform this task.

Running the Import User and Role Application Security Data Process

Sign in as a setup user and follow these steps:

1. Select **Navigator - Setup and Maintenance** to open the Setup and Maintenance work area.
2. Search for and select the Import Users and Roles into Application Security task.
3. On the Import Users and Roles into Application Security page, click **Submit**.

This action starts the Import User and Role Application Security Data process. Once the process completes, you can use the Security Console.

> **Note:** It’s recommended that you schedule this process to run daily.

Importing User Login History

During implementation, you perform the Import User Login History task in the Setup and Maintenance work area. This task runs a process that imports information about user access to Oracle Fusion Applications to the Oracle Fusion Applications Security tables. This information is required by the Inactive Users Report, which reports on users who have been inactive for a specified period. After you perform Import User Login History for the first time, you’re recommended to schedule it to run daily. In this way, you can ensure that the Inactive Users Report is up to date.

Scheduling the Import User Login History Process

Follow these steps:

1. Select **Navigator - Tools - Scheduled Processes** to open the Scheduled Processes work area.
2. In the Search Results section of the Overview page, click **Schedule New Process**.
3. In the **Schedule New Process** dialog box, search for and select the Import User Login History process.
4. Click **OK**.
5. In the Process Details dialog box, click Advanced.
6. On the Schedule tab, set Run to Using a schedule.
7. Set Frequency to Daily and Every to 1.
8. Enter start and end dates and times.
9. Click Submit.
10. Click OK to close the Confirmation message.

Related Topics
- Inactive Users Report

Managing Application Security Preferences

During implementation, a number of options are available on the Security Console for controlling the default functionality of tasks such as working with roles or certificates. Some of these options can be overridden. However, it is recommended that you set these options before you start to create application users or configure your security environment.

To configure these security preferences, the initial user, or a setup user with the IT Security Manager job role, performs the task Manage Application Security Preferences. This task opens the Administration tab of the Security Console from where you can do the following:

- On the General subtab of the Security Console Administration tab, you:
  - Define the default format of user names for the enterprise.
  - Set the enterprise password policy.
  - Specify for how long certificates remain valid.

  **Note:** Oracle Sales Cloud does not use certificate functionality.
  - Specify how often a warning appears to remind Security Console users to import latest user and role information.

- On the Roles subtab of the Security Console Administration tab, you:
  - Specify default prefix and suffix values for copied roles.
  - Specify a limit to the number of nodes that can appear in graphical representations of roles on the Roles tab of the security Console.
  - Specify whether hierarchies on the Roles tab appear in graphical or tabular format by default.
  - Manage editing of user-role memberships.
  - Manage editing of data security policies.

- On the Notifications subtab of the Security Console Administration tab, you:
  - Manage the notification of user and password events to affected users.
  - Define custom notification templates.

You can also configure security preferences by navigating directly to the Security Console (Navigator - Tools - Security Console). For detailed information about configuring default functionality for user names, roles, notifications, and passwords, see the topics in the remainder of this chapter.
Setting the Default User Name Format

During implementation, you specify the default format of user names for the enterprise. The default format you select is used to automatically generate a user name for a user if you don’t explicitly specify the user name when you create the user. This topic describes how to specify the default format of user names and the formats that are available.

Specifying the Format of User Names

Perform the steps in the following procedure to select the default format for user names:

1. Navigate to the Setup and Maintenance work area.
2. On the Setup and Maintenance page, search for and select the task Manage Applications Security Preferences.
   
   The Administration tab of the Security Console opens with the General subtab selected. (You can also navigate directly to the Security Console at any time by selecting Navigator - Tools - Security Console.)
3. In the User Preferences section of this subtab, select a user-name format. Select one of the options shown in the following table.

<table>
<thead>
<tr>
<th>Format Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Mail</td>
<td>The work e-mail (or party e-mail, for party users) is the user name. For example, the user name for <a href="mailto:john.smith@example.com">john.smith@example.com</a> is <a href="mailto:john.smith@example.com">john.smith@example.com</a>. To make duplicate names unique, a number is added. For example, <a href="mailto:john.smith2@example.com">john.smith2@example.com</a> may be used if <a href="mailto:john.smith@example.com">john.smith@example.com</a> and <a href="mailto:john.smith1@example.com">john.smith1@example.com</a> already exist. E-Mail is the default format.</td>
</tr>
<tr>
<td>FirstName.LastName</td>
<td>The user name is the user’s first and last names separated by a single period. For example, the user name for John Frank Smith is john.smith. To make duplicate names unique, either the user’s middle name or a random character is used. For example, John Smith’s user name could be john.frank.smith or john.x.smith.</td>
</tr>
<tr>
<td>F.LastName</td>
<td>The user name is the user’s last name prefixed with the initial of the user’s first name. For example, the user name for John Smith is jsmith.</td>
</tr>
<tr>
<td>Person or party number</td>
<td>The person or party number generated by the application is the user name. For example, if John Smith’s party number is 100000000178803, then the user name is 100000000178803. User names generated from party or person numbers can be difficult to remember so it’s recommended that you don’t select this option.</td>
</tr>
</tbody>
</table>

4. Enable or disable the option **Generate system user name when generation rule fails**. This option controls whether a system user name is generated if the user name rule fails, for example, if the default user name format is FirstName.LastName but a first name isn’t available.
   
   - If the option is enabled, a system user name is generated by applying these options in the following order until a unique user name is defined:
     - E-Mail
     - FirstName.LastName

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ORACLE
iii. If only the last name is available, then a random character is prefixed to the last name.
   o If the option is disabled, then an error is raised if the user name can't be generated in the selected format.

5. Click Save. Any changes take effect immediately.

Editing User Names
When creating users on the Create User page, you can enter user names in any format to override the default user names. You can also edit user names for individual users on the Edit User page.

Setting Password Policy
During implementation, you set the password policy for the enterprise. This topic describes the available options. To set the password policy, you perform the Manage Applications Security Preferences task, which opens the General subtab of the Security Console Administration tab. In the Password Policy section of this subtab, you select appropriate values. You can also change the enterprise policy at any time on the Security Console. Select Navigator - Tools - Security Console.

Password Policy Options
This table describes the available options for setting password policy.

<table>
<thead>
<tr>
<th>Password-Policy Option</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days Before Password Expiration</td>
<td>Specifies the number of days for which a password remains valid. After this period, users must reset their passwords. By default, users whose passwords expire must follow the Forgot Password process.</td>
<td>90</td>
</tr>
<tr>
<td>Days Before Password Expiry Warning</td>
<td>Specifies when a user is notified that a password is about to expire. By default, users are prompted to sign in and change their passwords. This value must be equal to or less than the value of the Days Before Password Expiration option.</td>
<td>80</td>
</tr>
<tr>
<td>Hours Before Password Reset Token Expiration</td>
<td>When users request a password reset, they’re sent a password-reset link. This option specifies how long a reset-password link remains active. If the link expires before the password is reset, then reset must be requested again. You can enter any value between 1 and 9999.</td>
<td>4</td>
</tr>
<tr>
<td>Password Complexity</td>
<td>Specifies whether passwords must be simple, complex, or very complex. Password validation rules identify passwords that fail the selected complexity test.</td>
<td>Simple</td>
</tr>
<tr>
<td>Disallow last password</td>
<td>Select to ensure that the new password is different from the last password.</td>
<td>No</td>
</tr>
</tbody>
</table>
### Setting Up Applications Security

#### Password-Policy Option

<table>
<thead>
<tr>
<th>Password-Policy Option</th>
<th>Description</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator can manually reset password</td>
<td>Passwords can be either generated automatically or reset manually by the IT Security Manager or IT Auditor. Select this option to allow user passwords to be reset manually. All passwords, whether reset manually or generated automatically, must satisfy the current complexity rule.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Note:** Users are notified when passwords are about to expire, have already expired, or have been reset only if appropriate notification templates are enabled. The predefined notification templates for these events are Password Expiry Warning Template, Password Expiration Template, and Password Reset Template.

### Password Expiry Report

The Password Expiry Report sends the password-expiration-warning and password-expired notifications. You must schedule the Password Expiry Report to run daily. To schedule the report:

1. Select **Navigator - Tools - Scheduled Processes**.
2. Click **Schedule New Process**.
3. In the **Schedule Process** dialog box, search for and select the Password Expiry Report process.
4. Click **OK**.
5. In the **Process Details** dialog box, click **Advanced**.
6. On the Schedule tab, set Run to **Using a schedule**.
7. Select a **Frequency** value. For example, select **Daily**.
8. Select a start date and time.
9. Click **Submit**.

### Setting Role Preferences

During implementation, you set default role preferences for the enterprise. This topic describes the role preferences and their effects. To set role preferences, you perform the Manage Applications Security Preferences task, which opens the General subtab of the Security Console Administration tab. From there, click the Roles subtab. You can also set role preferences at any time on the Security Console. Select **Navigator - Tools - Security Console**.

### Copied-Role Names

To create custom roles, you're recommended to copy predefined roles and edit the copied roles. When you copy a predefined role:

- The **ORA_** prefix, which identifies predefined roles, is removed automatically from the role code of the copied role.
- The enterprise prefix and suffix values are added automatically to the role name and code of the copied role.

You specify enterprise prefix and suffix values on the Roles subtab of the Security Console Administration tab. By default:

- Prefix values are blank.
- The role-name suffix is **Custom**.
- The role-code suffix is **_CUSTOM**.
For example, if you copy the Channel Account Manager job role (ORA_ZPM_CHANNEL_ACCOUNT_MANAGER_JOB), then the default name and code of the copied role are:

- Channel Account Manager Custom
- ZPM_CHANNEL_ACCOUNT_MANAGER_JOB_CUSTOM

You can supply prefix values and change the suffix values, as required. If you change these values, then click **Save**. The changes take effect immediately.

⚠️ **Note:** A role with the suffix AUTO_COPY indicates a predefined role that was customized in a previous release. For additional information about these roles, see Oracle Sales Cloud Security Upgrade Guide which is available at 1989500.1 (Article ID) on My Oracle Support.

### Graph Nodes and Default Views

On the Roles tab of the Security Console, you can display role hierarchies. By default, these hierarchies appear in tabular format. To use graphical format by default, deselect the **Enable default table view** option on the Roles subtab of the Security Console Administration tab.

When role hierarchies appear on the Roles tab, the number of nodes can be very high. You can limit the number of nodes by setting the **Graph Node Limit** option on the Roles subtab of the Security Console Administration tab. When you display a role hierarchy with more nodes than the specified limit, gray arrows indicate additional nodes. You can set such a node as the focus node to see the rest of its hierarchy.

### Data Security Policies and User Role Membership

By default, when creating or editing roles on the Security Console, you can manage their data security policies and assign the roles directly to users. These actions are controlled by the following options on the Roles subtab of the Security Console Administration tab:

- **Enable edit of data security policies**
  
  If you want to edit data security policies for custom roles using the Security Console, then you must leave this option enabled.

- **Enable edit of user role membership**
  
  To manage the automatic provisioning of job roles to users, you create role mappings. If you also want to be able to manually provision roles to specific users using the Security Console, then leave this option enabled.

### Managing User-Name and Password Notifications

By default, users are notified automatically of changes to their user accounts and passwords. These notifications are based on notification templates. Many templates are predefined, and you can create custom templates. During implementation, you identify the notifications that you plan to use and disable any that aren’t needed. This topic introduces the predefined notification templates and explains how to enable and disable notifications.
Predefined Notification Templates

This table describes the predefined notification templates. Each template is associated with a predefined event. For example, the Password Reset Template is associated with the password-reset event. You can see the notification templates and their associated events on the Notifications subtab of the Security Console Administration tab.

<table>
<thead>
<tr>
<th>Notification Template</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password Expiry Warning Template</td>
<td>Warns the user that a password is expiring soon and provides instructions for resetting the password.</td>
</tr>
<tr>
<td>Password Expiration Template</td>
<td>Notifies the user that a password has expired and provides instructions for resetting the password.</td>
</tr>
<tr>
<td>Forgot User Name Template</td>
<td>Sends the user name to a user who requested the reminder.</td>
</tr>
<tr>
<td>Password Generated Template</td>
<td>Notifies the user that a password has been generated automatically and provides instructions for resetting the password.</td>
</tr>
<tr>
<td>Password Reset Template</td>
<td>Sends a reset-password link to a user who requested a new password.</td>
</tr>
<tr>
<td>Password Reset Confirmation Template</td>
<td>Notifies the user when a password has been reset.</td>
</tr>
<tr>
<td>New Account Template</td>
<td>Notifies a user when a user account is created and provides a reset-password link.</td>
</tr>
<tr>
<td>New Account Manager Template</td>
<td>Notifies the user’s manager when a user account is created.</td>
</tr>
</tbody>
</table>

You’re recommended not to edit the predefined templates, as your changes are lost on upgrade. However, you can create custom templates and disable the predefined versions. Each predefined event can be associated with only one enabled notification template at a time.

Enabling and Disabling Notifications

For any notification to be sent, notifications in general must be enabled. Ensure that the **Enable notifications** option on the Notifications subtab of the Security Console Administration tab is selected. When notifications are enabled, you can disable specific templates. For example, if you disable the New Account Template, then users aren’t notified when their accounts are created. Other notifications continue to be sent.

To disable a template:

1. Select the template name on the Notifications subtab.
2. On the Edit Notification page, deselect the **Enabled** option.
Creating a Custom Notification Template

Predefined notification templates exist for events related to the user-account life cycle, such as user-account creation and password reset. When templates are enabled, users are notified automatically of events that affect them. To provide custom notifications, you create custom notification templates. This topic explains how to create a custom notification template.

Creating a Notification Template

Follow these steps:

1. Select **Navigator - Tools - Security Console** to open the Security Console, and click the Administration tab.
2. Click the Notifications subtab on the Administration tab.
3. Click **Add Template**.
4. On the Add Notification Template page, enter the template name.
5. In the **Event** field, select a value. The predefined content for the selected event appears automatically in the **Message Subject** and **Message Text** fields. Tokens in the message text are replaced automatically in generated notifications with values specific to the user.
6. Update the **Message Subject** field, as required. The text that you enter here appears in the subject line of the notification e-mail.
7. Update the message text, as required. These tokens are supported in the message text.

<table>
<thead>
<tr>
<th>Token</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>notificationUserName</td>
<td>User name to which notifications are sent</td>
</tr>
<tr>
<td>userEmailAddress</td>
<td>Address to which e-mail notifications are sent</td>
</tr>
<tr>
<td>userLoginId</td>
<td>User name</td>
</tr>
<tr>
<td>firstName</td>
<td>User’s first name</td>
</tr>
<tr>
<td>lastName</td>
<td>User’s last name</td>
</tr>
<tr>
<td>managerFirstName</td>
<td>Manager’s first name</td>
</tr>
<tr>
<td>managerLastName</td>
<td>Manager’s last name</td>
</tr>
<tr>
<td>loginURL</td>
<td>URL where the user can sign in</td>
</tr>
<tr>
<td>resetURL</td>
<td>URL where the user can reset his or her password</td>
</tr>
<tr>
<td>CRLF</td>
<td>New line</td>
</tr>
<tr>
<td>SP4</td>
<td>Four spaces</td>
</tr>
</tbody>
</table>

8. To enable the template, select the **Enabled** option.
9. Click **Save and Close**.

*Note:* When you enable a custom template for a predefined event, the predefined template for the same event is automatically disabled.

**Scheduling the Import User and Role Application Security Data Process**

You must run the Import User and Role Application Security Data process to set up and maintain the Security Console. During implementation, you perform the Import Users and Roles into Application Security task to run this process. It copies users, roles, privileges, and data security policies from the LDAP directory, policy store, and Applications Core Grants schema to Oracle Fusion Applications Security tables. Having this information in the Oracle Fusion Applications Security tables makes the assisted search feature of the Security Console fast and reliable. After the process runs to completion for the first time, you’re recommended to schedule Import User and Role Application Security Data to run daily. This topic describes how to schedule the process.

*Note:* Whenever you run the process, it copies only those changes that were made since it last ran.

**Scheduling the Process**

Follow these steps to schedule the Import User and Role Application Security Data process:

1. Select **Navigator - Tools - Scheduled Processes** to open the Scheduled Processes work area.
2. In the Search Results section of the Overview page, click **Schedule New Process**.
3. In the **Schedule New Process** dialog box, search for and select the Import User and Role Application Security Data process.
4. Click **OK**.
5. In the **Process Details** dialog box, click **Advanced**.
6. On the Schedule tab, set **Run to Using a schedule**.
7. Set **Frequency** to **Daily** and **Every** to **1**.
8. Enter start and end dates and times. The start time should be after any daily run of the Send Pending LDAP Requests process completes.
9. Click **Submit**.
10. Click **OK** to close the confirmation message.

**Synchronization Process Preferences**

On the General subtab of the Security Console Administration tab, you can set the **Synchronization Process Preferences** option. This option controls how frequently you’re reminded to run the Import User and Role Application Security Data process. By default, the warning appears if the process hasn’t run successfully in the last 6 hours. If you schedule the process to run daily, then you may want to increment this option to a value greater than 24.
Send Pending LDAP Requests

You're recommended to run the Send Pending LDAP Requests process daily to send future-dated and bulk requests to your LDAP directory server. Schedule the process in the Scheduled Processes work area. This topic describes the purpose of Send Pending LDAP Requests.

Send Pending LDAP Requests sends the following items to the LDAP directory:

- Requests to create, suspend, and reactivate user accounts.
  - When you create a person record for a worker, a user-account request is generated automatically.
  - When a person has no roles and no current work relationships, a request to suspend the user account is generated automatically.
  - A request to reactivate a suspended user account is generated automatically if you rehire a terminated worker.

The process sends these requests to the LDAP directory unless the automatic creation and management of user accounts are disabled for the enterprise.

- Work e-mails.
  
  If you include work e-mails when you create person records, then the process sends those e-mails to the LDAP directory.

- Role provisioning and deprovisioning requests.
  
  The process sends these requests to the LDAP directory unless automatic role provisioning is disabled for the enterprise.

- Changes to person attributes for individual users.
  
  The process sends this information to the LDAP directory unless the automatic management of user accounts is disabled for the enterprise.

>Note: All of these items are sent to the LDAP directory automatically unless they're either future-dated or generated by bulk data upload. You run the process Send Pending LDAP Requests to send future-dated and bulk requests to the LDAP directory.

Only one instance of Send Pending LDAP Requests can run at a time.

Scheduling the Send Pending LDAP Requests Process

The Send Pending LDAP Requests process sends bulk requests and future-dated requests that are now active to your LDAP directory. You're recommended to schedule the Send Pending LDAP Requests process to run daily. This procedure explains how to schedule the process.

>Note: Schedule the process only when your implementation is complete. Once you schedule the process you can’t run it on an as-needed basis, which may be necessary during implementation.
Scheduling the Send Pending LDAP Requests Process

Follow these steps:

1. Select **Navigator - Tools - Scheduled Processes** to open the Scheduled Processes work area.
2. Click **Schedule New Process** in the Search Results section of the Scheduled Processes work area.
3. In the **Schedule New Process** dialog box, search for and select the Send Pending LDAP Requests process.
4. In the **Process Details** dialog box, set **User Type** to identify the types of users to be processed. Values are **Person**, **Party**, and **All**. You’re recommended to leave **User Type** set to **All**.
5. The **Batch Size** field specifies the number of requests in a single batch. For example, if 400 requests exist and you set **Batch Size** to **25**, then the process creates 16 batches of requests to process in parallel.

   The value **A**, which means that the batch size is calculated automatically, is recommended.

6. Click **Advanced**.
7. On the Schedule tab, set **Run** to **Using a schedule**.
8. In the **Frequency** field, select **Daily**.
9. Enter the start and end dates and times.
10. Click **Submit**.

**Related Topics**
- **Send Pending LDAP Requests: Explained**

Bridge for Active Directory: Explained

The bridge for Microsoft Active Directory synchronizes user account information between Oracle Applications Cloud and Microsoft Active Directory.

Using the Bridge for Microsoft Active Directory

To use the bridge for Active Directory and synchronize information between Oracle Applications Cloud and Active Directory, perform the following steps:

1. Configure the bridge for Active Directory. Set the configuration options on the Administration tab in the Security Console.
2. Map attributes between source and target applications for synchronization.
3. Download and install the bridge for Active Directory.
4. Perform initial synchronization of users.
5. Perform manual or automatic synchronization regularly to maintain consistency of data on the source and target applications.

Prerequisites

Before setting up the bridge between Active Directory and Oracle Applications Cloud, you must:

- Install Java Runtime environment (JRE). The bridge is compatible with JRE versions 6, 7, and 8.
- Install the bridge on a computer that can connect to your Active Directory server.
• Enable Single Sign-On (SSO) between Oracle Applications Cloud and your Active Directory instance.

Source and Target
The bridge synchronizes information between the source and target:

• Source: Is the application that contains the user and role information that is copied to the target.
• Target: Is the application that is updated to contain the same user and role information as the source.

You can select either Oracle Applications Cloud or Active Directory as the source.

Related Topics
• Getting Started with Oracle Applications Cloud Bridge for Active Directory
6 Sales Cloud Users and Role Provisioning

About Sales Cloud Users

After you have signed up with Oracle Sales Cloud, you receive the user name and password for one initial user. The initial user is provisioned with the job roles and privileges necessary to perform many implementation tasks, including creating other users. This topic describes the privileges assigned to the initial user and to each of the different types of sales user that the initial user can create.

Note: The user types outlined are suggestions. The privileges granted to any user are entirely dependent on the assigned job and abstract roles so, for example, you can create a sales user who is also a setup user if you want.

Initial Users

The initial user is configured to perform many security tasks, including the creation of other users, however, the initial user cannot perform all implementation tasks without assigning themselves additional privileges. For example, the initial user can submit scheduled processes but can’t monitor their status.

The roles assigned to the initial user are:

- Application Implementation Consultant job role
  Provides access to all setup tasks across all products.
- IT Security Manager job role
  Provides access to security tasks, including the ability to assign other job and abstract roles.
- Application Diagnostic Administrator job role
  Provides access to diagnostic tests and data.

The initial user can create each of the following types of user.

Setup Users

You can create setup users and provision them with the same job roles as the initial user so that they can help to perform all the standard implementation set up tasks for your Oracle Sales Cloud implementation. Setup tasks include managing security, enterprise setup, and creating other users, including other users with the same privileges.

You also need to provision setup users with the following additional roles:

- Sales Analyst job role
  Makes it possible to create Sales Predictor rules.
- Sales Administrator job role
  Permits the setup user to perform the same tasks as a sales administrator, such as set up and administer sales territories and processes.
- Employee abstract role
Provides the ability to run and monitor background processes.

Setup users are not part of the sales organization so are not created as resources in Oracle Sales Cloud and are not provisioned with the Resource abstract role. You cannot assign sales work to them and they cannot view sales transaction data or reports. However, setup users do have the privileges to assign themselves additional roles to make those tasks possible. For information about creating setup users, see Oracle Sales Cloud Getting Started with Your Implementation at http://docs.oracle.com/.

Sales Administrators
Sales administrators, like other sales application users, are created as resources and are provisioned with job and abstract roles on the basis of the resource role they are assigned. You must create at least one sales administrator user.

Sales administrators are provisioned with the Sales Administrator job role, which includes permissions to manage the import of data from legacy systems, to customize the application according to business needs, and to set up and administer the sales territories and sales processes.

Sales administrator users can view sales transactional data and reports but cannot configure sales application security or perform tasks related to an enterprise setup. Sales administrator users are provisioned with the following roles:

- Sales Administrator job role
- Resource abstract role
- Employee abstract role

To create sales administrators, follow the procedure outlined in the topic Creating Sales Application Users for Oracle Sales Cloud: Worked Example.

Sales Application Users
You create sales application users as resources. As resources, application users can be assigned work and appear in your sales organization directory.

Sales users are provisioned with job and abstract roles according to the resource role they are assigned. The provisioned job roles do not permit sales users to perform implementation tasks, but they can perform a functional setup within the application, depending on their role. Sales application users are provisioned with the following roles:

- The job roles that they require to perform their job
- The Resource abstract role
- The Employee or the Contingent Worker abstract role, depending on the employee type of the user

Sales Restricted Users
To do their jobs effectively, users must be able to view all the data that is relevant to their role. In some cases, however, users do not require the ability to create, update or delete that data. You can create sales application users who have extensive privileges to view sales data, but limited privileges to change data, by provisioning users with the Sales Restricted User job role.

Users assigned the Sales Restricted User job role can:

- View accounts, contacts, leads and opportunities.
- Create and modify reports and analytics.
• Update, create and manage service requests.
• Create, update and delete notes, tasks and activities.
• Edit forecasts.
• Access content in Sales Lightbox.

Assigning the Sales Restricted User job role to the following types of users provides these users with the visibility to sales data that they require without assigning them excess privileges:
• Back office users can view reports, edit forecasts, and view activities.
• Service representatives can view customer information and can see leads and opportunities.
• Seasonal or administrative users can view leads and opportunities.

For information about creating restricted users and assigning roles to them, see the topic Creating Sales Restricted Users.

Related Topics
• Creating Sales Restricted Users
• Creating Application Users for Oracle Sales Cloud

Methods of Creating Users

This topic provides information about the methods available for creating users in Oracle Sales Cloud. Review this information before you create setup and sales application users. You can create users in either of the following ways. You can:

• Create users individually in the Manage Users work area.
  You can navigate to this work area using the Navigator menu from any application page.
  Use this method to create setup users, and to create individual sales application users.

• Import users from a file using the Define File-Based Data Import group of tasks from the Setup and Maintenance work area.
  Import users from a file if you have a large number of users to create. To import users, you must understand how user attributes are represented in Oracle Sales Cloud and how to map the attributes in your file to the attributes required by the application. You cannot import setup users because the import process requires you to import sales resources. For additional information about importing users, see the following information at http://docs.oracle.com/:
  ◦ The chapter about importing users from a file in Oracle Sales Cloud Getting Started with Your Implementation
  ◦ The chapter about importing employee resources in Oracle Sales Cloud Understanding File-Based Data Import and Export

> Note: You must use the Manage Users work area, and not the Security Console, for creating individual users. Use the Security Console to perform the user management tasks, such as resetting user passwords and updating user e-mail addresses, described in this guide.

Related Topics
• Creating Application Users for Oracle Sales Cloud
Tasks You Accomplish by Creating Users

When you create users in Oracle Sales Cloud, a number of other tasks are automatically performed. For example, users are sent e-mails with their user names and initial passwords, and the organization chart for your sales organization is built. Whether or not a task is performed depends on the type of user created, as explained in the following sections.

Tasks Accomplished for all Users

The tasks in the following table are completed regardless of the type of user you create: setup users, sales administrators, or sales application users. These tasks are performed whether the user is created in the UI or through file import.

<table>
<thead>
<tr>
<th>Task Accomplished</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notifies a user when a user account is created and provides sign-in details.</td>
<td>You can prevent e-mails from being sent either when creating individual users or by changing the default notification settings as described in the chapter Setting Up Applications Security. The application sends the user notifications only once, either on account creation or later, depending on the setup.</td>
</tr>
<tr>
<td>Automatically provision the job and abstract roles that provide the security settings users require to do their jobs.</td>
<td>Job and abstract roles are provisioned based on the autoprovisioning rules discussed later in this chapter.</td>
</tr>
<tr>
<td>Create rudimentary employee records. Employee records are used only if you are also implementing Oracle HCM Cloud, or if you implement it in the future.</td>
<td>You must specify each user either as an employee or as a contingent worker and enter the user’s business unit and legal employer. When you create users, the application generates employee records for each user based on your entries.</td>
</tr>
</tbody>
</table>

Tasks Accomplished for Resource Users

When you create users as resources by entering resource information for the user, Oracle Sales Cloud also performs the tasks shown in the following table.

![Note: These tasks do not apply to setup users because they are not created as resources in the organization.](image)

<table>
<thead>
<tr>
<th>Task Accomplished</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create resources that can be assigned sales work such as leads, opportunities, and tasks.</td>
<td>Setup users aren’t resources in your application and so can’t be assigned to sales teams or view reports.</td>
</tr>
<tr>
<td>Create the resource reporting hierarchy used for reporting, forecasting, and work assignments.</td>
<td>When you create a resource, you specify a manager for that resource and build a resource reporting hierarchy.</td>
</tr>
<tr>
<td>Create resource records that individual users can update with personal</td>
<td>Setup users aren’t resources and so their information doesn’t appear in your sales organization directory.</td>
</tr>
</tbody>
</table>
Task Accomplished

<table>
<thead>
<tr>
<th>Task</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a hierarchy of resource organizations.</td>
<td>Each resource is assigned to a resource organization, and the application builds a hierarchy of these organizations based on the resource reporting hierarchy. Setup users aren’t resources and so aren’t assigned to resource organizations.</td>
</tr>
</tbody>
</table>

About the Resource Reporting Hierarchy

You build a resource reporting hierarchy when you create sales application users by specifying the manager of each user you create. If you are creating users in the user interface, then you must start by creating the user at the top of the hierarchy and work your way down. If you are importing users, then the order doesn’t matter provided that all of your users are in the same file.

The resource reporting hierarchy doesn’t have to mirror the formal reporting hierarchy, which is captured separately in the Oracle HCM Cloud application if it has been implemented. In Oracle Sales Cloud, you can have only one resource reporting hierarchy reporting to one person.

Resource Organizations and the Resource Organization Hierarchy

You must assign each manager that you create as a user with his or her own resource organization. All direct reports who are individual contributors inherit their manager’s organization. The application automatically builds a resource organization hierarchy, using the resource reporting structure. The resource organizations remain even if managers leave. You can reassign the resource organizations to their replacements.

In Oracle Sales Cloud, resource organizations serve a limited purpose. The name of each resource organization appears in the application’s Resource Directory, which users can access to obtain information about their coworkers, and in social media interactions. However, resource organizations aren’t used in application security or for work assignments. You assign work to individuals rather than their organizations.

You access the Resource Directory from the Navigator menu. The resource organization names appear under each person’s title. The resource organization names don’t have to reflect the names of departments. Departments are tracked along with employee records in the Oracle HCM Cloud application if it has been implemented.

**Related Topics**

- Creating Application Users for Oracle Sales Cloud

About Provisioning Job and Abstract Roles to Users

This topic describes how role provisioning is implemented in Oracle Sales Cloud.

About Provisioning Roles to Users

Sales Cloud users gain access to data and functions through the job and abstract roles they are assigned. Roles are provisioned to users through predefined role provisioning rules, or through provisioning rules you create using the Manage
HCM Role Provisioning Rules task from the Setup and Maintenance work area. Each provisioning rule, also known as a role mapping, defines the following:

- The job and abstract roles to provision
- The conditions that must exist for the roles to be provisioned
- Whether or not role provisioning is automatic

The provisioning rules use resource roles as the condition for provisioning job and abstract roles to sales users. Each provisioning rule can use one resource role and you assign a resource role to each sales user you create.

- **Note:** The resource role should not be confused with job or abstract roles, which provide the user’s security permissions. The resource role merely describes the role the user plays in the organization and provides the job title which appears in the company resource directory for the user. Resource roles are used in provisioning roles to sales users but not to setup users.

If you select the automatic role provisioning option for a rule, then roles are provisioned automatically when you create the user if the user matches the rule conditions. It does not matter if you create users manually in the user interface, or import them from a file.

The following figure provides an example of how role provisioning rules work.

1. When you create the Sales Manager user, you assign that user the Sales Manager resource role provided by Oracle (callout 1), which is the user’s title in the organization. You also create the user as an employee person type.
2. The role provisioning rules use the resource role and person type values as conditions.
3. When you create a user as an employee with the sales manager resource role, then the conditions are true and the rules automatically assign the user with the Sales Manager job role and the Resource abstract role, and with the Employee abstract role.

Note: Oracle provides a predefined rule which automatically assigns the Employee abstract role to all active users who are created as employees, including users who are not sales resources, such as setup users. The Contingent Worker abstract role is automatically assigned to active non-employee users, that is, users created as contingent workers.

Resource Roles and Provisioning Rules Provided by Oracle
Oracle provides resource roles and provisioning rules for provisioning the standard sales job roles to users. The following table lists the role provisioning rules that are provided by Oracle, the condition that triggers the provisioning, and the job and abstract roles the rule provisions. With the exception of the partner provisioning rules, each rule uses two rule conditions to provision the relevant roles to a user:

- Resource Role or Person Type
  The Resource Role or Person Type condition specifies the job and abstract roles assigned to users.

- HR Assignment Status
  The HR Assignment Status condition ensures that the provisioned job roles are automatically removed if the user is terminated.

  The HR Assignment Status condition is not applicable to partner users who are created as external sales users. As a result, the partner provisioning rules specify only one condition, Resource Role.
For each role assigned by the provisioning rules, the Requestable, Self-Requestable, and Autoprovision options are enabled.

> **Note:** If you are using Oracle Sales Cloud in a Global Single Instance (GSI) environment, then Oracle does not provide these role-provisioning rules for you. You must create them manually.

<table>
<thead>
<tr>
<th>Provisioning Rule Name</th>
<th>Condition</th>
<th>Job or Abstract Roles Provisioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Account Manager</td>
<td>HR Assignment Status is Active</td>
<td>Channel Account Manager</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Channel Account Manager</td>
<td>Resource</td>
</tr>
<tr>
<td>Channel Sales Manager</td>
<td>HR Assignment Status is Active</td>
<td>Channel Sales Manager</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Channel Sales Manager</td>
<td>Resource</td>
</tr>
<tr>
<td>Channel Operations Manager</td>
<td>HR Assignment Status is Active</td>
<td>Channel Operations Manager</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Channel Operations Manager</td>
<td>Resource</td>
</tr>
<tr>
<td>Contract Administrator</td>
<td>HR Assignment Status is Active</td>
<td>Contract Administrator</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Contract Administrator</td>
<td>Resource</td>
</tr>
<tr>
<td>Contract Manager</td>
<td>HR Assignment Status is Active</td>
<td>Contract Manager</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Contract Manager</td>
<td>Resource</td>
</tr>
<tr>
<td>Customer Data Steward</td>
<td>HR Assignment Status is Active</td>
<td>Customer Data Steward</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Customer Data Steward</td>
<td>Resource</td>
</tr>
<tr>
<td>Data Steward Manager</td>
<td>HR Assignment Status is Active</td>
<td>Data Steward Manager</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Data Steward Manager</td>
<td>Resource</td>
</tr>
<tr>
<td>Partner Administrator</td>
<td>Resource Role is Partner Administrator</td>
<td>Partner Administrator</td>
</tr>
<tr>
<td>Partner Sales Manager</td>
<td>Resource Role is Partner Sales Manager</td>
<td>Partner Sales Manager</td>
</tr>
<tr>
<td>Partner Sales Representative</td>
<td>Resource Role is Partner Salesperson</td>
<td>Partner Sales Representative</td>
</tr>
<tr>
<td>Sales Administrator</td>
<td>HR Assignment Status is Active</td>
<td>Sales Administrator</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Sales Administrator</td>
<td>Resource</td>
</tr>
<tr>
<td>Sales Lead Qualifier</td>
<td>HR Assignment Status is Active</td>
<td>Sales Lead Qualifier</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Sales Lead Qualifier</td>
<td>Resource</td>
</tr>
<tr>
<td>Sales Manager</td>
<td>HR Assignment Status is Active</td>
<td>Sales Manager</td>
</tr>
</tbody>
</table>


### Steps for Setting Up Role Provisioning

Before you create setup or sales users, there are some role provisioning setup tasks you might have to perform, such as creating additional resource roles or role provisioning rules. These tasks are described in this topic.

#### Create Additional Resource Roles

Resource roles are provided for the most commonly used job roles included with the application. Resource role and job role names are the same except for the Salesperson resource role, which matches the Sales Representative job role. Review the predefined resource roles provided in Sales Cloud and determine whether or not you require additional resource roles.

You create additional resource roles using the Manage Resource Roles task from the Setup and Maintenance work area in the following circumstances:

- You are creating users with job roles that are not provided by Oracle, or your organization uses different job titles. For example, you must create a CEO resource role if you want to include the CEO title in your organization chart. It’s not one of the resource roles created for you.
- You want to provision a user or a subset of users with special privileges. For example, if one of the sales managers in the organization is also in charge of maintaining territories and sales processes, then you create a new resource role that you can provision with both the Sales Manager and the Sales Administrator job roles.

For information on creating additional resource roles, see the topic Creating Additional Resource Roles.

#### Create Additional Role Provisioning Rules

Role provisioning rules are provided for the most commonly used resource roles included with the application. You must create rules for all other resource roles you use.

<table>
<thead>
<tr>
<th>Provisioning Rule Name</th>
<th>Condition</th>
<th>Job or Abstract Roles Provisioned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resource Role is Sales Manager</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resource Role is Salesperson</td>
<td></td>
</tr>
<tr>
<td>Sales Representative</td>
<td>HR Assignment Status is Active</td>
<td>Sales Representative</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Salesperson</td>
<td>Resource</td>
</tr>
<tr>
<td>Sales Vice President</td>
<td>HR Assignment Status is Active</td>
<td>Sales Vice President</td>
</tr>
<tr>
<td></td>
<td>Resource Role is Sales Vice President</td>
<td>Resource</td>
</tr>
<tr>
<td>Contingent Worker</td>
<td>HR Assignment Status is Active</td>
<td>Contingent Worker</td>
</tr>
<tr>
<td></td>
<td>System Person Type is Contingent Worker</td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>HR Assignment Status is Active</td>
<td>Employee</td>
</tr>
<tr>
<td></td>
<td>System Person Type is Employee</td>
<td></td>
</tr>
</tbody>
</table>
When you are creating provisioning rules for users who are sales resources, each rule must provision both the relevant job role and the Resource abstract role. You can assign multiple job roles to an individual. For information about creating additional provisioning rules, see the topic Creating Rules to Automatically Provision Job Roles to Sales Users.

Related Topics

- Creating Rules to Automatically Provision Job Roles to Sales Users: Worked Example
Chapter 7

Getting Ready to Create Sales Users

What You Must Do Before Creating Sales Users

When you create sales application users, either in the UI or by importing them from a file, you not only provision the permissions the users need to do their jobs, but you also build the organization chart for your sales organization. This means that you must set up any additional role provisioning rules you require, as well as the elements that the application uses to create the organization chart in the Resource Directory, such as the root of the organization chart, and the names of the roles the resources play in the organization.

You are getting ready to create two types of sales users:

- Sales team members without any sales application administration duties. These include salespeople, sales managers, and sales vice presidents.
- At least one sales administrator user who will set up and administer the sales territories and sales processes.

Setup Overview

Before creating sales users, make sure that you have completed the following tasks:

1. Create any additional resource roles you need.
   You must assign a resource role, a name describing the role each resource plays in the organization, to each sales user you create. The resource roles display right underneath user names in the resource directory and elsewhere in the UI. You also use the resource roles as conditions in your provisioning rules.
   For information about creating resource roles, see the topic Creating Additional Resource Roles.

2. Create a resource organization for each of the manager users you create, including the top manager in your hierarchy.
   You can use the Manage Internal Resource Organizations task to create each resource organization. For details, see the topic Creating Resource Organizations. Alternatively, you can create each resource organization as you create each manager user in the UI or when you import the user. Individual contributors who aren’t managers inherit the organization assigned to their managers.
   As you create users, the application creates an organization hierarchy that you can use to browse through the sales organization’s resource directory.

3. You can explicitly designate the resource organization you create for the top manager in your organization as the top of your organization tree by using the Manage Resource Organization Hierarchies task. For details, see the topic Designating a Resource Organization as the Top of the Sales Hierarchy.
   If you don’t specify the top organization, the application automatically builds the resource organization hierarchy based on the management hierarchy you specify when you create users. You must enter a manager for each user you create, except for the manager at the top of the resource hierarchy.

4. Decide what job roles you want to assign to your users.
   Remember that you are not restricted to assigning one job role to a user. For example, you might want to provision the sales manager in charge of determining sales territories and sales processes with the Sales Administrator job role in addition to the Sales Manager job role. Assigning both job roles allows this resource to perform the required sales setups.
You must create at least one user with the Sales Administrator job role to perform these setups.

5. If you created additional resource roles, then create the provisioning rules to automatically provision the appropriate job roles and abstract roles to users who are assigned those resource roles. You must create a provisioning rule for every resource role you use.

For information about creating provisioning rules, see the topic Creating Rules to Automatically Provision Job Roles to Sales Users.

6. When you create users, the application sends e-mails with the sign-in credentials to the new users unless you disable notifications. You can configure this behavior as described in the topic Managing User-Name and Password Notifications.

Creating a Resource Organization

You must create a resource organization for every manager in your sales organization, including the top manager, usually the CEO. Use the procedure in this topic if you want to create your resource organization hierarchy before you create users. Alternatively, you can create resource organizations while creating manager users in the UI or by importing them. When you import users from a file, you can create the resource organizations automatically from the information you include in the file itself.

Creating the Resource Organization

To create a resource organization:

1. While signed in as a setup user, search for the Manage Internal Resource Organizations task in the Setup and Maintenance work area.
2. Select the Manage Internal Resource Organizations task from the search results list.

   The Manage Internal Resource Organizations page is displayed.
3. Click the Create icon.

   The Create Organization: Select Creation Method page is displayed.
4. Select Option 2: Create New Organization.
5. Click Next.
6. Enter the name of the resource organization in the Name field, for example, Vision Corp. This name will be visible in the resource directory.

   Note the following points:
   
   - Each resource organization name you enter must be unique.
   - The names don’t have to correspond to any formal organization in your enterprise. The names are there solely to create a resource directory.
   - Don’t use the name of a manager as the organization name as you might want to reassign the organization to someone else later.
7. In the Organization Usages region, click the Add icon and select Sales Organization.
8. Click Finish.
Designating an Organization as the Top of the Sales Hierarchy

After you have created the resource organization for the top person in the sales organization hierarchy, designate that resource organization as the top of the sales hierarchy in the application. If you don’t explicitly designate specify the top organization, the application automatically builds the resource organization hierarchy based on the management hierarchy you specify when you create users. You must enter a manager for each user you create, except for the manager at the top of the resource hierarchy.

Designating the Top of the Sales Hierarchy

To designate a resource organization as the top of the sales hierarchy:

1. Sign in as a setup user and search for the Manage Resource Organization Hierarchies task in the Setup and Maintenance work area.
2. Select the Manage Resource Organization Hierarchies task from the search results list.
   
   The Manage Resource Organization Hierarchies page appears.
3. Click **Search**.
4. In the search results, click the **Internal Resource Organization Hierarchy** link.
   
   This value is supplied by Oracle. The View Organization Hierarchy: Internal Resource Organization Hierarchy page appears.
5. From the **Action** menu at the top right-hand corner of the page, select **Edit This Hierarchy Version**.
   
   The **Edit Organization Hierarchy Version** page appears.
6. Click **Add** in the Internal Resource Organization Hierarchy region.
   
   The Add Tree Node window appears.

7. Click **Search**.
   
   The Search Node window appears.
8. Click **Search** again in the Search Node window.
9. In the Search Results list, select the resource organization that you created for the top person in the hierarchy.
10. Click OK.

    The application returns you to the Edit Organization Hierarchy Version page.
11. Click Save and Close.
12. When a warning appears, click Yes.

Creating Additional Resource Roles

This topic describes how to create additional resource roles. After you create a resource role, you must create the appropriate provisioning rules to provision the user with the required job and abstract roles. The resource role by itself is only a title.

Creating a Resource Role

To create a resource role:

1. Sign in as a setup user and search for the Manage Resource Roles task in the Setup and Maintenance work area.
2. Select the Manage Resource Roles task from the search results list.

    The Manage Resource Roles page appears.
3. If you want to review all the existing resource roles to verify that it is necessary to create a new role, then click Search without entering search criteria.

    All the available resource roles are listed. Roles that are predefined by Oracle are labeled System.
4. Click the Create icon to create a new resource role.

    The Create Role page appears.
5. In the Role Name field, enter the name of the resource role as it will appear in the application UI, for example, CEO.
6. In the Role Code field, enter a unique internal name. No spaces are permitted. If you’re importing users from a file then you must include this code in your file rather than the name.
7. Select the Manager option if the resource role belongs to a manager, or select the Member option if the resource role belongs to an individual contributor.
8. From the Role Type list, select Sales to classify the role that you’re creating.
9. Click Save and Close.

Creating Rules to Automatically Provision Job Roles to Sales Users

Before you create sales users, review the predefined role provisioning rules used to automatically assign job and abstract roles to users, and create any additional rules you require. For example, you have to create role provisioning rules for any additional resource roles you create, such as a CEO resource role. The provisioning rules use the resource role that you assign to each sales user as the trigger condition for provisioning job roles. Create a separate rule to provision each resource role.
For internal sales users, including sales administrators, map the Resource abstract role in addition to the required job roles in the provisioning rule. The Resource abstract role permits users to access the Resource Directory. Do not add the Resource abstract role for partner roles, including Partner Sales Representative, Partner Sales Manager, and Partner Administrator.

**Note:** Role provisioning rules are also known as role mappings.

**Creating a Provisioning Rule**

Perform the steps in the following procedure to review the predefined provisioning rules, and to create new rules:

1. Sign in as a setup user and navigate to the Setup and Maintenance work area.
2. On the Setup and Maintenance page, search for the Manage HCM Role Provisioning Rules task.
3. Select the Manage HCM Role Provisioning Rules task from the search results list.

   The Manage Role Mappings page appears.

4. If you want to review the predefined provisioning rules, do the following:
   a. Search for a role mapping using one of the search fields. For example, to determine if a provisioning rule exists for a resource role, in the Resource Role field, enter the name of a resource role, such as CEO.
   b. Click **Search**.

      If a role provisioning rule exists for the resource role (either a predefined rule or a custom rule you created), it is displayed in the Search Results area.
   c. To view or edit a provisioning rule, select the rule from the Search Results area.

   The Edit Role Mapping page is displayed listing details for the rule.

5. To create a new provisioning rule, on the Manage Role Mappings page, click **Create**.

   The Create Role Mapping page appears.

6. In the **Mapping Name** field, enter a name that will help you identify the mapping, for example, **CEO**.
7. In the Conditions region, select the resource role you want to provision from the Resource Role list. For example, if you have created a CEO resource role, select CEO.

8. Select Active from the HR Assignment Status list.

This additional condition ensures that the provisioned roles are automatically removed if the user is terminated in Global Human Resources.

9. In the Associated Roles region, click Add to add the job roles you want to provision. For the CEO, for example, add the Sales VP job role.

10. For internal sales users, including the CEO, add the Resource abstract role.

11. Make sure the Autoprovision option is selected for all the roles.

12. Click Save and Close.

Automatic and Manual Role Provisioning

Roles provide user access to data and functions. Roles are assigned to users by defining a relationship, called a role mapping or provisioning rule, between the role and some conditions. Users who satisfy the conditions specified in the mapping are eligible to acquire the role specified in the mapping. This topic describes role mapping options for automatic and manual role provisioning. Predefined provisioning rules are provided with the application but if you need to create new role mappings, you can do so using the Manage HCM Role Provisioning Rules task in the Setup and Maintenance work area.

Automatic Provisioning of Roles to Users

Role provisioning occurs automatically if:

- The user meets the conditions defined in the role-mapping.
- You select the Autoprovision option for the role specified in the role mapping.
For example, to create a role mapping rule that autoprovisions the Resource abstract role and Sales VP job role to users assigned a custom resource role you created, CEO, do the following:

1. Specify the following conditions.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Role</td>
<td>CEO</td>
</tr>
<tr>
<td>HR Assignment Status</td>
<td>Active</td>
</tr>
</tbody>
</table>

2. Specify the Resource abstract role and the Sales VP job role for the mapping, and select the Autoprovision option for each.

This mapping rule is applied when the user is first created or when the user’s status or resource role is modified by clicking the Autoprovision Roles option on the Create User or Edit User page.

Manual Provisioning of Roles to Users

Users, such as sales managers or administrators, can provision roles manually to other users if:

- The user meets the conditions defined in the role-mapping.
- You select the Requestable option for the role in the role mapping.

Users can also request a role when managing their own accounts if:

- The user meets the conditions defined in the role-mapping conditions.
- You select the Self-requestable option for the role in the role mapping.

For example, you can create a role mapping to assign roles to each active employee who has been assigned a custom Sales Operations Manager resource role as follows:

1. Specify the following conditions.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Role</td>
<td>Sales Operations Manager</td>
</tr>
<tr>
<td>HR Assignment Status</td>
<td>Active</td>
</tr>
</tbody>
</table>

2. Specify the following roles.

<table>
<thead>
<tr>
<th>Role</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource</td>
<td>Autopropvision</td>
</tr>
<tr>
<td>Sales Administrator</td>
<td>Autopropvision</td>
</tr>
<tr>
<td>Customer Data Steward</td>
<td>Requestable</td>
</tr>
<tr>
<td>Sales Representative</td>
<td>Self-requestable</td>
</tr>
</tbody>
</table>
In this example, any user assigned the Sales Operations Manager custom resource role:

- Is automatically provisioned with the Resource and Sales Administrator roles when the Autoprovision Roles option is clicked on the Create User or Edit User page
- Can grant the Customer Data Steward role to other users
- Can request the Sales Representative job role

Users keep manually provisioned roles until the user is terminated or the role is deprovisioned manually.

### Role-Mapping Names

Role mapping names must be unique in the enterprise. Devise a naming scheme that shows the scope of each role mapping. For example, a role mapping named CEO Autoprovisioned Roles could include all roles provisioned automatically to resources assigned the CEO resource role.

### Provisioning Roles for Customization Testing

#### What's Required for Testing Customizations in the Sandbox

If you are creating customizations for a specific job role or if you are creating custom objects, then you must be provisioned with additional job roles to view and test those customizations in the sandbox. You can enable the testing of both types of customizations using the steps described in this section.

#### What's Required for Role-Specific Customizations

If you are creating customizations for a specific job role in either Application Composer or Page Composer, then you must assign yourself that same job role to be able to test the customizations in the sandbox. For example, if you are creating a custom page layout for the Sales Manager job role, then you must have the Sales Manager job role to view and test the layout. If you later create a different layout for salespersons, then you must deprovision the Sales Manager job role and provision yourself with the Sales Representative job role instead.

#### What's Required for Custom Objects

If you are creating custom objects, then you must assign yourself the Custom Objects Administration (ORA_CRM_EXTN_ROLE) role. The application automatically generates this custom object role the first time you create a custom object in the application. Unless users have this role, they cannot view or test custom objects they create.

### Setup Overview

1. While signed in as a user with security privileges, such as the setup user or the initial user you received when you signed up with Oracle Sales Cloud, you edit all of the role-provisioning rules for sales administrators and add the required job roles. Here is a summary of the steps:

   a. You search for and open the Manage HCM Role Provisioning Rules task in the Setup and Maintenance work area.
b. You search for all role-provisioning rules containing the Sales Administrator job role.

c. For each rule, you add the job roles required for testing. Selecting the **Self-requestable** option makes it possible for individual users to assign themselves each job role when needed.

d. If you are creating custom objects, then you must also add the Custom Objects Administration role. You must select both the **Self-requestable** and the **Autoprovision** option for this role. This object role is required for all custom objects, so you want to provision it automatically for future to sales administrators.

For details, see the Enabling Sales Administrators to Test Customizations in the Sandbox topic.

2. Sales administrators, who are resources with the Sales Administrator job role, navigate to the Resource Directory and assign themselves the job roles they need. Setup users, who are not resources, can edit their own user records in the Manage Users work area and assign themselves the roles there.

For details on how resources can assign themselves job roles in the Resource Directory, see the Assigning Yourself an Additional Job Role topic.

### Enabling Sales Administrators to Test Customizations in the Sandbox

Modify the provisioning rules to make it possible for sales administrators to assign themselves the job roles they need for testing customizations in the sandbox. For viewing and testing custom objects, sales administrators must have the Custom Objects Administration (ORA_CRM_EXTN_ROLE) role. To test job role-specific customizations, they must have the same job role.

#### Modifying the Provisioning Rules for Sales Administrators

1. Sign in as a setup user or the initial user you received when you signed up with Oracle Sales Cloud.
2. Navigate to the Setup and Maintenance work area.
3. Search for the Manage HCM Role Provisioning Rules task.
4. Click the task name link in the search results.

   The Manage Role Mappings page appears.

5. Search for the role mappings that provision the sales administrators:
   a. In the Search region, click the **Role Name** list and select the **Search** link.
   b. In the Search and Select window, enter **Sales Administrator** in the **Role Name** field and click **Search**.
   c. Select the role name and click **OK**.
   d. Click **Search**.
6. On the Manage Role Mapping page, click **Search**.

   The Search Results display the mappings with the Sales Administrator job role.

7. Click the mapping name of each mapping and make the following edits:
   a. In the Associated Roles region, click **Add Row** (the plus sign icon) and add the job roles required for testing. You do not want the job roles assigned to the sales administrators automatically.
   b. For each job role, select the **Requestable** and the **Self-requestable** options and deselect **Autoprovision**.
   c. If you are creating custom objects, then you must also add the Custom Objects Administration role. The application automatically generates this custom object role the first time you create a custom object. For this job role select all of the options: **Requestable**, **Self-requestable**, and **Autoprovision**. All users creating custom objects must have this role when creating custom objects.
   d. Click **Save and Close**.
8. When you have added the job roles to all the provisioning rules, click **Done**.
Assigning Yourself Additional Job Roles Required for Testing

Sales administrators who are also sales resources can use this procedure to assign themselves the role they need to test role-specific customizations in the sandbox. For example, an administrator testing UI customizations for sales managers, requests the Sales Manager job role or the equivalent custom role. If you are creating custom objects, you can use this procedure to assign yourself the Custom Objects Administration role, if this role is not already assigned to you. The Custom Objects Administration role is required for testing custom objects in the sandbox.

**Note:** You can only assign yourself job roles that are made self-requestable in the role-provisioning rules created by a setup user. A setup user has the privileges to create other users and manage application security.

### Assigning Yourself an Additional Job Role

2. Select **View Resource Details** from the **Actions** menu in your record.

The Resource page appears.

3. Select the Roles tab.
4. Click **Add Role**.

The Add Role window appears.

5. Search for the role you want to use for testing by name or partial name, select it, and click **OK**.

For testing custom objects, you must add the Custom Objects Administration role.
Note: Available roles include only those that were set up as self-requestable during provisioning rule setup.

The application returns you to the Resource page and displays the requested role in the Roles Requests region.

6. You can remove a role you no longer need for testing by selecting it and clicking **Remove**.
7. Click **Save and Close**.
   The new role becomes available for your use in a few minutes, pending the completion of a background process. It displays in the Current Roles region the next time you navigate to this page.

**FAQs for Preparing for Application Users**

**What happens when I autoprovison roles for a user?**

The role-provisioning process reviews the user’s assignments against all current role mappings. The following changes are made to the user’s roles:
- The user acquires any role for which he or she qualifies but doesn’t have
- The user loses any role for which he or she no longer qualifies

It’s recommended that you autoprovise roles to individual users on the Edit User page when new or changed role mappings exist. Otherwise, no automatic updating of roles occurs until you next update the user’s assignments.

**Why did some roles appear automatically?**

In a role mapping:
- The conditions specified for the role match the user’s assignment attributes, such as job.
- The role has the **Autoprovise** option selected.

**Why can’t I see the roles that I want to provision to a user?**

You can provision a role if a role mapping exists for the role, the **Requestable** option is selected for the role in the role mapping, and at least one of your assignments satisfies the role-mapping conditions. Otherwise, you can’t provision the role to other users.

**Can I implement single sign-on in the cloud?**

Yes. Single sign-on enables users to sign in once but access multiple applications, within and across product families.
Submit a service request for implementation of single sign-on. For more information, see Oracle Applications Cloud Service Entitlements (2004494.1) on My Oracle Support at https://support.oracle.com.
8 Creating Sales Users

User Setup Options

This topic describes the enterprise options that are available for controlling default functionality when users are created in the application. You might have made decisions about user setup options when you configured your application security environment and set up the Security Console. If you did not, then it’s recommended that you configure these options before you start to create users.

To review user setup options, navigate to the Administration tab of the Security Console. For detailed information about configuring the options, see the chapter Setting Up Applications Security.

User Name and Password Notifications

By default, users automatically receive an e-mail notification containing their sign-in details when their user account is created. You can customize the text of the e-mail notification the user receives or suppress e-mail notifications altogether.

Password Policy

During implementation, you set the password policy for the enterprise. For example, you can configure how complex passwords must be, when they expire, and when a user is notified that a password is about to expire.

Default User Name Format

You can select the default format used to generate user names for application users in cases where a user name is not specified. Unless you specify otherwise, the default format is e-mail address.

Related Topics

- Setting the Default User Name Format: Procedure
- Setting Password Policy: Explained

Creating Sales Application Users

This topic describes how to create sales users in the Sales UI. Use this method of creating users to create individual sales application users.

You can also create users by importing users from a file using the file-based data import functionality. Importing users from a file is useful when you have a large number of users to create. For additional information, see the chapter about importing employee resources in Oracle Sales Cloud Understanding File-Based Data Import and Export at http://docs.oracle.com/.

Before creating application users, make sure you have:

- Set up any additional resource roles or role provisioning rules that are required.
- Created a resource organization for each manager. If you don’t create the resource organization ahead of time, then you must do so while creating each manager user.
Each manager is assigned with his or her own resource organization. Individual contributors automatically inherit their manager’s resource organization. The application determines who is a manager from the resource role you assign to the user.

When you create application users, you automatically set up the reporting hierarchy of your organization by indicating each person’s manager. For this reason, first create the user at the top of the hierarchy and that user’s organization. You don’t enter a manager for this user. You can then create the rest of the users starting right below the top of the hierarchy and working your way down.

Steps to Create an Application User

Use the following procedure to create sales users in the UI. Note that the procedure is slightly different for managers and individual contributors:

- You must assign each manager with his or her own resource organization. You can create the resource organization while creating the manager.
- Individual contributors automatically inherit their managers’ resource organization.

The application determines who is a manager from the resource role you assign to the user.

To create a user:

1. In the Navigator, select the Manage Users link under the My Team heading. You can also search for the Manage Users task in the Setup and Maintenance work area.
2. On the Manage Users page, click the Create icon.
   - The Create User page opens.
3. In the Personal Details region, enter the user’s name and a unique e-mail address. The application sends user notifications to this e-mail address by default unless you disable notifications in the Security Console.
   - Note: After you create the user, if you want to change the e-mail address you can do so on the Users tab of the Security Console or using file import. You can’t change e-mail addresses on the Edit User page of the Manage Users work area.
4. The application prefills today’s date in the Hire Date field and uses that date as the start date for the resource.
   - If you are planning to use quotas, then you must make sure that the hire date is a date before the start of the first quota period. For example, if you are allocating monthly quotas for fiscal year July 01, 2015 to June 30, 2016, then you must enter a hire date of 7-1-2015 or earlier. You cannot change the hire date after you create the user.
5. In the User Details region, enter a user name for the user.
   - If you leave the User Name field blank, then a user name is generated automatically using the enterprise default format. Unless you specify otherwise, e-mail address is the default user name format.
6. In the User Notification Preferences region, select the Send user name and password option to select whether or not you want a notification containing the new user’s login details to be sent to the user when the user account is created.
   - The Send user name and password option is enabled only if notifications are enabled on the Security Console and an appropriate notification template exists. For example, if the predefined notification template New Account Template is enabled, then a notification is sent to the new user when you select the Send user name and password option.
If you deselect the **Send user name and password** option, a notification isn’t sent when the account is created but you can choose to send the e-mail later by running the Send User Name and Password E-Mail Notifications process. The process sends out user names and reset-password links to any users for whom you haven’t so far requested an e-mail. An appropriate notification template must be enabled at that time. Alternatively, you can use the Security Console to reset the password and send the notification.

**7.** In the Employment Information region, enter the following values.

<table>
<thead>
<tr>
<th>Field</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person Type</strong></td>
<td>Select Employee.</td>
</tr>
<tr>
<td><strong>Legal Employer</strong></td>
<td>Select the legal employer Oracle created using the information you provided when you signed up with Oracle Sales Cloud.</td>
</tr>
<tr>
<td><strong>Business Unit</strong></td>
<td>Select the business unit for the user. Oracle creates an initial business unit using the information you provided when you signed up.</td>
</tr>
</tbody>
</table>

You don't have to complete the remaining fields in the Employment Information region.

**8.** In the Resource Information region, enter the following values.

<table>
<thead>
<tr>
<th>Field</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Role</strong></td>
<td>Select the role the user plays in the resource organization.</td>
</tr>
<tr>
<td><strong>Reporting Manager</strong></td>
<td>Select the user’s manager.</td>
</tr>
<tr>
<td></td>
<td>If you are creating the top user in your hierarchy, such as the CEO, you can leave this field blank.</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>If the user you are creating is a manager, and if you already created a resource organization for this manager, then select the appropriate resource organization. If you haven’t created a resource organization for the manager, then you can create one by clicking the <strong>Create</strong> link from the end of the <strong>Organization</strong> list. The <strong>Create Organization</strong> dialog box is displayed allowing you to enter a new organization name.</td>
</tr>
<tr>
<td></td>
<td>If the user you are creating is not a manager, then the resource organization is automatically copied from the manager.</td>
</tr>
</tbody>
</table>

**9.** In the Roles region, click **Autoprovision Roles**.

Any roles for which the user qualifies automatically appear in the Role Requests table with the status **Add Requested**.

The application provisions roles according to the provisioning rules specified for the selected resource role. Each sales user must have both the Employee and the Resource abstract roles in addition to the job roles they require.

**10.** You can also provision a role manually to the user if required by clicking **Add Role**. The **Add Role** dialog box opens.

**11.** Search for and select the role. The role is added to the Role Requests table with the status **Add Requested**.

**Note:** Roles that you can provision to others must appear in a role mapping for which you satisfy the role-mapping conditions and where the **Requestable** option is selected for the role.
12. Click **Save and Close**.
   The application creates the user. If you selected the **Send user name and password** option, the application also sends the e-mail with the user’s login details.

13. Click **Done**.

**Related Topics**
- About Oracle Sales Cloud Users: Explained
- Creating a Resource Organization: Worked Example

## Creating Sales Restricted Users

You can create sales application users who have extensive privileges to view sales data, but limited privileges to create, update or delete that data, by assigning users the Sales Restricted User job role. For example, you might want to assign the Sales Restricted User job role to accounting or legal users, or to seasonal or administrative users.

### Creating Sales Restricted Users

You create sales restricted users in the same way that you create sales application users. Oracle does not provide a resource role or role provisioning rule to automatically provision the Sales Restricted User job role to users, however, so you must first create both.

To create a sales restricted user:

1. Create a new resource role for the Sales Restricted User job role.
   For information about this task, see the topic Creating Additional Resource Roles. When creating the resource role, specify the values shown in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Name</td>
<td>Enter the name of the resource role as it will appear in the application UI, for example, Sales Restricted User.</td>
</tr>
<tr>
<td>Role Code</td>
<td>In the Role Code field, enter a unique internal name, for example, SALES.Restricted.USER.</td>
</tr>
</tbody>
</table>

2. Create a role provisioning rule to automatically provision users with the roles required for restricted access.
   For information about this task, see the topic Creating Rules to Automatically Provision Job Roles to Sales Users.
   a. When creating the provisioning rule, specify the values shown in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Role</td>
<td>Sales Restricted User</td>
</tr>
<tr>
<td>HR Assignment Status</td>
<td>Active</td>
</tr>
</tbody>
</table>
b. In the Associated Roles region, add the following roles and select the Autoprovision option for each:
   - Sales Restricted User job role
   - Resource abstract role

3. Create the user who is to have restricted access to the application.

   For information about this task, see the topic Creating Sales Application Users.
   a. When creating the user, specify the values shown in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person Type</td>
<td>Employee</td>
</tr>
<tr>
<td>Resource Role</td>
<td>Sales Restricted User</td>
</tr>
</tbody>
</table>

b. In the Roles region, click **Autoprovision Roles**.

   The user is automatically assigned the following roles:
   - Sales Restricted User job role
   - Resource abstract role
   - Employee abstract role

   A predefined rule automatically assigns the Employee abstract role to all active users who are created as employees.

*Related Topics*

- Creating Additional Resource Roles: Worked Example
- Creating Rules to Automatically Provision Job Roles to Sales Users: Worked Example
9 Managing Sales Users

Managing Users: Overview

This chapter describes user management tasks you have to perform on an on-going basis. These tasks include:

- Resetting passwords for users
- Assigning different resource roles to users when they change jobs within the organization or are promoted
- Terminating user accounts when users leave the organization
- Acting as a proxy for users so you can troubleshoot issues

**Note:** Users can request new passwords by selecting the Forgot Password link on the application Sign In page, or by selecting the Password option on the Preferences page (**Settings and Actions - Set Preferences**).

This chapter describes how to perform these and other user management tasks using the Sales Cloud UI. However, you can also use file-based data import functionality to perform user management tasks such as:

- Making changes to employee resource information, for example, name or e-mail address
- Enabling or disabling user accounts
- Making promotion, demotion, or transfer updates for an employee resource

For additional information, see the chapter about importing employee resources in Oracle Sales Cloud Understanding File-Based Data Import and Export at http://docs.oracle.com.

Resetting User Passwords

Setup users, who are provisioned with the IT Security Manager job role, can use the Users tab in the Security Console work area to reset passwords for all application users. Users who cannot access the Security Console can reset only their own passwords using the **Set Preferences** link in the **Settings and Actions** menu available by clicking their user name in the application or by using the **Forgot Password** link on the sign-in page.

**Note:** Use the Security Console only for changing passwords and for updating user account information such as user first and last name, e-mail address, and status. To manage users, use the Manage Users work area.

To reset a user’s password in the Security Console, do the following:

1. From the implementation project, open the **Manage Application Security Preferences** task. Alternatively, you can search for this task by name in the Setup or Maintenance work area or use the Navigator.
   
   You can close any warnings regarding the scheduling of the Import Users and Roles Application Security Data job.
2. Click the **Users** tab.
3. Search for the user using one of the following:
   
   - First or last name, but not both
   - User name
The following figure shows the Users tab in the Security Console work area.

4. From the Action menu (callout 1 in the preceding figure), select Reset Password.

The Reset Password window appears, as shown in the following figure. The window displays the password strength policy, which is set on the Security Console Administration tab.

5. If you want the application to send an e-mail to users with a URL that they can use to create their own passwords, then select the Automatically generate password option.

6. To reset the password yourself, do the following:
   a. Select the Manually change the password option
   b. Enter the new password twice.

   **Note:** The option to reset a password to an automatically generated value is always available. For the manual-reset option, you must select the Administrator can manually reset password option on the Security Console Administration tab.

7. Click Reset Password.
Changing a User's E-Mail Address

Use the Users tab in the Security Console work area to change user e-mail addresses. You can use the procedure described in this topic to update addresses of both setup users and sales users. If you are updating the e-mail addresses of sales users, then you can also use the same import process you use to create them.

To change a user's e-mail address, do the following:

1. While signed in as a setup user, navigate to the Security Console work area.
   
   You can close any warnings regarding scheduling of the Import Users and Roles Application Security Data job.

   ✍️ **Note:** Limit your use of the Users tab to editing e-mail addresses and resetting user passwords. Use the Manage Users work area to create user accounts and make other user record changes, including provisioning additional roles, inactivating users, and editing user names.

2. Click the **Users** tab.

3. Search for the user using one of the following:
   
   - First or last name, but not both
   - User name

   The following figure shows the Users tab in the Security Console work area.

4. Click the user name link (callout 1).

   The User Account Details window appears.

5. Click **Edit**.
The Edit User Account window appears, as shown in the following figure.

6. Edit the e-mail address (highlighted by callout 1).
7. Click Save and Close.

Changing User Names

User names are automatically generated in the enterprise default format when you create a new user if you don’t manually specify a user name. The default format is the user’s e-mail address, but this value can be overridden for the enterprise. For example, you might choose to use first name.last name as the default format. You can also manually override an individual user’s existing user name as described in this topic.

Existing User Names

To change an existing user name, sign in to the application as a setup user, then perform the following steps:

1. In the Navigator, select the Manage Users link under the My Team heading.
   You can also search for the Manage Users task in the Setup and Maintenance work area.
2. On the Manage Users page, search for and select the user whose user name you want to change.
   The Edit User page for the user opens.
3. In the User Details region, enter the new user name in the User Name field.

You can enter the user name in any format you choose.

4. Click Save and Close.

The updated name is sent automatically to your LDAP directory server.

Tip: When you change an existing user name on the Manage Users page, the user's password and roles remain the same. However, the user doesn't receive an automatic notification of the change. Therefore, it's recommended that you send details of the updated user name directly to the user.

Changing User Resource Roles When Job Assignments Change

If an employee takes on a different role within the company, for example, if the employee is promoted, then you must update the resource role assigned to the employee. Changing the resource role assigned to an employee involves the following steps:

- Assigning the user a new resource role that corresponds to the new assignment, for example, Sales Manager.
- Setting an end date for the old resource role, for example, Salesperson.

If the employee's new role also involves a change in the user's resource organization, for example, if the user is promoted to a management role from a non-management role, you must also change the user's organization membership.

You can make changes to role assignments using either file import functionality or using the Sales UI. Although importing changes takes care of many tasks that you have to perform manually in the UI, if you are updating resource role information for an individual user, then using the UI can be more efficient.

The following procedure describes how to update role information in the UI for a user who is promoted from a sales representative role to a sales manager role.

1. Sign in to the application as the sales administrator or as a setup user.

2. Form the Navigator menu, select My Team - Manage Users.

The Search Person page opens.

3. Search for and select the user who is being promoted. The Edit User page for the user opens.

4. In the Resource Information region, do the following:

   a. In the Resource Role field, add the new resource role for the user, for example, Sales Manager.

   b. In the Reporting Manager field, update the user’s manager.

   c. In the Organization field, specify the user’s resource organization.

   You must create a resource organization for every manager in your Sales organization. If you haven’t created a resource organization for the new manager, then you can create one by clicking the Create link from the end of the Organization list. The Create Organization dialog box is displayed allowing you to enter a new organization name.

   d. To automatically provision any roles provided by the new resource role you just assigned the user, click the Autoprovization Roles button in the Resource Information section.

   e. Click Save and Close.
5. Set an end date for the user’s old resource role as follows:

   a. Form the Navigator menu, select **Directory - Resource Directory**.
   b. In the Tasks area of the Resource Directory page, select **View Resources**.
   c. On the View Resources page, search for and select the user.

   The Resource page for the user opens.

   Note that the user is assigned the new resource organization you previously created.

   d. Click the Roles tab, and in the Roles list, select the current role assigned to the user, for example, Salesperson, and enter an end date in the **To Date** field.

   The value you enter is the date the user’s assignment in the current role ends.

   e. Click **Save and Close**.

**Note:** When you promote a user from one management position to another, for example, from a Sales Manager role to a Sales VP role, then the resource hierarchy is maintained provided that the promoted user’s resource organization does not change. That is, any users who reported to the Sales Manager continue to report to the same individual when he or she is promoted to the Sales VP role. If the promoted user’s resource organization does change upon the promotion, the user’s reports must be reassigned to a new manager.

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### Terminating User Accounts

This topic describes how to terminate a user account when an employee leaves your company. You cannot delete a user account. However, when an employee leaves your company, you can suspend the user account by completing the following steps:

1. Perform either one of the following tasks:
   - Inactivate the user’s account.
   - Remove the user’s roles.

2. Set an end date for the resource.

The process outlined in this topic applies if you are using only Oracle Sales Cloud. If your company uses Oracle HCM Cloud along with Oracle Sales, then a different process applies.

**Note:** When you deactivate a user account, the user record is not deleted from Oracle Sales Cloud. You can still view deactivated user’s record in the **Manage Users** page.

### Inactivating a User Account

When an employee leaves your company, in most cases it is recommended that you inactivate the user account. Inactivating the user’s account prevents the user from being able to sign in to the application.

To inactivate a user account, perform the following steps:

1. Navigate to the Setup and Maintenance work area.
2. On the Setup and Maintenance page, search for the task Manage Users.
3. Select the Manage Users task from the search results list.
The Manage Users page opens.

4. Search for and select the user whose account you want to inactivate. The Edit User page for the user opens.

5. In the User Details section, in the Active field, select Inactive.

6. Click Save and Close.

Removing Roles from a User

Instead of inactivating the user account, you can remove some or all of the roles assigned to the user. You might want to do this if you want to keep some roles active. For example, maybe you want to keep the user account valid to allow the user access to your custom pages.

To selectively remove roles from a user, perform the following steps:

1. Navigate to the Manage Users page as described in the previous task.
2. Search for and select the user whose roles you want to remove.

The Edit User page for the user opens.

3. In the Current Roles section, select the role you want to remove, then click the Remove icon. Repeat this process for each role assigned to the user that you want to remove.

4. Click Save and Close.

Setting an End Date for the Resource

After you have either inactivated a user account or removed the roles assigned to a user account, you must set an end date for the resource (user) as described in this topic.

Note: You can also set the end date for an employee in the Resource Directory which you can access from the Navigator menu.

To set the end date for a user, perform the following steps:

1. In the Setup and Maintenance work area, search for the task Manage Resources.
2. Select the Manage Resources task from the search results list.

The Manage Resources page opens.

3. Search for and select the resource you want to edit. The Resource page for the individual opens.

4. With the Organization tab selected, select the Edit option from the Actions menu.

The Edit Organization Membership page opens.

5. In the To Date field, enter the date the individual is leaving the company.

6. Click Save and Close.

When the end date you specify for a resource arrives, the following occurs:

- The terminated employee is no longer available in the application so can no longer be newly associated with any Sales objects, such as sales account, territory, lead, and opportunity. The user’s association with Sales objects made before the end date are not automatically removed but you can remove them manually.
- Resource roles for the individual are deprovisioned.
- If the terminated employee had any reports, they are reassigned to his or her manager.
FAQs for Terminating Users

How are the records of a terminated employee reassigned?

After you terminate an employee in the application, the assignment process automatically excludes the terminated user when it runs again. However, you have to manually handle other reassignments, for example, replacing the terminated user with another user on the territory team or sales account team. For specific types of records, such as lead records or opportunity records, you can also use the Mass Transfer tool to transfer records from a terminated resource to another resource.

Related Topics
- Transferring Records Between Users: Procedure
- Transferring Records Between Users: Explained

Can I reactivate a terminated employee record?

Yes. After you have specified an end date for a resource, you can’t reverse it in Oracle Sales Cloud. However, the former employee’s record remains in the application so you can again identify that person as a resource if the person is rehired. After identifying the person, you must assign roles and an organization again.

How can I notify users of their user names and passwords?

You can run the process Send User Name and Password E-Mail Notifications in the Scheduled Processes work area. For users for whom you haven’t so far requested an e-mail, this process sends out user names and reset-password links. The e-mail goes to the work e-mail of the user or the user’s line manager. You can send the user name and password once only to any user. A notification template for this event must exist and be enabled.

Impersonation and Proxy Users

Privileges Required by Proxy Users

The impersonation functionality in Oracle Sales Cloud allows you to designate another user as a proxy to sign in to the application and perform tasks on your behalf. For example, a channel manager might want to sign in to the Partner Portal as a partner user in order to resolve a query relating to the UI pages or data. Similarly, as a sales user, you might want to designate the sales administrator to act as your proxy to troubleshoot an issue you are experiencing.

Channel managers do not require a partner user’s permission to impersonate the partner user. To implement impersonation in all other cases, however:

- The user must explicitly designate another user as his or her proxy.
• The designated user must have the privileges required to act as a proxy.

Impersonate User Privilege
You can select a user to act as your proxy only if the user has the privilege required to be a proxy, that is, the Impersonate User privilege. The following job roles are assigned the Impersonate User privilege in Oracle Sales Cloud by default; therefore, users assigned these job roles can act as proxies for other users:

• Sales Administrator
• Customer Relationship Management Application Administrator
• Channel Account Manager
• Channel Operations Manager

You can enable other groups of users to act as proxies by creating a custom copy of the job role assigned to the users and adding the Impersonate User privilege to the custom role.

**Note:** When deciding whether or not to assign the Impersonate User privilege to an additional job role, be aware that a proxy user can access all the same data and tasks as the user they impersonate.

**Related Topics**

• Impersonating a Partner User: Explained

• Copying Job or Abstract Roles: Procedure

Configuring Impersonation Auditing
The impersonation functionality in Oracle Sales Cloud allows users to temporarily designate another user as a proxy to sign in to the application on their behalf. A proxy user has the same privileges as the impersonated user and has access to all of the impersonated user’s personal data. By default, therefore, auditing of proxy user sessions is enabled, even when auditing is disabled for the application. An audit record tracks the user name of the proxy and any transactions performed.

Auditing of proxy sessions is recommended but, if appropriate for your environment, you can disable impersonation auditing by changing the default value of the site-level profile option Audit Impersonation Transaction Enabled.

**Note:** A number of Oracle Sales Cloud database tables aren’t enabled for impersonation transaction auditing. If impersonation auditing is enabled, proxy users can’t save transactions that result in changes to the data in those tables. If the administrator disables impersonation auditing using the Audit Impersonation Transaction Enabled profile option, proxy users can change the data in any tables, whether or not the tables are enabled for impersonation auditing.

For additional information about auditing in Oracle Sales Cloud, including information about the objects that can be enabled for auditing, see the Oracle Sales Cloud Implementing Sales guide on Oracle Help Center at http://docs.oracle.com/.

Configuring Impersonation Auditing
The following procedure describes how to enable or disable impersonation auditing functionality by changing the value of the Audit Impersonation Transaction Enabled profile option.

1. Sign in to the Oracle Sales Cloud application with your administrator credentials.
2. From the navigator, click the Setup and Maintenance link.
3. On the Setup and Maintenance page, search for the task Manage Administrator Profile Values.
4. Select the Manage Administrator Profile Values task from the search results list.

The Manage Administrator Profile Values page appears.
5. In the Search: Profile Option section, enter Audit Impersonation Transaction Enabled in the Profile Display Name field.
6. Click Search.
7. In the Search Results list, select FND_AUDIT_IMPERSONATION_TRANSACTIONS.
8. In the FND_AUDIT_IMPERSONATION_TRANSACTIONS: Profile Values section, select the Site Profile level and et the value of the Profile Value field to either Yes or No.
9. Click Save and Close.

Related Topics

- What Oracle Sales Cloud objects can I enable to track their audit history?
10 Reporting on Application Users and Roles

User and Role Access Audit Report

The User and Role Access Audit Report provides details of the function and data security privileges granted to specified users or roles. This information is equivalent to the information that you can see for a user or role on the Security Console. This report is based on data in the Applications Security tables, which you populate by running the Import User and Role Application Security Data process.

To run the User and Role Access Audit Report:

1. In the Scheduled Processes work area, click Schedule New Process.
2. Search for and select the User and Role Access Audit Report.
3. In the Process Details dialog box, set parameters and click Submit.
4. Click OK to close the confirmation message.

User and Role Access Audit Report Parameters

Population Type

Set this parameter to one of these values to run the report for one user, one role, multiple users, or all roles.

- All roles
- Multiple users
- Role name
- User name

User Name

Search for and select the user name of a single user.

This field is enabled only when Population Type is User name.

Role Name

Search for and select the name of a single aggregate privilege or data, job, abstract, or duty role.

This field is enabled only when Population Type is Role name.

From User Name Starting With

Enter one or more characters from the start of the first user name in a range of user names.

This field is enabled only when Population Type is Multiple users. It enables you to report on a subset of multiple users.

To User Name Starting With

Enter one or more characters from the start of the last user name in a range of user names.

This field is enabled only when Population Type is Multiple users. It enables you to report on a subset of multiple users.
User Role Name Starts With
Enter one or more characters from the start of a role name.
This field is enabled only when Population Type is Multiple users. It enables you to report on a subset of all users and roles.

Data Security Policies
Select the Data Security Policies check box, when you want to view the data security report for any population. When you leave the option unchecked, only the function report is generated.

Note: If you don’t need the data security policy document, leave the option unchecked. This reduces the processing time to run the report.

Debug
Select the Debug check box to include role GUID in the report. The role GUID is used to troubleshoot. Use this option only when requested by the Oracle Support team.

Viewing the Report Results
The report produces one or two .zip files depending on the parameters you select. When you select the Data Security Policies check box, two .zip files are generated: one with information on the data security policies and the other on functional security policies in a hierarchical format.

The file names are in the following format: [FILE_PREFIX]_[PROCESS_ID]_[DATE]_[TIME]_[FILE_SUFFIX]. The file prefix depends on the specified Population Type value, as shown in this table.

<table>
<thead>
<tr>
<th>Population Type</th>
<th>File Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>User name</td>
<td>USER_NAME</td>
</tr>
<tr>
<td>Role name</td>
<td>ROLE_NAME</td>
</tr>
<tr>
<td>Multiple users</td>
<td>MULTIPLE_USERS</td>
</tr>
<tr>
<td>All roles</td>
<td>ALL_ROLES</td>
</tr>
</tbody>
</table>

This table shows the file suffix, file format, and file contents for each population type.

<table>
<thead>
<tr>
<th>Population Type</th>
<th>File Suffix</th>
<th>File Format</th>
<th>File Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any</td>
<td>DataSec</td>
<td>CVS</td>
<td>Data security policies. The .zip file contains one file for all users or roles. The data security policies file is generated only when the Data Security Policies check box is selected.</td>
</tr>
</tbody>
</table>
### Reporting on Application Users and Roles

<table>
<thead>
<tr>
<th>Population Type</th>
<th>File Suffix</th>
<th>File Format</th>
<th>File Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any</td>
<td>Hierarchical</td>
<td>CVS</td>
<td>Functional security policies in a hierarchical format. The .zip file contains one file for each user or role.</td>
</tr>
<tr>
<td>Multiple users</td>
<td>CSV</td>
<td>CSV</td>
<td>Functional security policies in a comma-separated, tabular format.</td>
</tr>
<tr>
<td>All roles</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

`Note:` Extract the data security policies only when needed as it takes a long time to generate the file.

For example, if you report on a job role at 13.30 on 17 December 2015 with process ID 201547 and the Data Security Policies option selected, then the report files are:

- ROLE_NAME_201547_12-17-2015_13-30-00_DataSec.zip
- ROLE_NAME_201547_12-17-2015_13-30-00_Hierarchical.zip
- Diagnostic.zip

### User Role Membership Report

The User Role Membership Report lists role memberships for specified users.

To run the report process:

1. Select **Navigator - Tools - Scheduled Processes**.
2. In the Scheduled Processes work area, search for and select the User Role Membership Report process.

### User Role Membership Report Parameters

You can specify any combination of the following parameters to identify the users whose role memberships are to appear in the report.

`Note:` The report may take a while to complete if you run it for all users, depending on the number of users and their roles.

**User Name Begins With**

Enter one or more characters of the user name.

**First Name Begins With**
Enter one or more characters from the user’s first name.

**Last Name Begins With**

Enter one or more characters from the user’s last name.

**Department**

Enter the department from the user’s primary assignment.

**Location**

Enter the location from the user’s primary assignment.

**Viewing the Report**

The process produces a UserRoleMemberships_processID_CSV.zip file and a Diagnostics_processID.zip file. The UserRoleMemberships_processID_CSV.zip file contains the report output in CSV format. The report shows the parameters that you specified, followed by the user details for each user in the specified population. The user details include the user name, first and last names, user status, department, location, and role memberships.

**User Password Changes Audit Report**

This report identifies users whose passwords were changed in a specified period. You must have the ASE_USER_PASSWORD_CHANGES_AUDIT_REPORT_PRIV function security privilege to run this report. The predefined IT Security Manager job role has this privilege by default.

To run the User Password Changes Audit Report:

1. Select **Navigator - Tools - Scheduled Processes** to open the Scheduled Processes work area.
2. Click **Schedule New Process**.
3. Search for and select the User Password Changes Audit Report.
4. In the **Process Details** dialog box, set parameters and click **Submit**.
5. Click **OK** to close the **Confirmation** message.

**User Password Changes Audit Report Parameters**

**Search Type**

Specify whether the report is for all users, a single, named user, or a subset of users identified by a name pattern that you specify.

**User Name**

Search for and select the user on whom you want to report. This field is enabled only when **Search Type** is set to **Single user**.

**User Name Pattern**
Enter one or more characters that appear in the user names on which you want to report. For example, you could report on all users whose user names begin with the characters SAL by entering SAL%. This field is enabled only when Search Type is set to User name pattern.

**Start Date**

Select the start date of the period during which password changes occurred. Changes made before this date don't appear in the report.

**To Date**

Select the end date of the period during which password changes occurred. Changes made after this date don't appear in the report.

**Sort By**

Specify how the report output is sorted. The report can be organized by either user name or the date when the password was changed.

**Viewing the Report Results**

The report produces these files:

- UserPasswordUpdateReport.csv
- UserPasswordUpdateReport.xml
- Diagnostics_[process ID].log

For each user whose password changed in the specified period, the report includes:

- The user name.
- The first and last names of the user.
- The user name of the person who changed the password.
- How the password was changed:
  - ADMIN means that the change was made for the user by a line manager or the IT Security manager, for example.
  - SELF_SERVICE means that the user made the change by setting preferences or requesting a password reset, for example.
  - FORGOT_PASSWORD means that the user clicked the Forgot Password link when signing in.
- The date and time of the change.

**Inactive Users Report**

Run the Inactive Users Report to identify users who haven’t signed in for a specified period.

To run the report:

1. Select **Navigator - Tools - Scheduled Processes** to open the Scheduled Processes work area.
2. Click **Schedule New Process**.
3. Search for and select the Import User Login History process.

**Note:** Whenever you run the Inactive Users Report process, you must first run the Import User Login History process. This process imports information that the Inactive Users Report process uses to identify inactive users. You're recommended to schedule Import User Login History to run daily.

4. When the Import User Login History process completes, search for and select the Inactive Users Report process.
5. In the **Process Details** dialog box, set parameters to identify one or more users.
6. Click **Submit**.

### Inactive Users Report Parameters

All parameters except **Days Since Last Activity** are optional.

**User Name Begins With**

Enter one or more characters.

**First Name Begins With**

Enter one or more characters.

**Last Name Begins With**

Enter one or more characters.

**Department**

Enter the department from the user’s primary assignment.

**Location**

Enter the location from the user’s primary assignment.

**Days Since Last Activity**

Enter the number of days since the user last signed in. Use this parameter to specify the meaning of the term inactive user in your enterprise. Use other parameters to filter the results.

This value is required and is 30 by default. This value identifies users who haven’t signed in during the last 30 or more days.

**Last Activity Start Date**

Specify the start date of a period in which the last activity must fall.

**Last Activity End Date**

Specify the end date of a period in which the last activity must fall.
Viewing the Report

The process produces an Inactive_Users_List_processID.xml file and a Diagnostics_processID.zip file.

The report includes the following details for each user who satisfies the report parameters:

- Number of days since the user was last active
- Date of last activity
- User name
- First and last names
- Assignment department
- Assignment location
- City and country
- Report time stamp

Related Topics
- Importing User Login History: Explained
11 Using the Security Console to Review and Analyze Roles

Reviewing Roles on the Security Console: Overview

This chapter describes how to use the Security Console to review and analyze role information. You perform these tasks from the Roles and Analytics tabs of the Security Console.

You can perform the following tasks from the Roles tab:

- Visualize role hierarchies and role assignments to users.
- Review Navigator menus available to roles or users, identifying roles that grant access to Navigator items and privileges required for that access.
- Compare roles.
- Copy roles, and create and edit custom job, abstract, and duty roles.

For information on copying roles and creating custom roles, see the chapter Customizing Security.

From the Analytics tab, you can review statistics concerning:

- Role categories
- The roles belonging to each category
- The components of each role

Role Visualizations

On the Roles tab, you can review role hierarchies. You see either a tabular or a graphical view of a role hierarchy. Which view you see by default depends on the setting of the Enable default table view option on the Administration tab. This topic describes how to use each of these views.

Role hierarchies stretch from users at the top of the hierarchy to privileges at the bottom. In both graphical and tabular views, you can set the direction of the displayed hierarchy.

- To show from the selected user, role, or privilege up the hierarchy, set Expand Toward to Users.
- To show from the selected user, role, or privilege down the hierarchy, set Expand Toward to Roles.

The Tabular View

If the tabular view doesn’t appear when you select a security artifact on the Roles tab, then you can click the View as Table icon. In the tabular view, you can:

- Review the complete role hierarchy for a selected user or role. The table shows roles inherited both directly and indirectly.
- Search for a security artifact by entering a search term in the field above any column and pressing Enter.
• Set the contents of the table as follows:
  o If Expand Toward is set to Privileges, then you can set Show to either Privileges or Roles.
  o If Expand Toward is set to Users, then you can set Show to either Roles or Users.

The resulting contents of the table depend on the start point. For example, if you select a privilege, Expand Toward is set to Privileges, and Show is set to Roles, then the table is empty.

• Export the displayed details to a Microsoft Excel spreadsheet.

The Graphical View

If the graphical view doesn’t appear when you select a security artifact on the Roles tab, then you can click the Show Graph icon. In the graphical view, users, privileges, and the various types of roles are represented by nodes and differentiated by both color and labels. These values are defined in the Legend. You can:

• Review roles inherited directly by the selected role or user. To see roles and privileges inherited indirectly, select a directly inherited role, right-click, and select either Expand or Expand All. Select Collapse or Collapse All to reverse the action. Alternatively, double-click a node to expand or collapse it.

• Use the Set as Focus action to make any selected node the center of the visualization.

• Use the Overview in the bottom right of the display area to manipulate the visualization. For example, clicking a node in the Overview moves the node to the center of the visualization. You can also use drag and drop.

• Hover on a Legend entry to highlight the corresponding nodes in the visualization. Click a legend entry to add or remove corresponding nodes in the visualization.

In the Control Panel, you can:

• Switch the layout between radial and layered representations.

• Click the Search icon and enter a search term to find a security artifact among currently displayed nodes.

• Zoom in and out using either the Zoom in and Zoom out icons or the mouse wheel.

• Magnify areas of the visualization by clicking the Magnify icon and dragging it to the area of interest. Click the icon again to switch it off.

• Click the Zoom to Fit icon to center the image and fill the display area

Creating Role Hierarchy Visualizations

On the Security Console you can review the role hierarchy of a job role, an abstract role, or a duty role. You must have the IT Security Manager job role to perform this task.

To review a role’s hierarchy:

2. On the Security Console, ensure that the Expand Toward field is set to Privileges.
3. Search for and select the role.
   Depending on the enterprise setting, either a table or a graphical representation of the role is displayed.
4. If the table doesn’t appear by default, click the View as Table icon.
   The table lists every role inherited either directly or indirectly by the selected role. To view the privileges inherited by the role, set the Show field to Privileges.
Tip: Enter text in the field above a column and press Enter to show only those roles or privileges that contain the specified text.

5. Click Export to Excel to export the current table data to Microsoft Excel.

Simulating Navigator Menus in the Security Console

You can simulate Navigator menus available to roles or users. From a simulation, you can review the access inherent in a role or granted to a user. You can also determine how to alter that access to create roles.

Opening a Simulation

To open a simulated menu:

1. Select the Roles tab in the Security Console.
2. Create a visualization graph, or populate the Search Results column with a selection of roles or users.
3. In the visualization graph, right-click a role or user. Or, in the Search Results column, select a user or role and click its menu icon.
4. Select Simulate Navigator.

Working with the Simulation

In a Simulate Navigator page:

- Select Show All to view all the menu and task entries that may be included in a Navigator menu.
- Select Show Access Granted to view the menu and task entries actually assigned to the selected role or user.

In either view:

- A padlock icon indicates that a menu or task entry can be, but is not currently, authorized for a role or user.
- An exclamation icon indicates an item that may be hidden from a user or role with the privilege for it, because it has been modified.

To plan how this authorization may be altered:

1. Click any blue menu entry.
2. Select either of two options:
   - One lists roles that grant access to the menu item.
   - The other lists privileges required for access to the menu item.

Reviewing Role Assignments

You can use the Security Console to:

- View the roles assigned to a user.
- Identify users who have a specific role.
You must have the IT Security Manager job role to perform these tasks.

**Viewing the Roles Assigned to a User**

Follow these steps:

1. Select **Navigator - Tools - Security Console**.
2. On the Security Console, search for and select the user.

Depending on the enterprise setting, either a table or a graphical representation of the user’s role hierarchy appears. Switch to the graphical representation if necessary to see the user and any roles that the user inherits directly. User and role names appear on hover. To expand an inherited role:

1. Select the role and right-click.
2. Select **Expand**. Repeat these steps as required to move down the hierarchy.

💡 **Tip:** Switch to the table to see the complete role hierarchy at once. You can export the details to Microsoft Excel from here.

**Identifying Users Who Have a Specific Role**

Follow these steps:

1. On the Security Console, search for and select the role.
2. Depending on the enterprise setting, either a table or a graphical representation of the role hierarchy appears. Switch to the graphical representation if it doesn’t appear by default.
3. Set **Expand Toward** to **Users**.

💡 **Tip:** Set the **Expand Toward** option to control the direction of the graph. You can move either up the hierarchy from the selected role (toward users) or down the hierarchy from the selected role (toward privileges).

In the refreshed graph, blue diamond shapes identify users. User names appear on hover. Users may inherit roles either directly or indirectly from other roles, which appear as green circles. Expand a role to view its hierarchy.

4. In the Legend, click the **Tabular View** icon for the **User** icon. The table lists all users who have the role. You can export this information to Microsoft Excel.

**Comparing Roles**

Compare any two roles to see the structural differences between them.

For example, assume you have copied a role and customized the copy. You then upgrade to a new release. You can compare your customized role from the earlier release with the role as shipped in the later release. You may then decide whether to incorporate upgrade changes into your custom role.

1. Select the Roles tab in the Security Console.
2. Do any of the following:
   - Click the **Compare Roles** button.
Create a visualization graph, right-click one of its roles, and select the **Compare Roles** option.

Generate a list of roles in the **Search Results** column of the Roles page. Select one of them, and click its menu icon. In the menu, select **Compare Roles**.

3. Select roles for comparison:
   - If you began by clicking the Compare Roles button, select roles in both **First Role** and **Second Role** fields.
   - If you began by selecting a role in a visualization graph or the Search Results column, the **First Role** field displays the name of the role you selected. Select another role in the **Second Role** field.

For either field, click the search icon, enter text, and select from a list of roles whose names contain that text.

4. Filter for any combination of these artifacts in the two roles:
   - Function security policies
   - Data security policies
   - Inherited roles

5. For the combination you select, choose whether to show:
   - All artifacts
   - Those that exist only in one role, or only in the other role
   - Those that exist only in both roles

6. Click the **Compare** button.

After you create the initial comparison, you can change the filter and show options. When you do, a new comparison is generated automatically.

**Role Analytics**

Use the Analytics page in the Security Console functional area to review statistics about:

- **Role Categories.** Each role belongs to a category that defines some common purpose. Typically, a category contains a type of role configured for an application, for example "Financials - Duty Roles."

  For each category, a Roles Category grid displays the number of:
  - Roles
  - Role memberships (roles belonging to other roles within the category)
  - Security policies created for those roles

  In addition, a Roles by Category pie chart compares the number of roles in each category with those in other categories.

- **Roles in Category.** Click a category in the Role Categories grid to list roles belonging to that category. For each role, the Roles in Category grid also shows the number of:
  - Role memberships
  - Security policies
  - Users assigned the role
• Individual role statistics. Click the name of a role in the Roles in Category grid to list the security policies and users associated with the role. The page also presents collapsible diagrams of hierarchies to which the role belongs.

Click Export to export data from this page to a spreadsheet.
12 Customizing Security

Security Customization: Overview

This chapter describes some of the ways in which you can customize the Oracle Sales Cloud security model.

The Oracle implementation of role-based access control is designed to handle a wide range of security requirements in different environments. As a result, most companies can use the standard security settings without modification. If necessary, however, you can configure the default settings to meet specific business requirements. For example, you can create custom roles and role hierarchies. Before making any changes to the security reference implementation, however, do the following:

- Clearly define the change that is required and review the proposed changes with Oracle Support.
- Make sure you understand the interrelationships of the various security components and the effect of the proposed change on user access.
- Document any changes you make.

For additional information about changing the standard security settings for Oracle Sales Cloud, go to the Security Resource Center, which is available at 1609084.1 (Article ID) on My Oracle Support. The Security Resource Center provides templates you can use to track the changes you make to standard settings.

Copying Sales Roles: Points to Consider

Copying predefined roles and editing the copies is the recommended approach to creating custom roles. This topic describes some of the issues to consider when copying a role on the Security Console.

Note: You can copy the predefined roles but can't edit them. Predefined roles have role codes with the prefix ORA_.

Role-Copy Options

When you copy a role on the Security Console, you have the option of copying the top role only (shallow copy), or of copying the top role and its inherited roles (deep copy). The result of selecting each of these copy options is described in this section.

- Copying the Top Role

  If you select the Copy top role option, you copy only the role you have selected. The source role has links to roles in its hierarchy, and the copy inherits links to the original versions of those roles. Subsequent changes to the inherited roles affect not only the source top role, but also your copy. The result of selecting the Copy top role option, therefore, is as follows:

  - You can add roles directly to the copied role without affecting the source role.
  - You can remove any role that’s inherited directly by the copied role without affecting the source role.
  - If you remove any role that’s inherited indirectly by the copied role, then the removal affects both the copied role and any other role that inherits the removed role’s parent role, including the source role.
If you edit any inherited role, then the changes affect any role that inherits the edited role. The changes aren’t limited to the copied role.

To edit the inherited roles without affecting other roles, you must first make copies of those inherited roles. You can either select the **Copy top role and inherited roles** option or copy individual inherited roles separately, edit the copies, and use them to replace the existing versions.

- **Copying the Top Role and Inherited Roles**

  If you select the **Copy top role and inherited roles** option, you copy not only the role you have selected, but also all of the roles in its hierarchy. Your copy of the top role is connected to new copies of subordinate roles.

  **Note:** Inherited duty roles are copied if a copy of the role with the same name doesn’t already exist. Otherwise, the copied role inherits links to the existing copies of the duty roles.

  When inherited duty roles are copied, you can edit them without affecting other roles. Equally, changes made subsequently to duty roles in the source role hierarchy aren’t reflected in the copied role.

### Reviewing the Role Hierarchy

When you copy a predefined job, abstract or duty role, it’s recommended that you first review the role hierarchy to identify any inherited roles that you want to either copy, add, or delete in your custom role. You can review the role hierarchy on the Roles tab of the Security Console in either graphical or tabular format. You can also:

- Export the role hierarchy to a spreadsheet from the Roles tab.
- Review the role hierarchy and export it to a spreadsheet from the Analytics tab.
- Run the User and Role Access Audit Report.

Job and abstract roles inherit function security privileges and data security policies from the roles that they inherit. Function security privileges and data security policies may also be granted directly to a job or abstract role. Review these directly granted privileges on the Roles tab of the Security Console, as follows:

- In the graphical view of a role, its inherited roles and function security privileges are visible at the same time.
- In the tabular view, you set the **Show** value to switch between roles and function security privileges. You can export either view to a spreadsheet.

Once your custom role exists, edit it to add or remove directly granted function security privileges.

  **Note:** Data security policies are visible only when you edit your custom role; they don’t display in the graphical or tabular role views. However, you can view the data security policies assigned to a role from the Analytics tab of the Security Console.

### Report and Analytics Roles

You cannot copy or customize roles that are used to secure analytics and reports in Oracle Sales Cloud. Therefore you cannot copy any of the following types of roles:

- Transaction Analysis Duty roles
- Business Intelligence roles
- Any role with a role code prefix of OBIA, for example, OBIA_ANALYSIS GENERIC DUTY
You can however, add any of these roles to custom job roles that you create.

### Naming Copied Roles

By default, a copied role has the same name as its source role with the suffix **Custom**. The role codes of copied roles have the suffix **CUSTOM**. Copied roles lose the prefix **ORA_** automatically from their role codes. You can define a local naming convention for custom roles, with a prefix, suffix, or both, on the Roles subtab of the Security Console Administration tab.

> **Note:** Copied roles take their naming pattern from the default values specified on the Roles subtab of the Security Console Administration tab. You can override this pattern on the Copy Role: Basic Information page for the role that you’re copying. However, the names of roles inherited by the copied role are unaffected. For example, if you perform a deep copy of the Employee role, then duty roles inherited by that role take their naming pattern from the default values.

If any role in the hierarchy already exists when you copy a role, then no copy of that role is made. For example, if you make a second copy of the Employee role, then copies of the inherited duty roles might already exist. In this case, the copied role inherits links to the existing copies of the roles. To create unique copies of inherited roles, you must enter unique values on the Administration tab of the Security Console before you perform a deep copy. To retain links to the predefined job or abstract role hierarchy, perform a shallow copy of the predefined role.

**Related Topics**

- Setting Role Preferences: Explained

### Copying Job or Abstract Roles

You can copy any job role or abstract role and use it as the basis for a custom role. Copying roles is more efficient than creating them from scratch, especially if your changes are minor. This topic explains how to copy a role to create a custom role. You must have the IT Security Manager job role to perform this task.

> **Note:** You can identify predefined job and abstract roles easily by their role codes, which have the prefix **ORA_**.

### Copying a Role

To copy a job or abstract role:

1. On the Roles tab of the Security Console, search for the role to copy.
2. Select the role in the search results. The role hierarchy appears in tabular format by default.

   > **Tip:** Click the **Show Graph** icon to show the hierarchy in graphical format.

3. In the search results, click the down arrow for the selected role and select **Copy Role**.
4. In the **Copy Options** dialog box, select a copy option.
5. Click **Copy Role**.
6. On the Copy Role: Basic Information page, review and edit the **Role Name**, **Role Code**, and **Description** values, as appropriate.
Tip: The role name and code have the default prefix and suffix for copied roles specified on the Roles subtab of the Security Console Administration tab. You can overwrite these values for the role that you’re copying. However, any roles inherited by the copied role are unaffected by any name changes that you make here.

7. Click the Summary and Impact Report train stop.
8. Click Submit and Close, then OK to close the confirmation message.
9. Review the progress of your copy on the Role Copy Status subtab of the Security Console Administration tab. Once the status is Complete, you can edit the copied role.

Editing Custom Job or Abstract Roles

You can create a custom role by copying a predefined job role or abstract role and editing the copy. This topic describes how to edit a custom role on the Security Console. You must have the IT Security Manager job role to perform this task.

Editing the Role

To edit a custom job or abstract role:

1. On the Roles tab of the Security Console, search for and select your custom role.
2. In the search results, click the down arrow for the selected role and select Edit Role.
3. On the Edit Role: Basic Information page, you can edit the role name and description, but not the role code.
4. Click Next.

Managing Functional Security Privileges

On the Edit Role: Function Security Policies page, any functional security privileges granted directly to the copied role appear. Click Load Inherited Policies to populate the table with privileges that the role inherits. To view details of the code resources that a privilege secures, select the privilege in the Details section of the page.

You can add or delete existing privileges from custom roles but can’t create new functional security policies. To delete a privilege that is added directly to the copied role, select the privilege and click the Delete icon. You can’t delete inherited privileges.

To add a privilege to the copied role:

1. Click Add Function Security Policy.
2. In the Add Function Security Policy dialog box, search for and select a privilege or role.
3. If you select a role, then click Add Selected Privileges to add all function security privileges from the role to your custom role. If you select a single privilege, then click Add Privilege to Role.
4. Click OK to close the confirmation message.
5. Repeat from step 2 for additional privileges.

All the privileges you selected are listed on the Edit Role: Function Security Policies page.
7. Click Next.
Managing Data Security Privileges

On the Edit Role: Data Security Policies page, any data security policies granted to the copied role appear. You can add or remove policies from the copied role, or edit the existing policies, provided that the page is enabled for editing (editing is enabled by default). Whether or not this page is enabled for editing depends on the current setting of the Enable edit of data security policies option. Set this option on the Roles subtab of the Security Console Administration tab.

For information about creating, editing, and adding data security policies to a custom role, see the topic Managing Data Security Policies.

Click Next to continue to the next page.

Adding and Removing Inherited Roles

The Edit Role: Role Hierarchy page shows the copied role and its inherited duty roles. The hierarchy is in tabular format by default but you can switch to graphical mode. You can add or remove roles.

To remove a role:

1. Select the role in the table.
2. Click the Delete icon.
3. Click OK to close the confirmation message.

To add a role:

1. Click the Add Role icon.
2. In the Add Role Membership dialog box, search for and select the role to add.
3. Click Add Role Membership.
4. Click OK to close the confirmation message.
5. Repeat from step 2 for additional roles.
6. Close the Add Role Membership dialog box.
7. The Edit Role: Role Hierarchy page shows the updated role hierarchy.
8. Click Next.

Assigning the Role to Users

On the Edit Role: Users page you can assign the copied role to users provided that the page is enabled for editing (editing is enabled by default). Whether or not this page can be edited depends on the current setting of the Enable edit of user role membership option. Set this option on the Roles subtab of the Security Console Administration tab.

To remove user access to a role:

1. Select the user in the table.
2. Click the Delete icon.
3. Click OK to close the confirmation message.

To add user access to a role:

1. Click the Add User button.
2. In the Add User dialog box, search for and select a user or role (job or abstract role).
3. If you select a role, then click Add Selected Users to add all the users assigned the role to your custom role. If you select a single user, then click Add User to Role.
4. Click OK to close the confirmation message.
5. Repeat from step 2 for additional users.
6. Close the Add User dialog box.
   The Edit Role: User page shows the updated role membership.

7. Click Next.

Reviewing the Role
On the Edit Role: Summary and Impact Report page, review the summary of changes. Then do the following:

1. Click Back to make corrections.
2. When you have completed any corrections required, click Save and Close to save the role.
3. Click OK to close the confirmation message.

The role is available immediately.

Creating Job or Abstract Roles

If the predefined job or abstract roles don’t meet enterprise requirements, then you can create new job or abstract roles. In many cases, an efficient method of creating a role is to copy an existing role, then edit the copy to meet your requirements. However, if the predefined roles aren’t similar enough to the roles that you require, then you can create a job role or abstract role from scratch as described in this topic. To perform this task, you must have the IT Security Manager job role.

Entering Basic Information

To create the new role, perform the following steps:

1. On the Roles tab of the Security Console, click Create Role.
2. On the Create Role: Basic Information page, enter the role’s display name in the Role Name field. For example, enter Inside Sales Representative.
3. Enter a unique Role Code value. For example, enter INSIDE_SALES_REP_JOB.
   Abstract roles have the suffix _ABSTRACT, and job roles have the suffix _JOB.
4. In the Role Category field, select the appropriate role category, for example, CRM - Job Roles.
5. Click Next.

Adding Functional Security Policies

When you create a role from scratch, you’re most likely to add one or more duty roles to your role. You’re less likely to grant function security privileges directly to the role. If you aren’t granting function security privileges, then click Next.

To grant function security privileges to the new custom role:

2. In the Add Function Security Policy dialog box, search for and select a privilege or role.
   You can either add an individual privilege or copy all the privileges that belong to an existing role.
3. If you select a role, then click Add Selected Privileges to add all the function security privileges assigned to the role to your custom role. If you select a single privilege, then click Add Privilege to Role.
4. Click OK to close the confirmation message.
5. Repeat from step 2 for additional privileges.
All the privileges you added are listed on the Create Role: Functional Security Policies page. You can:
  o Click on a privilege to view details of the code resource that it secures.
  o Delete any privilege by selecting the privilege and clicking the Delete icon.

7. Click Next.

(codec)

Note: You can add existing privileges to a custom role but can’t create new functional security policies.

Adding Data Security Policies
On the Create Role: Data Security Policies page, you can assign data security policies to your new role provided that the page is enabled for editing (editing is enabled by default). Whether this page is enabled for editing depends on the current setting of the Enable edit of data security policies option. Set this option on the Roles subtab of the Security Console Administration tab.

For information about creating and adding data security policies to a role, see the topic Managing Data Security Policies on the Security Console: Explained.

Click Next to continue to the next page.

Building the Role Hierarchy
The Create Role: Role Hierarchy page shows the hierarchy of your custom role in tabular format by default. You can add one or more job, abstract, and duty roles to the new role. Typically, when creating a job or abstract role you add duty roles. Roles are always added directly to the role that you’re creating.

To add a role:

1. Click the Add Role icon.
2. In the Add Role Membership dialog box, search for and select the role to add.
3. Click Add Role Membership.
4. Click OK to close the confirmation message.
5. Repeat from step 2 for additional roles.
6. Close the Add Role Membership dialog box.
   The Create Role: Role Hierarchy page shows the updated role hierarchy.
7. Click Next.

Assigning the Role to Users
On the Create Role: Users page, you can assign the job or abstract role you are creating to selected users provided that the page is enabled for editing (editing is enabled by default). Whether or not this page is enabled for editing depends on the current setting of the Enable edit of user role membership option. Set this option on the Roles subtab of the Security Console Administration tab.

To assign the role to a user:

1. Click Add User.
2. In the Add User dialog box, search for and select a user or role.
3. If you select a role, then click Add Selected Users to add all the users assigned the role to the role you’re creating.
   If you select a single user, then click Add User to Role.
4. Click OK to close the confirmation message.
5. Repeat from step 2 to add additional users.
6. Close the Add User dialog box.
   The Create Role: Users page shows the updated role membership.
7. Click Next.

Reviewing the Role
To review the role, do the following:
1. On the Create Role: Summary and Impact Report page, review the selections you’ve made.
   Summary listings show the numbers of function security policies, data security policies, roles, and users you’ve
   added and removed; an Impact listing shows the number of roles and users affected by your changes. Expand any
   of these listings to see names of policies, roles, or users included in its counts.
2. If you determine you need to make changes, click Back to navigate back to the appropriate page, then make the
   correction.
3. If you’re satisfied with the role, click Save and Close to save the role.
4. Click OK to close the confirmation message.

Your complete custom role is available immediately on the Security Console.

Tip: Search for the job or abstract role on the Security Console and review its visualization. Edit the role to make
any corrections.

Copying and Editing Duty Roles
You can copy a duty role and edit the copy to create a custom duty role. Copying duty roles is the recommended way of
creating custom duty roles. This topic explains how to copy a duty role and edit the copy. You must have the IT Security
Manager job role to perform these tasks.

Copying a Duty Role
To copy a duty role:
1. On the Roles tab of the Security Console, search for the duty role to copy.
2. Select the role in the search results.
   The role is displayed in tabular format by default. Click the Show Graph icon to show the hierarchy in graphical
   format.
3. In the search results, click the down arrow for the selected role and select Copy Role.
4. In the Copy Options dialog box, select a copy option.
   o If you select Copy top role, then only the selected role is copied. The copied role inherits the same role
     instances as the source role.
   o If you select Copy top role and inherited roles, then a copy is made of every role in the role hierarchy
     provided that a copy of the role with the same name doesn’t already exist.
5. Click Copy Role.
6. On the Copy Role: Basic Information page, edit the Role Name, Role Code, and Description values, as
   appropriate.
Tip: The Role Name and Role Code values are assigned the default prefix and suffix for copied roles specified on the Roles subtab of the Security Console Administration tab. The prefix ORA_ is also removed from the role code. You can overwrite the default prefix and suffix for the role that you’re copying. However, any roles inherited by the copied role are unaffected by any name changes that you make here.

7. Click the Summary and Impact Report train stop.
8. Click Submit and Close, then OK to close the confirmation message.
9. Review the progress of your copy on the Role Copy Status subtab of the Security Console Administration tab. Once the status is Complete, you can edit the copied role.

Editing the Copied Duty Role

To edit the copied role, perform the following steps:

1. On the Roles tab of the Security Console, search for and select your copy of the duty role.
2. In the search results, click the down arrow for the selected role and select Edit Role.
3. On the Edit Role: Basic Information page, you can edit the role name and description, but not the role code.
4. Click Next.

Managing Functional Security Policies

On the Edit Role: Function Security Policies page, any functional security privileges granted directly to the copied role appear. Click Load Inherited Policies to populate the table with privileges that the role inherits. To view details of the code resources that a privilege secures, select the privilege in the Details section of the page.

You can add or delete existing privileges from copied duty roles but can’t create new functional security policies. To delete a privilege that is added directly to the custom role, select the privilege and click the Delete icon. You can’t delete inherited privileges.

To add a privilege to the role:

1. Click Add Function Security Policy.
2. In the Add Function Security Policy dialog box, search for and select a privilege or role.
3. If you select a role, then click Add Selected Privilege to grant all function security privileges from the role to your custom role. If you select a single privilege, then click Add Privilege to Role.
4. Click OK to close the confirmation message.
5. Repeat from step 2 for additional privileges.
    All the privileges you selected are listed on the Edit Role: Function Security Policies page.
7. Click Next.

Managing Data Security Policies

On the Edit Role: Data Security Policies page, any data security policies granted to the copied role appear. You can edit or remove policies from the copied role, or create a new policy for the role, provided that the page is enabled for editing (editing is enabled by default). Whether or not this page is enabled for edit depends on the current setting of the Enable edit of data security policies option. Set this option on the Roles subtab of the Security Console Administration tab. For information about creating, editing, and adding data security policies to a custom role, see the topic Managing Data Security Policies.

Click Next to continue to the next page.
Adding and Removing Inherited Roles

The Edit Role: Role Hierarchy page shows the copied duty role and any duty roles that it inherits. The hierarchy is displayed in tabular format by default. You can add or remove roles.

To remove a role:

1. Select the role in the table.
2. Click the Delete icon.
3. Click **OK** to close the information message.

To add a role:

1. Click **Add Role**.
2. In the **Add Role Membership** dialog box, search for and select the role to add.
3. Click **Add Role Membership**.
4. Click **OK** to close the confirmation message.
5. Repeat from step 2 for additional roles.
6. Close the **Add Role Membership** dialog box.
   - The Edit Role: Role Hierarchy page shows the updated role hierarchy.
7. Click **Next**.

Viewing Users Assigned the Role

On the Edit Role: Users page, click **Next**. You can't provision duty roles directly to users.

Reviewing the Role

On the Edit Role: Summary and Impact Report page, review the summary of changes. Then do the following:

1. Click **Back** to make corrections.
2. When you have completed any corrections required, click **Save and Close** to save the role.
3. Click **OK** to close the confirmation message.

The role is available immediately.

Managing Data Security Policies

This topic describes how to manage data security policies when creating, copying or editing custom roles on the Roles tab of the Security Console. It also describes how you can disable the functionality to update data security policies if required.

Enabling and Disabling Update of Data Security Policies

By default, the Data Security Policies page in the Create, Copy, and Edit Role processes of the Security Console can be used to edit or remove data security policies from a custom role or to create a new policy for a custom role. However, if you don’t want data security policies to be updated, even for custom roles, then you can disable editing functionality as follows:

1. Navigate to the Administration tab of the Security Console.
2. Select the Roles subtab.
3. Deselect the option **Enable edit of data security policies**.
4. Click **Save**.

   The Data Security Policies page continues to display the data security policies associated with a role but the options to edit or delete existing policies or add new policies are no longer available.

### Editing, Removing, and Creating Data Security Policies for Custom Roles

To create a custom role, it’s recommended that you copy a predefined role rather than create a role from scratch. In this case, your custom role automatically has the data security policies of the copied role. You can edit or remove the copied data security policies if necessary. You’re unlikely to create data security policies unless you create custom roles from scratch.

To edit or remove a data security policy for a custom role:

1. On the Data Security Policies page, locate the policy then click the down arrow at the end of the policy row to show the actions menu.
2. Select one of the options listed:
   - To remove the policy, select the **Remove Data Security Policy** option.
     The policy is removed from the role.
   - To edit the policy, do the following:
     i. Select the **Edit Data Security Policy** option.
        The **Edit Data Security Policy** dialog box is displayed.
     ii. Change the values as required, for example, you can change the start date, the data set, or the action specified for the policy.
     iii. Click **OK** to save your changes, and close the confirmation message.

To create a data security policy:

1. On the Data Security Policies page, click **Create Data Security Policy**.
   The **Create Data Security Policy** dialog box is displayed. A **Start Date** value is automatically assigned to the policy but can be changed.
2. In the **Policy Name** field, enter a policy name.
   The names of predefined data security policies begin with the words **Grant on**.
3. Search for and select the database resource for which you’re defining the policy, for example, search for a table name.
4. In the **Data Set** field, specify which subset of the data made available by the database resource the policy applies to. Select one of the values shown in the following table.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select by key</td>
<td>Use to limit the data set to a single record in the data resource. If you select this option, you must specify the primary key value that identifies the record in the database resource.</td>
</tr>
<tr>
<td>Select by instance set</td>
<td>Use to limit the data set to a subset of the data in the data resource. If you select this option, you must select a condition that defines a subset of the data. Conditions vary by resource. If the predefined conditions available for a resource are not appropriate, you can create custom conditions for the predefined database resource. For additional information, see the topic Managing Database Resources.</td>
</tr>
<tr>
<td>All values</td>
<td>Use to include all data from the data resource in the data set.</td>
</tr>
</tbody>
</table>
5. Complete the remaining fields, which depend on the selected combination of database resource and data set values.
6. In the Actions field, select the actions to which this data security policy applies.
7. Click OK to save the data security policy.

You can view the new policy on the Data Security Policies page by scrolling to the end of the list of policies.

Managing Database Resources

Data security policies secure the database resources of an enterprise. This topic describes how to manage database resources and data security policies if, for example, you want to define and secure custom database resources, or if the predefined data security conditions for a database resource don’t meet your needs. Using the Manage Database Resources and Policies page of the Security Console, you can:

- Define custom database resources
- Create data security policies to secure a custom database resource
- Create new database resource conditions for a database resource

To perform the tasks in this topic, you must have the IT Security Manager job role.

Defining Custom Database Resources

A database resource is a database table or view that corresponds to a business object. When you create a custom business object that you want to secure, you must define its associated database table or view as a database resource. To define a table or view as a database resource, you must:

- Specify the primary key column of the database resource
- Filter columns of the database resource to exclude columns from being included in the row instance sets that can be made available to users through data security policies
- Identify conditions and actions for the database resource to determine what portions of the resource can be secured by data security policies and the operations that can be performed on the data

The following procedure describes each of these tasks.

To define a new custom database resource:

1. On the Security Console Administration tab, select the General subtab, then click Manage Database Resources. The Manage Database Resources and Policies page is displayed.
2. In the Search Results region, click the Create icon. The Create Database Resource page is displayed. The General Information subtab is selected by default.
3. Enter the values shown in the following table for the new database resource.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object Name</td>
<td>The name of the custom business object you want to define as a database resource.</td>
</tr>
</tbody>
</table>
Field | Value
--- | ---
Display Name | The display name of the custom business object
Data Object | Select the data resource (table or view) that the custom business object represents.
When you select a value for the **Data Object** field, the Primary Key Columns and Filter Column Details areas are displayed.
Module | Select the user module associated with the resource.

4. Click the **Function Security Enabled** check box if the business object has been enabled for functional security.
5. In the **Primary Key Columns** area, click the Create icon.
6. In the **Primary Key** field, select the primary key column of the database table or view that the business object represents.
7. In the Filter Column Details area, select columns you want to exclude from the row instance sets defined by data security policies. The data from filtered columns isn’t accessible by users. To select a column as a data filter, move it from the Available Columns list to the Selected Columns list.
8. Click the **Condition** subtab to create conditions for the new database resource, then click the Create icon. The **Create Database Resource Condition** dialog box is displayed. Conditions specify the rows of the database resource that can be secured by data security policies.
9. Create resource conditions as described in the procedure Creating Conditions for a Database Resource later in this topic.
10. Click the **Action** subtab.

You define actions on the database resource to specify the operations data security policies can secure on a business object. For example, you can specify whether a user might have read, update, or delete access by naming actions for each of these and granting them in a data security policy to a particular role. An action must correspond with an operation that the business object implements.
11. Click the **Add Row** icon.
12. Enter a value in the **Name** and **Display Name** fields. The action name you enter must match an operation name defined for the corresponding business object. Actions act on the row instance sets specified by the database resource conditions that you define in a data security policy, that is, conditions determine the row instance set available to a user for a given action.

You can specify more than one action.
13. Click **Submit**.
14. When the confirmation dialog box is displayed confirming that the database resource was created, click **OK**.

Creating Conditions for a Database Resource

Database resource conditions define what portions of a database resource can be secured by data security policies. You can’t edit the predefined conditions provided by Oracle but you can create new conditions for a predefined database resource or for a custom database resource.

A condition is a group of row instances that are determined by a simple XML filter or an SQL predicate (WHERE clause) that queries the attributes of the resource itself. You can define a condition to specify multiple row instance sets using an SQL WHERE clause with parameters. You don’t need to define a condition for single row instance conditions (single value) or for all row instance conditions (all values). Both the single-value case and the all-values case can be easily defined when you create the data security policy.
To create conditions for a database resource:

1. On the General subtab of the Security Console Administration tab, click Manage Database Resources. The Manage Database Resources and Policies page is displayed.
2. Search for the database resource whose conditions you want to edit.
3. In the Search Results list, select the appropriate database resource, then click the Edit icon. The Edit Data Security page is displayed.
4. Select the Condition subtab to define a new condition for the resource.
   Any existing conditions defined for the database resource are displayed. You can’t delete or edit any predefined conditions.
5. Click the Create icon. The Create Database Resource Condition dialog box is displayed.
6. Enter a name and display name for the condition.
7. For the Condition Type, select one of the following:
   o Select Filter if you want to use the attribute picker to define a simple condition. If you select the filter condition type, you also must specify the following values:
     • For the Match option, select the All option if you want the filter conditions to include AND clauses or select the Any option if you want the filter conditions to include OR clauses.
     • In the Conditions area, click the Add icon.
     • To define the filter values, enter values similar to those in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column Name</td>
<td>Select the column for which you’re defining the filter.</td>
</tr>
<tr>
<td>Tree Operators</td>
<td>Select this option if the operator you want to use in the filter is a tree operator.</td>
</tr>
<tr>
<td>Operator</td>
<td>Choose the operator for the selected column filter.</td>
</tr>
<tr>
<td>Value</td>
<td>Enter a value as the test for the operator.</td>
</tr>
</tbody>
</table>

   • If you specified the Tree Operators option, click the Search icon. The Select Tree Node dialog box is displayed allowing you to choose the operator value.

   o Select SQL Predicate if you know the attribute names of your condition and you want to use an SQL predicate consisting of a query on the table or view named by the database resource. Enter the SQL values in the SQL Predicate field.

8. Click Save to save the new condition.

Create a Data Security Policy for a Custom Database Resource

When you register a new business object as a database resource, users will initially be prevented from initiating the operations of the business object or from accessing the data of the resource. You define data security policies to make the data of a custom business object available to the users of the application.
Secure Oracle Sales Cloud

Before you create a data security policy, make sure that the following tasks have been completed:

- Identify the business object that you want to secure and register its associated database table or view as a database resource.
- Identify and define any conditions that you want to make available for the database resource.
- Identify and register the actions that you want to secure for this database resource.

To create a new policy for a custom database resource:

1. On the General subtab of the Security Console Administration tab, click Manage Database Resources.

   The Manage Database Resources and Policies page is displayed.

2. Search for the database resource that you want to secure by defining a policy.

3. In the Search Results list, select the database resource, then scroll down to the Policies Details area.

   All the policies defined for the database resource are displayed.

4. You can select an existing policy for editing by selecting the policy then clicking the Edit icon. In this case, however, click the Create icon to create a new policy.

   The Create Policy dialog box is displayed with the General subtab selected.

5. Specify the following information for the new policy:
   - In the Name field, enter a name for the policy.
   - In the Start Date field, enter the date on which the policy is to become active.

   The Module field is pre-filled with the name of the module associated with the database resource for which you’re creating the policy but you can change this value.

6. Click the Roles subtabs, then click the Add icon to select the roles that are to be assigned the new policy.

   The Select and Add: Roles dialog box is displayed.

7. Select the roles to be assigned the new policy as follows:
   - In the Role Name field, enter the name of the role.
   - In the Application field, enter the application stripe of the role, for example, CRM, HCM, or FSCM, then click Search.
   - Select a role from the list of roles displayed, then click Apply to associate the role with the new policy.
   - Select any additional roles from the list and, when you have finished adding roles, click OK.

   All users assigned the roles you select are provided with access to the data defined in the policy.

8. Click the Rule subtab to define a rule to specify the rows of the database resource to which the policy applies.

9. Select one of the following values in the Row Set field:
   - To secure a specific row, select Single Value, then search for and select the row you want to secure in the Row field.
   - To secure all rows in the resource, select All Values.
   - To secure a subset of the data in the data resource select Multiple Values, then search for and select the condition that defines the subset of the data to be secured in the Condition field.

10. Click the Action subtab, then move actions from the Available Actions list to the Selected Actions list to specify the actions, applicable to the data secured on the database resource, which you want to grant to the role.

11. Click Save and Close.
Security for Sales Cloud Analytics and Reports

Analytics are available throughout Oracle Sales Cloud as embedded analytics and also in standalone mode by way of the transactional work areas. Oracle Sales Cloud users interact with information in Oracle BI Applications and Oracle Transactional Business Intelligence using Oracle Business Intelligence Enterprise Edition (Oracle BI EE) components, such as Dashboards.

The analytics and reports that are delivered with Oracle Sales Cloud are secured based on the roles that use each report. For example, sales managers can access sales analytics and reports that salespeople don’t have access to. If you want to create new analytics or reports or edit existing ones, you should become familiar with Sales Cloud security concepts and how access is secured to Oracle Transactional Business Intelligence subject areas, Oracle BI Presentation Catalog folders, and Oracle Business Intelligence reports.

Subject Areas

Subject areas are functionally secured using duty roles. The supplied user roles include the necessary duty roles to access the Oracle Business Intelligence content. The names of duty roles that grant access to subject areas include the words Transaction Analysis Duty (for example, Sales Managerial Transaction Analysis Duty). Access to a subject area is needed to run or create reports for that subject area.

Business Intelligence Catalog Folders

BI Presentation Catalog folders are functionally secured using the same duty roles that secure access to the subject areas. Therefore, a user who inherits the Sales Managerial Transaction Analysis Duty can access both the Sales Manager folder in the BI Presentation Catalog and the Sales Manager subject areas.

Business Intelligence Reports

Analyses are secured based on the folders in which they’re stored. If you haven’t secured BI reports using the report permissions, then they’re secured at the folder level by default. You can set permissions against folders and reports for roles, catalog groups, or users.

Information about Security and Reporting

When you receive your Oracle Sales Cloud implementation, access to its functionality and data is secured using role-based access control. For more information about creating and securing reports, see the following guides on the Oracle Help Center at http://docs.oracle.com:

- Oracle Sales Cloud Security Reference
Describes the Oracle Sales Cloud applications security reference implementation and includes descriptions of all the predefined data that is included in the security reference implementation for an offering.

- Oracle Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition

Provides information about using Transactional Analysis Duty roles to secure access to the Business Intelligence catalog.

- Oracle Sales Cloud Creating and Administering Analytics

Explains how to view and work with analytics and reports.

Permissions for Catalog Objects

The Business Intelligence Catalog stores business intelligence objects such as dashboards, dashboard pages, folders, and analyses. Users can view only the objects for which they are authorized. Note that the owner of an object or folder cannot automatically access the object or folder. To access an object or folder, the user must have the proper permission assigned in the object or folder’s permission dialog.

What Are Permissions?

An object’s owner or a user who has been given the proper privileges and permissions can assign permissions to catalog objects. Permissions are authorizations that you grant to a user or role to perform a specific action or group of actions on a catalog object. For example, if you work in the sales department and created a dashboard that contains quarterly sales projections, then you can give read access to this dashboard to all sales people, but give read, write, and delete access to sales directors and vice presidents.

Note: Permissions are a part of the Oracle BI EE security model, and how permissions are initially assigned is based on how users, roles, and groups were set up on your application, and which privileges the Oracle BI EE administrator granted those users, roles, and groups.

Permission Definitions

To control access to objects (such as a folder in the catalog or a section in a dashboard), you assign permissions to roles, catalog groups, and users. The permissions that you can assign vary depending on the type of object with which you are working.

The following are the main types of permissions encountered for Sales Cloud users:

<table>
<thead>
<tr>
<th>Permission</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Control</td>
<td>Use this option to give authority to perform all tasks (modify and delete, for example) on the object.</td>
</tr>
<tr>
<td>Modify</td>
<td>Use this option to give authority to read, write, and delete the object.</td>
</tr>
</tbody>
</table>
### Permission Definitions

<table>
<thead>
<tr>
<th>Permission</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse</td>
<td>Use this option to give authority to access objects within the selected folder when the user does not have permission to the selected folder. Access to these objects is required when the objects in the folder, such as analyses, are embedded in a dashboard or Oracle WebCenter Portal application page that the user has permission to access. For example, if you grant users the Traverse permission to the /Shared Folders/Test folder, then they can access objects, through the BI Presentation Catalog or embedded in dashboards or Oracle WebCenter Portal application pages, stored in the/Shared Folders/ Test folder and stored in sub-folders, such as the /Shared Folders/ Test/Guest folder. However, users cannot access (meaning view, expand, or browse) the folder and sub-folders from the Catalog.</td>
</tr>
<tr>
<td>Open</td>
<td>Use this option to give authority to access, but not modify, the object. If you are working with an Oracle BI Publisher object, this option enables you to traverse the folder that contains the object.</td>
</tr>
<tr>
<td>No Access</td>
<td>Use this option to deny access to the object. Explicitly denying access takes precedence over any other permission.</td>
</tr>
<tr>
<td>Custom</td>
<td>Use this option to display the Custom Permissions dialog, where you grant read, write, execute, and delete permissions.</td>
</tr>
</tbody>
</table>

For additional information about catalog object permissions, see Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition on Oracle Help Center at [http://docs.oracle.com/](http://docs.oracle.com/).

### Transaction Analysis Duty Roles

Oracle Transactional Business Intelligence secures reporting objects and data through a set of delivered OTBI Transaction Analysis Duty roles. These OTBI Transaction Analysis Duty roles control which subject areas and analyses that a user can access and what data a user can see in Oracle Sales Cloud.

Your administrator can select users, roles, and catalog groups to:

- Receive the delivery content of an agent.
- Have permission to access a section or alert section in a dashboard.
- Have permission to use a saved customization.
- Add or edit for an existing catalog group.
- Assign permissions to a catalog object.

For information about setting the necessary security, see Oracle Middleware Security Guide for Oracle Business Intelligence Enterprise Edition.

The following is a list of some OTBI Transactional Analysis Duty roles for Sales:

- Partner Channel Transaction Analysis Duty
- Partner Channel Administrative Transaction Analysis Duty
- Sales Administrative Transaction Analysis Duty
- Sales Executive Transaction Analysis Duty
- Sales Managerial Transaction Analysis Duty
### Sales Transaction Analysis Duty

The following table lists analytics and reports available in Oracle Sales Cloud. It also shows the predefined job roles that can access the different analytics and reports, and the OTBI Transactional Analysis Duty roles that provide the access.

<table>
<thead>
<tr>
<th>Analytic or Report Name</th>
<th>Job Role</th>
<th>OTBI Transactional Analysis Duty Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Forecast vs. Quota</td>
<td>Sales VP</td>
<td>Sales Executive Transaction Analysis Duty</td>
</tr>
<tr>
<td>• Sales Stage by Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sales Performance Trend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Top Open Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Forecast Vs Open Pipeline: My Team</td>
<td>Sales Manager</td>
<td>Sales Managerial Transaction Analysis Duty</td>
</tr>
<tr>
<td>• My Team’s Activities (By Type)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Team’s Leads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Team’s Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Team’s Pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Team’s Tasks on Open Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Team’s Top Open Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Team Leadership Board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Top Accounts by My Team’s Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Open Leads by Age</td>
<td>Sales Representative</td>
<td>Sales Transaction Analysis Duty</td>
</tr>
<tr>
<td>• My Top Open Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Forecast vs. Open Pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Open Leads by Source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Open Tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Pipeline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Stalled Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Top Accounts by Open Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Unaccepted Leads by Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• My Won Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Top Accounts by My Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Evaluating My Partners’ Pipeline</td>
<td>Channel Account Manager</td>
<td>Partner Channel Transaction Analysis Duty</td>
</tr>
<tr>
<td>• Evaluating My Partners’ Quarterly and Yearly Closed Revenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Evaluating My Partners’ Current Quarterly Sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Evaluating My Partners’ Win Rate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The predefined Transaction Analysis Duty roles provide permissions to view but not create analyses and reports. Permissions to create reports are assigned at the job role level using Business Intelligence roles.

### Business Intelligence Roles

Business Intelligence roles apply to both Oracle Business Intelligence Publisher (Oracle BI Publisher) and Oracle Transactional Business Intelligence (OTBI). They grant access to Business Intelligence functionality, such as the ability to run or author
reports. Users need one or more of these roles in addition to the roles that grant access to reports, subject areas, Business Intelligence catalog folders, and Oracle Sales cloud data. This topic describes the Business Intelligence roles.

The Business Intelligence roles are described in the following table.

<table>
<thead>
<tr>
<th>Business Intelligence Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI Consumer Role</td>
<td>Runs Business Intelligence reports.</td>
</tr>
<tr>
<td>BI Author Role</td>
<td>Creates and edits reports.</td>
</tr>
<tr>
<td>BI Administrator Role</td>
<td>Performs administrative tasks such as creating and editing dashboards and modifying security permissions for reports, folders, and so on.</td>
</tr>
<tr>
<td>BI Publisher Data Model Developer Role</td>
<td>Creates and edits Oracle Business Intelligence Publisher data models.</td>
</tr>
</tbody>
</table>

**BI Consumer Role**

The predefined OTBI Transaction Analysis Duty roles inherit the BI Consumer Role. You can configure custom roles to inherit BI Consumer Role so that they can run reports but not author them.

**BI Author Role**

BI Author Role inherits BI Consumer Role. Users with BI Author Role can create, edit, and run OTBI reports. All predefined Sales job roles that inherit an OTBI Transaction Analysis Duty role are also assigned the BI Author Role at the job role level, except for the Sales Representative job role which is not assigned the BI Author role.

**BI Administrator Role**

BI Administrator Role is a superuser role. It inherits BI Author Role, which inherits BI Consumer Role. The predefined Sales Cloud job roles do not have BI Administrator Role access.

**BI Publisher Data Model Developer Role**

BI Publisher Data Model Developer Role is inherited by the Application Developer role, which is inherited by the Application Implementation Consultant role. Therefore, users with either of these predefined job roles can manage BI Publisher data models.
Customizing Security for Oracle Transactional Business Intelligence

Oracle Transactional Business Intelligence secures reporting objects and data through the following types of roles:

- Reporting objects and data are secured through the predefined OTBI Transactional Analysis Duty roles, for example, Sales Managerial Transaction Analysis Duty. The Transaction Analysis Duty roles control which subject areas and analyses a user can access and what data a user can see.

- Business Intelligence roles, for example, BI Consumer Role, or BI Author Role. These roles grant access to Business Intelligence functionality, such as the ability to run or author reports. Users need one or more of these roles in addition to the roles that grant access to reports and subject areas to create and run reports and view analytics.

You can’t copy or customize the Business Intelligence roles or the Transaction Analysis Duty roles provided with Oracle Sales Cloud, or the associated security privileges. In addition, any role with a role code prefix of OBIA, for example, Business Intelligence Applications Analysis Duty (OBIA_ANALYSIS_GENERIC_DUTY), can also not be copied. However, you can customize reporting security according to your security requirements as described in this topic.

Modifying Transaction Analysis Duty Role Assignments

If you want to customize the subject areas that users have access to, then create a custom job role and provide the custom role with the Oracle Transactional Business Intelligence duty roles that provide the required access.

For example, you can create a custom role that provides access to both partner and sales team subject areas by assigning both the Sales Managerial Transaction Analysis Duty and the Partner Channel Transaction Analysis Duty to the custom role.

Modifying Business Intelligence Role Assignments

The Business Intelligence roles enable users to perform tasks within Business Intelligence tools such as Oracle Business Intelligence Publisher. The default Business Intelligence roles used in Oracle Sales Cloud are BI Consumer and BI Author.

The delivered Transaction Analysis Duty roles inherit the BI Consumer Role, which provides view-only access to analyses and reports. You assign the BI Author Role at the job role level, giving you flexibility in granting the BI Author privilege to only those job roles that you want to have access to create and edit analyses and reports.

All predefined Sales Cloud job roles that inherit a Transaction Analysis Duty role are also assigned the BI Author Role by default, except for the Sales Representative job role. However, you can optionally create custom copies of the predefined job roles and add or remove the BI Author Role from the custom roles as required.

Viewing Reporting Roles

Viewing reporting roles can help you to understand Oracle Transactional Business Intelligence security. This topic explains how to view the following:

- The reporting roles that a job role inherits
- The reporting roles you are assigned
Viewing the Reporting Roles Assigned to a Job Role

To view the OTBI reporting roles that a job role inherits, perform the following steps:

1. Sign in with the IT Security Manager job role.
2. On the home page, select **Navigator - Tools - Security Console**.
3. On the Security console, search for and select a job role. For example, search for the Sales Manager job role.

   Depending on the enterprise setting, either a graphical or a tabular representation of the role appears. Switch to the tabular view if it doesn’t appear by default.
4. Notice that the Sales Manager job role inherits the BI Author Role directly. The Sales Manager job role also inherits a number of Transaction Analysis Duty roles, such as the Sales Managerial Transaction Analysis Duty role and the Marketing Lead Transaction Analysis Duty role.
5. Click the Show Graph icon to switch to a graphical view of the Sales Manager job role.
6. Locate and expand one of the OTBI roles, for example, expand the Sales Managerial Transaction Analysis Duty role.

   Notice that the role inherits the BI Consumer Role. It also inherits the Transactional Analysis Duty role which is required to run queries and reports.

Viewing the Reporting Roles You Are Assigned

To view all of the duty roles that you are assigned, including Business Intelligence roles and Transaction Analysis Duty roles, perform the following steps:

1. On the home page, select **Tools - Reports and Analytics** to open the Reports and Analytics work area.
2. In the Contents pane, click the Browse Catalog icon.

   The Business Intelligence Catalog page opens.
3. Click your user name in the global header, then select **My Account**.
4. Click the Roles and Catalog Groups tab.

   All the duty roles you are assigned are listed, including Transaction Analysis Duty roles and Business Intelligence roles.
5. Click **OK** to return to the Business Intelligence Catalog page.
6. Click **Sign Out** to return to the Oracle Applications Cloud window.

FAQs for Security and Reporting

How can I customize OTBI duty roles

If you are using Oracle Sales Cloud, you can’t customize the delivered OTBI duty roles or the associated security privileges. You can customize Oracle Transactional Business Intelligence reporting security by assigning different OTBI duty roles to a custom job role according to your needs.
14 Security and Personally Identifiable Information

Security and Personally Identifiable Information: Overview

Securing and protecting confidential customer information against data breaches, data theft, or unauthorized access is an increasing concern for enterprises. To address this issue, Oracle Sales Cloud provides restricted access to certain information, known as Personally Identifiable Information (PII), that is considered private to an individual. This chapter describes how personally identifiable information is secured in Oracle Sales Cloud.

For additional information about managing PII data, or about extending access to PII data, see Oracle Sales Cloud Implementing Customer Data Management at http://docs.oracle.com or 2224401.1 (Article ID) on My Oracle Support.

Protecting Personally Identifiable Information

The data or information that is used to uniquely identify, contact, or locate a person is called personally identifiable information (PII), such as social security number, addresses, bank account numbers, phone numbers, and so on. This information is considered confidential and sensitive, and must be protected to prevent unauthorized use of personal information for the purposes of legal regulation, financial liability, and personal reputation. For example, only authorized users must be allowed access to the social security numbers of people stored in a system.

In Oracle Sales Cloud, the PII data is secured and can be accessed only by the Sales Administrator job role. A sales administrator has complete privileges, such as view, edit, and manage of all the PII attributes. If any other job roles require access to PII attributes to meet their business requirements, then the IT Security Manager must create a custom job role and assign data policies required to access PII information.

In Oracle Sales Cloud, the PII attributes that are secured are as follows:

- Home Address
- Home Phone Number
- Personal Email Address
- Taxpayer Identification Number (Social Security Number)

<table>
<thead>
<tr>
<th>PII Attribute</th>
<th>Table Name</th>
<th>Privilege Title</th>
<th>Privilege Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxpayer Identification Number</td>
<td>HZ_PERSON_PROFILES</td>
<td>View Trading Community Person Social Security Data</td>
<td>HZ_VIEW_TRADING_COMMUNITY_PERSON_SOCIAL_SECURITY_DATA</td>
</tr>
<tr>
<td>(Social Security Number)</td>
<td></td>
<td>Manage Trading Community Person Social Security Data</td>
<td>HZ_MANAGE_TRADING_COMMUNITY_PERSON_SOCIAL_SECURITY_DATA</td>
</tr>
<tr>
<td>Citizenship Number</td>
<td>HZ_CITIZENSHIP</td>
<td>View Trading Community Person Citizenship Number Data</td>
<td>HZ_VIEW_TRADING_COMMUNITY_PERSON_CITIZENSHIP_NUMBER_DATA</td>
</tr>
<tr>
<td>PII Attribute</td>
<td>Table Name</td>
<td>Privilege Title</td>
<td>Privilege Name</td>
</tr>
<tr>
<td>---------------</td>
<td>------------</td>
<td>----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Home Address</td>
<td>HOME Address is identified by party site use defined in SITE_USE_TYPE field of the HZ_PARTY_SITE_USES table.</td>
<td>View Trading Community Person Address Data</td>
<td>HZ_VIEW_TRADING_COMMUNITY_PERSON_ADDRESS_DATA</td>
</tr>
<tr>
<td>Home Phone</td>
<td>HZ_CONTACT_POINTS rows with contact_point_purpose value PERSONAL</td>
<td>View Trading Community Person Contact Data</td>
<td>HZ_VIEW_TRADING_COMMUNITY_PERSON_CONTACT_DATA</td>
</tr>
<tr>
<td>Personal E-Mail</td>
<td>HZ_CONTACT_POINTS rows with contact_point_purpose value PERSONAL</td>
<td>View Trading Community Person Contact Data</td>
<td>HZ_VIEW_TRADING_COMMUNITY_PERSON_CONTACT_DATA</td>
</tr>
<tr>
<td>Additional Identifiers</td>
<td>All rows that belong to PERSON party in HZ_ADDTNL_PARTY_IDS</td>
<td>View Trading Community Person Additional Identifier Data</td>
<td>HZ_VIEW_TRADING_COMMUNITY_PERSON_ADDITIONAL_IDENTIFIER_DATA</td>
</tr>
<tr>
<td>Manage Trading Community Person Citizenship Number Data</td>
<td>HZ_MANAGE_TRADING_COMMUNITY_PERSON_CITIZENSHIP_NUMBER_DATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage Trading Community Person Address Data</td>
<td>HZ_MANAGE_TRADING_COMMUNITY_PERSON_ADDRESS_DATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage Trading Community Person Contact Data</td>
<td>HZ_MANAGE_TRADING_COMMUNITY_PERSON_CONTACT_DATA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage Trading Community Person Additional Identifier Data</td>
<td>HZ_MANAGE_TRADING_COMMUNITY_PERSON_ADDITIONAL_IDENTIFIER_DATA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Role Optimization Overview

Role optimization is the process used to analyze the existing role hierarchy for redundancies or other inefficiencies. Role optimization enables you to create a role hierarchy that minimizes the number of roles necessary to authorize every job role to its currently authorized privileges. The role optimizer feature automates the analysis process and generates a report you can use to optimize your job hierarchies.

**Important:** The use of the Role Optimization Report is not included in the cost of your service subscription or application license and incurs charges in addition to your subscription or licensing fee.

Reasons to Optimize

Changes to the predefined role hierarchies can put the privacy of your application data at risk. You can unintentionally make your data less secure if you:

- Create duty roles with small groups of privileges in an attempt to minimize:
  - Dependencies
  - The impact of making incremental changes
- Grant privileges that already exist in the role hierarchy
Roles can proliferate or have duplicate privileges over time to make your role hierarchy less efficient, as you see in the following figure.

Benefits of Optimization

By using the role optimizer, you can:

- **Increase user productivity.**
  
  You save time that you can perform other tasks.

- **Lower administrative costs.**
  
  You reduce the number of security objects and the amount of time you spend maintaining that you must administer them.

- **Decrease access risk associated with undocumented role hierarchy changes.**
  
  You identify and can eliminate redundant and inappropriate grants of privilege.
The role optimizer can suggest more efficient role hierarchies, such as the one you see in this figure.

Role Optimizer Access
The role optimizer feature is available as a predefined report. Schedule and submit the Role Optimization Report on the Overview page of the Scheduled Processes work area. The process:

1. Analyzes your existing job role hierarchies.
2. Generates the optimized job role hierarchy and stores the data for each job role in a separate CSV file.
3. Archives and attaches the CSV files as the process output.
4. Generates a log and archives it as a ZIP file. The log file includes technical details of the analysis for troubleshooting.

**Important:** The role optimization process makes no changes to your security structures. You use the report to map privileges to roles and update the role hierarchies.

Role Optimization Report
Use the Role Optimization Report to create the most efficient role hierarchy for your organization. Use the report results to evaluate and, if necessary, update your role hierarchy. The report results enable you to create a role hierarchy with the minimum number of roles necessary to authorize every job role to every privilege it is currently authorized to.

**Important:** The use of the Role Optimization Report is not included in the cost of your service subscription or application license and incurs charges in addition to your subscription or licensing fee.

Users with the IT Security Manager role can run the Role Optimization Report, which is available from the security console.
You should run this report if you:

- Make changes to the predefined role hierarchy.
- Implement your own role hierarchy instead of the predefined role hierarchy.

⚠️ **Important:** The process makes no changes to your role hierarchies.

🔍 **Note:** The predefined role hierarchy in the security reference implementation is optimized as delivered.

### Report Files

Monitor the process status on the Overview page. When the status value is Succeeded, two files appear in the Log and Output section of the report details. The following table describes the two files:

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ClusterAnalysis-Job-CSVs. zip</td>
<td>Contains one CSV file for every job role. Each CSV file contains the duty roles and privileges that make up the optimized job role hierarchy. The name of a CSV file, identifies the job role hierarchy data that the file contains. For example, the ClustersforJob-AR_REVENUE_MANAGER_JOB_14240.csv file contains all of the role hierarchy data for the Accounts Receivables Revenue Manager job role.</td>
</tr>
<tr>
<td>Diagnostics. zip</td>
<td>Contains a log file that provides technical details about the analysis process. You can use this file for troubleshooting purposes.</td>
</tr>
</tbody>
</table>

Import the raw data from the CSV file into your preferred application to read the results. Report data appears in these two sections:

- Privilege Clusters
- Cluster Details

### Role Optimization Report Results

**Privilege Clusters**

The Privilege Clusters section lists each privilege and the name of a recommended privilege cluster. Specific cluster recommendations are described in the cluster details section.

**Cluster Details**

A Cluster Details section appears for each privilege cluster referenced in the Privilege Clusters section. Each detail section includes:

- Cluster name.
- Names of recommended candidate roles that map to the privilege cluster.
- Names and descriptions of the jobs and privileges associated with the cluster.

This table provides descriptions of the fields that appear the Cluster Details section:
### Field Name | Description
---|---
Cluster Name | The name of the optimized cluster, usually in this format: Cluster ###
Primary, Secondary, Tertiary Candidate Role | Recommended role mappings for the privileges in the cluster. Up to three recommended duty roles map to the listed privileges. Select a role. Then assign the privileges in the cluster to that role.
Jobs in Cluster | The number of job roles that inherit the privilege cluster. A list of job names and descriptions is also included.
Privileges in Cluster | The number of privileges that make up the cluster. A list of privilege names and descriptions is also included.
Advanced Data Security

Advanced Data Security offers two types of extended data protections. Database Vault protects data from access by highly privileged users and Transparent Data Encryption encrypts data at rest. Advanced Data Security is available for Oracle Applications Cloud by subscription to Break-Glass service.

Oracle Database Vault

Database Vault reduces the risk of highly privileged users such as database and system administrators accessing and viewing your application data. This feature restricts access to specific database objects, such as the application tables and SOA objects.

Administrators can perform regular database maintenance activities, but cannot select from the application tables. If a DBA requires access to the application tables, she can request temporary access to the Fusion schema at which point keystroke auditing is enabled.

Transparent Data Encryption

Transparent Data Encryption (TDE) protects Fusion Applications data which is at rest on the file system from being read or used. Data in the database files (DBF) is protected because DBF files are encrypted. Data in backups and in temporary files is protected. All data from an encrypted tablespace is automatically encrypted when written to the undo tablespace, to the redo logs, and to any temporary tablespace.

Advanced security enables encryption at the tablespace level on all tablespaces which contain applications data. This includes SOA tablespaces which might contain hydrated payloads with applications data.

Encryption keys are stored in the Oracle Wallet. The Oracle Wallet is an encrypted container outside the database that stores authentication and signing credentials, including passwords, the TDE master key, PKI private keys, certificates, and trusted certificates needed by secure sockets layer (SSL). Tablespace keys are stored in the header of the tablespace and in the header of each operating system (OS) file that makes up the tablespace. These keys are encrypted with the master key which is stored in the Oracle Wallet. Tablespace keys are AES128-bit encryption while the TDE master key is always an AES256-bit encryption.
Glossary

**abstract role**
A description of a person’s function in the enterprise that is unrelated to the person’s job (position), such as employee, contingent worker, or line manager.

**action**
The kind of access, such as view or edit, named in a security policy.

**aggregate privilege**
A predefined role that combines one function security privilege with related data security policies.

**assignment**
A set of information, including job, position, pay, compensation, managers, working hours, and work location, that defines a worker’s or nonworker’s role in a legal employer.

**data security**
The control of access and action a user can take against which data.

**duty role**
A group of function and data privileges representing one duty of a job. Duty roles are specific to applications, stored in the policy store, and shared within an application instance.

**enterprise**
An organization with one or more legal entities under common control.

**entitlement**
Grant of access to functions and data. Oracle Fusion Middleware term for privilege.

**function security**
The control of access to a page or a specific use of a page. Function security controls what a user can do.

**job**
A generic role that is independent of any single department or location. For example, the jobs Manager and Consultant can occur in many departments.

**job role**
A role, such as an accounts payable manager or application implementation consultant, that usually identifies and aggregates the duties or responsibilities that make up the job.
**LDAP**

**privilege cluster**
In the output of the Role Optimization Report, a group of privileges that you can map to a duty role.

**resource role**
Resource roles indicate the role a resource plays as an individual, or within a resource team.

**role**
Controls access to application functions and data.

**role hierarchy**
Structure of roles to reflect an organization’s lines of authority and responsibility. In a role hierarchy, a parent role inherits all the entitlement of one or more child roles.

**role mapping**
A relationship between one or more roles and one or more assignment conditions. Users with at least one assignment that matches the conditions qualify for the associated roles.

**role provisioning**
The automatic or manual allocation of a role to a user.

**security reference implementation**
Predefined function and data security that includes role based access control, and policies that protect functions, and data. The reference implementation supports identity management, access provisioning, and security enforcement across the tools, data transformations, access methods, and the information life cycle of an enterprise.

**setup user**
A user provisioned with the job roles and abstract roles required to perform implementation tasks.

**work relationship**
An association between a person and a legal employer, where the worker type determines whether the relationship is a nonworker, contingent worker, or employee work relationship.