jProductivity LLC

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Protection!™

Oracle CRM On Demand Connector

v1.0

Administrator Guide

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Applicability
This document applies to Protection! Oracle CRM On Demand Connector v1.0 software.

Contents

Chapter 1

Overview

This document describes how to setup and administer *Protection! Oracle CRM On Demand Connector* application (hereafter "*Connector*").

Connector provides integration between Protection! Enterprise and [Oracle CRM On Demand](). It is a J2EE application responsible for handling Protection! Connect™ events and for adding/updating data in *Oracle CRM On Demand* (i.e., adding contacts or creating opportunities). With this *Connector* all of the licensing and customer activities in the Protection! Enterprise will be correctly reflected in the Oracle CRM On Demand providing up-to-date data for Sales, Management and Marketing staff.

The following is a brief description of *Connector* workflow:

1. On create or update event for an Evaluation license:
   a. Create a new Opportunity.
   b. Create or update corresponding Account and/or Contact.
   c. Associate Opportunity with corresponding Campaign (optional).
2. On create or update event for an Extended Evaluation license:
   a. Create or update Opportunity with increased probability percentage.
   b. Create or update corresponding Account and/or Contact.
   c. Associate Opportunity with corresponding Campaign (optional).
3. On create or update event for a Commercial license:
   a. If Opportunity exists then update its Sales Stage with status Closed-Won.
   b. Create or update corresponding Account and/or Contact.
   c. Create an Asset for the license and associate it with the corresponding Account.
   d. Optionally create an order that corresponds to the issued Commercial license.
4. On create or update event for a Customer:
   a. Create or update corresponding Account and/or Contact.

Note

Connector requires Protection! Connect™ application to be properly configured, up and running. Please consult the <PROTECTION_ENTERPRISE_HOME>/server/connect/Protection_Connect_Administrator_Guide.doc document on how to configure and deploy Protection! Connect™.

Chapter 2

Oracle CRM On Demand Configuration

This chapter describes required configuration and customization steps to setup *Oracle CRM On Demand* for integration with *Connector*.

2.1 Application Customization

Unfortunately *Oracle CRM On Demand* does not provide ability to package and deploy changes done in *CRM On Demand* Application Customization pages. Therefore all of the below required changes must be done manually using the Admin interface.

Note

Note: to perform these procedures, your role must include the Customize Application privilege.

To navigate to the Application Customization page:

1. In the upper right corner of any page, click the Admin global link.
2. Click the Application Customization link.
3. In the Record Type Setup section, click the link for the required record type.

2.1.1 "Product" Entity Customization

2.1.1.1 Adding Custom Product Entity Fields

The following table indicates custom fields that must be added to the *"Product"* entity. To add these fields navigate to:
Admin | *Application Customization* | *Product* | *Product Field Setup* page:

Display Name	Field Type	Required	Default Value
Product Code	Text (Short)		
Price	Currency	Yes	0

2.1.1.2 Adding Custom Product Static Page Layout

To add a custom static page layout navigate to:
Admin | *Application Customization* | *Product* | *Product Page Layout* page*:*

1. Click the <u>Copy</u> link opposite of *"Product Page Standard Layout"* to create a copy of an existing layout.
2. Go to *"Step 1: Layout Name"* and specify *Product Page Protection! Layout* as *"Layout Name".*
3. Go to *"Step 3: Field Layout"* and add the *"Product Code"* and *"Price"* fields to the *"Key Product Information"* pane.
4. Click *"Finish"* button to save changes.

To allow viewing/changing custom Product fields the "*Product Page Protection! Layout"* must be specified as default layout for desired role(s). To do this you need to navigate to the Role Management page and add new or customize existing role(s).

To set newly created "*Product Page Protection! Layout" as default layout*:

1. Navigate to the *Admin* | *User Management & Access Controls* | *Role Management* page.
2. Select desired role to be edited.
3. Select *"Step 6: Page Layout Assignment".*
4. *Locate "Product" record type*
5. *For "Product" record type chose Static as "Page View Type"*
6. Choose the *"Product Page Protection! Layout"* as "Page Layout Name".
7. Click *"Finish"* button to save changes.

2.1.2 "Contact" Entity Customization

2.1.2.1 Adding Custom Contact Entity Fields

The following table indicates custom fields that must be added to the *"Contact"* entity. To add these fields navigate to
Admin | *Application Customization* | *Contact* | *Contact Field Setup* page:

Display Name	Field Type	Required	Default Value
Locked	Checkbox		

2.1.2.2 Adding Custom Contact Static Page Layout

To add a custom static page layout navigate to:
Admin | *Application Customization* | *Contact* | *Contact Page Layout* page*:*

1. Click the Copy link opposite of *"Contact Page Standard Layout" "* to create a copy of an existing layout.
2. Go to *"Step 1: Layout Name"* and specify "*Contact Page Protection! Layout"* as *"Layout Name".*
3. Go to *"Step 3: Field Layout"* and add *"Locked"* field to the *"Key Detail Information"* pane.
4. Go to *"Step 4: Related Information"* and add *"Assets"* from the *"Available Information"* pane to the "Displayed Information" pane following right after "Opportunities" field.
5. Click *"Finish"* button to save changes.

To allow viewing/changing custom Contact fields the "*Contact Page Protection! Layout"* must be specified as default layout for desired role(s). To do this you need to navigate to the Role Management page and add new or customize existing role(s).

To set newly created "*Contact Page Protection! Layout" as default layout:*

1. Navigate to the *Admin* | *User Management & Access Controls* | *Role Management* page.
2. Select desired role to be edited.
3. Select *"Step 6:* Page Layout Assignment*".*
4. *Locate "Contact" record type*
5. *For "Contact" record type chose Static as "Page View Type"*
6. Choose the *"Contact Page Protection! Layout"* as "Page Layout Name"..
7. Click *"Finish"* button to save changes.

2.1.3 "Asset" Entity Customization

2.1.3.1 Adding Custom Asset Entity Fields

The following table indicates custom fields that must be added to the *"Asset"* entity. To add these fields navigate to:
Admin | *Application Customization* | *Asset* | *Asset Field Setup* page:

Display Name	Field Type	Required	Default Value
Locked	Checkbox		
Asset Name	Text (Long)		
Usage End Date	Date		

2.1.3.2 Adding Custom Asset Static Page Layout

To add a custom static page layout navigate to:
Admin | *Application Customization* | *Asset* | *Asset Page Layout* page*:*

1. Click the Copy link opposite of *"Asset Page Standard Layout"* to create a copy of an existing layout.
2. Go to *"Step 1: Layout Name"* and specify "*Asset Page Protection! Layout"* as *"Layout Name".*
3. Go to *"Step 3: Field Layout"* and add the *"Asset Name"*, *"Install Date"*, *"Locked"* and *"Usage End Date"* fields to the *"Key Asset Information"* pane.
4. Click *"Finish"* button to save changes.

To allow viewing/changing custom Asset fields the "*Asset Page Protection! Layout"* must be specified as default layout for desired role(s). To do this you need to navigate to the Role Management page and add new or customize existing role(s).

To set newly created "*Asset Page Protection! Layout" as default layout*:

1. Navigate to the *Admin* | *User Management & Access Controls* | *Role Management* page.
2. Select desired role to be edited.
3. Select *"Step 6:* Page Layout Assignment*".*
4. *Locate "Asset" record type.*
5. *For "Asset" record type chose Static as "Page View Type"*
6. Choose the *"Asset Page Protection! Layout"* as "Page Layout Name".
7. Click *"Finish"* button to save changes.

2.1.4 "Opportunity" Entity Customization

2.1.4.1 Adding Custom Opportunity Entity Fields

The following table indicates custom fields that must be added to the *"Opportunity"* entity. To add these fields navigate to:
Admin | *Application Customization* | *Opportunity* | *Opportunity Field Setup* page:

Display Name	Field Type	Required	Default Value
Opportunity Code	Text (Short)		

2.2 Setting up Company Products

Before License and License Action events can be processed, all of the products used by Protection! Enterprise must be setup in *Oracle CRM On Demand*. The easiest way to setup products is by exporting products from Protection! Enterprise Manager into *Oracle CRM On Demand*. It is also possible to setup/maintain products manually. It is strongly recommended to enter price for the each of the product to simplify process of working with Opportunities.

2.2.1 Setting up Company Products Using Enterprise Manager

All the products listed in Protection! Enterprise can be added to Oralce CRM on Demand by choosing the "*File* | *Export* | *Products to Protection! Connect" menu item*. This would automatically setup product information in *Oracle CRM On Demand*.

2.2.2 Setting up Company Products Manually

Before you begin:

- To perform the procedures described in this section, your role must include the Manage Content privilege.
- If you are grouping products under categories, set up the categories before you define your products.

All of the required products can be added to *Oracle CRM On Demand* manually.
To add products:

1. In the upper right corner of any page, click the <u>Admin</u> global link.
2. In the *"Content Management"* section, click the *"Content Management"* link.
3. In the *"Product Catalog"* section, click the *"Products"* link.
4. On the *"Product List"* page , do one of the following:
    a. To add a product, click the *"New"*.
    b. To update product information, click the *"Edit"* for the required record.
5. On the *"Product Edit"* page, complete the information.

For each product the *"Product Code"* field in *Oracle CRM On Demand* must correspond to the *"Product ID"* defined in Protection!.

If product has several editions then all of them should be listed in *Oracle CRM On Demand* as independent products. Each such product would have its *"Product Code"* set as a concatenation of *"Product ID"* and *"Product Edition ID"* separated by an underscore character: "_". For example the Demo Calculator product (note: sample Demo Calculator product provided with Protection! Developer) has two editions: Standard with its edition id: "1" and Professional with its edition id: "2", therefore the two corresponding products in *Oracle CRM On Demand* would be setup as: *"DemoCalc_1"* for Standard edition and *"DemoCalc_2" for* Professional edition.

Consult your *Oracle CRM On Demand* documentation regarding other available product fields and their acceptable values.

2.3 Oracle CRM On Demand Access Policy

The following must be established before *Connector* will be able to access *Oracle CRM On Demand*:

1. An *Oracle CRM On Demand* user with sufficient permissions to access/add/modify Accounts, Contacts, Opportunities, Assets, Products entities; must be available for Connector.

2. The “Web Services On Demand Integration” capability must be enabled for the company’s account. To turn it ON either a Customer Care representative should be contacted or a new Service Request should be placed to the Metalink.

Chapter 3

Connector Deployment and Configuration

3.1 Deployment on GlassFish Application Server

To deploy *Connector*:

1. The `OracleCRMOnDemandConnector.properties` configuration file needs to be modified (see section Connector Configuration), and then copied to the GlassFish domain's configuration folder: `<GLASSFISH_HOME>/domains/domain1/config`
2. The `OracleCRMOnDemandConnector.license` license file must be copied to the `<GLASSFISH_HOME>/domains/domain1/config` folder. If you need a license you may either:
   - Buy a commercial license at: Protection! Store.
   - Request a trial license at: Oracle CRM On Demand Connector page.
3. The `OracleCRMOnDemandConnector.ear` enterprise application needs to be copied to the GlassFish domain's auto deploy folder: `<GLASSFISH_HOME>/domains/domain1/autodeploy` or to be deployed via GlassFish's Admin Console.

Note

If there are several domains setup on the GlassFish AS then the correct domain name must be used instead of above-mentioned `domain1`.

3.2 Connector Configuration

To configure *Connector* enterprise application the `OracleCRMOnDemandConnector.properties` file needs to be modified. The following properties are available:

Name	Default Value	Description
`url`	`https://[host]/Services/Integration`	Oracle CRM On Demand URL. The `host` is account dependent and can be obtained by signing in to the Oracle CRM On Demand and copying host part of the address from the address bar of the Web Browser.
`username`		User name
`password`		Password
`opportunity.name`	`{0}_{1}_{2}`	Format for composing Opportunity name. Available arguments are: • `{0}` – Product name • `{1}` – Product version • `{2}` – Account name
`opportunity.`	`30`	Duration (in days) opportunity will stay

close_days		open (lifespan)
opportunity. probability_eval	20	Opportunity's Probability (%) for the Evaluation license
opportunity. probability_exteval	40	Opportunity's Probability (%) for the Extended Evaluation license
opportunity. stage_eval	Qualified Lead	Opportunity's Sales Stage for the Evaluation license
opportunity. stage_exteval	Building Vision	Opportunity's Sales Stage for the Extended Evaluation license
opportunity. stage_commercial	Closed/Won	Opportunity's Sales Stage for the Commercial license. Updated only if an opportunity with the same combination of *product+edition+version* found for the commercial license
opportunity. status_eval	Pending	Opportunity's Status during evaluation
opportunity. stage_commercial	Won	Opportunity's Status for the Commercial license. Updated only if an opportunity with the same combination of *product+edition+version* found for the commercial license
campaign.other.code	other	Code of default Campaign to associate Opportunities with in case of specified Campaign was not found.
account.unknown	{0} {1} ({2})	Format for composing Account name for the customers with no company specified (will be created if it does not exist). Possible values are: • {0} – Contact's first name. • {1} – Contact's last name. • {2} – Contact's e-mail.
account.type_eval	Prospect	Account type for the Evaluation license when creating a new Account
account. type_commercial	Customer	Account type for the Commercial license when creating/updating Accounts
contact.type_eval	Prospect	Account type for the Evaluation license when creating a new Contact
contact. type_commercial	Customer	Account type for the Commercial license when creating/updating Contacts
asset.name	{0}_{1}	Format for composing Asset name. Available arguments are: • {0} – Product name • {1} – Product version
log.level	INFO	Logging level. Possible values are: • ALL - log all messages. • FINE – log debug messages,

		information messages, warnings and errors. • `INFO` – log information messages, warnings and errors. • `WARNING` – log warnings and errors • `SEVERE` – log errors only. • `OFF` – log no messages.
`log.path`	`../logs/Protection Connect`	Path to log files. When related path is specified, absolute folder location depends on particular Application Server. For example, default path would be: <GLASSFISH_HOME>/domains/domain1/logs/ProtectionConnect for GlassFish Application Server

The following are a sample of the `OracleCRMOnDemandConnector.properties` file:

```
url=https://secure-ausomxbha.crmondemand.com/Services/Integration
username=john.doe@acme.com
password=123456

opportunity.name={0}_{1}
opportunity.close_days=30
opportunity.probability_eval=20
opportunity.probability_exteval=40
opportunity.stage_eval=Qualified Lead
opportunity.stage_exteval=Building Vision
opportunity.stage_commercial=Closed/Won
opportunity.status_eval=Pending
opportunity.status_commercial=Won

account.unknown={0} {1} ({2})
account.type_eval=Prospect
account.type_commercial=Customer

contact.type_eval=Prospect
contact.type_commercial=Customer

asset.name={0}_{1}

log.level=INFO
log.path=../logs/ProtectionConnect
```

Tip

Connector tracks the changes of `OracleCRMOnDemandConnector.properties` file and is able to apply them at runtime. So neither GlassFish Application Server nor *Connector* application need to be restarted to apply changes in configuration.

Chapter 4

Known Issues and Limitations

This chapter describes known problems and associated workarounds for the Protection! Oracle CRM On Demand Connector v1.0 software. If a summary statement does not specify a particular platform, the problem applies to all platforms.

1. Invalid Content-Type:text/html Exception

Some of CRM Web Services implementations may return textual errors instead of valid SOAP responses. Such results cannot be processed in current implementations and no actual error messages are shown and logged. The following approaches can be used to see actual responses:

a. Use some HTTP monitor application like Fiddler (http://www.fiddlertool.com) to see and analyze all the HTTP traffic. You may need to instruct Connector implementation to connect to the CRM through the Fiddler acting as a Web Proxy. To do so the following system properties must be set up:
```
http.proxyHost=127.0.0.1
http.proxyPort=8888
```

b. Enable HTTP traffic dump for all the JAX-WS based Connector implementations (Oracle CRM On Demand, SalesForce and Microsoft Dynamics CRM). It can be done by setting up the following system property:
```
com.sun.xml.ws.transport.http.client.HttpTransportPipe.dump=true
```

Appendix A

Connector Workflow

a.1 Oracle CRM On Demand Custom Fields

Connector uses the following custom fields:

Entity	Field	Description
Contacts	Locked	A checkbox field to lock the Contact to prevent its update by the *Connector*
Asset	Locked	A checkbox field to lock the Asset to prevent its update by the *Connector*
	Asset Name	Name of the Asset
	Usage End Date	Usage End Date of the Asset; usually corresponds to the “License Expiration Date”
Opportunities	Opportunity Code	Unique Opportunity's Code. It is composed as concatenation of the “Product Code” + “Product Version”. This is a hidden field and must not be changed by the users.
Product	Product Code	Protection! Product's ID.
	Price	Product’s unit price

a.2 OracleCRMOnDemandConnector Workflow

Connector handles “Added” and “Updated” events for the Customer, License and License Action entities by executing the following corresponding workflows:

a.2.1 Customer Added/Updated

If corresponding Contact exists and if Contact's “Lock” field is unchecked then Contact will be updated with the Customer data that came from Protection!. If such Contact does not exist, then a new Contact will be created. The existence of the Contact is checked by searching for Customer Id in the Contact's “ExternalSystemId” field and then, if not found, by the Contact's Email. The Contact's “Account” will be created, if not exists, based on Protection! Customer's Company and Customer's address data.

b.2.2 License Updated

This event will be handled for commercial licenses only. Commercial licenses are stored as Asset entities. The product, for which license action is requested, must exist in *Oracle CRM On Demand*.

First, License Id in Asset's “ExternalSystemId” field will be searched for existence of the license to be updated. If such license is not found, then it will be searched by the combination of the “License Number” (Serial#), “Product” and “Account”. If License(Asset) has been found and the “Lock” field is set to false (unchecked), then the Asset's “Quantity”, “Price”, “Serial#”, “Install Date”, “Usage End Date” and “Description” fields will be updated.

a.2.3 License Action Added/Updated

a.2.3.1 Evaluation License

Evaluation licenses are represented within Oracle CRM on Demand as Opportunity entities. The product, for which license is requested, must exist in *Oracle CRM On Demand*.

Evaluation License processing steps:

1. Attempt to find Contact by Protection! Customer's Id. If not found, then attempt to find Contact by Email. If not found by either, then create a new Contact. Set Contact's “Type” to `contact.type_eval` value from the `OracleCRMOnDemandConnector.properties` file. Attempt to find Account by Protection! Customer's Company name. If not found, then create a new Account using Customer's Company and Address data. Set Account's “Type” to `account.type_eval` from the `OracleCRMOnDemandConnector.properties` file. If Company is not specified then find/create default (unknown) Account (see `account.unknown` value in the `OracleCRMOnDemandConnector.properties` file).
2. Attempt to find License's Product by the Product Id, and, if applicable, by the Product Edition Id. Continue if found. Stop, if not.
3. Search for “Open” Opportunity (searching for the appropriate Opportunity by Protection! License's Id). If not found, then search for the Opportunity by combination of the Contact's Account and the Opportunity's Name.
4. If “Open” Opportunity has not been found then it will be created with the following attributes:
   - “Name” - combination of Product Name and version number from opportunity.name value from the `OracleCRMOnDemandConnector.properties` file.
   - “Account” – Contact's Account.
   - “Close Date” – calculated based on the “License Action Date” + `opportunity.close_days` value from the `OracleCRMOnDemandConnector.properties` file.
   - “Sales Stage” – for evaluation license - `opportunity.stage_eval` value; for extended evaluation license - `opportunity.stage_exteval` value from the `OracleCRMOnDemandConnector.properties` file.
   - “Status” – `opportunity.status_eval` value from the `OracleCRMOnDemandConnector.properties` file.
   - “Probability” - for evaluation license - `opportunity.probability_eval` value; for extended evaluation license - `opportunity.probability_exteval` value from the `OracleCRMOnDemandConnector.properties` file.
   - “Revenue” – Product's price.
   - “Opportunity Code” – hidden field containing combination of the “Product Code” + “Product Edition” + “Product Version”. “Opportunity Code” is used to find the appropriate Opportunity so it could be closed when related Asset is created.
5. If the Opportunity exists and License type is Extended Evaluation the following fields would be updated:
   - “Sales Stage” – `opportunity.stage_exteval` value from the `OracleCRMOnDemandConnector.properties` file.

- “Probability” – `opportunity.probability_exteval` value from the `OracleCRMOnDemandConnector.properties` file
    - “Close Date” – calculated based on License Action Date + `opportunity.close_days` value from the `OracleCRMOnDemandConnector.properties` file
6. Add or update Opportunity Note with License Details. Check whether the Note has been previously created (searching for appropriate Note by License Action “ID” in the Opportunity Notes “External Unique ID” attributes). Create a new Note if it has not been found; update found Note otherwise.
7. Associate Contact with Opportunity, if have not been associated yet.
8. Associate Opportunity with Product, if have not been associated yet.
9. Associate Opportunity with Campaign, if either Campaign’s code or Campaign’s name is provided in the License Action and corresponding Campaign has been found in the Campaigns List by either Campaign’s Code or Campaign’s Name. If corresponding Campaign has not been found, then try to find and associate Opportunity with a Campaign specified by the `campaign.other.code` value in the `OracleCRMOnDemandConnector.properties` file.
10. Add or Update Contact Note with License Action Details. Check whether the Note has been previously created (searching for appropriate Note by License Action “ID” in the Contact Notes “External Unique ID” attributes). Create a new Note if it has not been found; update found Note otherwise.

a.2.3.2 Commercial License

Commercial licenses are stored as the Asset entities. The product, for which license action is requested, must exist in *Oracle CRM On Demand*.

Commercial License processing by steps:

1. Attempt to find Contact by Protection! Customer Id. If not found, then attempt to find Contact by Email. If not found by either, then create a new Contact. Set Contact's “Type” to `contact.type_commercial` value from the `OracleCRMOnDemandConnector.properties` file. Attempt to find Account by Protection! Customer Company. If not found, then create a new Account using Customer Company and Address data. Set Account's “Type” to `contact.type_commercial` value from the `OracleCRMOnDemandConnector.properties` file. If Company field is empty then find/create default (unknown) Account (see `account.unknown` value in the `OracleCRMOnDemandConnector.properties` file).
2. Attempt to find License's Product by the Product Id, and, if applicable, plus by the Product Edition Id. Continue if found. Stop, if not.
3. Close the Opportunity for the License' Product if Opportunity exist. Opportunity’s “Sales Stage” field will be set to `opportunity.stage_commercial` value and its “Status” field to `opportunity.status_commercial` value from the `OracleCRMOnDemandConnector.properties` file
4. Check whether the Asset has been previously created (searching for the appropriate Asset by Protection! License Id). If not found, then search for the Asset by the combination of the “Serial#”, “Account” and “Product” attributes.
5. If the Asset has not been found, then it will be created with the following attributes:
    - “Name” –combination of “Product Name” and version number from the `asset.name` value in the `OracleCRMOnDemandConnector.properties` file.
    - “Account “– Contact's Account.
    - “Product” – License's Product.
    - “Purchase Price” – multiplication of the Product's price and License's Number of copies.

- “Quantity” – License's number of copies.
- “Install Date” – for License Action type “Activation” - License Action's date.
- “Purchase Date” - License's Issue date.
- “Ship Date” - License Action's Date.
- “Serial#” - License's number.
- “Usage End Date” - License's Expiration date.
- “Description” - formatted License information.

6. Associate new Asset with Account.
7. Add or update Contact Note with License Action Details. Check whether the Note has been previously created (searching for appropriate Note by License Action “ID” in the Notes “External Unique ID” attributes). Create a new Note if it has not been found; update found Note otherwise.

Feedback

As part of the continuing effort to improve our product, we welcome your comments, suggestions and general feedback regarding the product.

If you have questions about Protection! Connect™, Protection! Oracle CRM On Demand Connector or Protection! Enterprise please feel free to contact us for further information at protection@jproductivity.com, or visit our web site at: http://www.jproductivity.com.

If you discover any issues or defects in Protection! please send a detailed description to protection@jproductivity.com.