jProductivity LLC

Protect your investments with Protection!

# Protection!™

## SalesForce Connector

## v1.0

# Administrator Guide

http://www.jproductivity.com

**Revision**
336 - 8/10/2011

**Notice of Copyright**
Published by jProductivity, LLC
Copyright ©2003-2011
All rights reserved.

**Registered Trademarks and Proprietary Names**
Product names mentioned in this document may be trademarks or registered trademarks of jProductivity, LLC or other hardware, software, or service providers and are used herein for identification purposes only.

**Applicability**
This document applies to Protection! SalesForce Connector v1.0 software.

# Contents




Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

# Chapter 1

## Overview

This document describes how to setup and administer *Protection! SalesForce Connector* application (hereafter "*Connector*").

*Connector* provides integration between Protection! Enterprise and [SalesForce CRM](SalesForce CRM) (hereafter "SalesForce"). It is a J2EE application responsible for handling Protection! Connect™ events and for adding/updating data in *SalesForce CRM* (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 SalesForce CRM 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/doc/Protection_Connect_Administrator_Guide.doc` document on how to configure and deploy Protection! Connect™.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

# Chapter 2

## SalesForce CRM Configuration

The *Connector* requires its AppExchange Package to be installed and properly configured. This topic outlines how to install and configure it.

### 2.1 SalesForce Connector Package Installation

The SalesForce Connector Package must be installed by opening the following URL in the Web browser:

http://www.jproductivity.com/products/protection/sales_force_connector_package/

After opening the above URL you will be redirected to SalesForce site for the Package installation. Then follow the SalesForce installation and deployment instructions:

1. Login to SalesForce using Administrator user credentials.
2. On page *"Package Installation Details"* – press the *"Continue"* button.
3. On page *"Step 1. Approve Package API Access"* – press the *"Next"* button.
4. On page *"Step 2. Choose security level"* - choose the *"Grant access to all users"* option and press the *"Next"* button.
5. On page *"Step 3. Install Package"* – press the *"Install"* button.
6. On page *"Install complete"* – press the *"Deploy Now"* button.
7. On page *"Deploy Package | Package Components"* – press the *"Deploy"* button.

### 2.2 Customizing Fields and Layouts

Unfortunately SalesForce CRM does not provide ability to package and deploy changes in the fields' accessibility and layouts. Therefore all the required changes must be done manually using SalesForce Setup interface.

#### *2.2.1 Contacts Fields*

1. Go to *Setup* | *App Setup* | *Customize* | *Contacts* | *Fields* page and select the *"Do Not Call"* field.
2. Click the *"Set Field-Level Security"* button and select the *"Visible"* option to make this field visible for all profiles.
3. Click the *"Save"* button to save changes.

#### *2.2.2 Contacts Layout*

1. Go to *Setup* | *App Setup* | *Customize* | *Contacts* | *Page Layouts* page and select the *"Contact Layout"* for editing.
2. Drag and drop the *"Do Not Call"* and *"Locked"* fields from the *"Contact Fields"* pane to the *"Contact Information"* pane.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

3. Click the *"Save"* button to save changes.

#### 2.2.3 Accounts Layout

1. Go to *Setup* | *App Setup* | *Customize* | *Accounts* | *Page Layouts* and select the *"Account Layout"* for editing.
2. Select the *"Account Related Lists"* view.
3. Drag and drop the *"Assets"* from the *"Related Lists"* pane to the *"Account Detail"* pane.
4. Click the *"Save"* button to save changes.

#### 2.2.4 Assets Layout

1. Go to *Setup* | *App Setup* | *Customize* | *Assets* | *Page Layouts* and select the *"Asset Layout"* layout for editing.
2. Drag and drop the *"Locked"* field from the *"Asset Fields"* pane to *"Asset Information"* pane.
3. Click the *"Save"* button to save changes.

## 2.3 Setting up Products

License and License Action events cannot be processed without existence of corresponding products in SalesForce. Therefore all the products used by Protection! Enterprise must be listed in SalesForce to allow working with them. The easiest way to setup products is exporting them using Enterprise Manager but it is also possible to setup/maintain them manually if desired.

#### 2.3.1 Setting up Products Using Enterprise Manager

All the products can be added to SalesForce by choosing the *File* | *Export* | *Products to Protection! Connect* menu item. During the export process all the products created in SalesForce will be associated with a Price Book specified by the `pricebook.default` property in the `SalesForceConnector.properties` file.

#### 2.3.2 Setting up Products Manually

All the required products should be added using the *"Products"* tab in the SalesForce. For the each product the *"Product Code"* field in SalesForce must correspond to the *"Product ID"* in Protection!.

If the product has several editions all of them should be listed in SalesForce as independent products. Each such product would have *"Product Code"* as a concatenation of *"Product ID"* and *"Product Edition ID"* separated by underscore sign. For example the Demo Calculator product has two editions: Standard and Professional, so there would be two corresponding products in SalesForce - *"DemoCalc_Std"* and *"DemoCalc_Pro"*.

It is recommended to enter default price for the each product to simplify working with Price Books and Opportunities. Each product must be added to the "Standard" Price Book or to the Price Book specified by the `pricebook.default` property in the `SalesForceConnector.properties` file.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

## 2.4 SalesForce User

SalesForce Connector requires a SalesForce user with sufficient permissions:

1. Having ability to access/add/modify the Accounts, Contacts, Opportunities, Assets, Product, Price Books and Contact Assets entities.
2. Belonging to the Profile with turned ON the "Administrative Permission | API Enabled" property.

One of existing users or newly created one may be chosen for *Connector*.

In general, SalesForce requires user's password to be concatenated with a security token to allow access via the Apex API. The security token can be generated by SalesForce itself. To get the security token:

1. Login to the SalesForce using the same user.
2. Go to *Setup*| *My Personal Information* | *Reset My Security Token* and click the "Reset Security Token" button.

Note use of security token may be omitted for the servers belonging to the trusted IP range. It can be setup in *Setup* | *Administrative Setup* | *Security Controls* | *Network Access* page.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

Chapter 3

# Connector Deployment and Configuration

## 3.1 Deployment on GlassFish Application Server

To deploy *Connector*:

1. The `SalesForceConnector.properties` configuration file needs to be modified (see section Connector Configuration below), and then copied to the GlassFish domain's configuration folder: `<GLASSFISH_HOME>/domains/domain1/config`
2. The `SalesForceConnector.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: SalesForce Connector page.
3. The `SalesForceConnector.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 `SalesForceConnector.properties` file needs to be modified.

Note

Some of the properties allow using `[DO NOT USE]` constant as a property value. If such value is specified then corresponding field of SalesForce entity will not be modified by Connector preserving field's original value or value assigned by SalesForce.

The following properties are available:

| Name | Default Value | Description |
|---|---|---|
| `url` | | Endpoint URL. If it is not specified – it will be obtained from the bundled WSDL file. |
| `username` | | SalesForce's user name |
| `password` | | SalesForce's user password usually concatenated with security token (see the Topic 2.4). |
| `opportunity.name` | `{0}_{1}_{2}` | Format for composing Opportunity |


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

| | | |
|---|---|---|
| | | name. Available arguments are:<br>• `{0}` – Product name<br>• `{1}` – Product version<br>• `{2}` – Account name |
| contact.note.title | License [{0}] - {1} | Format for composing Contact’s note title. Available arguments are:<br>• `{0}` – License Number<br>• `{1}` – License Action |
| opportunity.create | yes | Specifies whether Opportunity should be created for Evaluation \| Extended Evaluation licenses |
| opportunity.type | | Opportunity’s Type |
| opportunity.<br>lead_source | | Opportunity’s Lead Source |
| opportunity.close | yes | Specifies whether Opportunity should be closed (Won) if a corresponding Commercial License is issued. Possible values are:<br>• `yes` – close Opportunity<br>• `no` – don’t close Opportunity |
| opportunity.<br>close_days | 30 | The duration in days of opportunity lifespan |
| opportunity.<br>probability_eval | 20 | Opportunity's Probability (%) for the Evaluation license |
| opportunity.<br>probability_exteval | 40 | Opportunity's Probability (%) for the Extended Evaluation license |
| opportunity.<br>stage_eval | Prospecting | Opportunity's Stage for the Evaluation license |
| opportunity.<br>stage_exteval | Qualification | Opportunity's Stage for the Extended Evaluation license |
| opportunity.<br>stage_commercial | Closed Won | Opportunity's Stage 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 | | Code of default Campaign to associate Opportunities with in case of specified Campaign was not found. |
| pricebook.default | Standard | Default Price Book name |
| account.type_eval | Prospect | Account type for the Evaluation license when creating a new Account. Accepts `[DO NOT USE]` value. |
| account.<br>type_commercial | Customer | Account type for the Commercial license when creating a new Account. Accepts `[DO NOT USE]` value. |
| account.unknown | {0} {1} ({2}) | Format for composing Account name for the customers with no company |


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

| | | |
|---|---|---|
| | | specified (will be created if it does not exist). Possible values are:<br>• `{0}` – Contact's first name.<br>• `{1}` – Contact's last name.<br>• `{2}` – Contact's e-mail. |
| asset.name | {0}_{1} | Format for composing Asset name. Available arguments are:<br>• `{0}` – Product name<br>• `{1}` – Product version<br>• `{2}` – Account name<br>• `{3}` – License Number |
| asset.status | Purchased | Default Asset status when creating a new one |
| asset.note.title | License [{0}] - {1} | Format for composing Asset's note title. Available arguments are:<br>• `{0}` – License Number<br>• `{1}` – License Action |
| log.level | INFO | Logging level. Possible values are:<br>• `ALL` - log all messages.<br>• `FINE` – log debug messages, information messages, warnings and errors.<br>• `INFO` – log information messages, warnings and errors.<br>• `WARNING` – log warnings and errors.<br>• `SEVERE` – log errors only.<br>• `OFF` – log no messages. |
| log.path | ../logs/ProtectionConnect | Path to log files. When related path is specified, absolute folder location depends on particular Application Server. For example, default path would be `<GLASS_FISH_HOME>/domains/domain1/logs/ProtectionConnect` for GlassFish v2. |

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

```
url=https://www.salesforce.com/services/Soap/c/14.0
username=john.doe@acme.com
password=123456

contact.note.title= License [{0}] - {1}

account.unknown=Unknown
account.type_eval=Prospect

account.type_commercial=Customer

opportunity.create=yes
opportunity.name={0}_{1}_{2}
opportunity.type=New Business
```


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

```
opportunity.lead_source=Other
opportunity.close_days=30
opportunity.probability_eval=20
opportunity.probability_exteval=40
opportunity.stage_eval=Prospecting
opportunity.stage_exteval=Qualification
opportunity.stage_commercial=Closed Won

campaign.other.code=Default

asset.name={0}_{1}
asset.status=Purchased
asset.note.title= License [{0}] - {1}

pricebook.default=Standard

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

Tip

Connector tracks the changes of `SalesForceConnector.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.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

# Chapter 4

## Known Issues and Limitations

This chapter describes known problems and associated workarounds for the Protection! SalesForce 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](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
```

### 2. API Requests Limit

SalesForce CRM imposes strict limits for the maximum number of API calls could be executed within 24 hours period. As for now the quote is 5000 API Calls/24 hours. See the Understanding Execution Governors and Limits document for more information. This limit can be quite easily reached if you have big number of transactions per day or need to setup SalesForce CRM with your existing data by performing export of License Actions from Protection! Enterprise.

If you need to increase your quote please contact your SalesForce CRM account manager or customers support.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

# Appendix A

## Connector Workflow

This topic outlines *Connector* workflow and provides description of the custom entities and fields were introduced.

### a.1 SalesForce Connector Package Custom Fields

The SalesForce Connector Package installs the following custom fields:

| Entity | Field | Description |
|---|---|---|
| Contacts | External_Id | Protection! "Customer Id". It is used by *Connector* to find an existing Contact (Customer) in SalesForce for updating. Should not be accessible to and edited by the user. |
| | Locked | A checkbox field to lock the Contact to prevent its update by *Connector*. |
| Assets | External_Id | Protection! "License Id". Is used by *Connector* to find an existing Asset in SalesForce for updating. Should not be accessible and edited by the user. |
| | Locked | A checkbox field to lock the Asset to prevent its update by *Connector*. |
| Opportunities | External_Id | Protection! "License Id". Is used by *Connector* to find an existing Opportunity in SalesForce for updating. Should not be accessible and edited by the user. |
| | Opportunity_Code | Unique Opportunity's Code. It is composed as "Product Code" + "Product Version". This field is hidden and must not be changed by the users anyway. |
| | Licenses Id | A list of Evaluation Licenses ID's attached to the Opportunity. Do not modify value of this field – it is for internal use only. |
| Campaign | CampaignCode | Code that uniquely identifies a campaign. |

### a.2 SalesForce Connector Package Custom Entities

The SalesForce Connector Package installs the following custom entities:

| Entity | Field | Description |
|---|---|---|
| Contact Assets | Describes the reference between Contact and Asset | |


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

| | | |
|---|---|---|
| | `Contact` | A Contact reference |
| | `Asset` | An Asset reference |
| | `Name` | The reference name. By default it is the Asset's name |
| | `Active` | Checked if the License is Got and not Deactivated |

## a.3 SalesForce Connector Workflow

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

### *a.3.1 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 *"External_Id"* 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.

### *a.3.2 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 SalesForce CRM.

First, License Id in Asset's *"External_Id"* 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.3.3 License Action Added/Updated*

#### a.3.3.1 Evaluation License

Evaluation licenses are represented within SalesForce as Opportunity entities. The product, for which license is requested, must exist in SalesForce.

Evaluation License processing by 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.
2. 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 `SalesForceConnector.properties` file. If Company is not specified then find/create default (unknown) Account (see `account.unknown` value in the `SalesForceConnector.properties` file).


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

3. Find License's Product by *"Product ID"* or if applicable by concatenation of *"Product ID"* and *"Product Edition ID"*. Continue if found. Stop, if not.
4. Find Standard Pricebook, specified by the `pricebook.default` value in `SalesForceConnector.properties` file, and relation between Product and Pricebook. If not found an Opportunity will be created without reference to the Product.
5. 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.
6. If "Open" Opportunity has not been found then it will be created with the following attributes:
   - *"Name"* – combination of Product Name, Product Version Number and Account Name composed according to `opportunity.name` format specified in the `SalesForceConnector.properties` file.
   - *"Account"* – Contact's Account.
   - *"Close Date"* – calculated based on the *"License Action Date"* + `opportunity.close_days` value from the `SalesForceConnector.properties` file.
   - *"Stage Name"* – for Evaluation license – `opportunity.stage_eval`; for Extended Evaluation license – `opportunity.stage_exteval` value from the `SalesForceConnector.properties` file.
   - *"Probability"* - for Evaluation license – `opportunity.probability_eval`; for Extended Evaluation license – `opportunity.probability_exteval` value from the `SalesForceConnector.properties` file.
   - *"Opportunity_Code"* – hidden field containing combination of the *"Product Code"* + *"Product Edition"* + *"Product Version"*. This code is used to find the appropriate Opportunity so it could be closed when related Asset is created.
7. If the Opportunity exists and License type is Extended Evaluation the following fields would be updated:
   - *"Stage Name"* – `opportunity.stage_exteval` value from the `SalesForceConnector.properties` file.
   - *"Probability"* - `opportunity.probability_exteval` value from the `SalesForceConnector.properties` file.
   - *"Close Date"* – calculated based on the *"License Action Date"* + `opportunity.close_days` value from the `SalesForceConnector.properties` file.
8. Add or update Opportunity *"Note"* with License details. Check whether the Note has been previously created (searching for appropriate Note its title). Create a new Note if it has not been found; update found Note otherwise.
9. Associate Contact with Opportunity, if have not been associated yet.
10. Associate Opportunity with Pricebook, if have not been associated yet.
11. Associate Opportunity with Campaign (through Campaign Influence reference), 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 `SalesForceConnector.properties` file.
12. Add or Update Contact *"Note"* with License Action details. Check whether the Note has been previously created (searching for appropriate Note by its title). Create a new Note if it has not been found; update found Note otherwise.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

#### a.3.3.2 Commercial License

Commercial licenses are stored as the Asset entities. The product, for which license action is requested, must exist in SalesForce.

Commercial 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.
2. 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. If Account's *"Type"* is *"Prospect"* - set Account's *"Type"* to the `type_commercial` value from the `SalesForceConnector.properties` file. If Company is not specified then find/create default (unknown) Account (see `account.unknown` value in the `SalesForceConnector.properties` file).
3. Find License's Product by *"Product ID"* or if applicable by concatenation of *"Product ID"* and *"Product Edition ID"*. Continue if found; stop, if not.
4. Find Standard Pricebook, specified by the `pricebook.default` value in `SalesForceConnector.properties` file, and relation between Product and Pricebook. If not found an Opportunity will be created without reference to the Product.
5. Close the Opportunity for the License's Product if ones exist. Set Opportunity's *"Stage Name"* field to `opportunity.stage_commercial` value from the `SalesForceConnector.properties` file
6. 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.
7. If the Asset has not been found, then it will be created with the following attributes:
   - *"Name"* – combination of *"Product Name"* and *"Product Version Number""* based on the `asset.name` format from the `SalesForceConnector.properties` file.
   - *"Price"* – the 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 Issue Date.
   - *"Serial Number"* - License's Number.
   - *"Usage End Date"* - License's Expiration Date.
   - *"Status"* – `asset.status` value from the `SalesForceConnector.properties` file.
   - *"Description"* – formatted License's description.
8. Associate new Asset with Account.
9. Add or update Contact Note with License Action details. Check whether the Note has been previously created (searching for appropriate Note by its title). Create a new Note if it has not been found; update found Note otherwise.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com

# 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! SalesForce 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.


Copyright © 2003-2011 jProductivity, LLC http://www. jproductivity.com