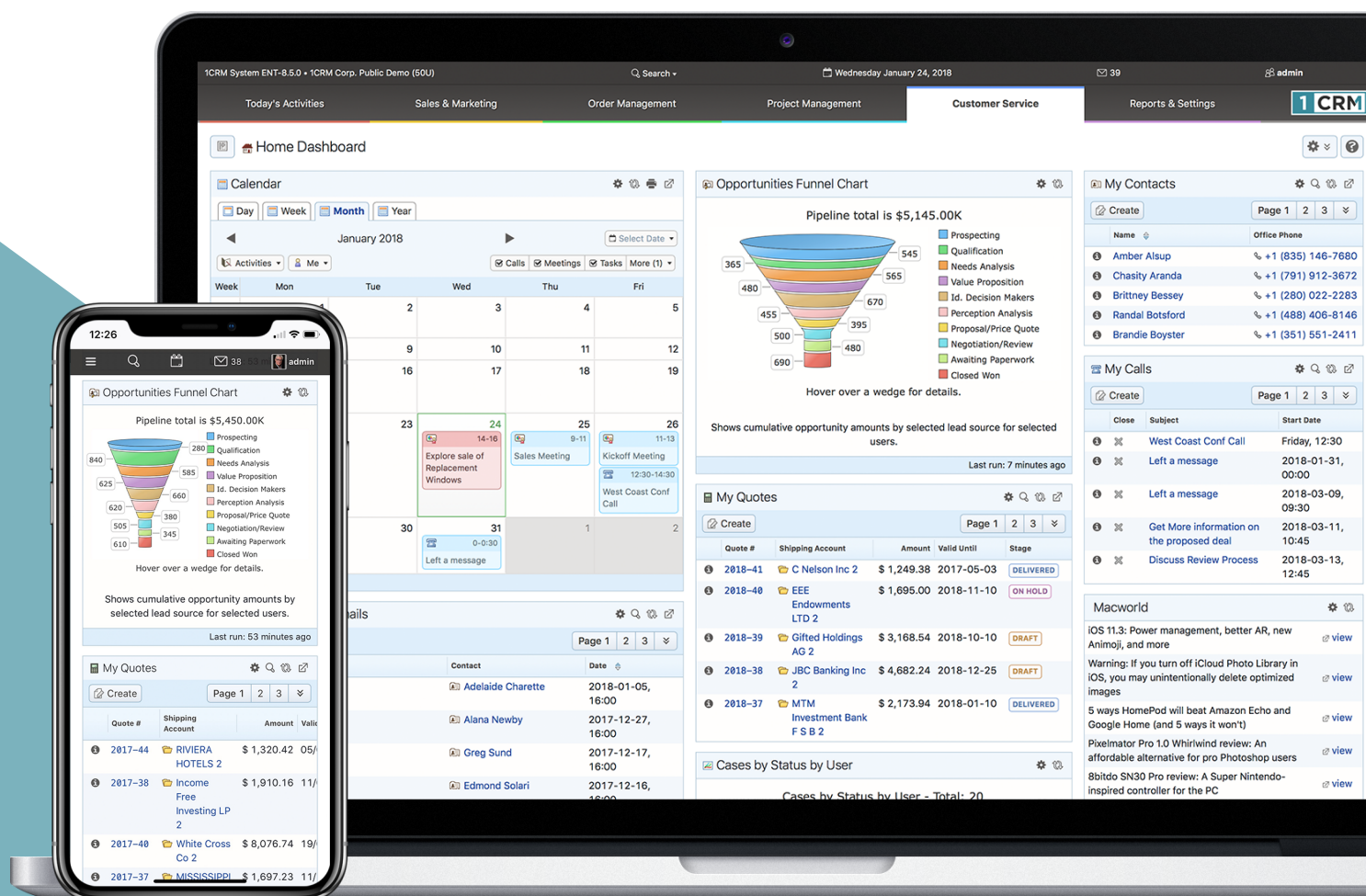# 1CRM FINANCE QB GUIDE

## A Comprehensive Guide to Implementing 1CRM Finance for QuickBooks

Version 8.5, April, 2018. This document is subject to change without notice.

**Disclaimer**

While every effort has been made to ensure the accuracy and completeness of information included in this document, no guarantee is given, or responsibility taken, by 1CRM Corp. for errors and omissions.

# Table of Contents

# 1.0  Welcome

Thank you for using 1CRM! Release 8.5 of the 1CRM Customer Relationship and Business Management (CRBM) System is designed to further energise your organisation's efforts to efficiently organise and maintain information that is crucial to many aspects of your business. 1CRM enables organisations to do business, better.

The 1CRM system is available in four Editions:

- Startup Edition: Free for use On Premise. Request a license key and download link, and you can install Startup Edition on your own server at no charge. It offers all the features of 1CRM Professional Edition, but is limited to 3 Users, 300 Accounts, 750 Leads, 750 Contacts, and 750 Targets. Although it only offers Community support, and no updates, the Startup Edition is a great way for an early stage business to get itself organized and productive while operating on a shoestring budget!

- Startup+ Edition: Similar to the Startup Edition, but for somewhat larger firms, with capacity limits of 10 users, 600 Accounts, 1,500 Contacts, 1,500 Leads and 1,500 Targets. Unlike the Startup Edition, this is a commercial product, available on the 1CRM Cloud or for On Premise software installation.

- Professional Edition: Formerly known as 1CRM, 1CRM Professional is our mainstream small business CRM product offering, available on the 1CRM Cloud or for On Premise software installation.

- Enterprise Edition: Our premium product. It offers all the features of 1CRM Professional Edition, plus a number of additional features of particular interest to larger, more sophisticated businesses. Administrators can use the Module Designer and PDF Form Designer to create more advanced customizations. Price Books let you establish pricing for multiple client levels. The iOS client provides optimized system access from an iPhone. And Advanced Reporting offers more sophisticated reporting capabilities.

Unlike most CRM solutions, 1CRM offers comprehensive Order Management. It includes a Product Catalog, plus the ability to create Quotations, Sales Orders and Invoices using products from the Catalog. Incoming Payments may be received and allocated against invoices, and the system can produce PDF documents for Quotes, Sales Orders, Invoices, Receipts, and Statements. Purchase Orders may also be created, and Outgoing Payments recorded against them.

1CRM also offers extensive features for Project Management, Service Management, and general office administration (including Expense Reports, Timesheets, Vacation scheduling and tracking, and HR).

Most importantly, the 1CRM system seamlessly blends all of these capabilities into an intuitive and friendly interface. The instructions in this guide will introduce you to the most important CRM concepts and help you get familiar with using your 1CRM system.

## 1.1  About this Guide

This guide is current with the details of operation for 1CRM 8.5 and later, in concert with the 1CRM Finance for QuickBooks module. It is designed to instruct technically capable individuals in the implementation of 1CRM Finance.

This entails the installation of the 1CRM software itself, the 1CRM Finance module, QuickBooks Pro/Premier/Enterprise 2006-2018 USA/Canada/UK/Australia, and the QuickBooks Web Connector (QBWC) version 2.x.

## 1.2 Who Should Read this Guide?

This 1CRM Finance Implementation Guide is intended for system administration personnel who need to install and configure the system as part of its initial implementation.

It is not intended for conventional users who wish to record and track company activities and outcomes, or for system administrators looking to install and optimize the 1CRM system – those topics are dealt with in the 1CRM *User Guide* and *Implementation Guide*.

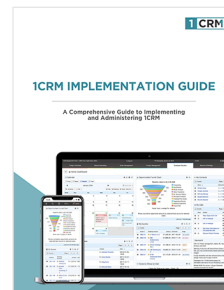## 1.3 Additional Documentation

The 1CRM Customer Relationship and Business Management (CRBM) system offers extensive documentation for the installation and use of its various components. Click on any image to download that document:

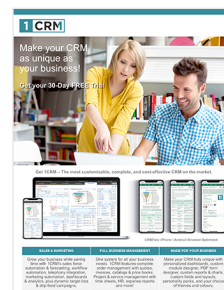| User Guide | Mobile User Guide | Implementation Guide | Developer Guide |
|---|---|---|---|

| Portal Guide | QuickBooks Sync | 1CRM Brochure | Editions & Pricing |
|---|---|---|---|

# 2.0  Before You Begin

The 1CRM installation targeted for synchronization with QuickBooks must be accessible via HTTPS – secure HTTP transport using Secure Socket Layer (SSL) encryption. The procedure for enabling this varies according to the operating system and web server platform in use.

For normal (browser-based) usage of the application 1CRM may also be made available via unencrypted HTTP transport if desired, but communication with QuickBooks requires SSL encryption.

The SSL certificate used may be self-signed or signed by a recognized registrar. The procedure for generating a self-signed SSL certificate and configuring the Apache web server on Linux is summarized at the end of this document.

## 2.1  Overview

Synchronization between 1CRM and QuickBooks relies on two additional components. The first component is the **QuickBooks Web Connector** (QBWC), published by Intuit to facilitate integration between web-based applications and the QuickBooks client application. This application runs on the same Microsoft Windows server as the primary QuickBooks installation for your company, and communicates with both the QuickBooks application (over COM) and your 1CRM installation (over SSL-encrypted SOAP).

The second component is the **1CRM Finance for QuickBooks** extension module for 1CRM. This module supplies the additional web services required by QBWC as well as a configuration interface.

The synchronization process is mediated by the QBWC application, which must actively initiate each sync request with the 1CRM server. The frequency of this communication is configured within the QBWC application.

# 3.0  Installing 1CRM Finance

This document starts from the assumption that you have already got 1CRM installed and working, and it has been a productive, stable installation for at least a few weeks. There are a number of common mistakes made when installing 1CRM, and we'd prefer you to be sure you are past them before going on to involve your accounting system!

The first thing you need to do as you prepare for implementing 1CRM Finance for QuickBooks is to 'clone' both your 1CRM and QuickBooks installations, so you are working in a risk-free environment.

***Note:*** There are more than 100 different versions of QuickBooks, many of which we may not even be aware of, so it is critical that the synchronization always be attempted first with cloned installations, not with live installations, and 1CRM Systems Corp. accepts no support responsibility for those who do not follow this process. (Or for those who do, as this is free, Open Sourced software!)

Once you have created clone copies of your QuickBooks and 1CRM installations, follow the instructions in this guide to link the two, and once the two are running successfully in synchronization, continue doing so for a period of two weeks in parallel with your current processes, until you are confident in the details and reliability of the new process. Then repeat the entire process with your live systems.

## 3.1  QuickBooks Setup

When first configuring and testing 1CRM Finance for QuickBooks, as mentioned above, we require that you open a duplicate of your standard company file in QuickBooks, in order to allow for an opportunity to verify the data mappings and avoid any data loss. Cloning your QuickBooks database in this manner is a mandatory step in the implementation of 1CRM Finance for QuickBooks.

In addition, the preferences for your QuickBooks company file may need to be adjusted:

For US Editions of QuickBooks, Sales Tax tracking must be enabled in order to allow synchronization of Estimates (Quotes), Invoices, Bills, Credit Notes and Payments, otherwise only Account (Customer and Vendor) and Product (Item) data will be managed. You are also advised to set up standard and corresponding tax rates in both QuickBooks and 1CRM to simplify the configuration process, if these have not yet been defined.

If the historical QuickBooks data you will be importing into 1CRM includes any periods where the tax rates were not the same as they are now defined in QuickBooks, you are required to set up historical tax rates in 1CRM for proper synchronization. Please refer to the 1CRM User Guide for setting historical tax rates.

For Canadian editions of QuickBooks, we recommend enabling multiple currency support.

In order to import 1CRM Quotes, QuickBooks support for Estimates must be enabled.

For compatibility with the 1CRM Product Catalog, Inventory Tracking should be enabled in QuickBooks.

Payment terms, payment methods and shipping providers used in 1CRM will need QuickBooks equivalents, and vice versa; you may create these manually to simplify the configuration process later.

The company file may be opened in single or multi-user mode, but in order to link with the Web Connector for the first time, you must be logged in using the QuickBooks administrative user.

# 3.2  Installing the QuickBooks Web Connector

To begin the implementation process, download and install the QuickBooks Web Connector application, available from the QuickBooks Solutions Marketplace at http://marketplace.intuit.com/webconnector/. This page should provide a download link for QBWebConnectorInstaller.exe, which installs QBWC as well as the Microsoft .NET 2.0 library if it has not been previously installed. Versions 2.x of the Web Connector is currently recommended. The earlier 1.0.x release is not supported.
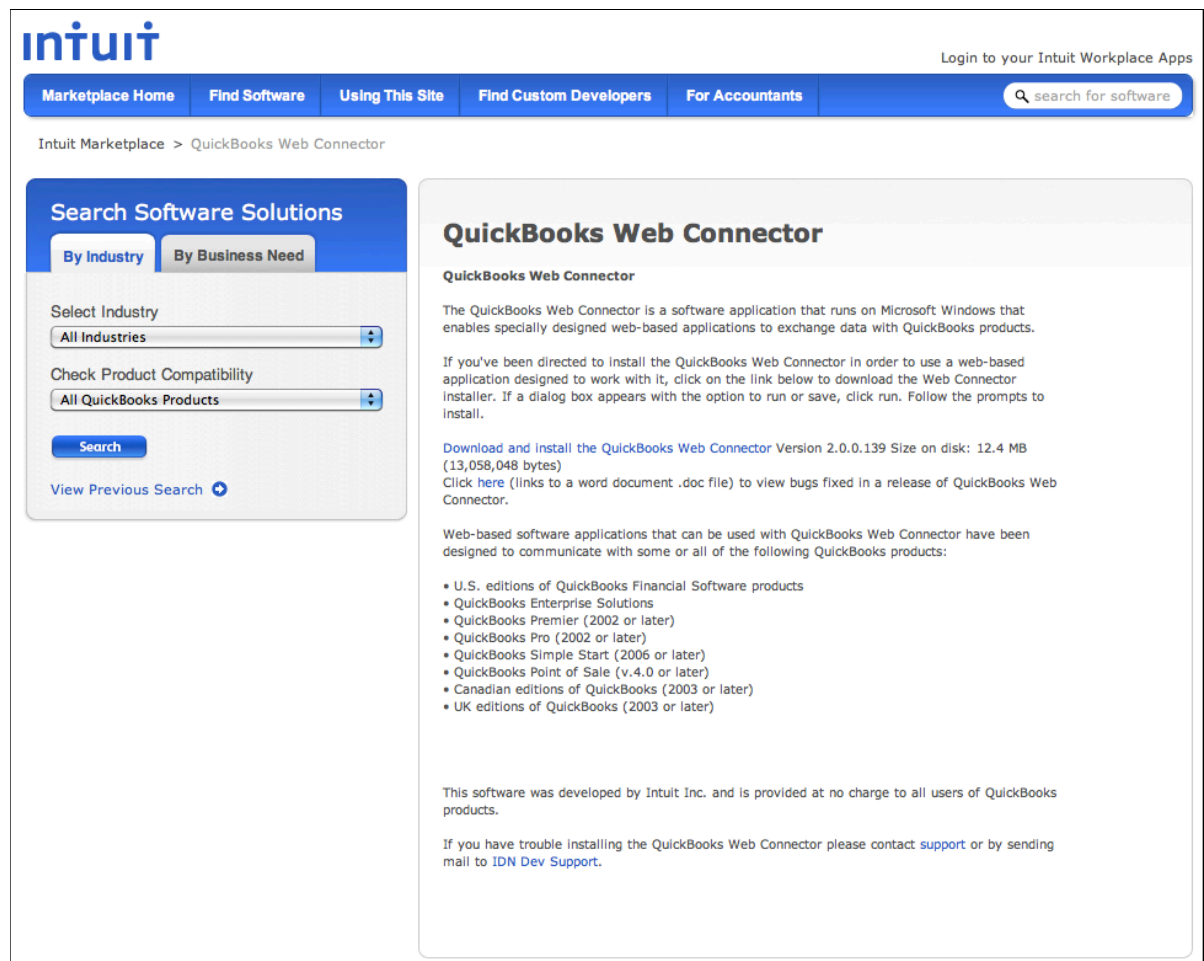


**Figure 1: A reference view of the Web Connector download page**

Once the Web Connector has been installed, you can move on to the installation of the QuickBooks integration component for 1CRM. This is performed within the 1CRM administration interface, and so you must be logged into the application using an account with administrator credentials.

Follow the Admin link at the top of the page, and select *Upgrades & Customization* from the list of Administration actions. On the following page, click the Browse button and select the **1CRM Finance** module installer you have downloaded previously (1CRM-8.x-FinanceQB-X.Y.zip where X.Y is the 1CRM Finance release number). Press upload, and a record of the uploaded module should appear in the module listing below. Now press the *Install* button to the right of that record, and confirm the module installation. You will then be returned to the main *Upgrades & Customization* screen, and a record of the newly installed module should now be displayed in the section for recorded upgrades.
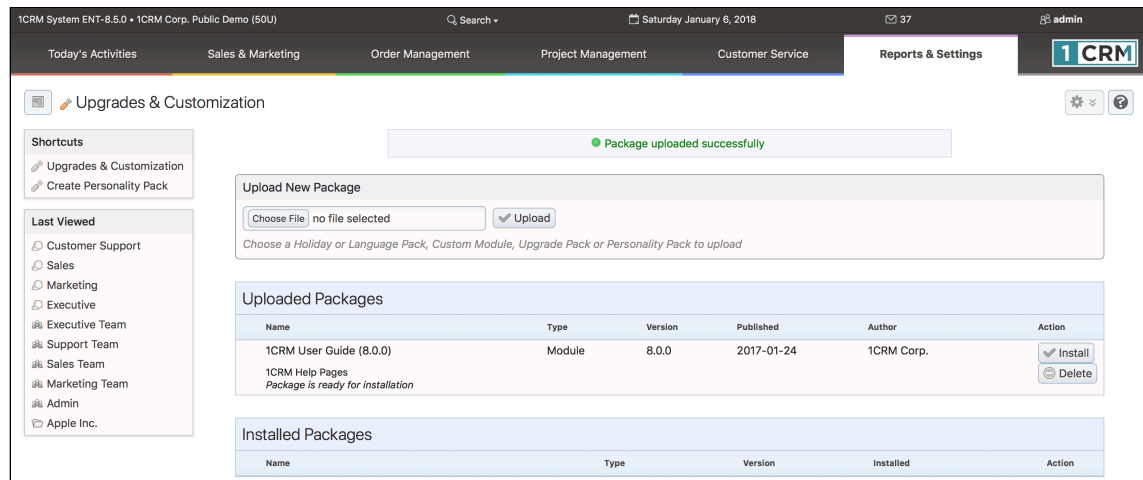


**Figure 2: A view of the Module Loader screen before any modules have been added**

## 3.3 Downloading the Web Connector Configuration File

Once the 1CRM Finance module has been installed, a new **Finance** (**QB)** tab should be visible within the 1CRM application. If using the Grouped Tabs interface option, this will likely be displayed underneath the catch-all grouped tab **Other**, otherwise it should appear at the very end of the module tab list.

Navigate to the Finance (QB) module and you should see the QuickBooks Link: Status screen. This page displays the status of the synchronization module, allows you to view and update the SSL-enabled address of the 1CRM server, and provides download links for both the QuickBooks Web Connector application and the 1CRM Finance configuration file for QBWC. This last link is labelled **Download Web Connector configuration file (.qwc)**. Once the SSL address of the server has been properly configured, follow this link to obtain the QWC file and set up the QBWC with the proper connection details.
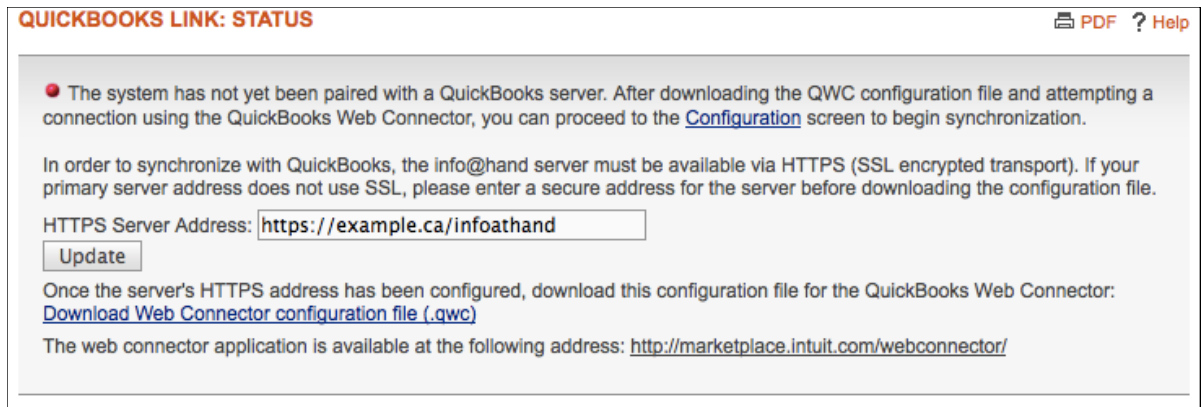
**Figure 3: The initial 1CRM Finance (QB) status screen**

If accessing the 1CRM application from a browser window on your QuickBooks server, you may simply Open the resulting file (see Figure below) in order to load the QuickBooks Web Connector and add this new configuration. Otherwise, you will have to transfer the file (*1CRM-QBLink.qwc*) to your QuickBooks server before opening it.
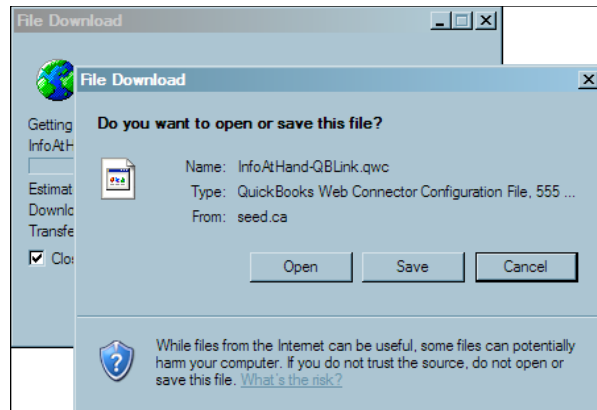


**Figure 4: Download and Open the .qwc File**

# 3.4  Configuring the Web Connector

After opening the .QWC configuration file, the QuickBooks Web Connector application will be launched. You will be prompted for a password – this is the password for your 1CRM administrator user (the one used to download the configuration file). QBWC will then display the newly-registered **1CRM Finance (QB)** web service, along with some basic configuration options.
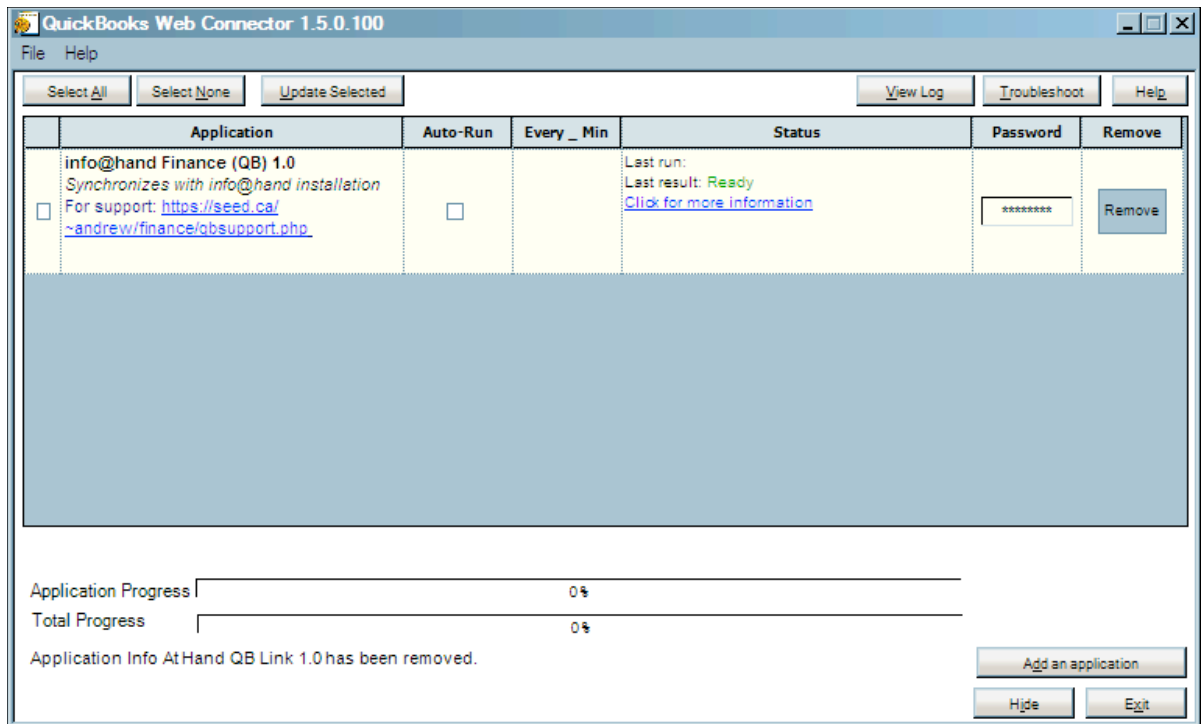
**Figure 5: QuickBooks Web Connector with 1CRM Finance (QB) Web Service Shown**

In this window you may configure the run interval for the synchronization process. Until the module configuration is complete, you will probably want to leave **Auto-Run** unchecked, check the **1CRM Finance (QB) 2.0** web service entry and press **Update Selected** to initiate the synchronization procedure manually.

If QBWC displays an error message instead of adding the new web service, the most likely cause is a faulty SSL implementation. If using a self-signed SSL certificate, be sure to import your self-generated certificate authority (CA) certificate into the system registry. In this case it is suggested to place the certificate (.crt or .cer) file on the Windows server desktop, then right-click on the file and select **Install Certificate..** from the resulting pop-up menu.

At this point you should be able to initiate a connection attempt with the 1CRM server (select and 'Update' the web service). First, ensure you have the QuickBooks application running with the appropriate company file opened. As the Web Connector application attempts to communicate with QuickBooks for the first time, you will be prompted by both QBWC and by QuickBooks itself whether to allow this access. This procedure also asks you to confirm the validity of your web server's SSL certificate.

**Figure 6: Authorizing QBWC to synchronize with the web service**
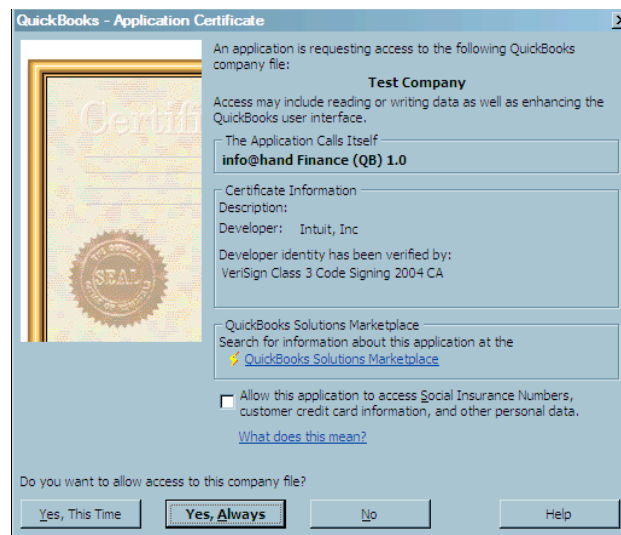


**Figure 7: Authorizing QuickBooks to communicate with the QBWC application**

# 3.5 *Configuring* 1CRM *Finance*

If you now return to the 1CRM Finance module **Status** screen in a web browser, the status indicator and message should have been updated to an intermediate state. This indicates that a connection attempt has been detected, but configuration is required before full synchronization with the QuickBooks server can be enabled.
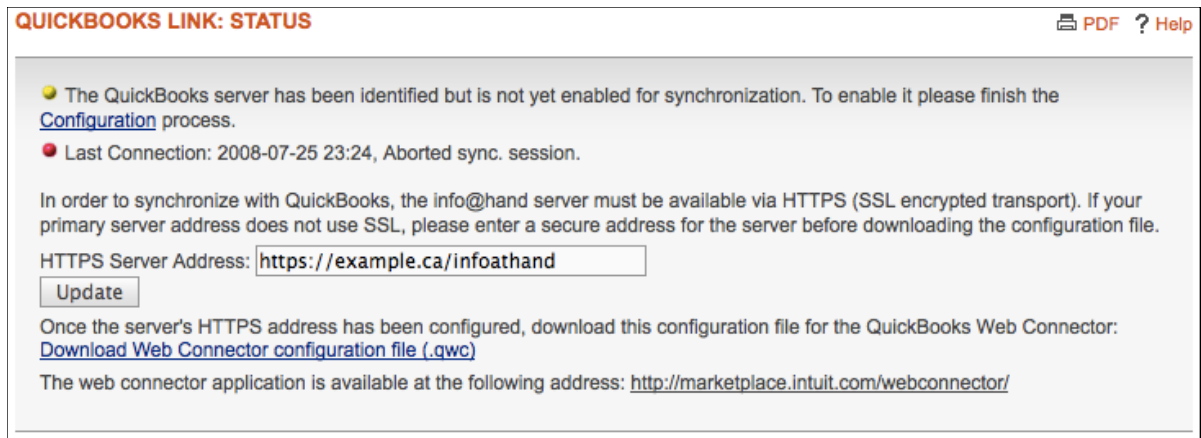
**Figure 8: The Status screen after a successful connection attempt**

You may now proceed to the **Configuration** page where you will be prompted to accept synchronization with the QuickBooks server. Check the details of the server information to ensure the correct server and company information are displayed before selecting the check-box and continuing on to the next step of the configuration.
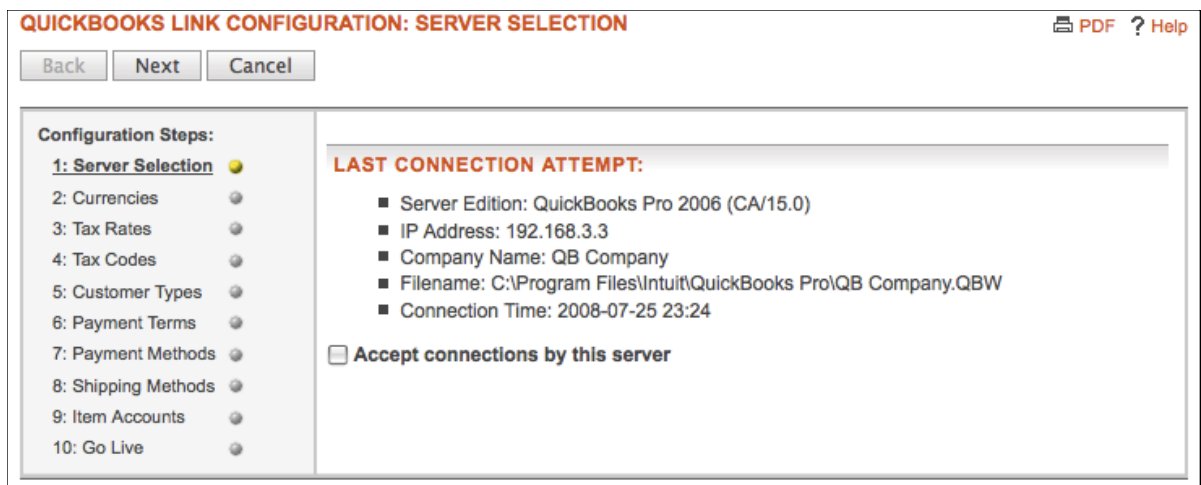


**Figure 9: The first Configuration screen after a successful connection attempt**

# 3.6  Automatically Opening the Company File

In order to allow automatic syncing between QuickBooks and 1CRM Finance, there are two simple requirements. First, you must select the checkbox on the first Configuration screen labeled, "**Always request this company file when initiating a connection (required for automatic QuickBooks login)**". When checked, the Web Connector will attempt to open the specified company file whenever a sync is begun. For this operation to succeed the company file itself must be configured for automatic login when being accessed by 1CRM Finance. This may be configured under the Integrated Applications panel of the QuickBooks company file preferences.

***Note:*** Because the Web Connector relies on communicating with QuickBooks, a graphical application, it cannot be run as a Windows service. To support automatic synchronization despite reboots of the server, you will need to configure the operating system to log in automatically, ideally as a user with the minimum privileges to access the QuickBooks company file and execute the the Web Connector.

# 3.7  Unrecognised Connection Attempts

During the course of configuring 1CRM Finance, or as a result of maintenance operations, the QuickBooks company file may fail to be recognised. Under these circumstances a second section will appear on the first Configuration page, Server Selection. The *Last Connection Attempt* section shows the details of the last attempted connection by a server or company file which was **not** identifiable as the current recognised server. Synchronization with the new server or company file will **not** proceed unless this situation is resolved, although any later connections by the primary server will continue to be processed normally.



**Figure 10: The first Configuration screen after an unrecognised connection attempt**

Each QuickBooks server is uniquely identified by the combination of its filename and its Owner ID and File ID properties; the IP address and software version are allowed to vary. Every new .QWC (QuickBooks Web Connector configuration) file downloaded from the module Status page will contain a unique File ID, and so loading a new .QWC file into the Web Connector before running the synchronization process will produce this result. Moving or renaming the QuickBooks file will also require re-verification of this step.

Resolving this situation is straightforward, but requires some attention to detail. The options for handling the unrecognised connection attempt are as follows:

**Take no action**
This is the default option, and produces no change in configuration. The last connection attempt will remain visible and other options may be chosen later.

**Ignore this connection attempt**
If the details of this connection indicate an authorized connection attempt, or an accidental connection using the wrong company file, then you may safely choose to ignore (and hide) it.

**Use these new connection details**
If your company file has simply been moved or renamed, then select this option in order to allow synchronization to pick up where it left off. Please note that if you have in fact opened a new or different company file then this is not the right option.

**Replace the primary QuickBooks server with this one**
Only when you are in fact attempting to connect with a new company file and forget the old synchronization state, select this option. All records of transferred data will be forgotten as long as the new connection is active. This change of server may be reverted by opening the old company file and attempting another Update using the Web Connector, but sustained synchronization with multiple servers is not supported.

# 3.8  Completing the Configuration
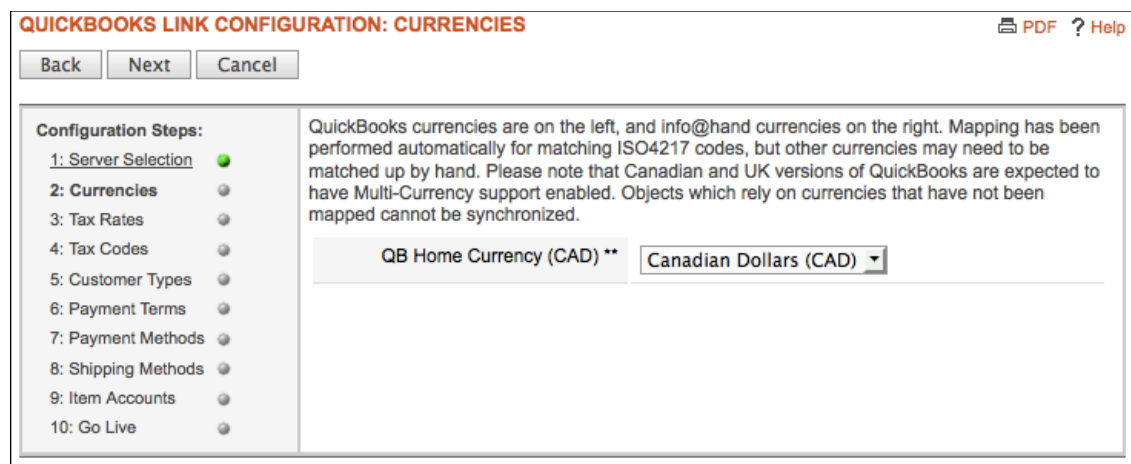


**Figure 11: Configuring currency mapping between QuickBooks and 1CRM**

Complete the configuration steps by mapping QuickBooks records to 1CRM ones. Certain mappings are required in order for the synchronization to proceed:

Objects which rely on unmapped currencies, tax codes or tax rates, payment terms or shipping methods can not be transferred until the required mappings are configured. This means, for example, that an Invoice priced in Euros cannot be exported to QuickBooks unless the Euro currency has been associated with its QuickBooks equivalent.

All "Item Accounts" are currently required. If you do not have appropriate financial Accounts defined within your QuickBooks company file then they will need to be created. After creating the new Accounts in QuickBooks, run the Web Connector update process again in order to make them available inside the Configuration panel.

In order to synchronize Payments, at least one bank account must be added to QuickBooks, and mapped to *Check Payments Bank Account* and *Credit Card Payments Bank Account.*

The 1CRM payment type list may need to be updated to allow a proper mapping and export of Payments. The standard payment type list (**terms_dom**) can be edited using the Dropdown Editor,

and does not normally distinguish between different credit card types - it groups them all under the *Credit Card* option.

Once you have completed all the configuration steps, the last step will prompt you to enable synchronization with this server. You can select which specific data types are to be transferred in each direction (either only imported, only exported, or both imported and exported). By checking this box and finishing the setup, you enable the two systems to transfer data freely each time the synchronization process is invoked by the QuickBooks Web Connector.



**Figure 12: The final 1CRM Finance Configuration screen**



**Figure 13: The Status Screen, With Configuration Process Completed**

# 3.9  The Synchronization Process

Once the server has been identified and properly configured, the next Update run by the QuickBooks Web Connector will begin the transfer of business data between QuickBooks and 1CRM. Data is transferred in a predictable sequence:

First, the QuickBooks Items must be merged with the 1CRM Product Catalog, Assemblies, and Discounts lists. Standard Items are created in QuickBooks in order to represent 1CRM's manually edited line items and shipping costs.

Next, QuickBooks Customers are synchronized with the 1CRM (Customer) Account list; these are imported in alphabetical order.

Finally, QuickBooks Estimates, Invoices, Bills and Payments are brought into 1CRM. Then any additional Quotes, Invoices, Bills and Payments stored in 1CRM are transferred to QuickBooks. Objects to be imported from QuickBooks are first registered in 1CRM (with a status of Pending Import) and then retrieved in detail during a later stage.

Please note that a single Update via the Web Connector is limited to 5,000 individual requests, and so installations with large amounts of data may be required to run the process several times before these initial steps have been completed.

Once the initial synchronization is complete, only updated records in either application will need to be transferred.

In certain environments it may be desirable to enable synchronization in only one direction - either to only export data to QuickBooks, or to only import from QuickBooks to 1CRM. This is supported, with minor caveats:

If Importing from QuickBooks is disabled, then records on the QuickBooks side can be modified independently and the changes will *not* be recognised in 1CRM. On the other hand, later modifications to the record in 1CRM can still trigger a subsequent update of the QuickBooks record, overriding any changes since the previous export, unless synchronization of that record is manually disabled (see the **Disable Sync** operation under *Inspecting the Sync*).

Similarly, if Exporting to QuickBooks is disabled, then imported objects may be freely modified in 1CRM, but risk having their changes overwritten if the related object is later modified in QuickBooks and then (automatically) re-imported. In either of these cases, there is no guarantee that 1CRM and QuickBooks will both have consistent data, unless editing on one side is disallowed by company policy.

It is possible to enable the synchronization in stages, for example by only exporting data or only importing, then later activating the other direction as well. Similarly, you may decide to sync only Accounts, and only later activate Quote/Estimate and Invoice syncing. Please be aware, however, that disabling one or more aspects of the synchronization will not undo previous data transfers.

# 3.10 Data Restrictions

There are certain conditions which may act as obstacles to the synchronization. The majority of these are caused by incompatibilities between the 1CRM and QuickBooks data models. The known restrictions are listed below:

1CRM treats Assemblies, Products, Discounts, and Tax Rates independently, while QuickBooks merges them into a single *Item* list. This means that the unique identifiers for these objects must be

unique between all these related collections, for objects that are to be transferred to QuickBooks. For Products and Assemblies the unique identifier used is the **Manufacturer's Part Number**. For Discounts and Tax Rates, the **Name** is used. So this means, for example, that you may not have the same Manufacturer's Part Number used for both an Assembly and for a Product, if you expect to be able to synchronize them both with QuickBooks.

Because of a QuickBooks restriction, the unique identifiers for data in the modules listed above must furthermore be limited to **31 characters** in length. This is significantly less than the standard field length for these fields in 1CRM. Before attempting a synchronization process, both the uniqueness and length of these fields may need to be rectified. A procedure for dealing with these issues is described in the next section.

*Entity* names in QuickBooks must also be unique. Currently, this means that an existing *Customer*, *Vendor*, *Employee*, or *Other Name* in QuickBooks may prevent the export of a 1CRM Account into QuickBooks if the two happen to share the same name (the comparison is case-insensitive). *Entity* (and hence 1CRM Account) names are limited to **41 characters**.

Products in the 1CRM Product Catalog are exported as either Inventory or Non-Inventory items in QuickBooks depending on their *Inventory Tracking* setting. Products with a *Manually Updated* or *Automatically Adjusted* inventory quantity will be exported from 1CRM to QuickBooks as Inventory Items.

*Note:* It is not possible to change the Inventory or Non-Inventory status of an item in QuickBooks once it has been synchronized from 1CRM and used in an Invoice, so you must make *absolutely* sure that all the Products in your 1CRM Product Catalog have the correct setting for *Inventory Tracking* before you perform a sync. And once you have your trial sync complete, be sure to check all the items in QuickBooks have the desired Inventory or Non-Inventory status before you proceed with your production sync.

Quotes, Invoices and Bills may only be transferred to QuickBooks if their currency matches that of the associated Billing Account. Likewise, Payments must match the currency of their associated Invoices and Bills to be exported from 1CRM to QuickBooks.

Only outgoing payments with payment types *Credit Card* and *Check* are exported into QuickBooks.

Only refund payments with payment types *Credit Card* and *Check* are exported into QuickBooks.

A payment is considered a Credit Card payment if its payment type is mapped to one of the credit card payment types in QuickBooks.

Vendor discounts are not supported in the synchronization process. This means that if 1CRM's Bills have discounts, or QuickBook's Bills have vendor discounts applied, these records will not be synchronized properly.

The Import and Export of refund payments requires a QuickBooks version with support for qbXML version 7.0. If your version of QuickBooks only supports earlier versions of qbXML, the synchronization of refund payments will be disabled.  Please refer to the table at the end of this document for QuickBooks versions and their corresponding qbXML versions.

Various non-English characters are automatically replaced with their ASCII (non-accented) equivalents if possible, or a question mark otherwise, when exporting data to QuickBooks.

# 3.11 Inspecting The Sync

You may inspect the current state of the shared data on a record-by-record basis using the *Entity Sync*, *Item Sync*, and *Estimate/Invoice Sync* links in the 1CRM Finance module shortcut menu. Search filters are provided at the top of this panel in order to filter records by name, type, or sync direction, and isolate any records that have sync issues.

**Figure 14: Inspecting the Current State of Item Sync**

On this screen the Type column holds the type of the record as represented in QuickBooks, while the Linkages column contains small icon links to the related records in 1CRM. First Sync may be one of the values:

**Imported**: Objects brought in from QuickBooks;

**Exported**: Objects sent to QuickBooks; or

**Not Synced**: Objects which have not yet been transferred in either direction.

The Sync. Status column contains one of several values:

**Enabled**: The object has been previously transferred, and is ready to be updated again if and when necessary.

**Pending Import**, **Pending Export**, **Pending Update**: The specified operation (*import*, *export*, or *update*) is due to be performed on the next sync, if possible. The *Pending Update* state has the further implication that the related 1CRM object will override any changes on the QuickBooks side.

**Import Error**, **Export Error**, **Update Error**: The specified operation failed in a non-recoverable way. To re-enable synchronization of this object once the reason for the error has been resolved, use the *Enable Sync* button described below.

**Import Blocked**, **Export Blocked**, **Update Blocked**: The specified operation would be performed at the next synchronization, but something about the current state of the server configuration or the related object is preventing it. In this case you can hover the mouse over the comment icon next to the Sync. Status in order to see a brief description of the issue.

The *Register Local Changes* button on these screens may be used to trigger registration of new and updated objects in 1CRM; this same operation is also performed on every sync. Below the list are four more buttons for record-level operations. Each of these operates on the records selected (checked) in the list above.

**Re-Register**: This operation will look up the 1CRM object(s) associated with the selected synchronization records, and updates the registered object name and synchronization status if necessary. When an *export* or *update* action has been previously blocked by the presence of incompatible data, this operation can be used to verify that the blocked action is now possible. For example, if a Product has a Manufacturer's Part Number longer than 31 characters it will be registered with a Sync. Status of *Export Blocked*. In this case the proper course of action is to edit

the associated product, assign a shorter part number, Re-Register the record on this page, and verify that the status has been changed to *Pending Export*.

**Force Update in QB**: This operation changes the Sync. Status of the selected records to *Pending Update*, and has the effect of overriding any un-synchronized changes in the QuickBooks company file. Upon the next synchronization, the QuickBooks record will be updated using the related 1CRM object details.

**Enable Sync**: This operation is used to cancel the *Error* status for selected records, which may come about as a result of an unexpected issue during the synchronization. Upon the next sync the failed action will be re-attempted. This operation can also be used to re-enable synchronization when it has been explicitly disabled using the *Disable Sync* operation.

**Disable Sync**: To prevent exporting or updating of a record in QuickBooks, this operation may be used to change the Sync. Status of the selected records to *Disabled*.

# 4.0  SSL Certificates

## 4.1  Creating a Self-signed Certificate in Linux

In a new directory:

Create an RSA private key.

```
openssl genrsa -des3 -out server.key 1024
```

Create a certificate signing request.

```
openssl req -new -key server.key -out server.csr
```

The Common Name given must correspond to the host name of the server.

Create an RSA private key for your private certificate signing authority (CA).

```
openssl genrsa -des3 -out ca.key 1024
```

Create a self-signed certificate from your CA private key.

```
openssl req -new -x509 -days 365 -key ca.key -out ca.crt
```

In this case the Common Name is a plain identifier for the server.

Copy apps/{demoCA, openssl.cnf} from the OpenSSL distribution to the working directory.

Sign the server's private key with self-generated CA's certificate, as per the signing request.

```
openssl ca -policy policy_anything -config openssl.cnf -cert ca.crt -in
server.csr -keyfile ca.key -days 365 -out server.crt
```

Generate a second key file with no password to avoid prompting at Apache startup.

```
cp server.key server.key.withpasswd
openssl rsa -in server.key.withpasswd -out server.key
```

## *4.2  Sample Apache Configuration for SSL*

In `httpd.conf`, comment the Port setting:
```
  # Port 80
```

Uncomment the following lines:
```
LoadModule ssl_module           libexec/httpd/libssl.so
AddModule mod_ssl.c
```

The Server name must match the SSL server certificate Common Name:
```
ServerName iahserver.local
```

Add a version of the following (with custom settings appropriate for your server) to the end of this file.

```
<IfModule mod_ssl.c>

  Listen 80
  Listen 443

  # Some MIME-types for downloading Certificates and CRLs
  AddType application/x-x509-ca-cert .crt
  AddType application/x-pkcs7-crl .crl

  # Initial Directives for SSL

  # Enable SSLv3 but not SSLv2
  SSLProtocol all -SSLv2
  SSLPassPhraseDialog builtin
  SSLSessionCache dbm:/var/run/ssl_scache
  SSLSessionCacheTimeout 300
  SSLMutex file:/var/run/ssl_mutex
  SSLRandomSeed startup builtin
  SSLLog /var/log/httpd/ssl_engine_log
  SSLLogLevel info

  ##
  ## SSL Virtual Host Context
  ##
  <VirtualHost 127.0.0.1:80>
    # Just to make this explicit
    DocumentRoot "/var/www/html"
    ServerName iahserver.local
    ServerAdmin admin@iahserver.local
    SSLEngine off
  </VirtualHost>
  <VirtualHost 127.0.0.1:443>
    # General setup for the virtual host
    DocumentRoot "/var/www/html"
    # ServerName must match the server you entered into the CSR
    ServerName iahserver.local
    ServerAdmin admin@iahserver.local
    ErrorLog /var/log/httpd/error_log
    TransferLog /var/log/httpd/access_log
```

```
    # SSL Engine Switch:
    # Enable/Disable SSL for this virtual host.
    SSLEngine on
    # enable SSLv3 but not SSLv2
    SSLProtocol all -SSLv2
    SSLCipherSuite ALL:!ADH:!EXPORT56:RC4+RSA:+HIGH:+MEDIUM: \
      +LOW:+SSLv2:+EXP:+eNULL
    # Path to your certificates and private key
    SSLCertificateFile /etc/httpd/ssl.key/server.crt
    SSLCertificateKeyFile /etc/httpd/ssl.key/server.key
    <Files ~ "\.(cgi|shtml|phtml|php3?)$">
      SSLOptions +StdEnvVars
    </Files>
    <Directory "/var/www/cgi">
      SSLOptions +StdEnvVars
    </Directory>
    # Correction for browsers that don't always handle SSL
    #   connections well
    SetEnvIf User-Agent ".*MSIE.*" \
      nokeepalive ssl-unclean-shutdown \
      downgrade-1.0 force-response-1.0
    # Per-Server Logging:
    # The home of a custom SSL log file. Use this when you want a
    # compact non-error SSL logfile on a virtual host basis.
    CustomLog /var/log/httpd/ssl_request_log \
      "%t %h %{SSL_PROTOCOL}x %{SSL_CIPHER}x \"%r\" %b"
  </VirtualHost>
</IfModule>
```

# 5.0  System Software Compatibility

## Compatible Versions of OS, Web Server, MySQL, PHP

| Stack Components | Versions | Comments |
|---|---|---|
| *Operating System* | | |
| *Linux* | *CentOS 7.3* | *64-bit version* |
| | | |
| *Web Server* | | |
| | *Apache 2.4.6-45* | *Supports any version that runs PHP* |
| | | |
| *Database* | | |
| | *MariaDB: MySQL 5.5.52* | *MyISAM Tables required* |
| | | |
| *PHP* | | |
| | *7.1.4* | |
| | | *Zend Server is supported* |
| | | |
| *Browser* | | |
| | *IE 8.x, 9.x* | |
| | *Firefox 12 or better* | |
| | *Chrome 12 or better* | |
| | *Safari 5 or better* | |

## Recommended Stacks

**CentOS 7 Linux Software Components**

PHP version 5.4.16
MariaDB: MySQL  5.5.40
Apache 2.4.6
CentOS 7, 64-bit

**Windows Server 2012 Software Components**

PHP version 5.5.12
MySQL  5.6.17
Apache 2.4.9
Microsoft Windows Server 2012, with GUI Option and WampServer 2.5 x86

# 6.0  qbXML Versions

| Version of QuickBooks | qbXML Versions Supported |
|---|---|
| QuickBooks 2014 and Enterprise 14.0 (Using QBXMLRP2) | 13.0,12.0,11.0,10.0,9.0,8.0 , 7.0,6.0,5.0,4.1,4.0,3.0,2.1, 2.0,1.1,1.0 |
| QuickBooks 2013 and Enterprise 13.0 (Using QBXMLRP2) | 12.0,11.0,10.0,9.0,8.0,7.0, 6.0,5.0,4.1,4.0,3.0,2.1,2.0, 1.1,1.0 |
| QuickBooks 2012 and Enterprise 12.0 (Using QBXMLRP2) | 11.0,10.0,9.0,8.0,7.0,6.0, 5.0,4.1,4.0,3.0,2.1,2.0,1.1, 1.0 |
| QuickBooks 2011 and Enterprise 11.0 (Using QBXMLRP2) | 10.0,9.0,8.0,7.0,6.0,5.0,4.1 4.0,3.0,2.1,2.0,1.1,1.0 |
| QuickBooks 2010 and Enterprise 10.0 | 8.0, 7.0, 6.0, 5.0, 4,1, 4.0, 3.0, 2.1, 2.0, 1.1, 1.0 |
| QuickBooks 2009 and Enterprise 9.0 | 8.0, 7.0, 6.0, 5.0, 4,1, 4.0, 3.0, 2.1, 2.0, 1.1, 1.0 |
| QuickBooks 2008 and Enterprise 8.0 | 7.0, 6.0, 5.0, 4,1, 4.0, 3.0, 2.1, 2.0, 1.1, 1.0 |
| QuickBooks 2007 and Enterprise 7.0 | 6.0, 5.0, 4,1, 4.0, 3.0, 2.1, 2.0, 1.1, 1.0 |
| QuickBooks 2006 and Enterprise 6.0 | 5.0, 4,1, 4.0, 3.0, 2.1, 2.0, 1.1, 1.0 |

*Note:* UK & Canadian QuickBooks versions prior to 2010 do not support qbXML versions above 6.0.

# 1CRM FINANCE QB GUIDE

## A Comprehensive Guide to Implementing 1CRM Finance for QuickBooks