



The Microsoft CRM Sales for Outlook Client Explained

Helpful information for users, implementers and administrators of the Microsoft CRM Sales for Outlook client

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Using SFO

Overview

The goal of this article is to help users, implementers and administrators understand how the Microsoft CRM Sales for Outlook (SFO) client works. In educating ourselves and our clients on Microsoft CRM we've encountered a lot of confusion around the functionality of the CRM Sales for Outlook client. Specifically, the topic of how data synchronizes ('synchs') is not immediately obvious. Version 1.2 of Microsoft CRM introduced a significantly improved version of SFO and more and more companies that previously used only CRM's web client are now starting to install and use SFO. We hope that you find this information useful in implementing the Microsoft CRM Sales for Outlook client.

Accessing CRM

Let's start with the basics. Microsoft CRM can be accessed in two ways; from the web client using Internet Explorer or from the Microsoft CRM Sales for Outlook client or SFO for short. SFO is an Outlook plug-in that must be installed separately from Outlook and launches as part of Outlook. When SFO is installed a local version of Microsoft's SQL Server database is also installed so the user's CRM data can be synchronized for 'offline' usage.

Synchronization explained

With respect to data that can be synched the rule of thumb is 'if you can see it you can synch it.' This means that users can synch all records they can search for and retrieve (i.e. 'see'). This will include records the user 'owns' as well as records that are shared with the user or records that are within the scope of what a user can read/view/see based on his or her security role. In a simple scenario where Microsoft CRM has been implemented as a single business unit, a user with rights to view all data will synchronize all records. By default SFO will only synch data from the user's business unit. This is a setting that can be changed upon syncing but generally it is a good idea to leave the default setting. Figure 1 shows the section of the offline configuration screen where this option can be set. This screen is displayed when a user clicks the 'go offline' button in SFO.

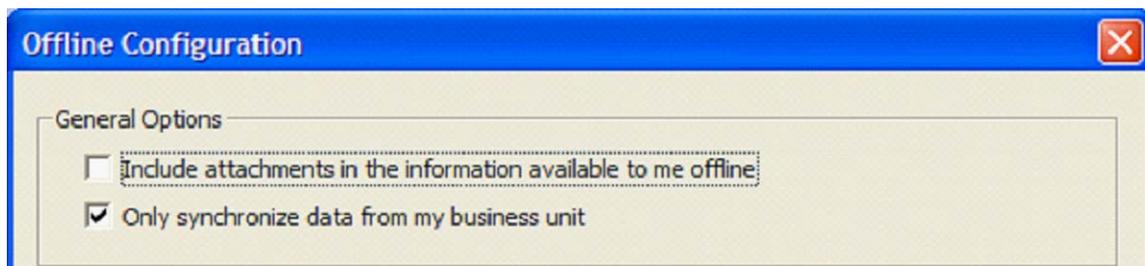


Figure 1 – General Options of the Offline Configuration screen



Because of the ability to limit the synch to the user's business unit it is often advisable to set up business units based on how much data you want users to synch when they go offline. Again, it is important to note that if you leave all records in a single business unit you will have no choice but to synch everything. Records are considered to be 'in' a business unit based on the business unit their owner (the user to whom the record is assigned) is in. For example, if Bob is a user in the West Sales business unit and the 'Big Company' account record is assigned to Bob then the Big Company account record is considered to be in the West Sales business unit.

Notes and Attachments

Referring back to figure 1, the first option displayed is titled 'Include attachments in the information available to me offline.' This is a bit misleading because what this option actually does is tells SFO whether or not to synch notes records. If you leave this box unchecked you will not synch any notes records. If you check this box, you will synch all notes and the attachments on them regardless of attachment size. Please note that this option has nothing to do with attachments on email activities. Email activity attachments will synch by default and there is no way to filter or prevent this.

Sales Literature

Figure 2 displays the section of the Offline Configuration screen that deals with Sales literature documents. In Sales Literature a 'document' is an attached file. By default, all Sales Literature records synchronize. The settings in figure 2 determine how the documents attached to those Sales Literature items synchronize. If you select the 'Download documents only if the size is less than' option and set a threshold then you will be unable to select which documents to synch in the list. The system will determine which ones are under the threshold and will synch them accordingly. If you do not select the 'Download documents only if the size is less than' option then you can select specific documents and those will synch regardless of their size. It is important to note that the 'Download documents only if the size is less than' option only applies to Sales Literature documents and not to notes or email attachments.

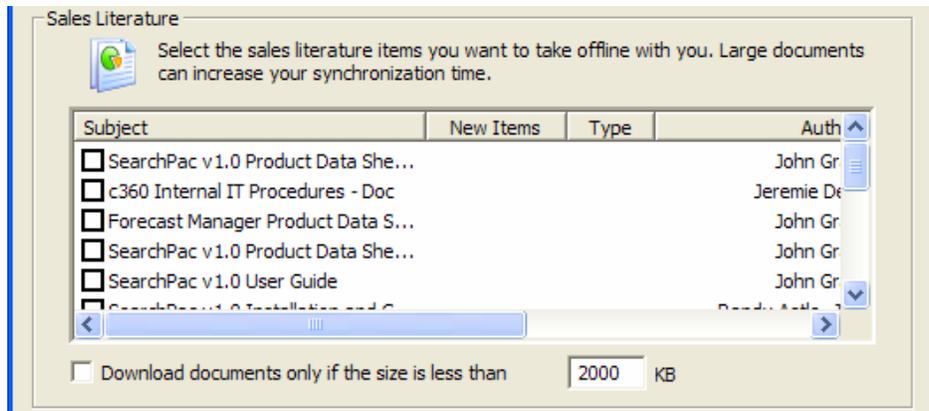


Figure 2 – Sales Literature options of the Offline Configuration screen

CRM to Outlook synchronization

Up to this point, we've been discussing what synchs from our company's main CRM database to our local SFO database. The question remains as to what synchs between SFO and our standard Outlook folders. By default, contacts, tasks and appointments synch between SFO and Outlook if they originated in CRM and if the user's SFO preferences are configured to synchronize these objects. Figure 3 shows the SFO Personal Options screen.

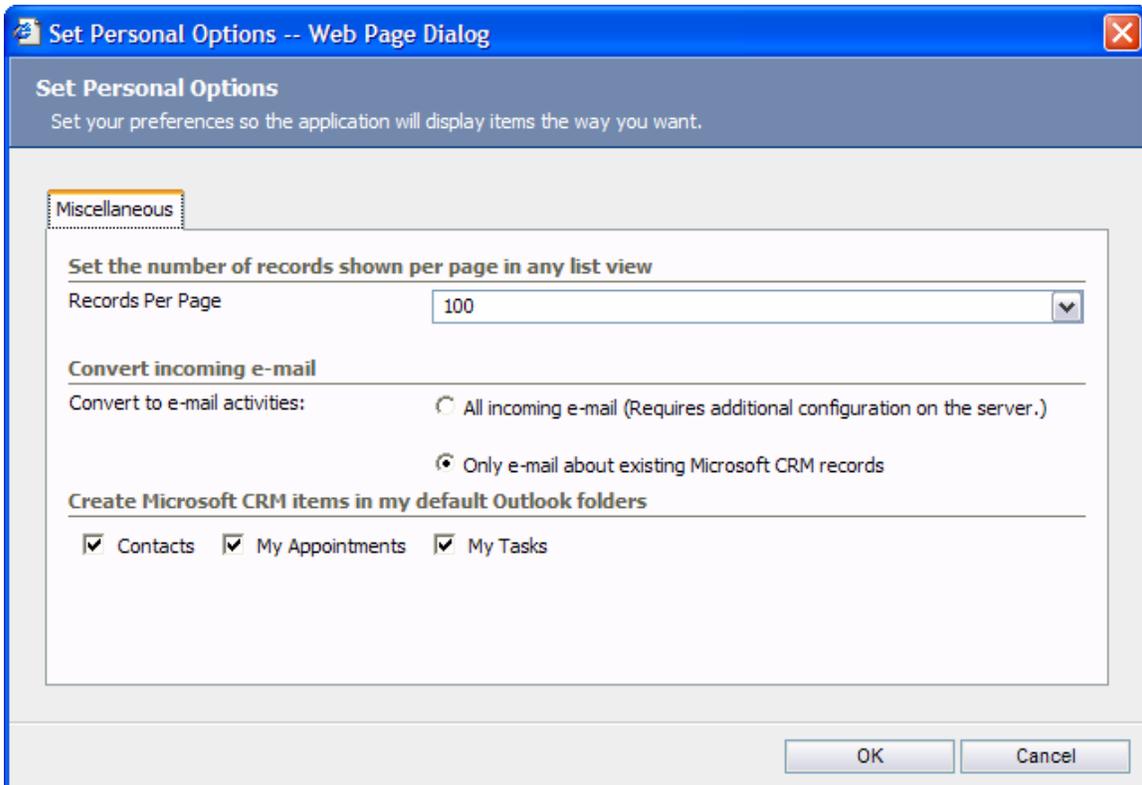


Figure 3: The SFO Personal Options screen

With the user's personal options set as shown in figure 3, contacts, tasks and appointments created in Outlook using the standard Outlook buttons will not synch to CRM. This is a good thing since you won't necessarily want all your contacts, tasks and appointments to go into your SFO and, therefore, your company's CRM database. However when you use any of the CRM buttons in SFO (e.g. the 'CRM Contact' button on the CRM Outlook toolbar or the 'New Contact' button in a CRM web page) the record you create will appear in both CRM and your Outlook folders. This includes records created in CRM's web client. However, it is important to note that when a contact, task or appointment record is created using the CRM web client that record will not appear in your Outlook folders until you actually perform a synchronization by clicking the 'Go Offline' button.



Let's refer back to our example of a simple implementation with a single business unit where all users have access to see all data. Let's also assume that you are a user of SFO. In this scenario, all CRM contact records will synch to your SFO contacts folder and, therefore, to your Outlook contacts folder. This means that even CRM contact records created by other users will synch to your SFO contacts folder and, in turn, to your Outlook contacts folder. In this scenario your Outlook contacts folders will house copies of all contact records from CRM. Contact records that you create using the SFO contact buttons will immediately be copied to your Outlook contacts folder while CRM contacts created by other users will be copied to your Outlook contacts folder when you click 'Go Offline' to perform a synchronization.

With a copy of each of your contacts both in your Outlook contacts folder as well as in your CRM contacts list you may wonder what will happen if the contact is deleted either from CRM or from Outlook. If a contact is deleted in CRM its Outlook copy will still exist but will now be a regular Outlook contact and will open in the standard Outlook contact form. If a contact is deleted in Outlook the CRM copy of that contact will still exist unchanged in CRM.

Who needs to synch?

Many users may want the additional functionality the SFO client provides but may not have a need to work offline. The question is; do these users actually need to synch? The answer to this question depends on how important it is for the users to have their contacts, appointments and tasks copied to their default Outlook folders. It is the synch process that triggers CRM contacts, appointments and tasks which were created online to actually be copied to the Outlook folders. For example, if a user's assistant creates a new contact on one of the user's accounts the contact will not appear in the user's Outlook contact folder until a synchronization occurs to trigger the record to be copied to Outlook. Since the user may use their Outlook contacts folder for addressing e-mails the user would not be able to find the e-mail address until the synchronization occurs. Figure 4 shows the selection box for addressing e-mails.

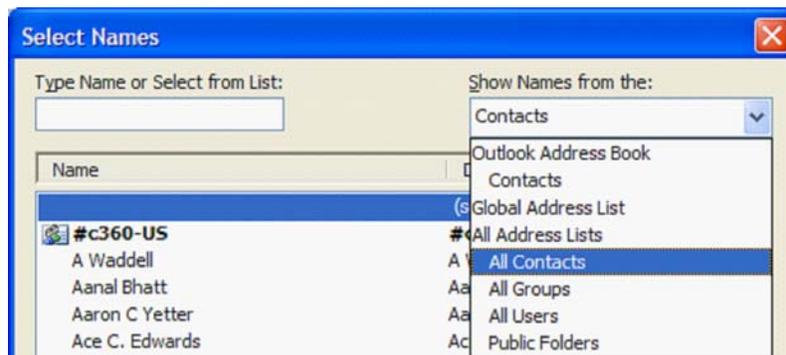


Figure 4: Only CRM contacts available as Outlook contacts will be available when addressing e-mails in Outlook



Another reason that a user who does not need to go offline may want to synchronize is to ensure that their contacts are copied to their Outlook contacts folder so the information will be available for synchronization to a PDA.

What about PDA's?

You may be asking how this all affects personal digital assistants like Palm Pilots and Pocket PC's. These devices are typically configured to synch and/or read data from Outlook folders so it stands to reason that these devices will be synching or reading the CRM data in these folders. Going back to the example of our simple implementation a user whose Palm Pilot is configured to synch all data in his or her default contacts folder will synch all CRM contacts into his or her Palm Pilot. Thus, if this user modifies a record in the Palm Pilot and then synchs the Palm Pilot to back Outlook the change to the Outlook record will also affect the CRM record. In this scenario the record appears in three places; CRM, Outlook and the Palm Pilot. Changes in any one of these places will affect the other two.

If you're still with me, hang in there a little bit longer. Earlier we mentioned that contact records created in Outlook using the standard Outlook button will not synch to CRM. This is correct, but if you find that you want those records to have CRM counterparts you can use the import function on SFO's Tools menu (don't confuse this with Outlook's Tools menu) to import standard Outlook contacts into CRM. The import will also create the linking to ensure that the CRM and Outlook contact records stay in synch. The import function is smart enough to differentiate between contact records that already have CRM counterparts and those that do not. This means that the import function can be used on an ongoing basis to import contact records that have been created using the standard Outlook creation method. This can be helpful to initially import your Outlook contacts into CRM as well as to import records created in a Palm Pilot or other device that synchs with a user's default Outlook contacts folder. Importing Outlook contact records will create CRM contact records but will not attempt to attach them to CRM Account records.

'Go Offline' vs. 'Work Offline'

We've discussed a lot about synching CRM data but we haven't touched on the relationship between synching CRM data and synching Outlook data for offline usage. Simply put, there is no relationship between these two synch processes. Selecting the 'Work Offline' option in Outlook to have copies of e-mails, contacts, appointments and tasks available when you are not connected to your network is a completely distinct process from selecting the 'Go Offline' button in SFO. So, to be sure that you are completely ready to work without an internet connection you will need to select both the 'Work Offline' and 'Go Offline' options.

Veteran Outlook users will likely be aware that Outlook can be configured to prompt the user for a connection state or automatically detect the connection state. The connection state refers to whether the user would like to work online or offline. Figure 5 displays the screen where a user can make this selection.

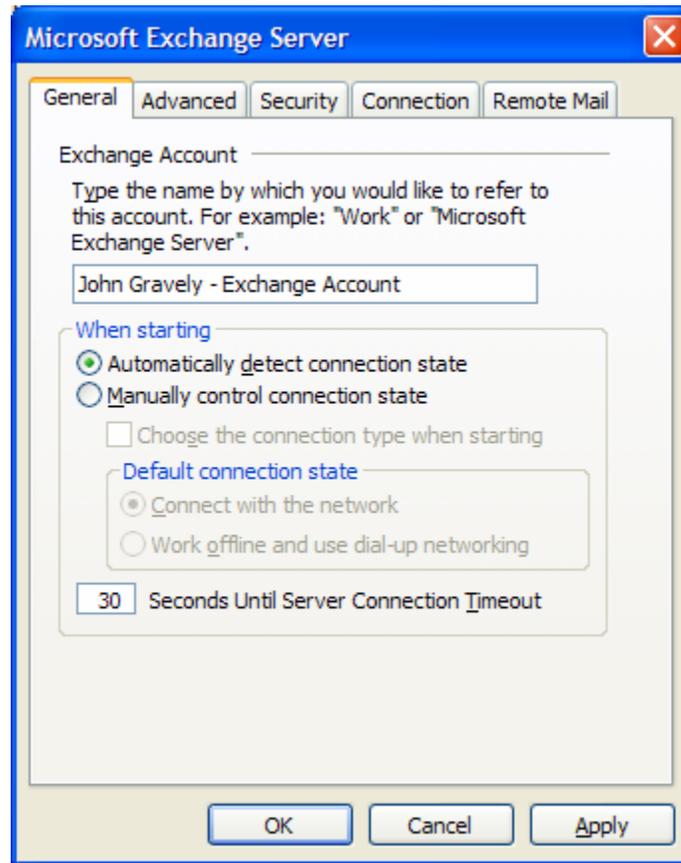


Figure 5: Controlling connection state in Microsoft Outlook

SFO, on the other hand, does not provide an option to configure the connection state. SFO automatically puts the user back into his or her last connection state. For example, if you are running to catch a plane and forget to click 'Go Offline' when you get on the plane and start up SFO it will unsuccessfully try and connect to your main CRM server and you will see an error message when trying to access a CRM screen. This will not keep Outlook from working offline but the CRM functionality will be unavailable until you successfully go offline. Should you find yourself in this situation there is an unofficial way to change SFO's connection state. To do this you must change SFO's RCOOffline registry key displayed in Figure 6 from 0 (online) to 1 (offline) to make SFO connect to the offline database. The RCOOffline key is located in the user's registry at \HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSCRM.

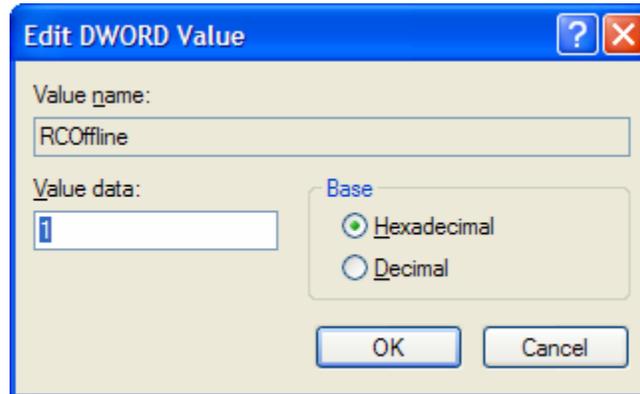


Figure 6: The RCOOffline setting in a SFO computer’s registry determines if SFO will connect online or offline.

Changing the RCOOffline registry setting should be a last resort in cases where you need access to data. Keep in mind that beyond simply changing the connection state, the 'Go Offline/Online' options in SFO are triggering synchronization to ensure that changes are properly applied online and offline. The proper way to use SFO is to go offline when you will need disconnected access to CRM data and then to go back online when you want the changes you made offline to be uploaded to the CRM server.

Where are my e-mails?

Another concept that generally creates confusion regarding SFO is the handling of CRM e-mails. CRM e-mails are e-mails created by using the SFO CRM E-mail button or by creating an e-mail activity in SFO or the CRM web client. In all of these scenarios the e-mail is not copied to your 'Sent Items' folder when it is sent. Instead, the e-mail is attached as a completed activity to the CRM records to which it related. This e-mail activity will be synched to your offline database but not to your sent items folder.

Quotes, Orders and Invoices

With respect to quotes orders and invoices SFO behaves differently depending on whether it is offline or online. For example, when working offline the 'Create Order' option is available on quotes but the order doesn't actually get created until the user goes back online. Figure 7 shows the information screen that is displayed in this scenario.

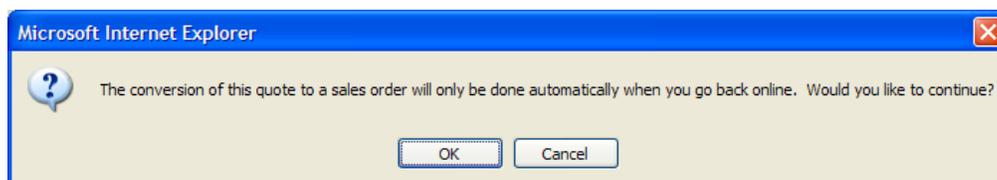


Figure 7: The information message displayed when creating an order from a quote while working offline



Quotes, orders and invoices can all be created while working offline but invoices cannot be created from orders while working offline. The 'Create Invoice' option available on the order screen while online is not available while offline.

What about Service Cases?

One common misconception about SFO is that Cases are not available offline. While Service Cases cannot be created offline existing Cases are available in a read-only mode while offline. Additionally, all activities linked to those cases will also be available in the Outlook client as will notes assuming you have selected the 'Include attachments in the information available to me offline' option.

Deploying ISV Customizations in SFO

ISV (Independent Software Vendor) customizations are applications built by third parties to extend the functionality of Microsoft CRM. c360's SearchPac, Activity Summary, Forecast Manager and Email Link products are examples of ISV applications that add functionality to Microsoft CRM. Administrators and developers will be aware of the isv.config file in the Microsoft CRM _Resources directory that tells Microsoft CRM where to render ISV customizations and where to look for these applications.

SFO has its own version of the isv.config file, named OutlookClient.xml, which is the SFO equivalent to isv.config. In fact, OutlookClient.xml and isv.config share the exact same tag structure. OutlookClient.xml is provided so that you can tell SFO to display different applications from isv.config. OutlookClient.xml is referenced by SFO whether it is being used in offline or online mode.

OutlookClient.xml should be configured and placed in the same directory (inetpub\wwwroot_Resources) on the server as isv.config. When a user goes offline for the first time, OutlookClient.xml is copied to the user's local computer.

In configuring OutlookClient.xml, the main difference from isv.config is that the location of the ISV application must be specified. For example, the following entry in isv.config to render c360's Activity Summary product:

```
<account>
  <NavBar ValidForCreate="0" ValidForUpdate="1" >
    <NavBarItem Icon="/Custom/c360/c360Icon.gif" Title="Summary"
      Url="/Custom/c360/ActivitySummary/ActivitySummary.aspx" PassParams="1"
      Id="ActivitySummary" />
  </NavBar>
</account>
```

must be implemented as:

```
<account>
  <NavBar ValidForCreate="0" ValidForUpdate="1" >
    <NavBarItem Icon="http://server/Custom/c360/c360Icon.gif" Title="Summary"
      Url="http://server/Custom/c360/ActivitySummary/ActivitySummary.aspx"
      PassParams="1" Id="ActivitySummary" />
  </NavBar>
</account>
```



</account>

in OutlookClient.xml. In this example you would replace the text 'server' with the name of your CRM server. Keep in mind that in this example the customization will work anytime a connection can be made to the CRM server, regardless of whether SFO is being used in offline or online mode.

Setup Considerations

If you are a CRM implementation consultant or a CRM system administrator this article may have prompted questions about how to best set up your users and business units for optimal performance during synchronization. The main thing to remember when thinking about this is the synchronization option labeled 'only synch data from my business unit.' To take advantage of this you may opt to set up individual sales users or sales teams as business units to minimize the data that must be synched.

With respect to Business Units and security it is important to understand the synchronization impact of the Microsoft CRM security model. Microsoft CRM uses a field called the security descriptor on all records. This descriptor tells Microsoft CRM which roles have which privileges on the record. Updates to security roles can cause this descriptor to be updated and when a record is updated in the main CRM database it must also be updated in any offline databases. In a situation where broad security changes were made that caused the security descriptor to be updated on all account records all offline users would be forced to re-synchronize those account records. The users would not have to take any special action but they would notice a longer than average synchronization time. As far as setup is concerned, carefully designing your security roles prior to offline deployment can mitigate the risk of increased synch times due to security changes. Microsoft CRM v2.0 will introduce a completely redesigned security architecture so this will not be an issue.

Another setup consideration with respect to synchronization is your organization's use of Lead records. While Lead records will synch to SFO, they do not synch to an Outlook folder and, therefore, will not be available to devices (i.e. Palm Pilot, Pocket PC) that get their data from Outlook folders. Based on this you may want to modify your qualification/conversion process or wait for Microsoft's Pocket PC edition of CRM available in mid-2004.

Installation Considerations

Upon installing the CRM server and SFO many administrators forget to also make sure that the SFO users' local databases (MSDE) can communicate with the main CRM SQL Server. The installation does not do this for you. Because SFO uses Microsoft SQL Server replication for its synchronization mechanism ensuring that the main and local databases can 'talk' is critical. To ensure this connectivity a SQL login must be created to allow all domain users to access the main CRM database. The steps to do this are found in Microsoft's Implementation Guide and are copied here as follows:

1. On the SQL Server computer (**CRMSQL01**), on the **Start** menu, point to **Programs**, point to **Microsoft SQL Server** and click **Enterprise Manager**



2. Expand **Microsoft SQL Servers**, expand SQL Server Group, expand **SQL_Server (CRMSQL01)**, and expand **Security**
3. Right-click **Logins** and then click **New Login**
4. Click the ellipsis (...) button, select **Domain Users**, click **Add**, and then click **OK**
5. In the **Properties** dialog box for the Domain Users login, click the **Database Access** tab
6. Select the Permit checkbox for the MSCRM and METABASE databases, and leave the default role of public
7. Click **OK** to close the **SQL Server Login Properties** dialog box

Known Issues

As you might suspect, there are some known issues with SFO. The ones we've seen are:

1. CRM toolbar buttons not working – this issue is easily fixed by going to Tools > Options > Other (tab) > Advanced Options > Custom Forms > Manage Forms and clicking the Clear Cache button.
2. Offline CRM contacts not syncing to Outlook contacts – This is a known issue for which a fix exists for v1.0 and is being created for v1.2. Contact Microsoft support for the fix. The workaround to this issue is to open the offline CRM record that is not present in the Outlook folder and make any change to it. This will trigger CRM to create an Outlook equivalent of that record the next time the user goes offline.
3. Error using the SFO Contact import function – If you receive errors when importing contacts into CRM from your default contacts folder in Outlook check for the existence of distribution lists in your Outlook contacts folder. Distribution lists are currently not supported and should be moved to another Outlook contacts folder.
4. SFO's initial synchronization failed and SFO is not working in offline mode. See Appendix A – Resetting SFO
5. Metadata Cache Error – This error occurs when the metabase does not properly synchronize. To resolve this see Appendix A – Resetting SFO to redo the synchronization. This error typically only occurs during an initial synch.
6. Cannot Generate SSPI Context – if you receive this message when trying to synchronize it means that your local msde CRM database cannot properly connect to your main CRM SQL Server. This is an indication of DNS issues in your network setup and should be addressed by your network maintenance provider. This is generally unrelated to CRM but manifests itself when the two SQL servers are trying to make a connection. Information on this issue can be found at the link below.

- a. <http://support.microsoft.com/default.aspx?scid=kb;en-us;811889&Product=sql2k>



Other issues you may encounter can be researched by visiting Microsoft Business Solutions TechKnowledge through PartnerSource or CustomerSource available at <http://www.microsoft.com/BusinessSolutions/default.aspx>

Performance

Microsoft CRM v1.2 has introduced significant performance improvements I use SFO everyday and regularly go offline so that I can access my CRM data when I am in places where an internet connection is not available. I use Outlook 2003 and have a new laptop with 512 mb RAM. My initial synch of 750 accounts, 1450 contacts, 7,800 activities and the other supporting records (cases, activity party, notes, etc.) took about 30 minutes and my ongoing synchronizations typically take between 3 and 5 minutes based on the number of changes that have been made since my last synch. Going online after working offline takes less than a minute.

I synch my default contacts, tasks and appointments from Outlook to my Palm Pilot as well as my iPod (to synch to my iPod I use iPodSynch v2.12. available at <http://iccnet.50megs.com/iPodSynch/>) and it has been extremely useful to have all this information with me whenever I need it. Changes I make on my Palm synch to both Outlook and CRM so I am able to more easily keep my information up to date.



Appendix A – Resetting SFO to re-synch _____

The steps below outline how to reset SFO so that a re-synchronization can be performed if an initial synchronization has failed and SFO will not function offline.

1. MAKE SURE THE SALES FOR OUTLOOK (SFO) CLIENT IS ONLINE. THIS IS A CRUCIAL STEP, IF YOU PERFORM THE ACTIONS DESCRIBED BELOW WHEN YOU ARE OFFLINE THEN YOU HAVE TO RE-INSTALL SFO CLIENT AGAIN.

On the CRM SQL server go to start | programs | Microsoft SQL server | SQL Server Enterprise Manager | Microsoft SQL Servers | SQL Server Group | My SQL server | New SQL server registration | and then register the SFO client MSDE instance in there. For example my SFO client machine name is SFOCLIENT, so the MSDE instance should say SFOCLIENT\CRM.

NOTE: If you can not successfully connect to the SFO client remotely with Enterprise Manager please follow the below steps to enable this.

- A. On the client machine and using Windows Explorer browse to C:\Program Files\Microsoft SQL Server\80\Tools\Binn.
- B. Locate the utility called SVRNETCN.exe, right-click on it and select Open.
- C. Select the General tab and then change the drop down selection titled 'Instance(s) on this server:' to the CRM MSDE instance. (ex. SFOCLIENT\CRM)
- D. Next find the TCP/IP protocol in the disable protocols, highlight it and click Enable.
- E. Click OK.
- F. Upon reboot of the Microsoft CRM Sales for Outlook client the SQL Server Service Manager will now successfully connect to the MSDE CRM instance.

2. Then under the MSDE database name go to Replication-Subscriptions and delete both subscription names. Depending on where the error occurred when going offline these subscriptions may or may not exist.

3. Next go to Start | Programs | Microsoft SQL server | SQL Server Enterprise Manager | Microsoft SQL Servers | SQL Server Group | SQLServerName | replication Monitor | Publishers | SQLServerName | and then there will be 2 publishers in there, under each publisher you should see the subscription for your SFO client entry in there. There will be as many entries as you tried to go offline. Please delete all entries for the problematic SFO client EXCEPT FOR SNAPSHOT ENTRY WHICH SAYS A SNAPSHOT OF 79 ARTICLES WERE GENERATED AND A SNAPSHOT OF 93 ARTICLES WERE GENERATED FOR METABASE AND MSCRM DATABASE RESPECTIVELY.

DISCLAIMER: THIS PORTION CONTAINS TO DELETE 3 REGISTRY ENTRIES FROM YOUR SFO CLIENT MACHINE. A REGISTRY DELETE MAY CORRUPT YOUR MACHINE AND MAKE IT INOPERABLE. SO PLEASE LEAVE A BACKUP OF YOUR ENTIRE REGISTRY FOR THE SFO MACHINE. TO DO SO PLEASE GO TO the SFO client machine go to Start | Run, type in regedit and click OK. Within the Registry Editor highlight



My Computer, right-click and select export. Export the entire registry entry for the SFO machine.

4. Now using the registry editor browse to HKEY_LOCAL_MACHINE | SOFTWARE | Microsoft | MSCRM.

Find the UserReplicationID registry entry in the right window pane, right click on it and select delete.

5. Again browse to HKEY_LOCAL_MACHINE | SOFTWARE | Microsoft | MSCRM.

Find the SQLServerName registry entry in the right window pane, right click on it and select delete.

6. Finally again browse to HKEY_LOCAL_MACHINE | SOFTWARE | Microsoft | MSCRM.

Find the LastSyncDate registry entry in the right window pane, right click on it and select delete.

7. Restart Outlook and attempt to go offline again with the SFO client.

8. If any error persists after this contact your reseller or Microsoft Business Solutions technical support.



About c360

c360 Solutions Inc. is an Atlanta, GA based Independent Software Vendor and Professional Services firm specializing in Microsoft Customer Relationship Management (CRM). c360 is the developer of widely installed Microsoft CRM products including SearchPac, Forecast Manager, Activity Summary and Email Link. For more information, please visit the C360 web site at <http://www.c360.com>.

John Gravely is Chief Executive Officer of c360 Solutions, Inc. (www.c360.com) an Atlanta, GA based Customer Relationship Management Independent Software Vendor and professional services firm specializing in Microsoft CRM. In his role at c360, John is heavily involved in the development of custom vertical and horizontal CRM solutions that leverage the Microsoft CRM platform. Prior to c360, John was a Regional Consulting Director for the Professional Services team of Onyx Software, a mid-market CRM software vendor. John has overseen dozens of CRM implementations across multiple industries and has been a hands-on consultant leading successful CRM implementation projects for Dreyfus Mutual Funds, FSC Securities, AT&T Latin America and Internet Security Systems among others. Prior to entering the CRM industry, John was a consultant, trainer and project manager for Datastream Systems; a leader in enterprise asset management systems. John began his career as an Engineer with Fluor Daniel Incorporated in Greenville, SC. John has a degree in engineering from Clemson University and a Master's Degree in International Business (MIBS) from the University of South Carolina. Stemming from his involvement in the MIBS program, John has lived and worked throughout Mexico, Central and South America and implemented one of the first enterprise CRM systems in the country of Chile. He is the co-chair and founder of the Technology Association of Georgia's (TAG) CRM Special Interest Group and is an active writer in the CRM community. John is co-author 'Special Edition – Using Microsoft CRM' by Que Publisher.