Citrix-Terminal Services Installation

> **This document applies to the following ERP system(s):**
>
> FIS EAS

BizInsight can be run in a Citrix or Terminal Services environment. This document provides information on the necessary steps that must be taken to implement BizInsight in this environment.

Essential Background Information

BizInsight is an add-in to Excel. All registry keys that control BizInsight are stored in the HKEY_CURRENT_USER registry hive which means that non-BizInsight users will not see BizInsight in Excel. This design requires that BizInsight users have permission to write to their own profile registry hive and they will need to be able to execute a .bat file (or have it executed for them) to register BizInsight while logged in to the Citrix or Terminal Services server. The registry key locations to which users must have permission to write are:

```
[HKEY_CURRENT_USER\Software\Microsoft\Office\12.0\Excel\Options]
[HKEY_CURRENT_USER\SOFTWARE\Mi-
crosoft\Office\Excel\Addins\BizInsightXL.AddinModule]
```

Note The version number in the first registry key location listed above will be different for each Excel version. For Excel 2003 the version is 11.0, Excel 2007 is 12.0, Excel 2010 is 14.0 and Excel 2013 is 15.0.

BizInsight provides a .bat file that can be used to register the product for the currently logged in user. This .bat file is named "**Register BizInsight for Excel *xxxx* OnDemand.bat**" and can be found in the reg5 subdirectory of the BizInsight installation directory.

If BizInsight is going to be delivered as a published application, providing users access to the .bat file or automatically executing that file for users can be accomplished different ways. The following are examples of what customers have done but are not all inclusive.

- Call the .bat file from a login script each time the user logs into the server

- Publish the .bat file as a separate application so that the user can execute it

- Publish the .bat file instead of Excel and modify the .bat file to start Excel after all registry update files and the registration of the adxloader.dll have been performed. The following command added to the end of the .bat file accomplishes the startup of Excel AND closes the Command dialog (be sure to adjust the path for your Office installation location):

```
Start "Excel" /D"C:\Program Files (x86)\Microsoft Office\Office12\"
Excel.exe EXIT /B
```

BizNet Software does not require any particular method so the choice of how to accomplish the registering of the product is your decision.

IMPORTANT

- If profiles are being deleted when users log off the Citrix or Terminal Services server, the adxloader.dll registration is NOT preserved when the user's profile is saved back to the profile server. BizInsight or the adxloader.dll will need to be re-registered each time the user logs in.

- Users MUST have read and execute rights to the BizInsight runtime files that are stored on the server's local disk drive. The local directory must be visible and accessible by the user as a local drive and cannot be a network or mapped drive. Microsoft will not properly register Excel add-ins unless they are accessible via a local drive location.
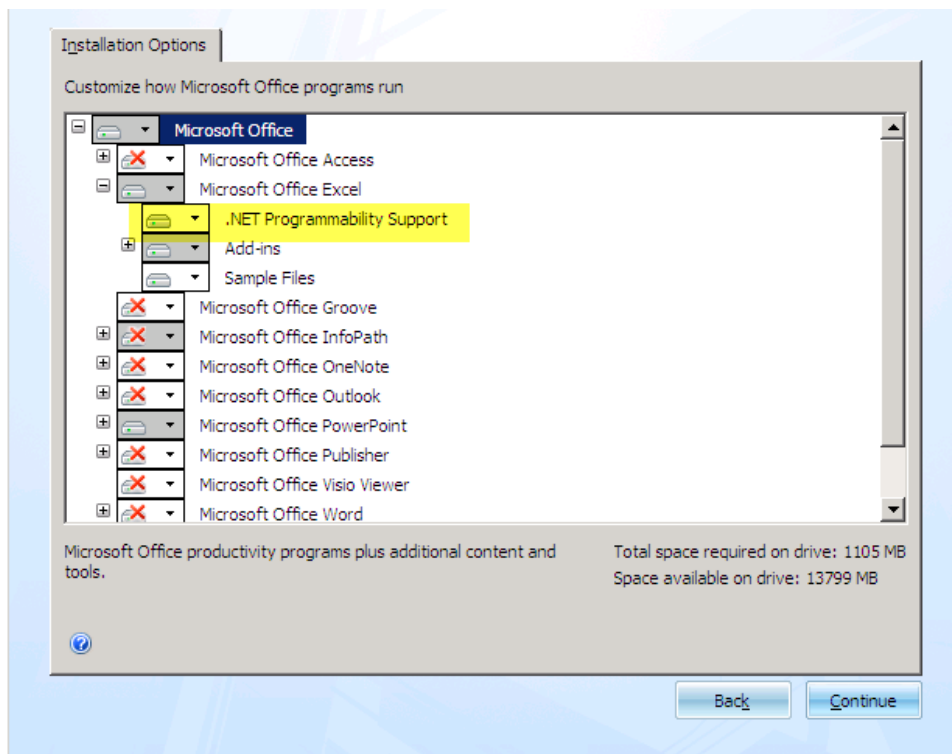
Implementing BizInsight

Even though you are implementing on a Citrix/Terminal Services server, its role in a BizInsight implementation is to be the client workstation.

IMPORTANT If you already have BizInsight implemented on your Citrix/Terminal Services server, you need to refer to the Citrix/Terminal services instructions in the document titled "Applying Updates". This document is written for new implementations of BizInsight in a Citrix/Terminal Services environment.

1. If you have not already downloaded the BizInsight installation files from the BizNet Software portal site, please do so. The portal site can be accessed from

http://biznet.flexnetoperations.com. If you will not be Centrally Managing your user settings, download the BizInsight Tools.zip as well.

2. On your server, make sure all server side steps are completed. The server side steps are provided in the Installation Guide. This document is available for download from the BizNet Software customer portal, http://biznet.flexnetoperations.com.

3. Ensure that no users are logged in to the Citrix/Terminal Server until installation and configuration of the server is complete.

4. Log in as a user with administrative rights.

5. Verify that the Excel installation has both the .Net Programmability and VBA for Applications features installed. Both features are required for proper product functionality.
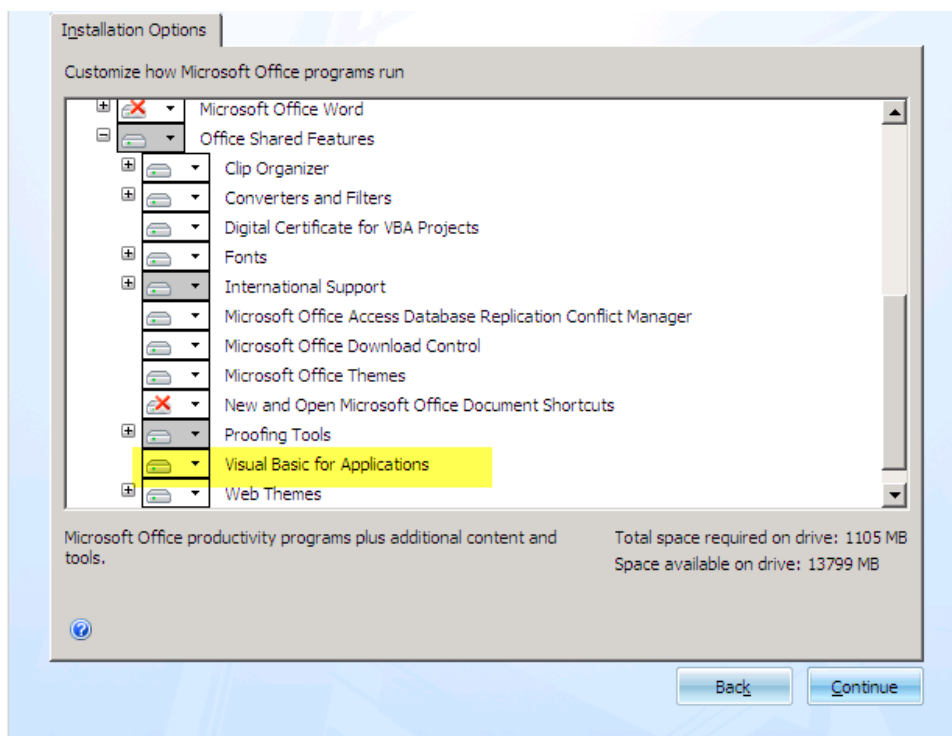
6. **If you used the Content Installer to create an app.config file to use for Centrally Managed settings, you can skip this step**.
   You will need to know the paths for the BizInsight implementation. Go to the server and start the Content Installer. Click on the Relevant Information link and make a note of the values shown.
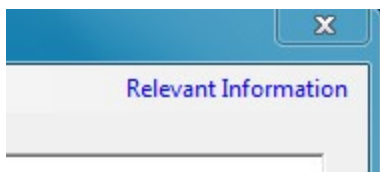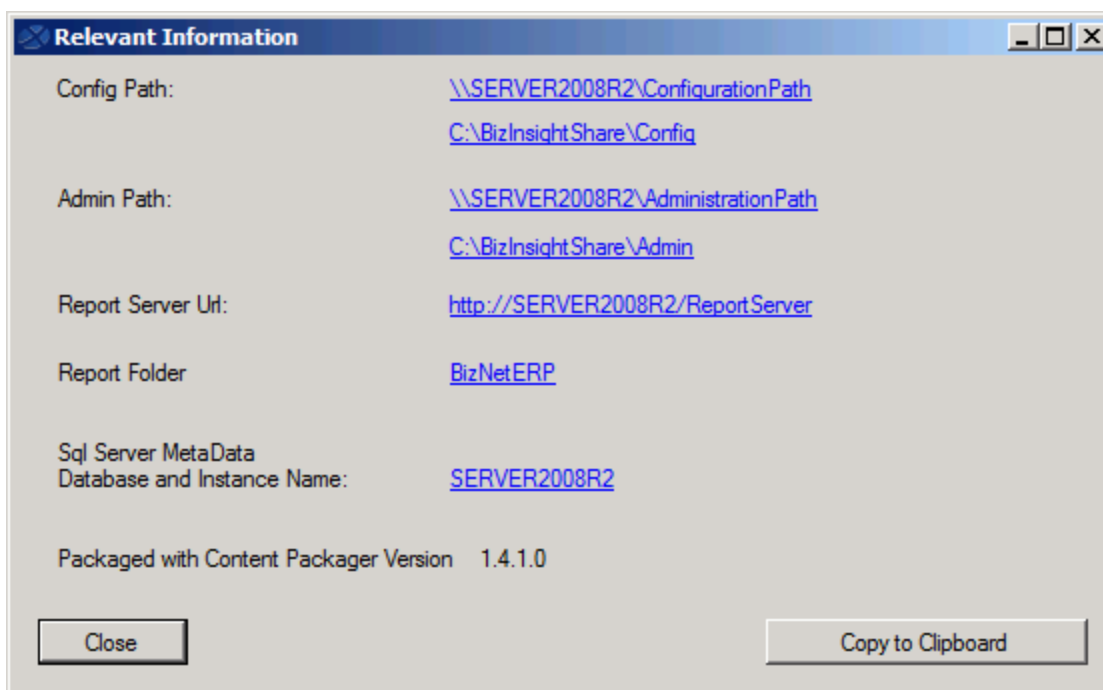
7. **If** you are upgrading from the earlier, BizExcelerator version, uninstall the previous
    BizInsight installation from **Control Panel** > **Programs and Features**.

8. The right-click menu for the old BizExcelerator version must be removed before
    installing the new product. If you are a new installation or upgrading from the
    BizInsight 5.5 version, go to the next step. Otherwise do the following:

a. Open Excel.

b. Right-click on a cell to verify that the BizExcelerator right-click menu is still present.
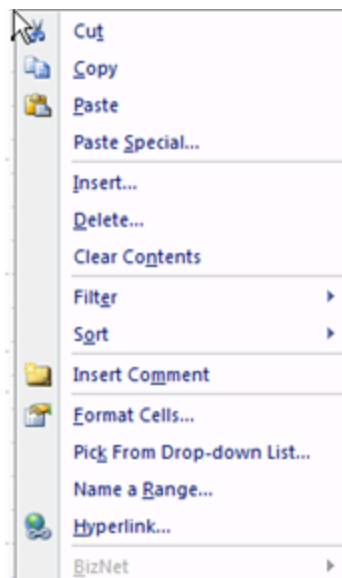
c. Right-click on the Sheet name and choose **View Code**.
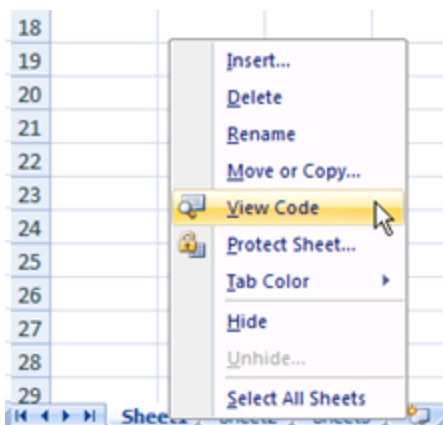
d. Copy and paste the following text into the right pane.
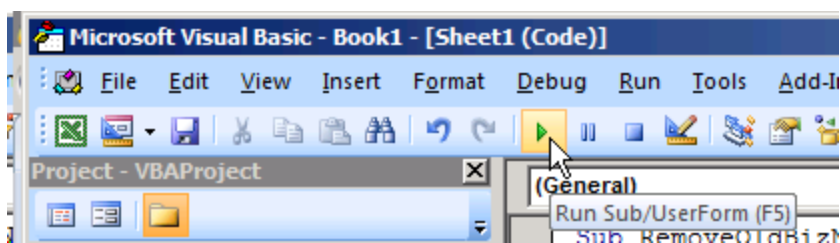
```
Sub RemoveOldBizNetMenu()

Dim ctlCBarControl As CommandBarControl
Set ctlCBarControl = Application.CommandBars("Cell").Controls("&BizNet")
ctlCBarControl.Delete
MsgBox ("Finished")
```
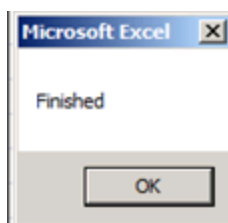
```
End Sub
```

Make sure the script looks as shown below and correct any extra line returns.
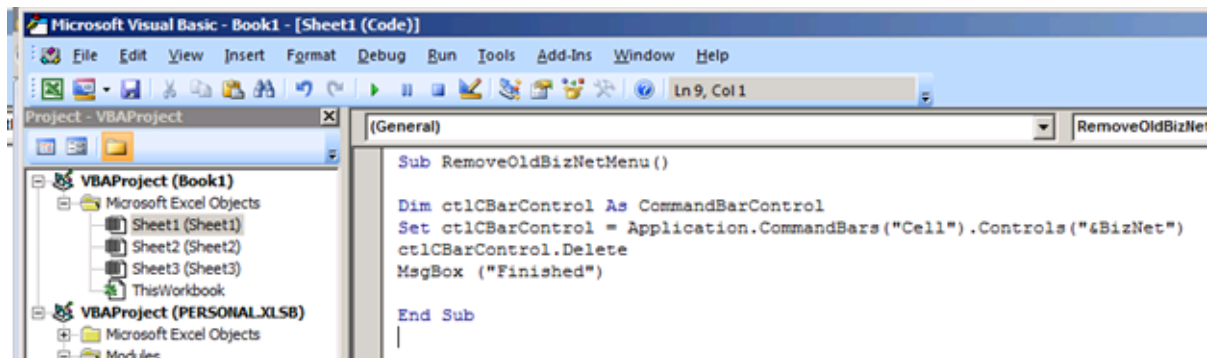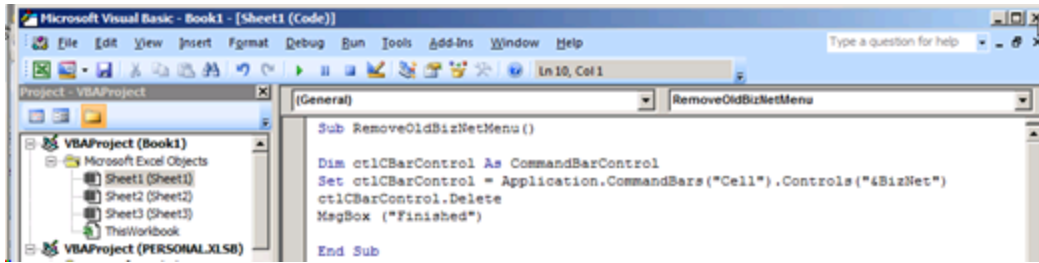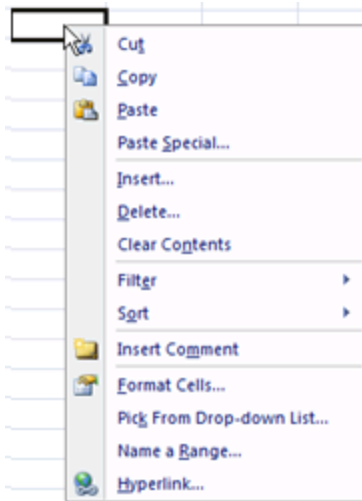

e. Click on the Run Sub button to run the macro.

f. Click **OK** when the Finished message is displayed.

g. Close the Visual Basic Dialog.

h. Right-click on a cell again to confirm the BizNet menu is removed.


9. Locate the BizInsight product installation files that you downloaded from the portal site and extract the contents.

10. Extract the .zip contents to any directory that is accessible from the client workstation (or server for a Citrix/Terminal Services installation).

11. Double-click the **Setup.exe**.

    NOTE As of the 5.0.35.2 release, there is a single Setup.exe for all supported Office versions.

12. The installation will check to see if Microsoft .Net Framework 4.0 is installed. If not installed, the following dialog will display. Click **Accept**.
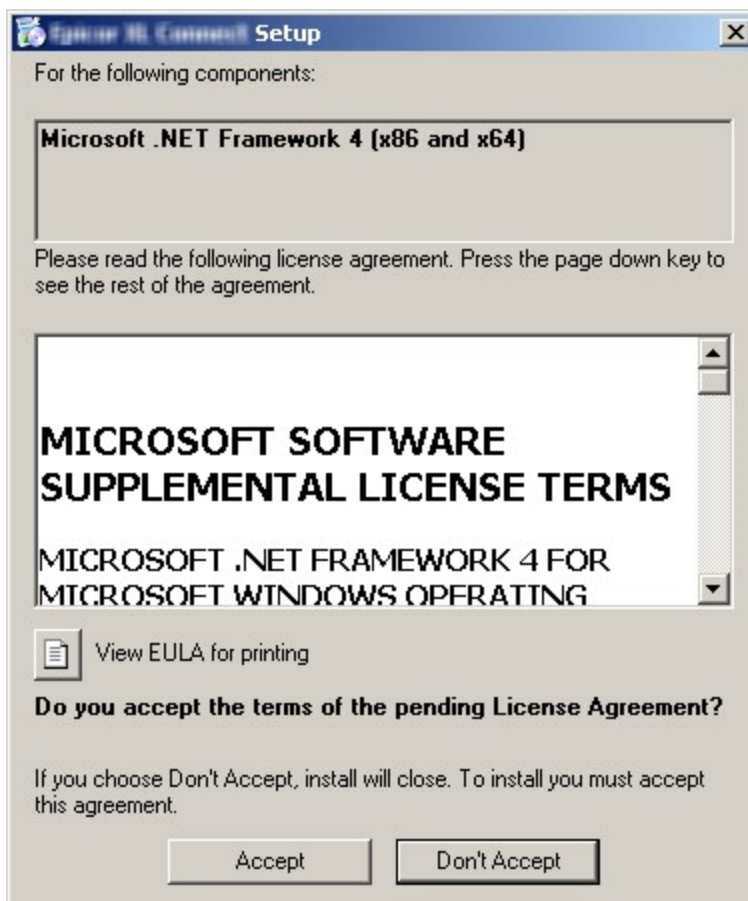
13. The installation will then check to see if the Microsoft Office Primary Interop assemblies for the installed Excel version are installed as well as a specific Microsoft Update that is necessary for proper Excel add-in functionality. If not found, the following dialog will display. Click **Install**.
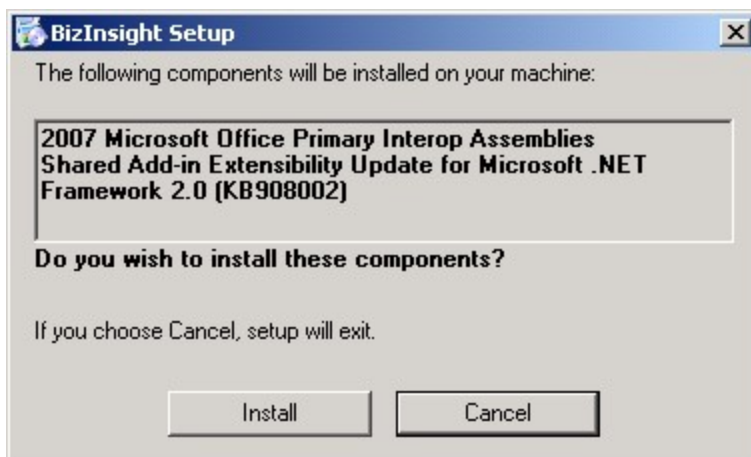
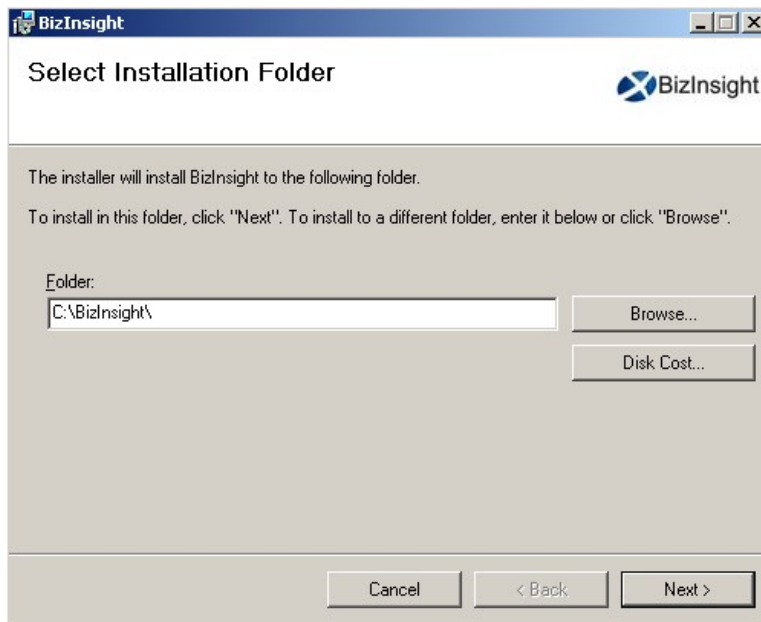14. The splash dialog will open. Click **Next** to continue.

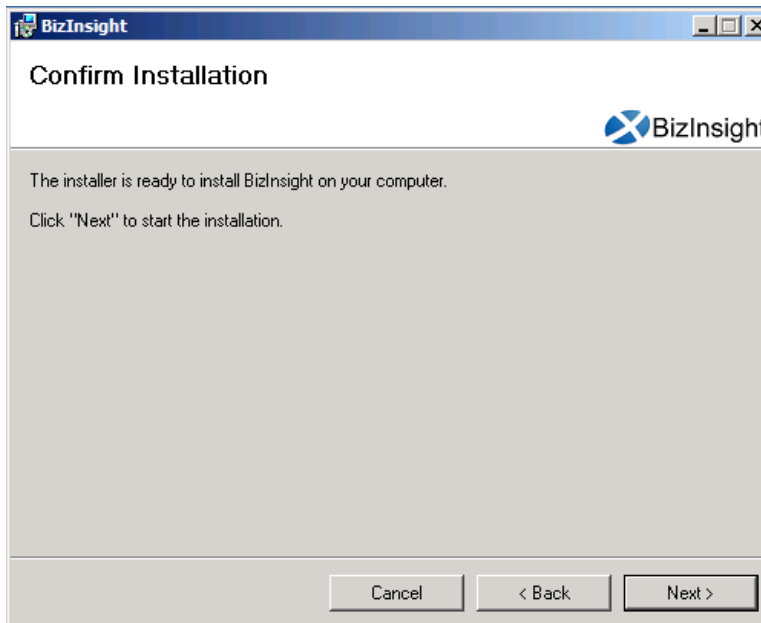15. The Welcome dialog will open. Click **Next** to continue.
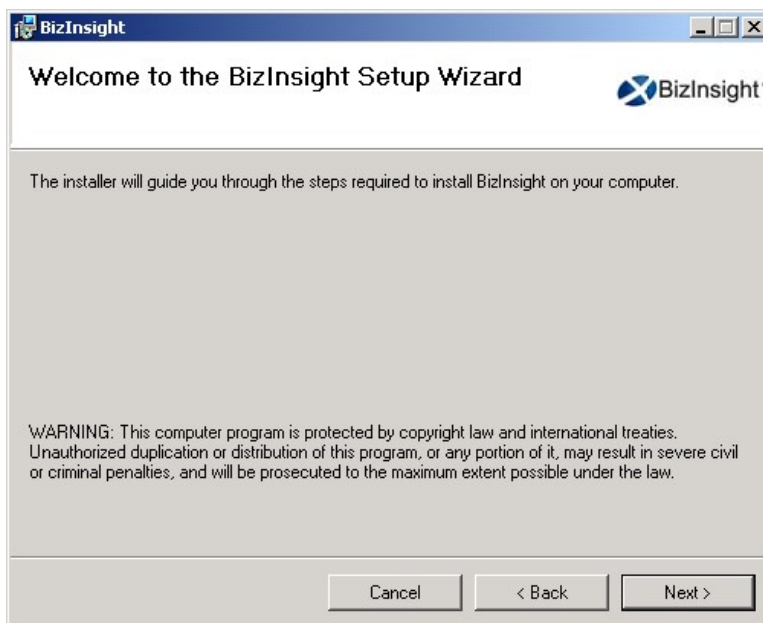
16. The **License Agreement** dialog will open. Read through the agreement and if you agree with the terms, click the **I agree** radio button and then click **Next**.

17. Accept the default installation directory or browse to a location of your choice. Click **Next**.


18. Click **Next** at the **Confirm Installation** dialog.

19. When installing BizInsight versions or higher, the **Enter your Configuration Path** dialog will open. If you have an app.config file produced by a Content Installer in your Configuration Path, leave the default option. Click **OK**.
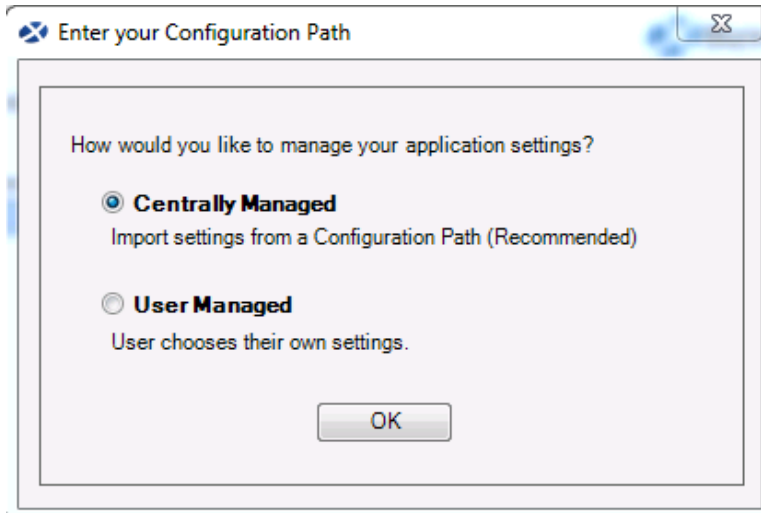
If you do not have a Content Installer created app.config file, choose the **User Managed** radio button to proceed. You will need to supply the key paths when configuring BizInsight for the user. When you click OK, the Import Settings Skipped dialog will open. Click **OK**.
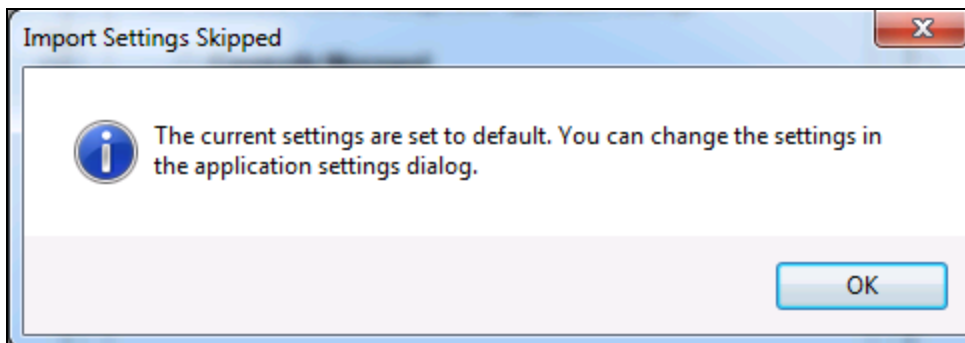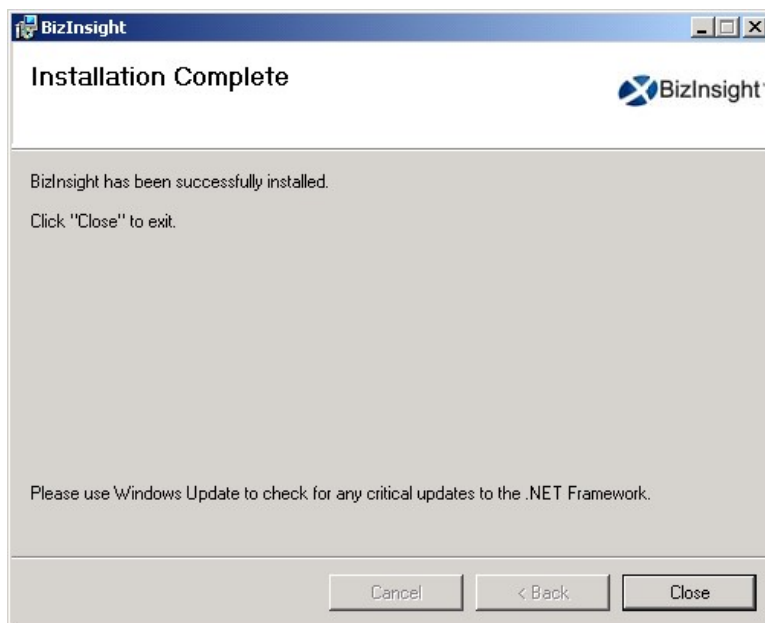
20. If the Centrally Managed option was selected, click the Browse button and browse to the Configuration Path shared directory.
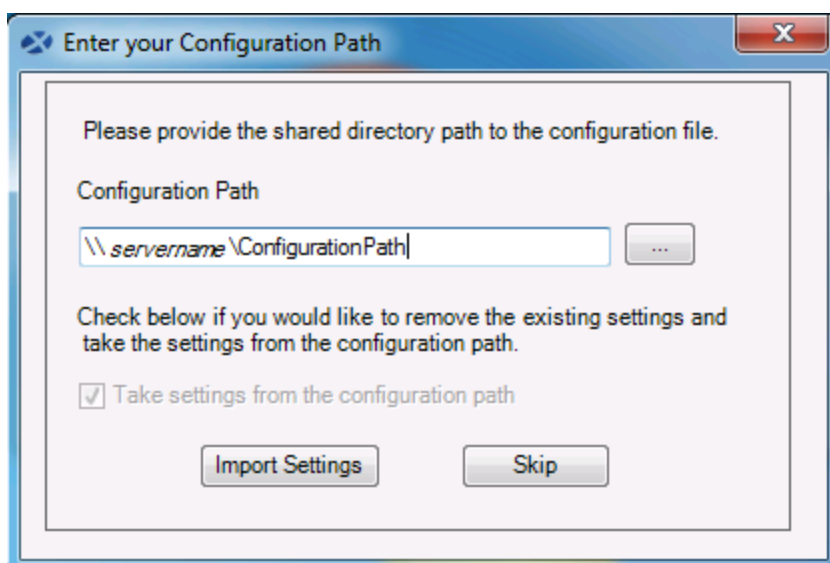
    Click **Import Settings**.

21. Once the installation completes, click **Close**.

The next steps are a departure from the usual client installation steps but are intended to automate the registration of the BizContent add-ins for the Citrix/Terminal Services users.

22. If you are using Centrally Managed user settings, skip this step and go to the Next Step.

Otherwise, you will need to adjust the app.config file installed by BizInsight to point the installation to the location of the various server side pieces. BizInsight will read this file for every user and making these changes to the app.config file will eliminate the need for each user to set these values themselves. Perform the following steps. **NOTE** if you don't want to perform the below steps, just go back to the server and use the Config Tool button to configure an app.config file and skip to the next step.

   a. If you have not already downloaded the BizInsight Tools.zip, log into the BizNet Software portal (http://biznet.flexnetoperations.com) to download the file. You will find the file with the BizInsight download file. Extract the contents.

   b. Browse to the AppConfigTool folder and double-click the file named **AppConfigTool.exe**.

   c. Click on the Browse button.
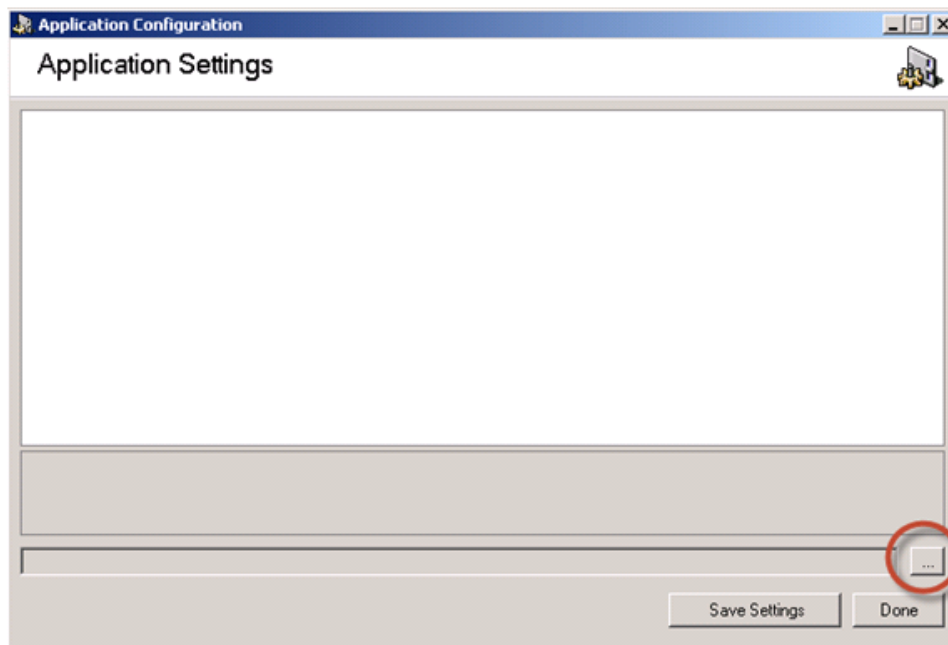
d. Browse to the bin5 subdirectory of the BizInsight installation directory and select the app.config file. Click **Open**.
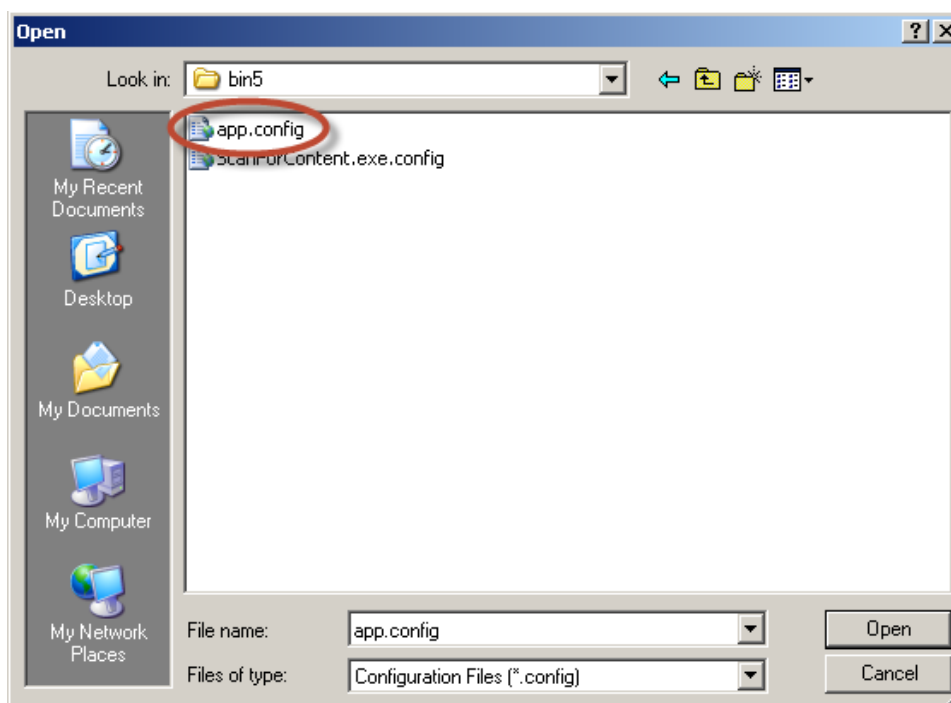
e. Locate the **MetaDatabaseType** entry and change the value to "**SQL**". This change "checks" the **Use SQL Server for MetaData** checkbox on the Configure SQL dialog.
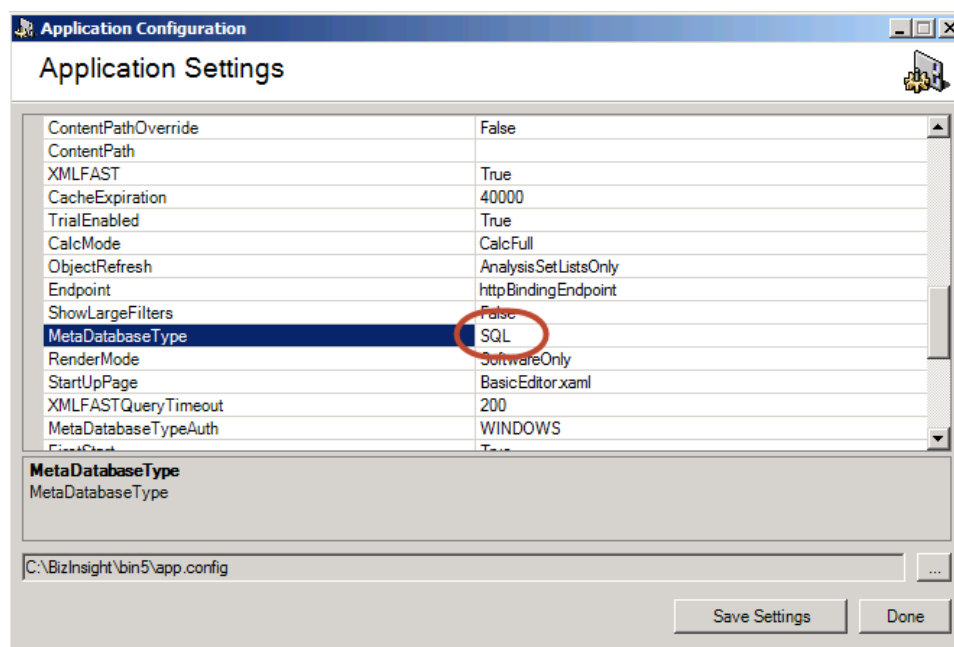
f. **OPTIONAL** If the users are using SQL authentication to connect to the SQL MetaData databases (BizInsight and BizInsightDB), locate the **MetaDatabaseTypeAuth** entry and change it to **SQL**. This change "checks" the **Use SQL Authentication** checkbox on the Configure SQL dialog.
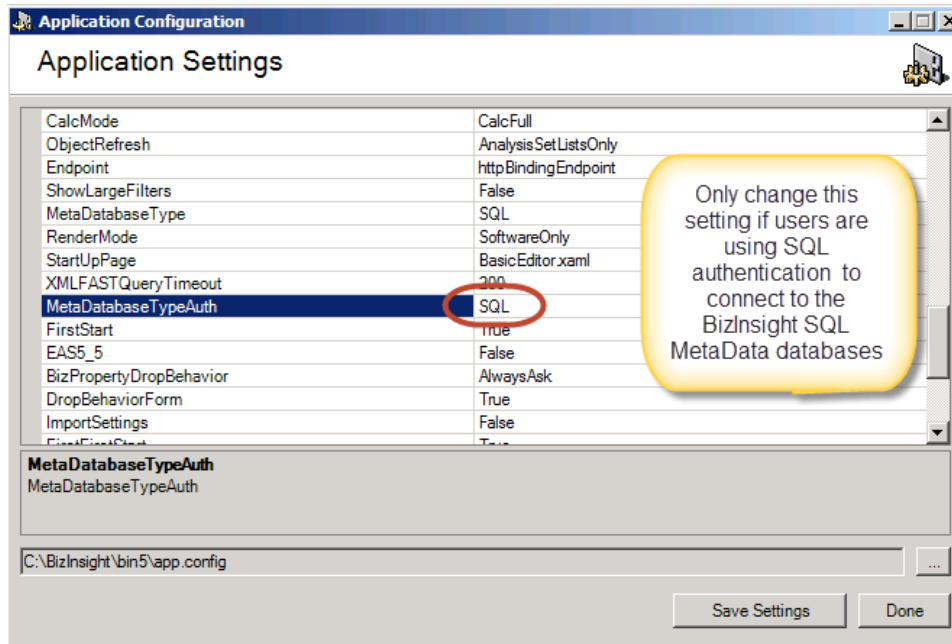
g. The next steps will walk you through setting the connection strings for the two SQL MetaData databases.

   i. Locate the **BizInsightMenuConnectionString** entry and paste one of the following text samples for the value depending on which method of authentication will be used to connect to the SQL MetaData databases.

<u>Windows Authentication</u>
```
Provider=SQLOLEDB;Data source=servername;Initial
Catalog=BizInsight;Integrated Security=SSPI;
```

<u>SQL Authentication</u>
```
Provider=SQLOLEDB;Data source=servername;Initial
Catalog=BizInsight;user id=
UserID;password=PASSWORD;
```
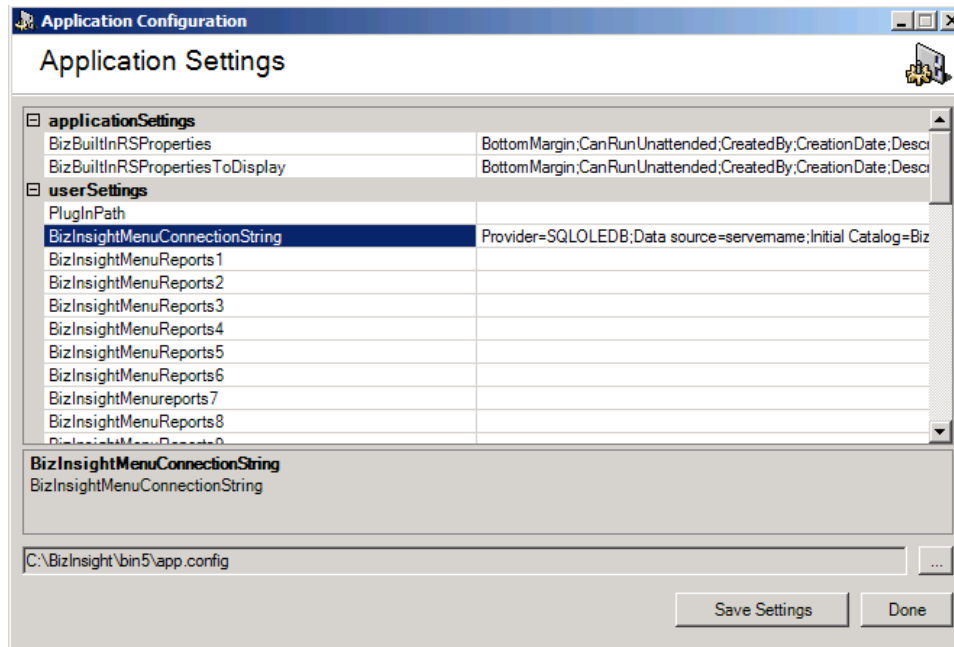
ii. Change the placeholder entries from these samples with the appropriate server name and, if using SQL authentication, a valid SQL user id and password.
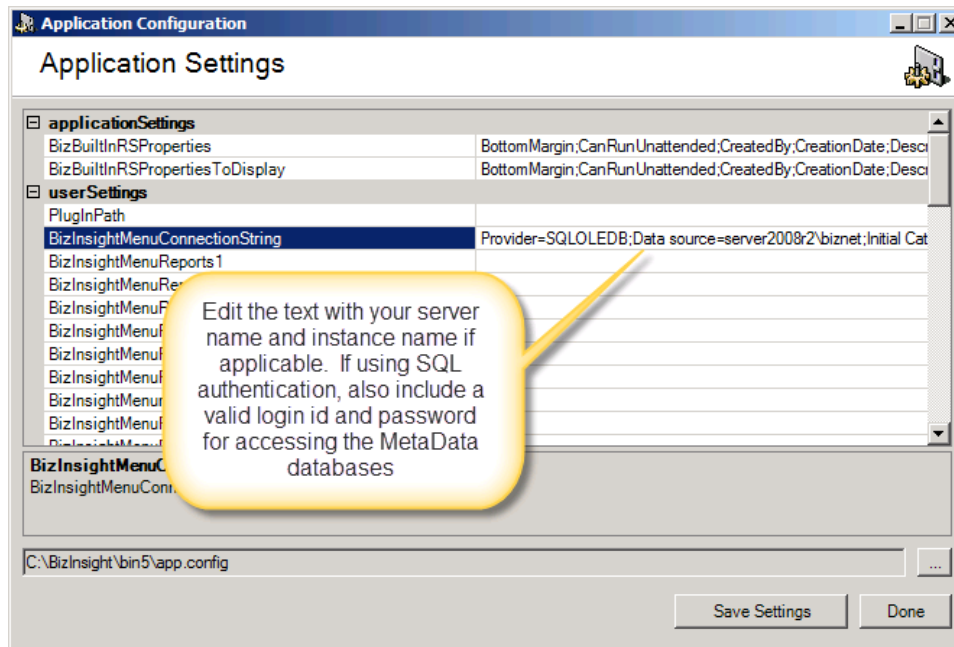
iii. Copy your edited connection string, locate the
BizInsightDataDBConnectionString entry and paste your copied
connection string for its value.

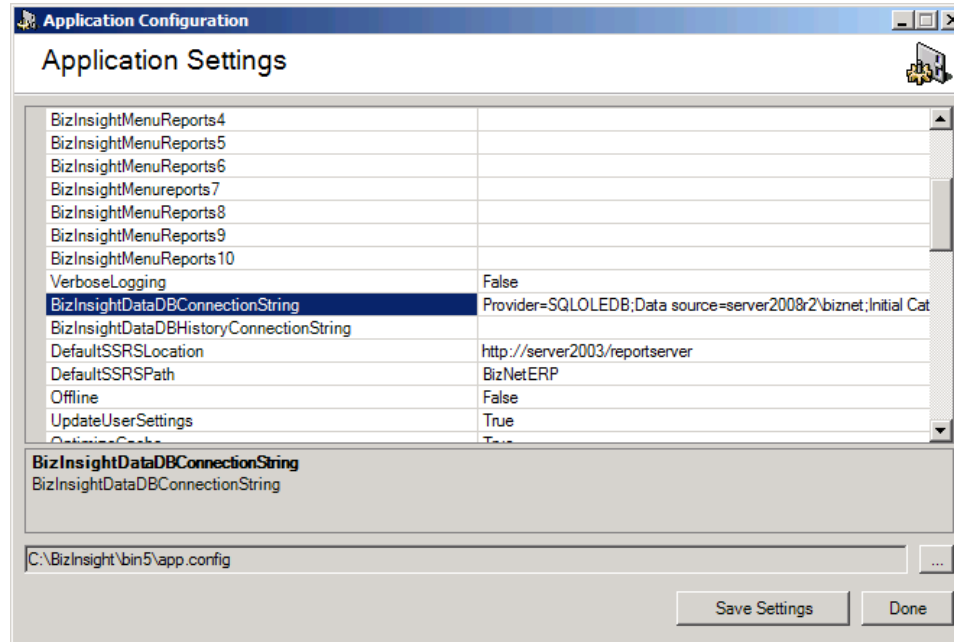iv. Edit the copied connection string to change the Initial Catalog value to
BizInsightDB.
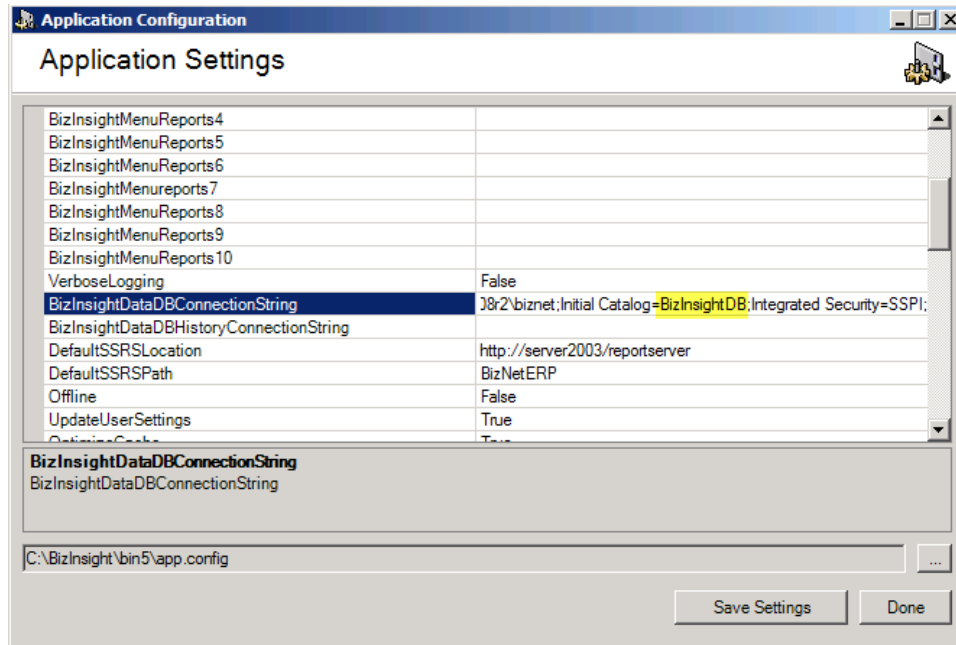
h. Locate the **DefaultSSRSLocation** entry and type in the Reporting Server URL
that you noted earlier from the Relevant Info dialog of the Content Installer.
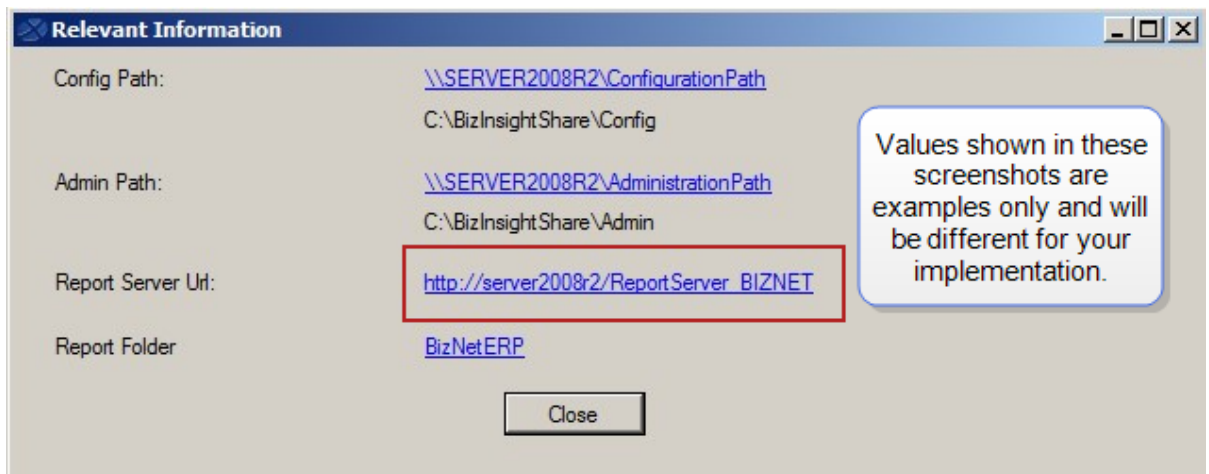
    i. Locate the **DefaultSSRSPath** entry and provide the Report Folder name.
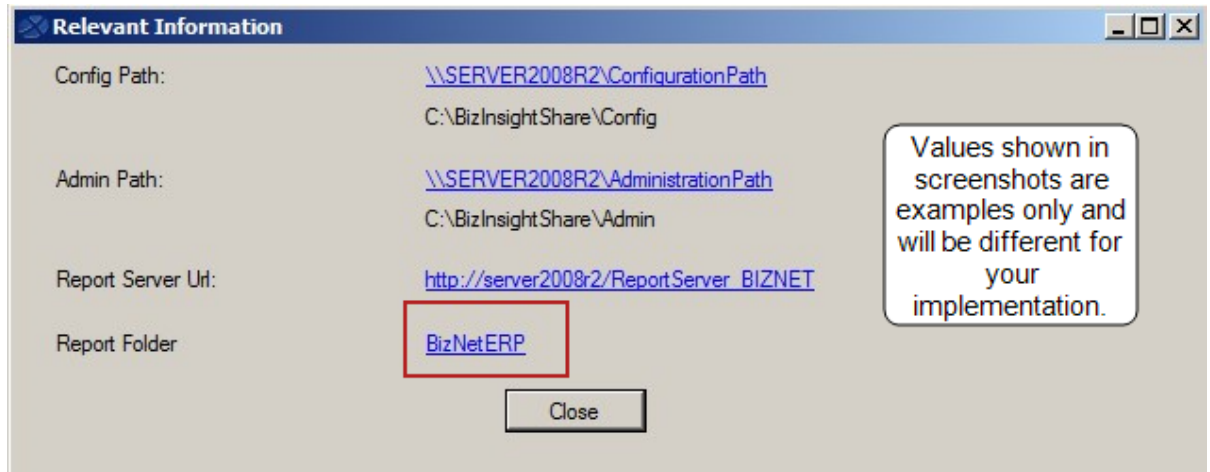
    j. Locate the **BizInsightMenuDB, BizInsightDataDB**, **BizInsightDataDBHistory** and the **ConfigPathV4** entries. Update each one to replace C:\BizInsight with the UNC path to the Config Path directory shown in the Relevant Info dialog. These entries all relate to the **Configuration Path** field of the Application Settings dialog.
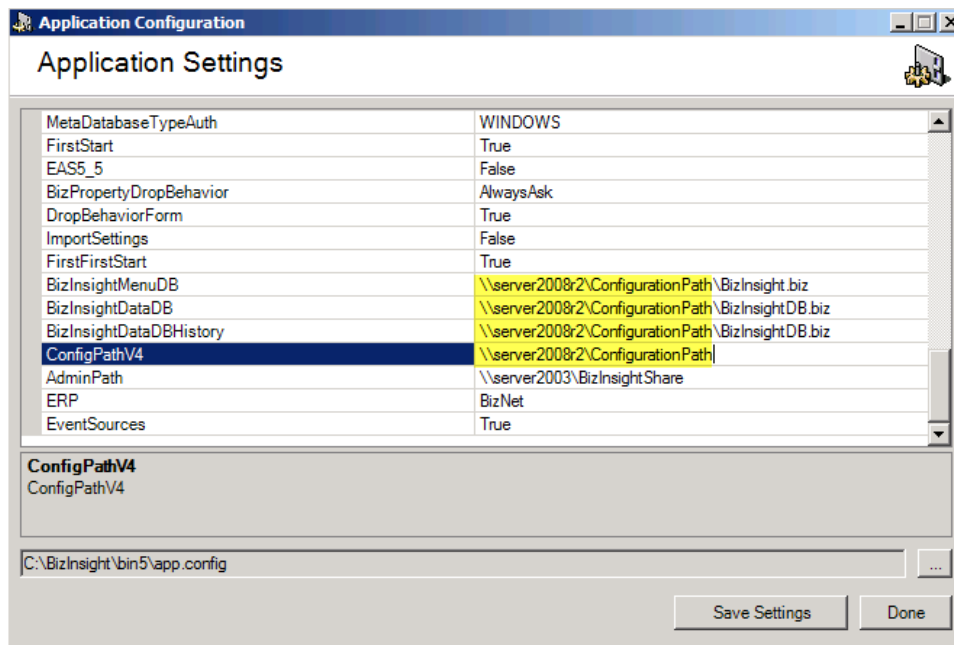
k. Locate the **AdminPath** entry and update its value to the Admin Path directory shown in the Relevant Info dialog. This entry sets the value for the **Administration Path** field of the Application Settings dialog.

l. Click the **Save Settings** button and click **Done** to close the AppConfigTool.

m. Copy this configured app.config file to the Configuration Path directory for future use as a settings import file for any future BizInsight installations.
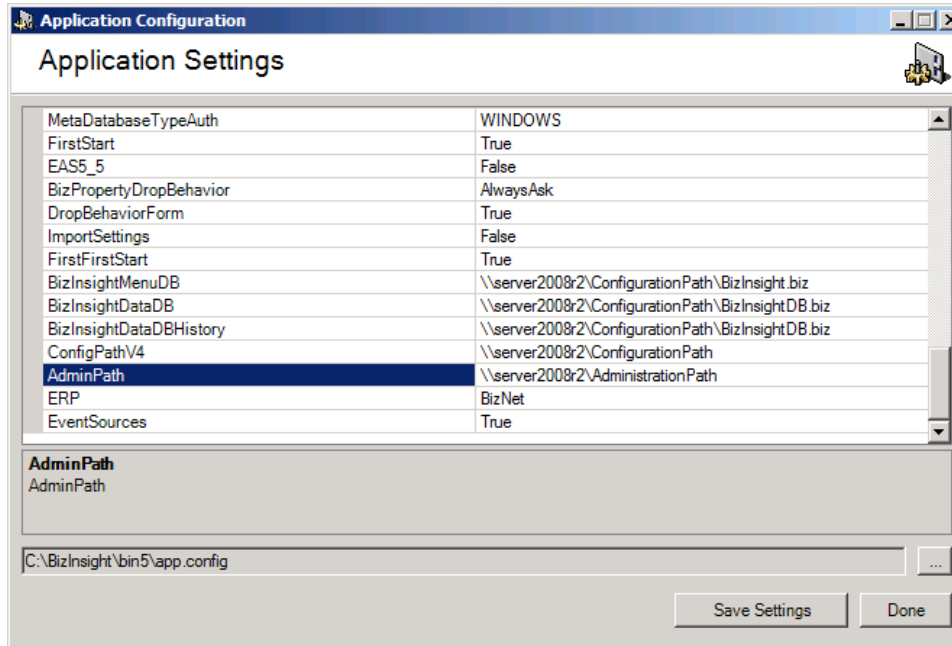
23. Copy all BizContent add-in files (.dll, .dna and .xll) from the Configuration Path to the local BizInsightMake sure to copy the BizAppSecurity.dll and CustomChannel.dll. These files will have been placed in the Configuration Path by the Content Installer. If they are not present, refer back to the Installation Guide and the section titled "Automatic Install".

24. The next steps will modify some key files that will be used by each user to register BizInsight for their profile.

   a. Browse to the reg5 subdirectory of the local BizInsight directory. Open the file named "**Excel*xxxx*_register_OnDemand.reg**" with Notepad. Add an Open*n* entry to this file for the Sungard content add-in.

      Following is an example of an edited copy of this .reg file with an entry added for the Sungard GL content add-in.

```
Windows Registry Editor Version 5.00

[HKEY_CURRENT_USER\Software\Microsoft\Office\12.0\Excel\Options]
"OPEN"="/A \"BizInsightXL.Foundation\""
"OPEN1"="/R \"C:\\BizInsight\\BizInsightSunGardEAS.xll\""
```
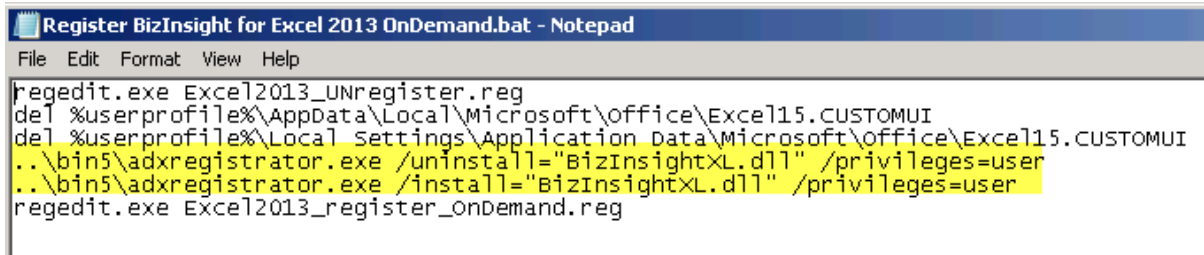
      IMPORTANT Adjust the above path to the BizInsight directory as necessary to match your environment. The example above uses the default installation directory for BizInsight but that may not be where BizInsight was installed on your server.

   b. Copy the following block into the .reg file if it is not already present:

```
[HKEY_CURRENT_
USER\SOFTWARE\Microsoft\Office\Excel\Addins\BizInsig
htXL.AddinModule]
"FriendlyName"="BizInsightXL"
"Description"=""
"CommandLineSafe"=dword:00000000
"ADXStartMode"="FIRSTSTART"
"LoadBehavior"=dword:00000010
```

   c. Save your changes to the file and close it.

   d. In the reg5 directory, locate the "**Register BizInsight for Excel *xxxx* OnDemand.bat**" and open it with Notepad.

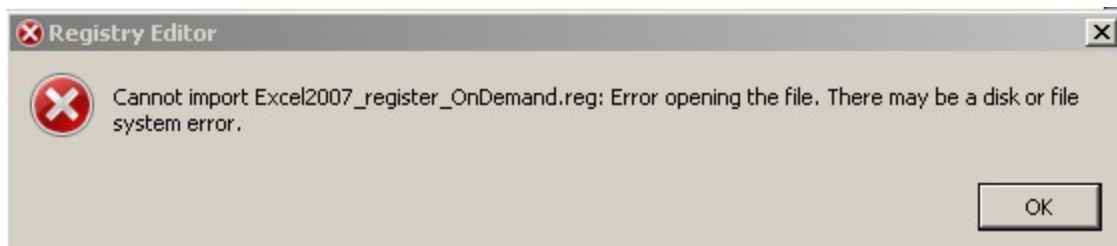e. Locate the two adxregistrator.exe lines:

```
Register BizInsight for Excel 2013 OnDemand.bat - Notepad
File  Edit  Format  View  Help
regedit.exe Excel2013_UNregister.reg
del %userprofile%\AppData\Local\Microsoft\Office\Excel15.CUSTOMUI
del %userprofile%\Local Settings\Application Data\Microsoft\Office\Excel15.CUSTOMUI
..\bin5\adxregistrator.exe /uninstall="BizInsightXL.dll" /privileges=user
..\bin5\adxregistrator.exe /install="BizInsightXL.dll" /privileges=user
regedit.exe Excel2013_register_OnDemand.reg
```

Replace the two adxregistrator.exe lines with the following single line:

```
regsvr32 /s "C:\BizInsight\bin5\adxloader.dll
```

f. Save your changes to the files and close it.

25. In the reg5 subdirectory, execute the "**Register BizInsight for Excel *xxxx* OnDemand.bat**" file to make sure it runs without error.

IMPORTANT If you get the following error when running the .bat file, you must edit the file named "Register BizInsight for Excel xxxx OnDemand.bat" to add the file directory path to each regedit.exe line.

```
Registry Editor                                          [x]

  (X)  Cannot import Excel2007_register_OnDemand.reg: Error opening the file. There may be a disk or file
       system error.

                                                   [  OK  ]
```

To edit the "Register BizInsight for Excel *xxxx* OnDemand.bat", open it with Notepad and add the file directory path to each regedit.exe entry in the file. For example:
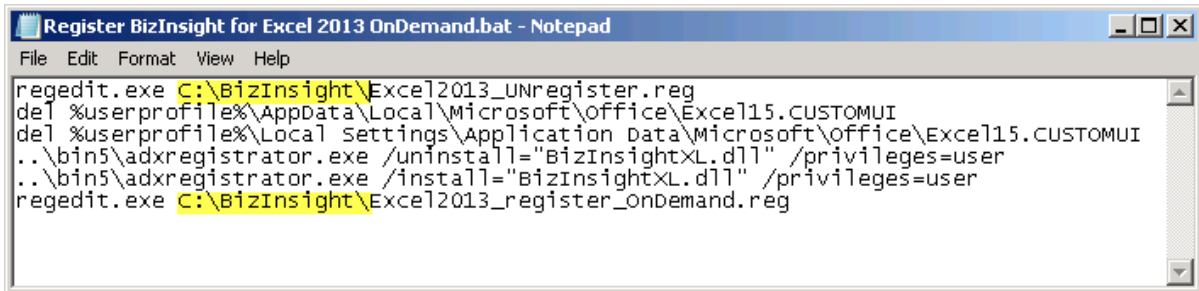
26. The following steps can be used to create a simple report with which to verify the installation.

    Note Your login id must be setup as a Designer user to be able to perform these steps. You may need to temporarily add your login as a Designer user using the Admin Tool to perform these steps. The Admin Tool can be accessed from the Content Installer interface on the server.

27. In separate cells in your Excel worksheet, type in a valid Company Code, Fiscal Year and Period.In cells B2, B3, B4, B5 and B6 enter values as follows:

   a. '1% (be sure to include the leading single apostrophe)

    b. A Fiscal Year for which data exists, ex. 2008

    c. A Fiscal Period for which data will exist, ex. 1

    d. A valid EAS company code, ex. PC1

    e. A valid Basis code
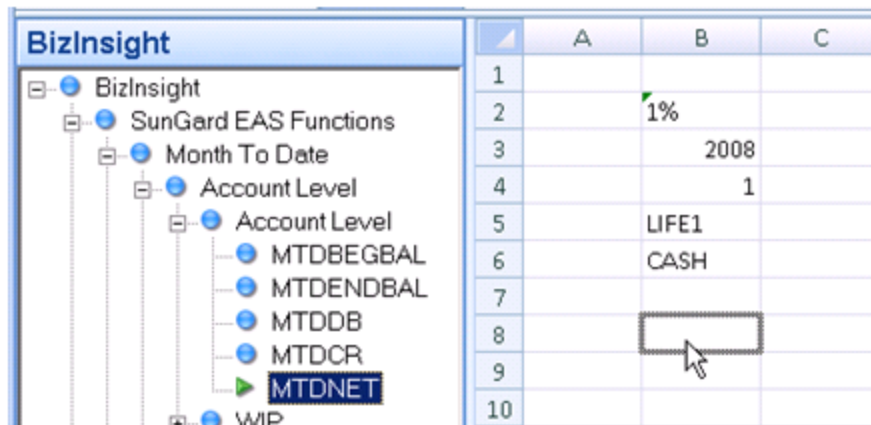
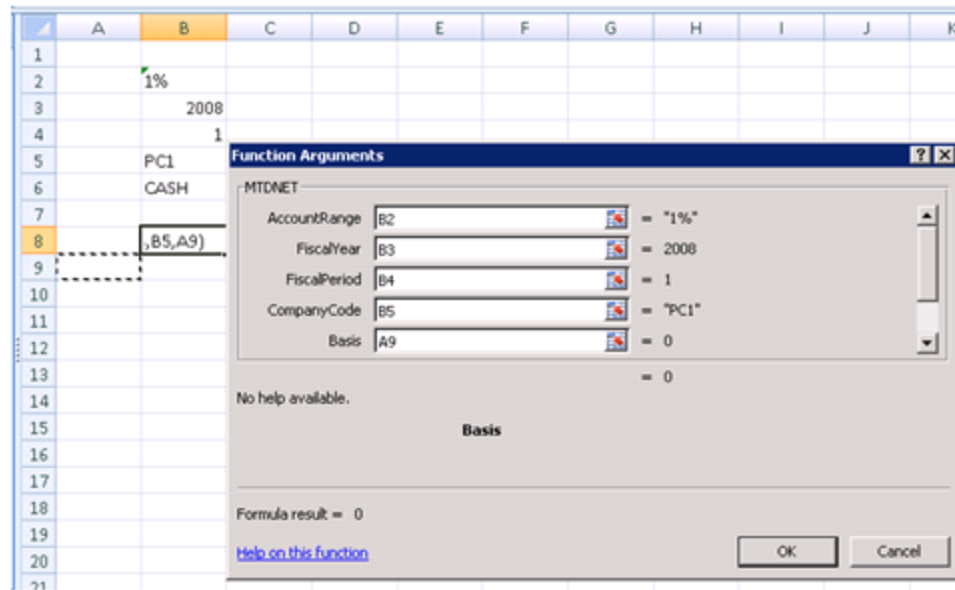28. In the Navigation Pane, expand *YourContentPackName* > **Functions** > **Month to Date**. Click on a **Net** function and drag it into a cell in the Excel worksheet.
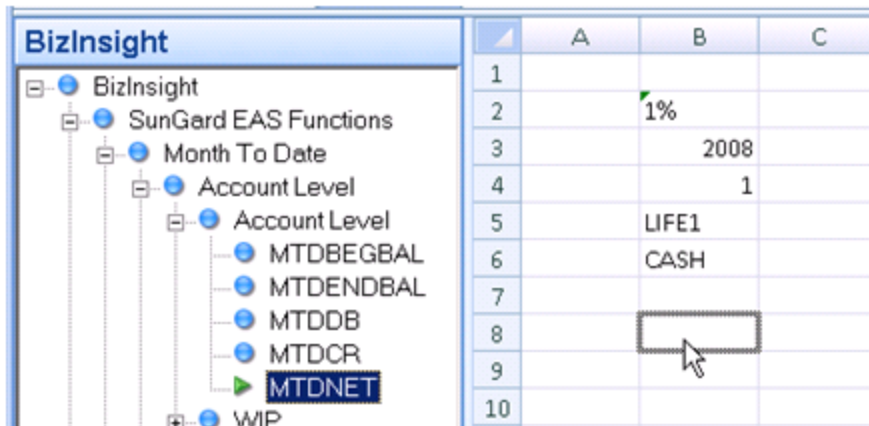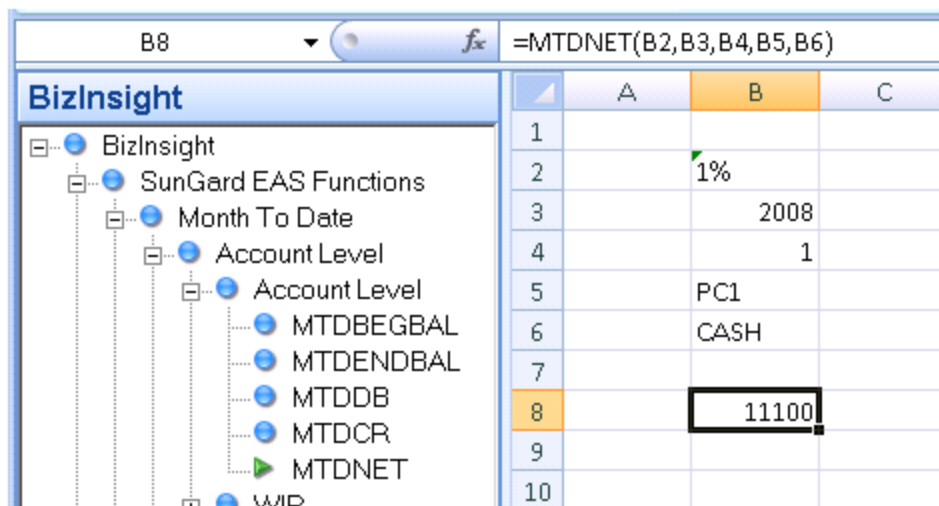

If the Function Arguments dialog does not automatically open, click on the Excel Insert Function button (*fx*)
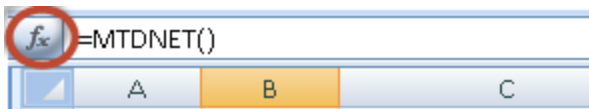
29. Click on the cells containing your input parameters and then click **OK**

.

30. If the function returns data or a zero, your installation and configuration are correct.

If you receive an error, click on the BizNet Assistant button on the BizInsight ribbon, choose the **Resolve Issues automatically** option and click **Next**. Once that process finishes, refresh the report again to see if the issue is resolved.

If the issue is still not resolved, you can contact BizNet Software Support using the BizNet

Assistant's **Contact Support** option. If it is after hours or you want to continue to try to troubleshoot, you can get to the BizNet knowledge base by choosing the **Online documentation** option in BizNet Assistant. Once at the online documentation site, click on the link to the BizNet knowledge base.
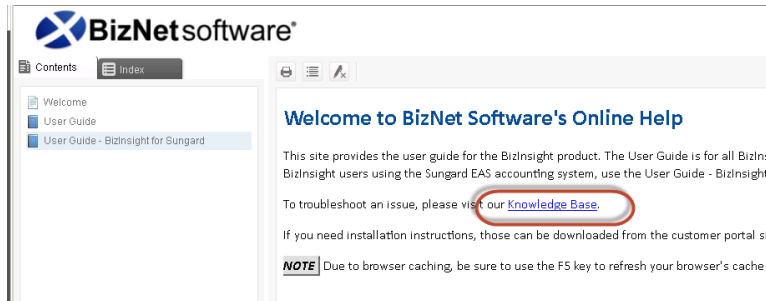

Once the installation is confirmed, save this report to a shared directory to use for verifying the installations of Viewer and Drilldown users. These users cannot add functions to reports so you will need an existing report that you can refresh to confirm there are no errors. To verify the installations for Viewer and Drilldown users, install and configure , open this report, right-click and choose Refresh.

31. Once the installation is tested and verified, log in to the Citrix/Terminal Services server as an end user and execute the "**Register BizInsight for Excel *xxxx* OnDemand.bat**" file.

32. While logged in as the end user, start Excel and click on the **Application Settings** to verify the fields are populated with the correct values. Click on the **About** button and verify that the user has the correct permissions assigned to them (Designer, Viewer or DrillDown). If the **About** dialog indicates that the user has no access rights, their login id needs to be added to BizInsight security. See "Assign BizInsight Security to Users" on page 33 for instructions on how to assign users BizInsight security.

33. Verify that the installation is functional for this end user.

34. Once the installation has been verified to function for one of the BizInsight users, all other BizInsight users will need to log in and execute the "**Register BizInsight for Excel *xxxx* OnDemand.bat**" file in the reg5 subdirectory. This step can be automated for the end users with a login script or one of the methods described on Page 1.

Tip The "/s" switch can be added to the Register BizInsightfor Excel *xxxx* OnDemand.bat command lines to run it silently. BizNet Software recommends adding this switch after testing and confirming that the file is functioning correctly as the /s switch can hide errors that may be occurring when the file is executed.

IMPORTANT The /s switch will not suppress User Account Control ("UAC") prompts.
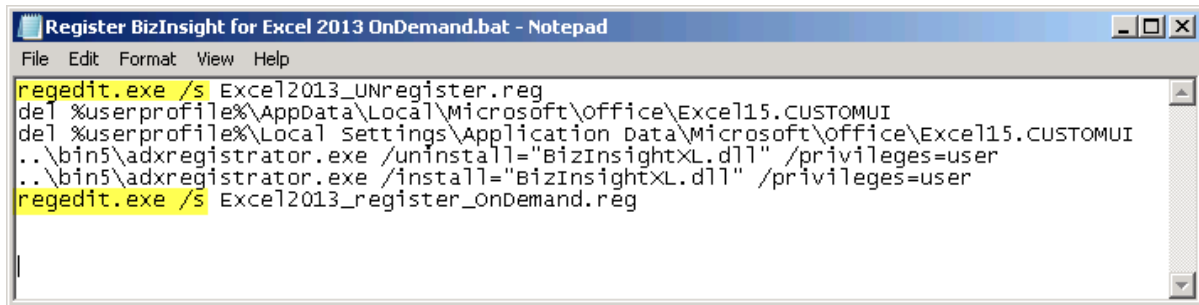
The following table lists the typical things that make an application unusable on a terminal server (Citrix, Terminal Services) and which of these items apply to BizInsight.

Issue	BizInsight Manifestation
The application stores user data/config in HKEY_LOCAL_MACHINE	BizInsight uses the HKEY_CURRENT_USER hive exclusively which requires that each BizInsight user runs a registry update file that loads the requisite registry entries into the HKEY_CURRENT_USER hive.
Requires a unique IP address per user	N/A
Requires a license dongle connected to the connected machine.	N/A
Problems with redirected drives (C drive is mapped to for example m:)	N/A
The Application overwrites important system files (drivers, dll's etc)	N/A

| Issue	BizInsight Manifestation
Requires unsupported core files	You must have a valid Volume License Copy of Microsoft Office Excel 2003, 2007 or 2010 to run our add-in. This requirement is the responsibility of the entity implementing BizInsight. Our software does not validate the Microsoft Office Excel licensing. A Click-to-Run implementation of Office is not supported.
The application is in conflict with other applications (dll's, drivers, etc).	Application conflicts are a fact of life, and Excel is no different. Since our application is hosted by EXCEL.EXE, other add-ins may conflict or causes issues with BizInsight. If you frequently find that the add-in is disabled, we recommended adding the registry keys to activate the add-in on startup of EXCEL.EXE. This approach has been tested and does not cause any ill effects on the system or the registry.
The application can require extra permissions (write in registry / file system)	Write permissions to the registry are only required when running the registry update batch file.
Extensive CPU or memory usage (This can slow down a terminal server with only a few users logged in)	The in memory data caching model is per user. Therefore, it is recommended that 2 GB of RAM be available for each simultaneous client connection.

Appendices

Assign BizInsight Security to Users

Each BizInsight user's Windows account name must be added to a .users file in the admin shared directory in order for that user to perform any BizInsight action. You will use the License Administration Tool to perform these steps.

To assign BizInsight security to your users, do the following:

1. On the server, double-click any content installer desktop icon. If the content installers were installed without desktop icons, browse to the installation directory and double-click the file named "BizNet Content Installer.exe". If the content installer was uninstalled, reinstall it.
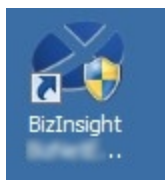
    If you do not want to reinstall the content installer, see "Manual Steps" on page 39.
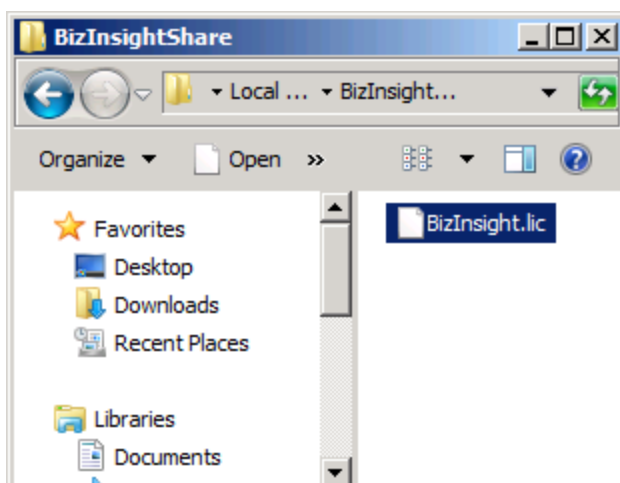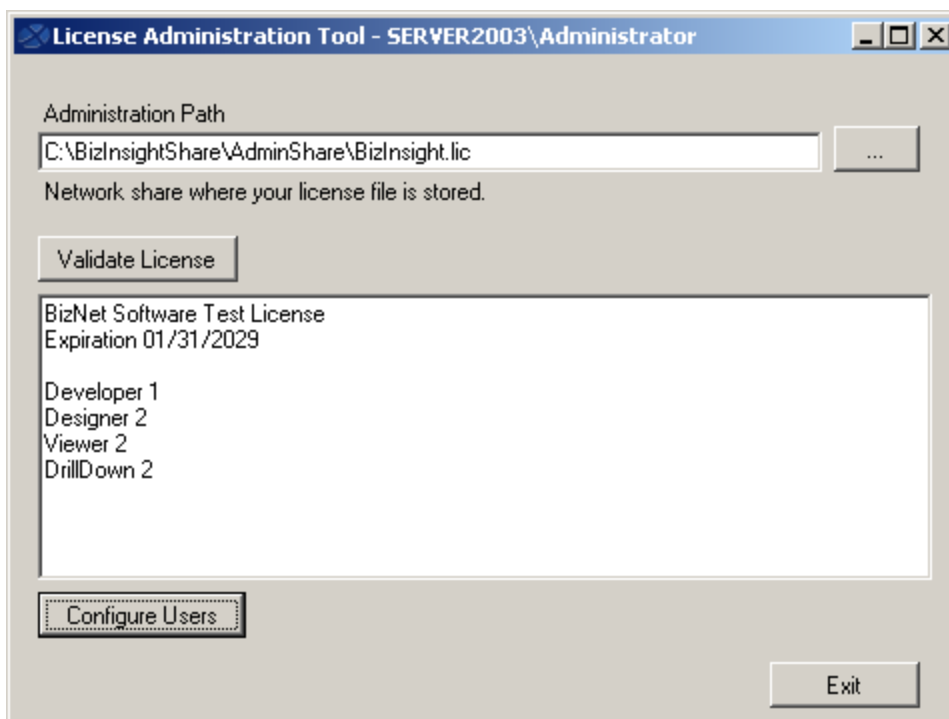
2. Click on the **Admin Tool** button.
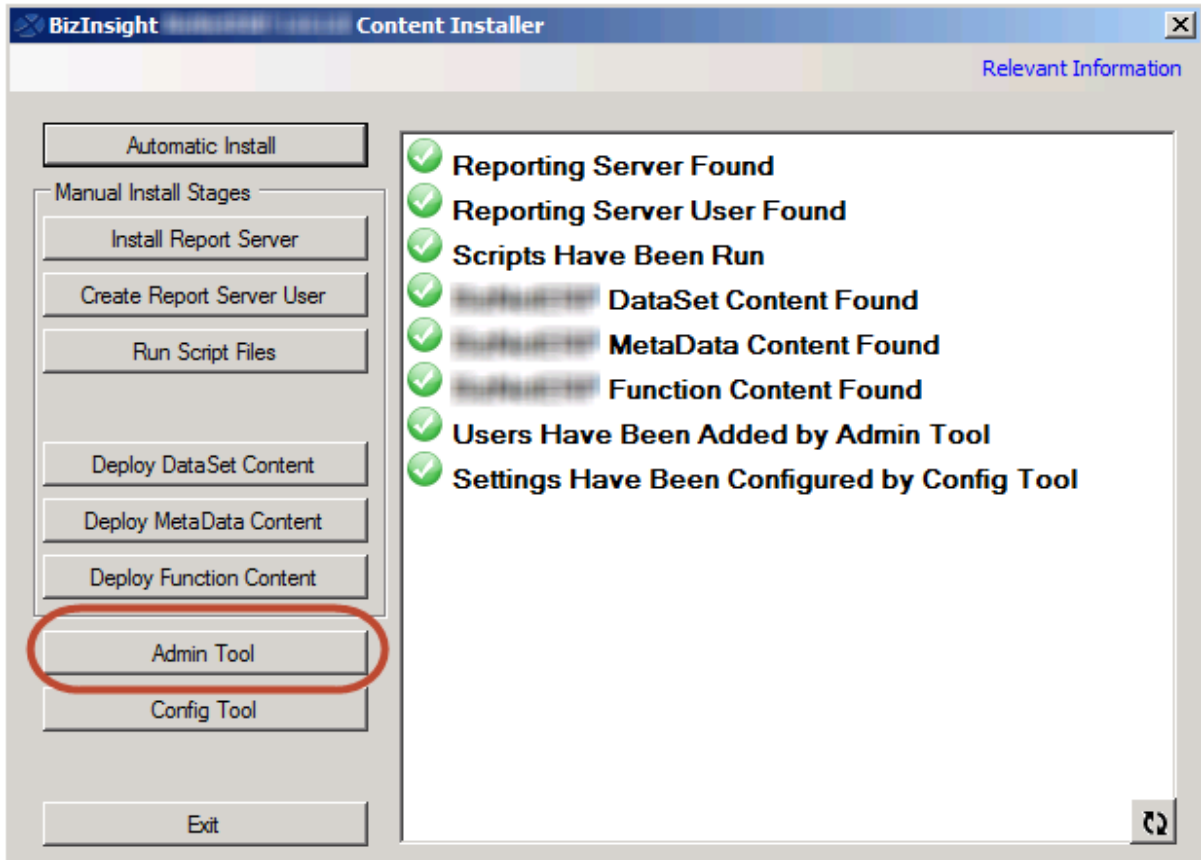
3. Click on the ellipses and browse to the admin share folder of your BizInsight shared directory.
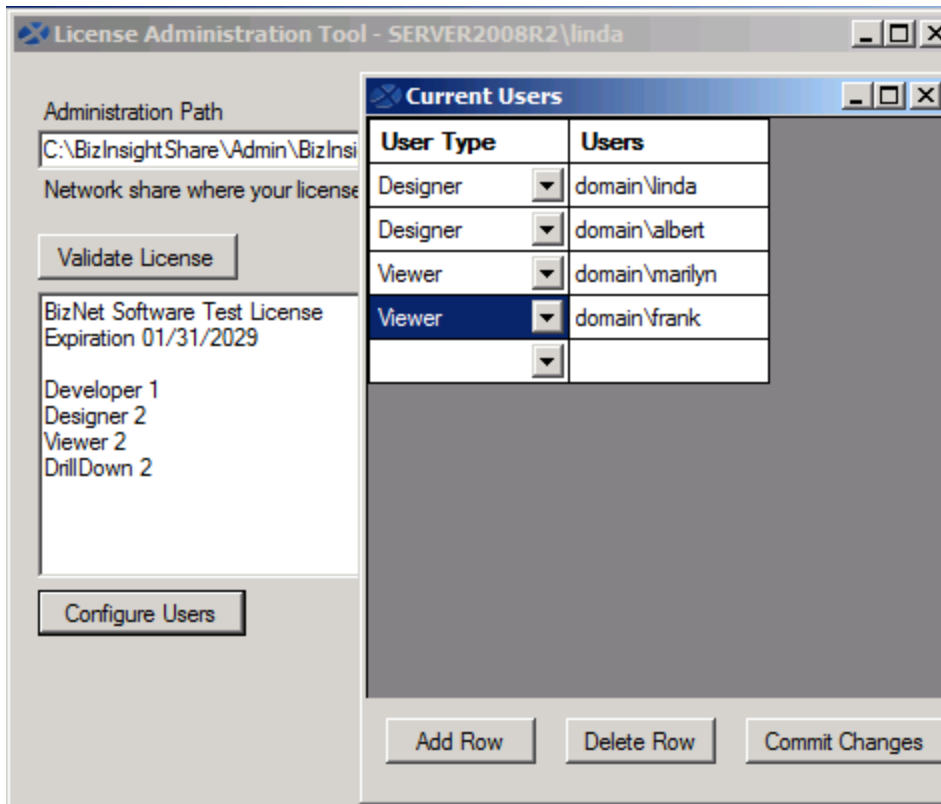
4. Select your BizInsight license file and click Open.

5. Click on the **Validate License** button to check how many licenses you currently have. Your current license count will be displayed.

6. Click on the **Configure Users** button. The **Current Users** dialog will open.

7. You will now add your new BizInsight user and assign them a user type. Click on the **User Type** drop down and select the desired user type. If you want your user to be a Designer, choose Designer from the drop down list.
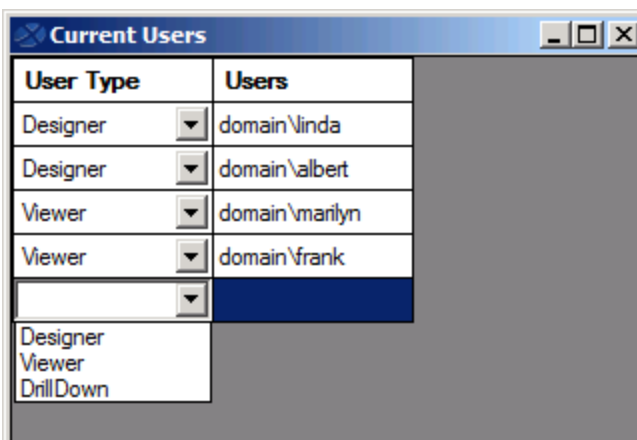
8. Type the user's name in the **Users** field in the format of domain\username.

    WARNING Do **not** add your own login using the Admin Tool unless you know for sure that you have another login available with sysadmin rights to the SQL Server instance. Early versions of the content installer (pre version 1.6) will remove existing permissions for users, including those with sysadmin rights. If uncertain, skip this step and confirm sysadmin access will not be lost then return to complete the Admin Tool step.
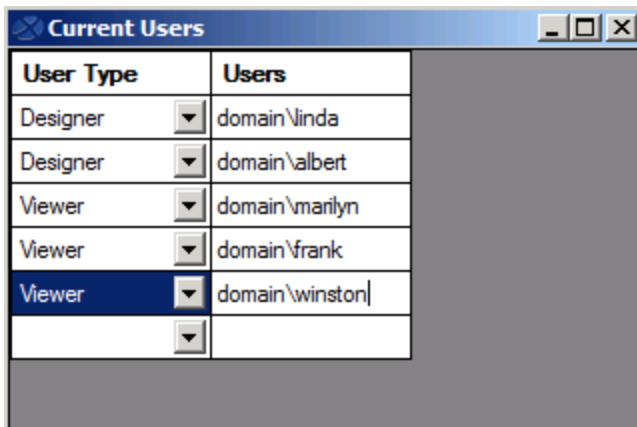
9. Click on the **Commit Changes** button when finished. You will be presented with a message asking if you want to grant the user additional security permissions. Click **Yes**.
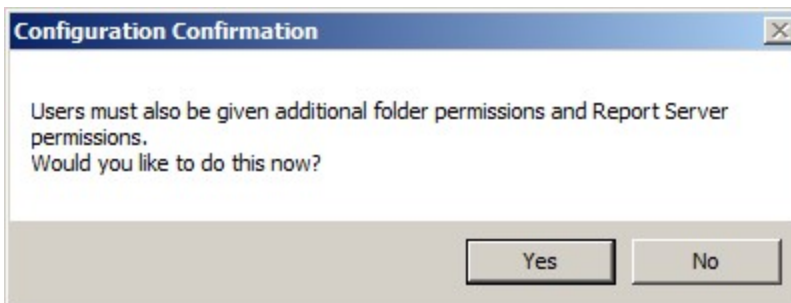

    If you have entered more names for a particular user type than you have licenses, you will get an error similar to the following.

You will be returned to the **Current Users** dialog where you can remove a row so that you comply with the number of licenses your company purchased. Select the row to remove and click the **Delete Row** button.

To purchase additional licenses, use the BizNet Assistant button to open a support ticket indicating that you need to purchase additional licenses.
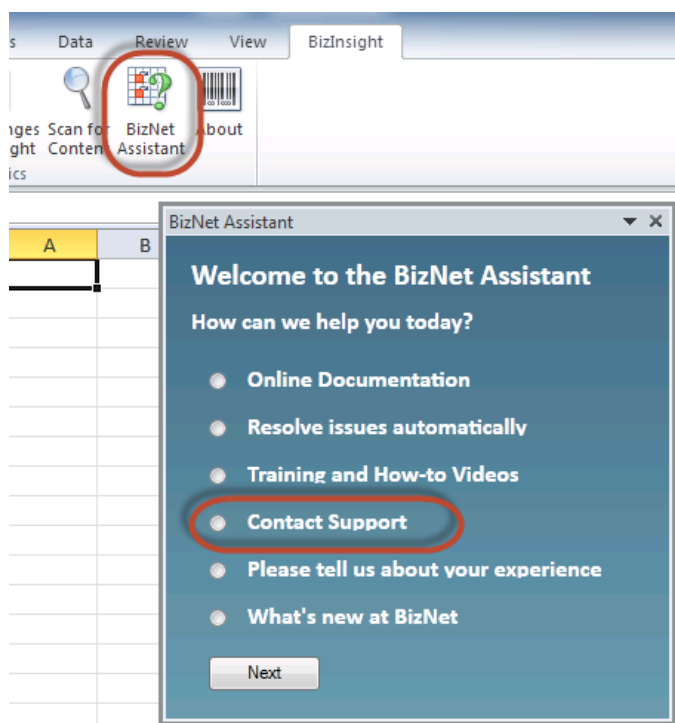

When you receive your new license, move your old license from the Administration Path shared directory and save the new license there. Do not rename the old license and leave it in the Administration Path; it must be removed from the directory in order for the new license count to take effect.

Manual Steps

1. In the Admin shared directory, open the .users file with Notepad that corresponds with the BizInsight permissions the user should have. For example, if the user should have Designer permissions, you would open the Designer.users file.

    Tip If you are not sure where to find the Admin shared directory, go to an existing user's workstation, open Excel and click on the **Application Settings** button on the BizInsight ribbon and copy the path provided for the Administration Path.

2. In the .users file, add the Windows account name of the BizInsight user. For more information on the different user types, refer to the User Types section of the User Guide.
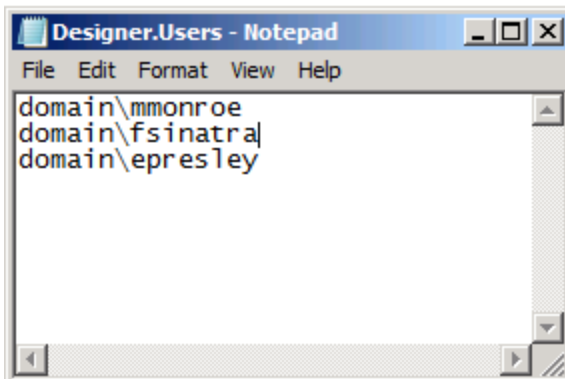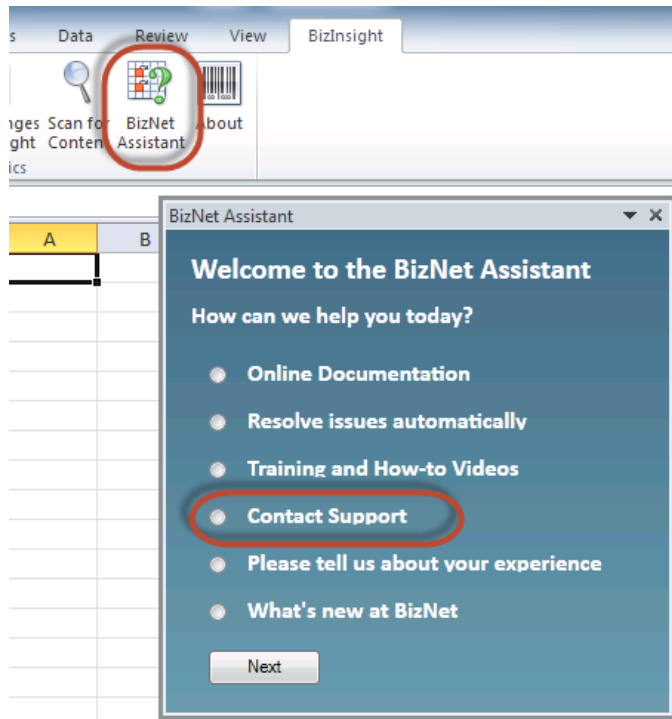

3. Save and close the file.

    IMPORTANT As you add Windows account names to the .users files, add only as many as you have licenses. If you add more Windows account names than you have licenses or you have an extra line return in the file, users will get an error message similar to the following when they open Excel after BizInsight is installed.
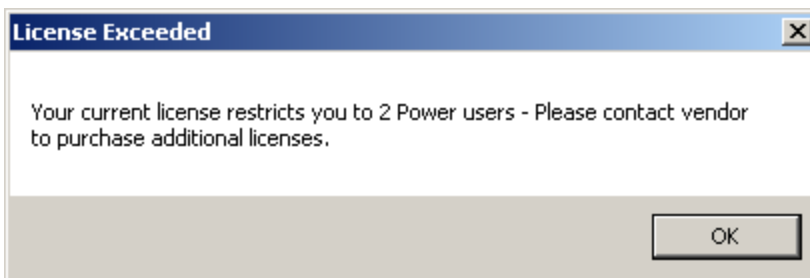
If you are not sure how many licenses you have, open the .lic file that is in the Admin shared directory with Notepad and check how many licenses are shown for the user type you are adding.

To purchase additional licenses, use the BizNet Assistant button to open a support ticket indicating that you need to purchase additional licenses.

When you receive your new license, move your old license from the Administration Path shared directory and save the new license there. Do not rename the old license and leave it in the Administration Path; it must be removed from the directory in order for the new license count to take effect.