

S&P Capital IQ Office Plug-in v9.4x Technical Guide

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Introduction

The S&P Capital IQ Office Plug-in consists of add-ins for Microsoft Excel, PowerPoint, and Word. It allows users to download public company financials, equity and fixed income pricing, company information, and macroeconomic data within Microsoft Excel. It can assist users in building financial models, creating comp sets, charting securities pricing, and searching within company filings.

Please note that the Word plug-in in this release is currently in beta. S&P Capital IQ values your feedback; please forward any comments or concerns to your account manager or Client Support at 1-888-806-5541.

The purpose of this document is to provide IT professionals with the necessary information to successfully deploy and support the S&P Capital IQ Office Plug-in.

Licensing and Access Provisioning

Access to the S&P Capital IQ platform, including the Office Plug-in, is licensed on a per-named-user basis. Each user is assigned an S&P Capital IQ account and password for his individual use, and those credentials are required to access any S&P Capital IQ application, including the Office Plug-in. Access to functionality and data sets within the application is determined by the entitlements configured for each user. Users are contractually prohibited from sharing accounts with others, and a system called Single Machine Login is used to detect violations of this policy.

Upon first launch, the Office Plug-in will prompt the user for his S&P Capital IQ credentials. These credentials will be saved in the user profile for future use. Credentials can also be programmatically set within users' profiles to implement seamless sign-on solutions (please see [Office Plug-in Settings](#) section for more information). Multiple Windows users using the same PC will each be prompted for credentials separately, and those credentials will be stored in each user's individual Windows profile.

Clients are permitted to install the Office Plug-in on any number of computers for use by licensed users, and are permitted to redistribute the Office Plug-in installation binaries internally to facilitate such installations. Please note that each user can use the Office Plug-in on only a single computer at a time.

There is no additional cost associated with upgrading to new versions of the Office Plug-in.

Path Definitions

The following file system path abbreviations are referenced throughout this document.

Name	Description
[ProgramFiles]	<p>When the architectures of Windows and Office are both 32-bit or both 64-bit, the value of the %PROGRAMFILES% environment variable (typically "C:\Program Files").</p> <p>When 64-bit Windows is used with 32-bit Office, the value of the %PROGRAMFILES(x86)% environment variable (typically "C:\Program Files (x86)").</p>
[UserProfile]	The value of the %USERPROFILE% environment variable (typically "C:\Documents and Settings\ <i>username</i> " on Windows XP/2003 and earlier and "C:\Users\ <i>username</i> " on Windows Vista/2008 and later).
[AppData]	"[UserProfile]\Application Data" on Windows XP/2003 and earlier, and "[UserProfile]\AppData\Roaming" on Windows Vista/2008 and later.
[LocalAppData]	"[UserProfile]\Local Settings\Application Data" on Windows XP/2003 and earlier, and "[UserProfile]\AppData\Local" on Windows Vista/2008 and later.
[WinDir]	The value of the %WINDIR% environment variable (typically "C:\Windows").
[InstallDir]	The Office Plug-in path specified during installation (defaults to "[ProgramFiles]\Capital IQ\Office Plug-in").

Supported Platforms

The following platforms are supported by the Office Plug-in:

- Windows Versions: 7, 8, 8.1, 10 (32-bit and 64-bit editions); Server 2008 R2 (64-bit editions)
- Office Versions: 2007 (32-bit edition); 2010, 2013, 2016 (32-bit and 64-bit editions), Office 365 (2013 & 2016, excluding web based and MS App Store installs)

Note: Windows 10 and Office 2016 (Traditional and O365 editions) are only supported with CIQ plug-in v9.1 and above.

Recommended Hardware Configuration

The following hardware configuration is recommended for the Office Plug-in:

- CPU: 2 gigahertz (GHz) or faster x86 – or x64 processor
- RAM: 4 gigabytes (GB) or more RAM
- Disk Space: 10 gigabytes (GB) or more available
- Display: Graphics hardware acceleration requires a DirectX10 graphics card and a 1024x576 or higher resolution monitor

Installing the Office Plug-in

Installer Types

Two Office Plug-in installers are available:

- The **EXE installer** is an interactive setup wizard, which is recommended for most clients.
- The **MSI installer** is intended for clients who perform automated deployments of the Office Plug-in (please see [Automated Deployments](#) below).

Prerequisites

Core Functionality

Both the EXE and MSI installers check for the following prerequisites. Generally, any missing prerequisite will cause the installation to immediately fail. The only exception is that the EXE installer will attempt to download and install the .NET Framework if it is missing.

- Microsoft .NET Framework 4.5.2 or above
- Office 2007 Service Pack 3 (for Office 2007 users only)
- Office 2010 Service Pack 2 (for Office 2010 users only)
- Office 2013 (for Office 2013 users only)
- Office 2016 (for Office 2016 users only)

Automated Deployments

Many S&P Capital IQ clients deploy software using package management systems such as Microsoft SCCM, Altiris and Marimba. S&P Capital IQ supports such deployments provided they are performed within the following guidelines:

- **The MSI installer must be used for all automated deployments.** S&P Capital IQ does not support repackaging of the EXE installer for automated deployments.
- **The bitness of the MSI installer used must match the bitness of Office.** It need not match the bitness of the Windows installation.
- **Prerequisites must be deployed separately** (please see [Prerequisites](#) above).
- **Word, Excel and PowerPoint must be closed** for the installation to succeed.
- **Customization of the MSI package is generally not supported;** the only exception is that customization of the properties listed under [Installation Options](#) below is acceptable. S&P Capital IQ recommends that the original MSI package never be modified; it is preferable to create a transform (MST) and apply it to the

package at the time of installation. Changing other MSI properties (ProductCode, UpgradeCode, ALLUSERS, etc.) is not supported and may cause undesirable behavior.

Installation Options

The Office Plug-in installer offers the following installation options:

EXE Checkbox	MSI Property	Checkbox / Property Value	Description
Install the Office Plug-in for all users	IQCURRENTUSER	Checked / 0 (default)	The Office Plug-in will be enabled for the user running the installer, and Active Setup will be used to enable the Office Plug-in for each additional user who logs onto the PC.
		Unchecked / 1	The Office Plug-in will be enabled for the user running the installer. It will not be visible to other users who log onto the PC unless they enable it manually using the Plug-in Manager.
Enable Excel Features	IQEXCEL	Checked / excel (default)	The Office Plug-in's Excel features will be enabled for the user running the installer. If the "all users" option above is checked, the Excel features will also be enabled for each user by Active Setup.
		Unchecked / <i>blank</i>	The Excel component will be disabled by default. It will not be visible unless enabled manually using the Plug-in Manager.
Enable PowerPoint Features	IQPOWERPOINT	Checked / powerpoint (default)	The Office Plug-in's PowerPoint features will be enabled for the user running the installer. If the "all users" option above is

			checked, the PowerPoint features will also be enabled for each user by Active Setup.
		Unchecked / <i>blank</i>	The PowerPoint component will be disabled by default. It will not be visible unless enabled manually using the Plug-in Manager.
Enable Word Features	IQWORD	Checked / word (default)	The Office Plug-in's Word features will be enabled for the user running the installer. If the "all users" option above is checked, the Word features will also be enabled for each user by Active Setup.
		Unchecked / <i>blank</i>	The Word component will be disabled by default. It will not be visible unless enabled manually using the Plug-in Manager.

Please note that the entire Office Plug-in, as well as the individual Excel, PowerPoint and Word components, can be toggled on or off on a per-user basis after the installation by using the Plug-in Manager, regardless of the defaults chosen during installation (please see [Plug-in Manager](#) section for more information).

Upgrade Considerations

Cleaning Up Old Packages

The Office Plug-in 9.4x installer will automatically uninstall previous versions of the Office Plug-in, with the following conditions:

- **Only official S&P Capital IQ packages are removed by the installer.** Repackaged installations, or packages modified in an unsupported manner, will need to be removed separately. Please see [Automated Deployments](#) under the [Installing the Office Plug-in](#) section for more information.
- Office Plug-in versions 5.0 through 6.3 will be automatically uninstalled during the 9.4x installation **only if the previous package was installed for all users.**
- Office Plug-in versions 6.4 and higher will be automatically uninstalled during the 9.4x installation.

Settings Upgrade

The Office Plug-in 9.4x installer will preserve settings customizations within older installs **only if an in-place upgrade is performed** i.e. 9.4x is installed over the existing older plug-in. Removing the older plug-in prior to the 9.4x install may result in loss of custom settings.

PresCenter Links Upgrade

The PresCenter Linking functionality was overhauled in Office Plug-in 8.6. When files with PresCenter links created in versions 8.5x and earlier are opened, the user will be prompted to upgrade those links. Please note that upgraded links are not backwards compatible. As such, it is recommended that users of PresCenter Linking who regularly exchange linked documents use the same version of the Office Plug-in.

Changes in Supported Platforms

- As of Office Plug-in 8.7, Office 2003 is no longer supported.
- As of Office Plug-in 7.0, Office XP and Windows 2000 are no longer supported.

Architecture and Components

Application Files and Registry Keys

Office Plug-in files reside in the following locations:

Location	Description
[InstallDir]	Application files
.NET Global Assembly Cache (e.g. [WinDir]\Microsoft.NET\Assembly)	Application files
[LocalAppData]\Software\Capital IQ	User-specific metadata, logs, and templates downloaded using the “Get/Update Templates” feature
[AppData]\Software\Capital IQ	User-specific settings
[LocalAppData]\Temp	Temporary files

Office Plug-in settings reside in the following registry keys:

Location	Description
HKEY_LOCAL_MACHINE\Software\Capital IQ	System-wide application settings (when Windows and Office are both 32-bit or both 64-bit)
HKEY_LOCAL_MACHINE\Software\Wow6432Node\Capital IQ	System-wide application settings (when 64-bit Windows is used with 32-bit Office)
HKEY_CURRENT_USER\Software\Capital IQ\Office Plug-in	User-specific application settings
HKEY_LOCAL_MACHINE\Software\Classes (HKEY_CLASSES_ROOT)	Registration information for the application’s COM classes, interfaces and type libraries

Application Architecture

The Office Plug-in is comprised of the following major components:

- **COM shim.** The COM shim resides in “[InstallDir]\CIQAddin.dll”. It is a Visual C++ DLL that exposes a COM-creatable class, CIQAddin.Connect, that is responsible for loading the .NET Common Language Runtime and the Office Plug-in’s COM components. The shim is registered as a COM add-in for each Office application (Excel, PowerPoint and Word) in “HKEY_CURRENT_USER\Software\Microsoft\Office\(*Office application name*)\Addins” by the Plug-in Manager (please see the [Plug-in Manager](#) section). A second COM-creatable class, EmpowerE.AddinModule, is loaded into PowerPoint for users of Advanced PresCenter Features.
- **COM components.** The Office Plug-in’s COM components provide most of the application’s functionality. These components are implemented in .NET assemblies located in the Global Assembly Cache, as well as in Visual C++ DLLs located in [InstallDir].
- **Automation add-in.** The automation add-in resides in “[InstallDir]\CIQFunctions.xll”. It is a Visual C++ DLL that exposes a COM-creatable class, **CIQFunctions.udf**, that provides the functions (CIQ, CIQAVG, CIQGETDATE, etc.) used in S&P Capital IQ formulas. The automation add-in is registered as an Excel add-in in “HKEY_CURRENT_USER\Software\Microsoft\Office*version number*\Excel\Options” by the Plug-in Manager (please see the [Plug-in Manager](#) section).

Office Plug-in Settings

Authentication and Connectivity Settings

Users can configure authentication and connectivity settings by clicking the Settings button on the S&P Capital IQ Office ribbon. These settings are stored in the user-side registry hive in the location “HKEY_CURRENT_USER\Software\Capital IQ\Office Plug-in”. If desired, client IT departments can programmatically populate these values through manual registry manipulation or by using the Plug-in Manager (please see the [Plug-in Manager](#) section).

Please note that if you choose to programmatically populate user credentials, it may be advantageous to utilize S&P Capital IQ’s company-level password functionality. This feature enables access to any S&P Capital IQ user account at your firm with one master password to simplify administration of single sign-on implementations. For more information, please refer to the document “Implementing Single Sign-On for the S&P Capital IQ Platform.”

User Credentials

Name	Description
username	The user’s S&P Capital IQ username
password	The user’s S&P Capital IQ plaintext password or encrypted password (plaintext passwords are encrypted upon first logon)
passln	The number of asterisks that will be displayed in the “password” field in the login form (must be a number greater than 0)
firstlogin	Determines whether to prompt the user for credentials upon launch (0x0 = Disabled, 0x1 = Enabled)

Proxy Settings

Name	Description
proxyStatusHttp	Toggles the proxy detection method for HTTP connectivity. The available options are: <ul style="list-style-type: none"> • 0x0 = Use Internet Explorer settings (default)

	<ul style="list-style-type: none"> • 0x1 = Use hardcoded settings (to be used together with proxyServerHttp and proxyPortHttp settings) • 0x2 = Do not attempt to use a proxy
proxyStatusSsl	<p>Toggles the proxy detection method for SSL connectivity. The available options are:</p> <ul style="list-style-type: none"> • 0x0 = Use Internet Explorer settings (default) • 0x1 = Use hardcoded settings (to be used together with proxyServerSsl and proxyPortSsl settings) • 0x2 = Do not attempt to use a proxy • 0x3 = Use the same settings as configured for HTTP
proxyServerHttp	The hostname of the proxy server to be used for HTTP connectivity (must be an actual proxy server, not a PAC autoconfiguration script)
proxyServerSsl	The hostname of the proxy server to be used for SSL connectivity (must be an actual proxy server, not a PAC autoconfiguration script)
proxyPortHttp	The TCP port number of the proxy server to be used for HTTP connectivity
proxyPortSsl	The TCP port number of the proxy server to be used for SSL connectivity

Environment-Specific Notes

User Permissions

The Office Plug-in can be used by any user with typical non-administrative user permissions on the desktop, including:

- Full read and write access to the user profile ([UserProfile]) and the user-side registry hive (HKEY_CURRENT_USER)
- Read-only access to the machine-side registry hive (HKEY_LOCAL_MACHINE) and other commonly used areas of the file system (e.g. [ProgramFiles], [WinDir])

In extremely locked-down environments, the Office Plug-in may not be fully functional, but this is very uncommon.

External Connectivity

The Office Plug-in communicates with the S&P Capital IQ backend via HTTP and HTTPS on the standard TCP ports 80 and 443 respectively. The application is capable of connecting through web proxy servers, and attempts to automatically detect the proxy configuration based on the user's Internet Explorer settings. As such, the application works in the vast majority of client environments without any special configuration.

If the Office Plug-in is unable to detect your firm's proxy settings, they can be hardcoded in the Office Plug-in settings. If this works, it is possible to automatically populate these settings for the users in your environment (please see [Office Plug-in Settings](#) section).

The Office Plug-in communicates with the following hosts:

- *.spglobal.com
- *.capitaliq.com
- *.ciqimg.com
- www.entrust.net
- crl.entrust.net
- svrintl-crl.verisign.com
- crl.verisign.com
- crl3.digicert.com
- crl4.digicert.com

Plug-in Manager

The Plug-in Manager is a utility used primarily to enable and disable components of the Office Plug-in. There are two versions of the utility: a user-friendly interactive version that can be found on the Start Menu, and a command-line version that can be run from scripts. Each version has slightly different features that reflect its use case.

Interactive Version

The interactive version of the Plug-in Manager can be found in “[InstallDir]CIQPluginManagerGUI.exe” and can be accessed from the Start Menu under Start > Programs > S&P Capital IQ Office Plug-in > Plug-in Manager.

Users can use the utility to enable or disable the Excel, PowerPoint and Word components of the Office Plug-in, as well as to clear user metadata and reset the application settings to their defaults. It can also be used to run diagnostic tests on the Office Plug-in, with assistance from S&P Capital IQ Client Support.

Command-Line Version

The command-line version of Plug-in Manager can be found in “[InstallDir]CIQPluginManagerCLI.exe.” The purpose of the utility is to allow IT staff to programmatically configure the Office Plug-in on a per-user basis, e.g. from a logon script. The parameters available are as follows:

Parameter	Description
/enable appName1 appName2 ...	Enables the specified components of the Office Plug-in for the running user; valid components are “excel”, “powerpoint” and “word”. Not typically required unless the application was not installed for all users.
/disable appName1 appName2 ...	Disables the specified components of the Office Plug-in for the running user; valid components are “excel”, “powerpoint” and “word”.
/clearsettings	Clears all Office Plug-in settings for the running user.
/upgradesettings	Migrates the running user’s settings for Excel Plug-in 6.5 or earlier for use with the Office Plug-in.

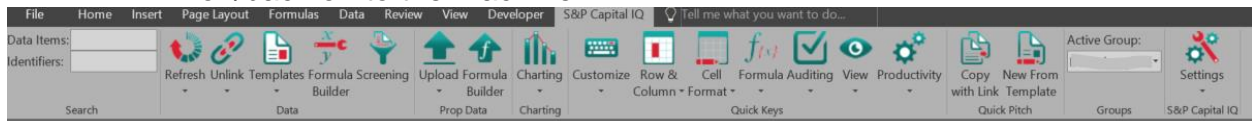
/set settingName1=value1 settingName2=value2 ...	Sets the specified application settings. Please see Office Plug-in Settings section for valid settings.
/help	Displays a list of available command-line switches.

Deployment – Test Scripts

After the S&P Capital IQ Plug-In is installed, to confirm that an installation (or packaging/rollout) was successful, follow these steps described below. The following tests will provide confirmation that the basic functionalities of the S&P Capital IQ Plug-in are working as expected and confirm connectivity. It is recommended that these tests be performed in an environment similar to the end-users' typical system, including testing with other commonly used Office/Excel add-ins when possible. It is also recommended to test actual user models when possible.

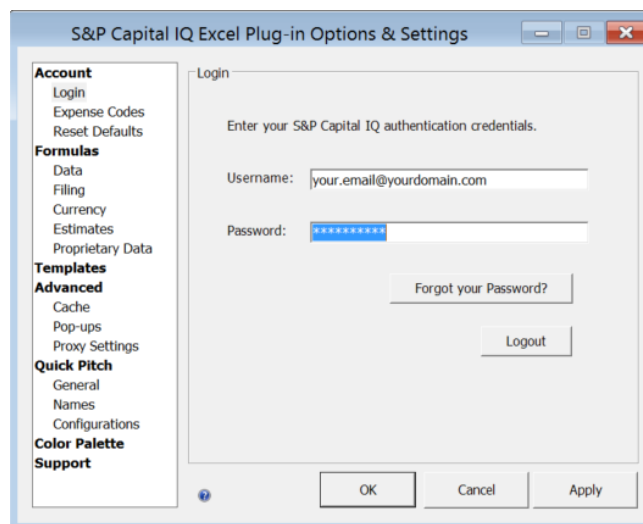
1. Verify the S&P Capital IQ Plug-in appears in the Excel ribbon

- a. If the plug-in does not appear in the ribbon, close open programs and log off/back on to the machine.



2. Log in to the S&P Capital IQ Plug-in

- a. If the log-in window is not present, click on Settings in the S&P Capital IQ ribbon and log in with credentials



3. Verify Proxy Settings

- a. If Proxy is being used, click on Proxy Settings in the Advanced section
- b. Enter/verify proxy settings and click 'Apply'
 - i. If no proxy is being used, Use Internet Explorer Settings or Do Not Use Proxy can be used
- c. A 'Connection Established' message should appear at the top of the window

4. Ensure Plug-in is Set to Retrieve Data Automatically

- a. Click on Settings, then Data under the Formulas section, and ensure the box next to 'Automatically retrieve CIQ data' is checked. Click 'OK'

5. Verify S&P Capital IQ Menu Drop-downs and Buttons Functionality

- a. In the S&P Capital IQ ribbon, click on the drop-down icons and verify the drop-down menus appear. Click on all other icons and verify the corresponding window opens

6. Templates & Updating/Refreshing Formulas

- a. Click on the 'Templates' drop-down in the Data section of the ribbon and click on 'Get/Update Templates'
- b. To the left of 'Company Tearsheets', click the plus '+' sign to expand the selection
- c. Check the box next to '+One Page Tearsheet' and click Download
- d. Again, click on the 'Templates' drop-down, hover on Company Tearsheets, the click '+One Page Tearsheet'
- e. Observe: a new Excel window should open with the One Page Tearsheet. A progress bar should overlay, indicating the template is updating
- f. Once the progress bar finishes loading, please check to ensure the template has refreshed completely and the data and charts on the template have been populated with relevant values
- g. You may now also test by changing the company ticker on the template once to ensure the values update and the template refreshes as expected

7. Formula Builder

- a. Click on the 'Formula Builder' in the Data section of the ribbon
- b. The Formula Builder window should appear
- c. Ensure the Identifier radio button is selected, then enter a ticker in to the top search bar, such as 'IBM'
- d. Click the magnifying glass/lookup button to the right of the box, then click/highlight the first result and click 'OK'
- e. In the Data Item Keyword search box, start typing 'Total Revenue'

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- i. Note the smart search results should appear
 - ii. Select the first result for Total Revenue
 - f. Next, on the left of the window, click the radio button for Absolute Period and leave the default FY 2017
 - g. Towards the bottom of the window, note the formula should read '=CIQ("NYSE:IBM", "IQ_TOTAL_REV", "FY2017")'
 - h. Click 'Add Formula', then click 'OK'
 - i. The Formula Builder window should close and a value should be displayed in the last selected cell in the worksheet

8. Quick Keys

- a. In Excel, type a number, such as 123 in to any cell
- b. Highlight this cell, then press 'Ctrl+,' (**Control** and **Comma**), two or three times, then press 'Ctrl+.' (**Control** and **Period**)
- c. Note that this should first increase the number decimal places, then decrease them respectively

9. For users who have the S&P Capital IQ Plug-in enabled in PowerPoint and/or Word, the following can be used to test the PresCenter functionality

- a. Click on the 'Templates' drop-down in the Data section of the ribbon and click on 'Get/Update Templates'
- b. To the left of 'Company Tearsheets', click the plus '+' sign to expand the selection
- c. Check the box next to '+One Page Tearsheet' and click Download
- d. Again, click on the 'Templates' drop-down, hover on Company Tearsheets, the click '+One Page Tearsheet'
- e. Select the range of cells, and in the S&P Capital IQ ribbon, click Copy with Link in the Quick Pitch section
- f. In PowerPoint or Word, in the S&P Capital IQ ribbon, click Paste in the Quick Pitch section
- g. Verify the data matches, then in Excel change one or more values
- h. In PowerPoint or Word, click Update Links in the Quick Pitch section and verify the data changes as expected

Note: Through the testing steps listed above you may be able to test some of the most basic and commonly used functions of the S&P Capital IQ Office plug-in. For other complex functionalities and to cover rest of the plug-in's offerings, additional testing may be required.