



CallCopy®

Innovations in Call Recording
and Contact Center Solutions

cc: Fusion Administration Manual, v4.5 R3

November 2011

Reference Guide

www.callcopy.com

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Note: Applicable non-disclosure agreements must be in force for authorization.

Revision History			
Revision	Change Description	Author	Effective Date
0	Initial draft based on input from Yao Xie and Ray Bohac.	JThomas	2011-10-07
1	Added Microsoft Excel as an application that is not compatible with Fusion.	JThomas	2011-10-13
2	Added screen shots for updated Fusion installer.	JThomas	2011-11-10
3	Corrected two typos and clarified reconnection if connection to CallCopy API Server is lost.	JThomas	2011-11-14

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Table of Contents

Introduction	5
Product Technical Overview	6
Requirements	7
Hardware	7
Software	7
Licenses	7
Compatible Desktop Applications	8
Deployment and Redundancy Guidelines	8
Security	8
Install and Configure the Application	9
Permissions Needed for Installation	9
Uninstall the Application	9
Run the Installation Package	9
Configure the INI File	11
Install Java Support	12
Java Access Bridge Base Installation	12
Java Access Bridge Installation to Work with a Specific JRE	12
Test the Java Access Bridge Installation	13
Troubleshooting	14
FusionLog File	14
Screen/Application Flickers When Fusion Pulls Data	14
COM Class Error	14
Plan A: Run the COM Component Registration Fix Utility	14
Plan B: Register the COM Components Manually	15
About CallCopy	16

Introduction

This document is for cc: Fusion administrators. It explains

- System components
- System requirements
- How to install and configure the application

For information on creating scripts for cc: Fusion, contact your CallCopy representative.

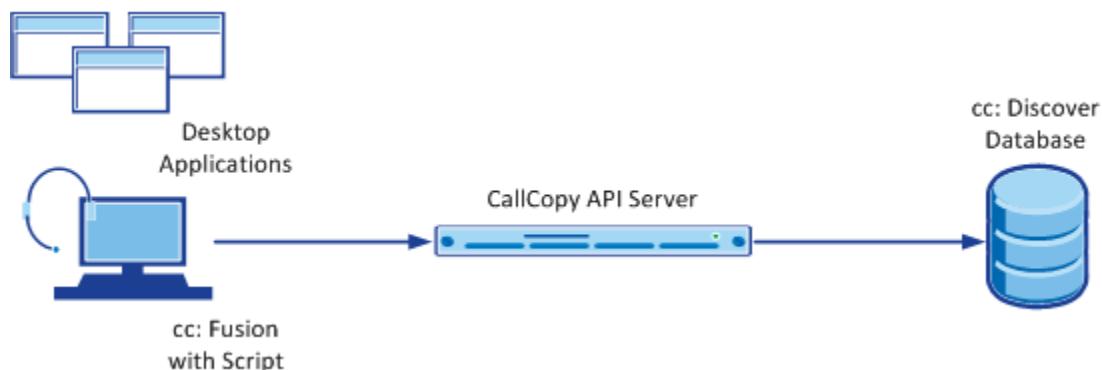
Product Technical Overview

cc: Fusion is a desktop application that detects information in other applications and then performs actions based on that information. The actions performed are controlled by a script. Possible actions include

- Adding the information as metadata to a call recording in progress
- Starting or stopping call recording
- Triggering recording blackouts for compliance

These diagrams illustrate the product’s components, their interactions, and deployment scenarios. (Note: The client/server deployment scenario is a future product.)

The cc: Fusion application can be installed on the PC with the script. In this scenario, all script installation and updates must be made manually on each PC.



Component	Function
cc: Fusion	Desktop application controlled by a script. Detects information in other desktop applications and performs actions specified in a script. The script is installed and managed locally. On startup, it is read and compiled automatically.
cc: Discover Server	Includes the cc: Voice recorder that records the audio and creates the raw call audio files. Creates call record files in the database.
Desktop Applications	See the <i>Requirements</i> section for information on the applications from which data can be captured.
CallCopy API Server	Used to write information from cc: Fusion application to the database.
cc: Discover Database	Stores call records associated with call audio WAV files. Data collected by the cc: Fusion client can be written to the call records.

Requirements

Hardware requirements vary depending on performance need, the number of applications running concurrently on machines, and the amount of data written to the cc: Discover database. The requirements stated in this section are only for cc: Fusion. For requirements for cc: Discover, see the *cc: Discover Installation Guide*. Final hardware specifications are determined by the CallCopy Sales Engineering team during the sales process.

Hardware

cc: Fusion functions on PCs with either a 32- and 64-bit processor. However, it does not support interaction with Java-based applications running on machines with 64-bit processors.

Minimum Specifications:

- Pentium 1.5 GHz
- 1 GB RAM
- 50 MB hard drive space
- 1280 X 800 – minimum screen resolution

Recommended Specifications:

- Pentium 3Ghz or 1.6Ghz dual core
- 2 GB RAM
- 50 MB hard drive space
- 1280 X 1024 or higher screen resolution

Software

cc: Fusion requires

- PCs running Microsoft Windows XP or higher.
- .NET Framework v3.5 SP1 or greater
- Java Access Bridge if information will be captured from Java applications.

Licenses

Contact your CallCopy representative for cc: Fusion and cc: Discover licensing. No additional third-party licenses are required.

Compatible Desktop Applications

CallCopy requires prospective customers to test if cc: Fusion is compatible with their applications. To test compatibility, the cc: Fusion Test Tool must be used to try to capture information from an application.

cc: Fusion has been compatible with applications written using versions of the items listed below:

- Win32
- Microsoft Foundation Class (MFC)
- Visual Basic 6
- Windows WinForms
- Java
- FoxPro
- WPF
- Flash
- Silverlight

Data has also be captured from within versions of

- Terminal emulators (green screen emulators)
- Adobe Acrobat Reader
- Internet Explorer
- FireFox

cc: Fusion is currently not compatible with Google Chrome and Microsoft Excel.

Microsoft Outlook is not fully supported. If message windows (i.e., popup windows) are opened from Outlook, the windows title number will not be identified consistently. Outlook arbitrarily assigns popup windows numbers (i.e., <wnd cls="_WwB" title="Document12"). For example, a message is opened, assigned Document1, and then closed. A second message is opened and assigned Document2. If the original message is reopened, it will be assigned the title Document3. Fusion cannot associate different captures from the original message.

Deployment and Redundancy Guidelines

CallCopy Sales Engineers consult with customers to determine the most effective deployment to meet performance, redundancy, and security needs. Some guidelines include

- cc: Fusion supports only one script per installation. In the typical installation, all users logging into a PC will automatically have the application running with that script.
- Bandwidth usage depends heavily on the number of users and the amount of data written to the database.
- Network layout (e.g., branches, firewalls) affects the application's ability to write data to the database.

Security

cc: Fusion relies on the security and auditing measures of cc: Discover, the Windows server hosting the applications, and the Windows PCs on which the desktop application is installed. Access to script files should be restricted to administrators. If scripts are installed on PCs, users should not have Administrator permissions to the machines. (See the *Install and Configure Client* section for permissions information.)

No specific cc: Discover user permission settings have to be configured to enable cc: Fusion.

See the *cc: Discover Administration Guide* for information on the system's auditing.

Install and Configure the Application

This section explains how to install and configure the cc: Fusion application. Once it is installed on a PC, the application can be used by any user that logs into the PC.

Permissions Needed for Installation

The installer must have Administrator permissions on the client PC.

The Administrator must have permission to modify or access these registry settings:

- HKEY_LOCAL_MACHINE\SOFTWARE
- HKEY_LOCAL_MACHINE\SOFTWARE\Classes\CLSID\
- HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
- HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Java Runtime Environment – The installer does not modify any value under this setting. It accesses it for reading java version and java_home value.

Uninstall the Application

Before installing a new version of the application, older versions must be uninstalled. Follow these steps to uninstall the software.

1. Open the Add/Remove Programs applet in the Control Panel.
2. Click CallCopy Fusion Software from the programs list.
3. Click Uninstall.
4. You will be prompted to remove the software. Click Yes.

The software will be automatically uninstalled, and the entry on the Programs list will be removed once the process is complete.

Run the Installation Package

Note: If a new version of the application is installed on a machine with an older version, the existing scripts must be tested and probably edited to work with the new application.

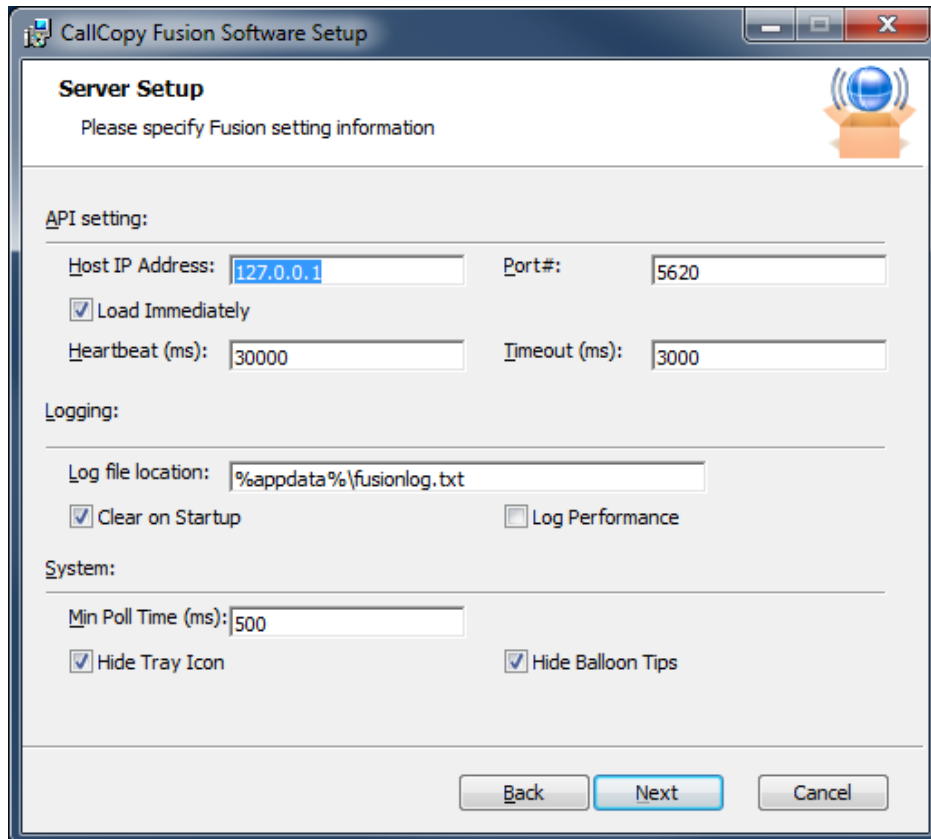
Note: Uninstall older versions of the application before installing a newer version.

Follow these steps for manually installing the cc: Fusion application.

1. Logon to the PC using an account with Administrator privileges.
2. Access the FusionSetup.msi file and double-click it. The MSI file can be located on the PC or a remote location.
3. On the Welcome step, click Next.
4. Accept the Licensing Agreement. Click Next.
5. Do not change any settings on the Custom Setup step. Click Next.

Install and Configure the Application

6. On the Server Setup, configure the API server and client settings. See Configure the INI File for definitions of each setting.
 - Hide Balloon Tips – This option can be set by users by right-clicking the Fusion icon in the system tray and selecting Hide Balloon Popups.



The screenshot shows the 'Server Setup' window of the 'CallCopy Fusion Software Setup' installer. The window title is 'CallCopy Fusion Software Setup' and it has a blue header bar. Below the title bar, the text 'Server Setup' is displayed in bold, followed by the instruction 'Please specify Fusion setting information'. A Fusion icon (a blue globe with orange waves) is in the top right corner. The settings are organized into sections: 'API setting:' includes 'Host IP Address' (127.0.0.1), 'Port#' (5620), a checked 'Load Immediately' checkbox, 'Heartbeat (ms)' (30000), and 'Timeout (ms)' (3000). 'Logging:' includes 'Log file location' (%appdata%\fusionlog.txt), a checked 'Clear on Startup' checkbox, and an unchecked 'Log Performance' checkbox. 'System:' includes 'Min Poll Time (ms)' (500), a checked 'Hide Tray Icon' checkbox, and a checked 'Hide Balloon Tips' checkbox. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

7. Click Install.
8. If Windows prompts to allow the installer to run, click Yes.
9. Click Finish.

By default, the installer creates this directory with the application files: c: Program Files\CallCopy\Fusion.

Note: Windows Installer Error 160 – This is a general error code that indicates a problem occurred during the installation. During cc: Fusion installation, this error may occur if the installer does not have adequate permissions, especially for the registry. In order for better trouble shoot this general error code, enable Windows Installer logging, which will allow you to view a log of all attempts and failures related to an installation. You can disable it after the installation is complete.

Configure the INI File

The application settings are read from a configuration file that is stored in the application installation directory. The file is named **Fusion.ini**.

[CallCopy] Host=10.100.1.203 Port=5620 LoadImmediately=true	API server host IP address and port number. If set to 'true', the application connects to the API server when it starts. If set to 'false', the application does not connect until the first time the Fusion script detects content that should be blacked out or recorded.
Heartbeat=3000	Frequency in milliseconds (ms) that the application sends a 'heartbeat' message to the API server to test the connection.
Timeout=3000	How long in milliseconds (ms) the application waits for a response to a 'heartbeat' before it considers the connection lost. If the connection is lost, application writes that event to the log file and attempts to reconnect.
[Logging] Location=%appdata%\fusionlog.txt	This path is for file deletion purposes only. Changing it does not change the log file location. To change the log file location, set the value in NLog.Config and then update this setting also.
ClearOnStartup=true	Clear the log file on application startup.
LogPerformance=false	Log script execution metrics to the log file.
[System] MinPollTime = 500	Forces a minimum polling interval for checking the user's screen for content to block or record, overriding the script setting. Time in milliseconds (ms).
HideTrayIcon=false	Do not display the icon in the system tray.
HideBalloonTips=false	Prevent balloon tips from popping up.
LoadScriptsLocally=true	(For future versions of Fusion.) Overwrite server INI setting.

Install Java Support

Note: These instructions are for 32-bit systems.

The Java Access Bridge is a library that allows Microsoft based applications to interact with Java based applications. This is a requirement only if cc: Fusion will be used to capture any data from Java based applications.

If you only install the Access Bridge and don't configure the bridge to work within the specific JRE of the Java application, you will only be able to capture the entire Java applications' data as a single string. This is still an acceptable way to capture from Java applications, and may be the preferred way in some environments.

More information is available at <http://www.oracle.com/technetwork/java/javase/tech/index-jsp-136191.html>

Java Access Bridge Base Installation

1. Navigate to c:\Program Files\CallCopy\Fusion\Java Access Bridge.
2. Double-click the file accessbridge-2_0_1.exe.
3. If Windows prompts to allow the executable to run, click Yes.
4. In the install wizard, click Next.
5. Accept the license agreement and click Next. Then click Install.
6. Click Finish when the installation is complete.
7. Restart the computer. The Java Bridge base directory will be c:\Program Files\Java Access Bridge\.

Java Access Bridge Installation to Work with a Specific JRE

Before performing these steps, perform the base installation steps above.

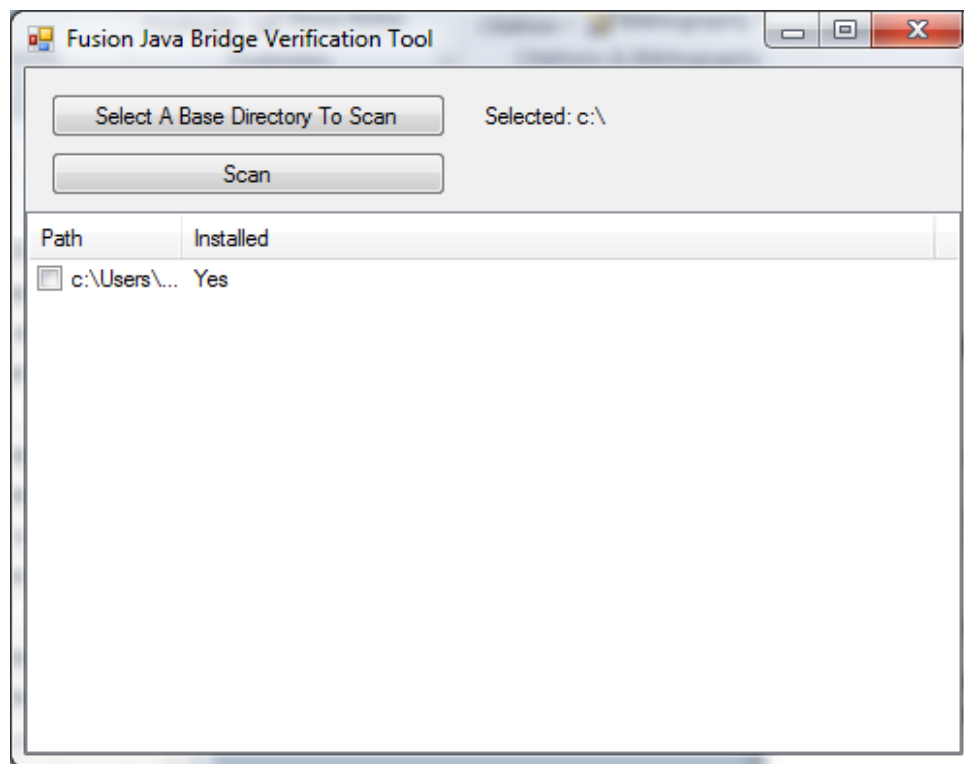
1. Navigate to the \jre\lib of the JRE you want to use.
2. Confirm that \ext\jaccess-1_4.jar exists. If it does not, copy it from the JavaBridge base directory.
3. Confirm that \ext\access-bridge.jar exists. If it does not, copy it from the JavaBridge base directory.
4. Confirm that \accessibility.properties exists. If it does not, copy it from the JavaBridge base directory.
5. Open \accessibility.properties.
6. Confirm that it has the following line: assistive_technologies=com.sun.java.accessibility.AccessBridge

Test the Java Access Bridge Installation

Use the CheckFusionJavaBridgeInstallations.exe application to verify the Java Access Bridge is configured correctly for a specific JRE.

1. In the JavaBridge directory, double-click CheckFusionJavaBridgeInstallations.exe.
2. Select a base directory to scan. You can scan an entire drive; however, scanning a subdirectory speeds up the search
3. Select Scan.

A list of identified JREs will be presented. If the bridge is installed and configured, you will see Yes. If it is not, you will see messages indicating the steps that need to be taken to properly configure the JRE Bridge.



Troubleshooting

This section provides troubleshooting guidance that can be used by both administrators and script programmers.

FusionLog File

The FusionLog.txt file is stored in the user's application roaming profile located in this directory (%appdata%\Roaming\).

Screen/Application Flickers When Fusion Pulls Data

If users experience this issue, try to capture using the fulltext method instead of the native method. In some applications, the native setting sometimes causes the application to repaint. This is the flicker that is sometimes visible.

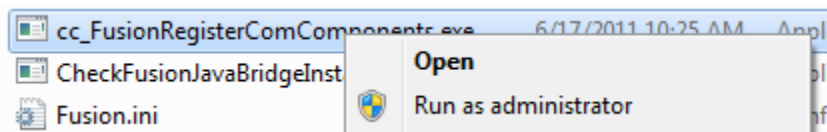
When switching to fulltext, you may need to create a new capture identifier.

COM Class Error

If you see a COM class error, then the COM components didn't register properly. This is usually caused by the client application not being installed as a system administrator account.

Plan A: Run the COM Component Registration Fix Utility

To fix this automatically, run the application cc_FusionRegisterComComponents.exe with administrator privileges. To do this, right-click the executable and select "Run as administrator". Select "Yes" or "Allow" on any popup dialogs. After running the application, try running cc: Fusion again.



Plan B: Register the COM Components Manually

You can always register the COM components manually. To do this, open a command prompt in privileged mode: Right click on a command prompt shortcut and select Run as administrator.

TCaptureX.dll, **TSelection.dll**, **UIElement.dll** and **SSSystemObj.dll** will need to be registered. These will be located in the ScrapperLib subfolder where fusion is installed

Registration on 64-bit

```
%windir%\syswow64\regsvr32 <fusion path>\ScrapperLib\TCaptureX.dll
%windir%\syswow64\regsvr32 <fusion path>\ScrapperLib\UIElement.dll
%windir%\syswow64\regsvr32 <fusion path>\ScrapperLib\TSelection.dll
%windir%\syswow64\regsvr32 <fusion path>\ScrapperLib\SSSystemObj.dll
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\TCaptureX_x64.dll
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\UIElement_x64.dll
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\TSelection_x64.dll
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\SSSystemObj_x64.dll
```

Registration on 32-bit (x86)

```
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\TCaptureX.dll
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\UIElement.dll
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\TSelection.dll
%windir%\system32\regsvr32 <fusion path>\ScrapperLib\SSSystemObj.dll
```

About CallCopy

CallCopy, a leading provider of innovative call recording and contact center solutions, is dedicated to ensuring the highest standards of customer and employee satisfaction. The award-winning, enterprise-proven cc: Discover suite delivers advanced call recording, screen capture, quality management, speech analytics, performance management, customer survey and workforce management capabilities to organizations of all sizes and industries across the globe.

CallCopy empowers these organizations to gather business intelligence, which is leveraged to maximize operational performance, reduce liability, achieve regulatory compliance and increase customer satisfaction.

For more information, visit www.callcopy.com.