



Installation Guide

3CX CRM Plugin for ConnectWise

Single Tenant Version

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Introduction

The 3CX CRM Plugin for ConnectWise creates a seamless integration between ConnectWise and 3CX. The solution consists of two main components:

- An Integration Server. The Integration Server manages communication between the client plugin and ConnectWise, and manages the licensing of endpoints.
- A plugin for 3CX Phone for Windows. The plugin displays call notifications and performs screen-pops for incoming calls. The plugin instructs ConnectWise to display either a contact, ticket, or search screen. The plugin also supports the optional Desk Director add-in.

Installation

1

Download software

There are two installers - a server installer that is run on the 3CX server (includes the ConnectWise Integration Server, the VoIPToys Licensing Server, and VoIPToys Relay Agent), and a client installer which is run on each workstation. You can download the installers here:

<http://www.voiptoys.com/3cx-crm-plugin-for-connectwise>

2

Install Prerequisites

There are a number of prerequisites that must be installed prior to installing 3CX CRM Plugin for ConnectWise. Ensure that your system is ready with requirements and prerequisites mentioned in this guide for both server and client installers.

3

Install 3CX CRM Plugin for ConnectWise (Server)

The step-by-step instructions guide you to successfully install 3CX ConnectWise Integration Server. Begin by extracting the installer from the downloaded zip file (Step 1 above), then run the setup program named **ConnectWise3CXInstaller.exe**

4

Install 3CX CRM Plugin for ConnectWise (Client)

The step-by-step instructions guide you to successfully install 3CX ConnectWise Client Server. Begin by extracting the installer from the downloaded zip file (Step 1 above), then run the setup program named **ConnectWisePluginInstaller.exe**

5

Register your License Key

Licensing for the ConnectWise plugin is based on the number clients needed. You must purchase a license key which is installed during the server installation process.

Connectwise Integration Server

Requirements

Before installing 3CX CRM Plugin for ConnectWise, you need to ensure that your computer meets the minimum requirements mentioned below:

1. 3CX Version 12 64 bit (licensed Edition)
2. Windows 7, 8, 8.1, Windows Server 2008, R2, 2012, R2 64bit
3. Microsoft .Net 4.5.1
4. SQL Server 2012 (including Express) or newer
5. Open TCP ports 6300 and 8700 on the 3CX server's Windows firewall
6. Installation on a domain controller is not supported

Prerequisites

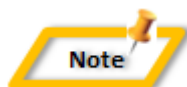
Prior to installing 3CX CRM Plugin for ConnectWise, the following prerequisites must be completed:

1. Install Microsoft SQL Server 2012 (or newer) or identify an existing SQL Server instance that can be used by the 3CX CRM Plug-in for ConnectWise. The Integration server needs to maintain information for its internal processes in a Microsoft SQL Server database.

**Note**

The Integration server can use the free "Express" edition of SQL Server. It is recommended that you also install SQL Server Management Studio

2. If you are running a firewall directly on your 3CX server, you will need to open TCP ports 6300 and 8700 prior to starting the install of the integration server. The client plugin communicates with the Integration Server using these TCP ports.
3. In the 3CX Management Console create two queues and assign to the following extensions:
 - Sales queue (extension 821)
 - Support queue (extension 822)

**Note**

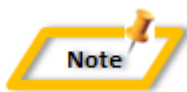
It is possible to modify the extension associated with each queue by editing the VAD installer configuration file prior to installation of the Integration server

The client plugin determines what ConnectWise screen to display based on the type of inbound call. For example, if the call is coming from a sales queue, a contact screen will display. If the call is coming from a support queue, a ticket screen will display.

The plugin determines whether an inbound call should display contact or ticket information based on the origin (queue extension number) of the call. A mapping of queue extensions to screen-pop types (contact or ticket) will be performed during the install.

Step by step Installation Procedure

The following section guides you through a detailed walk-through of the installation process. Start with the Server installation which must be performed on the 3CX server.



The CRM Plugin communicates with the Integration Server using TCP ports 6300 and 8700. If you are running a firewall directly on your 3CX server, you will need to open these ports in the firewall prior to starting the install

Step 1: Download server installer

You can check for the software download link included in your order confirmation email. As an alternative, you can also find the link from your order history on our website.

Step 2: Extract the installer from the downloaded .zip file

The file you downloaded in the above step is a compressed .zip file.

1. Position the mouse on the zip file and right-click.
2. From the popup menu, select **Extract All** to extract the software.

Step 3: Start the installation process

1. From the extracted folder, find and double-click the file **ConnectWise3CXInstaller.exe**
2. You will be prompted to allow administrative access to perform the install. Click **Yes** to continue the installation.

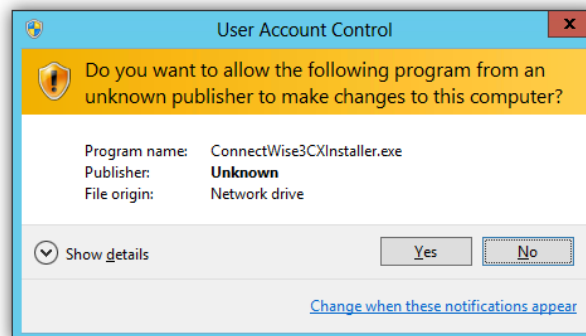


Figure 1: User Account Control

3. Click **Next** on the initial Setup Wizard screen.

Step 4: Download the VoIPTools 3CX Relay (if required)



The 3CX CRM Plug-in for ConnectWise communicate with 3CX through the VoIPToys Relay Agent. The relay agent enables multiple BVoIP products to communicate with 3CX through a single consistent connection

1. Press **Click here if you need to install / upgrade 3CX Relay Services** to download and start the Relay Agent Installer.
2. On the initial Relay Agent Setup Wizard screen press **Next**.



Figure 2: Relay Agent Setup Wizard

The Relay Agent installer will complete the installation of the 3CX Relay Services windows service and start the service.

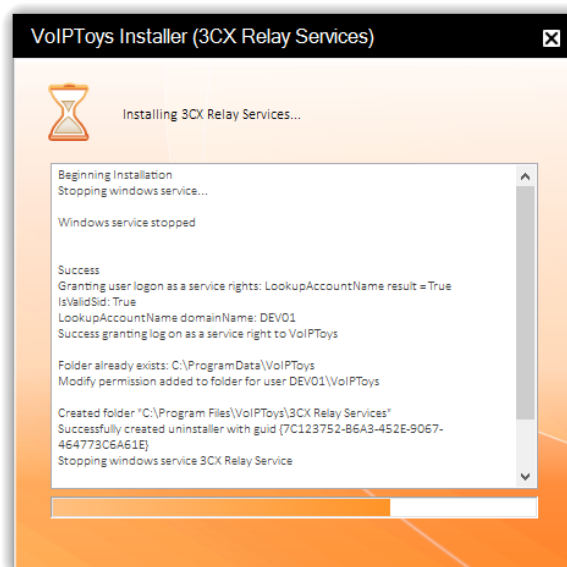


Figure 3: Relay Agent Install Progress Screen

3. Once the Relay Agent installation has completed successfully the Installation Complete screen will display. Press **Close** to close the Relay Agent installer and return to the Integration Server Installer.

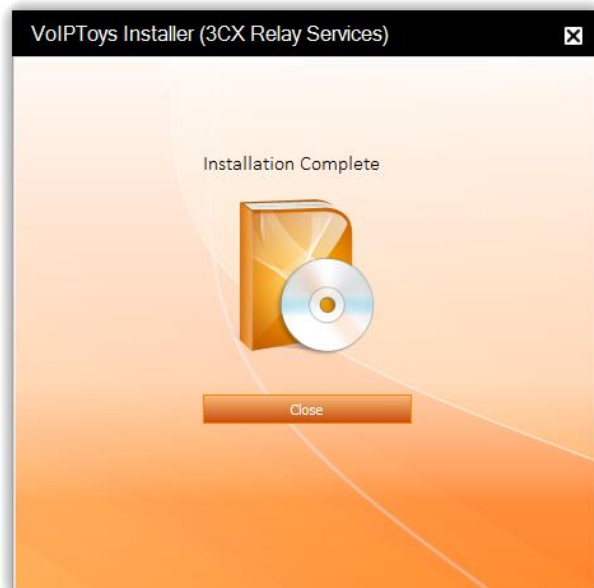


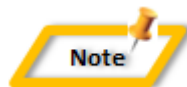
Figure 4: Relay Agent Installation Complete Screen

Step 5: Test the VoIPTools 3CX Relay Settings

1. On the Integration Server installer screen, press **Test Relay Settings** to confirm you can communicate with the Relay Agent. You should see a "Test success!" message.
2. After a successful Relay test, press the **Next** button to continue with the installation of the Integration Server.

Step 6: Configure the Database

1. On the SQL Database Connection screen, press the **Configure** button to setup a connection to SQL Server.



You can let the installer create the SQL Server database for you, or you can manually create the database using Microsoft SQL Server Management Studio. The installer will create the necessary SQL objects for you automatically.

- The Connection Properties screen will display. Use this screen to define your SQL Connection string. In the Server name field enter the SQL Server Instance name (example: SQLServerName\SQLExpress).

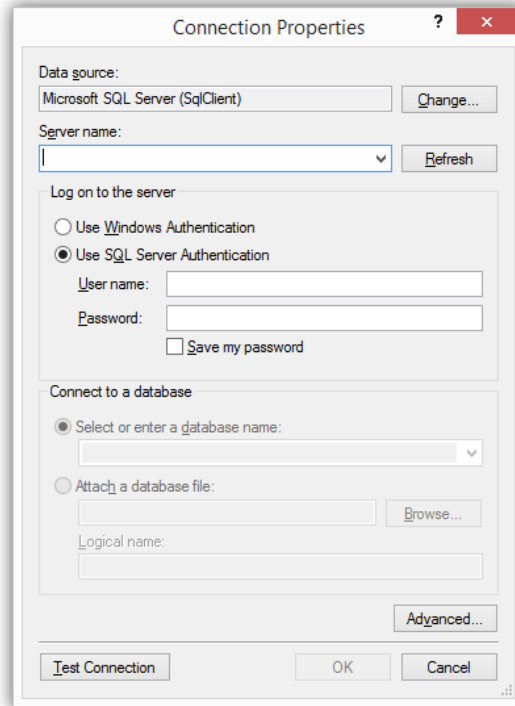


Figure 5: SQL Connection Properties Screen



The Integration Server installer will automatically create a local “VoIPToys” user account. This account authenticates to SQL server and is given the necessary access permissions to update the database. The Integration Server license service also uses this account.

- Select **Use Windows Authentication**. SQL Server technical administrators can alternatively select **Use SQL Server Authentication** and specify a SQL Login account and password.
- To have the installer create the database for you, leave the **Select or enter a database name** field blank. To use a pre-existing database, select the desired database from the drop-down list.
- Press the **Test Connection** button to confirm connectivity to SQL Server.
- Press **OK** to save the SQL Connection information.
- Press **Next** to create the required SQL database objects. The Integration Server installation status screen will display the installation progress.

Step 7: VAD Project Installation

One of the features of the ConnectWise Integration server is the ability to prompt callers for their ticket number. This feature must be installed on the 3CX server. The Voice Application Designer (VAD) Project Installer will create a Digital Receptionist as extension 882. To prompt callers for their ticket number simply route calls to this extension.

1. The 3CX VAD application installer will display. Press **Deploy to local 3CX** to complete the VAD application installation.

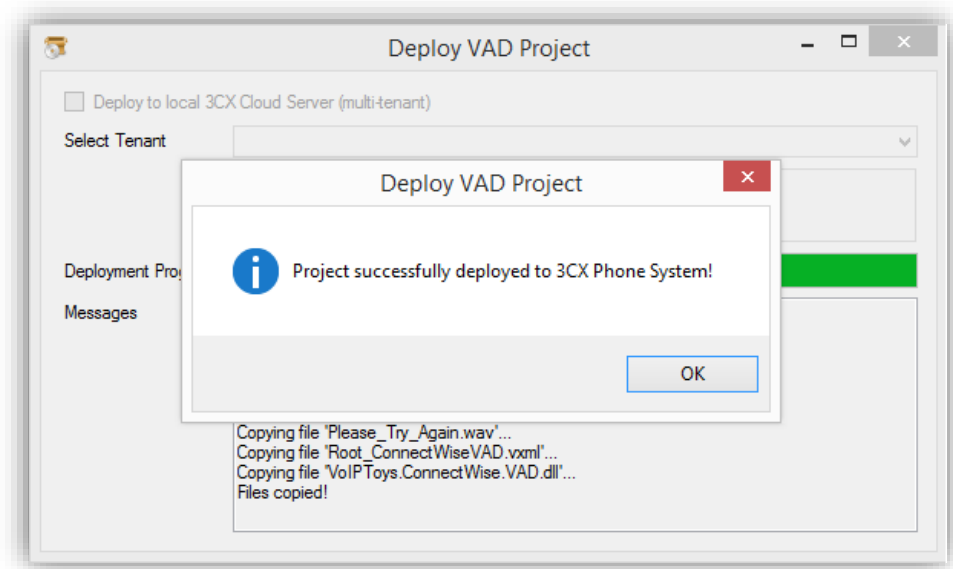


Figure 6: Deploy VAD Project Screen

2. Press **OK** to close the VAD success dialog.
3. Upon completion of the VAD installer, press the red **X** on the **Deploy VAD Project** screen to complete the Integration Server installation process.
4. Press **Run Application** to run the Site License Distribution Server.

Step 8: Voiptoys Site License Distribution Server

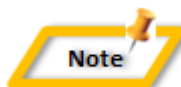


The Integration Server installer will create a desktop shortcut to the licensing configuration application. This program collects your license information and registers your license key for use with the 3CX server.



A license key is provided when you purchase 3CX CRM Plugin for ConnectWise. The license key will specify the number of endpoints (extensions) that are permitted to register to the license server.

1. Click on the licensing configuration shortcut to start the configuration application.
2. Enter the license key and end-user contact information on the **Server License** tab and press **Register** to activate your license key. After the key has successfully registered, your purchased license information will display on the top portion of the screen.



*Pay particular attention to the number of licenses shown in the **Licenses** field. This is the number of authorized endpoints. The **Activation** field shows when your key was activated. You are eligible to receive free software updates for one year.*

3. You can manage the list of endpoints registered to the ConnectWise Integration Server on the **Endpoints** tab. This tab displays pertinent information about the registered workstations, and displays the total number of licenses available and the number of licenses in use.



*You can reclaim a registration by highlighting the PC no longer in use and pressing **DELETE**. This process will disable the endpoint from the list and return the license to the total number of licenses available for endpoints.*





*If a software update is available for download, a message will display next to the **Check for Updates** button. Pressing this button will download an updated installer to your desktop. You can then run the installer to update the software.*

4. Configure the ConnectWise server settings. These settings will be downloaded into the clients upon installation.

Step 9: ConnectWise Live Links

The 3CX CRM Plug-in for ConnectWise simplifies placing outbound calls through the use of “Live Links”. Invoking a Live Link displays a dialog containing phone number links. Clicking on a phone number link will automatically dial the selected phone number. To setup live links:

1. Open the ConnectWise Internet Client
2. In the left-hand pane navigate to: **Setup** → **Setup Tables**
3. In the search screen type **Links** in the **Table** filter field to display existing **Live Links**.
4. Click on **Links** to display existing **Live Links** or create new **Live Links**
5. Create three “Live Links” – one for tickets, contacts, and company. To create a new live link click on the **New Item** icon 

6. Create three “Live Links” using the following information. When finished creating a “Live Link”, press the **save** icon 

Link Name: 3CX Ticket Phone Control

Table Reference: Service

Link Definitions:

[http://localhost:8085/Plugin/PhoneControl?phonenumber=Company_Phone:\[companyphone\];Contact_Phone:\[contactphone\]&options=ticketnumber:\[srnumber\]](http://localhost:8085/Plugin/PhoneControl?phonenumber=Company_Phone:[companyphone];Contact_Phone:[contactphone]&options=ticketnumber:[srnumber])

Link Name: 3CX Contact Phone Control

Table Reference: Contact

Link Definitions:

[http://localhost:8085/Plugin/PhoneControl?phonenumber=Company_Phone:\[companyphone\];Contact_Phone:\[contactphone\];Office_Phone:\[memberofficephone\];Home_Phone:\[memberhomephone\];Mobile_Phone:\[membermobilephone\]&options=contactid:\[contactrecordid\];companyid:\[companyrecordid\]](http://localhost:8085/Plugin/PhoneControl?phonenumber=Company_Phone:[companyphone];Contact_Phone:[contactphone];Office_Phone:[memberofficephone];Home_Phone:[memberhomephone];Mobile_Phone:[membermobilephone]&options=contactid:[contactrecordid];companyid:[companyrecordid])

Link Name: 3CX Company Phone Control

Table Reference: Company


Link Definitions:

[http://localhost:8085/Plugin/PhoneControl?phonenumber=Company_Phone:\[companyphone\];Contact_Phone:\[contactphone\]&options=companyid:\[companyrecordid\]](http://localhost:8085/Plugin/PhoneControl?phonenumber=Company_Phone:[companyphone];Contact_Phone:[contactphone]&options=companyid:[companyrecordid])

Step 10: ConnectWise Integration User

Just as a user must authenticate with ConnectWise by entering a user name and password, the 3CX CRM Plugin must login to interact with ConnectWise. Each PC must authenticate to ConnectWise using an “integration user”.

To create the ConnectWise integration user, perform the following steps:

1. Open the **ConnectWise Internet Client**.
2. Click on **Setup --> Setup Tables --> Integrator Login**
3. Click on the **New Item** icon to create a new integrator login
4. On the Integrator Login configuration screen, enter a username and password
5. Set the Access Level to **All records**
6. In the Service Board combo box, select the desired service board.
7. Check all of the API check boxes in the left-most column starting with “Service Ticket API”.
8. Press the **save** icon 

3CX CRM Plugin for ConnectWise (Client)

The 3CX CRM Plugin for ConnectWise has a client application (plugin) that integrates with 3CX Phone for Windows. The plugin displays inbound call information and instructs ConnectWise to display the caller's contact or ticket information.

Requirements

1. 3CX Phone for Windows
2. The "Pro" editions of Windows 7, 8, 8.1, Windows Server 2008, R2, 2012, and R2 64bit
3. Microsoft .Net 4.5
4. Open TCP ports 6300 and 8700 on the 3CX server's Windows firewall
5. Installation of the client directly on the 3CX server is not supported

Prerequisites

Install 3CX Phone for Windows on the client PC prior to installing the CRM plugin.

Download

The CRM Plugin client installer is run on each workstation. You can download the installer here:

<http://www.voip toys.com/3cx-crm-plugin-for-connectwise>

Licensing for the ConnectWise plugin is based on the number clients you need. You will need to purchase a license key which is installed during the server installation process.

Installation

Step by step Installation Procedure

Step 1: Download client installer

You can check for the software download link included in your order confirmation email. As an alternative, you can also find the link from your order history on our website.

Step 2: Extract the installer from the downloaded .zip file

The file you downloaded in the above step is a compressed .zip file.

1. Position the mouse on the zip file and right-click.
2. From the popup menu, select **Extract All** to extract the software.

Step 3: Start the installation process

1. From the extracted folder, find and double-click the file **ConnectWisePluginInstaller.exe**
2. You will be prompted to allow administrative access to perform the install. Click **Yes** to continue the installation.
3. Click **Next** on the initial Setup Wizard screen.

Step 4: Download the VoIPTools 3CX Relay (if required)



All BVoIP products communicate with 3CX through the VoIPToys Relay Agent. The relay agent makes it possible for multiple products to communicate with 3CX through a single consistent connection.

1. Enter the appropriate host and port for the relay agent. This will always be the host name of the 3cx server and port 8700 for single tenant environments. For multi-tenant environments the port number will be different for each tenant.

Step 5: Test the VoIPTools 3CX Relay Settings

1. On the CRM Plugin installer screen, press **Test Relay Settings** to confirm that you can communicate with the Relay Agent. You should see a **Test success!** message.
2. After a successful Relay test, press the **Next** button to continue with the installation of the CRM Plugin.
3. When the CRM plugin installation is complete, press **Run Application** to start the CRM Plugin configuration program.

Step 6: Configure ConnectWise

The CRM plugin configuration screen manages the settings necessary for the plugin to login and communicate with ConnectWise.

1. Make the necessary configuration settings and press **Save**
2. Press the **Restart 3CX Phone** to apply the changes.

The following table describes each of the CRM configuration settings.

Setting	Description
Connect Wise Web Host	Hostname of the ConnectWise server
Connect Wise Company ID	Company ID you use to login to ConnectWise
Connect Wise Version String	The version for the ConnectWise URL. For 2014.4 hosted this should be "v2014_4". For the on premise edition for 2014.4 this should be "v4_6_release". You can determine this value by simply opening ConnectWise in a browser and verifying the value for your installation in the browser's address bar.
Connect Wise Integration User Name	Integration account username (this is different than your user login username)
Connect Wise Integration Password	Integration account password (this is different than your user login password)
Connect Wise Screen Pop Open Option	Indicate when the screen pop will happen. Valid values are "RINGING" or "ANSWERED".
Connect Wise Debug	Log additional debug information. When set to true, the ConnectWise plugin will log extra debug information to a text file for troubleshooting purposes. Valid values are 'true' or 'false'.
Connect Wise Ticket Queue List	List the queues that pop the support ticket screen. A comma separated list of queue extension numbers. Only one queue (extension 822) can pop specific ticket numbers.
Connect Wise Company Queue List	List of queues that pop the company/contact screen. A comma separated list of queue extension numbers.
Connect Wise Relay Services DNS Name	Host name of the 3CX server
Connect Wise Relay Services Port	TCP port number used to communicate with the relay agent. This will always be 8700 in a single tenant environment. In a multi-tenant environment this number will vary. You must take note of the port number when you initially install the relay agent on the 3CX server.
Connect Wise Desk Director Integration	Integrate with Desk Director. Valid values are 'true' or 'false'

Figure 28: CRM Plugin settings

Step 7: Restore ConnectWise Plugin Configuration

When the ConnectWise plugin is installed on a PC, the 3CX Phone for Windows configuration file is updated to load the ConnectWise plugin. Unfortunately, when 3CX releases an automatic update for 3CX Phone for Windows, their updater deletes all plugin information.

To restore the ConnectWise plugin configuration information in the 3CX Phone for Windows configuration file, open the ConnectWise 3CX Plugin Configuration screen and press **Restart 3CX Phone**.

Step 8: Enable Integration with Desk Director

Desk Director is a 3rd Party Add-on for ConnectWise. Enabling integration with Desk Director is very simple. On the ConnectWise 3CX Plugin configuration screen:

1. Enter **true** in the **Connect Wise Desk Director Integration** field.
2. Press **Save** to update the plugin configuration.
3. Press the **Restart 3CX Phone** The plugin will open Desk Director whenever a caller has specified a ticket number.

Web Portal

The web portal allows you to specify which 3CX extensions have permission to use the plugin and consume a client licenses. To access the web portal, a user must have 3CX system admin rights.

To configure 3CX admin rights:

1. Log in to the 3CX Management Console
2. Select the extension that will be assigned 3CX System Administration rights
3. Select the **Options** tab
4. Check **Allow 3CX Management Console Access**
5. Click the **Configure Permissions** button

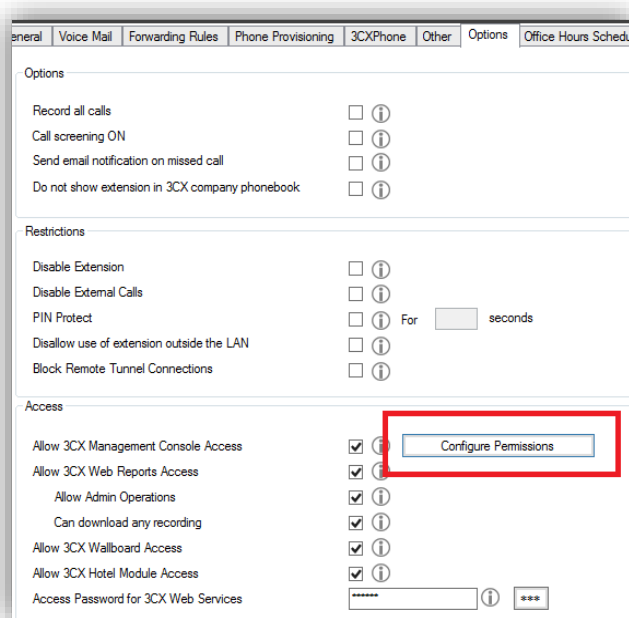


Figure 7: 3CX Extension Permissions

6. Check the **System Administrator** check box and click **OK**
7. Next click **Apply** and then **OK**.

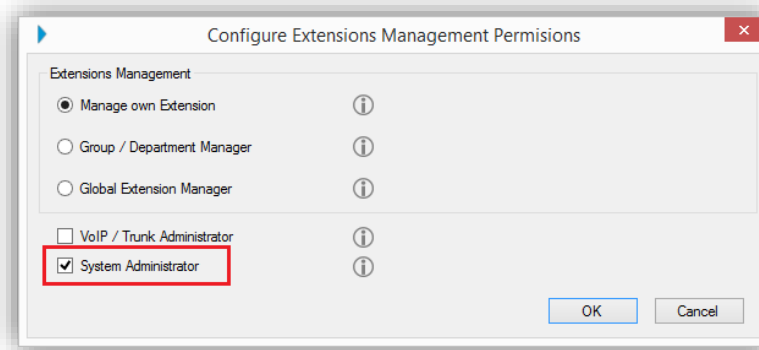


Figure 8: 3CX System Administrator

8. Once you have assigned the necessary permissions, you can login to the 3CX ConnectWise Integration web portal. To login to the web portal, browse to the default URL:

<http://<3CXServerIP>:6200>

On the login screen enter the 3CX extension number and PIN for an extension with 3CX System Administration permissions:

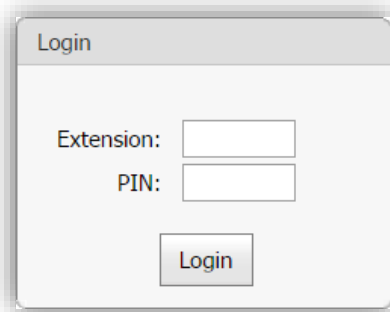


Figure 9: 3CX ConnectWise Integration Login Screen

Having successfully logged into the 3CX ConnectWise Integration login screen, the **Settings** screen will display. On this screen you manage which extensions are authorized to use the 3CX CRM Plug-in for ConnectWise client plug-in.

9. Select each extension authorized to use the 3CX CRM Plugin for ConnectWise by clicking on the check box next to the desired extension.
10. Press the **Save** button to committ your changes.