Avaya Solution & Interoperability Test Lab

Application Notes for Configuring NMS Adaptive Progressive Dialler with Avaya IP Office R8.0 using Avaya IP Office TAPI Service Provider – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for NMS Adaptive Progressive Dialler module to interoperate with Avaya IP Office. Adaptive Progressive Dialler is one module of the NMS Adaptive Suite which allows users to make outbound phone calls as a part of a Progressive outbound campaign.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the compliance tested configuration used to validate the NMS Adaptive Progressive Dialler module of the Adaptive Suite with Avaya IP Office R8.0 using Avaya IP Office TAPI3 Service Provider. The Adaptive Suite interoperates with Avaya IP Office using Third Party Telephony Application Programming Interface (TAPI).

NMS Adaptive is a Computer Telephony Integration platform that provides call control, media blending, progressive and predictive dialling and monitoring functionality to end users. Adaptive Desktop allows operators to control making and receiving calls via an Avaya deskphone registered to the Avaya IP Office. The Adaptive Progressive Dialler module of the NMS Adaptive Suite allows the automation of outbound dialling using progressive dialling campaigns. The Adaptive Campaign Editor allows the importing of call lists and sets call outcome codes and dialling parameters. If combined with Adaptive CTI, screen-pops can be designed to activate as each outbound call is dialled.

When a user becomes available, the Adaptive Progressive Dialler retrieves the next call in the campaign and dials it using the IP Office deskphone. The computer shows the user a campaign call dialog, giving information about the call and the recipient. At any time during the call, the user can select a "call outcome code". The user can also choose to reschedule the call for another time and date. When the call has finished, the Adaptive Progressive Dialler gives the user time to do any post-call work or "wrap-up" before making the next call.

If the user wants to take a break, the "make this my last call" feature and the Adaptive Progressive Dialler will mark the user as "unavailable" until ready for more work. The Adaptive Progressive Dialler records the time a user spends unavailable, so that a report showing how much time users spent unavailable and how much talking to customers can be ran.

2. General Test Approach and Test Results

The interoperability compliance testing included feature and serviceability testing. The feature testing focused on verifying NMS Adaptive handling of CTI messages in the areas of call control, event notification and routing. Testing of outbound calls in an Outbound calls in a Progressive Dialling Campaign was the main focus of the compliance testing.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Compliance testing

The compliance testing focused primarily on the following types of calls:

- Progressive Dialler Single Number tests
- Progressive Dialler Multi Number tests

The serviceability testing focused on verifying the ability of NMS Adaptive to recover from adverse conditions, disconnecting the Ethernet cable for the CTI link and the reboot of Adaptive server under test.

2.2. Test Results

The following observations were noted during testing:

- Adaptive Desktop does not login a user as a part of the CTI functionality. Call Control is taken for a user already logged in to an extension.
- Option for re-scheduling the second call in a multi number campaign is greyed out.
- There is no preparation time for the second call in a multi number campaign if the first call is not answered it is dialled directly after the first call is unanswered.
- The CLID for Alternative Numbers do not show the Management Console Historical Single Campaign Report.

2.3. Support

For technical support on NMS Adaptive products please contact the NMS Adaptive support team at:

Web address	:	http://www.nms-adaptive.com/support-options.html
Telephone	:	+44 845 612 4000
Email	:	support@nms-adaptive.com

3. Reference Configuration

Figure 1 shows the network topology for compliance testing. NMS Adaptive Predictive Dialler which resides on a Windows 2003 Server with IP Office TAPI3 Service Provider to provide a CTI connection to Avaya IP Office. Avaya 2400 Series digital deskphones are associated with Adaptive Desktop operators/users giving each Adaptive Desktop user telephony functionality from the IP Office. Avaya H.323 IP deskphones can also be used to provide telephony functionality.

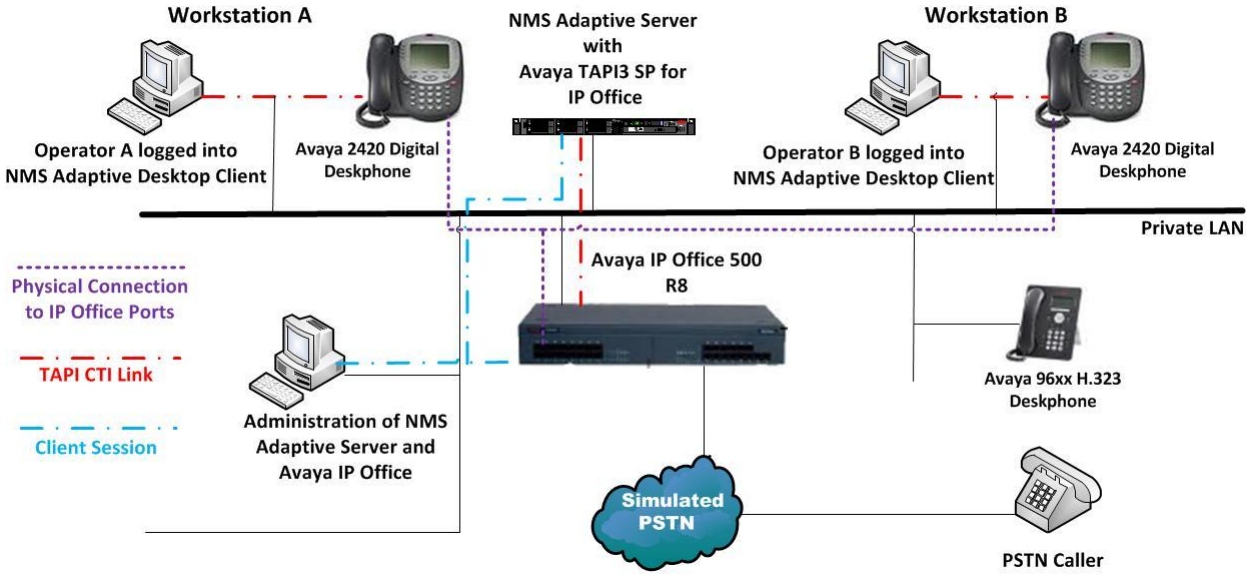


Figure 1: Connection of NMS Adaptive Progressive Dialler with Avaya IP Office R8.0

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Release/Version
Avaya IP Office 500	Avaya IP Office R8.0.16
Avaya 96xx H.323 Deskphone	Avaya H323 IP Office Firmware Ha96xxua3_Hbas.bin
Avaya 2420 Digital Extension	N/A
Avaya TAPI3 Telephony Service Provider Client for IP Office Installed on Adaptive Server.	Avaya TSPI3w.tsp 1.0.0.17
Platform Independent Server with Windows 2003 Server O/S and NMS Adaptive Server.	NMS Adaptive Progressive Dialler Release 9.4
Client Workstation with Windows XP and NMS Adaptive Desktop	NMS Adaptive Desktop Release 9.4

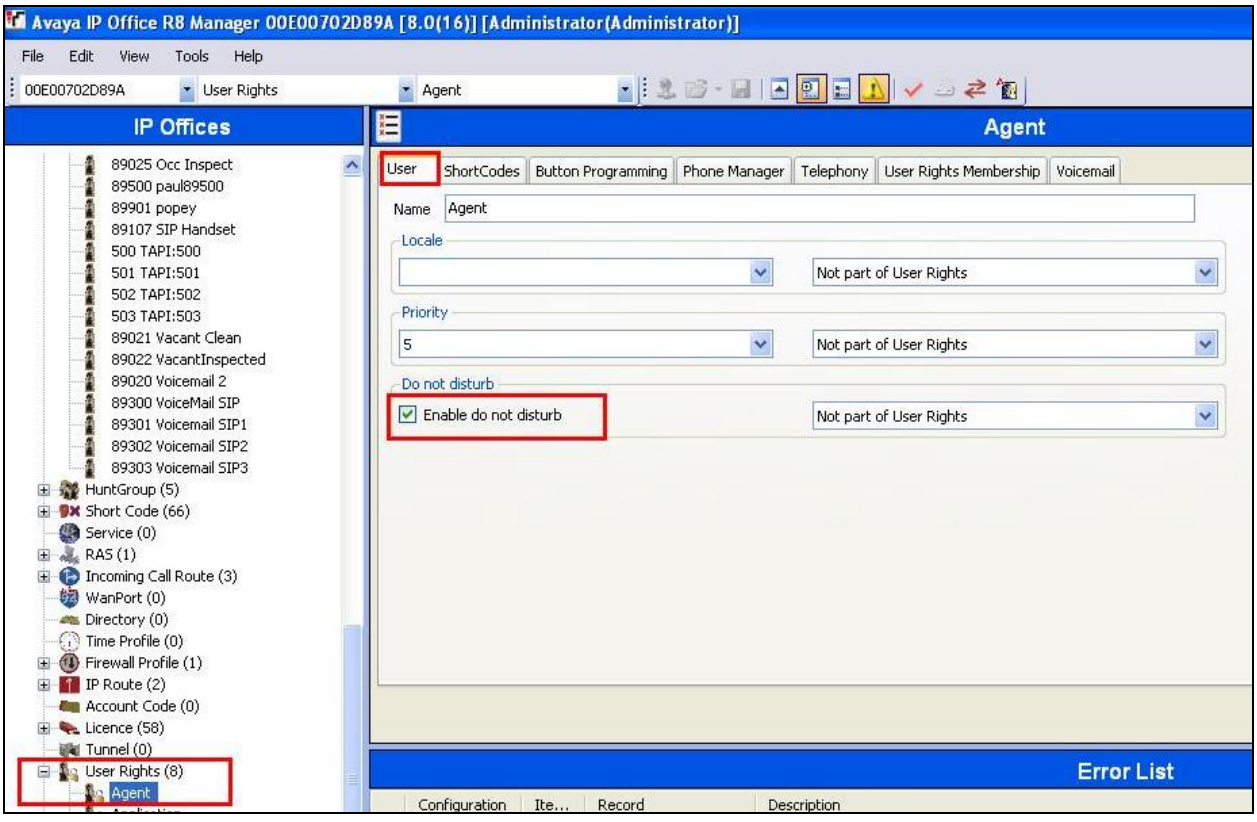
5. Configuration of Avaya IP Office

IP Office is administered using IP Office Manager installed on a client PC. It is assumed that a fully working IP Office is in place with extensions and users preconfigured. This section shows what changes to the IP Office configuration is required for NMS Adaptive Progressive Dialler to interoperate correctly with IP Office.

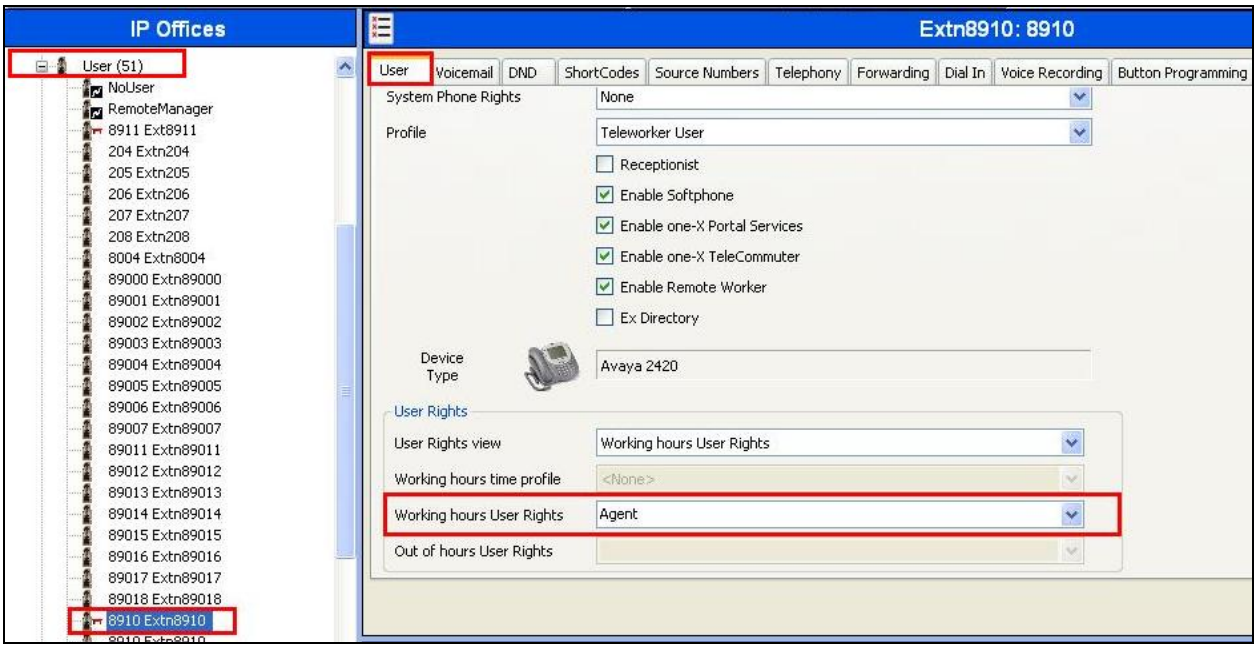
Note: A user must be logged into the extension before the Adaptive Desktop can assume control of the extension.

5.1. Configuration of Avaya IP Office Users

Each user needs to be configured to allow the do not disturb feature. Click on **User Rights** in the left window select the user right associated with the users. In the example below this is called **Agent**. Under the **User** tab ensure **Enable do not disturb** is ticked as shown. Enter a suitable name for the User rights as this will be referenced in the User configuration to follow. Click **OK** once the information is entered correctly (not shown).

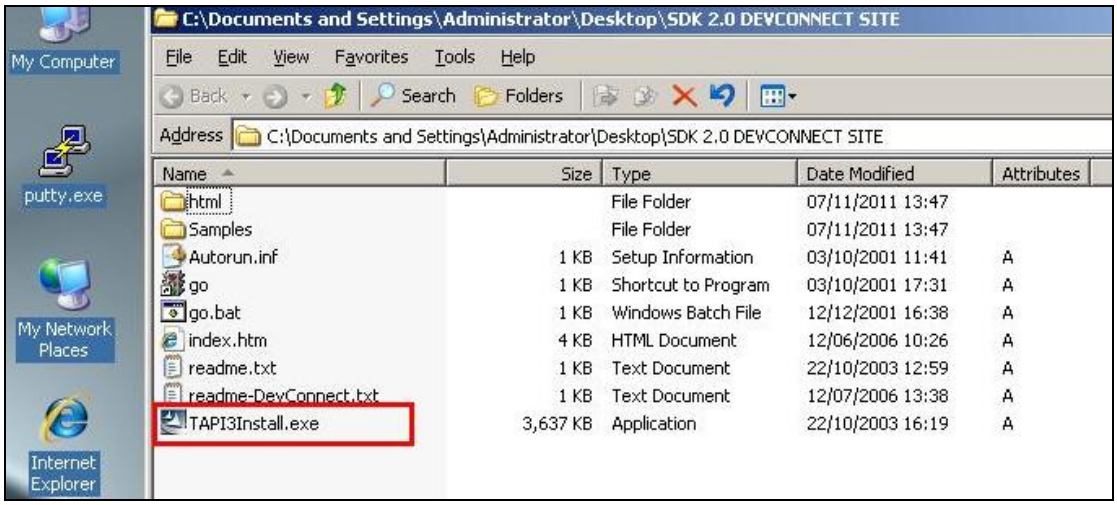


Expand on **User** in the left window and select the user to modify. Under the **User** tab in the right window ensure that **Working hours User Rights** is set to that user rights configured above.



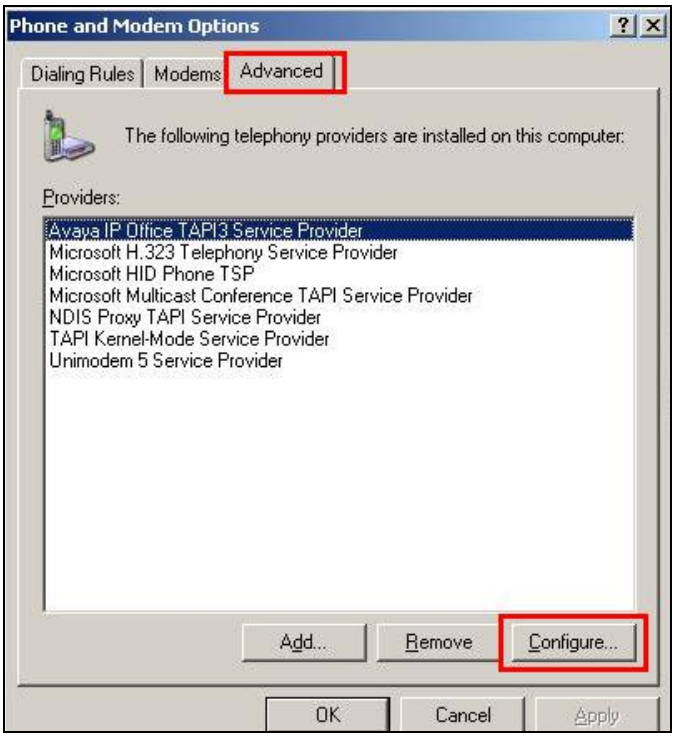
6. Installation and Configuration of Avaya IP Office TAPI3 Service Provider

TAPI3 Service Provider is included in the IP Office CTI Link Software Development Kit (SDK) located on the DevConnect website (http://www.avaya.com/gcm/master-usa/en-us/corporate/alliances/devconnect/index.htm) under the product name IP Office. Once downloaded the install is initiated by running **TAPI3Install.exe** as shown below.

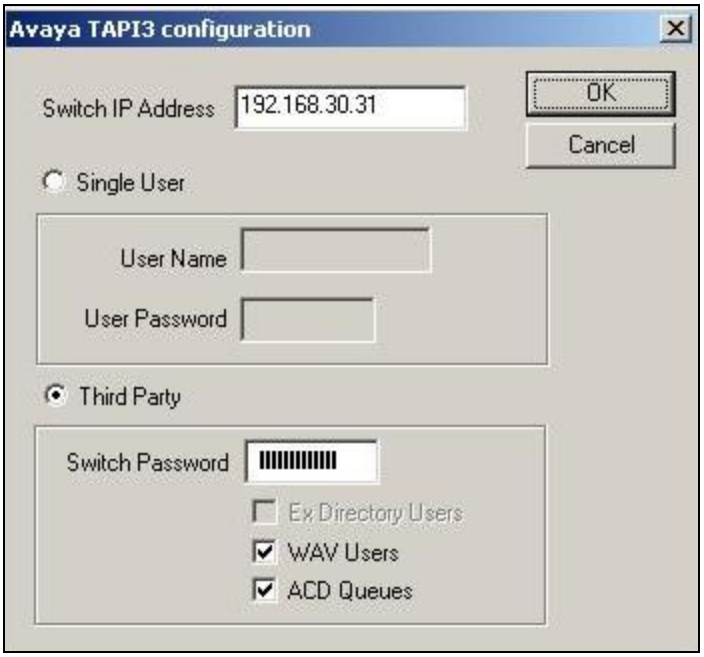


To configure the TAPI Service Provider, navigate to **Control Panel** and right click on **Phone and Modem Options** and properties as highlighted below.

Click on the **Advanced** tab and highlight **Avaya IP Office TAPI3 Service Provider** and click **Configure**.



Enter the IP Office IP address into the **Switch IP Address** box. Select **Third Party** and enter the IP Office Administrators password into the **Switch Password** box. Ensure **WAV Users** and **ACD Queues** are ticked as shown below.



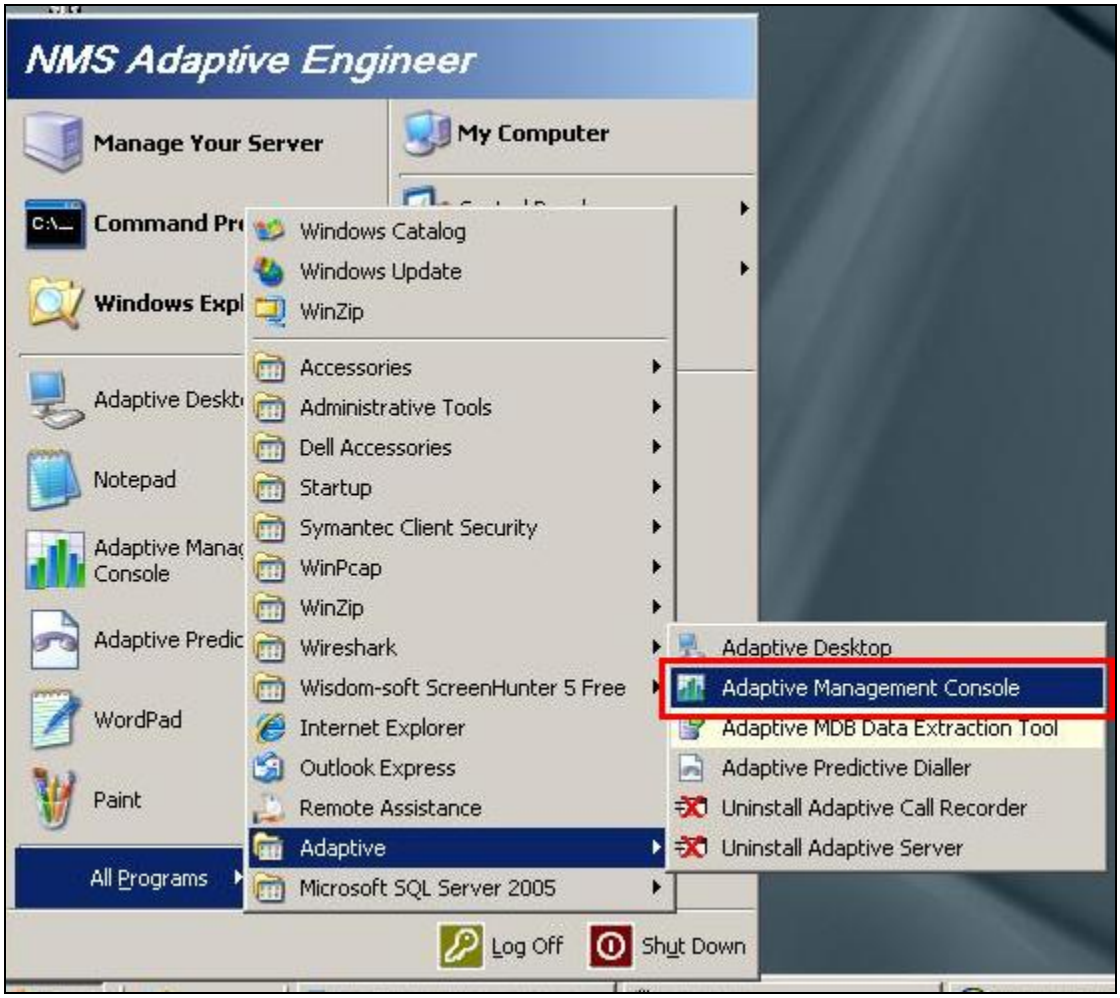
7. Configuration of NMS Adaptive Progressive Dialler

This section outlines the steps necessary to configure the NMS Adaptive Progressive Dialler to enable the Adaptive Desktop users use the Avaya IP Office deskphones in a progressive dialling outbound campaign. All configuration changes on the Adaptive Server are done through Adaptive Management Console installed on the Adaptive Server.

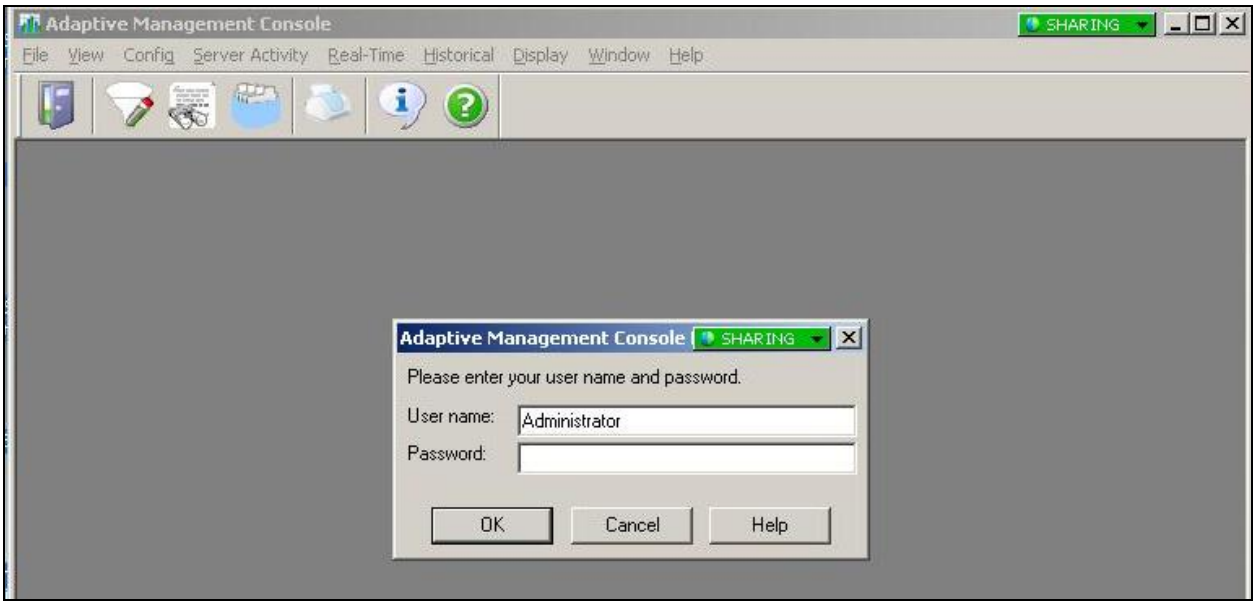
Note: Installation of the Adaptive CTI software is outside the scope of this document, for additional information regarding the installation please see **Section 10** of these Application Notes.

7.1. Configuration of NMS Adaptive CTI Gateway

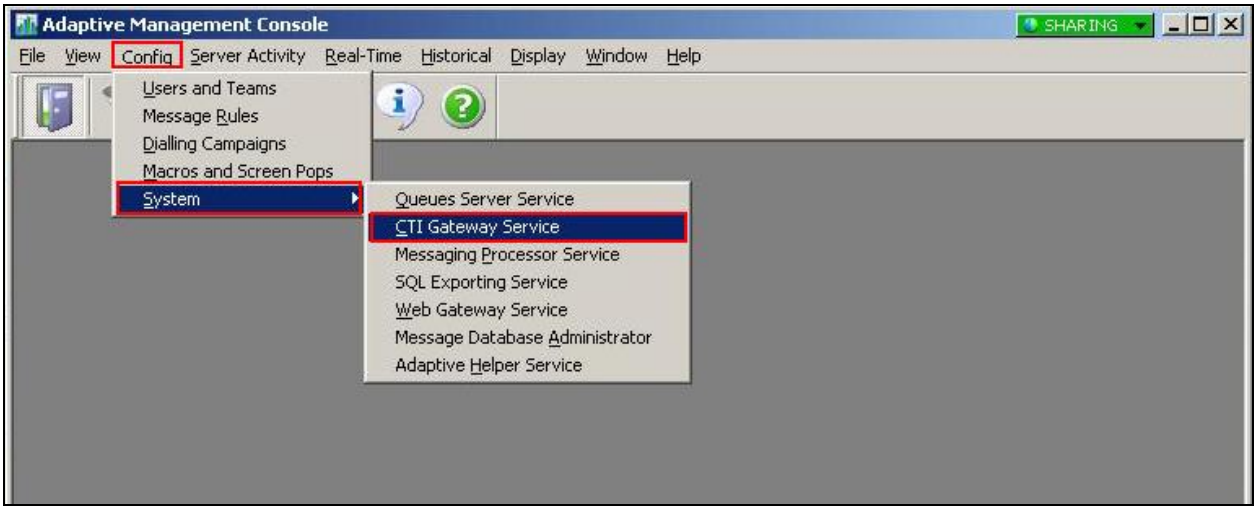
The steps below describe the configuration for Adaptive CTI Gateway. This configuration enables the Adaptive Suite to communicate with IP Office via TAPI. Open the program **Adaptive Management Console** as shown below.



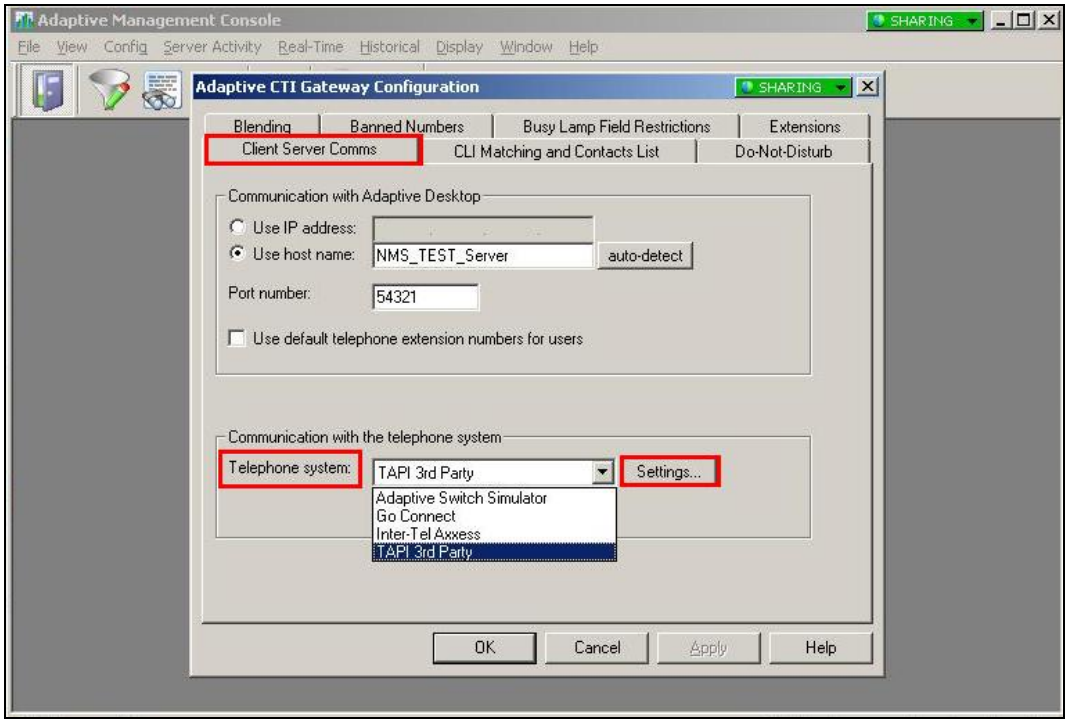
Enter the appropriate credentials into the **Adaptive Management Console** login screen as shown.



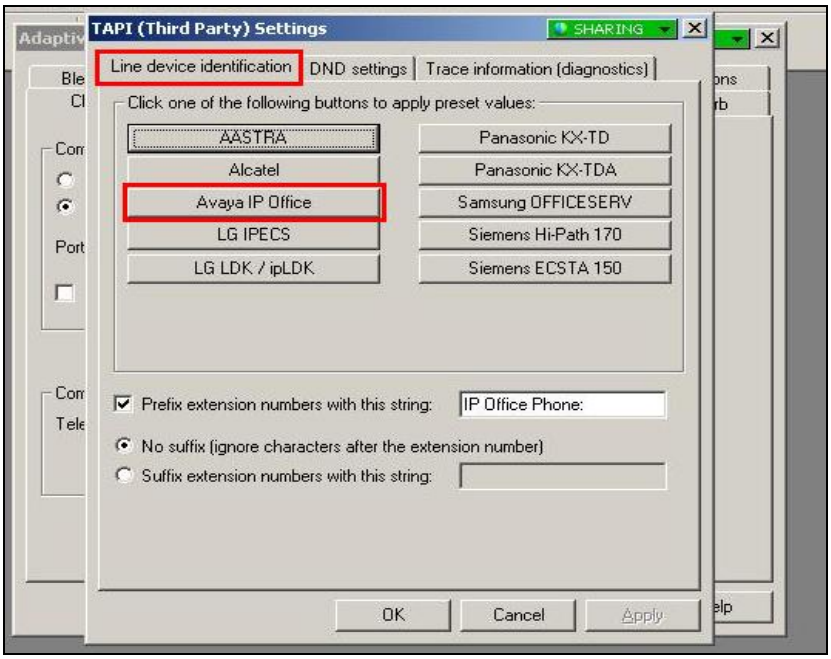
Once logged in configure the CTI Gateway Service by clicking on **Config** in the toolbar at the top of the screen and under **System** select **CTI Gateway Service** as shown below.



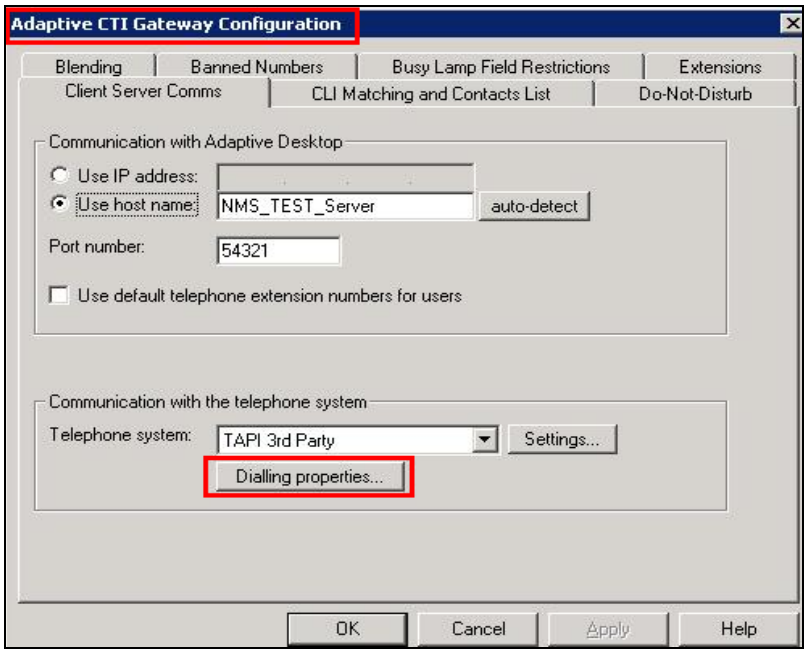
The **Adaptive CTI Gateway Configuration** window opens. Select **Client Server Comms** tab and select **TAPI 3rd Party** for the **Telephone system** as highlighted below. Click **Settings** to configure the TAPI Settings.



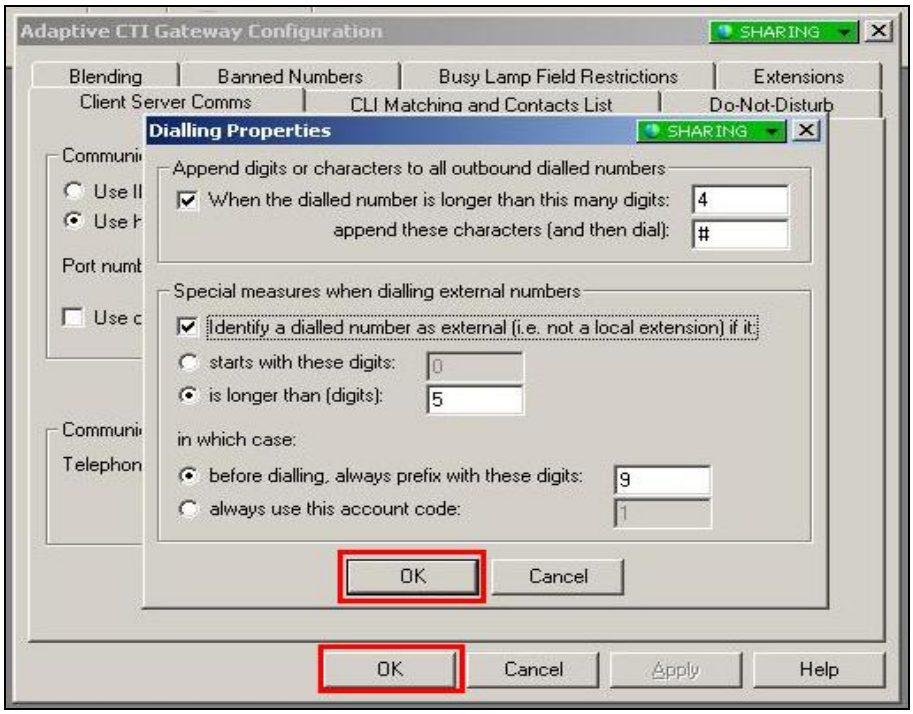
The **TAPI (Third Party) Settings** window opens. Click the **Avaya IP Office** button under the **Line device identification** tab and click **OK** to submit. All other entries are default.



Click on **Dialling properties** on the **Adaptive CTI Gateway Configuration** window as shown below.

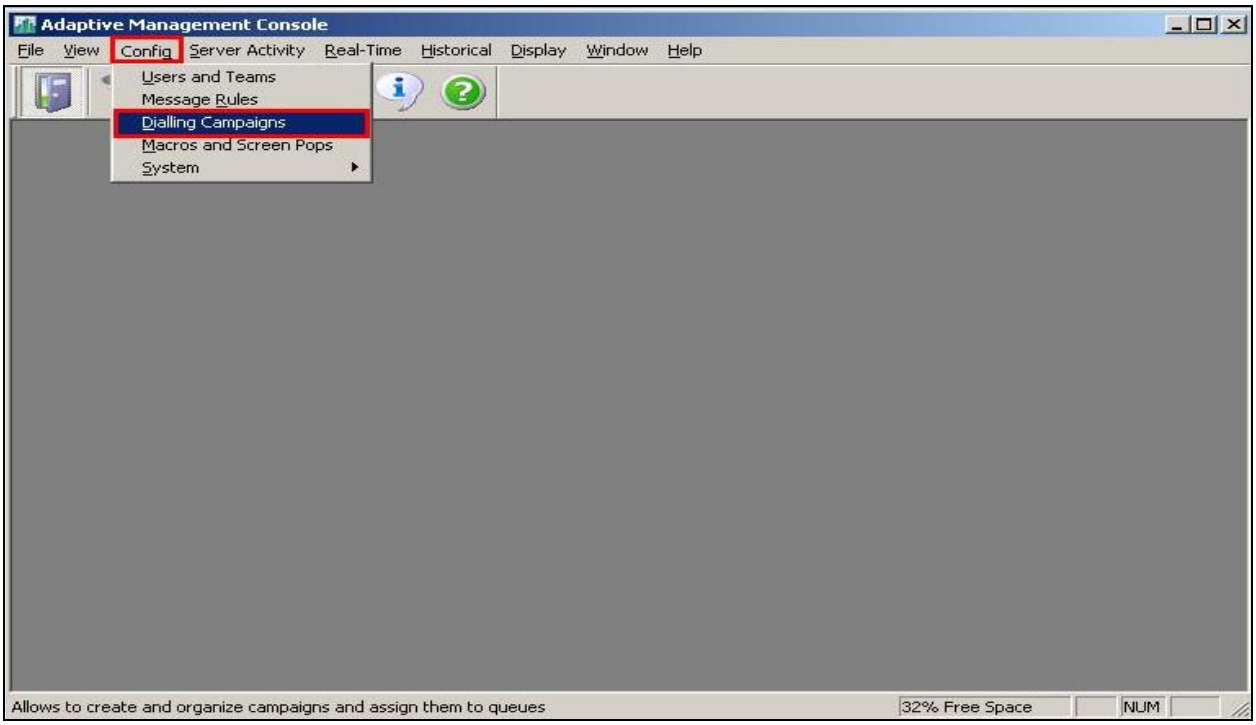


Prefix numbers for outside lines and appended numbers are added for the system on this screen. The information added here is non-specific as it is unique for each site. Once the relevant information is added, click **OK** and **OK** on the **Adaptive CTI Gateway Configuration** window, as shown.

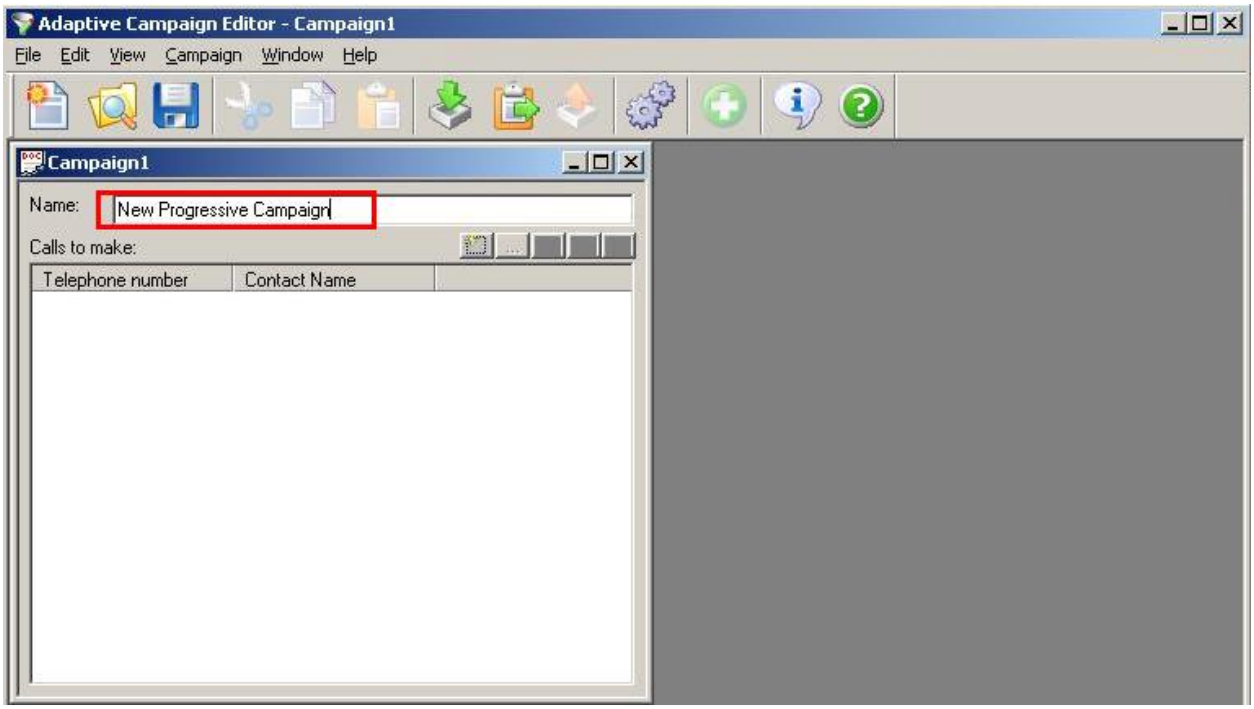


7.2. Configuration of NMS Adaptive Progressive Dialler Campaign

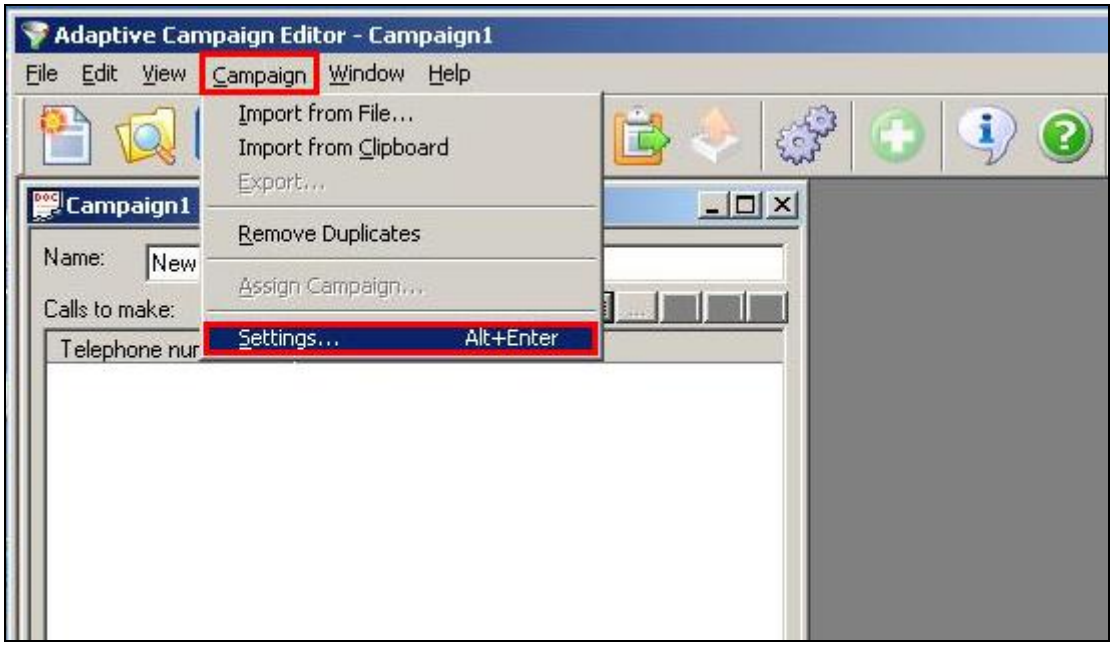
Open the Adaptive Management Console as described in **Section 7.1**. Select **Config** in the tool bar and click on **Dialling Campaigns** as shown below.



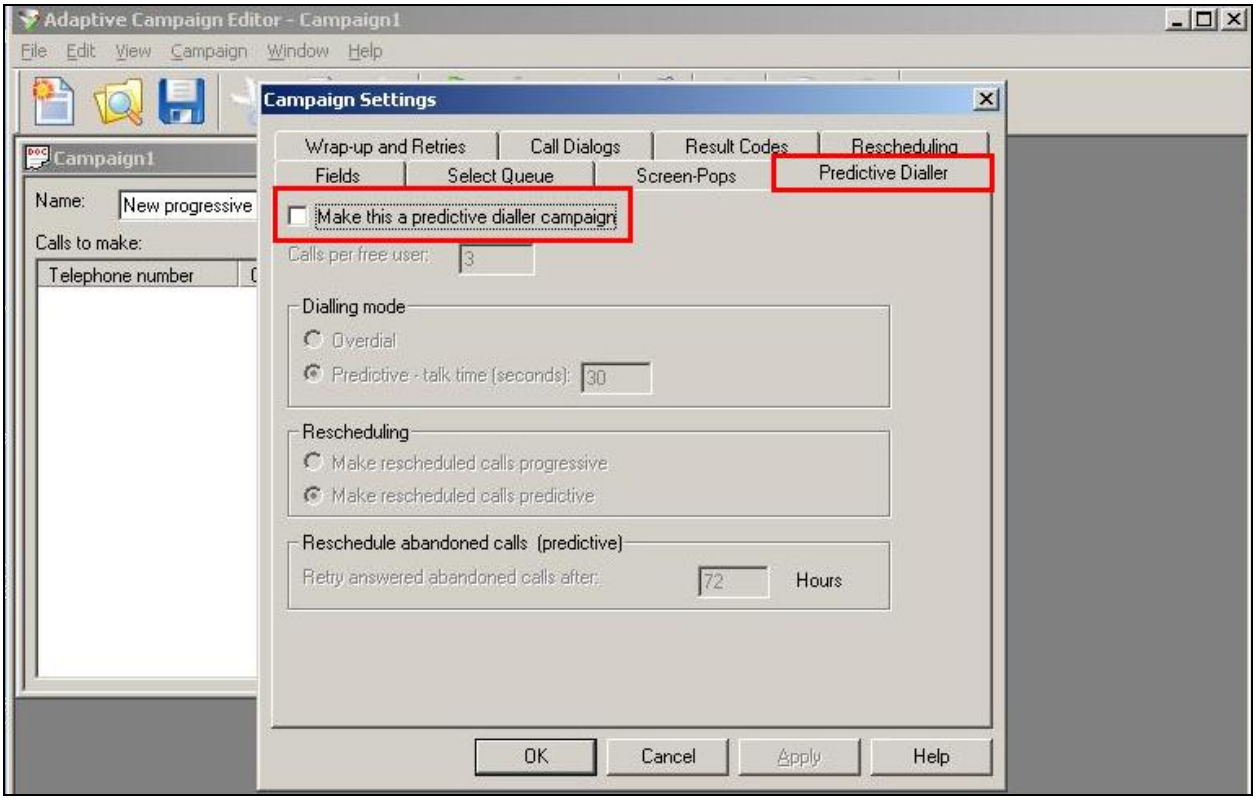
Enter a suitable **Name** for the **Campaign**.



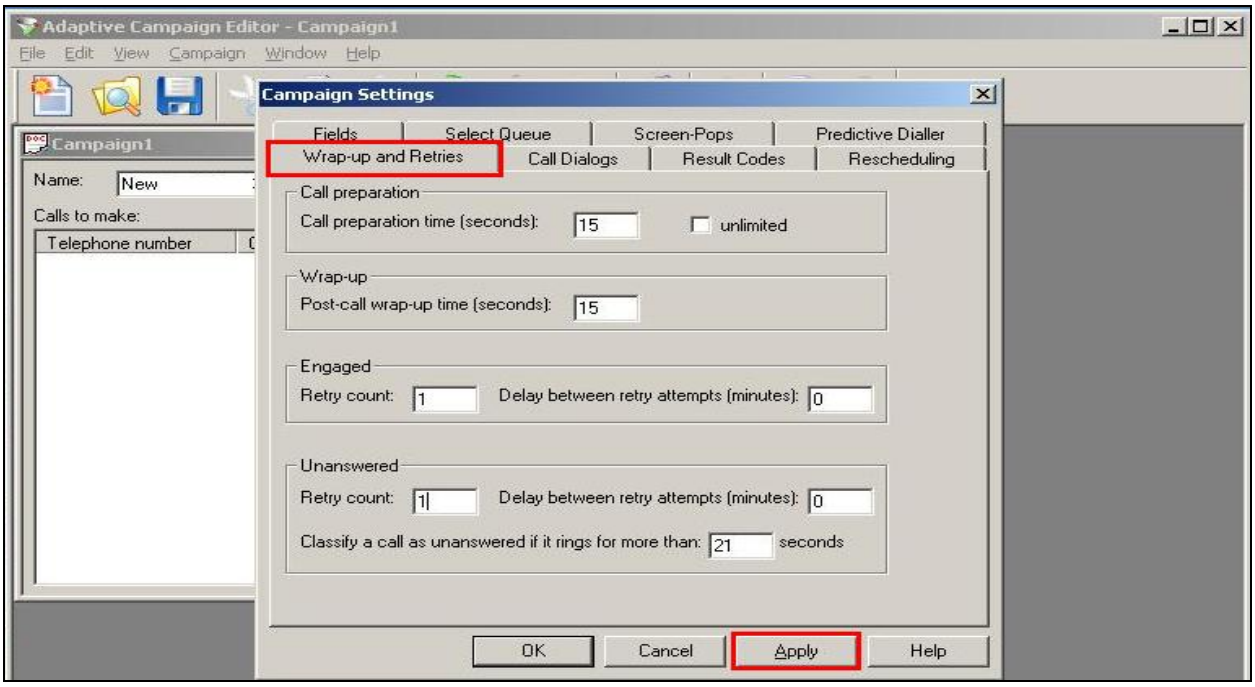
Select **Campaign** from the top toolbar and **Settings** as shown below.



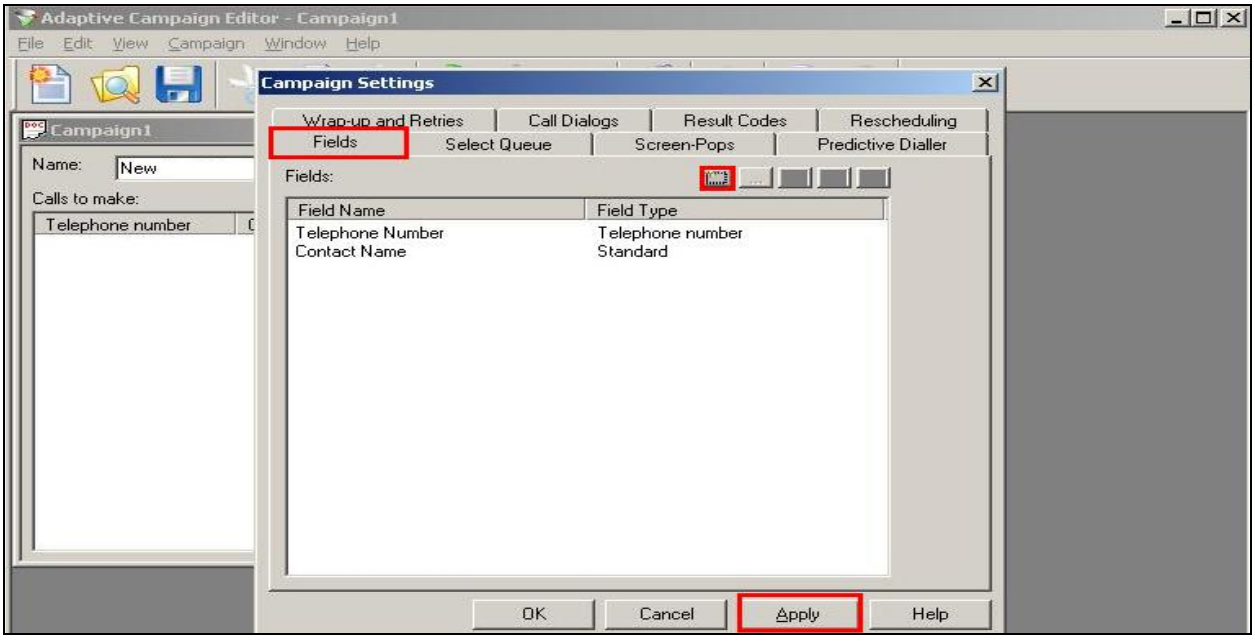
Under the **Predictive Dialler** tab, ensure that **Make this a predictive dialler campaign** is not ticked as shown.



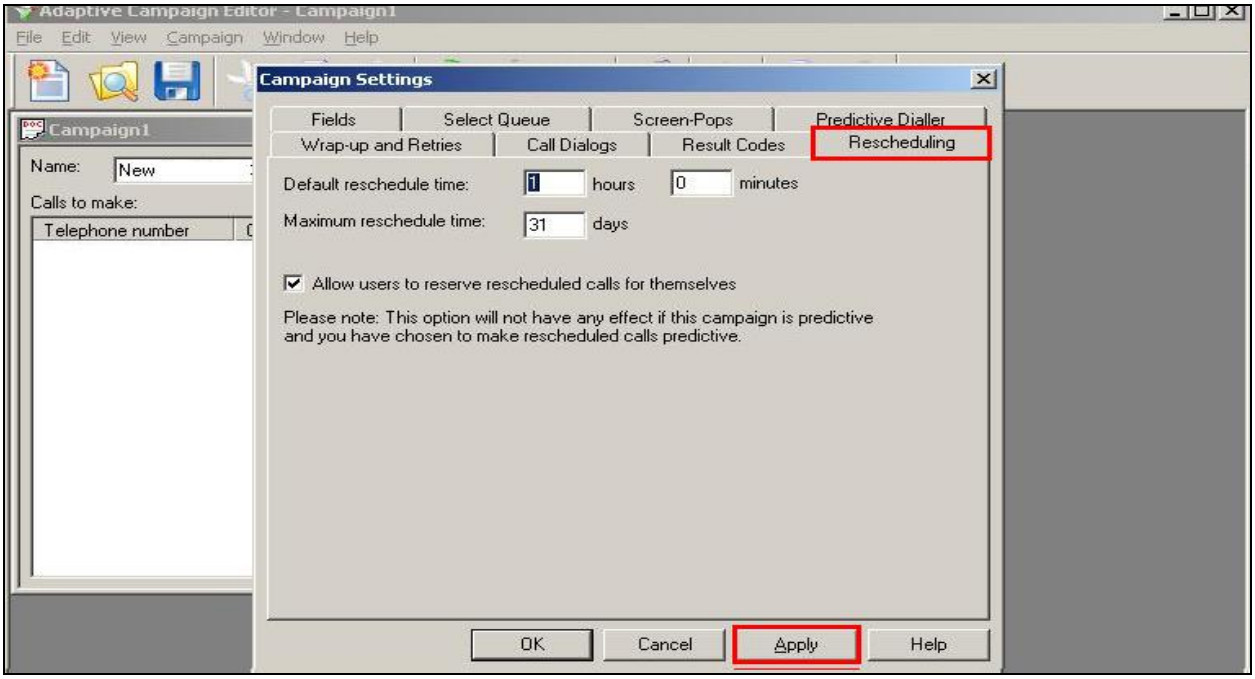
Click on the **Wrap-up and Retries** tab. Select a suitable **Call preparation** and **Wrap-up** time. This is selected to give users a fixed time in seconds before the outbound call is made and again after the outbound call is finished. Select a suitable **Retry count** for both **Engaged** and **Unanswered calls**. Click **Apply** once the configuration is inputted correctly.



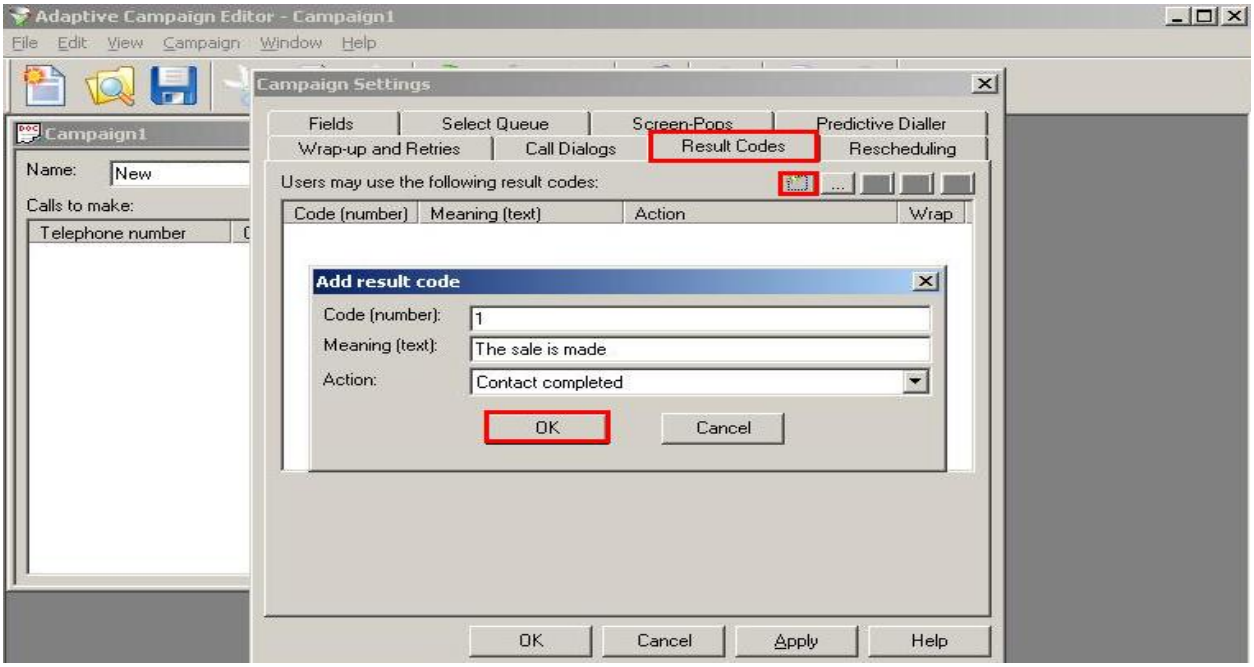
The Predictive Dialler fields such as **Contact Name** or **Telephone Number** can be altered or added to by selecting the icon highlighted below in the **Fields** tab. These fields will be evident in **Section 7.3** when adding calls to a campaign.



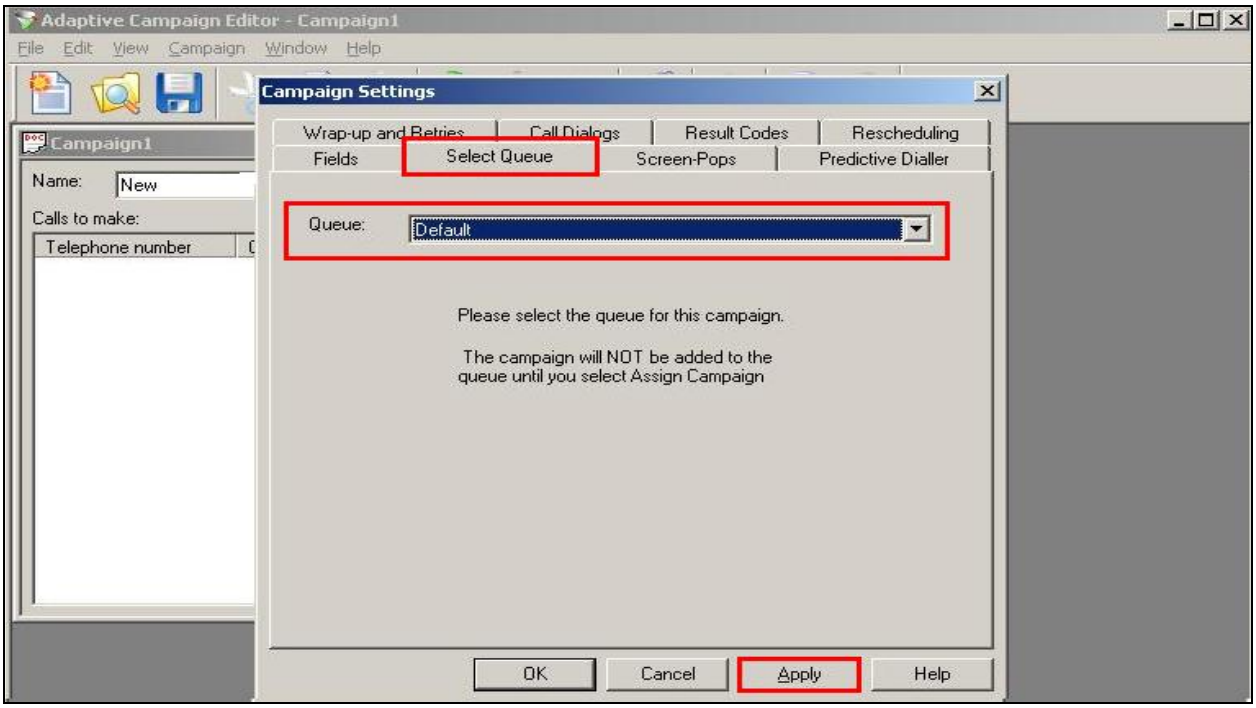
The default rescheduling time can be altered under the **Rescheduling** tab.



Once a call is completed a result code must be entered to report on how the call was finished, for example if the agent made a sale or if the customer was not interested or perhaps would require a call back in the future. Click on **Result Codes** tab and select the icon highlighted to **Add result code**. Enter a suitable **Meaning** and choose an **Action** from the drop-down menu. Click **OK** once completed.

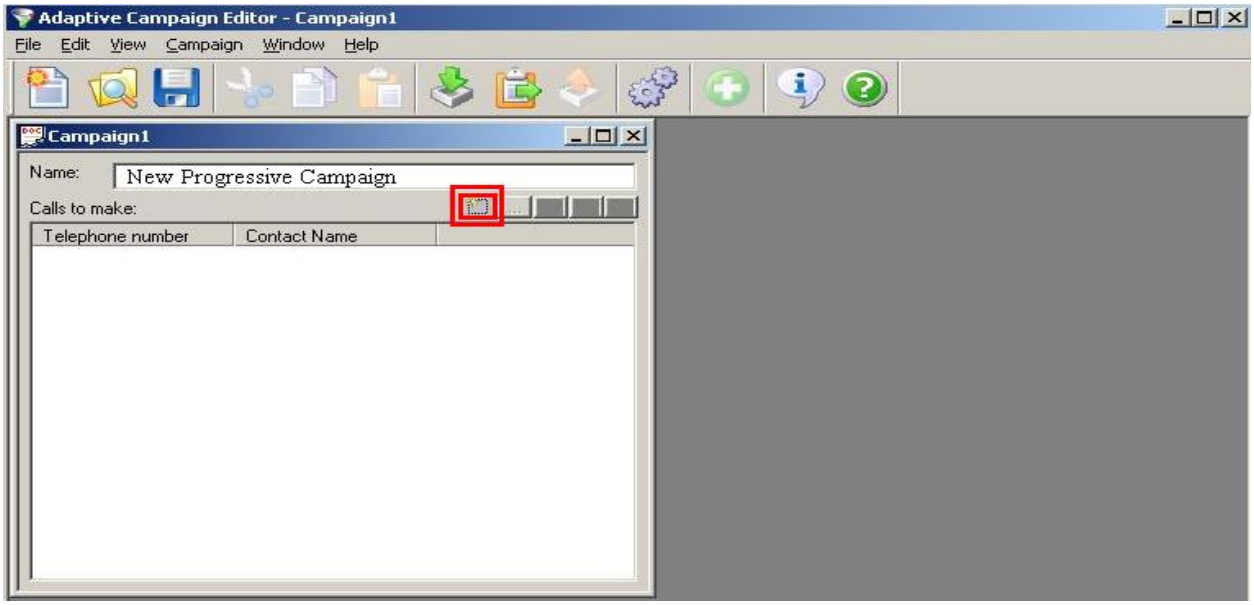


Select the queue to which the Progressive Campaign belongs to under the **Select Queue** tab, click **Apply** once selected.

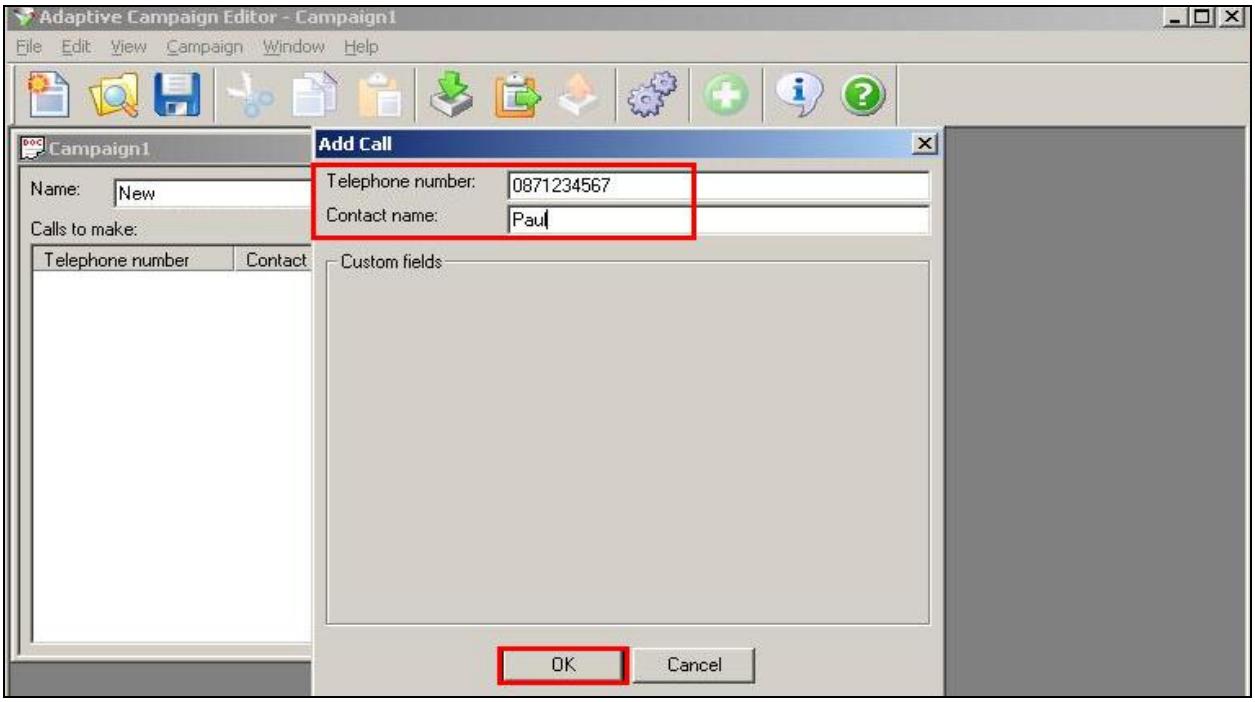


7.3. Adding callers to a campaign

Click on the icon highlighted below to add some users/numbers to the progressive campaign.

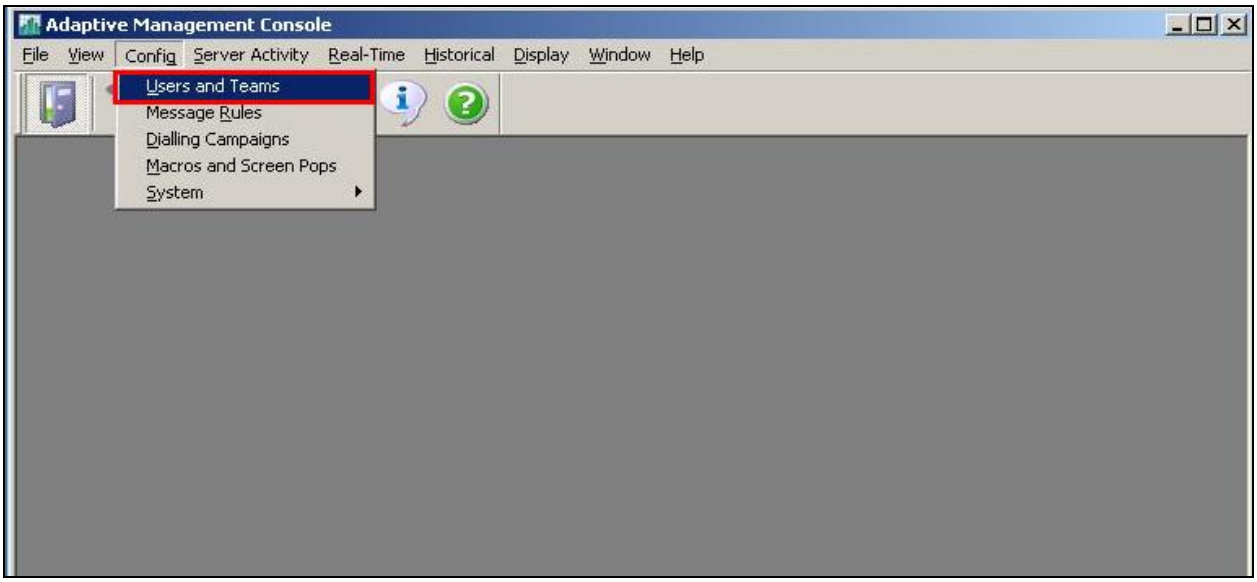


Note the fields present in the Add Call window. These fields correspond to those added in the **Section 7.2** above. Click on OK once completed. Any number of calls can be added to the campaign.

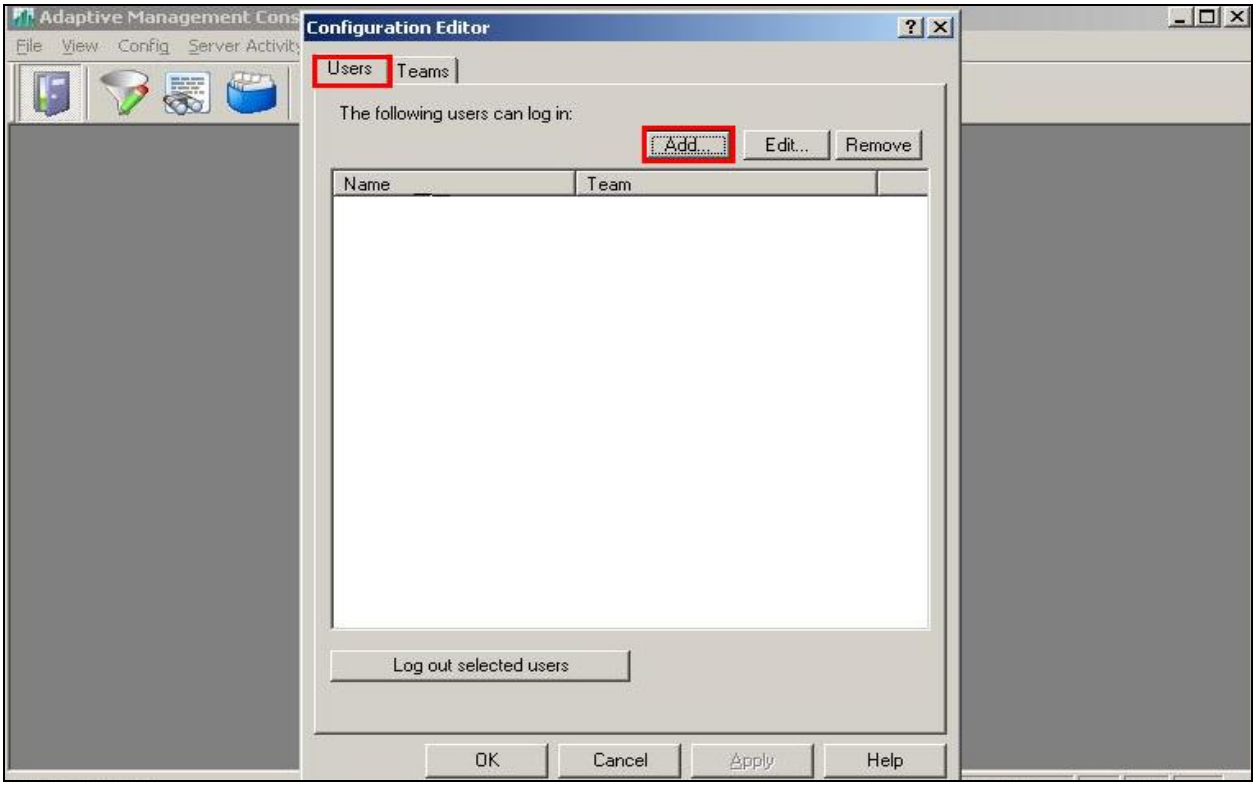


7.4. Adding Adaptive Users

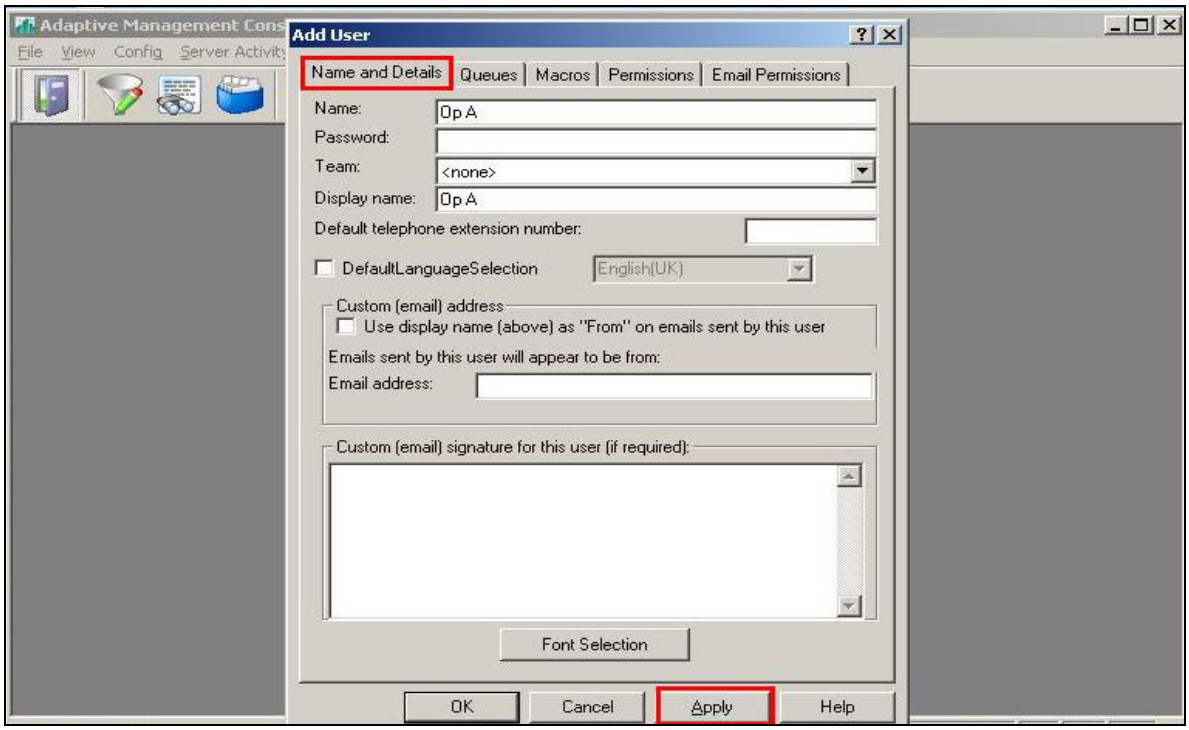
Open the **Adaptive Management Console** as described in **Section 7.1**. Under **Config** on the top toolbar select **Users and Teams** highlighted below.



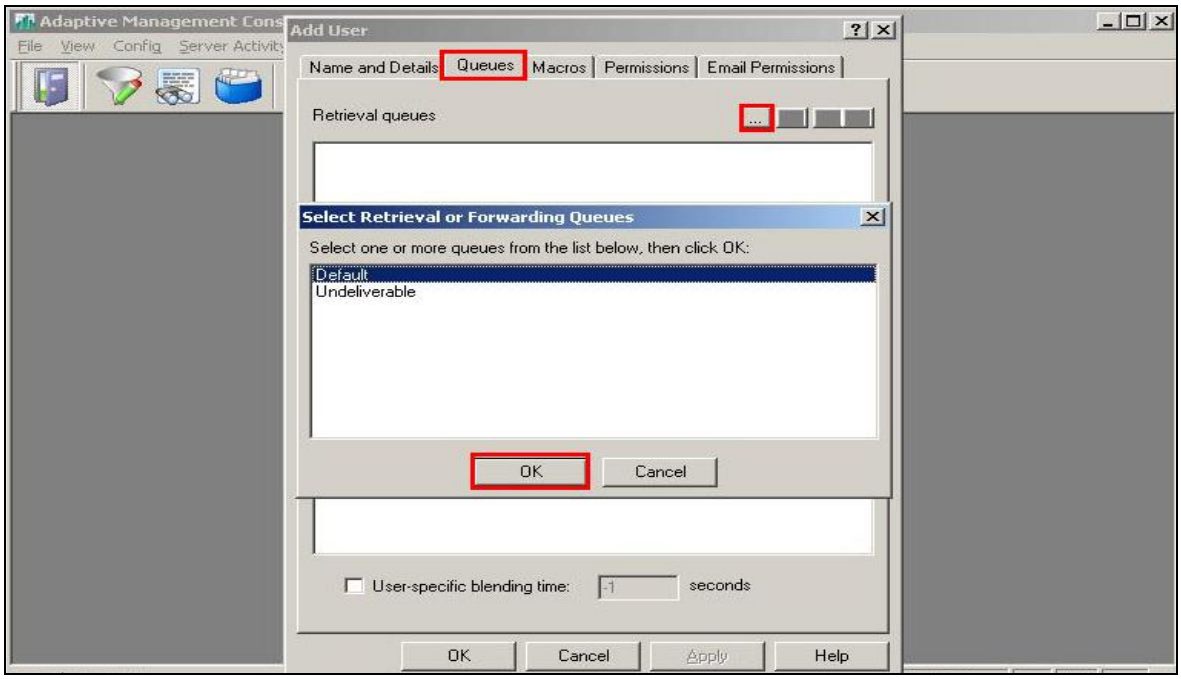
Select the **Users** tab and click on the **Add** button highlighted below.



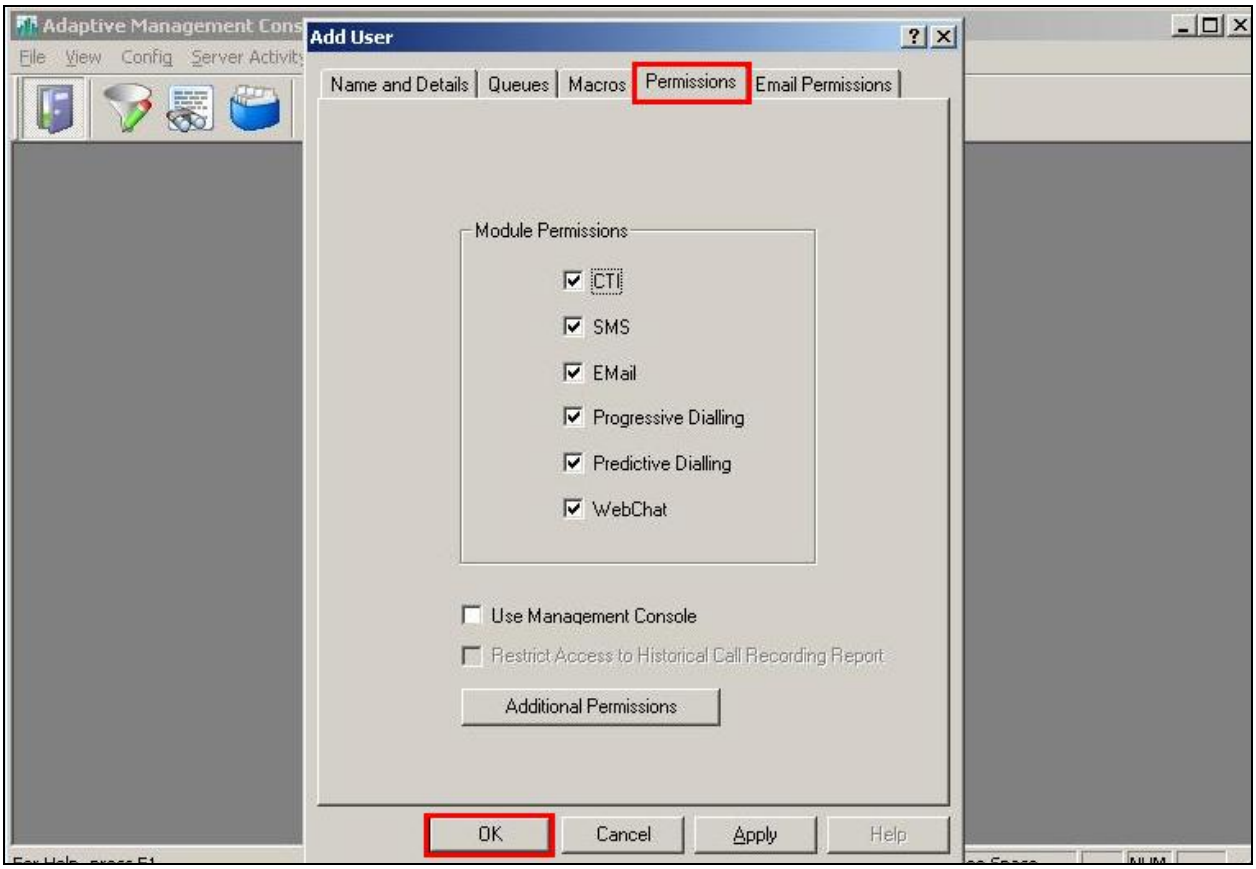
The **Add User** window is opened, under the **Name and Details** tab enter a suitable **Name** and **Password** and click **Apply**.



Select the **Queues** tab and click on the icon highlighted below. The **Select Retrieval or Forwarding Queues** window is opened. Select the required queue that will be associated with the new user and click **OK**.

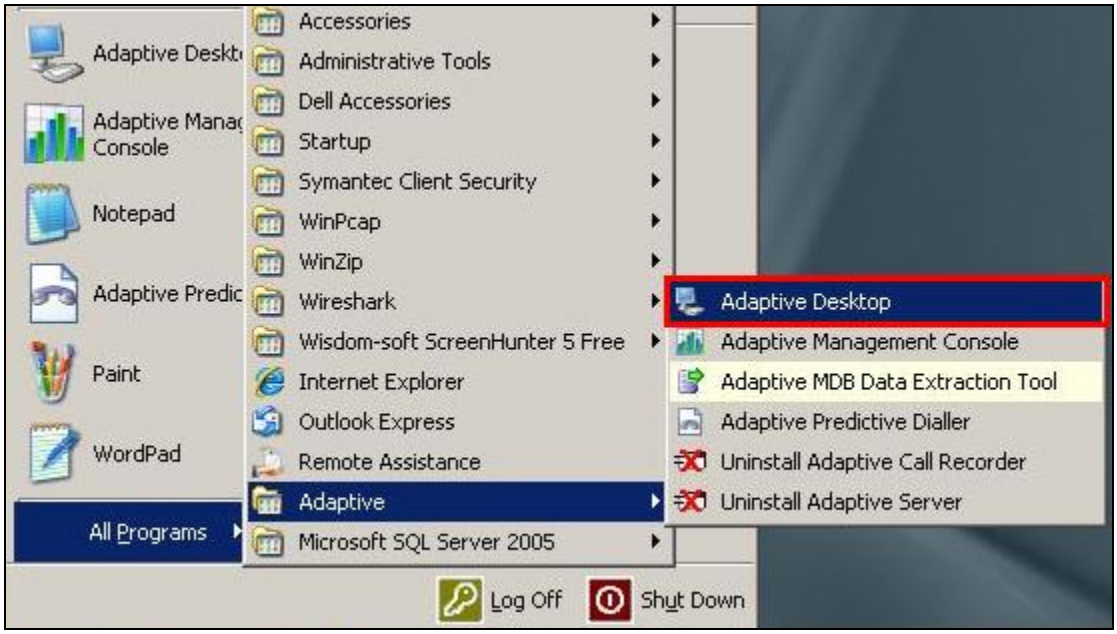


Click on the **Permissions** tab and select the **Module Permissions** required for the user, the example below shows all possible modules selected for the user. Click on **OK** once selected.

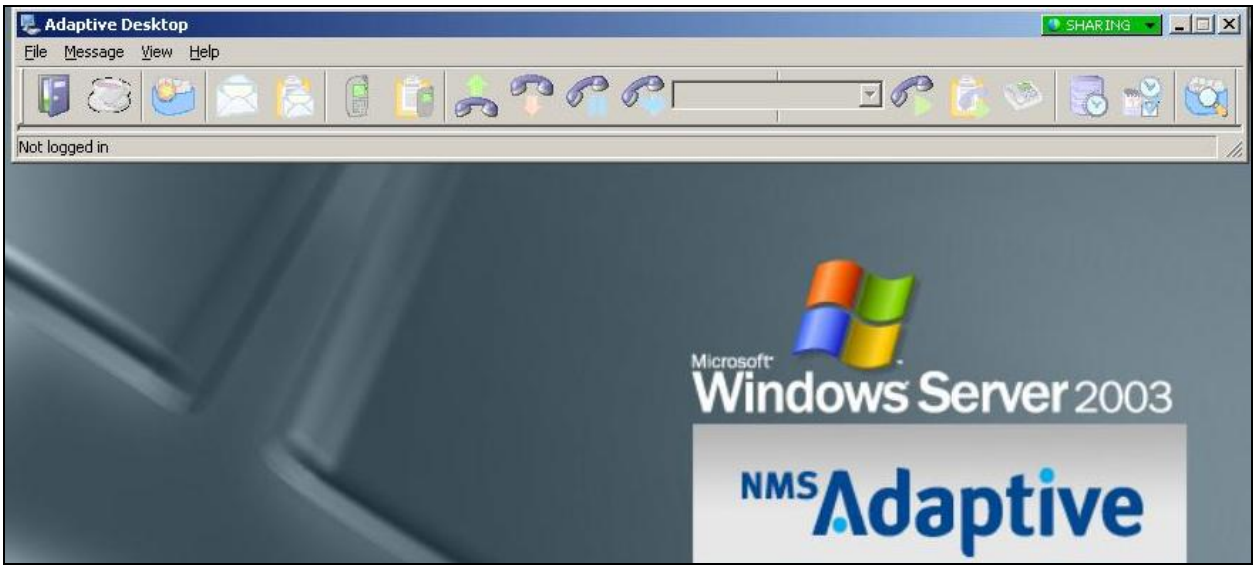


7.5. Configure Adaptive Desktop

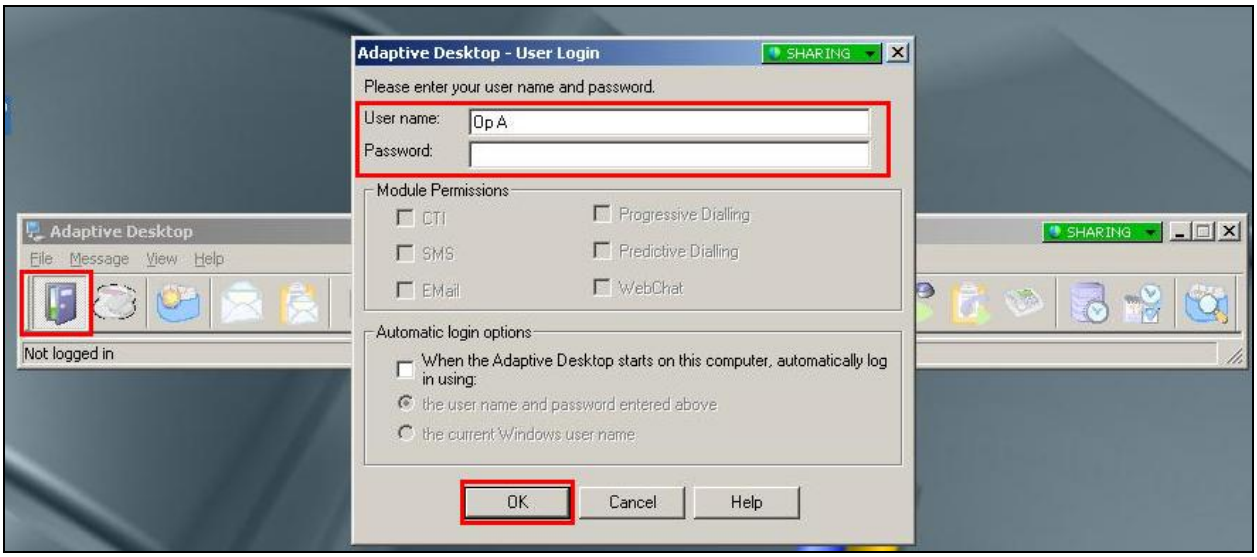
Open **Adaptive Desktop** as shown below.



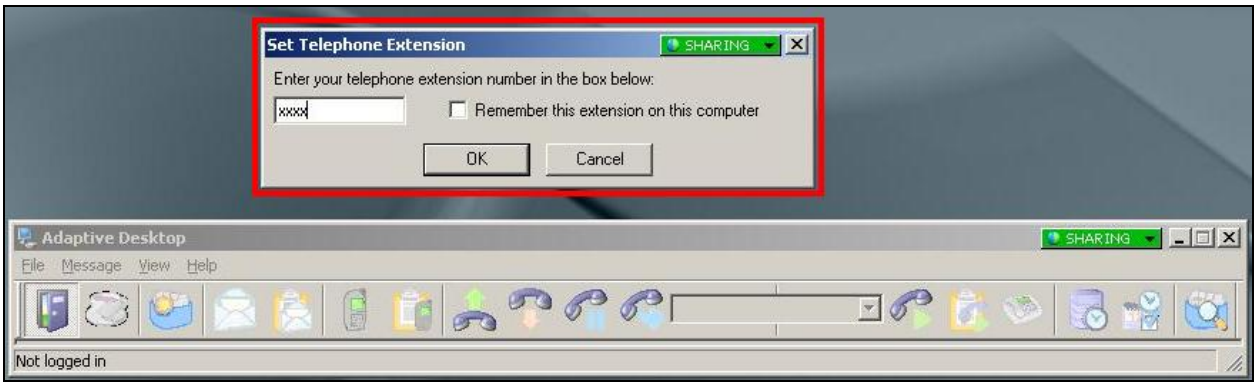
This opens the **Adaptive Desktop** window as shown.



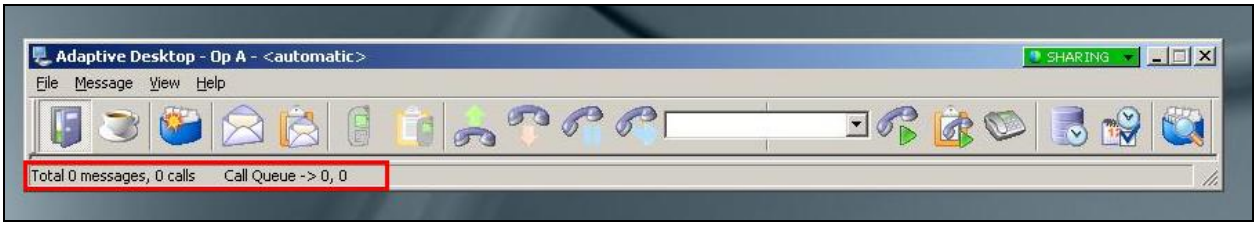
Click on the Login Icon highlighted. This opens the **Adaptive Desktop – User Login window**, Enter the required **User name** and **Password** and click **OK**.



Once **OK** is clicked above the **Set Telephone Extension** window opens. Enter the IP Office extension that is to be associated with the Adaptive Desktop operator and click **OK**.



Once logged in information on **messages**, **calls**, and **Call Queue** is displayed as highlighted below.

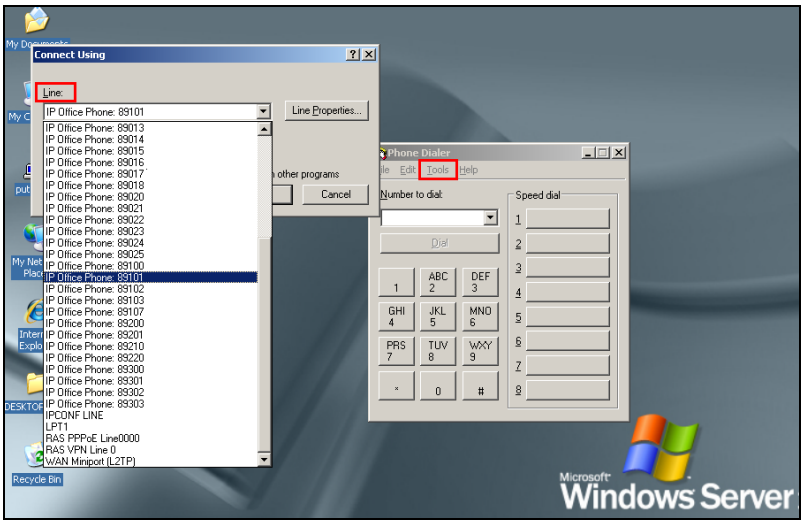


8. Verification Steps

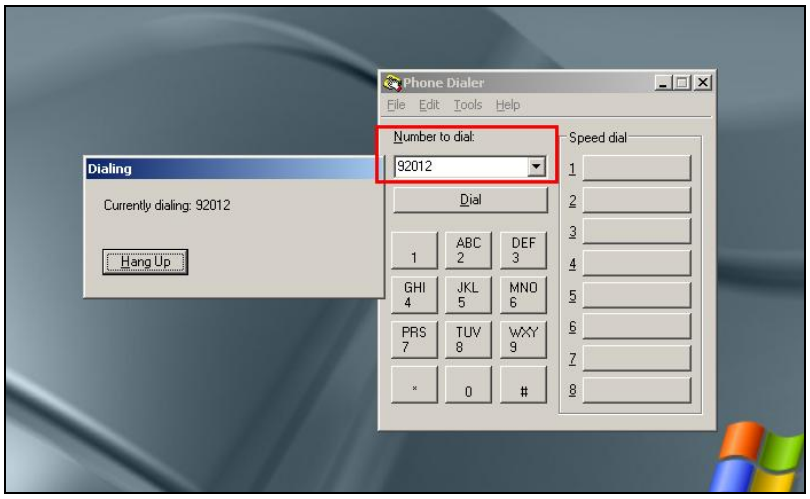
This section illustrates the steps necessary to verify that the NMS Adaptive Progressive Dialler is connected to the IP Office correctly.

8.1. Verify that Avaya IP Office TAPI Service Provider is running correctly

Open **Phone Dialer** (Windows program installed on all Windows platforms) on the Evolution Server where TAPI is installed. Click on the Tools menu and select **Connect Using**. Another box opens as shown below. Open the **Line** dropdown box and all the IP Office users should here as an available line to use.

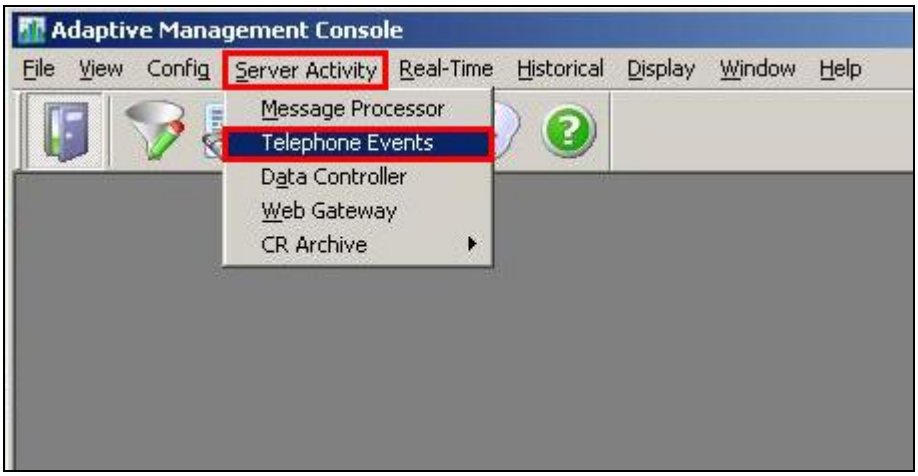


Choose any line and in the box **Number to dial** enter a valid IP Office extension number as shown below and click **Dial**. The **Phone Dialer** should successfully call the chosen extension number.

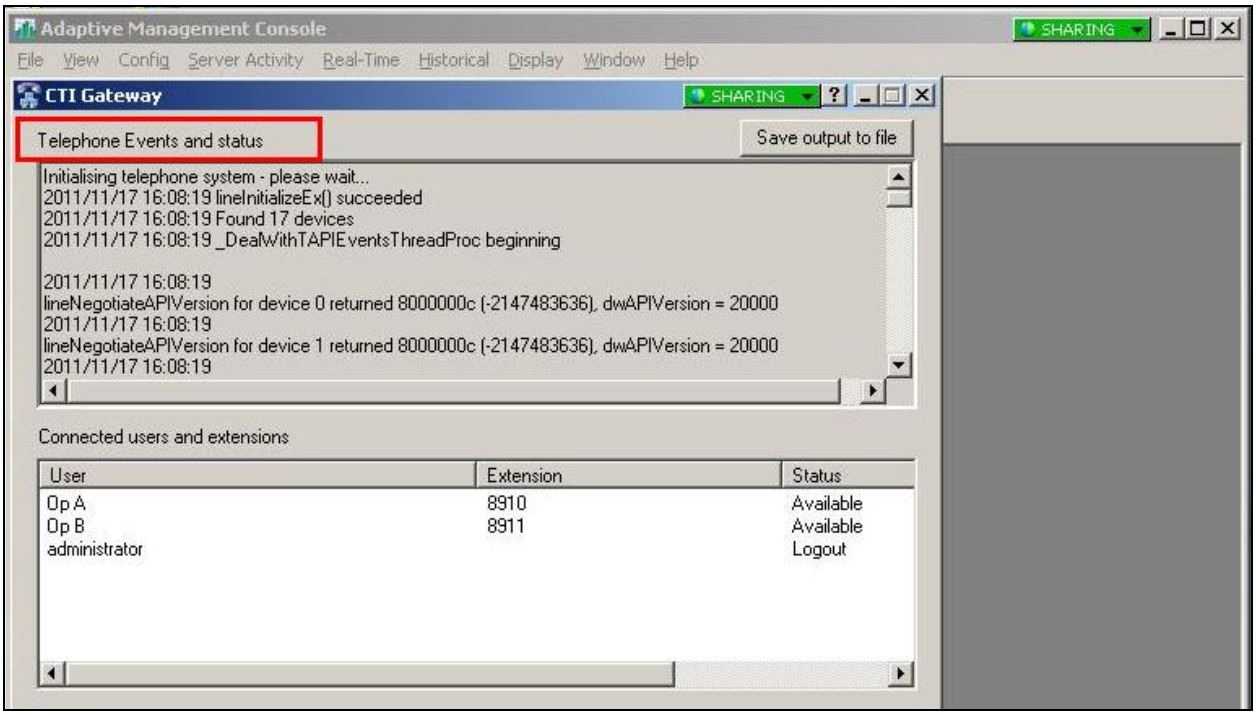


8.2. Verify that NMS Adaptive Server has CTI functionality

Open Adaptive Management Console as shown in **Section 7.1**. Click on **Server Activity** in the top menu and **Telephone Events** as shown below.

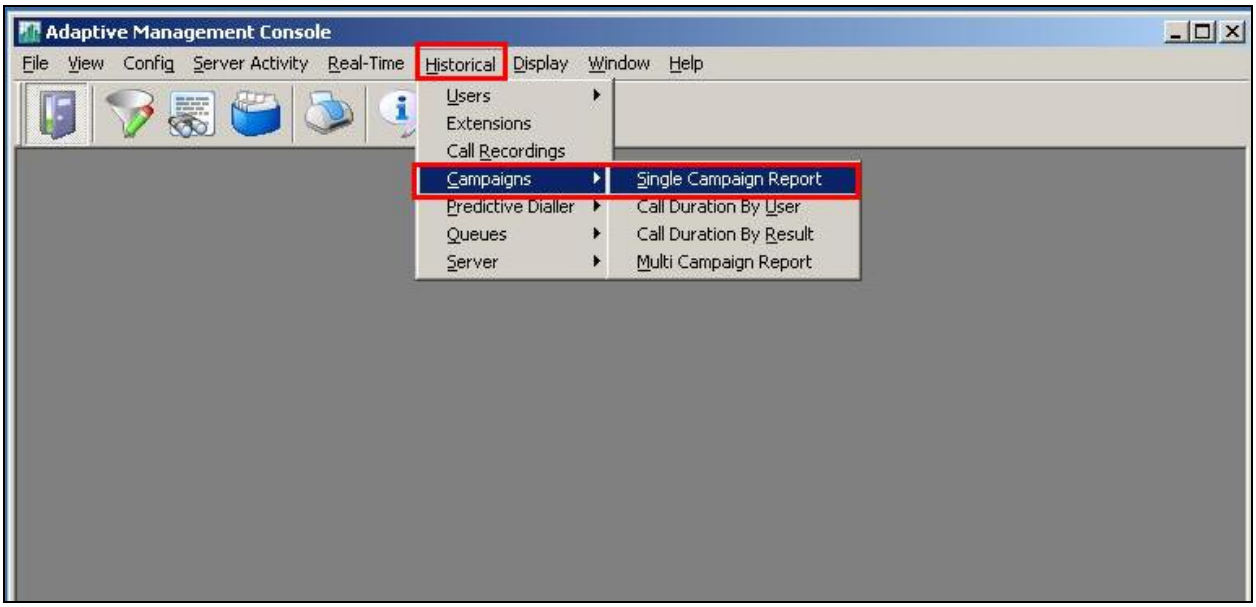


Telephone Events and status are displayed in the **CTI Gateway** window as shown below.

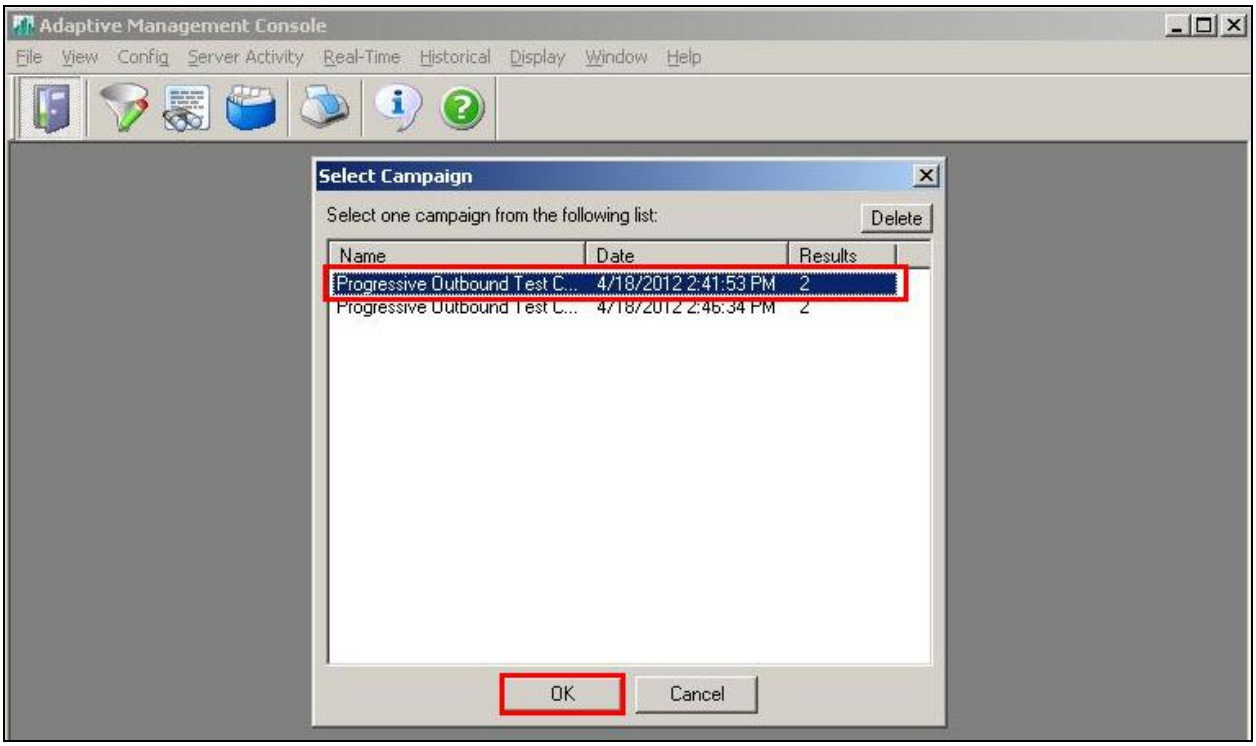


8.3. Verify Progressive Dialler is configured correctly

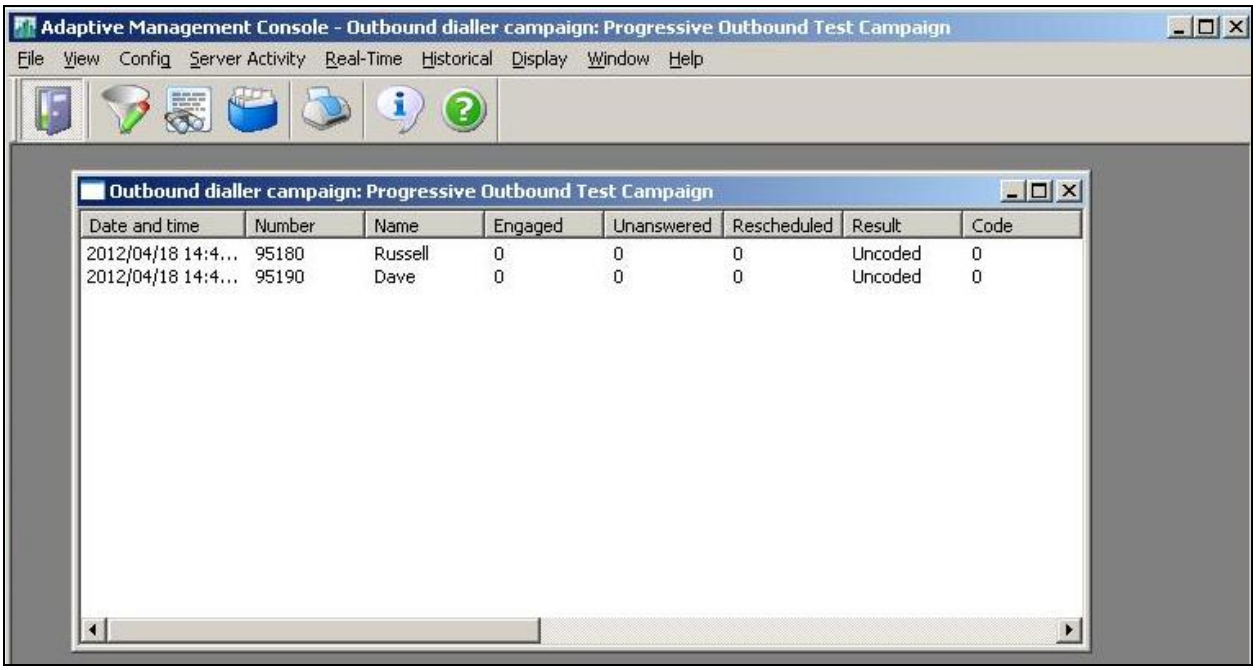
Open the **Adaptive Management Console** as described in **Section 7.1**. Click on **Historical** in the top toolbar and select **Campaigns → Single Campaign Report** highlighted below.



Select the campaign to report on from the **Select Campaign** window and click **OK**.



A report on the desired campaign showing the details of calls made will be shown like the example below.



9. Conclusion

As illustrated in these Application Notes the procedures for configuring NMS Adaptive Progressive Dialler to interoperate with Avaya IP Office R8.0. Using the configuration described in these Application Notes, an outbound progressive dialling campaign was setup and outbound calls were tested. During compliance testing, all test cases were completed successfully any observations are outlined in **Section 2.2**.

10. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at http://support.avaya.com.

[1] *TAPI Link installation Doc # 15-601034 Issue 11d*
[2] *TAPI Link Doc # 15-601035 Issue 11f*
[3] *IP Office R8 Doc library*

The following NMS Adaptive product documentation can be found at http://nms-adaptive.com/downloads/

[1] *Adaptive Software Suite – User Guide*

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.