



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring the Xarios Call Recorder and an Avaya IP Office Telephony Solution Attached to PRI Trunk – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for the Xarios Call Recorder to interoperate with Avaya IP Office. Xarios Call Recorder is a call recording solution that allows calls which traverse a PRI trunk to be recorded.

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

The Xarios Call Recorder attaches via a passive tap to the PRI interface connecting Avaya IP Office to the PSTN, using the Avaya DevLink interface to supply call switching information. The Xarios Call Recorder has an embedded Web server which provides access to archived voice files and server status for users at Web clients.

The Xarios Call Recorder records the voice content of calls which traverse the PRI trunk to which the recorder passive tap is attached. The recorder can be configured with an exclusion list to not record calls to/from individual PSTN endpoints or local extensions. An inclusion list which contains extensions and PSTN numbers that should be recorded is also provided which takes precedence over the exclusion list. Thus, if a call from an extension included in the exclusion list is made to an endpoint on the inclusion list, the call will be recorded.

The decision to record calls which are transferred is configurable in that the extension of any party on the call can be configured as the number to be used as the value to compare with the exclusion and inclusion lists.

The decision to record a call made to or from a bridged appearance is based on the extension of the actual device involved in the call, not the extension assigned to the bridged appearance. The extension assigned to voice archive files for calls made to or from bridged appearances is also that of the actual device involved in the call.

The Xarios Call Recorder allows DTMF sequences to be designated as recording pause/resume indicators, thus allowing sensitive information such as credit card numbers to be excluded from the recorded voice file.

1.1. Interoperability Compliance Testing

The following tests were performed as part of the compliance testing.

- Basic call
- Hold/retrieve
- Enquiry
- Transfer / Blind transfer
- Conferencing
- Call forwarding
- Recording pause / resume
- Hunt group calls
- Calls to/from bridged appearances
- Call inclusion / exclusion
- Interruption of Xarios Call Recorder LAN connection
- Interruption of Xarios Call Recorder passive tap connection to the PSTN
- Recovery after server restart

1.2. Support

Support is available via the distributor or direct from <http://www.xarios.com/support>.

2. Reference Configuration

The following diagram illustrates the configuration used for testing.

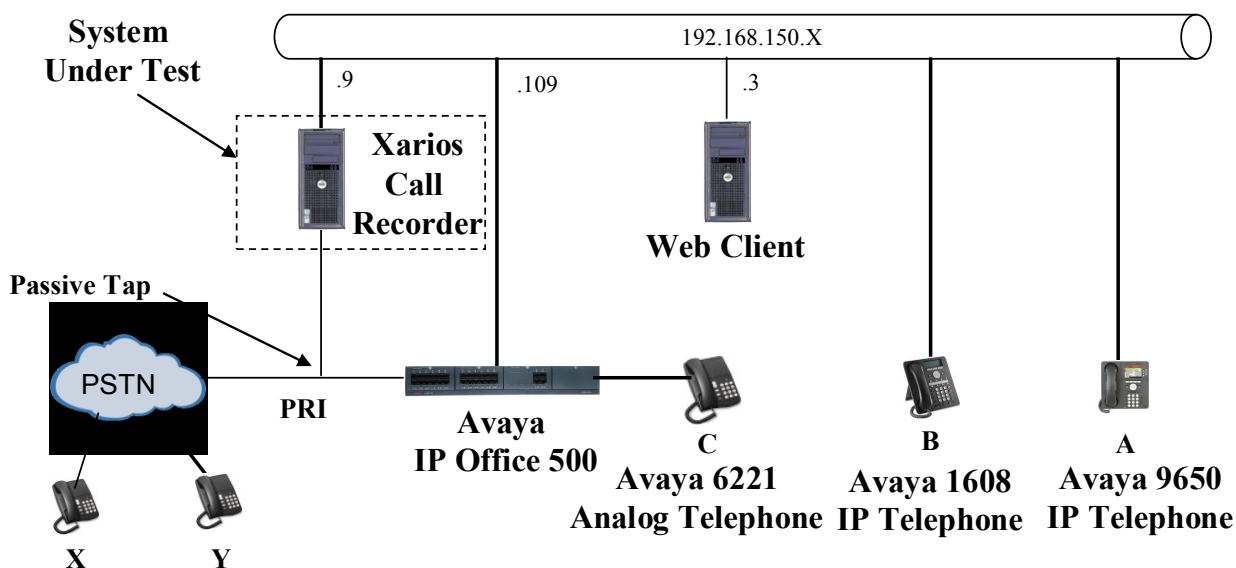


Figure 1: Reference Configuration

Additional information about the telephone endpoints in the above diagram are shown in the following table.

Phone	Model	Extension	DDI	Caller ID
A	Avaya 9650 IP Telephone	10163	907xxxxx10163	0069907xxxxx10163
B	Avaya 1608 IP Telephone	10062	907xxxxx10062	0069907xxxxx10062
C	Avaya 6221 Analog Telephone	10001	907xxxxx10001	0069907xxxxx10001
X	PSTN ISDN Telephone	----	----	0069xxxx6174
Y	PSTN ISDN Telephone	----	----	0069xxxx6645
HG	Hunt Group	11301	907xxxxx11301	0069907xxxxx11301

Table 1: Extensions Used for Testing

3. Validated Equipment and Software

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

Component	Version
Avaya IP Office 500	6.0 (8)
Avaya 1608 IP Telephone	1.2.2
Avaya 9650 IP Telephone	3.1.1
Avaya DevLink Driver	1.0.0.5
Xarios OS Platform: Microsoft Server	2003/SP2
Xarios Call Recorder Enterprise Edition	1.4.02

Table 2: Equipment and Software Validated

4. Avaya IP Office Configuration

All configuration steps for Avaya IP Office were performed using the IP Office Manager application. This application presents the administrator with a hierarchy of icons for configuring various components, as shown below.

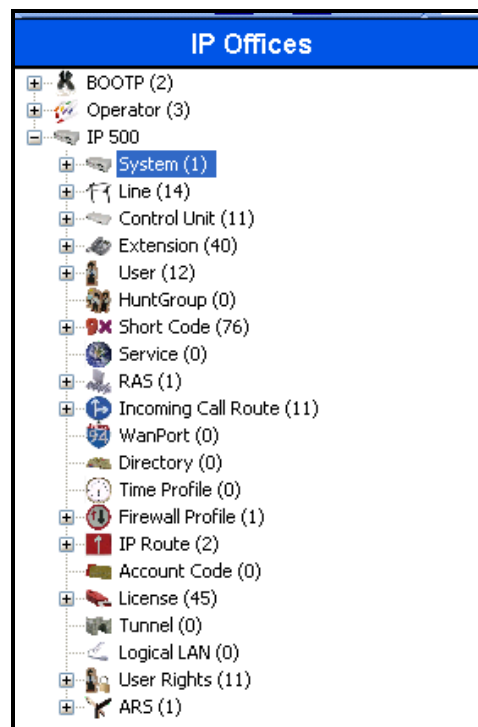
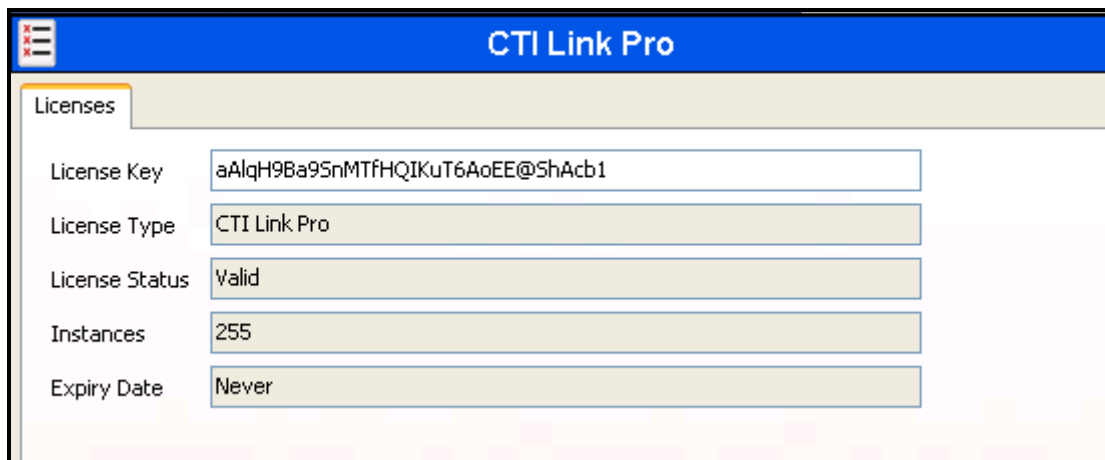


Figure 2: IP Office Manager Top Level Presentation

4.1. Licenses

An IP Office CTI Link Pro license is required for the Xarios Call Recorder solution.



CTI Link Pro	
Licenses	
License Key	aAlqH9Ba9SnMTfHQIKuT6AoEE@ShAcb1
License Type	CTI Link Pro
License Status	Valid
Instances	255
Expiry Date	Never

Figure 3: CTI Link Pro License

4.2. System

Select the “System” icon shown in **Figure 2** and enter the parameters shown in the following table.

Tab	Parameter	Usage
LAN1 LAN Settings	IP Address	Enter the IP address assigned to IP Office.
	IP Mask	Enter the network mask assigned to IP Office.
Telephony	Dial Delay Time	Enter the inter-digit dial delay time. A value of “5” seconds was used for the test.
	Dial Delay Count	Enter “0”.

Table 3: IP Office System Parameters

The screenshot shows the 'IP 500*' configuration window for the 'LAN1' tab. The 'LAN Settings' sub-tab is active. The 'IP Address' field is set to '192 . 168 . 150 . 9' and the 'IP Mask' field is set to '255 . 255 . 255 . 0'. These two fields are enclosed in a red rectangular box. Below them, the 'Primary Trans. IP Address' is '0 . 0 . 0 . 0', the 'RIP Mode' is 'None', and the 'Enable NAT' checkbox is unchecked. The 'Number Of DHCP IP Addresses' is set to '200'. At the bottom, the 'DHCP Mode' section has four radio buttons: 'Server', 'Client', 'Dialin', and 'Disabled' (which is selected). An 'Advanced' button is located to the right of the DHCP Mode section.

Field	Value
IP Address	192 . 168 . 150 . 9
IP Mask	255 . 255 . 255 . 0
Primary Trans. IP Address	0 . 0 . 0 . 0
RIP Mode	None
Enable NAT	<input type="checkbox"/>
Number Of DHCP IP Addresses	200
DHCP Mode	<input type="radio"/> Server <input type="radio"/> Client <input type="radio"/> Dialin <input checked="" type="radio"/> Disabled

Figure 4: IP Office System: LAN1 Settings Tab

IP 500*

System LAN1 LAN2 DNS Voicemail **Telephony** Directory Services System Events SMTP SMDR Twinning

Telephony Tones & Music Call Log

Analogue Extensions

Default Outside Call Sequence Normal

Default Inside Call Sequence Ring Type 1

Default Ring Back Sequence Ring Type 2

Dial Delay Time (secs) 5

Dial Delay Count 0

Default No Answer Time (secs) 25

Hold Timeout (secs) 0

Park Timeout (secs) 300

Ring Delay (secs) 5

Call Priority Promotion Time (secs) Disabled

Default Currency USD

Automatic Codec Preference G.711 ALAW 64K

Companding Law

Switch

☐ ULAW

☒ ALAW

Line

☐ ULAW Line

☒ ALAW Line

☐ DSS Status

☒ Auto Hold

☒ Dial By Name

☒ Show Account Code

☐ Inhibit Off-Switch Forward/Transfer

☐ Restrict Network Interconnect

☐ Drop External Only Impromptu Conference

☐ Visually Differentiate External Call

Figure 5: IP Office System: Telephony Tab

4.3. PSTN Line

Select the “Line” icon shown in **Figure 2**, and add a new line to the PSTN as shown in **Figure 1**, using the parameters shown in the following table. The parameters shown here are for the E1 line which was used for testing.

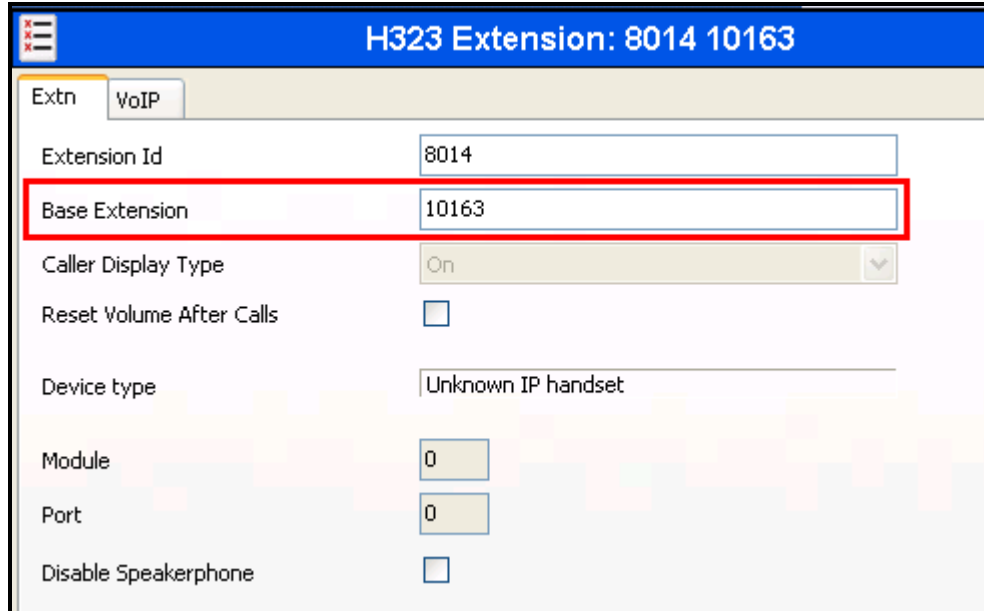
Parameter	Usage
Line SubType	Select “ETSI” from the drop-down menu for and E1 line.
Incoming Group ID	Enter an available group ID number.
Outgoing Group ID	Use the same value used for “Incoming Group ID”.
Prefix	Enter the dial prefix used to dial local PSTN numbers.
National Prefix	Enter the dial prefix used to dial national PSTN numbers.
International Prefix	Enter the dial prefix used to dial international PSTN numbers.

Table 4: IP Office PSTN Line Parameters

Figure 6: IP Office Line: PRI Line Tab

4.4. Endpoints

Select the “Extensions” icon shown in **Figure 2**, and create an extension for an H.323 telephone. Enter the extension in the “Base Extension” field. Repeat this for each extension shown in **Table 1**.



The screenshot shows a configuration window titled "H323 Extension: 8014 10163". It has two tabs: "Extn" (selected) and "VoIP". The "Extn" tab contains the following fields:

Field	Value
Extension Id	8014
Base Extension	10163
Caller Display Type	On
Reset Volume After Calls	<input type="checkbox"/>
Device type	Unknown IP handset
Module	0
Port	0
Disable Speakerphone	<input type="checkbox"/>

Figure 7: Local Telephone Extension: Extn Tab

Select the “Users” icon shown in **Figure 2**, and add a new user for each local telephone shown in **Table 1**, using the parameters shown in the table below.

Tab	Parameter	Usage
User	Name	Enter an appropriate name to be assigned to the user.
	Extension	Enter the local extension to be assigned to the user.

Table 5: IP Office User Parameters

The screenshot displays the 'User' configuration page for 'Extn10163: 10163'. The 'User' tab is selected, and the 'Name' and 'Extension' fields are highlighted with red boxes. The 'Name' field contains 'Extn10163' and the 'Extension' field contains '10163'. Other fields include 'Password', 'Confirm Password', 'Full Name', 'Locale' (dropdown), 'Priority' (dropdown), 'System Phone Rights' (dropdown), 'Profile' (dropdown), 'Device Type' (dropdown), 'User Rights view' (dropdown), 'Working hours time profile' (dropdown), and 'Working hours User Rights' (dropdown). There are also checkboxes for 'Receptionist', 'Enable SoftPhone', 'Enable one-X Portal Services', 'Enable one-X TeleCommuter', and 'Ex Directory'.

Figure 8: IP Office Local Telephone User: User Tab

4.5. Outgoing Call Routing

Create a shortcode to route outgoing calls from Avaya IP Office to the PSTN. Select the “Shortcode” icon shown in **Figure 2**, and create a new shortcode with the values shown in the following table.

Parameter	Usage
Code	Enter 0N;
Feature	Select “Dial” from the drop-down menu.
Telephone Number	Enter NSi<trunk>E, where <trunk> is the prefix for the PRI trunk to the PSTN.
Line Group Id	Enter the line group number assigned to the PSTN Line configured in Figure 6 .

Table 6: IP Office Outgoing Call Shortcode Parameters

0N;; Dial

Short Code

Code: 0N;

Feature: Dial

Telephone Number: NSi69907XXXXE

Line Group Id: 5

Locale: Germany (German)

Force Account Code: ☐

Figure 9: IP Office Outgoing Call Shortcode

4.6. Incoming Call Routing

Select the “Incoming Call Route” icon shown in **Figure 2**, and create a new incoming call route with the values shown in the table below. This routes calls from the PSTN to the proper endpoint.

Tab	Parameter	Usage
Standard	Line Group Id	Enter the line group number assigned to the PSTN Line configured in Figure 6 .
	Incoming Number	Enter the telephone number assigned to the local PSTN trunk followed by the sequence “xxxx” to serve as a placeholder for the local extensions.
Destinations	Destination	Enter “#” which will be replaced by the “xxxx” local extension which matches the “xxxx” in the previous step.

Table 7: IP Office PSTN Incoming Call Route Parameters

The screenshot shows the 'Standard' tab of the IP Office PSTN Incoming Call Route configuration. The title bar displays '5 069907-xxxx'. The 'Line Group Id' is set to '5' and the 'Incoming Number' is '069907-xxxx'. These two fields are enclosed in a red rectangular box. Other visible fields include 'Bearer Capability' (Any Voice), 'Incoming Sub Address', 'Incoming CLI', 'Locale', 'Priority' (1 - Low), 'Tag', and 'Hold Music Source' (System Source).

Figure 10: IP Office PSTN Incoming Call Route: Standard Tab

The screenshot shows the 'Destinations' tab of the IP Office PSTN Incoming Call Route configuration. The title bar displays '5 069907-xxxx'. Below the tabs, there is a table with three columns: 'TimeProfile', 'Destination', and 'Fallback Extension'. The 'Destination' column contains the value '#'. This field is highlighted with a red rectangular box.

Figure 11: IP Office PSTN Incoming Call Route: Destinations Tab

The Xarios Call Recorder is a bundled package including server, interface components, and software. The software is installed by Xarios prior to delivery to the customer. The Xarios Call Recorder software can be configured via a configuration program which runs on the server. Other configuration steps required to adapt the recording process to changing monitoring requirements can be performed from a separate PC via a Web browser.

Prior to actually configuring the server, the user must first determine the number of the IP Office PRI trunks to which the Xarios Call Recorder is attached. This can be done by executing the Xarios “Real-Time Event Monitor” program which has the path “C:\Program Files\Xarios\Xarios Call Recorder\Call Recorder\devlink.exe” on the Xarios Call Recorder server. When a call is made to or from the IP Office PRI interface, the call is added to the programs event list. The “B Slot” column contains the trunk channels used for calls which traverse the trunk, using the format <trunk number>,<channel number>. Thus, for the example shown below, the <trunk number> is “6”. This value will be required when configuring the voice recorder.



To start the configuration program, right click the Xarios Call Recorder icon located in the system tray and select “Settings”.

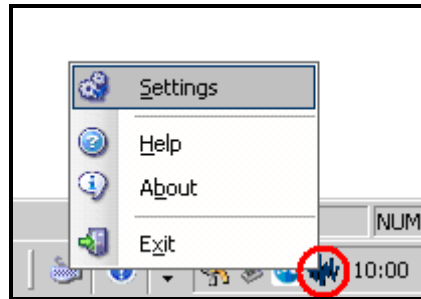


Figure 13: Call Recorder Icon

Enter the appropriate login credentials in the “Call Recorder Admin Tool” dialog window and click “Login”.

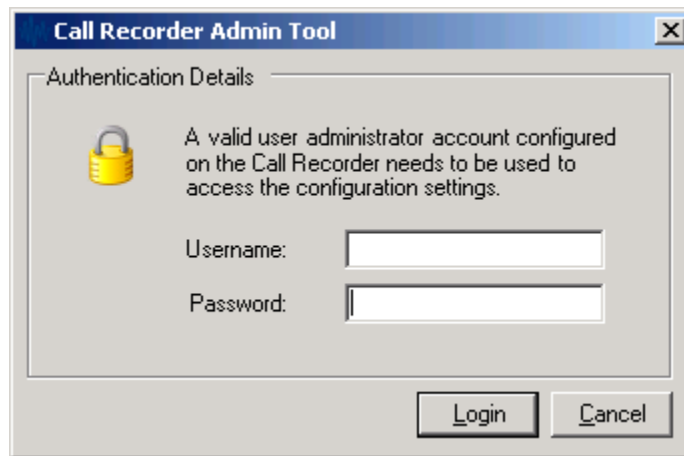


Figure 14: Call Recorder Admin Tool Dialog

Select the “General” tab, enter the parameters shown in the following table, and click “Apply”.

Parameter	Usage
Company name	Enter an appropriate name to identify the installation site.
Recorder description	If more than one Xarios Call Recorder is present, enter a name to identify this call recorder.
Recording path	Enter the path of the directory to which voice files are to be written in UNC (Uniform Naming Convention) format: \\<computer name>\<directory>. The directory D:\recordings is by default configured as a shared directory with the required settings.

Table 8: IP Office PSTN Line Parameters

Xarios Recorder - Configuration

Rules Based Recording | Website | Inter-networking | Watchdog | Speech Analytics

Remote Office

General | Archiving | Database | Call Details | Support | PBX Integration | Email

Recorder Setting

Current license settings for the call recorder

Company name: Xarios

Recorder ID: 1 ☒ Master Server

Recorder description: CallRecorder

Licensed

Item	Value
Site ID	1101
Channels	120
Type	Enterprise
PBX	Avaya_IPOffice, InterTel, Mitel_3300
Quality Control	120
Compliance	120
Multi-Site	Enabled
Speech Analysis Licenses	120

Recording Details

Configuration settings for the recording card and timeslot / trunk mapping

Voice Card Type: Synway

Recording format: GSM ☒ Encrypt Recordings

Recording path: \\avayarec\recordings

Figure 15: Xarios Configuration General Tab

Click the “Trunk Mapping” button from the “General” tab. Click on the magnifying glass icon shown highlighted at the bottom right corner of the screen.

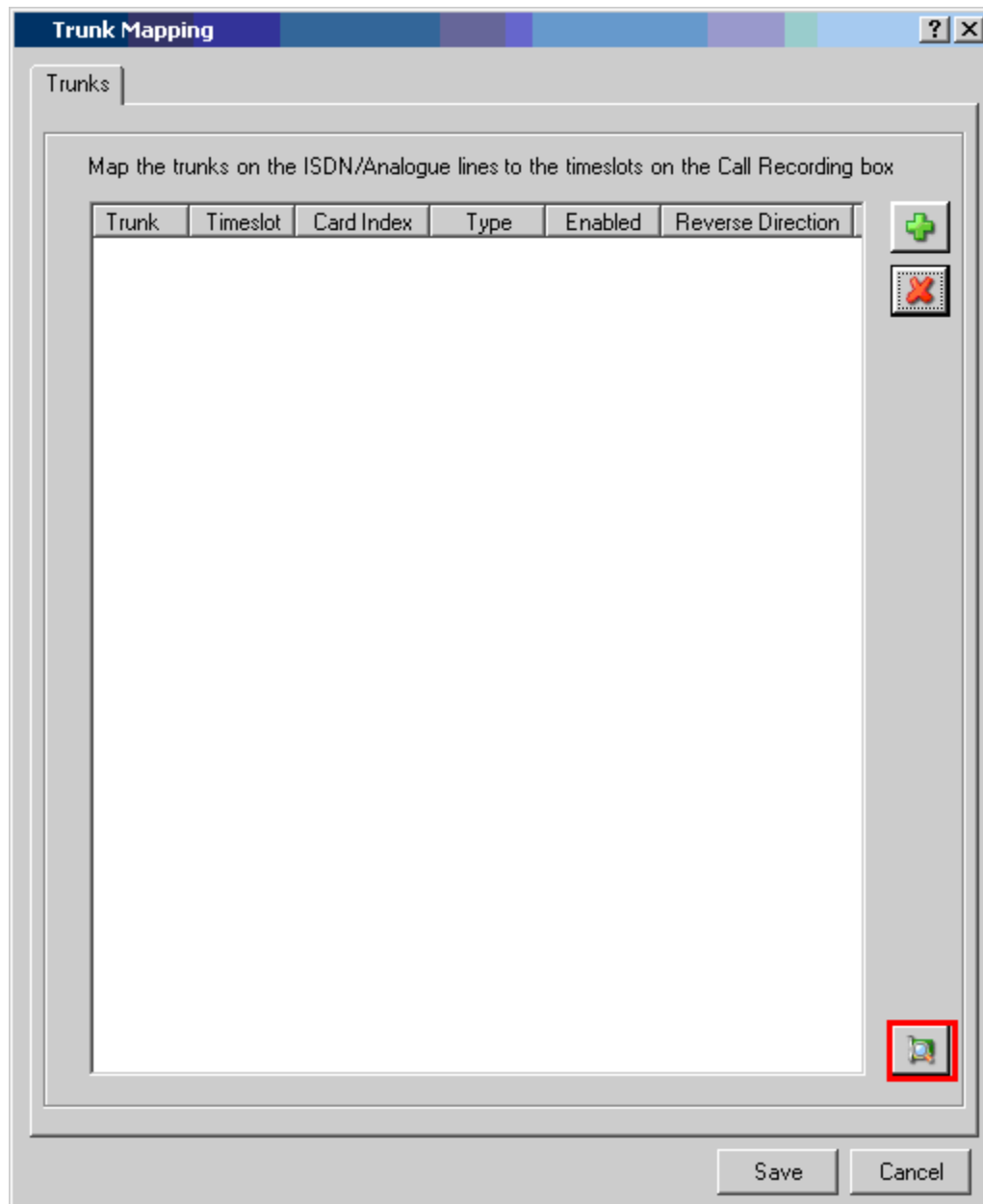


Figure 16: Trunk Mapping Screen

When the message box indicating that the interface has been found appears, click “OK”.

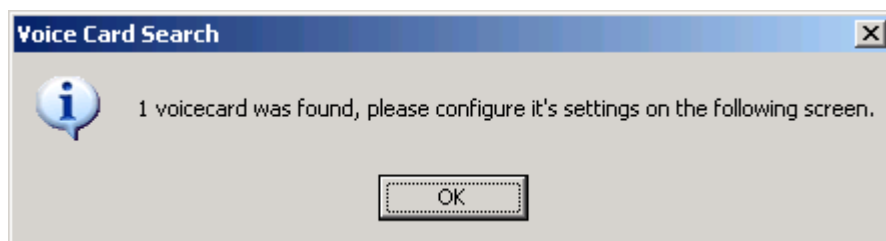


Figure 17: Trunk Interface Found Message Box

Enter the parameters shown in the following table in the “Add Time Slot” dialog box and click “Add”.

Parameter	Usage
Initial trunk	Enter the value <trunk number>”.2”, where <trunk number> is the value which was determined from Figure 12 , and “2” is the first channel to be used for a PRI trunk.
Timeslots to configure	Enter “30”, the number of available voice timeslots for a PRI trunk using an E1 interface.

Table 9: Time Slot Parameters

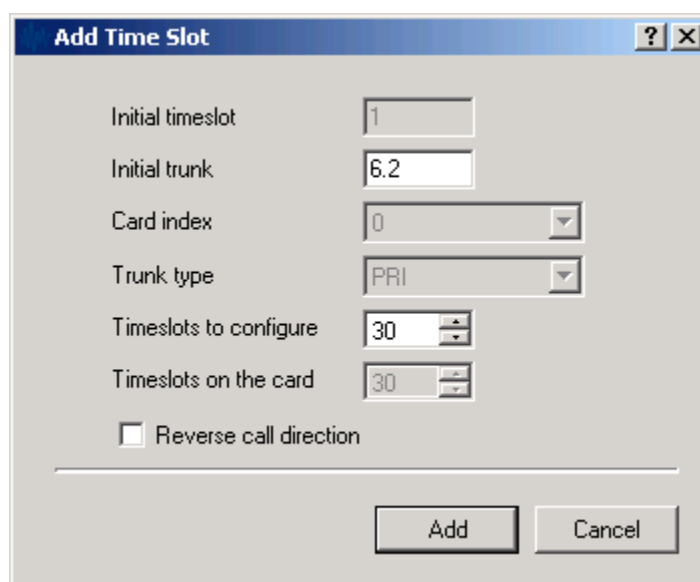


Figure 18: Time Slot Dialog Screen

The added time slots are then reflected in the Trunk Mapping screen. Click “Save”.

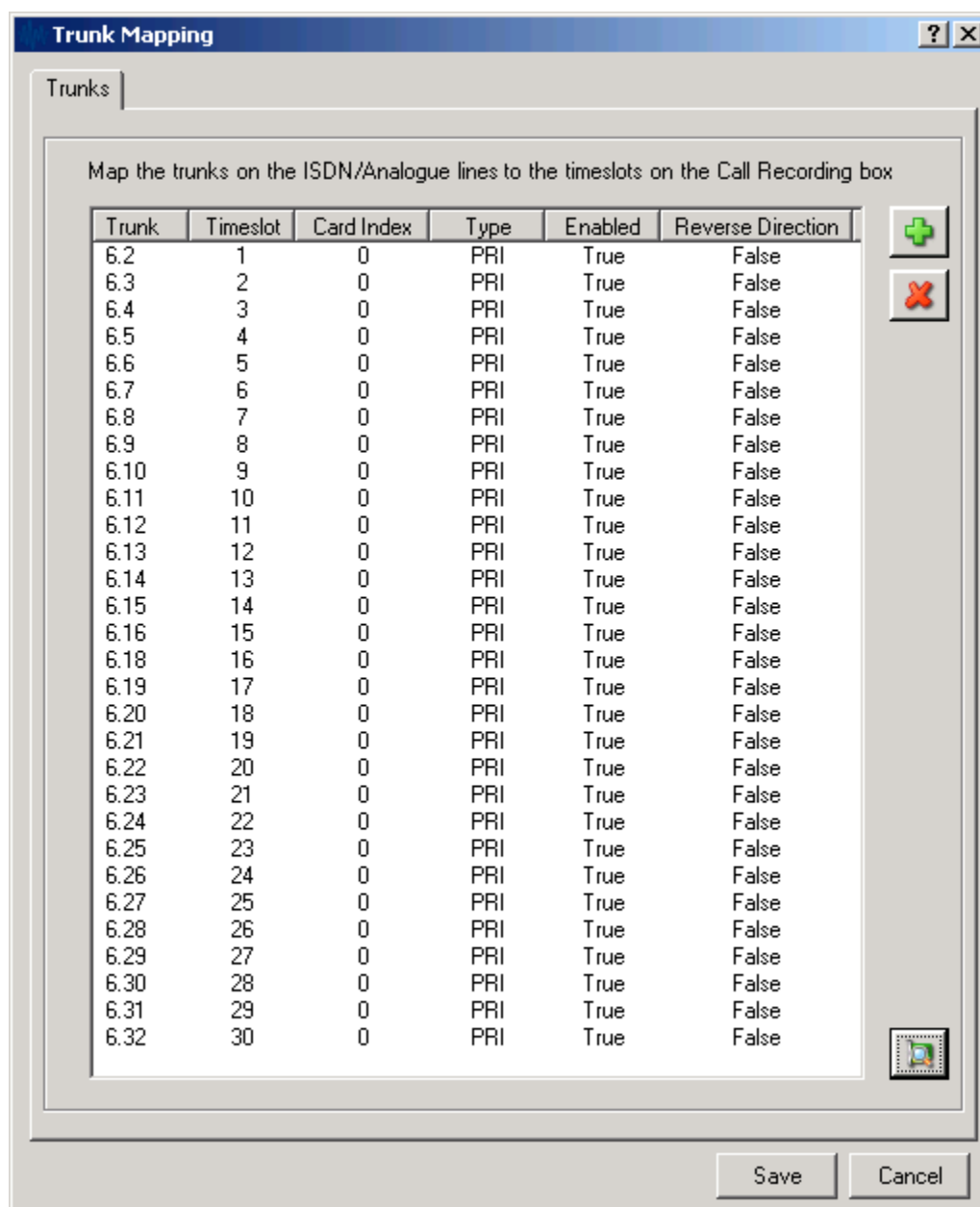


Figure 19: Trunk Mapping Screen Showing Channels


Select the “Call Details” tab, enter the values shown in the following table and click “Apply”.

Parameter	Usage
Use first/last Extension	Select one of these radio buttons to designate whether the first or last extension involved in a call is to be used as exclusion criteria.
DTMF pause number	The key sequence used to stop voice recording.
DTMF resume number	The key sequence used to resume voice recording.
DTMF Pause / Resume	Check this box if the pause/resume recording feature should be activated.

Table 10: Call Details Parameters

General Archiving Database **Call Details** Support PBX Integration Email

Call Details

 These settings relate to call information that is recorded in the database.
These settings will only effect future recordings and not historic ones

☐ Use first Extension and / or Agent ID against calls

☒ Use last Extension and / or Agent ID against calls

Caller ID prefixes to remove

DDI prefix to add

Outbound called number prefix to add

DTMF pause number ☒ DTMF Pause/Resume

DTMF resume number

☐ Create data file with recordings

Apply Save Cancel

Figure 20: Call Details Screen

Select the “PBX Integration” tab, enter the values shown in the following table and click “Apply”.

Parameter	Usage
Integration type	Select “Avaya IPOffice” from the drop-down menu.
Hostname / IP address	Enter the IP address assigned to IP Office, as shown in Figure 4 .
Password	Enter the password assigned to the IP Office PBX.

Table 11: PBX Integration Parameters

The screenshot shows the 'Xarios Recorder - Configuration' window with the 'PBX Integration' tab selected. The window has a title bar with a question mark and close button. Below the title bar is a tabbed interface with the following tabs: Remote Office, Rules Based Recording, Website, Inter-networking, Watchdog, Speech Analytics, General, Archiving, Database, Call Details, Support, PBX Integration (selected), and Email. The 'PBX Integration' section contains two main areas: 'PBX Integration Selection' and 'IPOffice Connection Details'. The 'PBX Integration Selection' area has a telephone icon and a description: 'Integrating Call Recorder to a PBX provides enhanced call and agent information about each recording'. Below this is a label 'Integration type' and a dropdown menu showing 'Avaya IPOffice'. The 'IPOffice Connection Details' area has a network icon and a description: 'Network connection details for the IPOffice server'. Below this are two labels: 'Hostname / IP address' with a text box containing '192.168.150.109', and 'Password' with a text box containing 'xxxxxxxx'. At the bottom right of the window are three buttons: 'Apply', 'Save', and 'Cancel'.

Figure 21: PBX Integration Screen

Select the “Website” tab and enter the values shown in the following table and click “Apply”.

Parameter	Usage
Website address	Enter the hostname assigned to the server, which can be found from the computer name tab in the properties of the "My Computer" icon.

Table 12: Website Parameters

Xarios Recorder - Configuration

Remote Office | General | Archiving | Database | Call Details | Support | PBX Integration | Email | Rules Based Recording | **Website** | Inter-networking | Watchdog | Speech Analytics

Website Settings

Configure the web interface that will be used for search and playback of recordings

Website address:

Root path:

Protocol:

Inactivity timeout: Mins (max 1440)

☐ Allow realtime refresh of recordings

Realtime search range: Mins (max 60)

OEM skin: -

Streaming

When playing back recordings through the website, audio files can be streamed instead of being played back over the network

☐ Enable users to stream recordings from the website


Windows Media Server:

Publishing point:

Figure 22: Website Screen

5.2. Services Configuration

Xarios Call Recorder runs as a set of system services, as shown in the figure below. In the default configuration, only Xarios Recorder Watchdog is configured to start automatically. This service starts the other services if they are not already running, and restarts them if they should stop.



The screenshot shows the Windows Services console for 'Services (Local)'. The 'Xarios Recorder Watchdog' service is selected. On the left, there is a link to 'Start the service' and a description: 'Watchdog service that monitors all recorder applications'. The main pane displays a list of services with columns for Name, Description, Status, and Startup Type.

Name	Description	Status	Startup Type
Xarios Recorder Watchdog	Watchdog service that monitors all recorder applications		Automatic
Xarios DB Archiver	Application that archives call records		Manual
Xarios Call Recorder Workflow	Workflow process handler		Manual
Xarios Call Recorder Speech Indexer	Indexes call recording files into speech indexed files		Manual
Xarios Call Recorder SMDR Service	Processes SMDR data from the SMDR collector		Manual
Xarios Call Recorder SMDR Collector S...	Collects SMDR information from the PBX		Manual
Xarios Call Recorder Service Host	Service to handle background processing tasks.		Manual
Xarios Call Recorder Replication Service	Provides replication services between call recorders.		Manual
Xarios Call Recorder LCD	Controls the Call Recorder LCD Screen		Manual
Xarios Call Recorder	Application that performs main recording functions		Manual
Xarios Call Archiver	Application that handles archiving and caching of record...		Manual

Figure 23: System Services

5.3. Configuration via Web Browser

Certain call recorder features can be configured remotely via Web browser. Any version of Microsoft Internet Explorer from 6.0 to 8.0 can be used. The Web browser needs to only browse to the system name or IP address of the Xarios Call Recorder, at which time the user will be prompted to login. Enter administrator authorization credentials and click “Login” and select the “Configuration” tab

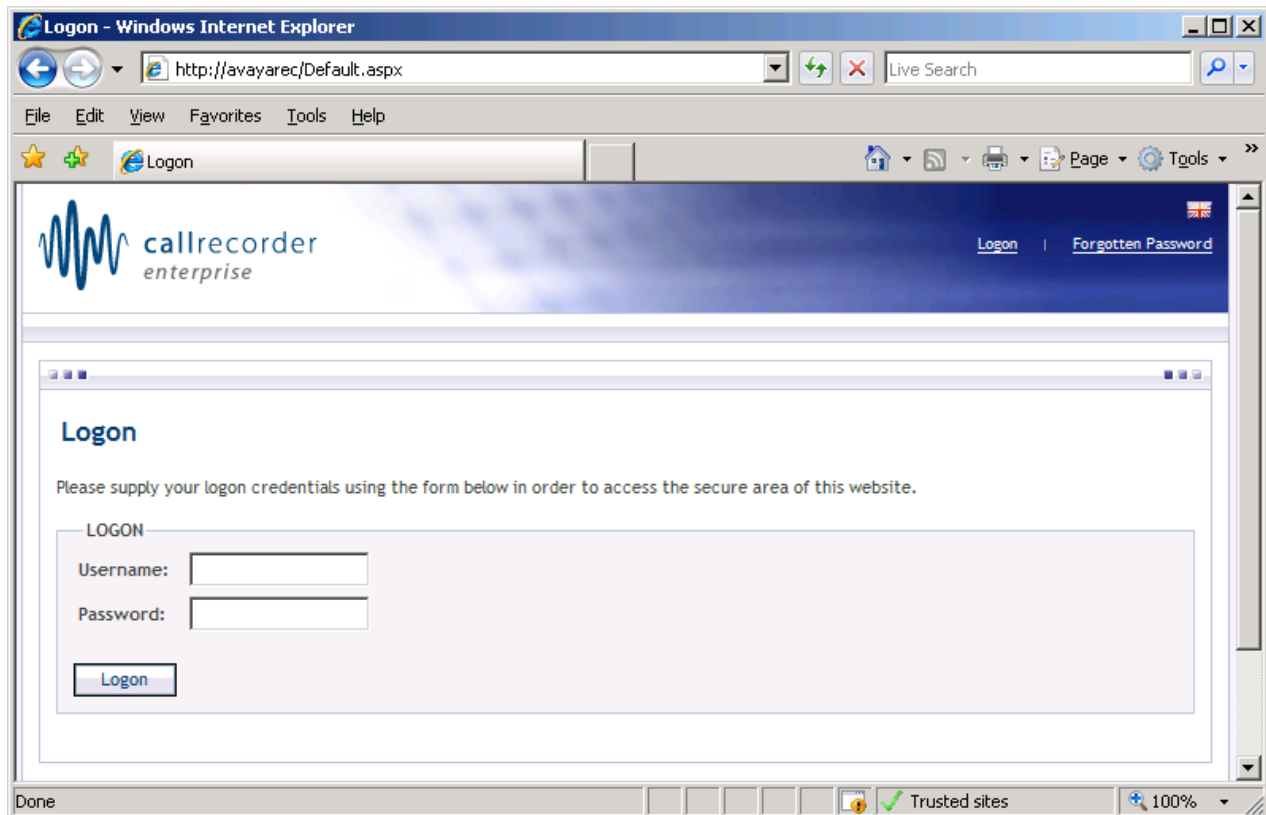


Figure 24: Web Login Screen

Click the “Device Configuration” icon.



Figure 25: Configuration Screen

Enter each of the local extensions from **Table 1**, enter the following information into the “ADD DEVICE” box and click the “Add Device” button.

Parameter	Usage
ID	Enter the extension.
Description	Enter a descriptive name for the extension.
Device Type	Select “Extension” from the drop-down menu.

Table 13: Device Configuration Parameters

callrecorder enterprise Logged in as Default Engineer | [Logoff](#)

[Status](#) [Recordings](#) [Reporting](#) [Configuration](#) [My Settings](#)

Device Configuration

Use this page to configure the extensions and agents connected to your phone system.
For bulk importing of device data, you can obtain a CSV file from the phone system and click the 'Import Data' button to load this file into Call Recorder.

No results found

[Import Data](#) [Remove Selected](#) [Back](#)

ADD DEVICE

ID:

Description:

Device Type:

[Add Device](#)

Figure 26: Device Configuration Screen

After all of the extensions have been configured, they will be listed on the Device Configuration screen. Click the “Configuration” tab, to return to the screen shown by **Figure 25**, and then click the “Exclusion List” icon.

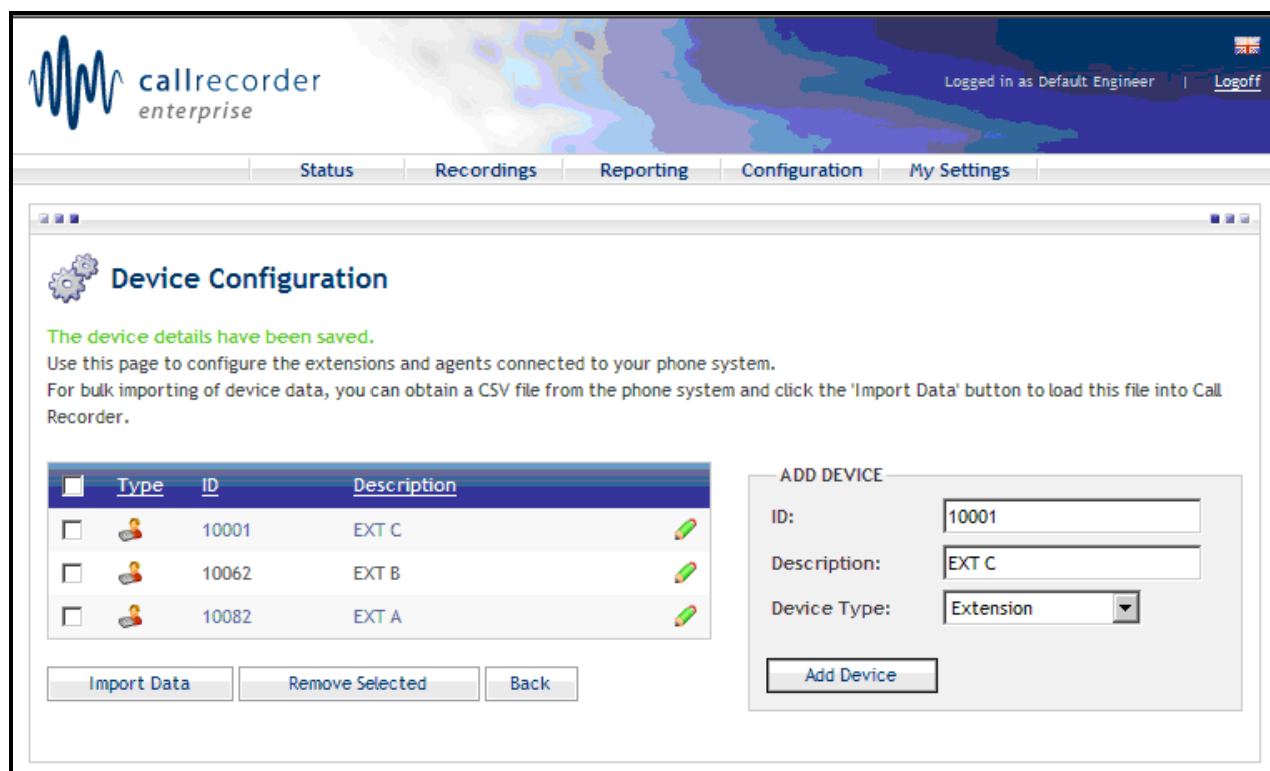


Figure 27: Completed Device Configuration Screen

Click the “Add Device” button to add a new exclusion list entry.

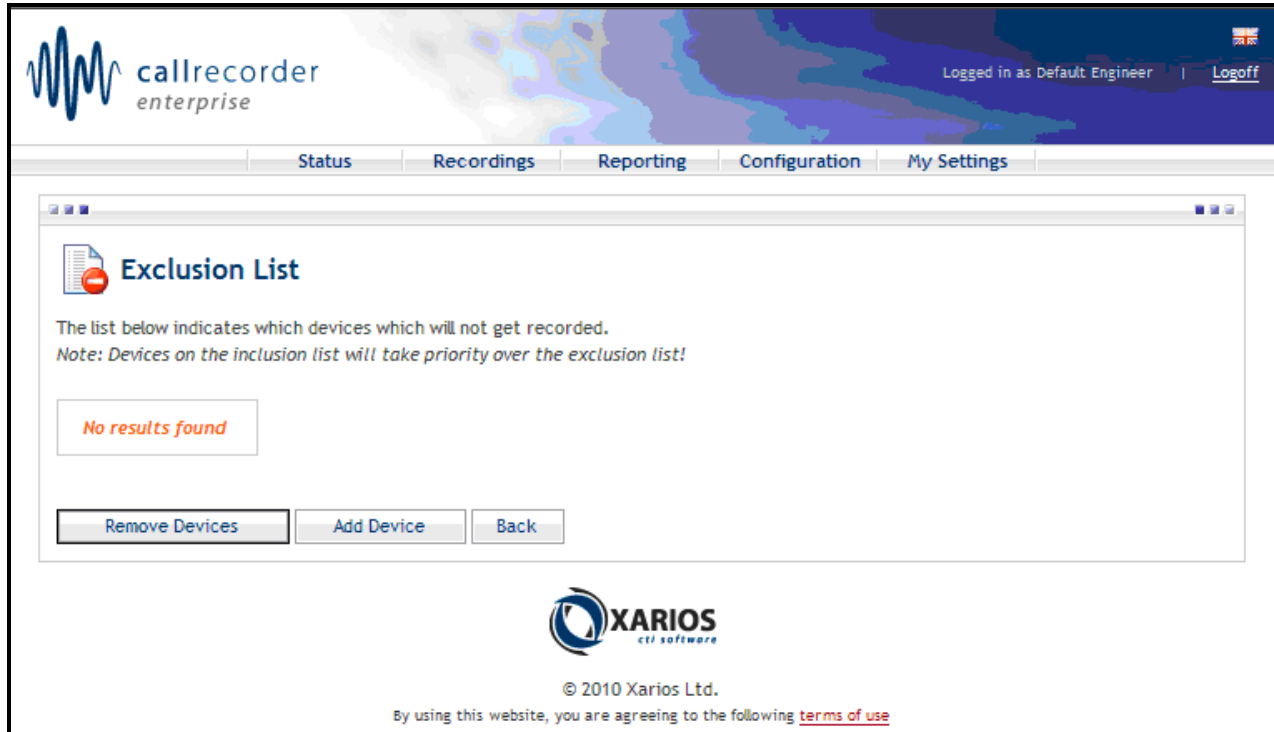


Figure 28: Exclusion List Screen

At this point the user can select one of the tabs shown to specify what type of device is to be added to the exclusion list. Below is a list of choices for the exclusion types presented by each of these tabs. For example, entering the Caller ID for telephone X in the call exclusion list as shown in the screen below would prevent all calls to or from X from being recorded. Click the “Add CLIs” button to complete the addition of the exclusion.

Exclusion Type	Usage
Extensions	Local extension can be excluded, for example “10163” for telephone A.
Caller IDs	Caller IDs can be excluded. This is the number used to identify an external endpoint attached to the PSTN, including the leading digits used to designate national/international numbers. For example, “0069xxxx6174” for telephone X, which is shown in the screen below.
DDIs	External numbers used to identify local extensions can be excluded. For example, “907xxxxx10163” for telephone A.

Table 14: Telephone Number Choices

Agents Extensions **Caller IDs** DDIs Account codes Hunt groups

To add a CallerID to the list, fill in the textbox below and then click on the button.

Caller ID: 00698886174

Description: EXT X

Add CLIs

Figure 29: Exclusion List Entry Screen

6. General Test Approach and Test Results

Only functional testing was performed: no performance testing was done. All tests were performed manually. Incoming and outgoing calls were made to verify that calls made to extensions on the inclusion list were recorded. Conversely, it was verified that if an extension was on the exclusion list, no recording was generated. In addition, the recorded audio files were verified. Basic telephony features (see **Section 1.1**) were also tested to verify that call recordings were generated based on the Xarios configuration and expected results.

All tests produced the expected results.

7. Verification Steps

The correct configuration of the system can be verified by performing the following steps:

- Use the IP Office System Status program to verify that the PRI trunk interface channels are in the “Idle” state.

The screenshot displays the AVAYA IP Office System Status application. The left sidebar shows a navigation tree with categories like System, Alarms, Extensions, Trunks, Active Calls, Resources, Voicemail, and IP Networking. Under Trunks, Line 13 is selected. The main content area shows the 'Status' tab for Line 13, Slot 4, Port 1. It lists details such as Line Type (E1), Line Subtype (ETSI), Number of Channels (30), Number of Administered Channels (30), and Number of Channels in Use (0). Below this is a table with 6 columns: Channel Number, Call Ref, Current State, Time in State, Routing Digits, and Caller ID or Dialed Digits. The table shows 6 channels, all in an 'Idle' state, with a time in state of '1 day 01:48:57'.

Channel Number	Call Ref	Current State	Time in State	Routing Digits	Caller ID or Dialed Digits
1		Idle	1 day 01:48:57		
2		Idle	1 day 01:48:57		
3		Idle	1 day 01:48:57		
4		Idle	1 day 01:48:57		
5		Idle	1 day 01:48:57		
6		Idle	1 day 01:48:57		

Figure 30: Trunk Channel Status Screen

- Log into the Xarios Call Recorder using a web browser and select the “Status” tab which shows the status of the various subsystems. Verify that no warnings are shown.

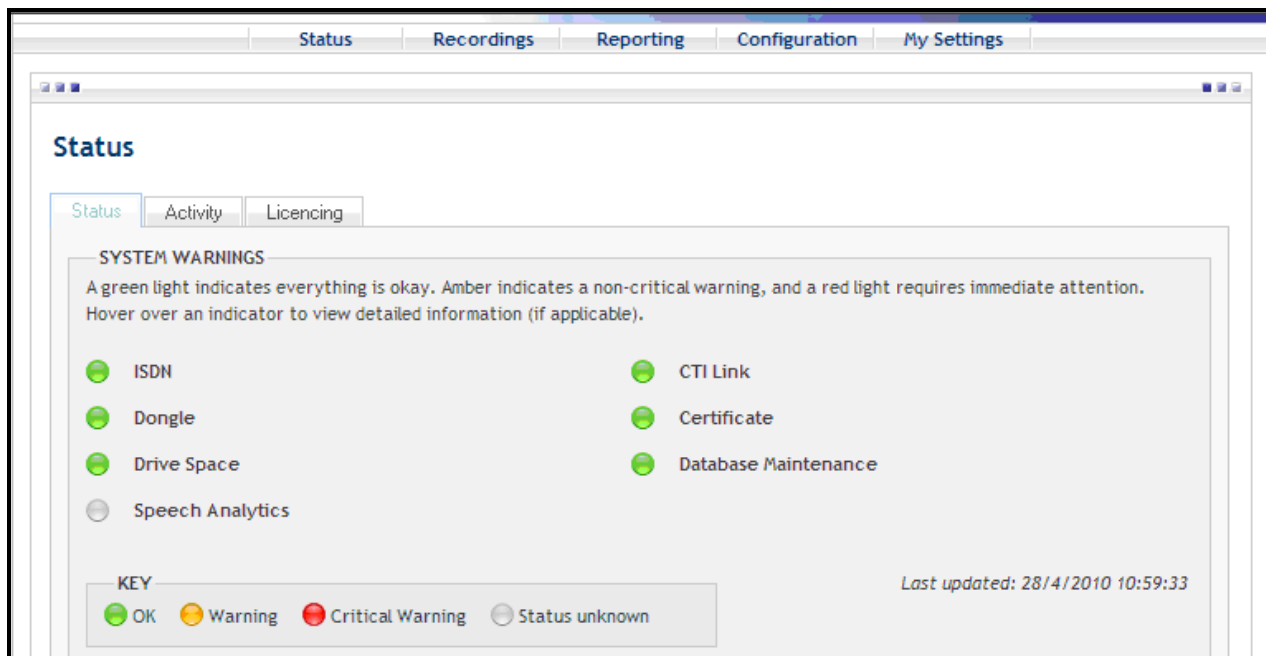


Figure 31: Status Screen

8. Conclusion

These Application Notes contain instructions for configuring a connection between the IP Office and the Xarios Call Recorder. All test cases produced the expected result.

9. Additional References

This section references documentation which is relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com>. Xarios documentation can be obtained from <http://www.xarios.com/support/>

- [1] *IP Office Installation*, August 2009, Document Number 15-601042.
- [2] *IP Office 5.0 Manager*, August 2009, Document Number 15-601011.
- [3] *Xarios Administrator Manual*, March 2010.

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