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Avtec Scout Integration for NICE Recording Installation Guide

Release 1.0

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Important Notice

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1   Introduction

This guide describes the installation and configuration of the Avtec Scout Integration for NICE Recording software that records audio and metadata from the Avtec Scout system.

1.1   Audience

Use this guide if you are an installation engineer.

1.2   Assumptions

We assume you have knowledge of:

- NICE Recording

1.3   References

This guide refers to:

- NICE Public Safety Recommended Servers Guide
- NICE Recording Public Safety Installation Guide
- NICE Trading Recording Installation Manual
- NICE Recording OS Hardening Manual

2   Overview

Avtec Scout Integration for NICE Recording consists of the Avtec Scout Integration Service and the CDR Processor service. Call audio data is received as RTP streams over UDP and is recorded using the standard NICE Recording cti_vox_voip firmware. Metadata is received as is received by the Avtec Scout Integration Service and this is sent over a TCP/IP connection to the CDR Processor to be added to the NICE Recording database as separate CDR records.

The UDP and TCP port numbers used for audio and metadata must be opened in the NICE Recording server firewall for incoming connections.

If multiple recording satellites are required it is possible to deploy an instance of the Avtec Integration on each of the satellites where Avtec recording and metadata is required.

Call recordings can be replayed from either the NICE Recording web GUI or from NICE Inform by replaying either the VOX records created by the NICE Recording system or by replaying the CDR records created by the CDR Processor. VOX records only contain start time, end time and channel information while CDR records also contain the additional metadata received from the Avtec Scout system.

Figure 1 : Block diagram
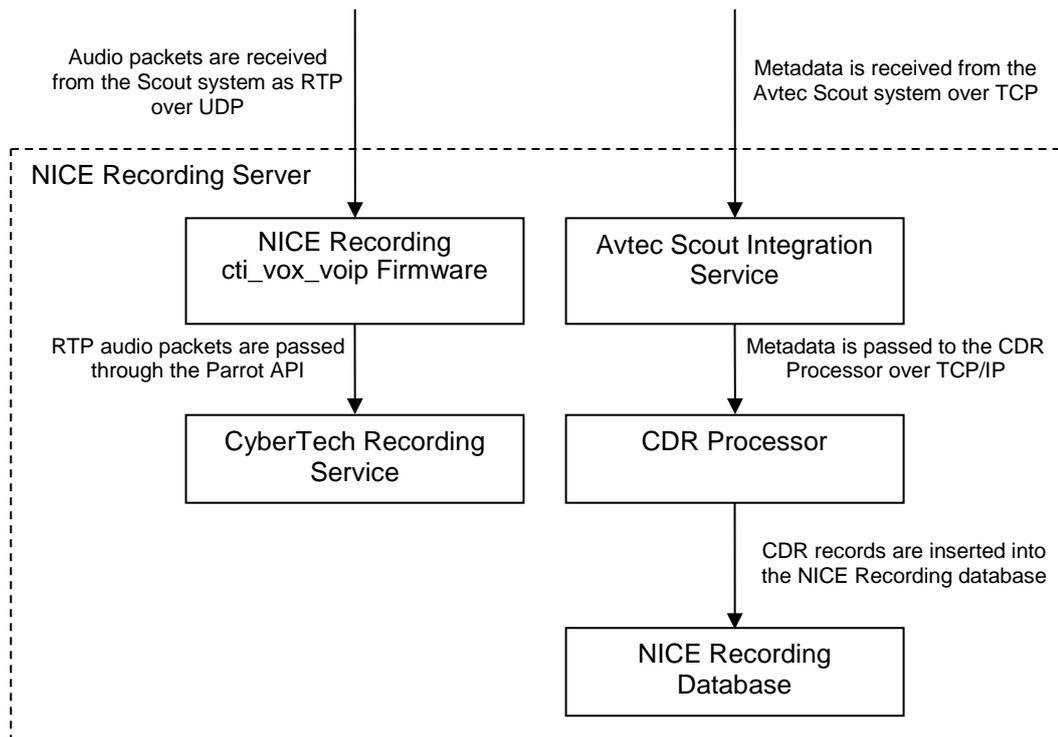
3   Preparation

In order to configure the Avtec Scout Integration for NICE Recording you will require:

- Installed NICE Recording system of the correct version

- VoIP recording channels using the cti_vox_viop firmware

- A license for the Avtec Scout Integration for NICE Recording

- Network connectivity to the Avtec Scout system

- Avtec Scout system configured to send audio and metadata to the NICE Recording system

For details of recommended server hardware refer to the NICE Public Safety Recommended Servers Guide.

3.1   Software Versions

In order to configure the Avtec Scout Integration for NICE Recording you will need to supply the software items in Table 1

Table 1: Software versions

Item	Version
NICE Recording System	6.6 PL2
Avtec Scout Integration for NICE Recording	1.0.0 or later

3.2   VoIP Recording Channels

Recording of Avtec Scout calls requires the NICE Recording system to have VoIP recording channels using the cti_vox_voip firmware. The number of VoIP channels licensed on the system will determine the maximum number of Avtec Scout devices that can be recorded on that system. For details of how to install VoIP firmware refer to the *NICE Recording Public Safety Installation Guide*.

3.3   Integration License

The Avtec Scout Integration for NICE Recording software requires a CDR Processor license to be available in the NICE Recording system. The required license data fields and values are shown in Table 2.

Table 2: Integration license data fields

Data field	Value
12	164 (0x00A4)
13	The number of channels licensed for the integration

The installed licenses in a system can be view from the *<system status> <general info>* tab of the NICE Recording web GUI as shown in Figure 2.

Figure 2 : Integration license
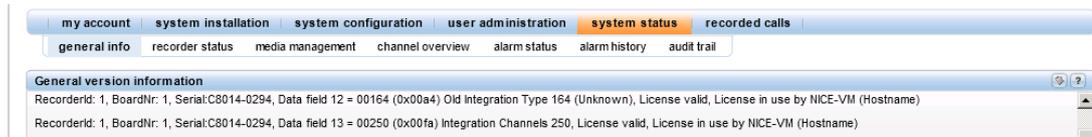
For Public Safety there are two licensing options:

- USB license dongle
- Parrot DSC card license

A USB license dongle is used when recording VoIP only (no Parrot DSC card fitted).

If a Parrot DSC card is fitted, e.g. for analogue recording, the license is held in the card. This is also true if a mixture of analogue and VoIP recording is required.

Refer to the VoIP recording and licensing and Parrot DSC card licensing chapters as appropriate in the NICE Trading Recording Installation Manual.

3.4   Firewall Ports

Successful communication between the Avtec Scout system and the NICE Recording system will require a range of ports to be opened in any network firewalls between the two systems. The required ports are detailed in Table 3.

Table 3: Firewall ports

From	To	Ports
Avtec Scout	NICE Recording	Metadata TCP ports from 10002 to 10002 + (number of channels * 2)
Avtec Scout	NICE Recording	Audio UDP ports from 10002 to 10002 + (number of channels * 2)

For details of the ports used between the NICE Recording servers refer to the NICE Recording OS Hardening Manual.

3.5   Avtec Scout Configuration

The Avtec Scout system must be configured to send the audio and metadata to the NICE Recording system. Each Avtec device that is to be recorded must be configured with the IP address of the NICE Recording system where the integration is installed and the port number a port number for audio and a port number for metadata. The ports used by default start from 10002 increase by 2 for each NICE Recording channel and each port must only be assigned to a single Avtec Scout device.

If the Scout device forwards a single mixed stream this should be sent to the lower (even) number UDP port allocated to a channel. The higher (odd) number port is not used. Avtec Scout devices that forward separate transmit and receive streams should send one stream to the lower (even) numbered port and the other to the higher (odd) numbered port. The allocation of transmit and receive to odd and even port numbers is not important. In this case the two streams are mixed together onto the associated recorder channel.

4   Installation

This section describes the steps necessary to install the Avtec Scout Integration for NICE Recording.

NOTE: Be sure to reboot the system after installation.

▶ To install the Avtec Scout Integration:

1.   Double click **NICE.Avtec.Scout.Integration.msi** installation file from a local drive or CD. The installation wizard opens at the **Welcome** screen.

2.   Click **Next**. The **End-user license agreement** screen is presented showing information on intellectual property rights.

3.   Read the information and click **Next**. The **Destination Folder** screen is presented.

Figure 3 : Installation – Destination folder screen
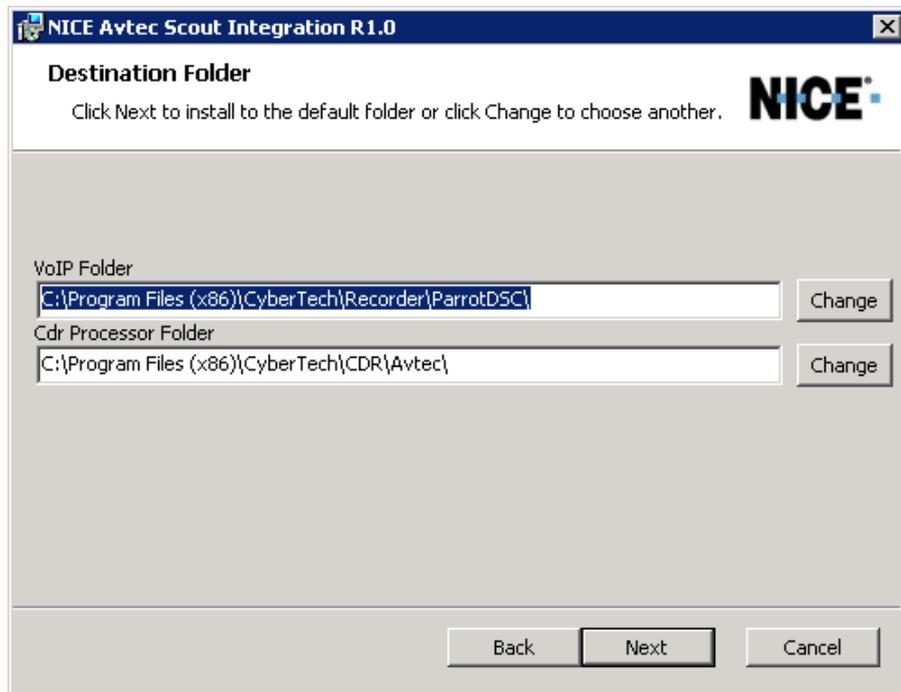
4.   To change the CDR Processor destination folder from its default location, click the **Change** button to the right of the CDR Processor folder text box.

5.   Click **Next**. The **Service Credentials** window is presented.

Figure 4 : Installation – Service credentials screen
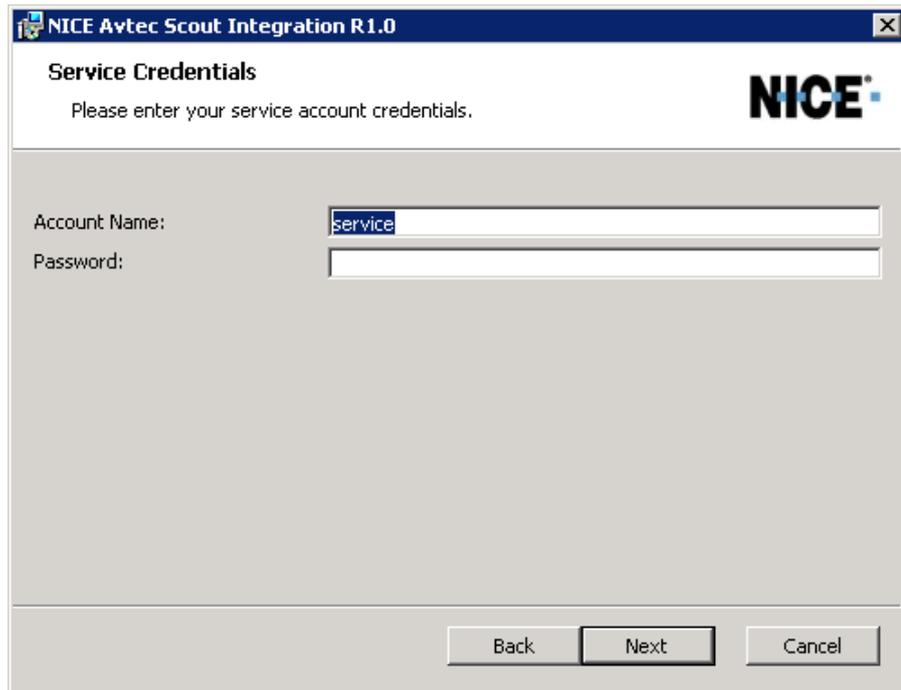
6. Enter the **Account Name** in the text box provided. By default, this is 'service'.

7. Enter the **Password** in the text box provided.

8. Click **Next**. If the credentials are correct, the **Ready to install** screen is presented.

9. Click **Install** to start the installation. The **Installing** screen is presented showing the progress of the installation.

10. During the installation process the following dialog message may be displayed:

Figure 5 : Database fields warning
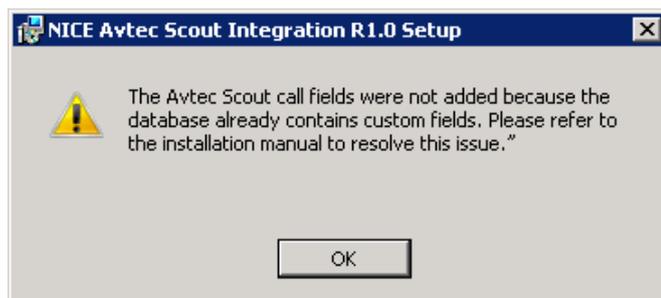
NOTE: This warning appears in case of an upgrade installation, when the specific database fields cannot be added to the database because it already contains custom fields. You must correct this manually after the installation has completed.

11. Click **OK** and wait until the installation completes. The **Installation Completed** screen is presented.

12. Click **Finish** to exit the installation.

13. Reboot the system.

5 Configuration

5.1 Firmware Settings

The following settings can be changed in the **AvtecScoutIntegrationService.exe.config** file located in the Avtec Scout Integration Service installation folder. The default location for this file is the folder **C:\Program Files (x86)\NICE Systems\AvtecScoutIntegrationService**.

> NOTE: Changes to these settings will not take effect until the Avtec Scout Integration Service is restarted.

Table 4: Configuration settings

Setting	Default Value	Description
FirstAvtecChannel	1	The first channel on the local server that is used for Avtec Scout recording. The channels are counted from one even if the satellite channel numbering starts from a different value.
AvtecChannelCount	250	The number of channels on the local server that are used for Avtec Scout recording.
CdrProcessorPort	4250	The TCP port number that is used to listen for connection from the CDR Processor.

5.2 CDR Processor Settings

The mapping file AvtecCdrProcessor.csv must be updated with the mapping of recorder channel IDs to Avtec Scout Integration channel. The file is formatted as comma separated values and can be edited in either Notepad or Excel.

Figure 6 : Channel mapping
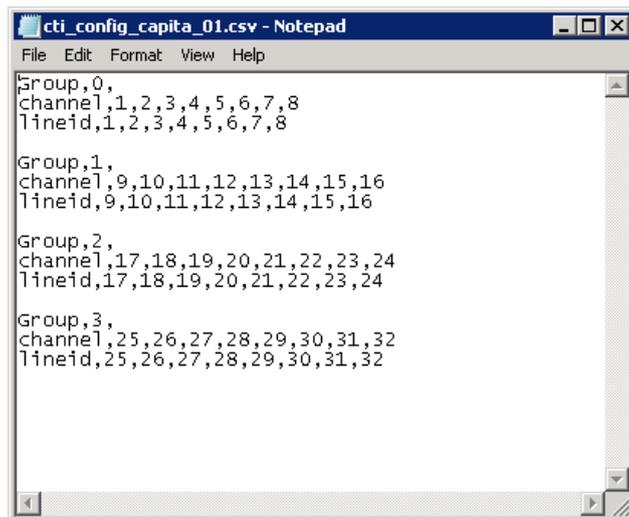
5.3   Configuring Database Fields

The additional call information fields provided by the Avtec Scout Integration for NICE Recording are shown in Table 5.

Table 5: Additional call information fields

Field	Description
Endpoint Name	Name of an audio endpoint such as a radio base station or a telephone line.
User Login Name	Login Name of the User who has logged on to the Console.
Console ID Source ID1	IP address of the Scout console.
Console ID Source ID2	
Audio Direction	Direction of the Audio whether inbound or outbound.
Endpoint State	The state in which the endpoint is placed, on the console by the Dispatcher (Select, Unselect, Mute...)
Frequency	Frequency on which transmission takes place
Talkgroup	Talkgroup of the Radio
ANI	ANI of the Caller
Call Type	Type of the call. Whether it is a Unit call or a group call.
Dialed Number	The Dialed Number from the Dialer, when an outbound call is made.
NAC	P25 Network Access Code of the endpoint(Radios)
Emergency	Emergency state of the endpoint.
Call Priority	Emergency state of the call.
Talkers List	Identifies the consoles that are transmitting audio toward the endpoint.
Listeners List	Identifies the endpoints that are receiving audio from the console.
Entity ID	ID of the entity
Call State	Identifies the state of a call.
RX Encryption State	Indicates that the audio received from the field is encrypted.
TX Encryption State	Indicates that the endpoint is encrypting audio transmitted to the field.
Key State	Indicates that a console is keying the radio.

▶ To select which call data fields are shown in call search results:

1. Click the *<recorded calls> <column selection>* tabs. The **Edit current view** screen is presented:

Figure 7 : Edit current view
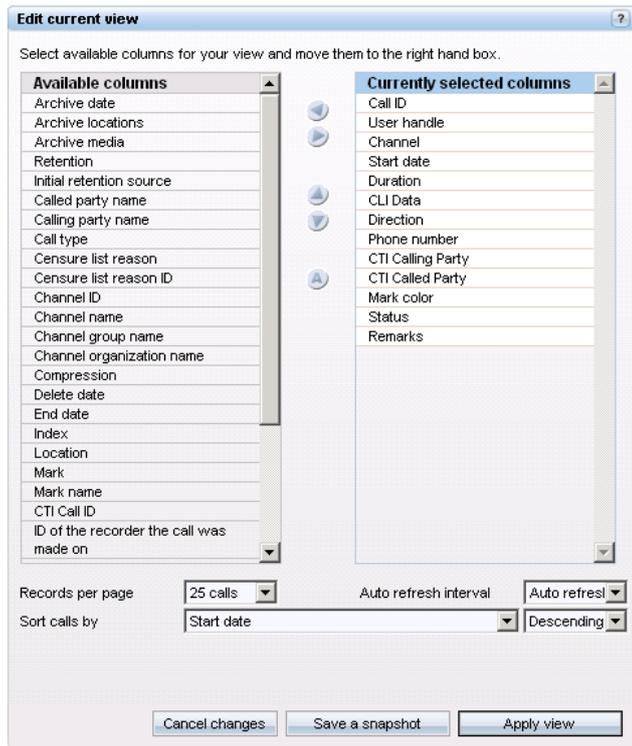
2. Add a field to the **Currently selected columns** list by double-clicking it in the **Available columns list** or by single-clicking it and clicking the **Right arrow** button.

3. Remove a field from the **Currently selected columns** by double-clicking it or single-clicking it and clicking the **Left arrow** button.

4. Move the fields in the **Currently selected columns** list by clicking the **Up arrow** and **Down arrow** buttons.

5. Click the **Save a snapshot** button to save the field selection.

6. Type the following data in the **Edit current view** screen:

    –   Store view as – the view name for the column selection.

    –   Share this view – check this box to make the view available to other users.

7. Click the **OK** button. The new view is added to the **Load a view** pane.

8. Click the **Apply view** button to switch to the *<calls listing>* tab. The list shows the columns you selected in your view.

NOTE: You can select a views as the default view for the calls listing in the <**my account**> <**my settings**> tab.

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6   Troubleshooting

6.1   No call recordings

6.1.1   Symptoms

- Channels do not go red on the NICE Recording Monitor tool when Avtec Scout calls take place.

6.1.2   Possible Causes

- The Avtec Scout device is not configured to send audio to the correct IP address and port number.
- Network connection is down.
- Firewall settings are blocking the audio data.

6.2   No CDR records inserted

6.2.1   Symptoms

- Call recordings can be played back from the VOX record but no matching CDR records with Avtec call information are created.

6.2.2   Possible Causes

- The Avtec Scout device is not configured to call metadata to the correct IP address and port number.
- Network connection is down.
- Firewall settings are blocking the metadata.
- The Avtec Scout Integration Service or CDR Processor service is not running.

7   Uninstallation

The Avtec Scout Integration for NICE Recording software can be removed using the **Programs and Features** option found in the Windows **Control Panel**.

Figure 8: Programs and Features
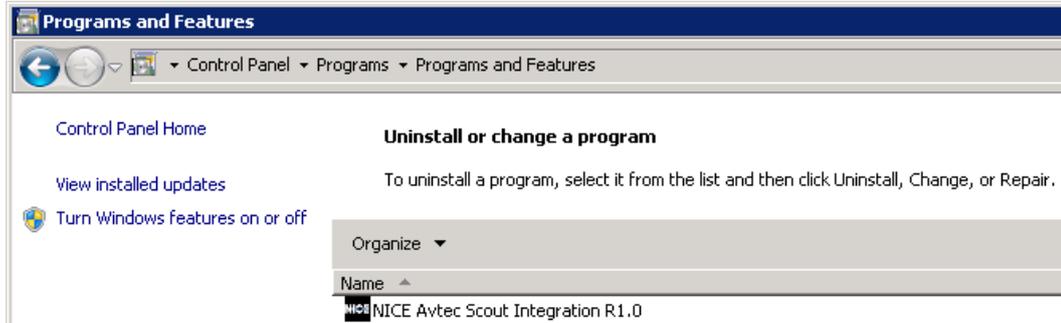
▶ To remove the Avtec Scout Integration for NICE Recording software:

1. Highlight NICE Avtec Scout Integration in **Programs and Features**.

2. Click the **Uninstall** button.

3. Follow the on screen instruction to complete the software removal.

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