TotalRecallVR

Total Recall VR Connector for SkySoft-ATM

User Guide

May, 2022
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Total Recall VR Connector for SkySoft-ATM Release 19.0.0

Prolancer

Related Documents:

[1] Prolancer Pty Ltd, Total Recall VR web site. Available from: http://www.totalrecallvr.com/.

[2] Prolancer Pty Ltd, Prolancer web site. Available from: http://www.prolancer.com.au/.

[3] Prolancer Pty Ltd, Total Recall VR Overview User Guide, 28.0, May 2022

[4] SkySoft-ATM, company web site. Available from: http://www.skysoft-atm.com/

[5] SkySoft-ATM, SkyRec recording solution web site. Available from: http://www.skysoft-atm.com/solutions/legal-atm-recording/

[6] Prolancer Pty Ltd, Total Recall VR Embedded GUI User Guide, 28.0, May 2022

[7] Prolancer Pty Ltd, Total Recall VR Manager User Guide, 19.0, May 2022

[8] Prolancer Pty Ltd, Total Recall VR Deployment User Guide, 28.0, May 2022

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1. Preface

1.1. Conventions

Our guides use several conventions to highlight certain words and phrases and draw attention to specific pieces of information.

1.1.1. Notes & Warnings

We use the following visual styles to draw attention to information that might otherwise be overlooked:

Notes are tips, shortcuts or alternative approaches to the task at hand. Ignoring a note should have no negative consequences, but you might miss out on a trick that makes your life easier.

Important boxes detail things that are easily missed: configuration changes that only apply to the current session, or services that need restarting before an update will apply. Ignoring the information will not cause data loss, but may cause irritation and frustration.

Warnings should not be ignored. Ignoring warnings will most likely cause data loss.

1.1.2. Typographic Conventions

We use typographic conventions to call attention to specific words and phrases. These conventions, and the circumstances they apply to, are as follows.

Example	Meaning
Select <u>Guide</u> to display ...	Locate the link named "Guide" on the screen, position the cursor over the link and then depress the appropriate mouse button to follow the link.
Select **Add** to create a new ...	Locate the button or menu item named "Add" on the screen, position the cursor over the button or menu item and then depress the appropriate mouse button to initiate an action.

Enter *Commission* ...	Locate the field named "Commission" on the screen, position the cursor over the field and then depress the appropriate mouse button to select the field. Once the cursor appears in the field, enter a value.
Choose *Country* ...	Locate the field named "Country" on the screen, position the cursor over the field and then depress the appropriate mouse button to display the available options. Then position the cursor over the desired option and depress the appropriate mouse button to select it.
Tick *Active User* ...	Locate the check box named "Active User" on the screen, position the cursor over the check box and depress the appropriate mouse button to place a visual tick in the box.
Un-tick *Active User* ...	Locate the check box named "Active User" on the screen, position the cursor over the check box and depress the appropriate mouse button to remove the visual tick in the box.
Enter *$30.95* ...	Enter "$30.95" using the keys on your keyboard.

1.1.3. Procedures

We use numbered sequence of steps to define procedures for performing certain tasks. For example:

> *Procedure Title*
>
> 1. This is the first step of the procedure.
>
> 2. This is the second step of the procedure.
>
>   a. This is the first sub-step of step 2.
>
>   b. This is the second sub-step of step 2.
>
> 3. This is step three.

1.2. We Need Feedback

If you find a typographical error in this guide, or if you have thought of a way to make this guide better, we would love to hear from you.

Please submit your feedback using the feedback form on our web site: http://www.prolancer.com.au/contact/feedback.

If you have a suggestion for improving the guide, then try to be as specific as possible when describing your suggestion. Otherwise, if you have found an error, please include the section number and some of the surrounding text so we can find it easily.

2. Introduction

2.1. About This Guide

This guide describes the Total Recall VR Connector for SkySoft-ATM application.

The guide is intended for Total Recall VR end users. It describes how to configure and use the Total Recall VR Connector for SkySoft-ATM application. Please keep a copy of this guide handy for quick reference.

2.2. What is Total Recall VR

Audio Logging
and
Call Recording
Systems

Total Recall VR is a professional audio logging and call recording system which is self-contained, fully featured and cost-effective. Enterprises and governments worldwide use it to create electronic records of many forms of audio communication including telephone, 2-way radio, broadcast radio, public address, intercoms, room microphones and much more.

Total Recall VR is the ideal solution for:

- Recording business telephone conversations;

- Recording agent calls in contact centres;

- Logging emergency response communication;

- Logging business operations communication;

- Logging radio broadcasts;

- Logging public announcements;

- Logging Air Traffic Control communication;

- Creating audio records of meetings, legal proceedings, public enquiries and similar events; and

- Creating compliance records to meet duty of care and legal requirements.

Total Recall VR captures all audio in digital format and stores it in a proprietary, secure and tamper proof file format in its on-board hard drive storage. The file format preserves the originality of the audio that it stores and has a number of built-in mechanisms that aid quick and reliable detection of tampering. However, for ease of access, Total Recall VR client applications can generate copies of recordings in a number of popular and everyday formats such as Microsoft's Wave (.wav) and MPEG Layer-3 (.mp3).

Storing audio by itself does not help when looking for one recording in a store that can hold hundreds of thousands of recordings. That is why, in addition to audio, Total Recall VR captures and then stores information related to each recording and audio source in its database such as start time, end time and duration of recordings, calling and called numbers on telephone calls, DTMF digits during calls, radio IDs, user configurable notes and much more. This information is the backbone of a powerful search capability which can pin point a single recording in a set of hundreds of thousands of recordings which reside either on a Total Recall VR recorder or in one of many types of off-system archives of recordings.

In addition to the audio recorder and the on-board storage, each Total Recall VR system comes with a built-in media player with comprehensive player controls (start, stop, fast-forward, rewind …). The player can play audio stored in files directly on the system or stream audio to a remote client application which then outputs the sound to the PC speakers of the PC that it runs on.

While audio recording, storage and re-play are the main functions of Total Recall VR, every Total Recall VR offers many more advanced, professional-grade features. For example:

- Ability to capture audio from different types of audio sources (analogue, VoIP, RoIP, AoIP and ISDN), at the same time – hybrid recording.

- Live and real-time monitoring (listening) of recordings in progress on the system itself or on a remote PC with the aid of a PC client application.

- Feature-rich archiver which can create searchable archives of recordings on CD, DVD or BD discs, USB keys or drives and network drives, either automatically or on-demand.

- Automated self-cleaning mechanism that removes obsolete recordings automatically and on regular intervals to keep the system operating endlessly.

- SNMP agent capable of generating SNMP alarms (traps).

- SMDR integration for a number of popular PBXes.

- Fully internationalised user interface; all menus and software available in multiple languages.

- Role based access control.

- On-board LCD display and control keypad on selected models.

- A range of PC client applications with value adding functionality.

- APIs and PC applications for integration with other business systems and solutions.

When audio records are critical to your operations, Total Recall VR delivers. It is professional, reliable and fully self-contained solution for audio logging and call recording that comes at an affordable price.

> The Total Recall VR Overview [3] guide contains a comprehensive description and overview of Total Recall VR.

2.3. What is SkySoft-ATM

SkySoft-ATM [4] designs and implements Air Traffic Management (ATM) solutions. Part of SkySoft-ATM's portfolio of solutions is the SkyRec [5] ATM data recording solution which is used for legal recording of ATM data, video and audio to aid post incident analysis, training and technical investigations.

The subsequent image shows the architecture of the SkyRec solutions:
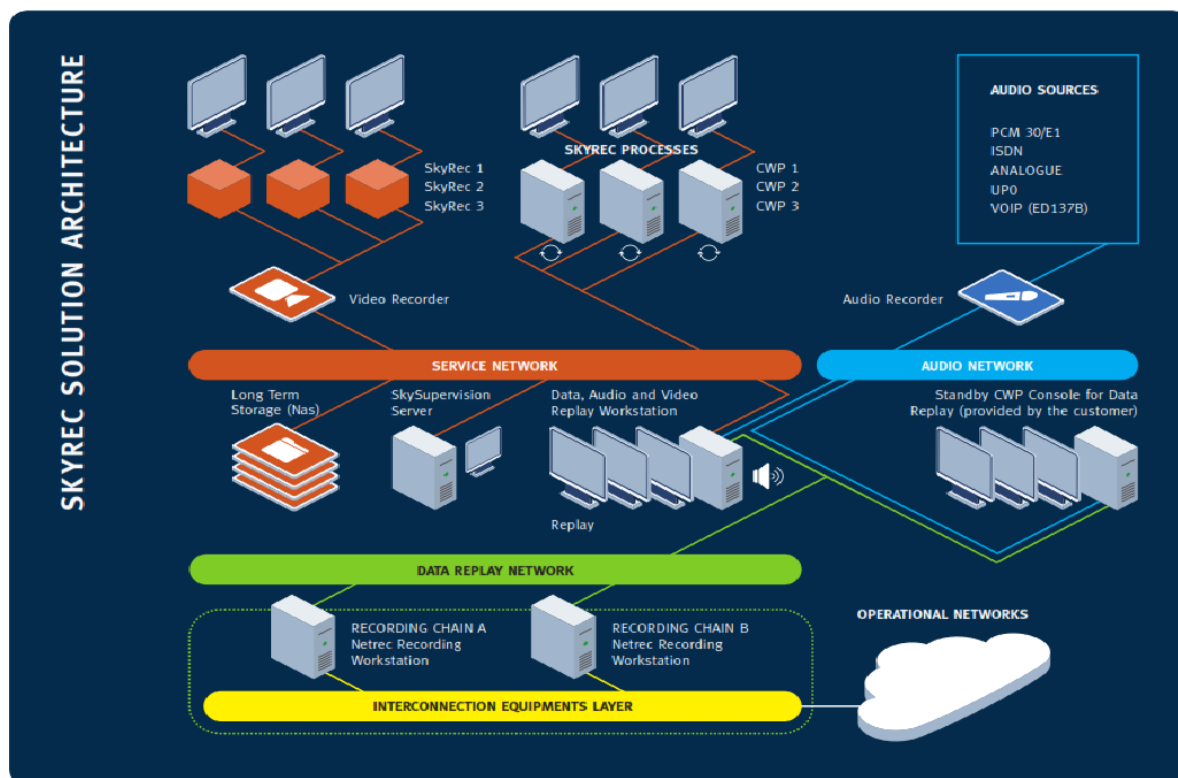

2.4. What is Total Recall VR Connector for SkySoft-ATM

Total Recall VR Connector for SkySoft-ATM (connector) is a combination of a Windows service and a GUI application.

The service enables easy integration of Total Recall VR with the SkyRec solution, via the SkySoft-Audio API 01.00.00, where Total Recall VR provides audio recording services to other components of the SkyRec solution.

The subsequent diagram shows how the connector fits in the SkyRec solution architecture.
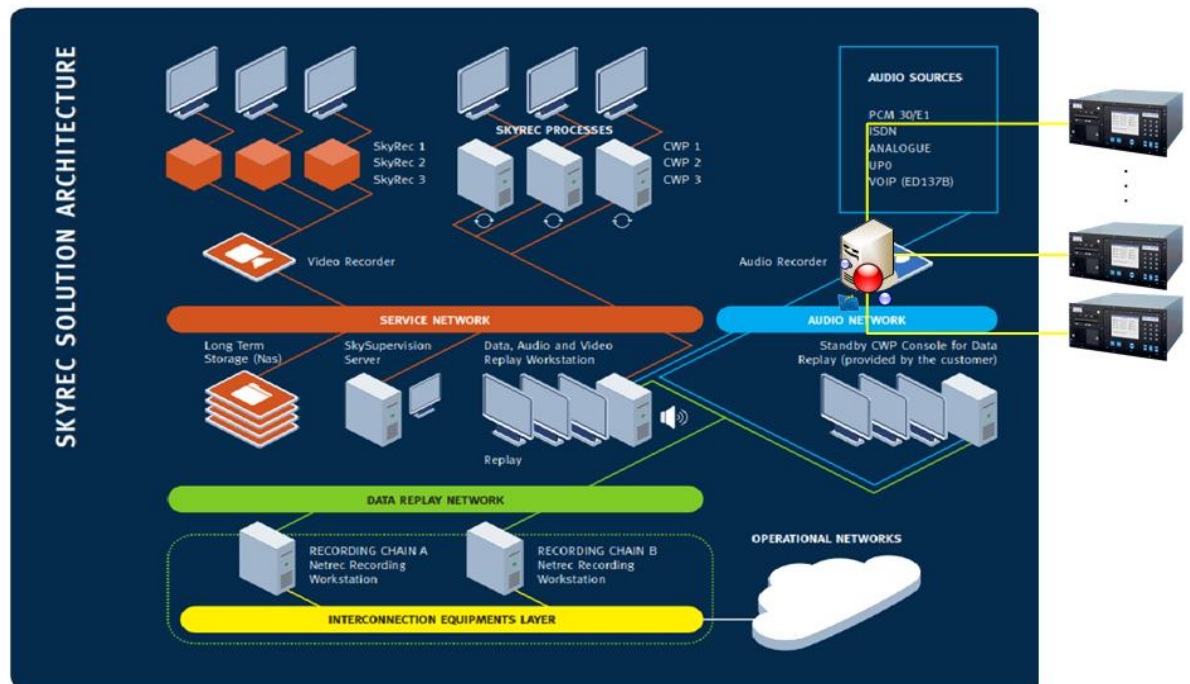
It is possible to deploy a set of connectors and configure each to provide access to the same or different set of Total Recall VR recorders as shown on the subsequent diagram. Consequently it is very easy to design a solution that implements some form of redundancy.
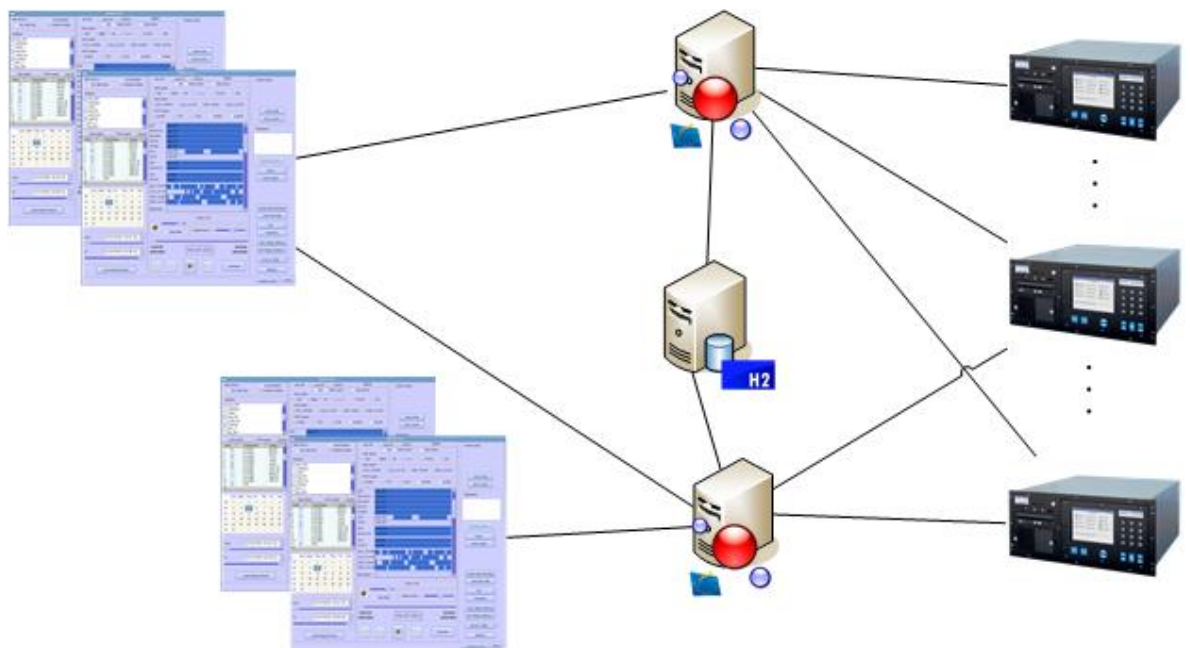
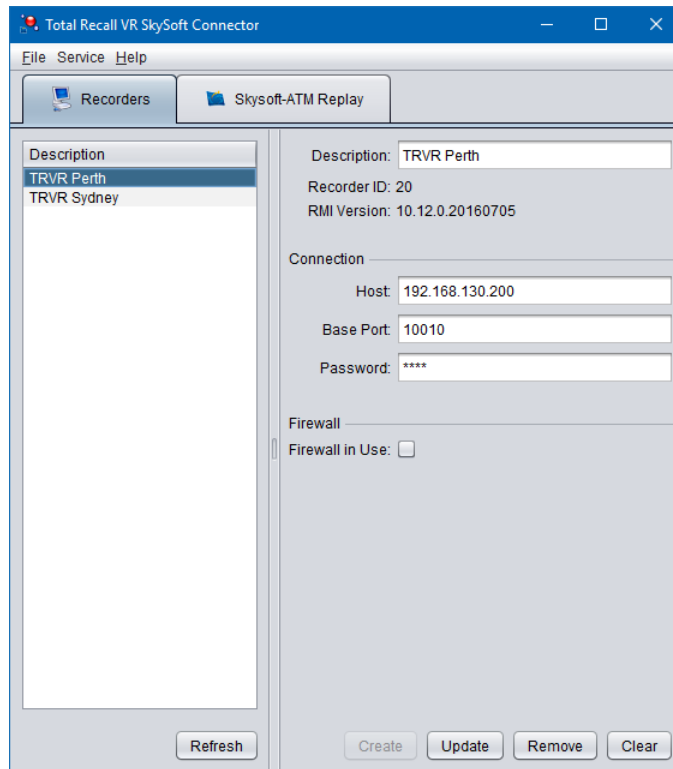The GUI application provides for configuration and control of the service.

Total Recall VR Connector for SkySoft-ATM is a licensed application. You must purchase an Activation License in order to use the application.

Total Recall VR Connector for SkySoft-ATM may require an AMBE decoder license to export recordings that are stored in the AMBE audio format.

You can purchase a USB based AMBE decoder from us, order code TRVR-AMBE and TRVR-AMBE-3.

3. Start Here

3.1. System Requirements

Total Recall VR Connector for SkySoft-ATM is a Java based application designed to run on a PC with Windows 7, 8 or 10 or a server running Windows Server 2010 or 2012.

The application is compatible with Windows XP and Vista, however it has not been tested for correct operation on Windows XP and Vista.

Total Recall VR Connector for SkySoft-ATM should be installed on a system with the following minimum specification:

- 25Mb free hard disk space.

- 4Gb memory (RAM).

- Display hardware that supports the 1024x768 resolution.

- At least one network connection

> Total Recall VR Connector for SkySoft-ATM requires an AMBE decoder license to export recordings that use the AMBE audio format.
>
> You can purchase a USB based AMBE decoder from us, order code TRVR-AMBE and TRVR-AMBE-3.

3.2. Compatibility

Total Recall VR Connector for SkySoft-ATM uses cutting edge technology to connect to Total Recall VR systems that run different releases of the Total Recall VR application.

As a result, it is possible to connect Total Recall VR Connector for SkySoft-ATM to Total Recall VR systems that run different 10.x.y or 11.x.y version of the application at the same time. However, the minimum releases of the Total Recall VR application that has support for applications like Total Recall VR Connector for SkySoft-ATM is 10.13.0 so you will have to upgrade your Total Recall VR systems to at least 10.13.0, if possible to do so, in order to use Total Recall VR Connector for SkySoft-ATM with your systems.

It is not possible to connect Total Recall VR Connector for SkySoft-ATM to Total Recall VR systems that run application version 9.x.y or earlier.

3.3. Pre-Installation

Total Recall VR Connector for SkySoft-ATM requires 3rd party software and drivers which you must install before installing Total Recall VR Connector for SkySoft-ATM.

3.3.1. Java SE Runtime Environment

This 3rd party software is mandatory. The application will not run at all without it.

Total Recall VR Connector for SkySoft-ATM is a Java application and as such it requires a Java SE runtime environment to run.

You must install a 32bit, version 8 (tested and recommended), Java SE Runtime Environment on your PC to use Total Recall VR Connector for SkySoft-ATM.

You can download a Java SE Runtime Environment installer from http://www.oracle.com/technetwork/java/javase/downloads/index.html.

You may already have a Java SE runtime environment on your PC or server. Ask your friendly technical staff to help you determine this if you are not sure how to check.

If your PC or server is running a 64bit version of Windows, then you may already have a 64bit Java SE runtime environment on your PC or server. If this is the case you must install the 32bit Java SE runtime environment on your PC or server as well in order to use Total Recall VR Connector for SkySoft-ATM. Ask your friendly technical staff to help you if you are not sure what to do.

3.3.2. FTDI 2DXX Drivers

This 3rd party software is optional. It is required to decode recordings that use the AMBE audio encoding.

Total Recall VR Connector for SkySoft-ATM uses a USB based AMBE decoder when exporting AMBE encoded audio.

You can purchase the USB based AMBE decoder from us – order code TRVR-AMBE and TRVR-AMBE-3.

The USB device requires FTDI D2XX drivers to work.

You must install FTDI's D2XX version 2.12.06, or better, WHQL certified drivers on your PC to enable Total Recall VR Connector for SkySoft-ATM to export recordings in the AMBE format.

You can download an installer for the drivers from http://www.ftdichip.com/Drivers/D2XX.htm.

3.3.3. Visual C++ 2015 Redistributable

This 3rd party software is mandatory. The application will not run correctly without it.

Total Recall VR Connector for SkySoft-ATM uses native Windows libraries and as such it requires the Visual C++ 2015 redistributable to run.

You must install the 32bit Visual C++ 2015 redistributable on your PC to use Total Recall VR Connector for SkySoft-ATM.

You can download an installer for the 32bit Visual C++ 2015 redistributable from https://www.microsoft.com/en-au/download/details.aspx?id=48145.

You may already have a Visual C++ 2015 redistributable on your PC or server. Ask your friendly technical staff to help you determine this if you are not sure how to check.

If your PC or server is running a 64bit version of Windows, then you may already have a 64bit Visual C++ 2015 redistributable on your PC or server. If this is the case you must install the 32bit Visual C++ 2015 redistributable on your PC or server as well in order to use Total Recall VR Connector for SkySoft-ATM. Ask your friendly technical staff to help you if you are not sure what to do.

3.3.4. H2 Database

This 3rd party software is mandatory. The application will not run correctly without it.

Total Recall VR Connector for SkySoft-ATM uses an H2 database to store its operating state.

You must install an H2 database server on the same machine, or a different machine, in order to use Total Recall VR Connector for SkySoft-ATM.

You can download a Windows installation package for an H2 database server from http://www.h2database.com/html/download.html. We have tested the application with version 1.4.200 and we recommend that you use this version.

Once you have installed an H2 database on a server, configure the H2 database service (using the wrapper.conf file in the services directory) and make sure that the H2 database service is running.

> This document uses an H2 database server which runs on a machine with IP address 192.168.120.200 and provides service on TCP port 9092 in examples. The same server provides a management service on TCP port 8082.

The H2 database installation instructions are not as clear as they should be when it comes to explaining how to get an H2 database server going. The following is a summary of the steps and can be used as a guide when setting up an H2 database server; however, it does not aim to replace the official H2 database documentation.

Install an H2 database server

1. Download the latest stable Windows installer from http://www.h2database.com/html/download.html. We downloaded a file named 'h2-setup-2019-10-14.exe' for this example.

2. Run the installer file which by default will install the software in "c:\Program Files\H2" on a 32bit system or "c:\Program Files (x86)\H2" on a 64bit system.

3. Step 2 does not install the H2 database service automatically. You must manually install it, after configuring it, as follows.

   The service ensures that the H2 database starts when the machine restarts.

4. The service configuration is in the "c:\Program Files\H2\service\wrapper.conf" file. We modified the following to tailor the service to our environment:

```
1. # Application parameters.  Add parameters as needed starting from 1
2. ## -- Make sure to allow tcpPort on the firewall -- ##
3. wrapper.app.parameter.1=org.h2.tools.Server
4. wrapper.app.parameter.2=-tcp
5. wrapper.app.parameter.3=-tcpPort 9092
6. wrapper.app.parameter.4=-tcpAllowOthers
7. wrapper.app.parameter.5=-web
8. wrapper.app.parameter.6=-webPort 8082
9. wrapper.app.parameter.7=-webAllowOthers
10. wrapper.app.parameter.8=-ifNotExists
11. wrapper.app.parameter.9=-baseDir "c:/worktemp/db"
```

   In summary, we want the service to store database files in the "c:\worktemp\db" directory on the local machine and run on TCP port 9092. Also, we want the service to use TCP port 8082 for web management.

5. With the above changes in place, open a terminal window and change to the "c:\Program Files\H2\service" directory. Then:

   a. Run the *1_install_service.bat* script to install the service on the machine. This adds the "H2 Database Engine Service" to the set of services on the machine.

   b. Run the *2_start_service.bat* script to start the service.

   c. To make sure that the service is running, start a browser using the *3_start_browser.bat* script on the same machine. This should show the login page for the database server management console.

6. Edit the firewall configuration for the machine and make sure that TCP ports 9092 and 8082 (if you are using our configuration from step 4) are not blocked.

   How you complete this step depends on the firewall application that you are using. Please consult the documentation for your firewall application.

7. Once the firewall is allowing communication to TCP ports 9092 and 8082 open a browser on a different machine and attempt to access the H2 server web management console using http://192.168.120.200:8082 (if you are using our configuration from step 4) to make sure that remote access to the server is possible.

Note that you do not need to create database users and a database for Total Recall VR Connector once the server is running. Total Recall VR Connector will create users and a database when it attempts to access the server for the first time.

3.3.5. Remote Interface

> This recorder configuration is mandatory. The application will not be able to connect to recorders without it.
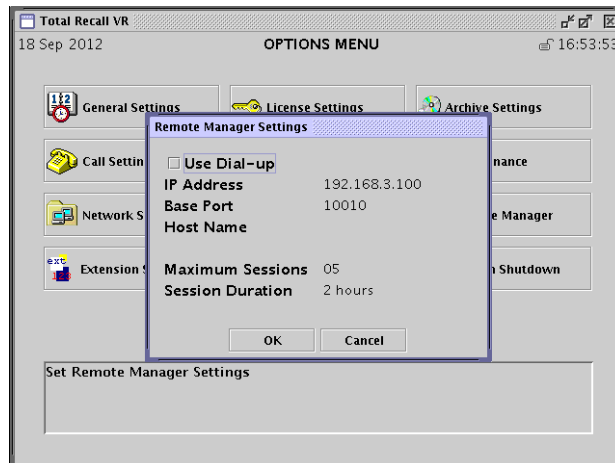
Total Recall VR Connector for SkySoft-ATM will connect to one or more Total Recall VR systems.

Total Recall VR Connector for SkySoft-ATM uses the Remote Interface provided by Total Recall VR systems to connect and interact with Total Recall VR systems. As a result, you must configure the Remote Interface on each Total Recall VR system that you wish to access from Total Recall VR Connector for SkySoft-ATM.

See section 6.5 in the Total Recall VR Embedded GUI User Guide [6] for details on how to configure the Remote Interface on systems with built-in screen.
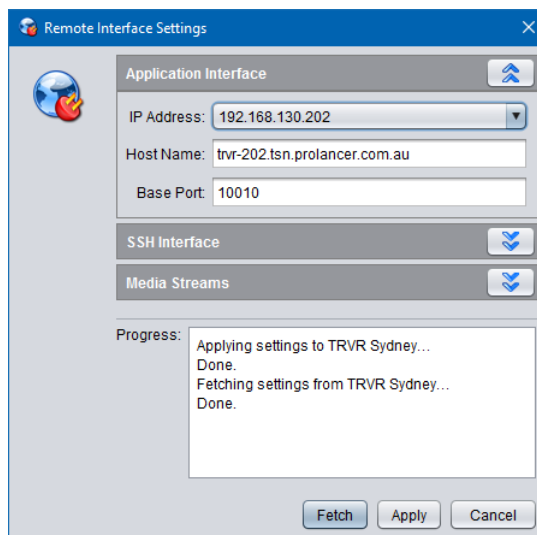
For example:

Figure 1: Remote Interface Configuration

If your Total Recall VR system does not have a built-in screen, then use the Total Recall VR Manager application to configure the Remote Interface. See section 8.2.5 in the Total Recall VR Manager User Guide [7] for details on how to configure the Remote Interface on systems without a built-in screen.

For example:

Figure 2: Remote Interface Configuration

3.4.   Application Installation

A Total Recall VR Connector for SkySoft-ATM installer is available for download from our web site. We do not ship installation media for Total Recall VR Connector for SkySoft-ATM.

> Please visit http://www.totalrecallvr.com/applications/total-recall-vr-connector-for-skysoftatm to download the installer for Total Recall VR Connector for SkySoft-ATM.

The installer is a wizard based installation program which will guide you through the installation steps. To install Total Recall VR Connector for SkySoft-ATM on your PC:

Install Total Recall VR Connector for SkySoft-ATM

1. Extract the TRVRSkysoftConnector-Setup-x.y.z.yyyymmdd.exe file from the TRVRSkysoftConnector-Setup-x.y.z.yyyymmdd.zip file that you downloaded from our web site.

2. Double-click on the TRVRSkysoftConnector-Setup-x.y.z.yyyymmdd.exe file to launch the installer.

3. Follow the prompts to complete the installation.

> The installer does not automatically start the Total Recall VR Connector for SkySoft-ATM service at the end of the installation.
>
> You must start the service manually after installing and configuring the application, or alternatively restart the machine.

3.5. Application Update

To upgrade Total Recall VR Connector for SkySoft-ATM:

- If you wish to keep the previous configuration and activation license for the application, then simply follow the installation procedure. Do not uninstall the previous version of the application.

- If you wish to have a clean installation of the application, with new configuration, then first uninstall the previous version of the application and then install the new version. Please make a record of your activation license before you uninstall the old version of the application. You will need the activation license for the new version of the application.

The installer will stop the Total Recall VR Connector for SkySoft-ATM service when uninstalling the application or before upgrading it.

The installer does not automatically start the Total Recall VR Connector for SkySoft-ATM service at the end of the upgrade.

You must start the service manually after upgrading and configuring the application, or alternatively restart the machine.

The installer will reset the runtime properties of the service to their default values. So if you have been using the service with custom runtime properties, for example the Log On properties, then you must customise the properties again after the upgrade and before you run the service.

3.6. First Run

Total Recall VR Connector for SkySoft-ATM requires an activation license key to run. As a result, when you run the Total Recall VR Connector for SkySoft-ATM GUI application for the first time, , it will prompt you to enter an activation token or license as shown on the following screen capture.

Figure 3: Activation Dialog

You can activate the application in one of the following ways:

1. Activate a 10 day trial of the application by choosing the **Trial Token** option. This mode of activation requires Internet access.

   Note that you will be able to activate one, and only one, trial of the application on a given PC. Once the 10 day trial is complete, it will not be possible to activate another trial for the application on the same PC.

2. Activate the application for either a limited time or perpetually by entering an **Activation Token** that we send you when you purchase a license for the application. This mode of activation requires Internet access.

   Based on the number of licenses that you purchase, and the type of token that we send you, you may be able to activate the application with the token on a single PC or multiple PCs. Please consult the instructions that come with the token for more details.
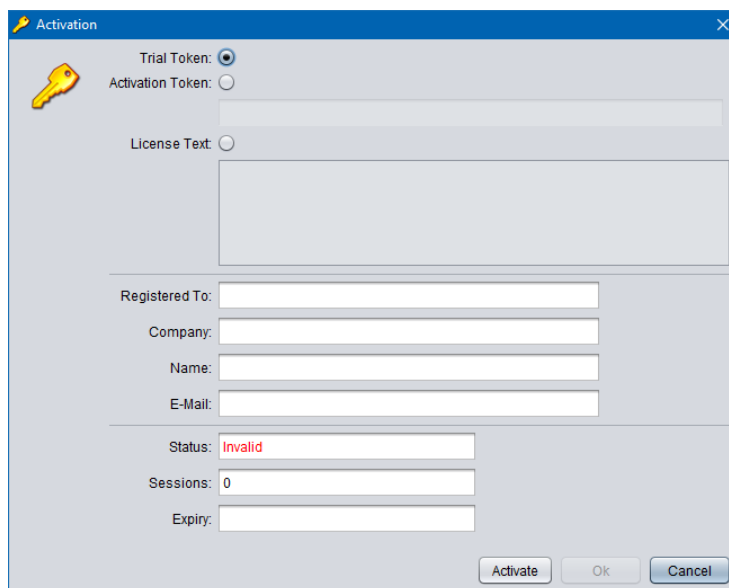
3. Activate the application for a limited time or perpetually by entering a **License Text**. This mode of activation does not requires Internet access.

   This mode of activation, in general, will be used only for existing licenses (activated previously) when lost or misplaced. Please contact us for instructions on how to proceed to recover lost activation licenses. However, it can be used to activate the application on PCs that do not have Internet access.

Instructions for each method of activation follows.

Activation with the Trial Token

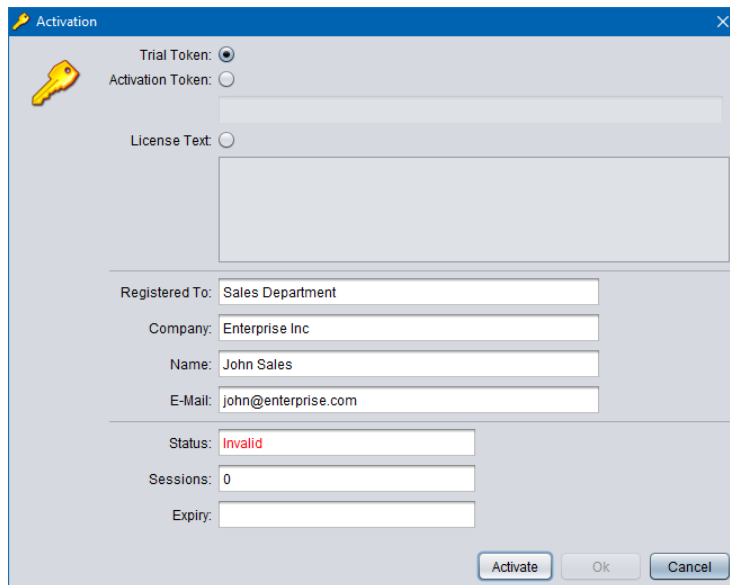1. To activate a 10 day trial of the application select **Trial Token**.

2. Enter *Registered To*, *Company*, *Name* and *E-Mail* as desired. Note that the details that you enter here will be needed to recover the trial activation license in
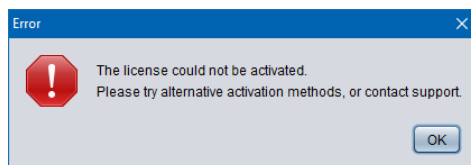
the event that it is lost or misplaced so make a record of them and keep them in a safe place.
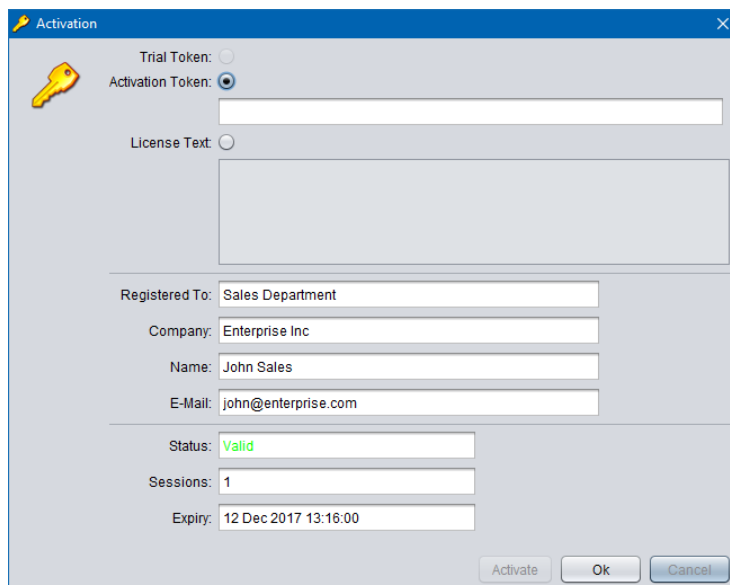
For example:

3. Select **Activate** to attempt activation. The application will attempt activation (over the Internet) with the Total Recall VR licensing server. If you receive the following error message, then a trial of the application was previously activated on the PC.

As a result, the Trial Token cannot be used to activate the application (again).

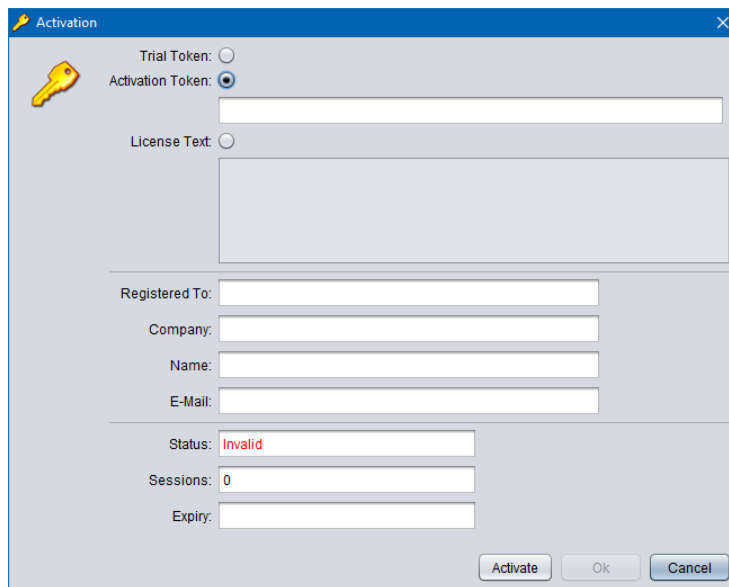4. In most cases the activation will be successful. For example:

5. Select **Ok** to start the trial of the application. You will not be asked to activate the application again during the trial.

Activation with an Activation Token

1. If you have received an activation token from us, then you can activate the application with the token. This is an example of an activation token that you will receive:
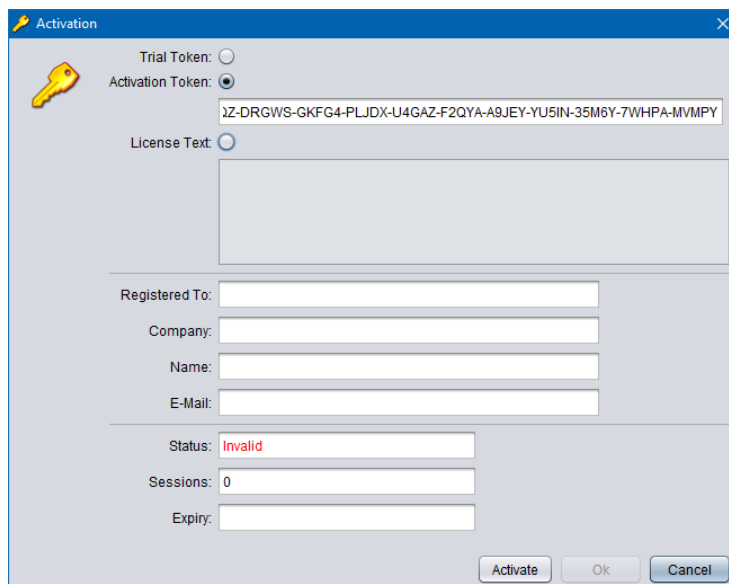
```
ZU2QL-DSFGK-GHAHA-3NW9B-24RAH-LJQ9A-A9LEH-GTPH5-3G6L4-
XJPTX-H5SEA
```

2. To activate the application with an activation token select **Activation Token**.

3. Enter the token as you received it from us. For example:

4. Enter *Registered To*, *Company*, *Name* and *E-Mail* as desired. Note that the details that you enter here will be needed to recover the activation license in the

event that it is lost or misplaced so make a record of them and keep them in a safe place.

For example:

5. Select **Activate** to attempt activation. The application will attempt activation (over the Internet) with the Total Recall VR licensing server. If you receive the following error message, then the Activation Token is no longer valid, or it was previously used to activate the application.
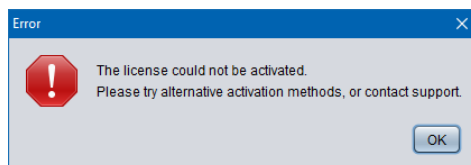
6. In most cases the activation will be successful. For example:

7. Select **Ok** to start using the application.

(Re)Activation with License Text
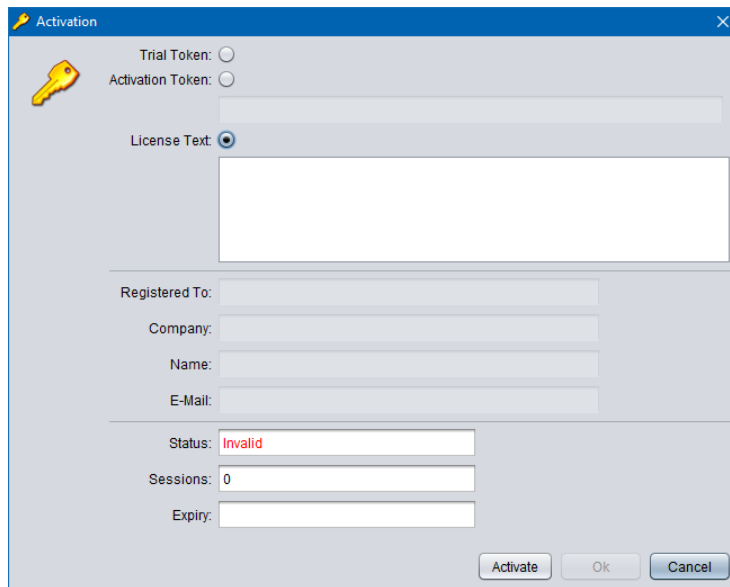
1. We may send you the license text of an activation license if you cannot activate the application over the Internet, or if you have activated the application before and misplaced your activation license for the application on a particular PC. This is an example of license text that you will receive (some lines were removed to save space):

```
# Example Application License (id: 1511837763868)
6729c0c1fc5b9b29b19c4336e2068b75b231474c87cbce079ff39ea741b0
04ec3480fda88ffed82f6dee402293e82e1ece184925ed3510c2189c2b18
4c819332337373235b9e7b8210da6286c2f502de30a0a4140e3a5ddc1102
        :
        :
4abc5a5efd5f38c804a4ee8b45e92495aac362e67cf5c9721a48400c9ee3
8b699a6d3fc266e0d8efabcede2d58427ac92f510576c4250af30d5ad7a2
5cde6395e2493adb54960307e8083ae8
```

Note:
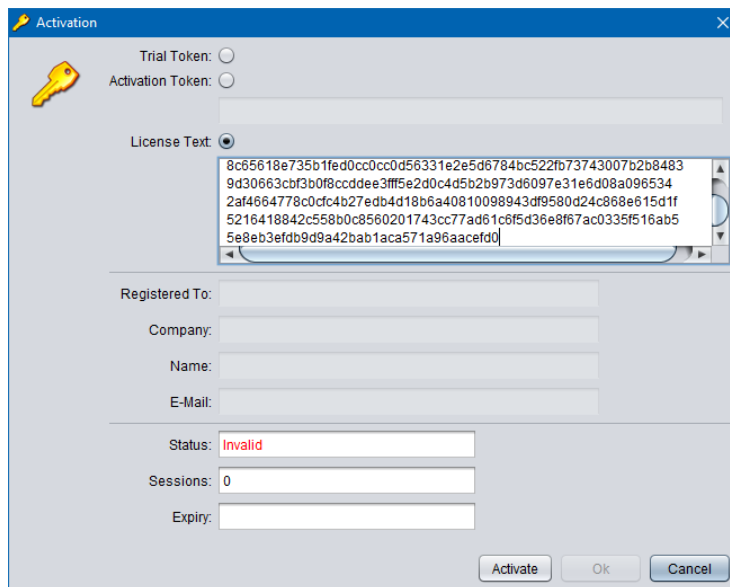
   a. The PC does not need Internet access to (re)activate the application with license text.

   b. The license text that we will send you is for an existing license which activates the application on the same PC (without hardware modifications) as it was when activated for the first time.

   c. If the activation license is lost due to damaged hard disk, or motherboard and you replace the faulty hardware, then the license text of the original activation license (which we will send you) will no longer be valid as the hardware of the PC changed and you will have to purchase a new license.

2. To activate the application with a license text select **License Text**.

3. Enter the license text as you received it from us. For example:

4. Select **Activate** to attempt activation. If you receive the following error message, then the activation license is no longer valid, or it is for a different application, or it is for a PC with different hardware.
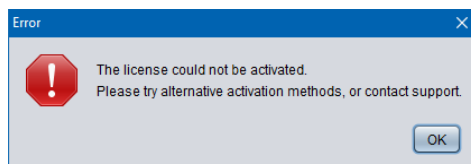
5. In most cases the activation will be successful. For example:
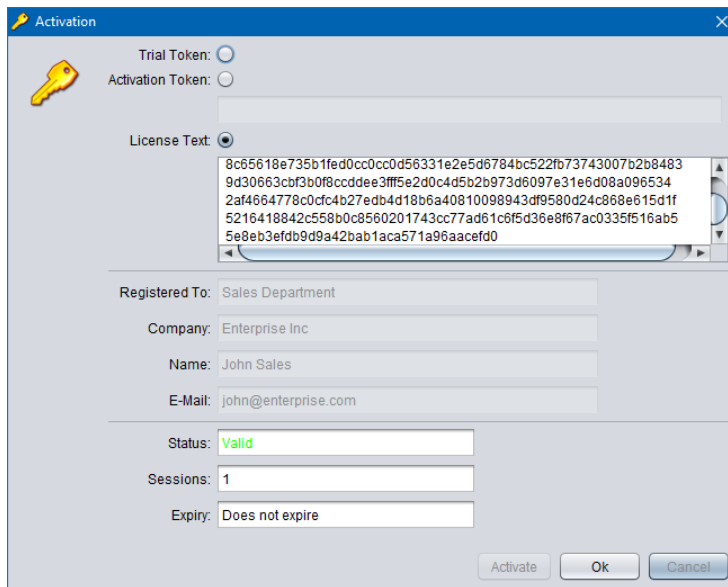
6. Select **Ok** to start using the application.

Once you activate the application (for the first time), it will display the Preference dialog which allows you to configure the application.

Application Configuration

1. The Preferences dialog allows you to configure the application.
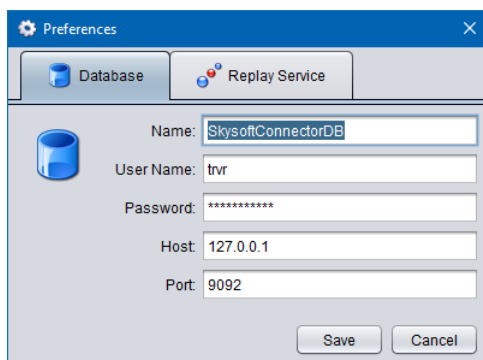
2. On the **Database** tab:

    a. Enter *Name*. This is the name of the H2 database that will be created and used by this instance of Total Recall VR Connector for SkySoft-ATM.

    b. Enter *User Name*. This is the user name that Total Recall VR Connector for SkySoft-ATM will use when connecting to the database.

    c. Enter *Password*. This is the password that Total Recall VR Connector for SkySoft-ATM will use when connection to the database.

    d. Enter *Host*. This is the IP address, or the host name, of the server which runs the H2 database server.

      e. Enter *Port*. This is the TCP port that is used by the H2 database server to provide database services.

3. Switch to the **Replay Service** tab to configure the service address and port which Total Recall VR Connector for SkySoft-ATM will use to exchange messages with other SkyRec components:

4. On the **Replay Service** tab:
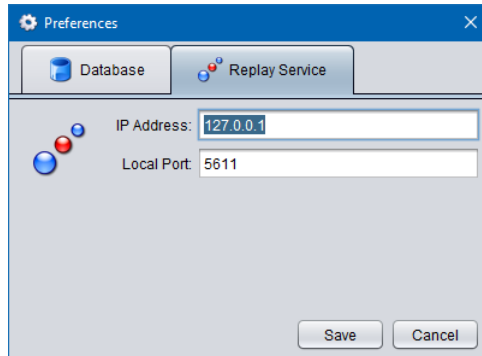
      a. Enter *IP Address*. This is the IP address that Total Recall VR Connector for SkySoft-ATM will use to receive requests from other SkyRec components and when sending responses to other SkyRec components.

      b. Enter *Local Port*. This is the UDP port that Total Recall VR Connector for SkySoft-ATM will use to receive requests from other SkyRec components and when sending responses to other SkyRec components.

5. Select **Save** to save the application configuration and to start using the application.

Next you should proceed to configure Total Recall VR Connector for SkySoft-ATM as described in section 5 Application Configuration.

4.   User Interface

Total Recall VR Connector for SkySoft-ATM uses a simple GUI application to configure and control its Windows service.
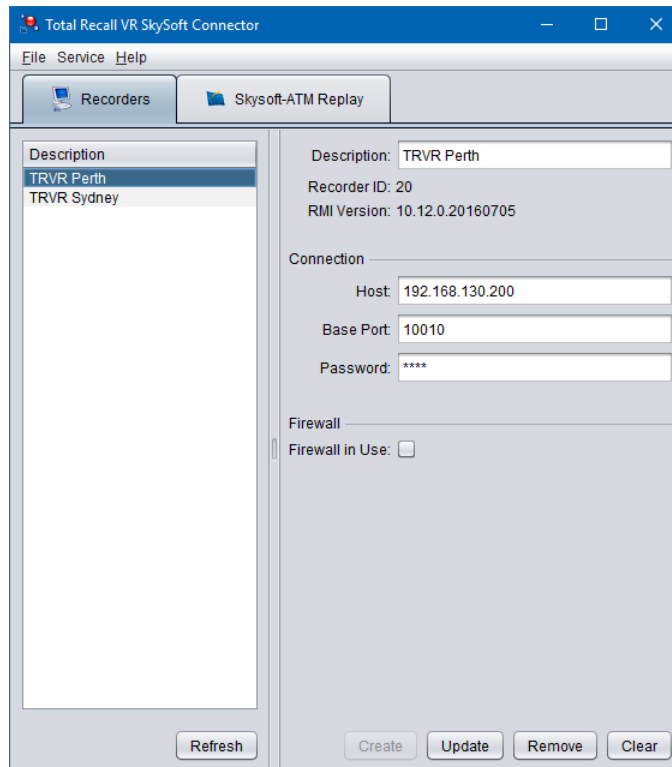
Figure 4: Total Recall VR Connector for SkySoft-ATM GUI Application

Use the GUI application to add Total Recall VR systems connections; to add SkyRec components; to start, stop and restart the service and to view the service state.

4.1.   Main Menu Bar

The Total Recall VR Connector for SkySoft-ATM main menu bar includes 3 menus: File, Service and Help.

4.1.1. File Menu
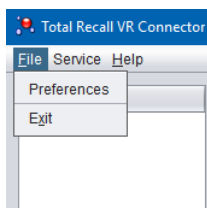
The File menu includes the following options:

1. **Preferences**

   It opens the Preferences dialog which allows you to make changes to the application configuration.

2. **Exit**

   It terminates Total Recall VR Connector for SkySoft-ATM GUI application. It does not stop the service.

4.1.2. Service Menu
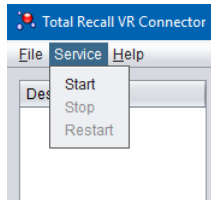
You must run the application "As Administrator" in order to control the service from the application.

The Service menu includes the following options:

1. **Start**

   It starts the Total Recall VR Connector for SkySoft-ATM Windows service.

2. **Stop**

   It stops the Total Recall VR Connector for SkySoft-ATM Windows service.

   Note that if the service is in the process of serving requests, then it may take few minutes for it to stop as it will first complete the current batch of requests before it stops.

3. **Restart**

   It restarts (stop followed by start) the Total Recall VR Connector for SkySoft-ATM Windows service.

4.1.3. Help Menu
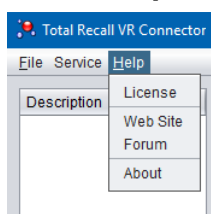
The Help menu includes the following options:

1. **License**

   It displays the Activation Status dialog which shows information on the activation license:
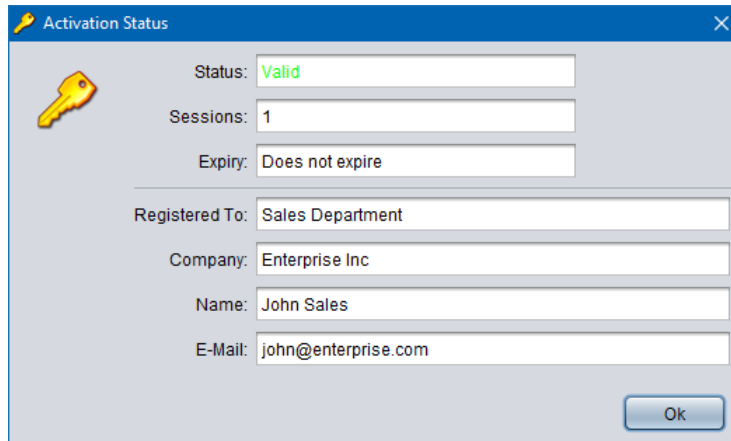
2. **Web Site**

   It starts the default system web browser and loads the front page of the Total Recall VR web site.

3. **Forum**

   It starts the default system web browser and loads the Forums page of the Total Recall VR web site.

4. **About**

   It display 'about' information about the application including the version number of the application.

5. Application Configuration

For best results with Total Recall VR Connector for SkySoft-ATM, we recommended that you configure it as explained in this section before using it.

5.1. Configuration Considerations

5.1.1. Recorder ID

If you have multiple Total Recall VR systems, then you must assign a different recorder ID to each system before you configure Total Recall VR Connector for SkySoft-ATM to connect to them.

> Total Recall VR and SkySoft-ATM systems use different ID numbering system. For example SkySoft-ATM systems support recorder ID 0 while Total Recall VR systems do not.
>
> Recorder IDs between 1 and 29 inclusive work on both systems and as a result you are limited to using 1 to 29 (inclusive) as recorder IDs.

Total Recall VR Connector for SkySoft-ATM uses the recorder IDs in the AUDIO DATA requests to identify the Total Recall VR recorders to use when serving the requests. As a result, it is important to have matching recorder IDs on the Total Recall VR systems with recorder IDs used in the audichannelinfo.ini configuration files on SkySoft-ATM systems. For example, if a Total Recall VR is configured to use recorder ID 15, then a section like the following must be present in the audichannelinfo.ini:

```
[AUDIO_RECORDER_15]
NAME=…
ADDRESS=…
```

Note that a section like the following in the audichannelinfo.ini file will result in all requests being rejected by the connector as it is not possible to configure a Total Recall VR recorder with ID 0:

```
[AUDIO_RECORDER_0]
NAME=…
ADDRESS=…
```

5.1.2. Channel IDs

Total Recall VR Connector for SkySoft-ATM uses the channel IDs in the AUDIO DATA requests to identify the Total Recall VR recording channel to use when serving the requests.

Total Recall VR and SkySoft-ATM systems use different ID numbering system. For example SkySoft-ATM systems support channel ID 0 while Total Recall VR systems do not.

Channel IDs 1 and onwards work on both systems and as a result you are limited to using channel IDs of 1 and above.

Note that a section like the following in the audichannelinfo.ini file will result in all requests being rejected by the connector for channel 0:

```
[AUDIO_RECORDER_15]
NAME=…
ADDRESS=…

AUDIO_CHANNEL_NAME_0=…
POSITIONNAME_0=…
```

While it is possible to use channel IDs when searching for audio on a Total Recall VR, the end result is very likely to be incorrect as Total Recall VR allocates channel numbers dynamically to recordings when they start.

Total Recall VR prefers to use extension values (which can be any free text, for example "Tanya's Phone") instead.

The Total Recall VR Connector for SkySoft-ATM provides for mapping of integer channel IDs to Total Recall VR extensions in its configuration. For example channel 1 can be mapped to "Tanya's Phone" in the Total Recall VR Connector for SkySoft-ATM configuration.

This enables the connector to find recordings irrespective of what channel number was used to create the recording.

5.1.3. Recorder Activities

A number of activities on the recorder, if in progress, will (temporarily) prevent Total Recall VR Connector for SkySoft-ATM from servicing requests from SkySoft-ATM systems. The activities, as well as recommended actions to minimise outages, are:

- Transcoding
    - Disable transcoding on the recorder.
- Automatic or manual archiving
    - Disable automatic archiving or accept an outage while automatic archiving is in progress.
    - Avoid manual archiving, or archive during periods when an outage is acceptable.

- House-keeping

    o Outages cannot be avoided during house-keeping. Fortunately, house-keeping events are short.

- Erasing a disc

    o Avoid erasing discs on the recorder.

- Service requests from other connector and archiving PC applications

    o Avoid connections from other connector and archiving PC applications

5.2. Recorders

Total Recall VR Connector for SkySoft-ATM fetches recordings from one or multiple Total Recall VR recorders in order to service requests from SkyRec components.

You must specify connection details for each recorder.

> If you have multiple Total Recall VR systems, then you must assign a different recorder ID to each system before you configure Total Recall VR Connector for SkySoft-ATM to connect to them.
>
> See the Total Recall VR Embedded GUI User Guide [6] and/or the Total Recall VR Remote Manager User Guide [7] on how to assign a recorder ID to your systems.

> You must configure the Remote Manager Interface on your Total Recall VR systems before you configure Total Recall VR Connector for SkySoft-ATM to connect to them.
>
> See section 3.3.5 Remote Interface for more details.

Then, to add a recorder:

Add a recorder

1. Stop the service. Select **Stop** from the **Service** menu.

2. Select the **Recorders** tab and then select **Clear**.

3. Enter the connection details:

a. Enter *Description*, which must be unique, to help you identify the recorder.

b. Enter *Host* and *Base Port* which must reflect the configuration of the Remote Manager Interface on a Total Recall VR system. For example:

c. Enter *Password* which must be the password assigned to the Administrator user on the Total Recall VR system. By default this password is '0000' (four zeroes); however, you may have changed it to a different value.

d. If there is a firewall between the networks that connect the system that runs Total Recall VR Connector and the Total Recall VR system, then tick *Firewall in Use* and then change *Host* and *Base Port* as described in the Total Recall VR Deployment Guide [8].

4. Select **Create**. Total Recall VR Connector for SkySoft-ATM will attempt to connect to the recorder and access details from it and if successful it will add the recorder to its configuration.

5. Start the service. Select **Start** from the **Service** menu.

Once you start the service after adding a recorder, the service will automatically manage the connection to that recorder.

5.3. SkySoft-ATM Replay

In addition to recorders, Total Recall VR Connector for SkySoft-ATM requires information on the SkyRec components that will request service from it. So it is necessary to add an entry for each component on the **SkySoft-ATM Replay** tab.

> If all details for all replays that will request service form the connector are the same (except for the IP address), then you can configure a single entry with IP address 0.0.0.0.

Then, to add a replay:

Add a replay

1. Stop the service. Select **Stop** from the **Service** menu.

2. Select the **SySoft-ATM Replay** tab and then select **Clear**.

3. Enter the replay details:
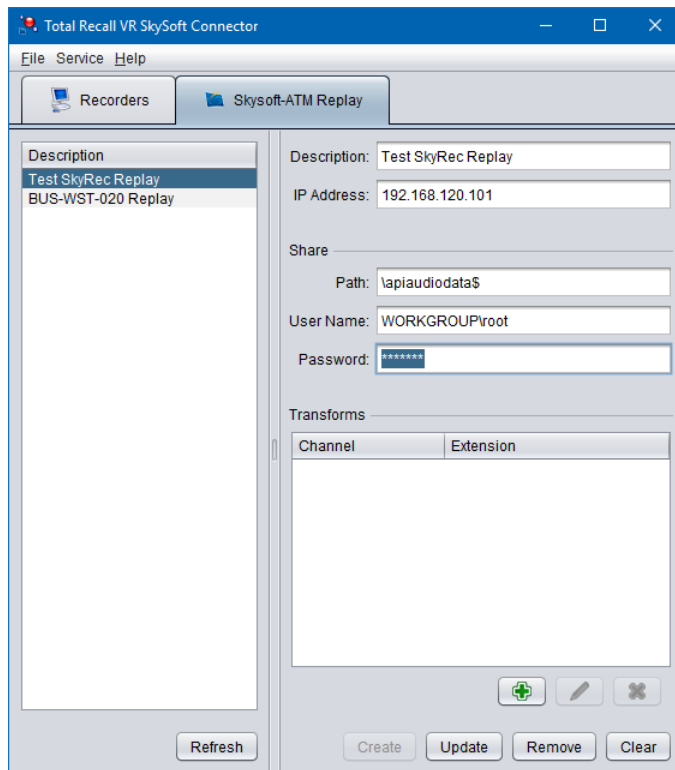
a. Enter *Description*, which must be unique, to help you identify the replay.

b. Enter *IP Address*, which must be unique across all replay entries. This is the IP address that the replay will use when sending requests to the connector. It is also the IP address when the connector will use as the hostname of the UNC path to the disk share where it will place the audio files.

c. Enter *Path*. This is the share name of the UNC path to the disk share where the connector will place the audio files when servicing requests from the replay.

d. Enter *User Name*. This is the user name the connector will use when attaching the disk share where it will place the audio files.

e. Enter *Password*. This is the password that the connector will use when attaching the disk share where it will place the audio files.

4. Select **Create**. Total Recall VR Connector for SkySoft-ATM will add the replay to its configuration.

5. Start the service. Select **Start** from the **Service** menu.

While channel ID transforms are optional, you will find that in most cases it is necessary to map the channel IDs that appear in AUDIO DATA messages to Total Recall VR extensions.

Add a channel ID transform

1. Stop the service. Select **Stop** from the **Service** menu.

2. Select the **SySoft-ATM Replay** tab and then select a replay **Description** to display the data of the replay:
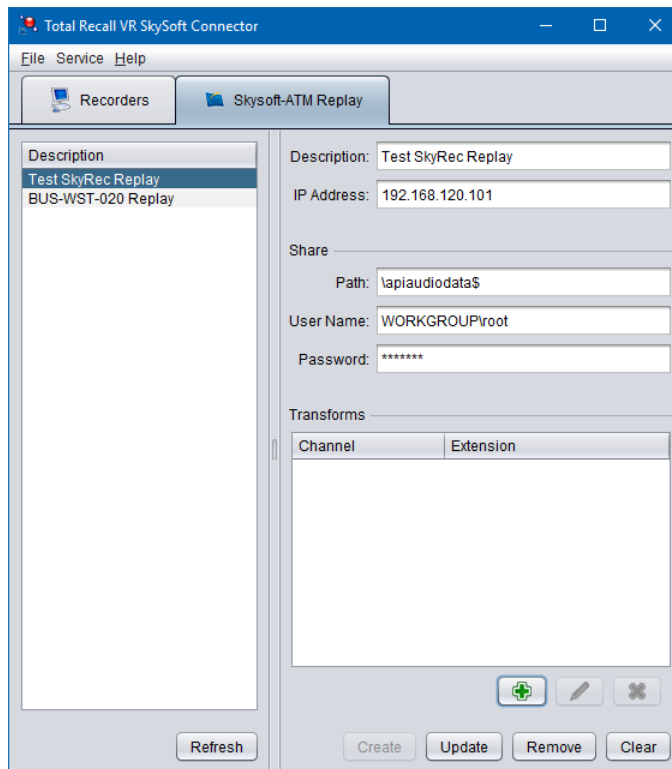
3. Under the *Transforms* table select to display the Channel ID Transform dialog:
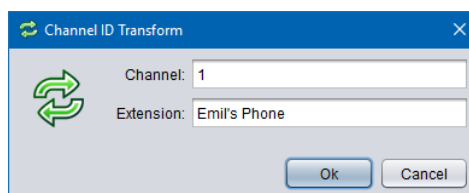
4. Enter *Channel*. This is the integer ID that appears in AUDIO DATA messages.

5. Enter *Extension*. This is a Total Recall VR extension.

6. Select **Ok**. This adds the transform to the Transforms table.
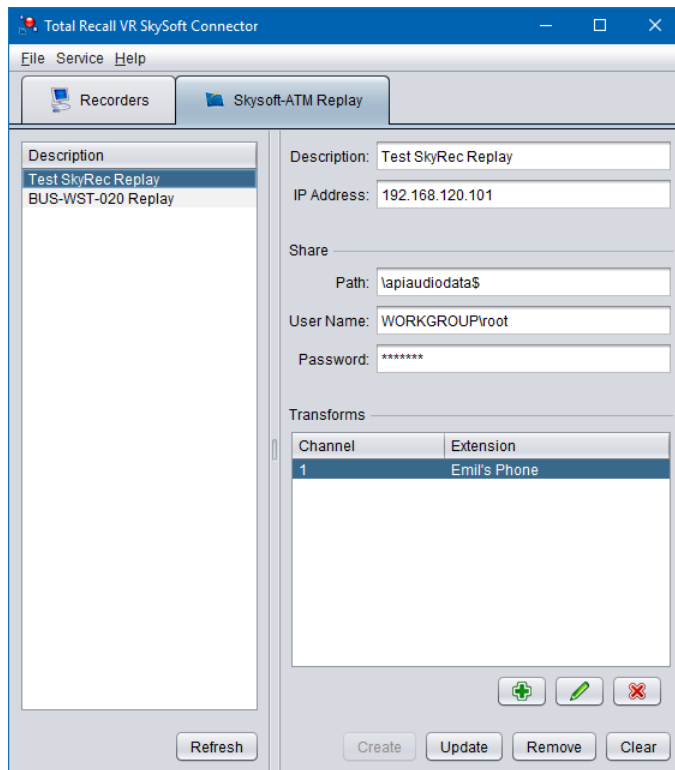
7. Select **Update** to save the transform.

8. Start the service. Select **Start** from the **Service** menu.

6. Connector Service

The Total Recall VR Connector for SkySoft-ATM service is a Windows service that implements the Skysoft Audio API 01.00.00.
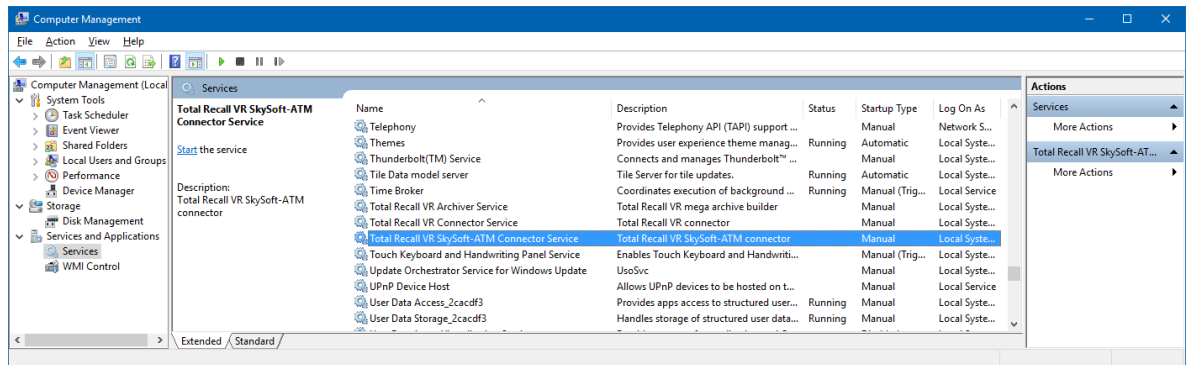
Figure 5: Total Recall VR Connector for SkySoft-ATM Service

You can use the Windows Services console (see previous screen capture) to control the operation of the service. Alternatively, you can use the Total Recall VR Connector for SkySoft-ATM GUI application to control the operation of the service.

However, you must use the Total Recall VR Connector for SkySoft-ATM GUI application to configure the service. This is not possible with the Windows Services console.

The service creates an operating log which is a text file. The file is called TRVRSkysoftConnectorService.log and is located in the "<install folder>\log" directory. Typically this is the "C:\Program Files (x86)\TRVR Skysoft Connector\log" folder.

You should examine this log from time to time to make sure that the service is operating without problems.

6.1. Request Processing

The following are the steps that the connector service will take when processing a request:

1. All requests are validated for compliance with the Skysoft-Audio API 01.00.00 when they arrive.

   a. Invalid request are ignored by the connector; that is, a response is not sent back to the replay that sent the invalid request.

2. The connector looks up its configuration (**Recorders** tab) for a recorder with ID that matches the recorder ID in the request.

   a. If a recorder with a matching ID does not exist in the configuration, then the connector send a fail response to the replay.

3. The connector looks up its configuration (**SkySoft-ATM Replay** tab) for an entry with an IP address that matches the IP address of the socket used to send the request.

    a. If a replay record with a matching IP address does not exist, the connector looks up its configuration (**SkySoft-ATM Replay** tab) for an entry with IP address 0.0.0.0 (the default replay entry).

    b. If it fails to find an entry, then the connector sends a send a fail response to the replay.

4. The connector attempts to attach the audio file share as a drive using configuration parameters that it determined during step 3.

    a. The connector sends a fail response if it encounters problems to attach the share as a drive.

5. For each channel in the request:

    a. The connector looks up its configuration (**SkySoft-ATM Replay** tab) to determine a channel ID transform.

        i. If a transform exists, the connector uses the *Extension* specified in the transform to search for recordings.

        ii. If a transform does not exist, the connector uses the channel ID from the request to search for recordings.

    b. The connector searches for recordings in the period specified by the request.

    c. The connector creates the .skyrec files and adds the audio segment information to the response.

6. The connector detaches the drive that is uses to access the audio file share on the replay.

7. The connector send the response back to the replay.

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17.1 Your license to use the Software continues until terminated. This license will terminate automatically if you fail to comply with any term hereof. No notice shall be required from Prolancer to effect such termination. You may also terminate this Agreement at any time by notifying Prolancer in writing of termination. On termination, you must destroy all copies of the Software. Your obligation to pay accrued charges and fees shall survive any termination of this Agreement.

18. ASSIGNMENT

18.1 Neither this Agreement nor any rights granted hereunder may be sold, leased, assigned, or otherwise transferred, in whole or in part, by you, whether voluntary or by operation of law. Any such attempted assignment shall be void and of no effect without the prior written consent of Prolancer.

19. ENTIRE AGREEMENT

19.1 This Agreement contains the entire agreement between Prolancer and You related to the software and supersedes all prior agreements and understandings, whether oral or written. It may be amended only by a writing executed by both parties.

[End of Document]