# TotalRecallVR

# Infinity VS$^X$ Appliance

## *Quick Start Guide*

**December, 2021**
**Guide Issue 1.0**
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# 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 Infinity Overview User Guide, 1.0, December 2021

[4] Prolancer Pty Ltd, Total Recall VR Cockpit User Guide, 1.0, December 2021

# Table of Contents

# 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 Guide to display ... | Locate the link named "Guide" on the screen and then either:<br>• Position the cursor over the link and then depress the appropriate mouse button to follow the link; or |

| | |
|---|---|
| | • Tap on the link with a single finger to follow the link. |
| Select **Add** to ... | Locate the button or menu item named "Add" on the screen and then either:<br><br>• Position the cursor over the button or menu item and then depress the appropriate mouse button to initiate an action; or<br><br>• Press on the button with a single finger to initiate the action. |
| Select ➦ to ... | Locate the button or menu item with the icon "➦" on the screen and then either:<br><br>• Position the cursor over the button or menu item and then depress the appropriate mouse button to initiate an action; or<br><br>• Press on the button with a single finger to initiate the action. |
| Enter *Commission* ...<br><br>or<br><br>Set *Commission* ... | Locate the field named "Commission" on the screen and then either:<br><br>• 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; or<br><br>• Tap in the field with a single finger to select the filed. Once the cursor appears in the field, enter a value. |
| Choose *Country* ... | Locate the field named "Country" on the screen and then either:<br><br>• 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; or<br><br>• Press on the filed with a single finger to display the available options. Then tap with a single finger on the desired option to select it. |
| Tick *Active User* ... | Locate the check box named "Active User" on the screen and then either:<br><br>• Position the cursor over the check box and depress the appropriate mouse button to place a visual tick in the box; or<br><br>• Tap on the check box with a single finger to place a visual tick in the box. |

| Un-tick *Active User* ... | Locate the check box named "Active User" on the screen and then either: <br><br> • Position the cursor over the check box and depress the appropriate mouse button to remove the visual tick in the box. <br><br> • Tap on the check box with a single finger to remove the visual tick in the box. |
|---|---|
| Enter *$30.95* ... | Enter "$30.95" using the keys on your physical or on-screen 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, then we would love to hear from you.

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

Congratulations on your purchase of a latest generation Total Recall VR Infinity professional audio logging and call recording appliance. Thank you.

Total Recall VR has more than 20 years history of creating professional audio logging and call recording systems which are self-contained, fully featured and cost-effective. Enterprises and governments worldwide use Total Recall VR products 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.

## 2.2. About This Guide

This guide contains information intended to get you recording with your new Total Recall VR appliance as quickly as possible.

However, to enjoy the maximum benefit from your purchase we recommend that you carefully read the following additional documents:

- Total Recall VR Cockpit User Guide [4].

## 2.3. What is Infinity VS$^X$?

Total Recall VR Infinity VS$^X$ is a Total Recall VR appliance that is based on a virtual machine, or virtual hardware. It is designed to run as a virtual guest on top of a virtualisation product such as the VMware ESXi or the Oracle's VirtualBox.

The appliance is a combination of a latest generation Linux operating system and a suite of Total Recall VR Infinity recorder services that have been engineered to run in a virtual machine environment. Depending on the combination of Total Recall VR Infinity recorder services that are part of the appliance, each instance of Infinity VS$^X$ can be used as a:

1. Total Recall VR Infinity recorder appliance; or

2. Total Recall VR Infinity archive appliance.

As a recording appliance, Infinity VS$^X$ supports only IP (VoIP, RoIP, AoIP ...) recording channels and is capable of recording:

- SIP sessions (calls) via UDP/TCP ports.

- SIPrec sessions via UDP/TCP ports.

- Cisco BiB sessions via UDP/TCP ports.

- Unicast and multicast RTP streams via SPAN ports.

- Unicast and multicast RTP streams via UDP ports.

- RTSP sessions via UDP/TCP ports.

- ATC recording via ED-137B/C Part 4.

- RoIP (analogue, MPT-IP and DMR networks) recording via Tait VRP.

- RoIP (DMR networks) recording via Hytera HDAP.

- RoIP (analogue, DMR, P25, NXDN ... networks) recording via Omnitronics RTP.

- RoIP (analogue, DMR, P25, NXDN ... networks) recording via Zetron SIP logging interface.

As an archive appliance, Infinity VS$^X$ acts as a repository (archive) for recordings and associated metadata as well as a repository (archive) for audit events.

In all cases, users access Infinity VS$^X$ appliances via instances of Total Recall VR Cockpit [4], the user interface for the latest generation Total Recall VR Infinity appliance and custom recorders.

# 3. Start Here

> ⚠ If a ruling is required on the legality of recording in your country, then please seek legal advice from a legal professional in your country.
>
> THIS PRODUCT MUST NOT BE USED FOR ILLEGAL OR UNAUTHORISED RECORDING PURPOSES.

## 3.1. Virtual Machine Requirements

> ⚠ It is not possible to guarantee the performance of Infinity $VS^X$ instances as it largely depends on the hardware that is available to the virtualisation layer and the virtual hardware that is allocated to the Infinity $VS^X$ virtual machines.

### 3.1.1. Recorder Appliance

The standard Infinity $VS^X$ virtual machine when it is used as a recording appliance has the following configuration:

- 4 CPU cores

- 16GB of RAM

- Single 1TB virtual hard disk

- Two network interfaces

- USB 3.1 controller

The above configuration is sufficient to record 60 sessions simultaneously when the virtual CPU uses a physical CPU that is equivalent to an Intel® Core™ i5-11500 CPU and the virtual hard disk is located on a standard AV-GP SATA physical disk. The following table shows the required virtual machine configuration and physical hardware in order to record more than 60 sessions simultaneously:

| Sessions | Virtual CPU | RAM | Virtual Disk |
|---|---|---|---|
| Up to 120 | 8 CPU cores (on an i7-11700 equivalent) | 32 GiB | 2TB+ on a SAS SSD physical disk |
| Up to 180 | 12 CPU cores (on an i9-11900 equivalent) | 48GiB | 2TB+ on a NVMe physical disk |
| Up to 500 (maximum tested) | 24 CPU cores (on an i9-11900 equivalent) | 128GiB | 4TB+ on a NVMe physical disk |

### 3.1.2. Archive Appliance

The standard Infinity VS$^X$ virtual machine when it is used as an archive appliance has the following configuration:

- 4 CPU cores

- 16GB of RAM

- Single 4TB virtual hard disk

- Two network interfaces

- USB 3.1 controller

In most cases the above configuration is sufficient to maintain an archive of 10,000,000 sessions from 4 different recorder appliances and support browsing from up to 4 Total Recall VR Cockpit instances.

However, based on the duration of recordings, you may need additional disk space. As a rule of thumb, each TB of disk space is sufficient for about 60,000 audio hours of recordings.

## 3.2. Installation – OVF Download

Infinity VS$^X$ open virtualisation format (OVF) packages are available to download from our web site. We do not ship installation media for Infinity VS$^X$.

Please visit http://www.totalrecallvr.com/products/total-recall-vr-infinity-vsx to download a ZIP package that contains an OVF package for Infinity VS$^X$. Extract the OVF package from the ZIP package.

After you download an OVF package, to import it please follow the instructions related to importing OVF packages in the documentation that came with your virtualisation environment. We recommend that you configure the import process to reinitialise the MAC addresses of all network interfaces.

An Infinity VS$^X$ virtual machine will appear in the list of virtual machines on the management console for your virtualisation environment once you import the OVF package. At this point you should:

- If required, set the guest OS to Linux and the guest OS version to "Other 5.x or later Linux (64-bit)" (or if not available use "Other 4.x or later Linux (64-bit)").

- If required, adjust the CPU and RAM configuration for the virtual machine.

- Connect at least one network interface to a virtual network that has DHCP enabled and that can be accessed from at least one device that will run an instance of Total Recall VR Cockpit.

    To simplify the initial configuration process, we recommend that you connect both network interfaces to a virtual network at this point, either the same or different networks.

At this point you can power up the virtual machine, however we recommend that you delay that for a moment and until you complete the following:

1. Install and activate an instance of Total Recall Cockpit on a device (usually a Windows based PC) that has network access to at least one of the virtual networks to which the virtual machine is connected.

    See the Total Recall VR Cockpit User Guide [4] for information on how to install and activate a Total Recall VR Cockpit instance.

## 3.3. Installation – DIY Virtual Machine

You can create an Infinity VS$^X$ virtual machine yourself as an alternative to the preferred method of installation that depends on an OVF package that you download from our web site, see section 3.2 Installation – OVF Download.

<table>
<tr>
<td>⚠️</td>
<td>We reserve the right to refuse support for Infinity VS$^X$ virtual machines that were created with this installation method and in particular if we find that the installation procedure that you used is inconsistent with what is described here or the virtual machine does not meet the minimum virtual and physical hardware requirements.</td>
</tr>
</table>

However, this method requires technical skills and a virtual network with Internet access. Do not attempt this method if you lack the technical skills to create a Linux based virtual machine using advanced bootstrapping techniques.

To build an Infinity VS$^X$ virtual machine yourself:

### *Build an Infinity VS$^X$ virtual machine*

1. Download the Fedora 34 Server Netinstall ISO x86_64 image and place it in a location where it will be accessible by the new virtual machine.

2. Create a virtual machine that meets or exceeds the requirements that are documented in section 3.1 Virtual Machine Requirements.

   In addition, add a CD/DVD drive to the configuration and configure it to use the ISO image that you downloaded during step 1.

   Tips:

   During the process of creating a VM you may have to set the guest OS family to "Linux" and may have to set the guest OS version to "Other 5.x or later Linux (64-bit)" as other versions may not support EFI firmware.

   Also, do not use the "VMware Paravirtual" SCSI controller. Total Recall VR Cockpit will not be able to manage the disks if you use this controller.

3. Configure the virtual machine to boot using its EFI firmware and from the CD/DVD drive.

4. Connect at least one of the network interfaces to a virtual network that has a DHCP server and Internet access. The installation process will download files from the Total Recall VR installation server over the Internet.

   We recommend that you connect both network interfaces to a virtual network, either the same on different networks. If you must connect only one, then connect the one with lower MAC address, usually the first network interface that is assigned to the virtual machine.

5. Power on the virtual machine and make sure that it boots from the CD/DVD drive (the Fedora Netinstall ISO x86_64 image actually). If successful, you should see the boot selection screen:
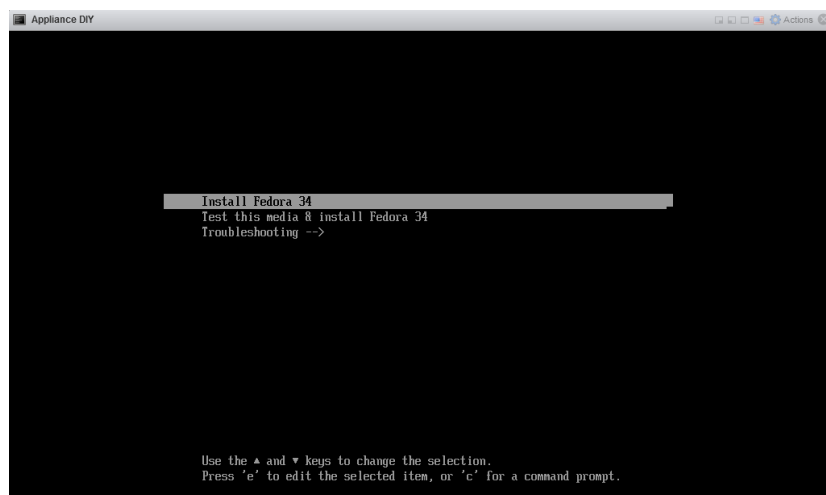


6. Move the selection to "Install Fedora 34" and then press "e" to edit the boot configuration:
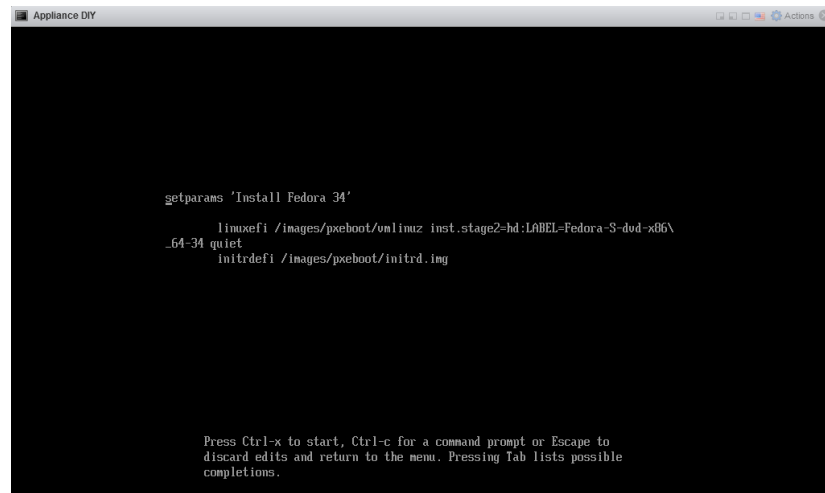
7.  Modify the boot options to include the following two options to build a recorder appliance:

    ```
    inst.ks=http://dnf.totalrecallvr.com/kickstart/trar-cli.x86_64.ks ip=dhcp
    ```

    Alternatively, use the following two options to build an archive appliance:

    ```
    inst.ks=http://dnf.totalrecallvr.com/kickstart/traa-cli.x86_64.ks ip=dhcp
    ```

    Note, you must place both options before the `quiet` option if present. For example:
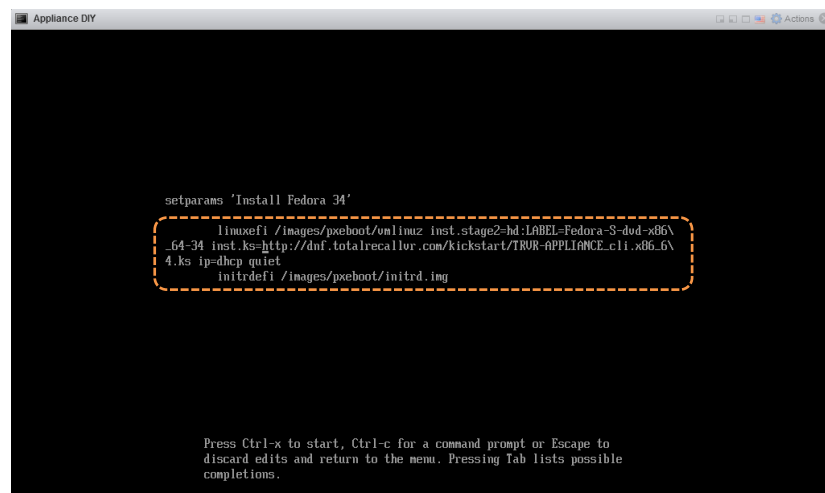


8.  Press Ctrl-x to start the installation. If successful, the automated installation will start.

    All of the installation is done in text mode. So if you see the following screen, then you have missed something and you must power down the virtual machine and start again from step 1:
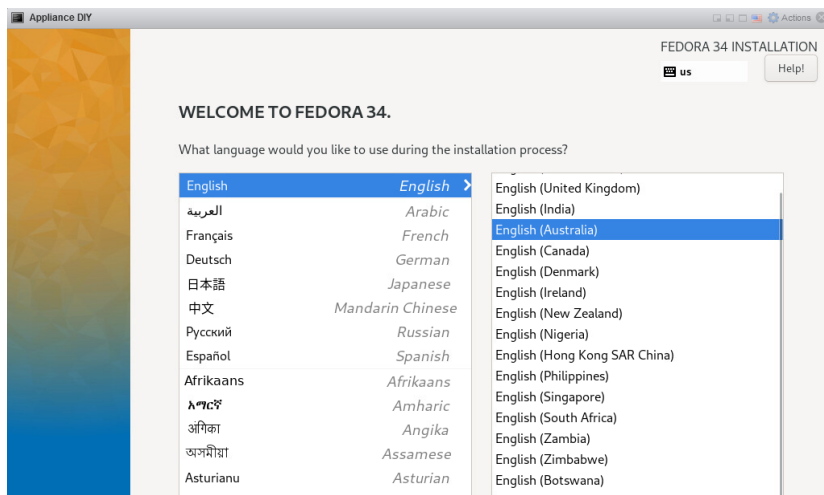
A successful start of the installation process should show the following screen during the initial stages:
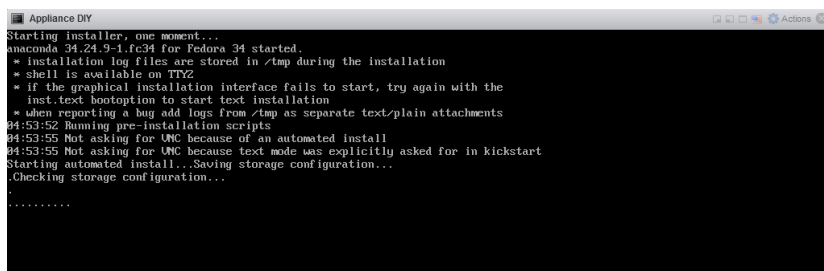


9. Wait until the installation completes. The process is hands off and fully automatic. However, it may take some time to complete based on the network delays between the virtual machine and the Total Recall VR installation server.

10. When the installation completes, you will be asked to reboot the virtual machine. For example:



Please reboot the virtual machine (i.e. press ENTER as instructed on the screen). You will have a working Infinity VS$^X$ virtual machine when it completes rebooting. For example:
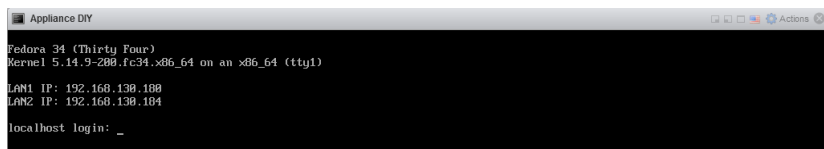


11. Finally, remove the CD/DVD drive from the virtual machine hardware configuration. The Infinity VS$^X$ virtual machine will not use it.

## 3.4.    Initial Run

If the virtual machine is not already running then power it up and let it go through the boot process. Once the virtual machine is up and running, you can get the IP addresses that were assigned to its network interfaces by the DHCP servers form a console window. For example:
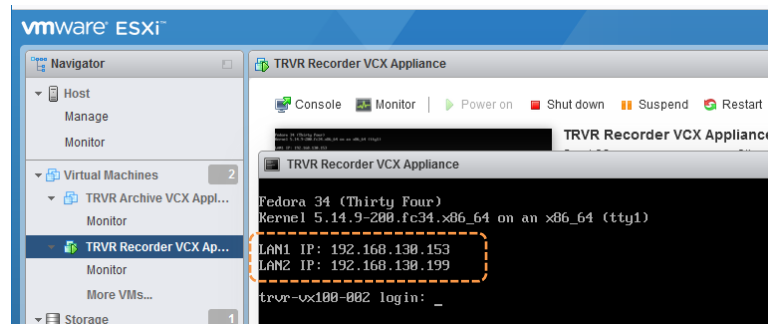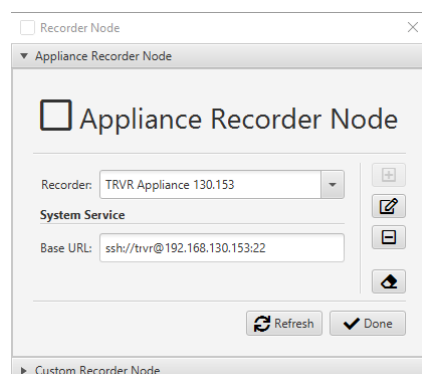


At this point you can configure an Appliance Recorder Node in the Manager view of Total Recall VR Cockpit.



For information on how configure an Appliance Recorder Node using the Manager view see the Total Recall VR Cockpit User Guide [4].

For example, to access the appliance that is shown on the previous screen capture via the interface with IP address 192.168.130.153:



You will have management and monitoring access to the appliance once you create the node and you are ready to proceed with the initial configuration and activation.

⚠️ We do not disclose the password for the root user, or any other operating system user, to protect the integrity of the Total Recall VR appliance.

You must use Total Recall VR Cockpit to manage and monitor the appliance.

# 4. Initial Configuration

> ✏️ The definitive guide for the information in this section is the Total Recall VR Cockpit User Guide [4].

This section contains information that will help you complete the initial basic configuration of your Total Recall VR appliance.

Before you proceed with the initial configuration of your Total Recall VR appliance make sure that:

- The Total Recall VR appliance is up and running;

- You have a running instance of Total Recall VR Cockpit that can access the appliance over your network.

- You have created an Appliance Recorder Node in the Management view of Total Recall VR Cockpit to one of the network interfaces of the appliance – see section 3.4 Initial Run.

Continuing with the example from the previous sections, where we created an Appliance Recorder Node for the appliance with network interface with IP address 192.168.130.153, the following screen capture shows the Manager view of Total Recall VR Cockpit when it is ready to perform the initial configuration:
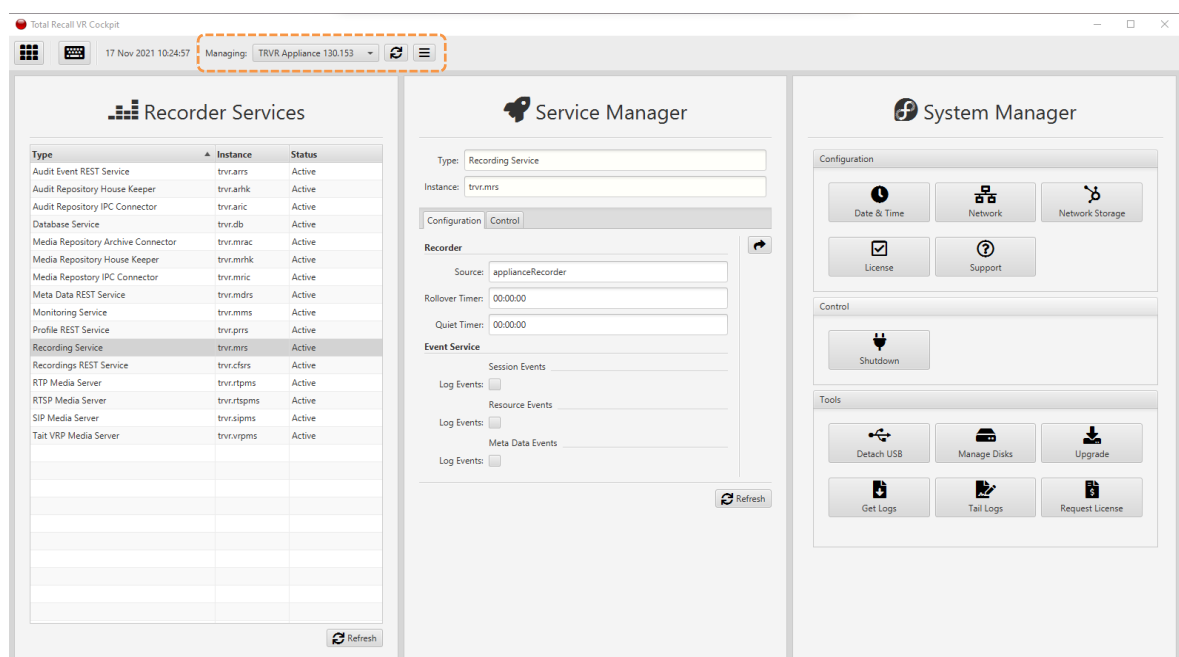
## 4.1. Network Configuration

Your Total Recall VR appliance has two network interfaces. Use one (usually the first one) to connect the appliance to the enterprise network and the other (usually the second) for recording.



As you may already know, the default configuration for both interfaces is to use automatic configuration (via DHCP).

| | |
|---|---|
| 💡 | We recommend static configuration for both network interfaces. |

| | |
|---|---|
| ⚠ | Exercise extreme caution when changing the configuration of the network interfaces – you may lose connection to the appliance if you are configuring the network interfaces remotely and if you misconfigure the network interface that is in use for the current connection to the appliance. |

To use static configuration, untick *Automatic* and specify *IP Address* and optionally *Gateway*, *Name Server* and *VLAN ID*.
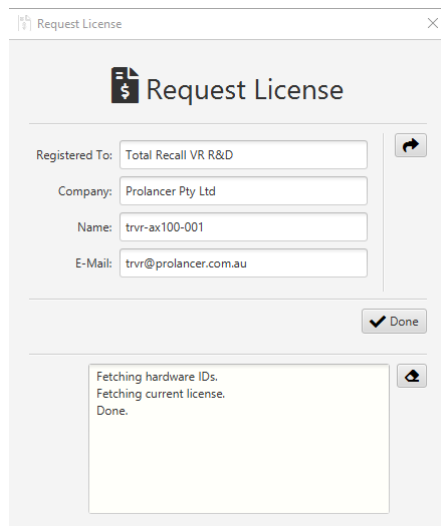
If you lose the connection to the appliance while configuring the network interfaces, then remember that you can get the current IP addresses that are assigned to the interfaces of the appliance from a console. Once you know the IP addresses, then you can create a new, or update an existing, Appliance Recorder Node in the Manager view of Total Recall VR Cockpit to re-gain access to the appliance.

## 4.2. Activation License Request

The Total Recall VR recorder services that run on your Total Recall VR appliance require a valid activation license.

If you have not received an activation license from us, then you need to purchase one. To do so, you need to create a license request file.

Use the Request License tool to create the license request file. The tool allows you to specify the license ownership information as shown on the following screen capture:



> 💡 You must send us the license request file with your order for a new license. We cannot process your order without the license request file.

## 4.3. Activation

The Total Recall VR recorder services that run on your Total Recall VR appliance require a valid activation license.

If you have received an activation license from us, then use the License tool to activate the recorder services on your Total Recall VR appliance.



To apply the license either set *License Text* to the text of the new license that you received from us by cutting and pasting, or select 📂 to load the license text from a license file that you received from us.

You may have noticed that the number of licensed channels, sessions etc. do not appear on the License form (see previous screen capture). To determine the actual number of licensed channels, sessions etc. visit the **Control** tab for each of the services in the Service Manager, for example:

## 4.4. Recording

To start recording with your total Recall VR appliance you may have to change the configuration of some, or all, of the following Total Recall VR recording services:

- "RTP Media Server"

- "RTSP Media Server"

- "SIP Media Server"

- "Tait VP Media Server"

In addition, although less likely, you may have to change the configuration of the "Recording Service".

Finally, you may need to define address transforms and recording policies via the "Profile REST Service".

# 5. Basic Operation

> ✎ The definitive guide for the information in this section is the Total Recall VR Cockpit User Guide [4].

## 5.1. Recording Repository Access

Your Total Recall VR appliance has a built in recording repository where it will store the recordings that it creates. This repository provides a REST interface via the "Meta Data REST Service" and the "Recordings REST Service".

The Explorer view of Total Recall VR Cockpit has a built in browser for recordings that are stored in repositories with different type of access. The browser has a suite of recording management and productivity tools that work on recording files and recording metadata.

In addition, the Explorer view of Total Recall VR Cockpit has a built in event player that is capable of processing multiple recordings in the correct time order. Use the event player to reconstruct the timeline of events (incidents) and listen to the events as they happened in time.
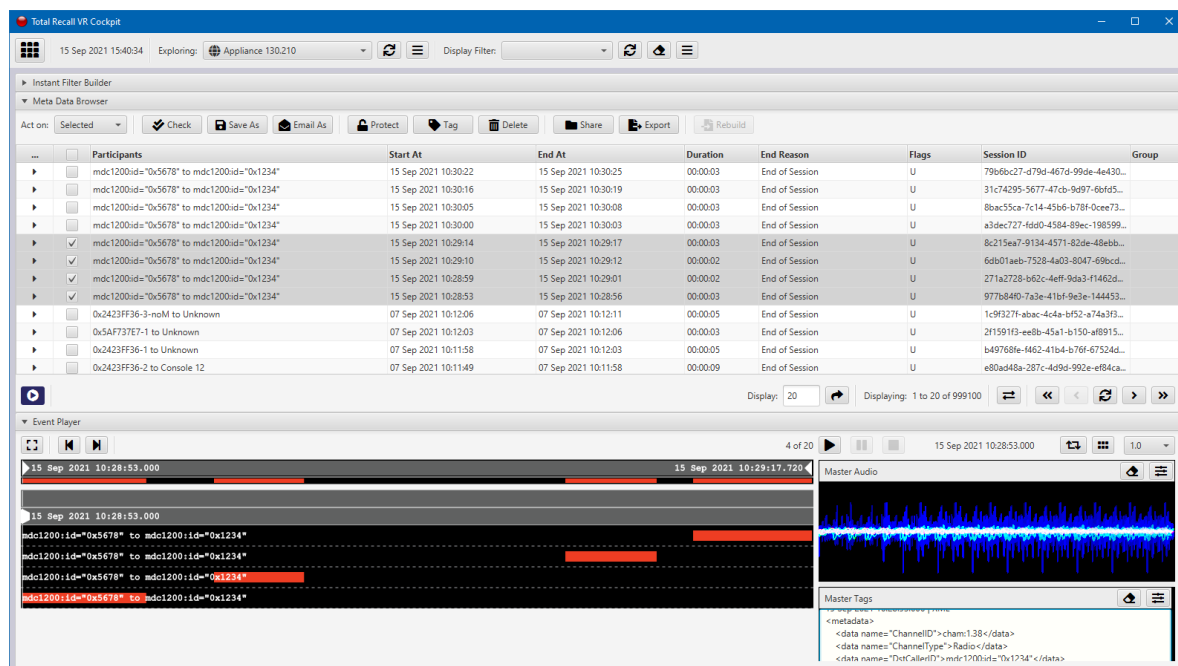


You need to create a Media Repository record, in particular a Web (Media) Repository record, in the Explorer view in order to access the recordings that are in the recording repository of your Total Recall VR appliance. For example:
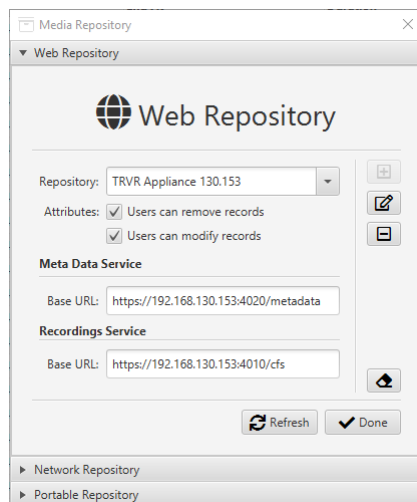
As you may have already noticed, to configure a Web (Media) Repository you need the base REST URLs for both the "Meta Data REST Service" and the "Recordings REST Service". You can get the base URLs from the service runtime status, for example:
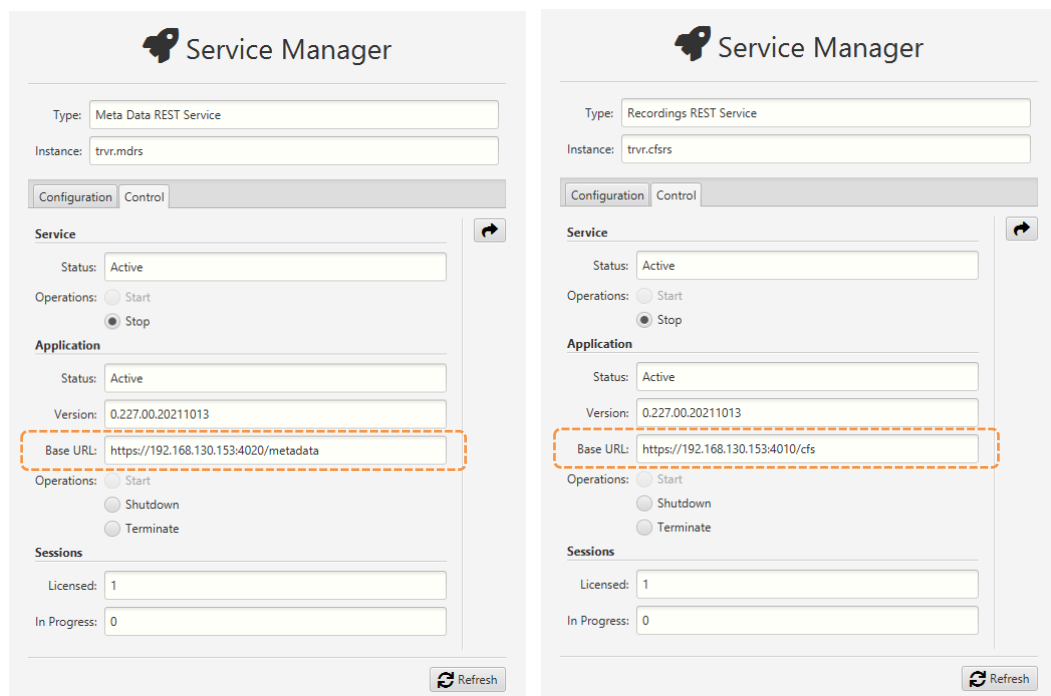


## 5.2.   Live Monitoring

Your Total Recall VR appliance has a built in media and metadata streaming interface (also known as media feed). This interface is provided by the "Monitoring Service" which can stream both media and metadata of recordings as they are recorded, in real time.

The Monitor view of Total Recall VR Cockpit can connect to such media feeds and show the metadata of recordings in progress, automatically construct a visual representation of a running timeline of the recordings in progress and play the media that is being recorded for the recordings that appear on the timeline.
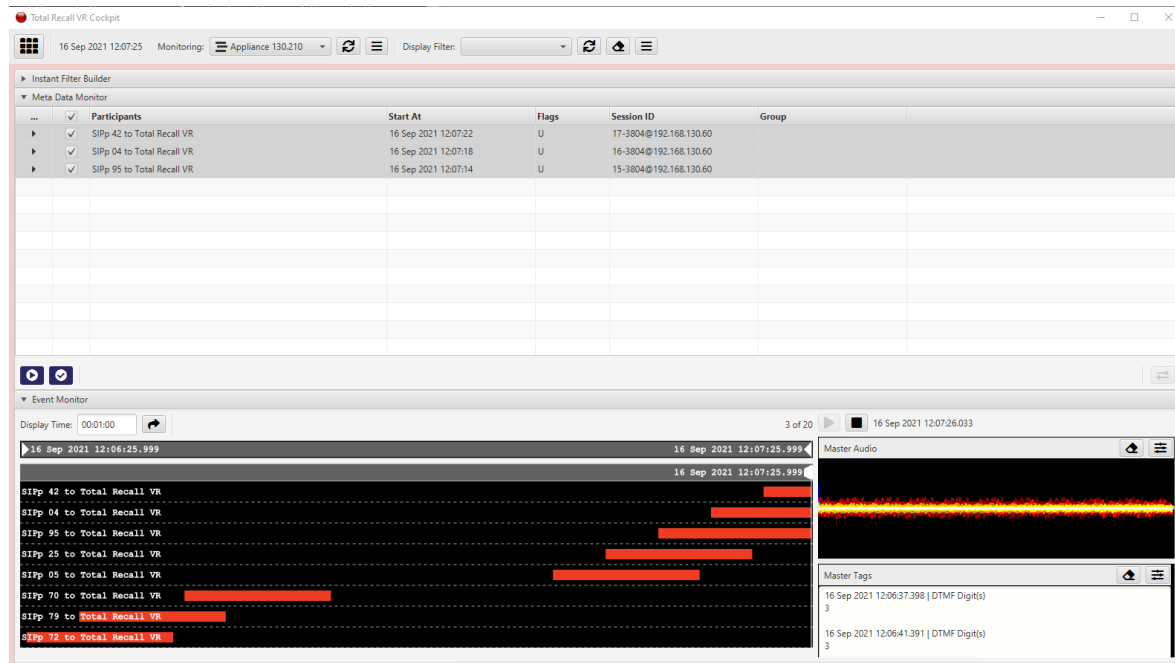


You need to create a Media Feed record in the Monitor view in order to access the media feed on Total Recall VR appliance. For example:



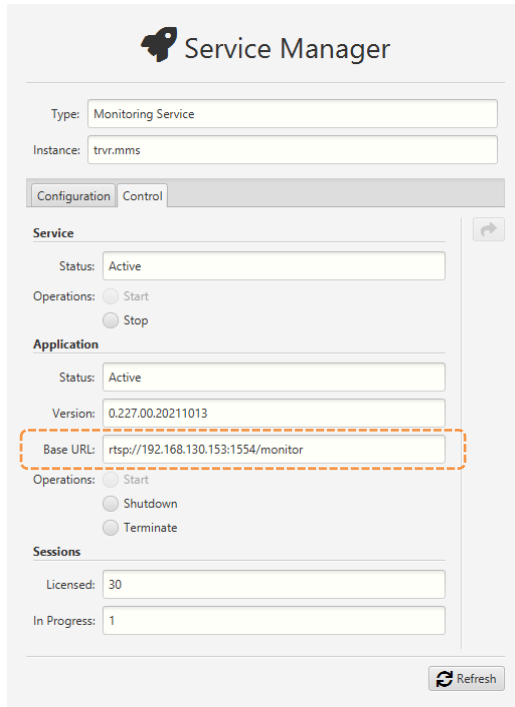As you may have already noticed, to configure a Media Feed you need the base RTSP URL of the feed. You can get the base URL from the runtime status of the "Monitoring Service", for example:

## 5.3.    Automatic Archiving – Web Repository

Ideally you will configure your Total Recall VR appliance to archive recordings to a Total Recall VR archive appliance.

> ⚠️  A working archiving strategy must be implemented to avoid losing recordings as a result of auto-cleaning. See section 6.2 Disk and Database Space.

However, in order to do so, you need to first purchase a Total Recall VR Infinity archive appliance, and then configure the "Media Repository Archiving Connector" service to use it.

> ✏️  For complete and detailed instructions on how to setup automatic archiving to a Web Repository see the Total Recall VR Cockpit User Guide [4].

If you do not own a Total Recall VR Infinity archive appliance, then your next best option is to archive to a Network Repository – see the following section.

## 5.4. Automatic Archiving – Network Repository

If you do not own a Total Recall VR Infinity archive appliance, then we recommend that you configure your Total Recall VR appliance to archive recordings to a Network Repository.

> ⚠️ A working archiving strategy must be implemented to avoid losing recordings as a result of auto-cleaning. See section 6.2 Disk and Database Space.

However, in order to do so, you need to first create a Network Repository (possibly on another VM), and then configure the "Media Repository Archiving Connector" service to use it.

> ✎ For complete and detailed instructions on how to setup automatic archiving to a Network Repository see the Total Recall VR Cockpit User Guide [4].

## 5.5. Automatic Archiving – Physical USB Disk

In the cases where you do not own a Total Recall VR Infinity archive appliance and you cannot create a Network Repository (see previous two sections), you have the option to archive to a USB disk that is attached to your Total Recall VR appliance.

> ⚠️ A working archiving strategy must be implemented to avoid losing recordings as a result of auto-cleaning. See section 6.2 Disk and Database Space.

Of course, to use a physical USB disk with a virtual machine it must be possible to physically attach a USB disk to the VM server, that is, the server that is used by the virtualisation layer which in turn is used to run the Infinity VS$^X$ virtual machine. In addition, it must be possible to attach the USB disk to the Infinity VS$^X$ virtual machine.

Assuming that it is, for complete and detailed instructions on how to setup automatic archiving to a Portable Repository see the Total Recall VR Cockpit User Guide [4].

Generally you can use any USB disk that you can attach to your Total Recall VR appliance recorder, however:

- Prefer brand new and unused disks.

- Prefer USB 3.1 or USB 3.0 disks. Avoid USB 2.0 disks at all costs.

- Disks with less than 128GiB capacity are unlikely to have enough capacity for a Portable Repository with maximum allowed occupancy, while a lot of space may be wasted on disks with more than 500GiB. This of course depends on the length of your recordings, shorter recordings have smaller file size while longer have larger file size.

USB disks, in particular thumb drives, generally come preformatted with an NTFS file system and as a result they can be used straight out of the box. However, you can use unformatted disks, as well as disks with a FAT32 and an exFAT file system.

# 6. Preventative Maintenance

All Total Recall VR appliances require minimal preventive maintenance to ensure maximum performance.

## 6.1. Disks

The physical disks that are used by your Total Recall VR appliance are the hardest working component. Information is constantly written to and read from the disks.

The average life expectancy of any type of disk is about 4 years. However, as with any electronic and mechanical technology, the disks in your recorder may last much longer or much shorter time.

We recommend that you replace the physical disks that are used by your Total Recall VR appliance every 4 years of so.

## 6.2. Disk and Database Space

All Total Recall VR appliances manage disk and database space automatically. An integrated auto cleaning function ensures that that there is enough free disk and database space to record endlessly.

> ⚠️ A working archiving strategy must be implemented to avoid losing recordings as a result of auto cleaning.

The auto cleaning function is performed by the "Media Repository House Keeper" recording service. By default it automatically starts deleting recordings when the database occupancy reaches 100%, or the disk occupancy reaches 95%, whichever occurs first. It removes oldest first recordings until the database occupancy is at or below 85%, and the disk occupancy is at or below 80%.

However, you may be using different limits on your appliance, so check the configuration of the "Media Repository House Keeper" service.

## 6.3. Orderly Shutdown

You must power down your Total Recall VR appliance in an orderly fashion to prevent damage to its electronic components, in particular its disks, and prevent partial or total information loss.

> ⚠ DO NOT remove power or simply turn off any of the Total Recall VR products while in use. This will result in disk damage and most likely in a partial or total information loss. In addition, it may cause damage to other electronic components. Finally, it will void the warranty.

To shut down, or restart, a Total Recall VR appliance in an orderly fashion use the **Shutdown** control:
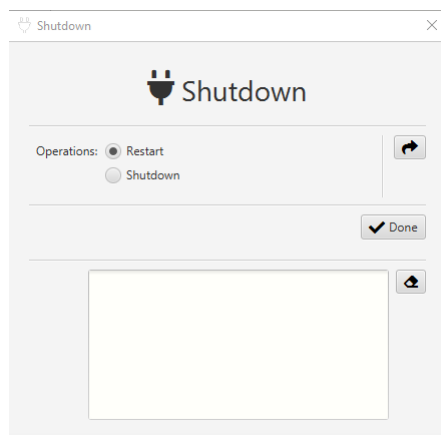
# 7. Troubleshooting

## 7.1. Limited Product Warranty

For full details of the limited product warranty for this Total Recall VR recorder product please visit our web site: http://www.totalrecallvr.com/warranty.

## 7.2. Support Information

If after using this manual, and other related Total Recall VR manuals and in particular the Total Recall VR Cockpit User Guide [4], you still have questions about the operation of your Total Recall VR recorder and applications, or you are experiencing problems with your Total Recall VR recorder and applications, then:

1. Please visit the Total Recall VR online forums, http://www.totalrecallvr.com/forum, where you may find answers to common problems that you may experience when installing and using Total Recall VR products.

2. Please browse the Total Recall VR online articles and tutorials, http://www.totalrecallvr.com/articles-and-tutorials, where you may find information on how to use Total Recall VR products in combination with products from other manufacturers.

> 💡 If you continue to experience problems, then in all cases you should seek support from the point of purchase first.

In the cases where you need to contact us directly and require remote support, then please write to itsupport@prolancer.com.au to book a remote support session.

> 💡 You need to provide a valid and active support token for the appliance when you seek support in order to receive support directly from us for your Total Recall VR appliance.

Use the Support tool to determine the status of your support token as shown on the following screen capture:
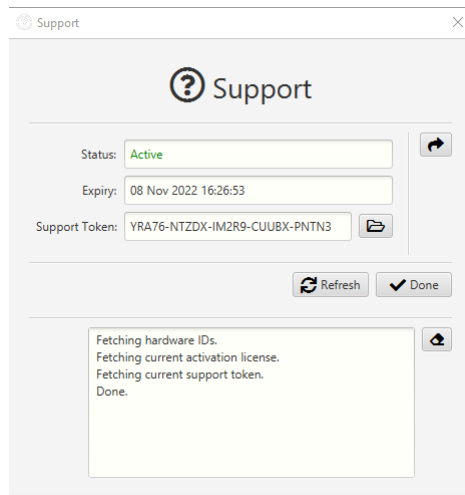
If the **Status** of the support token is not *Active*, or it has expired, then you will need to renew the support token, or purchase a new one, before you can receive support from us.

Please note the following regarding the support token:-

a. You do not need to purchase support tokens for any of your Total Recall VR appliances if you do not wish to receive support directly from us. Please discuss your support options with a representative from the point of purchase. They may, and should, offer support options that are likely to be tailored to your case when compared to the remote support that we offer as the manufacturer of the products.

b. Support tokens are valid for one (1) year starting from the date that is exactly one (1) month after the date when the appliance that it relates to was shipped from our factory. Support for the first month after the shipment date is free and does not require a valid support token. So during the first year, if you purchase a support token for an appliance at the same time when you purchase the appliance, then you will receive thirteen (13) months of support from the shipment date of the related product. Each subsequent year you will receive twelve (12) months if you renew the support token.

c. Each token relates to one Total Recall VR appliance and cannot be transferred to another Total Recall VR appliance or used to get support for another Total Recall VR appliance.

d. On expiry, support tokens can be renewed on back-charging basis. That is you need to pay for years missed and the current year when you renew an expired token. For example:

Let's assume that you purchased a support token when you purchased the Total Recall VR appliance. Further, let's assume that you did not renew the token or purchase a new one after it expired at the end of the first year. If you request support in year 3 of ownership, then you will need to pay for 2 years of support (to cover support for year 2 and 3) to renew your existing token or purchase a new one. The purchase will give you a token that will expire at the end of year 3.

e.  You can purchase a support token at any time on back-charging basis for any Total Recall VR appliance. For example:

Let's assume that you did NOT purchase a support token when you purchased a Total Recall VR appliance. If you request support in year 3 of ownership, then you will need to pay for 3 years of support (to cover support for year 1, 2 and 3) to purchase a new support token. The purchase will give you a token that will expire at the end of year 3.

> ⚠️ In summary, if you wish to receive support directly from us for a Total Recall VR appliance, then you need a valid and active support token for the Total Recall VR appliance.
>
> However, you do not need to purchase support from us. Instead, please discuss your support options with a representative from the point of purchase. They may, and should, offer support options that are likely to be tailored to your case when compared to the remote support that we offer as the manufacturer of Total Recall VR appliances.

[End of Document]