
RecordTS v7.0 Single Server Edition

Installation Guide





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Version 1.1 – Updated February 5th, 2023

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Introduction

What is RecordTS Single Server Edition?

RecordTS Single Server Edition is a remote session recorder for Windows Terminal Services. It is a complete out-of-the-box, stand-alone software product that installs all the necessary software components onto one machine. It is intended for demonstration and single-server installations only.

NOTE: Customers requiring larger configurations should use the full enterprise version of RecordTS.

Once installed on a server running Terminal Services or simply a Windows server or workstation with Remote Desktop/Remote Administration enabled, administrators will be able to record everything users are doing during their sessions for later playback and/or archiving. It's pretty much the same as watching a video on your computer! Thanks to this product you can:

- Track who is connected to the computer and see what they do on it
- View selected recordings for a specific user, during a specific time period, etc.
- Track users' actions that might have caused problems on a server or workstation
- Save recorded sessions locally

Main Features

Security/Audit compliance

Instead of looking at hundreds of entries in log files, RecordTS allows you to actually see everything that was done - as it happened, in real time. You can archive all recorded sessions for later playback, and in case of an audit it is just a matter of finding a particular session and watching!

Works on any Platform

RecordTS is the only solution that integrates directly with the Windows operating system desktop video engine. This means increased performance and scalability, with much smaller recordings, nothing is missed. RecordTS works on any Windows hosting platform such as Citrix, VMware, AWS, Azure, etc.

Sessions can be Recorded in Stealth Mode

The users have no clue that their sessions are being recorded or can receive a warning message during log on. RecordTS services can be tamper-proof to prevent users from switching recording services off.

Per user session recording

Recorded sessions are saved individually on a per user basis. Recordings are stored locally for later retrieval and replay.

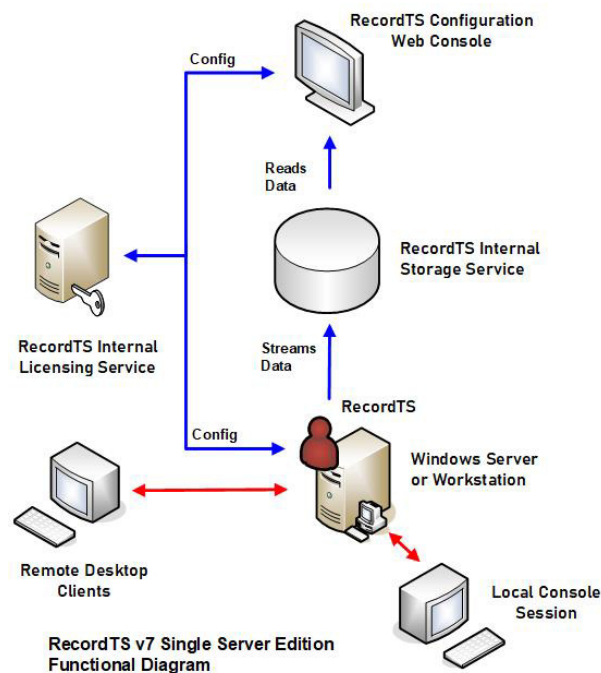
Access Recordings Remotely from any Browser

Recorded sessions may be accessed remotely using a standard web browser. No need to install special media players or client software.

How does RecordTS work?

RecordTS installs locally on a Windows Server or Workstation. Once a user logs on either locally via the console or remotely via a remote desktop client, RecordTS will begin recording the session video. The session video stream is stored to its local database. As RecordTS was developed from the ground up specifically for Windows, this process does not affect your server performance, scaling easily once more users and/or servers/workstations are added to the system.

Below is a schematic diagram of the Single Server Edition configuration for RecordTS v7.



The next section will discuss the individual components in detail.

Quick Overview

Below is the list of individual basic components of RecordTS Single Server Edition. Each component is installed automatically for you during installation and will be discussed more in depth further into the manual.

- **Recording Service (Recorder)**
- **Configuration Console**
- **License Service**
- **Data Storage**

Recorder

The basic component of RecordTS is the Recording Service or Recorder. Its main job is to record user sessions and store the recording video to a local database. From the time RecordTS Recorder is installed and properly configured on the server or workstation, each user session will be recorded and saved locally in a native RecordTS video format. Recorded sessions will contain additional information about each session such as computer name, IP address, user name, connection time and duration, etc. For each individual user, recorded sessions are stored separately in the local data store.

The recorded sessions can be viewed or played as a video using the RecordTS WebPlayer.

Configuration Console

The RecordTS Configuration utility is a web-based console that allows the admin to centrally manage the recorder, licensing and stored recorded sessions.

The main purpose of the configuration console is to allow configuration of the various RecordTS modules and to view sessions.

License Service

RecordTS can be licensed subscription (pay as you go) based licensing. Standard technical support and updates are provided with each active subscription.

Subscription licensing is cost effective and allows products to be purchased for use for a period of time. Free trial subscriptions are available for download to allow advance testing of RecordTS on-site prior to purchase.

The RecordTS License Service will be installed automatically and is used to authorize RecordTS components for use. The License Service will be configured during installation and allow the customer to either run in trial mode for 30 days or enter a purchased license or subscription ID. The license or ID can always be entered later.

NOTE: It is strongly suggested to purchase or renew subscriptions prior to expiration to avoid disruption of service.

Storage

The RecordTS recorders stream session data to local storage for safe keeping. Sessions can be played back immediately once a user's session has been established. This allows real-time viewing of session activity and does not require the user to log off to view their session.

For RecordTS v7 Single Server Edition, a file storage server engine will be installed automatically.

Session recording can be buffered in case the storage service becomes temporarily unavailable, slows down or the network becomes unstable, etc. Once connectivity to the local storage server is restored, buffered session data will be dumped to the store and normal operation will continue. If connectivity to the storage server is disrupted for extended periods of time, the buffers may fill completely and sessions will be suspended until connectivity to the storage server is restored. This behavior can be overridden in the configuration console to permit unrecorded connections when the storage server is unavailable.

Installation

Overview

RecordTS Single Server Edition is designed to be installed completely onto one machine only, preferably a Windows terminal server.

It is made up of four major components:

License service – handles licensing components

Configuration console – centralized management

File storage server – storage for session data

Recorder service – records sessions

It is assumed that the prerequisite software and configurations have been made prior to installing this software.

WARNINGS: Read This Before You Start...

Uninstall Older Versions

You cannot upgrade from older versions of RecordTS to v7 other than v6. You need to uninstall any older versions than v6 of RecordTS and reboot before installing v7. The reboot is necessary to reassign terminal server ports properly.

Beware of AV, Endpoint Protection, Backup and Dictation Software

Some third-party software packages can interfere with the RecordTS services installation and operation. Software such as antivirus, endpoint protection, backup and dictation software can prevent RecordTS from installing or recording properly. These packages must be completely disabled during installation.

Backup, Backup, Backup!

As with any new software, you should make a ***complete backup*** of the machines before installing RecordTS. This will enable you to quickly return the systems back to the way they were if you run into any problems.

Read This Manual

RecordTS is server-grade software, meaning it is intended for professionals that have a working knowledge of server and network management. There is a lot of useful and important information in this manual. Read it and save yourself some headaches and time. Get help if you have questions or need help installing and configuring RecordTS. There are some great troubleshooting tools towards the end of this manual.

Ask Questions

We are here to help you. If you are not sure about any aspect of how RecordTS works or is installed, then please contact our support department or one of our partners. You are probably not the first person to ask your question or be confused about this type of software. Servers are complicated and can be tricky to program. Contact us before installing or configuring so we can explain the process and help you have a great experience.

Prerequisites

For all users installing the software:

- Download the product software and store to a convenient location.
- You will need a Windows Server 2016 or higher server-grade machine to install RecordTS, preferably with the latest updates installed, with at least 4gig of RAM and 100gig of drive space. Storage requirements are dictated by the database, so plan accordingly. RecordTS may be installed on a Windows 10 workstation or higher as well.
- At least one other Windows machine that can log in remotely to the RecordTS machine. (act as a remote desktop client)
- A domain or system admin account (or equiv) that has access to all machines in the test.
- Active Directory is not required for RecordTS Single Server Edition, but is recommended.

For trial software testing:

- No licensing is required for the trial period.

WARNING:

Certain programs such as antivirus and backup software can interfere with the proper installation and operation of RecordTS software, especially the recorders. It is strongly recommended to completely disable these programs on the recorded machine prior to installation. The antivirus and backup programs should be configured to ignore the RecordTS working folders and the RecordTS program processes if they are to be enabled after installation.

Installing RecordTS Single Server Edition

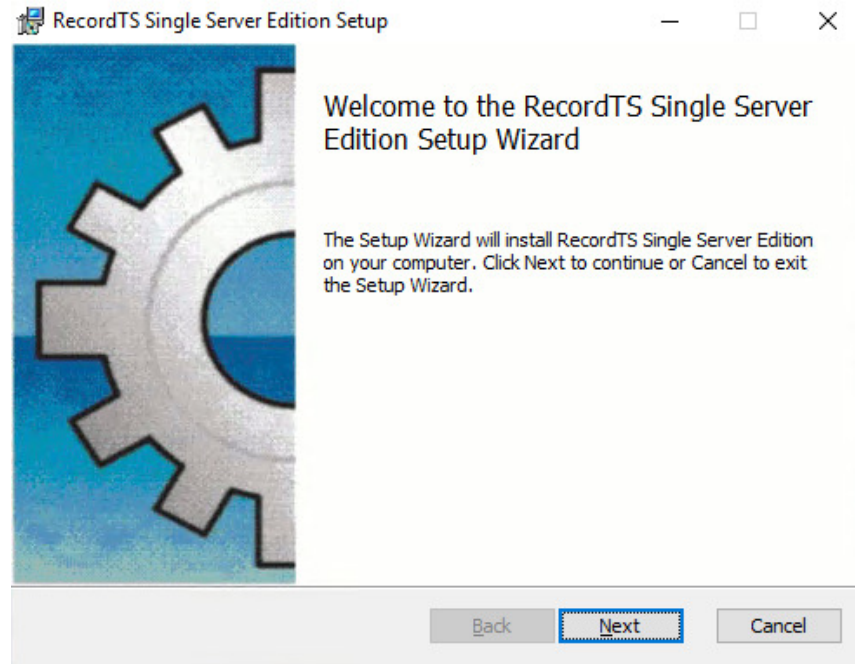
The RecordTS Single Server Edition installation file must be installed on a 2016, 2019 or 2022 Server or Windows 10 or 11 Workstation machine. Azure's Mutli-User Workstation OS is supported as well.

Best practice is to copy the installation file to a folder on the target machine and install locally.

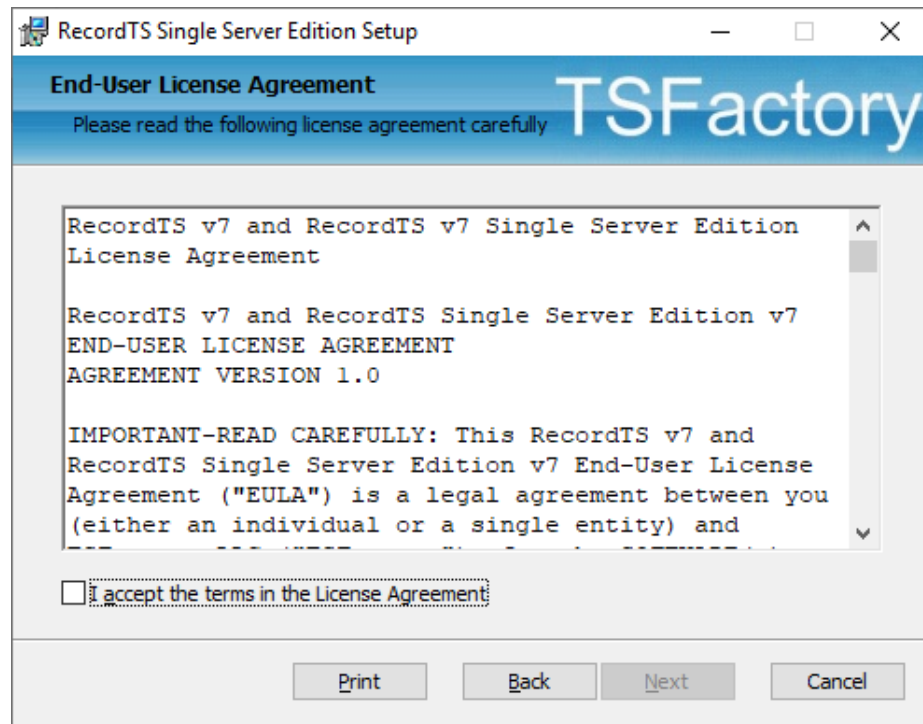
Several RecordTS services will appear in the Windows Services applet after installation.

Step by Step Instructions

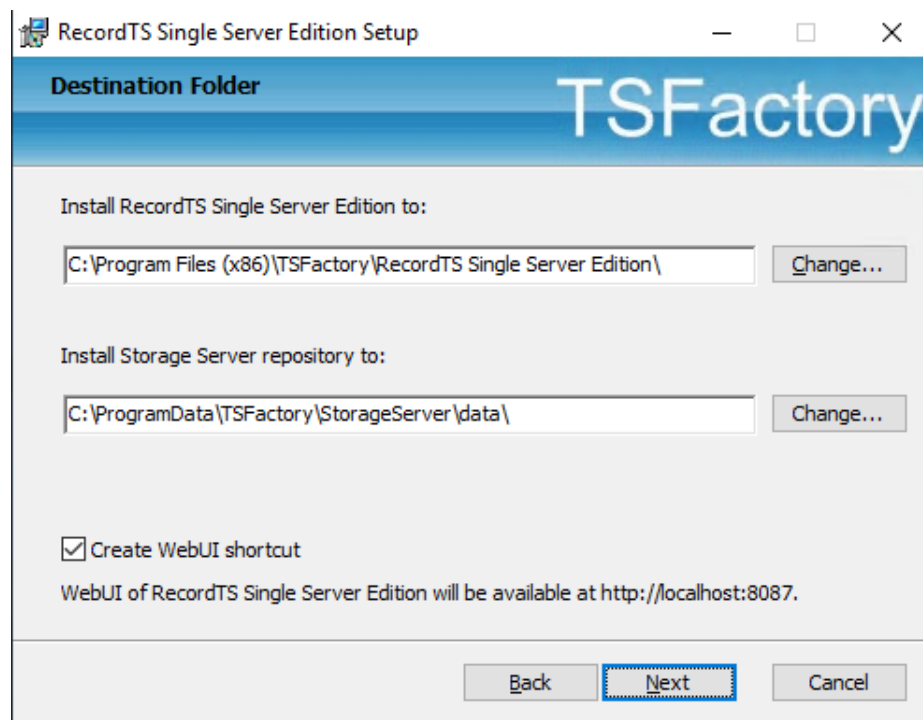
1. Download and run the RecordTS-Single-Server-Edition-7.x.xxx.msi installation file on the machine that is to be recorded. The installation wizard will appear. Close all other programs and then click Next.



- Carefully read the license agreement. If you agree to the terms, select the check box to confirm acceptance of the agreement. Click Next to continue installing. To exit Setup, click Cancel.



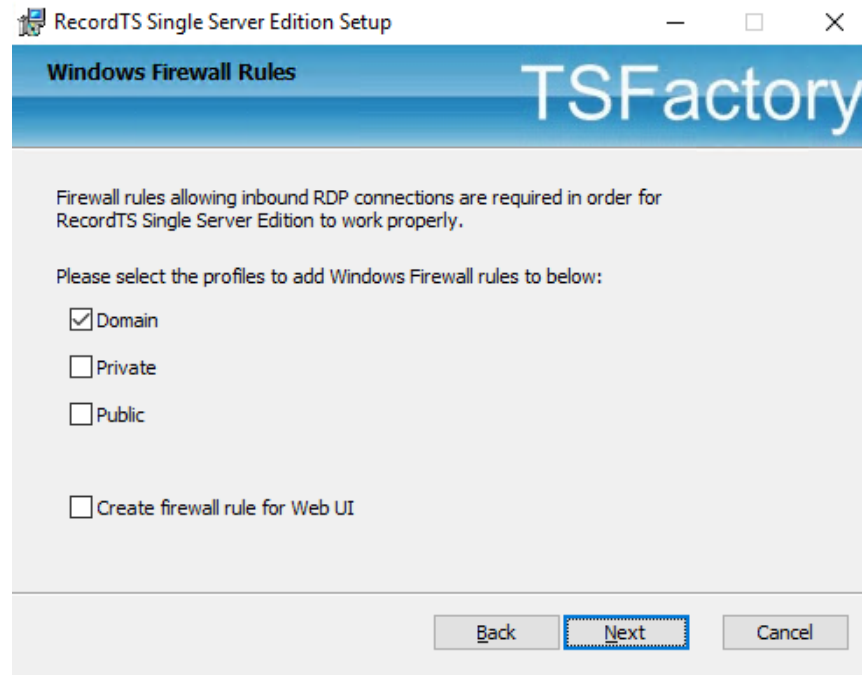
- Select the folder where the RecordTS program files will be installed and the session data stored. Only folders on the local machine can be used. Mapped network drives will fail. If you do not want to use the default directory suggested by the installer, click Browse... to choose another directory. Then click Next.



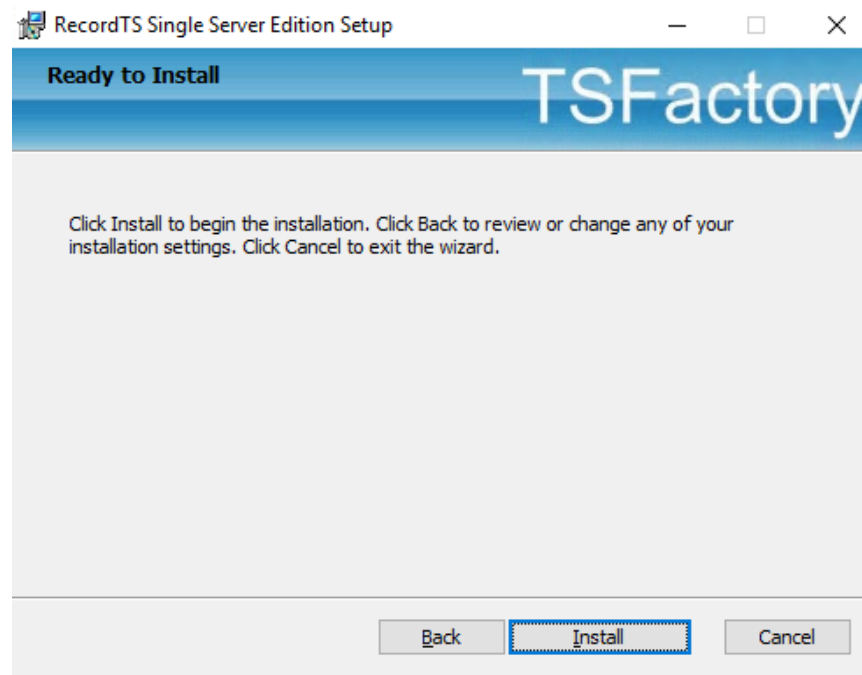
You can uncheck “Create WebUI Shortcut” to prevent installing shortcuts to each user’s application list. You can access the Dashboard webUI with this URL: <http://localhost:8087>.

Click Next to continue.

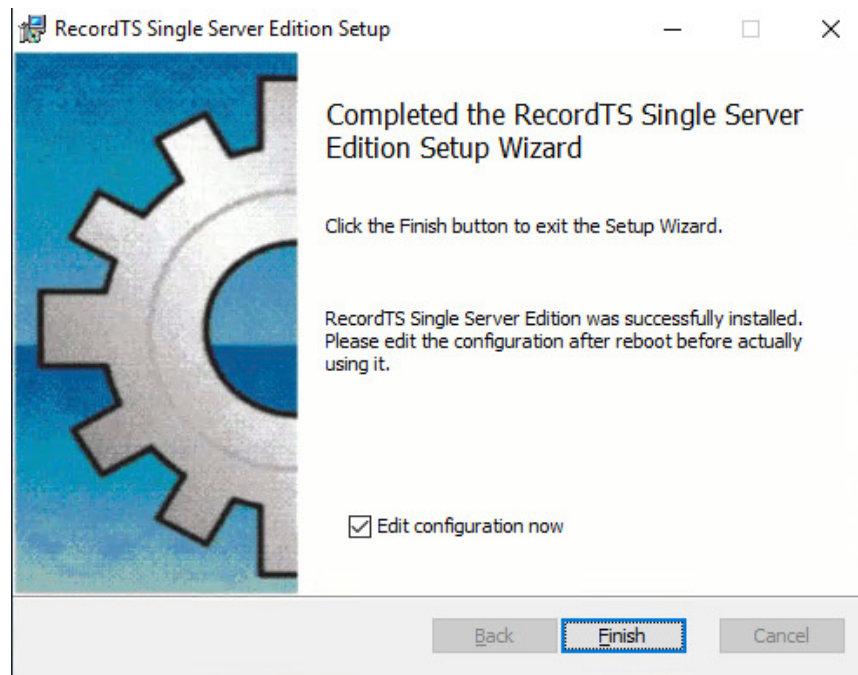
4. Select the profiles to add firewall rules for RecordTS. You can leave the default selections. Click Next to continue.



5. To start the installation program, click Install. To modify the installation options that are mentioned in the previous steps, click Back. To exit Setup, click Cancel.



- Once the installation program finishes copying the necessary files to the system, the installation process has successfully completed. You may leave the “Edit configuration now” box checked to configure RecordTS after exiting. To exit the installation wizard, click Finish. You may be asked to reboot if you installed over v6.



- The RecordTS Configuration Authorization screen will appear after exiting the installation wizard (if you left “Edit configuration now” checked).
- You will be required to enter administrative logon credentials for access to the Configuration webconsole. Enter a username and password for the RecordTS administrator account.

You may create new account credentials since this is locally stored – not Active Directory or elsewhere.

A screenshot of the 'RecordTS Single Server Edition' configuration screen. The title bar says 'RecordTS Single Server Edition'. The main content area is titled 'Configure Authorization'. Below the title, it says: 'Please now set credentials for RecordTS Single Server Edition access.' There are three input fields: 'Login:', 'Password:', and 'Confirm password:'. At the bottom of the form, there is a button labeled 'Set Credentials'.

Once you have entered the admin credentials, click Set Credentials.

- Log into the Configuration webconsole using the credentials entered in the previous step. Make sure you write down the username and password and store them in a secure place.

RecordTS Single Server Edition

Authorization Required

Login:

Password:

10. The following diagram shows what the Configuration console should look like once the license service has successfully been initialized: (your resource amounts may differ)

RecordTS Single Server Edition Configuration Sessions Logged on as admin
[Change password](#) [Logout](#)

Recording Settings

Recording console sessions: Enabled Disabled ?

Frame compression type: Lossy Lossless ?

Frames per second: ?

Buffer Settings

Memory buffer size (MB): ?

Security

Connections allowed from: Local computer only Any computer ?

HTTPS: Enabled Disabled ?

Session Recording Alert

Session recording alert: Enabled Disabled ?

RecordTS License status: Trial Mode ✔

RecordTS is running in an unlimited trial mode. It will expire on 2/27/2023 5:32:47 PM.

[Show License Key](#) [Show License Request](#)

Resource	Available	Used
Server User	∞	1
Server Recorder	∞	1

Some things to consider:

Recording console sessions is disabled by default. Console sessions are usually administrators logging into the system. Enable this option if you wish to record this activity.

The “Connections allowed from” option can be set to “Any computer” to allow using the webconsole from a browser on another computer, device or phone. HTTPS option should be enabled and configured if the connections will come from outside the firewall for secure communications.

Click on Save Configuration to save any changes made. This will restart the service and present a log on screen.

At this point the system should be ready to record sessions.

Configuring RecordTS

Overview of Configuration Console

The RecordTS Configuration Console is used to configure the RecordTS license service and various other components to do the following:

- ✓ Allow custom configuration of key features in RecordTS.
- ✓ Display a list of recorded sessions for the user to browse and play back.
- ✓ Display licensed resources and usage information.

RecordTS Configuration Webconsole:

RecordTS Single Server Edition Configuration Sessions Logged on as admin
[Change password](#) [Logout](#)

Recording Settings

Recording console sessions: Enabled Disabled [?](#)

Frame compression type: Lossy Lossless [?](#)

Frames per second: [?](#)

Buffer Settings

Memory buffer size (MB): [?](#)

Security

Connections allowed from: Local computer only Any computer [?](#)

HTTPS: Enabled Disabled [?](#)

Session Recording Alert

Session recording alert: Enabled Disabled [?](#)

RecordTS License status: Trial Mode ✓

RecordTS is running in an unlimited trial mode. It will expire on 2/27/2023 5:32:47 PM.

[Show License Key](#) [Show License Request](#)

Resource	Available	Used
Server User	∞	1
Server Recorder	∞	1

Here is a breakdown of the individual settings and what they are used for:

Recording Settings:

Recording console sessions:

Recording console sessions is disabled by default. Console sessions are usually administrators logging into the system. Enable this option if you wish to record this activity. This may be important if outside contractors are managing the recorded machines.

Frame compression type:

Set this option to control the type and amount of image compression is used during recording.

Lossy compression is less resource hungry and more space efficient, but text may become unreadable. Configure this option by dragging the image quality slider to the percent compression desired. Lower image quality results in higher compression.

Lossless compression is a class of data compression that allows the original data to be perfectly reconstructed from the compressed data with no loss of information. In other words, it retains the original detail of the recording, but does not compress the data as much as lossy

compression. Select this option if you wish to retain the original image quality but still have some data compression.

Buffer Settings

RecordTS streams session data to its local storage system. If during peak activity, the storage becomes overwhelmed, bogged down or has a problem, RecordTS will buffer session data in memory to prevent users from experiencing delays or lag in responsiveness during their sessions. Once the memory buffer is exhausted, all sessions will be terminated to prevent non-recorded activity.

Memory buffer size (MB)

RecordTS will buffer (temporarily store) session data to physical memory (RAM) if the local storage server becomes slow or intermittent. This can happen during times of high desktop activity amongst users and is normal. You may increase the buffer size if users are experiencing delays or latency during their sessions. Entering a value of zero will disable memory buffering.

Security

Connections allowed from:

The “Connections allowed” feature lets you connect remotely to Dashboard from another computer using a browser. Select the “From any computer” to allow connections from other computers.

NOTE: Changing this feature will reduce security by allowing foreign computers to have access to the web console.

This feature is useful if you want to manage the web console remotely or allow others the ability to view recorded sessions from their desktop. To view sessions remotely, the user will need security access to the web console prior to viewing any sessions.

To connect remotely, the user will need access permission to connect to the RecordTS machine. In a browser on the user’s desktop, enter this URL: <http://RecordTS:8087> where **RecordTS should be replaced with the actual hostname or IP address.**

NOTES: Remote users will need to have security access to view sessions. Firewall rules will need to allow access to port 8087.

Secure Web Access to Dashboard

The “Enable HTTPS” option allows configuring the webconsole to accept secure browser connections using SSL/TLS (https).

Click on the Enable HTTPS checkbox to show the entire list of options for this feature:

HTTPS: Enabled Disabled [?](#)

Enforce HTTPS only: Enabled Disabled *Visit RecordTS SSE over HTTPS to make this option available* [?](#)

From file Generate self-signed

Public certificate: [?](#)

Certificate chain: [?](#)

Private key: [?](#)

There are three options to providing SSL certificates for secure web browsing:

1. Self-signed certificate
2. Customer generated certificate signed by hosted Certificate Authority such as Active Directory
3. Public certificate signed by a trusted Certificate Authority such as Godaddy, Thawte, etc.

The first item can be automatically generated by RecordTS Dashboard. The other two are provided by the customer.

NOTE: Details for creating certificates for use with webconsole https can be found in a separate document “Securing RecordTS Web Interfaces”. Contact our support staff for a copy of this document or visit our website.

Option #1 – Self-signed certificates

This is the simplest way to create certificates for https, but also the least secure as some browsers such as Firefox will not trust self-signed certificates.

There are a few steps to this process – generate the certificate, download the public certificate and copy it to any machines that will be accessing the webconsole remotely. The public certificate must be installed into the Windows Trusted Root CA store on each client machine.

Step 1: Click on Generate self-signed checkbox. You should see the screen change as depicted below:

HTTPS: Enabled Disabled [?](#)

Enforce HTTPS only: Enabled Disabled *Visit RecordTS SSE over HTTPS to make this option available* [?](#)

From file Generate self-signed

Host: [?](#) Serial number: [?](#)

Step 2: Enter a fully qualified domain name (FQDN) of the webconsole machine into the Host field, like vm603.tsfactory.com for example. Advance the serial number to any integer (for the browser's use).

Step 3: Save the configuration by clicking on the Save Config button. It will take a few moments to create the certificate and restart the webconsole service. You can log back in afterwards.

Step 4: Download the public certificate by clicking on the "Download Certificate" link. You will be prompted to save it. You should install this certificate to the Trusted Root CA store on each machine that needs remote access to Dashboard. Alternatively, this can be done several ways including creating global policies and installing directly from a browser while connecting remotely.

To reset the certificate, simply click on the Reset certificate button and save configuration.

Option #2 – Hosted CA signed certificates

This is method is useful for companies that host their own trusted certificate authority. The requirements for webconsole are to provide Base64 encoded PEM file certificates. You will need three files: a public certificate, a private key file, and a certificate chain file containing the CA root and CA intermediate certificates combined into one file.

Step 1: Enter the filename (or browse) of the Public certificate.

Step 2: Enter the filename (or browse) of the Certificate chain file.

Step 3: Enter the filename (or browse) of the Private key file.

Step 4: Save the configuration by clicking on the Save Config button. It will take a few moments to save the configuration and restart the webconsole service. You can log back in afterwards.

The CA root certificate and intermediate certificates should be installed on any machines that need access to the webconsole. The public certificate will be sent to browsers that connect to webconsole during a normal https session.

Option #2 – Public CA signed certificates

The procedure for public CA signed certificates is the same as Option #2, only the CA root certificate and intermediate certificates will most likely be already installed on the client machines. This is because most browsers and Windows honor the public CA system by re-installing their root certificates.

NOTE: Firefox maintains its own trusted root CA certificates and requires special procedures for including the Windows certificate stores. Firefox does not inherently trust properly registered self-signed certificates.

After configuring the https security option, remotely connect a browser using https in the webconsole URL. You should see a green lock or similar icon that indicates a secure connection has been made. Clicking into the icon should reveal webconsole's site certificate, which you should verify is correct.

Enforce HTTPS only:

This feature prevents a browser from connecting using non-secure protocols (http). The only way to enable this feature is to first configure the https option and then connect using https. Then the feature will allow you to enable it and force https only for browser connections.

Click the Save Config button after enabling this feature. The service will restart and require you to log back into webconsole using https.

Session Recording Alert:

This feature allows displaying a message to the users as they log onto their desktops.

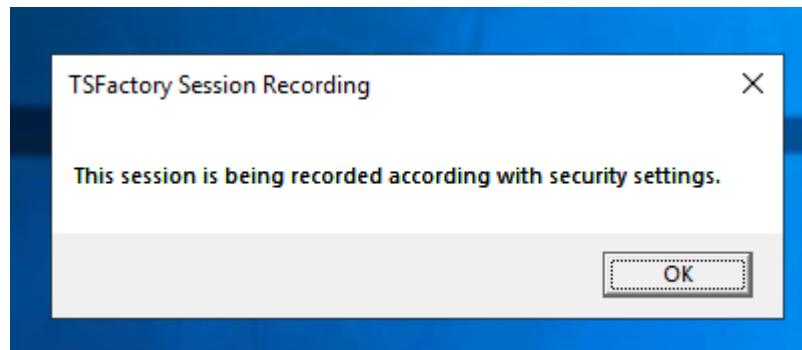
For instance, these settings will result in the message displayed below, upon session logon:

Session Recording Alert

Session recording alert: Enabled Disabled ?

Title: ?

Message: ?




Licensing

When in trial mode, the RecordTS License Status will display "Trial Mode" otherwise the status will display expired or licensed, if the product has been properly licensed.

To obtain a trial extension or permanent license, click on Show License Request and copy the entire code displayed in the box below the link, as shown below:


RecordTS License status: Trial Mode ✓

RecordTS is running in an unlimited trial mode. It will expire on 7/18/2018 11:08:55 AM.

[Show License Key](#) [Hide License Request](#) 

Please send the following information to TSFactory to obtain your license key:

```
{"host": "Vk0w#DUudHNmYwN0b335LmNvbQ=="}
```

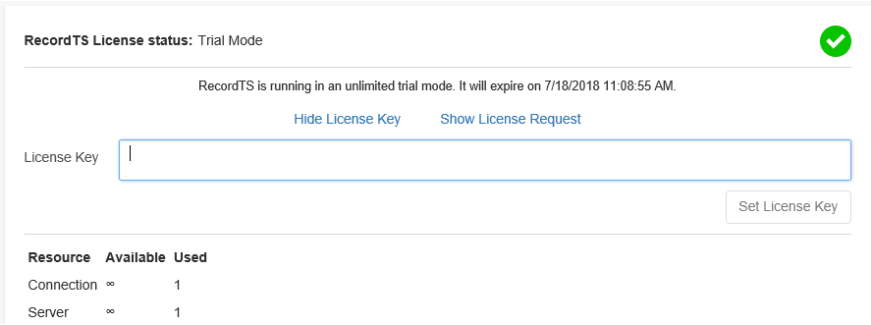


Resource	Available	Used
Connection	∞	1
Server	∞	1

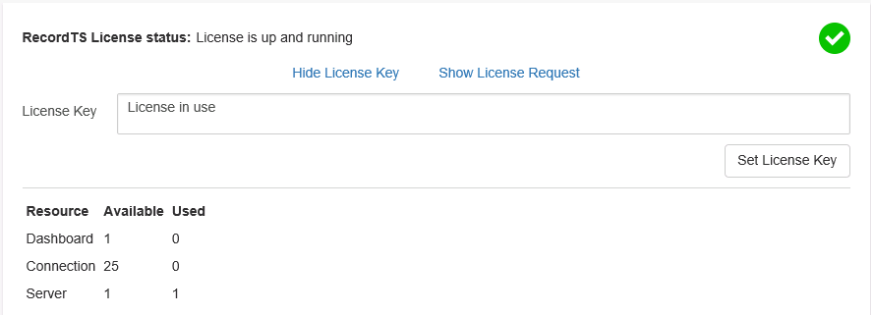
Email this code to support@tsfactory.com to obtain a license key that will enable the product with the purchased resources.

Entering a License

Once you receive a license, copy the entire contents of the license file into the License Key field and click on the Set License Key button to submit. You will need to click on the Show License Key link to display the License Key field.



The RecordTS License status and Resource list should update accordingly and the License Key field will display “License in use” as depicted below. In the case of a Trial Extension license, the status will display the new expiration date.



Moving RecordTS

If RecordTS is moved to a different server, a new license will need to be generated. Please contact our support or sales department to have them issue a new license. There is no charge for this service.

Using RecordTS

Once RecordTS has been properly configured and the server has been rebooted at least once, users may begin logging in remotely. Their sessions will be recorded and viewed immediately.

NOTE: Users will not know that they are being recorded unless the Session Recording Alert option is enabled.

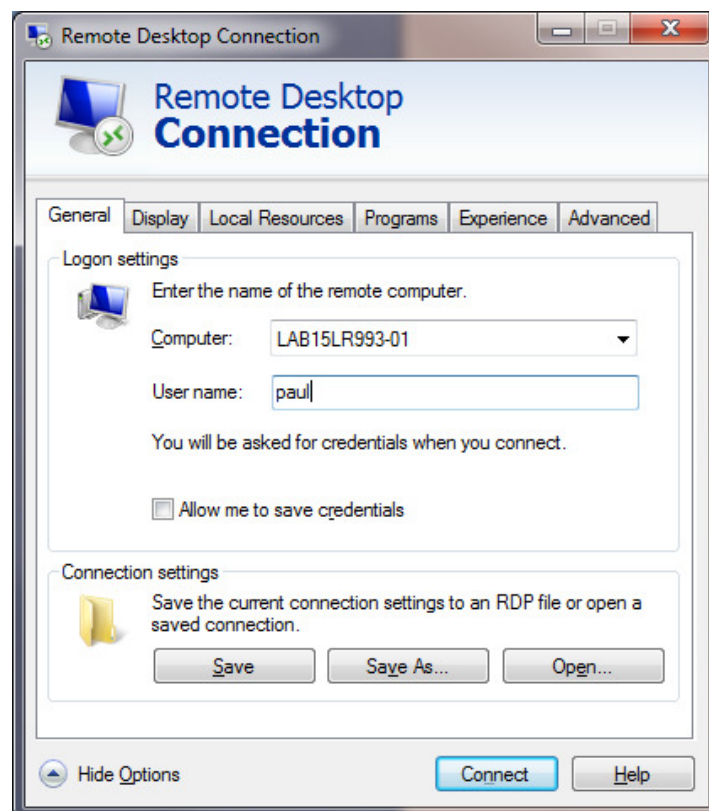
Connecting Remotely

Users may connect to the recorded machine remotely using most any client that supports RDP or the native host client for systems such as Citrix Virtual Desktops & Applications (formerly XenApp/XenDesktop), VMWare Horizon, Microsoft Azure, etc.

NOTE: Starting in v7, the connection method no longer matters to the recording process.

Configuring the RDP client

The standard Windows remote desktop client is pictured below. Enter the recorded machine name or IP address in the Computer field, along with the username to log on with.



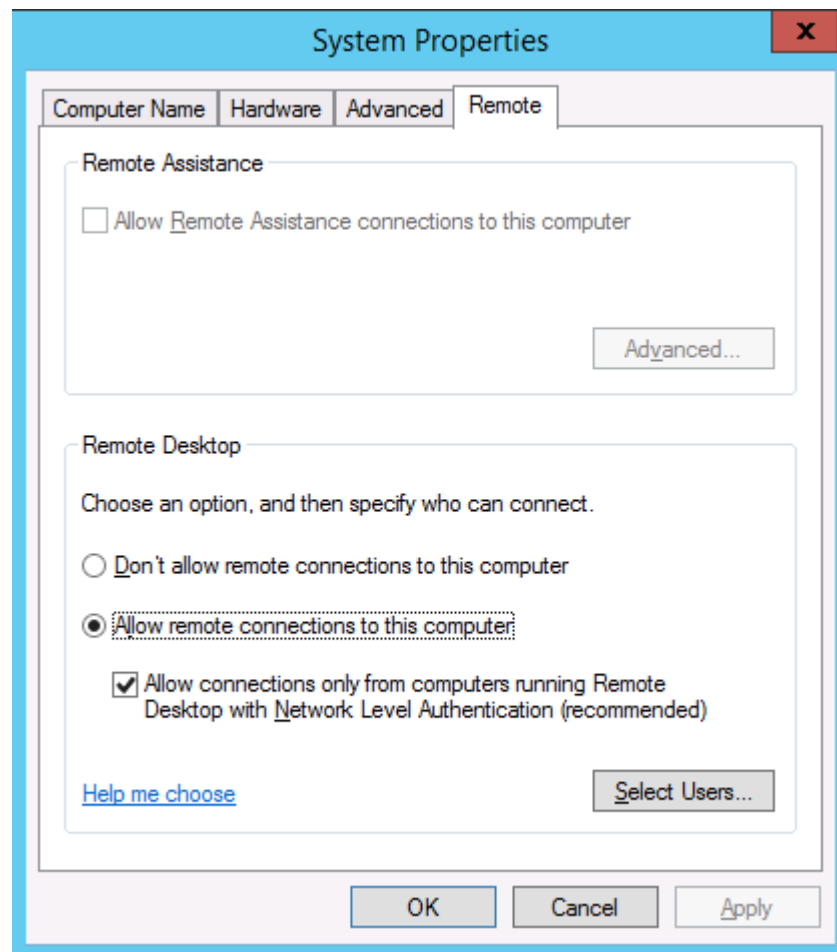
Configuring client security

On networks that support NLA (network level authority) security, the NLA option which must be configured in both the client software and on the machine being recorded.

For the standard Windows remote desktop client, the security setting can be found under the Advanced tab, Server authentication, as pictured below.

Configuring server security

On the recorded machine, the security configuration can be found in Control panel, System and security, Allow remote access, as depicted below.



If you are using an older client that does not support NLA, then uncheck the “Allow connections only from...” box and click OK to save your changes.

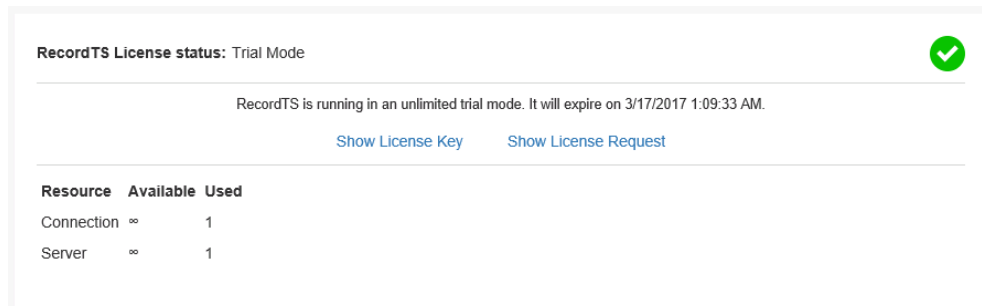
This screen is also where you would allow additional users to connect remotely. Administrators are automatically included by default. Windows Server allows up to two remote connections by default and Windows Workstation allows only one. You must purchase additional user CAL's


(client access licenses) from Microsoft if you plan on hosting more desktops and possibly configure RDS services.

NOTE: RecordTS will not work as intended when installed on home versions of Windows. The home versions do not allow remote access, but you can connection remotely *from* a home version of Windows, just not *to* it.

Licensing

RecordTS limits the number of users that can log in remotely by the amount of user licenses listed in the RecordTS Configuration found under the Configuration tab. (see below)



RecordTS License status: Trial Mode 

RecordTS is running in an unlimited trial mode. It will expire on 3/17/2017 1:09:33 AM.

[Show License Key](#) [Show License Request](#)

Resource	Available	Used
Connection	∞	1
Server	∞	1

In the diagram above, RecordTS is licensed for infinite servers and users where only one server is registered (used) and one user is currently remotely connected. This is trial mode and is used only for demonstration purposes. You license/subscription may be different from this one.

NOTE: RecordTS Single Server Edition is intended to record only ONE server or workstation. If you intend on recording more than one machine, then **this version is probably not for you**. Consider using one of the other RecordTS products for this purpose.

Additional licenses may be purchased at any time. Please contact our sales department at sales@tsfactory.com or call one of the sales local offices or your local software reseller or distributor.

Sessions

Recorded sessions are stored in the database and are listed in the Configuration under the Sessions tab.

RecordTS Single Server Edition Configuration Sessions Logged on as admin
[Change password](#) [Logout](#)

Start date	Start time	End date	End time	User name	User domain	Session host	Client name	Data size	
01/29/23	10:06:44	<i>01/29/23</i>	<i>10:25:46</i>	Administrator	TSTFACTORY	VM104.tsfactory.com	MORTY	31.81 MB	Play
01/29/23	10:06:08	01/29/23	10:06:17	Administrator	TSTFACTORY	VM104.tsfactory.com	MORTY	4.06 MB	Play
01/29/23	09:29:52	01/29/23	10:06:07	Administrator	TSTFACTORY	VM104.tsfactory.com	MORTY	37.01 MB	Play
01/28/23	17:32:47	01/28/23	18:45:00	Administrator	TSTFACTORY	VM104.tsfactory.com	MORTY	33.97 MB	Play

25 50 100

Total disk space used by the RecordTS database is 106.85 MB.
RecordTS uses 0 B disk space for caching.

Purge:

In the diagram above, there are four sessions listed. The start and end times are listed for each session, along with the user name, domain and the client machine name. The first session shows the end date and time in italics because the user is still connected and being recorded.

The session host is the name of the machine being recorded. In other versions of RecordTS, the session host may list other machines, but in the Single Server Edition only one machine will always be listed. The Data size column shows the size of each session as it is stored in the database.

The total disk space used in the database is listed at the bottom of the page.

The [Play](#) link will start the RecordTS WebPlayer in a new tab to view the corresponding selected session.

The Purge feature allows automated deletion of sessions that are older than a specified time frame. In the diagram below, the purge period is set to 3 days, which will remove all sessions older than three days from the current date. Longer purge periods will allow retention of more sessions, but will use more local storage space. Plan accordingly to accommodate storage for the amount and size of sessions you wish to retain.

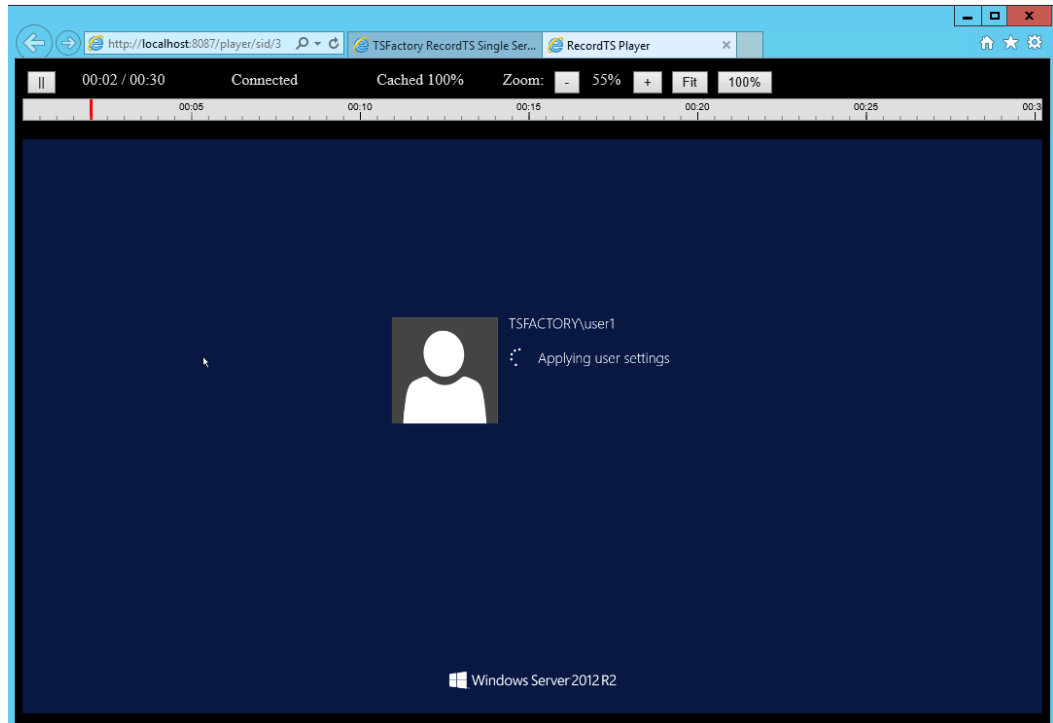
Purge: Enabled

Purge period: days

Purge is active. Sessions awaiting to be purged: 0

Playing Back Recorded Sessions

Selecting the Play link located next to a session listed in Dashboard will start the RecordTS WebPlayer in a new browser tab and start playing the selected session.



You can navigate by using the red slider bar at the top to move through the video. The Zoom buttons (+/-) allow magnification of the video. You can pause the video by clicking on the || button. To end viewing, simply close the tab.

RecordTS Storage Backup Tool

RecordTS comes with scripts that allow you to back up and restore the database files. There are also options to check the integrity and display information on an existing archive.

WARNING: The RecordTS Storage Server service **must be stopped** before creating a backup of the database. This means all users must be logged off and no session recording is in progress. Plan ahead for the system to be offline while the backup or restore takes place. **You will need to log on locally for this procedure.**

Here are the basic modes for performing a backup of the storage database along with restoring it and operations to verify the integrity of an archive.

Help

This mode will display instructions on how to use the tool.

To display tool help:

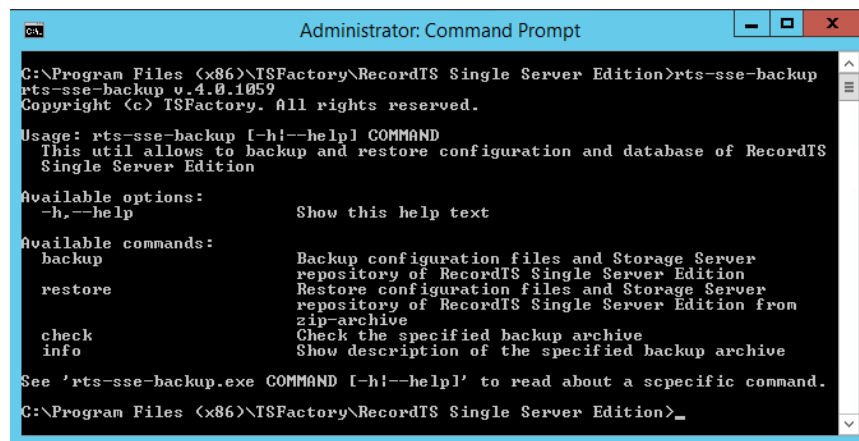
Open a DOS command or Powershell window and navigate to the RecordTS program files folder here:

```
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition
```

Execute the following command:

```
> rts-sse-backup --help
```

Here is the output:



```
Administrator: Command Prompt
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition>rts-sse-backup
rts-sse-backup v.4.0.1059
Copyright (c) TSFactory. All rights reserved.

Usage: rts-sse-backup [-h|--help] COMMAND
This util allows to backup and restore configuration and database of RecordTS
Single Server Edition

Available options:
-h,--help          Show this help text

Available commands:
backup             Backup configuration files and Storage Server
                  repository of RecordTS Single Server Edition
restore           Restore configuration files and Storage Server
                  repository of RecordTS Single Server Edition from
                  zip-archive
check             Check the specified backup archive
info             Show description of the specified backup archive

See 'rts-sse-backup.exe COMMAND [-h|--help]' to read about a specific command.
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition>_
```

Backup

This mode will copy the database files to a specified location using various command line switches to tailor the archive.

Simple backup procedures:

Log on locally and stop the RecordTS Storage Server service, then open a DOS command or Powershell window and navigate to the RecordTS program files folder here:

```
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition
```

Execute the following command:

```
> rts-sse-backup backup -d backupfolder
```

where: *backupfolder* is the directory to store the backup.

The backup process will take time to copy the database files so expect some down time while the process completes.

Start the RecordTS Storage Server service.

Command line switches include:

- d, --directory Directory to save an archive with backup data
- n, --name ARG Specify name of backup archive.
- c, --comment Include a comment with backup archive.
- compress Compress files in an archive.
- no-compression Store files without compression.
- bzip Pack data with BZip2 algorithm.
- f, --force Suppress user input requests.
- h, --help Display help.

If a custom name is not specified, the tool will generate a name for you with the format: RTS_Storage_ServerYYYYMMDD-XXXXXX.zip

The .zip file extension will automatically added if no extension was specified.

Where: YYYY = year, MM = month, DD = day, XXXXXX = internally generated timestamp suffix.

Restore

This mode restores data from an archive.

Simple restore procedures:

Log on locally and stop the RecordTS Storage Server service, open a DOS command or Powershell window and navigate to the RecordTS Storage Server program files folder here:

```
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition
```

Execute the following command:

```
> rts-sse-backup restore -a archive
```

where: *archive* is the path\filename of the archive.

The tool will warn you the existing configuration files will be removed. This is normal. Press Enter to continue restoring or type 'n' to quit.

Start the RecordTS Storage Server service.

The restore process will take time to extract and copy the database files from the archive so expect some down time while the process completes.

Command line switches include:

- a, --archive ARG Specify name of the archive file to restore.
- f, --force Suppress user input requests.
- h, --help Display help.

Check

This mode verifies archive integrity.

Open a DOS command or Powershell window and navigate to the RecordTS Storage Server program files folder here:

```
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition
```

Execute the following command:

```
> rts-sse-backup check -a archive
```

where: *archive* is the name and location of the archive file.

The integrity checking process may take time so plan accordingly.

Command line switches include:

- a, --archive ARG Specify name of the archive file to restore.
- h, --help Display help.

Info

This mode reports information about an archive.

Open a DOS command or Powershell window and navigate to the RecordTS Storage Server program files folder here:

```
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition
```

Execute the following command:

```
> rts-sse-backup info -a archive
```

where: *archive* is the name and location of the archive file.

The information reporting process may take time so plan accordingly.

Command line switches include:

- a, --archive ARG Specify name of the archive file to restore.
- h, --help Display help.

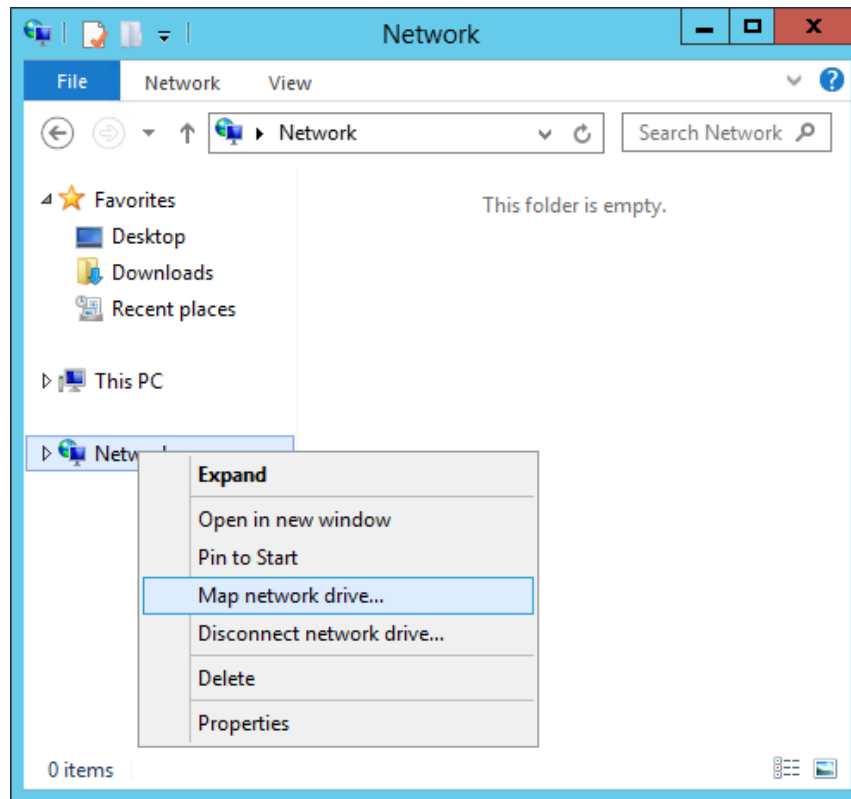
Backup Tool Examples

For the following examples, you should stop the storage server service before performing a backup or restore operation. All commands are executed from the RecordTS program files folder in a DOS command or Powershell window. See previous section for more information on this process.

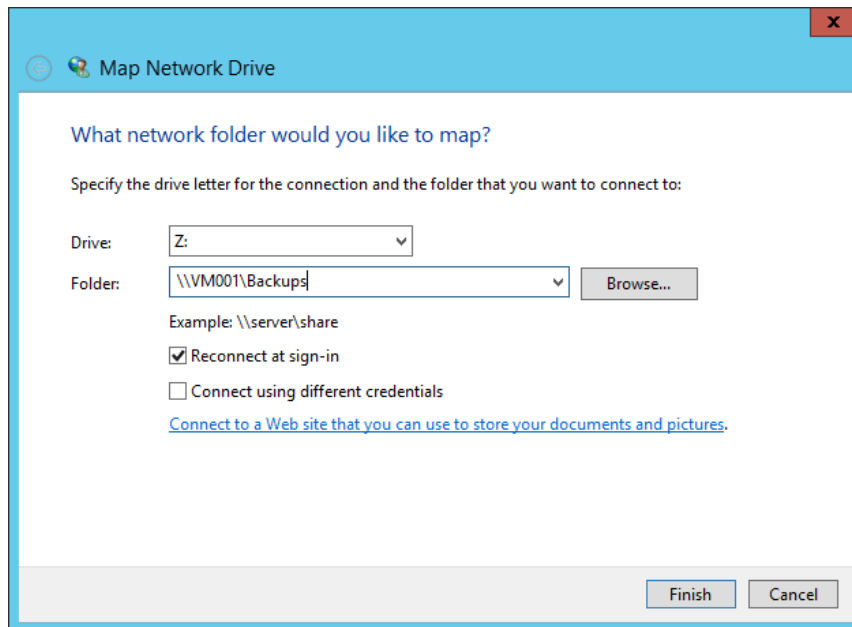
To backup the database to another machine (network share) on your network, you will first need to map a local network drive to that machine.

Mapping a Network Drive

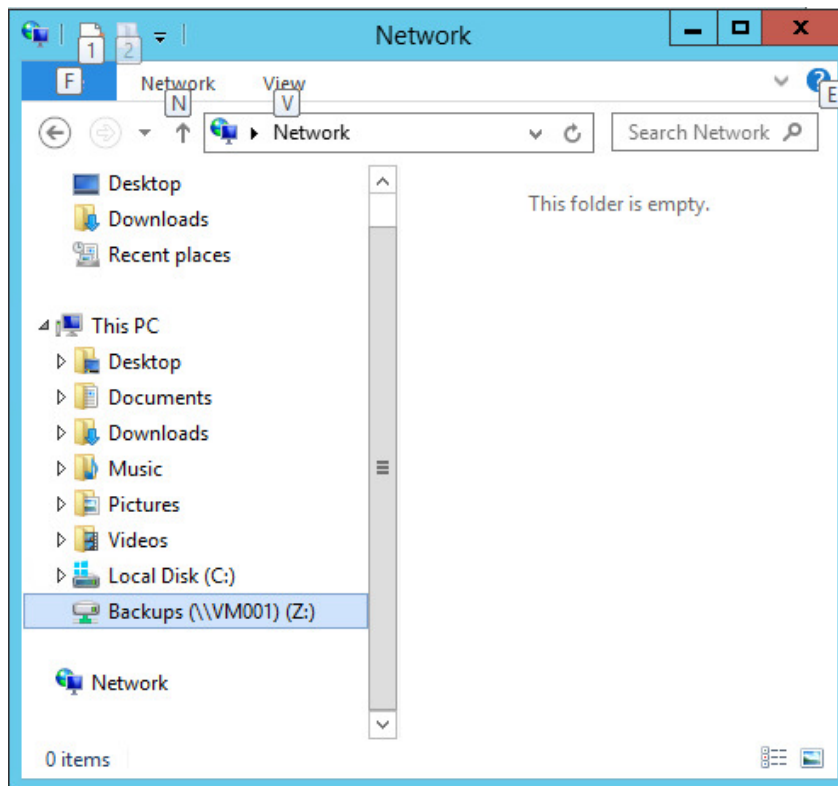
On the RecordTS Storage Server, open File Explorer and right mouse click over the Network icon.



Click on "Map network drive..." and enter the network share name in the Folder field or click Browse to locate the folder. Modify the other settings and click on Finish to map the share to a local drive.



The mapped drive should appear in the drive list. You are now ready to use it for backups. See below.



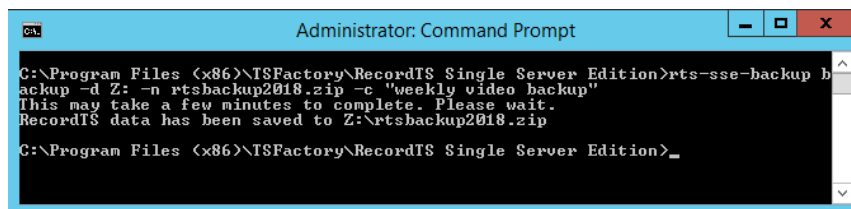
Examples

Example #1:

Backup the database to mapped network drive Z: using archive name “rtsbackup2018.zip” and add a comment to the archive.

```
> rts-storage-backup backup -d Z: -n rtsbackup2018.zip -c  
“weekly video backup”
```

Here is a screen shot of the backup procedure:



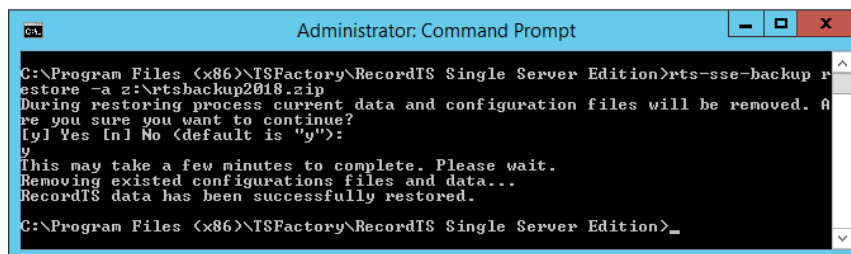
```
Administrator: Command Prompt  
C:\Program Files (x86)\ISFactory\RecordTS Single Server Edition>rts-sse-backup b  
ackup -d Z: -n rtsbackup2018.zip -c "weekly video backup"  
This may take a few minutes to complete. Please wait.  
RecordTS data has been saved to Z:\rtsbackup2018.zip  
C:\Program Files (x86)\ISFactory\RecordTS Single Server Edition>_
```

Example #2:

Restore the database from an archive file located on a locally mapped network drive Z: with the archive file name “rtsbackup2018.zip”.

```
> rts-storage-backup restore -a z:\rtsbackup2018.zip
```

Here is a screen shot of the restore procedure:



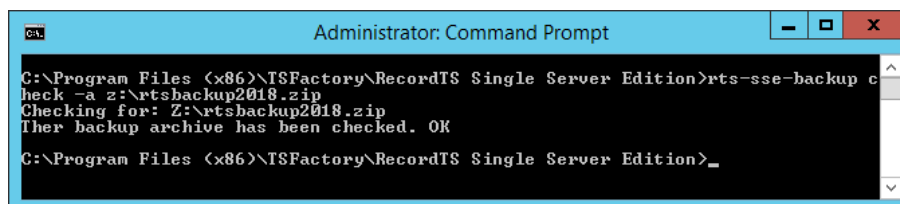
```
Administrator: Command Prompt  
C:\Program Files (x86)\ISFactory\RecordTS Single Server Edition>rts-sse-backup r  
estore -a z:\rtsbackup2018.zip  
During restoring process current data and configuration files will be removed. Are  
you sure you want to continue?  
[y] Yes [n] No (default is "y"):  
y  
This may take a few minutes to complete. Please wait.  
Removing existed configurations files and data...  
RecordTS data has been successfully restored.  
C:\Program Files (x86)\ISFactory\RecordTS Single Server Edition>_
```

Example #3:

Check the integrity of an archive file located on a locally mapped network drive Z: with the archive file name “rtsbackup2018.zip”.

```
> rts-storage-backup check -a z:\rtsbackup2018.zip
```

Here is a screen shot of the archive integrity check procedure:



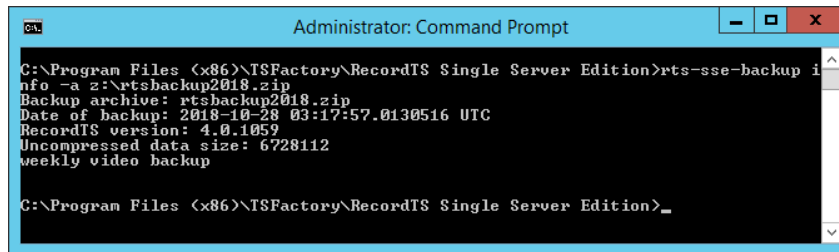
```
Administrator: Command Prompt  
C:\Program Files (x86)\ISFactory\RecordTS Single Server Edition>rts-sse-backup c  
heck -a z:\rtsbackup2018.zip  
Checking for: Z:\rtsbackup2018.zip  
The backup archive has been checked. OK  
C:\Program Files (x86)\ISFactory\RecordTS Single Server Edition>_
```

Example #4:

Display the information from an archive file located on a locally mapped network drive Z: with the archive file name "rtsbackup2018.zip".

```
> rts-storage-backup info -a z:\rtsbackup2018.zip
```

Here is a screen shot of the archive information dump:



```
Administrator: Command Prompt
C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition>rts-sse-backup i
info -a z:\rtsbackup2018.zip
Backup archive: rtsbackup2018.zip
Date of backup: 2018-10-28 03:17:57.0130516 UTC
RecordTS version: 4.0.1059
Uncompressed data size: 6728112
weekly video backup

C:\Program Files (x86)\TSFactory\RecordTS Single Server Edition>_
```

Note the last line will be the comment if one was specified during backup.

Performing a Complete Uninstall

When you uninstall RecordTS, the folder containing the database and configuration files is retained in order to avoid accidental loss of data.

To completely remove all components including the database and configuration files during uninstallation of RecordTS, you will need to perform the uninstall manually using DOS commands.

There is a hidden system flag named REMOVE_DATA that controls how RecordTS gets uninstalled. If it is equal to 'yes', the installer deletes the database and configuration directories. Because this action leads to loss of data, a user needs specify this flag on uninstallation.

To perform this operation, the administrator should run the msiexec.exe tool in a Command or Powershell window:

```
msiexec.exe /x RecordTS-Single-Server-Edition-7.0.1262.msi  
REMOVE_DATA=yes
```

This command will invoke the standard Windows uninstaller and completely remove RecordTS along with all the stored session data.

List of Service Ports

Webconsole: 8087