



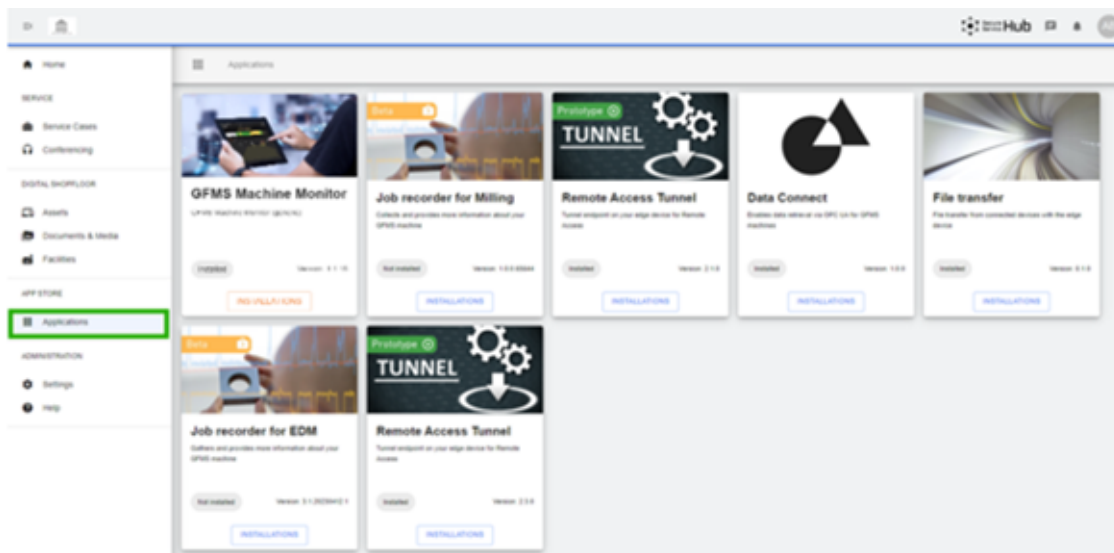
Apps management by the customer

Content:

- [1. Apps front page](#)
- [2. install main Apps for My rConnect](#)
 - [2.1 GFMS - OPC UA Apps](#)
 - [2.2 GFMS Machine Monitor](#)
 - [2.3 SSC Tunnel Client](#)

1 Apps front page

To install the available apps, press the "APPS" tab.





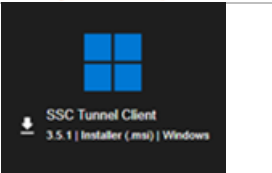
Inside the window, a different collection of apps is presented



1. Name of the app
2. Version of the app
3. Status of the installation
4. Installation button

2 Install Apps through My rConnect

For the My rConnect platform, there are 4 apps that each user must be able to install:

<p>1. Data Connect</p>		<p>Apps allowing reading and using the data coming from the machine.</p>
<p>2. GFMS Machine Monitor</p>		<p>Apps that display data and machining efficiency from connected machine(s).</p>
<p>3. SSC Tunnel Client</p>		<p>My rConnect provides a facility to transfer files between your laptop or PC and machine. In order to achieve that you need to install SSC client in your PC or machine,</p>

2.1 Data Connect - GFMS - OPC UA apps

Click on the "Installations" button, and then you will be redirected on a new popup window.



1. Machine Selection



Inside this window you have 3 steps in order to upload thus app:

- 1. Machine Selection**
- 2. Configurations**
- 3. Agreements**

After selecting for which machine do you want this apps press on the "Next" button

2. Configurations

Machine Selection

Configurations

Agreements

Buffer time KPI data (seconds) *

300

Device TimeZone override (leave empty if uncertain)

OPC UA Endpoint *

opc.tcp://10.0.0.9:4840/GFUnitServer

OPC UA Username (leave empty for anonymous authentication)

user

OPC UA Password

password

CANCEL PREVIOUS NEXT

In this window some data related to the OPC UA must be entered.

OPC UA endpoint:

opc.tcp://machine_ip:4840/GFUnitServer

User:

<USERNAME selected by the customer>

Password:

<PASSWORD selected by the customer>

and then press on the "Next" button.

	<p>The OPCUA server must be configured on the machine first!</p>
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Important remark

3. Agreements

Machine Selection

Configurations

Agreements

Please read the following Agreements carefully. We need your consent in order to be able to install and use the Application.

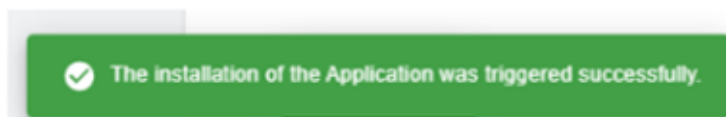
I accept the Terms of Use.

I accept the Privacy Agreement.

Accept the terms of use and the privacy agreement.

If you want to have, an idea press on the underlined words to be able to read the contract.

Press on the "Install" button.



After the installation you will get a "successful" message

2.2 GFMS Machine Monitor



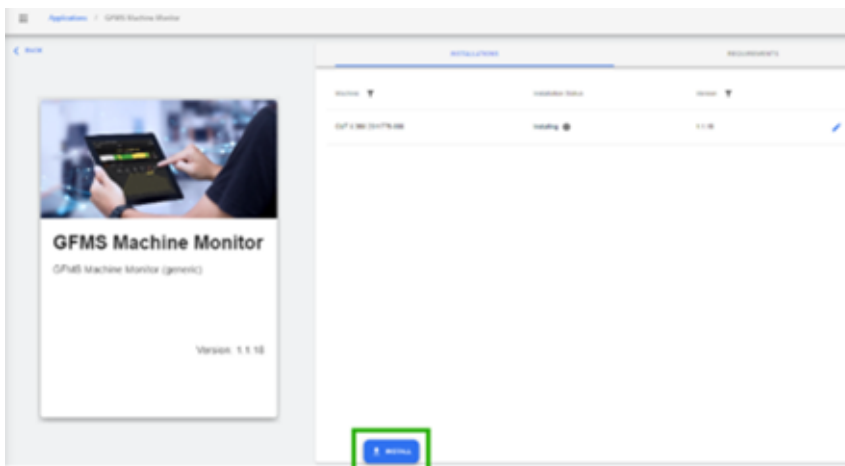
GFMS Machine Monitor

GF MS Machine Monitor (generic)

Installed

Version: 1.1.18

INSTALLATIONS



Click on the "Installations" button, and then you will be redirected on a new popup window.

To install the Apps, please press the install button.



CANCEL NEXT

Inside this window you have 3 steps in order to upload thus app:

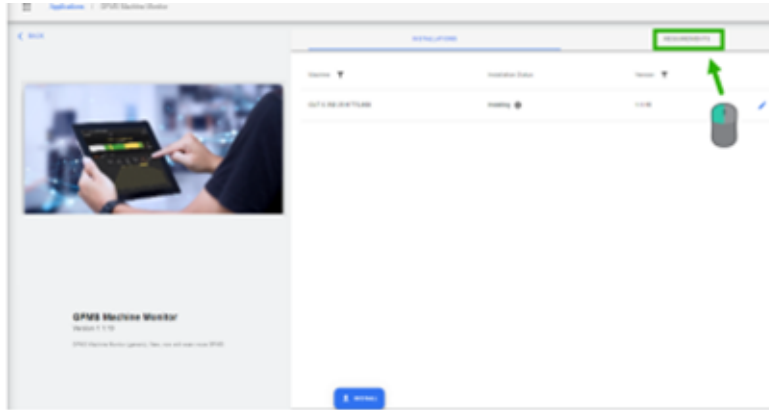
1. Machine Selection

2. Configurations

3. Agreements

After selecting for which machine (asset) do you want this apps press on the "Next" button

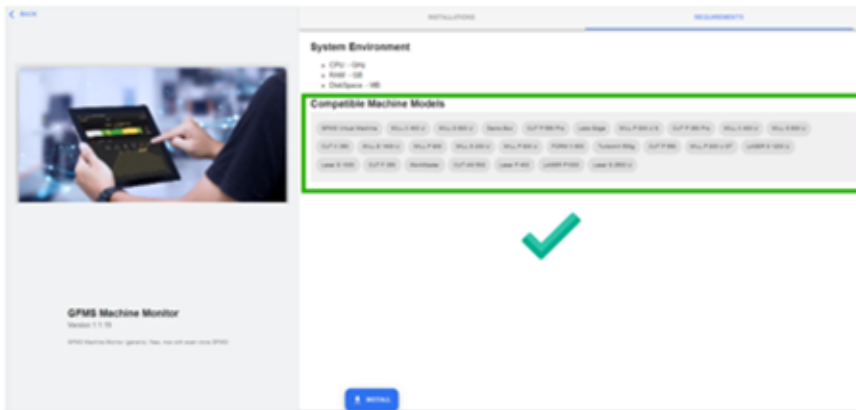
On the **Machine Selection** field, some choices are not allowed. Some machines do not support the Apps. A list of Apps-compatible machines can be seen in the figures below.



To check the list of the compatible machines, select the **Requirements** tab, and then check the list.



Important remark



Check if your machine belongs to the **Compatible Machine Models**.

Inside the configuration window you should enter:

Machine Selection
Configurations
Agreements

IP Address of OPC/UA Machine *

172.29.50.54 1

OPC/UA Port (default 4840) *

4840 2

OPC/UA username (leave empty for anonymous)

user 3

OPC/UA password

1234 4

1. Machine IP address
2. The port for the OPC/UA server (by default 4840)
3. OPC/UA username
4. OPC/UA password

The third and the fourth information are the credentials defined when launching the OPC/UA server.



Then press on the Next button

Machine Selection
Configurations
Agreements

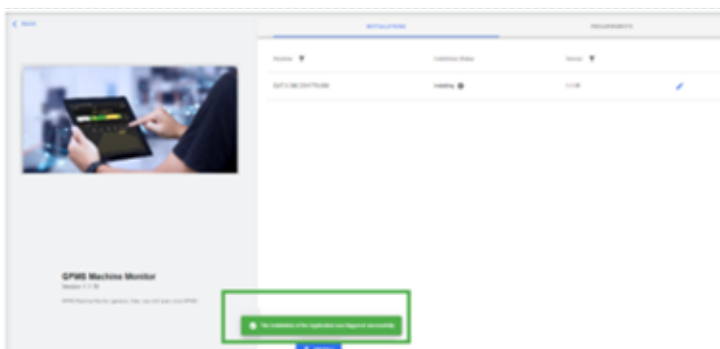
Please read the following Agreements carefully. We need your consent in order to be able to install and use the Application.

I accept the [Terms of Use](#).

I accept the [Privacy Agreement](#).

Please check the agreements and then and then approve them.

You can press on the install button.



The App is automatically installed. A message confirming successful installation is displayed:

The installation of the Application was triggered successfully.

2.2.1 Roles

Machine Monitor offers two distinct roles:

1. GFMS Machine Monitor for read-only access to Machine Monitor;
2. GFMS Machine Monitor Operator to include OEE related information and classify downtime (both features currently in the roadmap, not yet launched).

Users must be assigned one of these roles in order to access Machine Monitor.

2.2.2 Feature list

Currently, Machine Monitor offers two main views: the **Dashboard** and the **Machine Activity View**.

2.2.2.1 Dashboard

The Dashboard is the primary screen in Machine Monitor and consists of machines state view and jobs state view.

The screenshot displays the Machine Monitoring Dashboard. At the top, it shows 'Machine Monitoring' with a menu icon, a refresh icon, and a settings icon. The dashboard is organized into a grid of machine status cards and a progress table at the bottom.

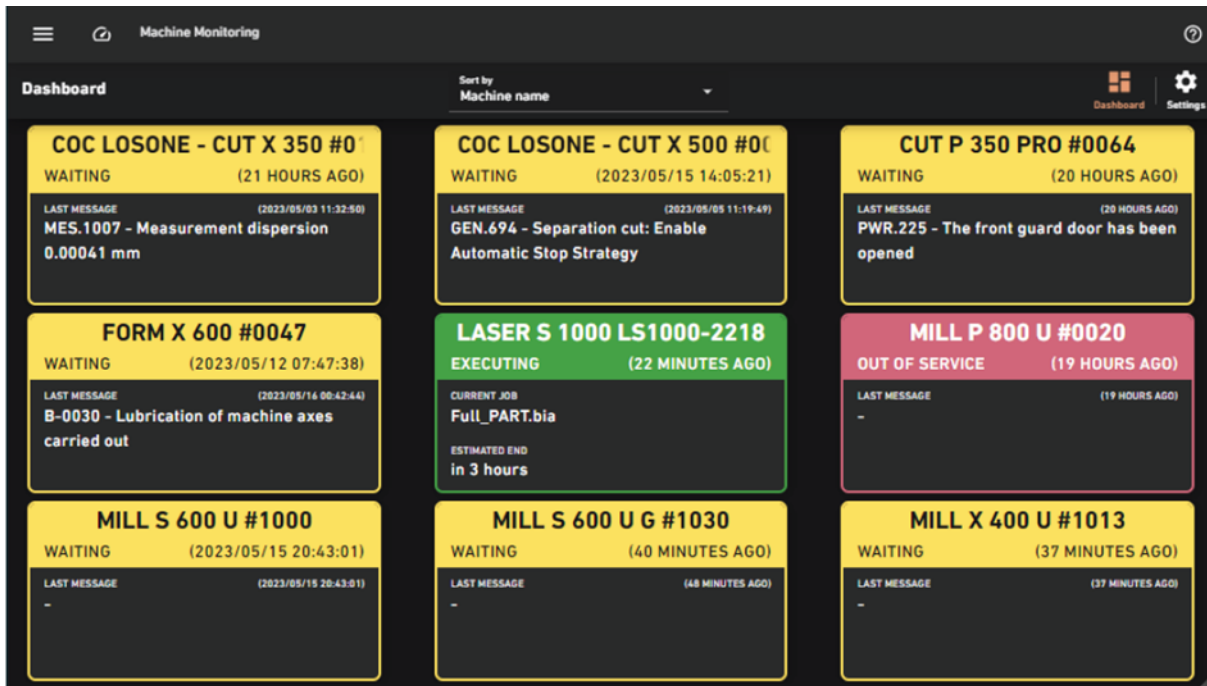
Machine Name	Status	Last Message
COC LOSONE - CUT X 350 #01	WAITING (21 HOURS AGO)	MES.1007 - Measurement dispersion 0.00041 mm
COC LOSONE - CUT X 500 #01	WAITING (2023/05/15 14:05:21)	GEN.694 - Separation cut: Enable Automatic Stop Strategy
CUT P 350 PRO #0064	WAITING (20 HOURS AGO)	PWR.225 - The front guard door has been opened
FORM X 600 #0047	WAITING (2023/05/12 07:47:38)	B-0030 - Lubrication of machine axes carried out
LASER S 1000 LS1000-2218	EXECUTING (22 MINUTES AGO)	Full_PART.bia
MILL P 800 U #0020	OUT OF SERVICE (19 HOURS AGO)	-
MILL S 600 U #1000	WAITING (2023/05/15 20:43:01)	-
MILL S 600 U G #1030	WAITING (40 MINUTES AGO)	-
MILL X 400 U #1013	WAITING (37 MINUTES AGO)	-

Progress	Machine	Job name
ESTIMATED END 9 MINUTES AGO	COC LOSONE - CUT P 550 PRO #306	4 PIECE_Copy1_Copy1_Copy1
ESTIMATED END IN 1 HOUR	COC LOSONE - CUT P 550 PRO #255	Wolfspeed
ESTIMATED END IN 3 HOURS	LASER S 1000 LS1000-2218	Full_PART.bia

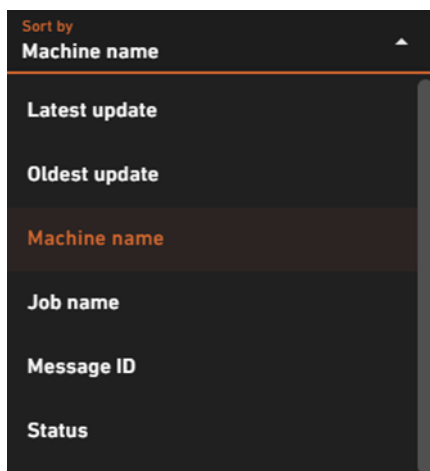
2.2.2.2 Machines state view

In this view, users can see each of their connected machines displayed in tiles. Each tile includes:

- Machine name
- Current state
- Last update date
- Current job information (if the machine is running a job)
- Last message (if the machine is in Waiting, Out of Service, or Undefined state)



Tiles are sorted by machine name as a default, but users can also choose to sort by latest update, oldest update, job name, message ID, or status:



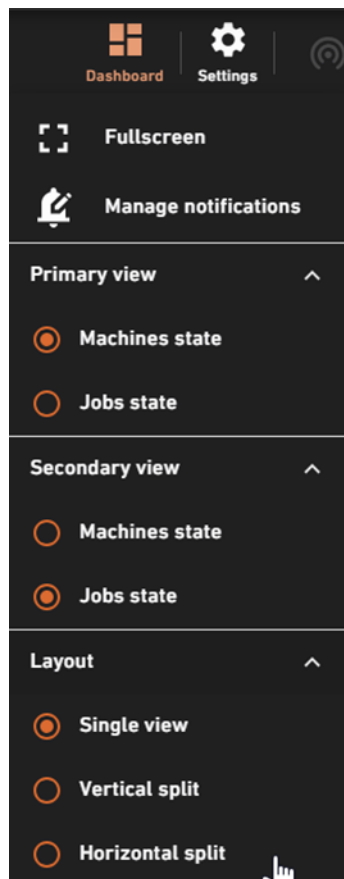
2.2.2.3 Jobs state view

This view provides users with information on currently running jobs, including their progress, the machine running the job, and the job name. It is useful for identifying machines that are about to complete their jobs, enabling operators to promptly inspect finished parts and minimize unplanned downtime.

Progress	Machine	Job name
ESTIMATED END 9 MINUTES AGO	COC LOSONE - CUT P 550 PRO #306	4 PIECE_Copy1_Copy1_Copy1
ESTIMATED END IN 1 HOUR	COC LOSONE - CUT P 550 PRO #255	Wolfspeed
ESTIMATED END IN 3 HOURS	LASER 5 1000 LS1000-2218	Full_PART.bla

2.2.2.4 Layout customization

Users can personalize the Dashboard in the Settings menu. They have the option to run the Dashboard in full-screen mode, manage notification preferences, select primary and secondary views, and adjust the layout (single view, horizontal split, or vertical split).



2.2.2.5 Notification options

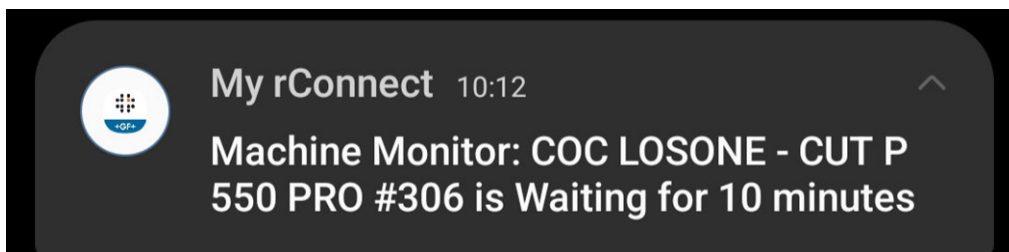
In this section, users can specify their notification preferences, including the type of notifications they want to receive, notification thresholds, and the time window for sending notifications.

Manage Notifications

- Receive notifications when a machine is Out of Service for longer than 5 minute(s)
5 minute(s)
- Receive notifications when a machine is Waiting for longer than 10 minute(s)
10 minute(s)
- Receive notifications when a machine is Offline for longer than 15 minute(s)
15 minute(s)
- Receive notifications during the time period of 11:18:00 and 17:36:00
Start time: 11:18 to End time: 17:36

CLOSE SAVE

Notifications are sent to the mobile apps (iOS and Android) in the following format:

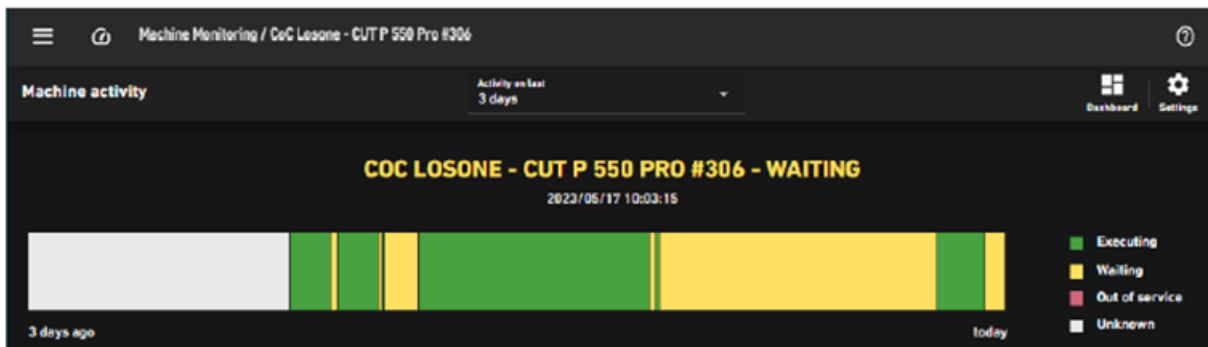


2.2.3 Machine activity view

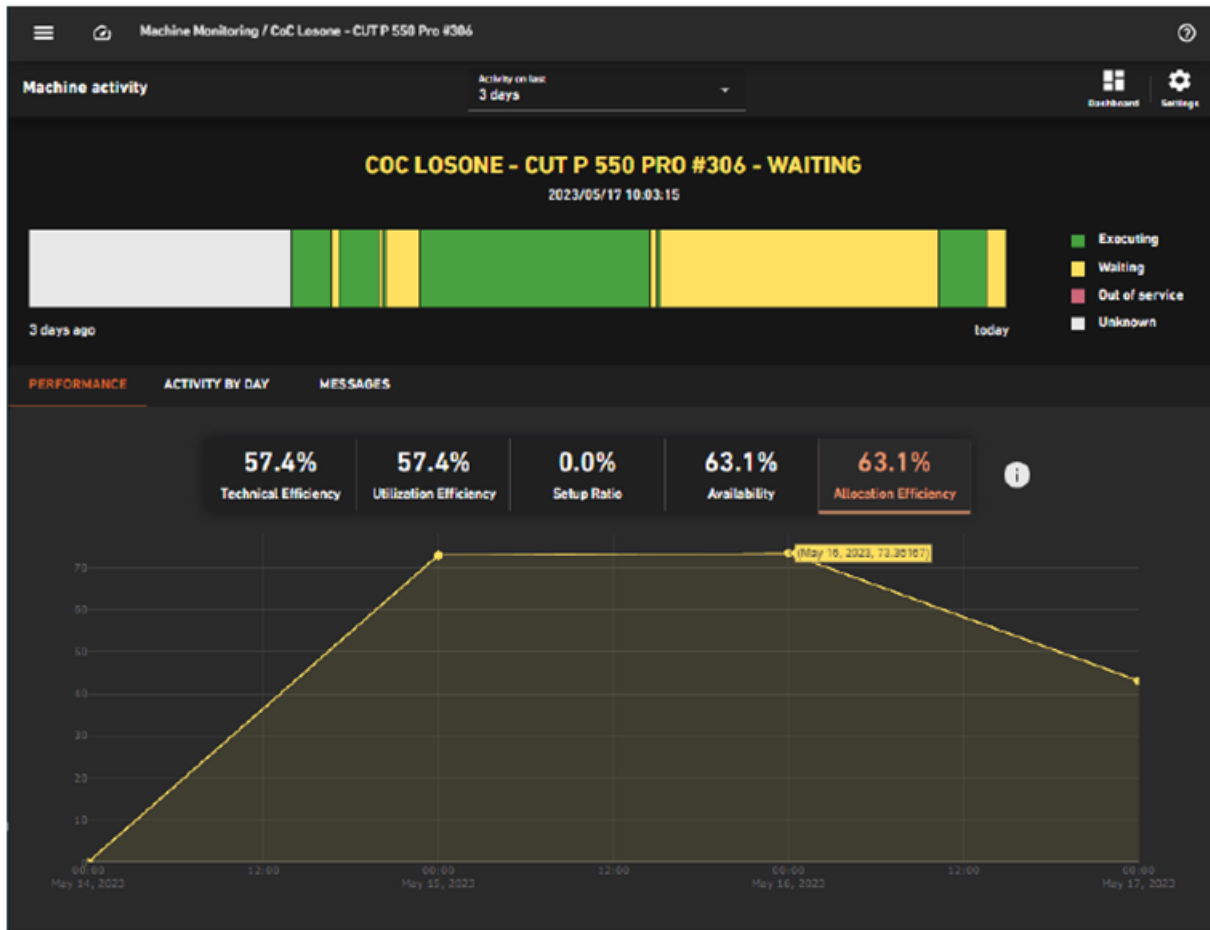
The Machine Activity View offers historical insights into machine performance. Users can choose a time range from the past 15, 7, or 3 days. This view includes:

2.2.3.1 Timeline

At the top of the screen, users can view the machine's name and its current status. The timeline visually represents the machine's state changes over the selected time period.



2.2.3.2 Performance tab

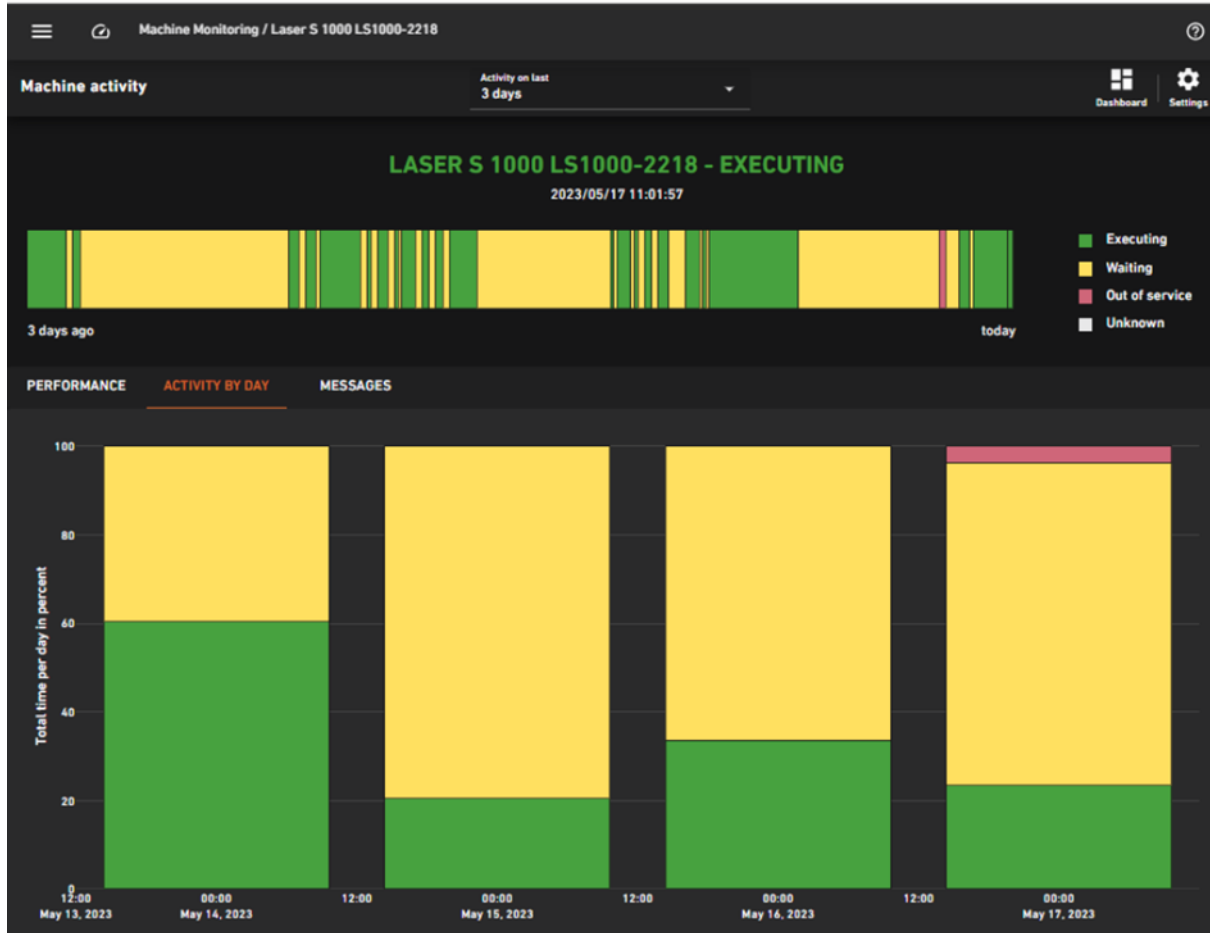


This tab provides the following ISO 22400 standard KPIs for the machine:

• Technical Efficiency	• Utilization Efficiency	• Setup Ratio	• Availability	• Allocation Efficiency
<p>Technical efficiency measures the effectiveness of a machine in terms of its production time and delay time. It is calculated by dividing the actual production time by the sum of the actual production time and the actual unit delay time. A higher technical efficiency value indicates that the machine is operating efficiently and experiencing minimal delays.</p>	<p>Utilization efficiency evaluates how well a machine utilizes its available time. It is calculated by dividing the actual production time by the actual unit busy time. A higher utilization efficiency value suggests that the machine is effectively utilizing its available time for production.</p>	<p>Setup ratio assesses the proportion of time spent on setting up a machine relative to the processing time. It is calculated by dividing the actual unit setup time by the actual unit processing time. A higher setup ratio value indicates that a significant portion of time is dedicated to setting up the machine compared to the actual production process.</p>	<p>Availability measures the extent to which a machine is available for production during the planned busy time. It is calculated by dividing the actual unit production time by the planned busy time. A higher availability value indicates that the machine is consistently available for production during the scheduled time.</p>	<p>Allocation efficiency evaluates the effectiveness of resource allocation for a machine. It is calculated by dividing the actual unit busy time by the planned busy time. A higher allocation efficiency value suggests that the allocated resources are effectively utilized and that the machine is being kept busy for a significant portion of the planned time.</p>

2.2.3.3 Activity by Day tab

This tab enables users to track the percentage of time the machine spent in execution, waiting, or out of service on a daily basis. It's a valuable tool for identifying anomalies by comparing machine behavior during different operational phases. The data is presented in a clustered graph format, excluding unknown/undefined statuses for better data comparison.



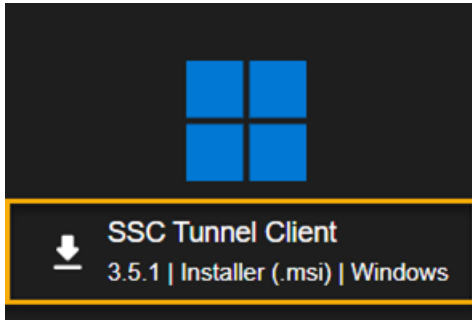
2.2.3.4 Messages tab

The Messages tab displays a list of the most common messages generated by the machine. Users can filter messages by information, warning, error, or all severity levels and select the top 5, 10, or 15 most frequent messages within the chosen time frame. Messages are grouped by their ID to avoid redundancy, and users can click on table headers to sort and filter messages as needed.

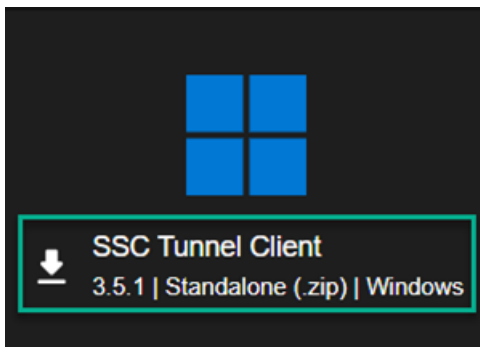
The screenshot shows the 'Machine activity' dashboard for 'COC LOSONE - CUT P 550 PRO #306'. The status is 'WAITING' as of 2023/05/17 10:03:15. A performance chart shows activity over the last 3 days, with a legend for Executing (green), Waiting (yellow), Out of service (pink), and Unknown (grey). The 'MESSAGES' tab is active, displaying a table of the top 15 warning messages.

Occurrences	ID	Severity	Message
42	DLC.106	Warning	High level sensor of dielectric in dirty tank is uncovered
32	CNB.110552	Warning	Invalid number format in list or permissible range of value exceeded.
10	HMI.1071	Warning	Previewer in low modality due to heavy job load (3550/3000).
10	HMI.1419	Warning	Operator fix slug action required on the 'CT12-R008' machining.
8	WIR.203	Warning	Automatic thread failure because of buckling detection maximum number of trial reached
4	EXM.106	Warning	Channel switch not allowed
4	GEN.684	Warning	Warning: the difference of the voltage read on upper and lower current pick-up is too important (AWR)
4	MSV.106	Warning	EDM time limit : At least one consumable must be checked
2	HMI.1080	Warning	Slug can not be fixed on '4_PIECE_Copy1' 'CT12-R008_1'

2.3 SSC Tunnel Client



The SSC Tunnel Client installer needs admin access to your laptop or PC.



SSC Tunnel Client standalone doesn't need the admin access.

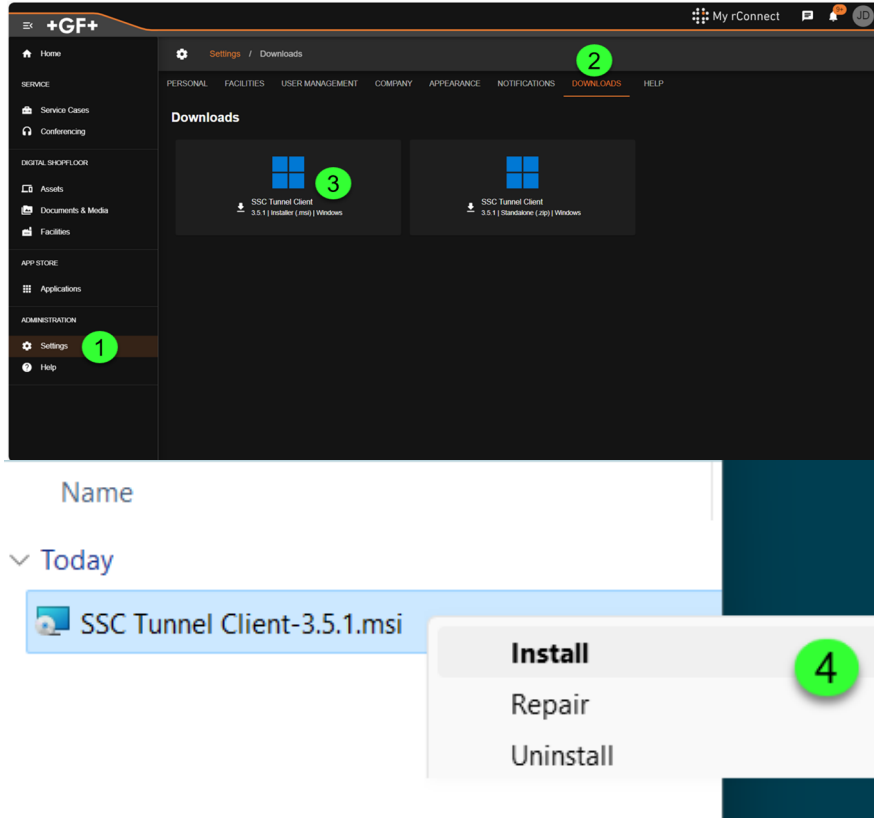
With standalone client there are certain drawbacks, e.g., you'll need to:

Manually copy paste the connection URL to the client.

There is no auto check when a new version of the client is available.

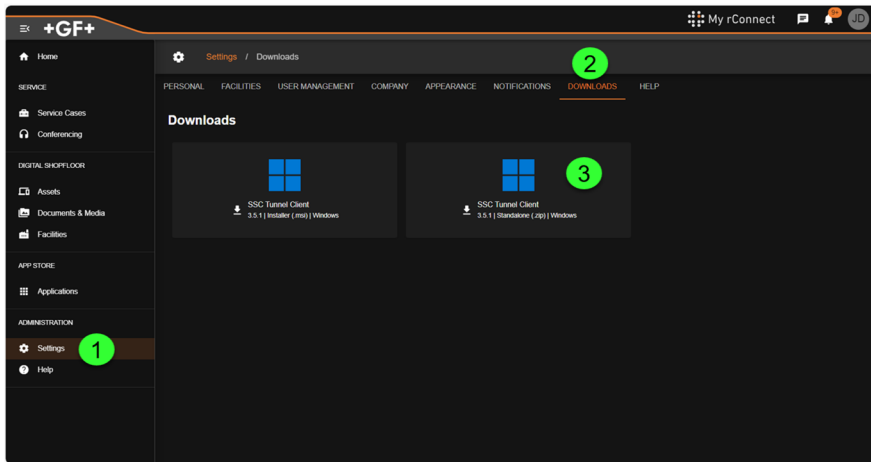
2.3.1 Installer

To install the SSC Client MSI installer, follow following steps.

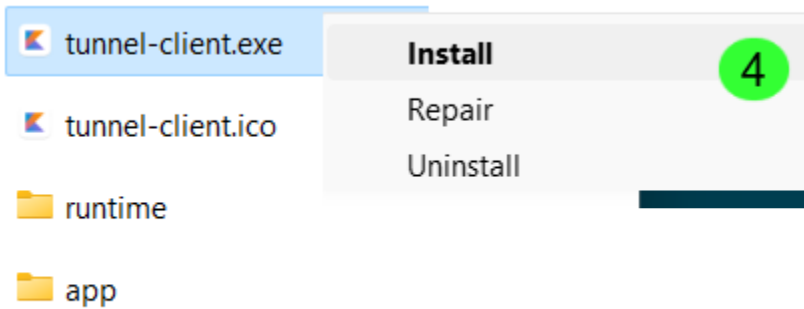


1. Login to My rConnect portal and navigate to **SETTINGS** Page
2. Click on **DOWNLOAD** tab.
3. Click and download SSC Tunnel Client with Installer (.msi) Windows option.
4. Install downloaded client, you'll need admin access for this. You can get help from IT helpdesk to do this.

To install the SSC Client Standalone, follow following steps.



1. Login to My rConnect portal and navigate to **SETTINGS** Page
2. Click on **DOWNLOAD** tab.
3. Click and download SSC Tunnel Client with Standalone (.zip) windows option.
4. Install downloaded client, you'll **not** need admin access for this option.

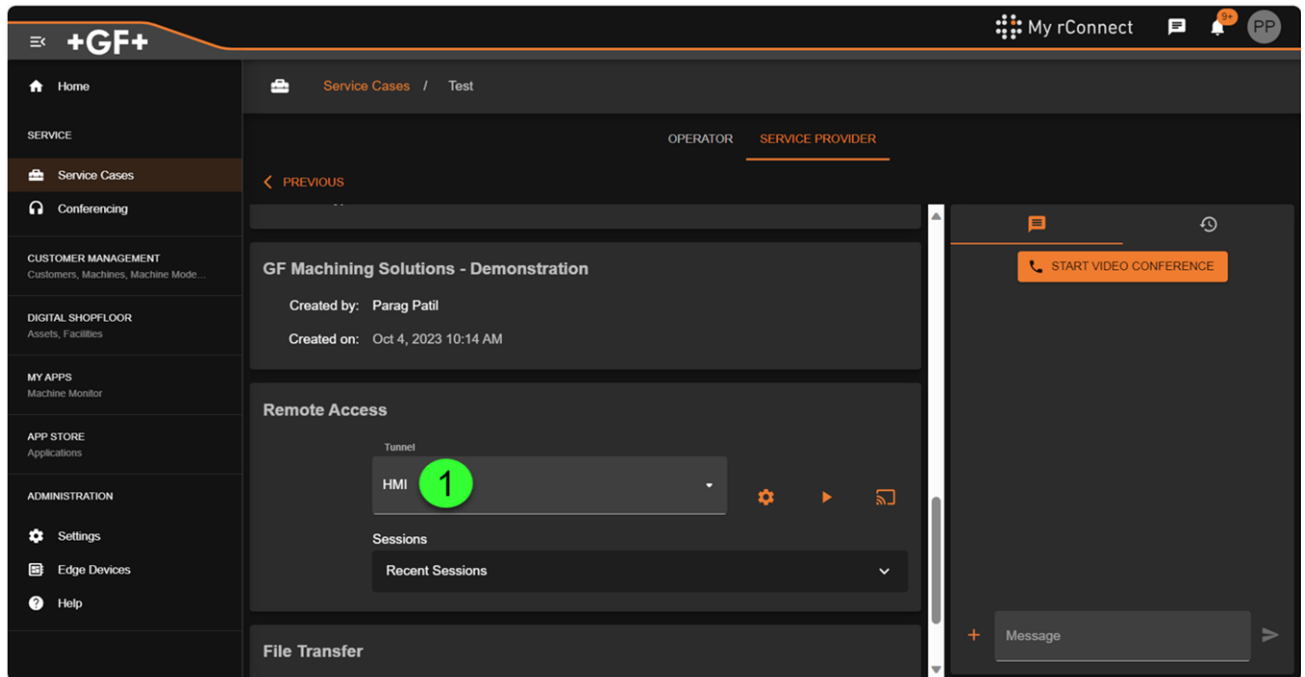


2.3.2 Pre-requisites

Before you use the SSC Tunnel client, you need to ensure the proper end point configuration are setup. These can only be setup by GF Service Personnel (key users). For different machine types there are different endpoints needed. The endpoints can be setup for relevant EDGE device according to the Knowledge Center documents by GF Service Personnel (key users).

2.3.3 Windows based machines

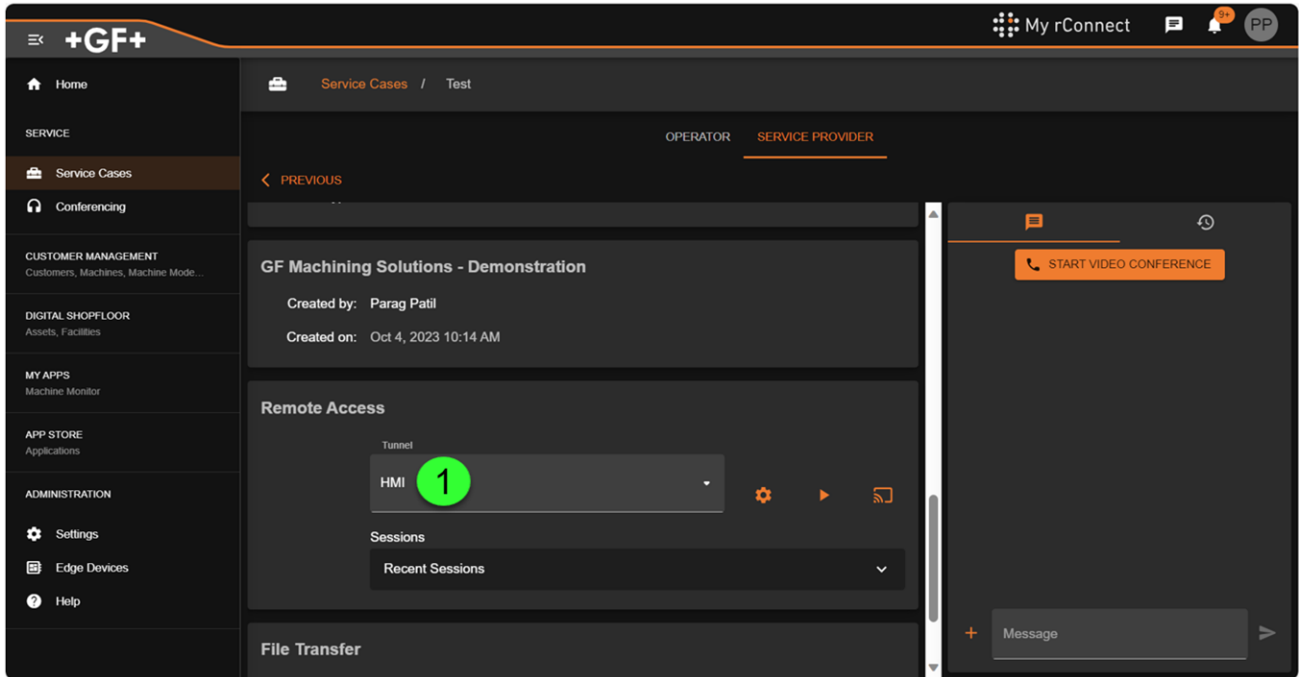
For all windows-based machines e.g. EDM, Laser a **HMI** endpoint as shown below should be available.



Furthermore, you also need **Ultra VNC Viewer** application on your laptop or PC. Please note other VNC Viewers will not work.

2.3.4 Milling with CENIOWER

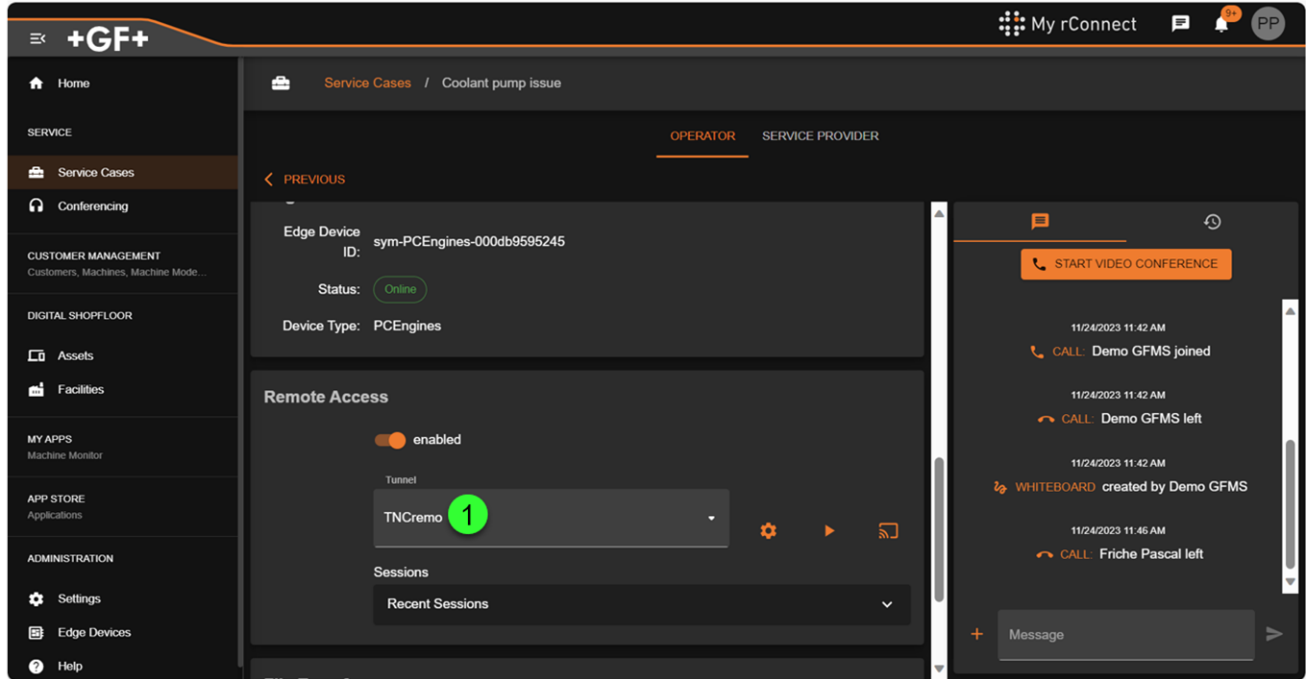
For all milling machines irrespective of HH, Siemens or Fanuc there should be similar endpoint available name **CENOWER** as shown in following screenshot.



Furthermore, you also need **TightVNC Viewer** application on your laptop or PC. Please note other VNC Viewers will not work.

2.3.5 Milling Heidenhain

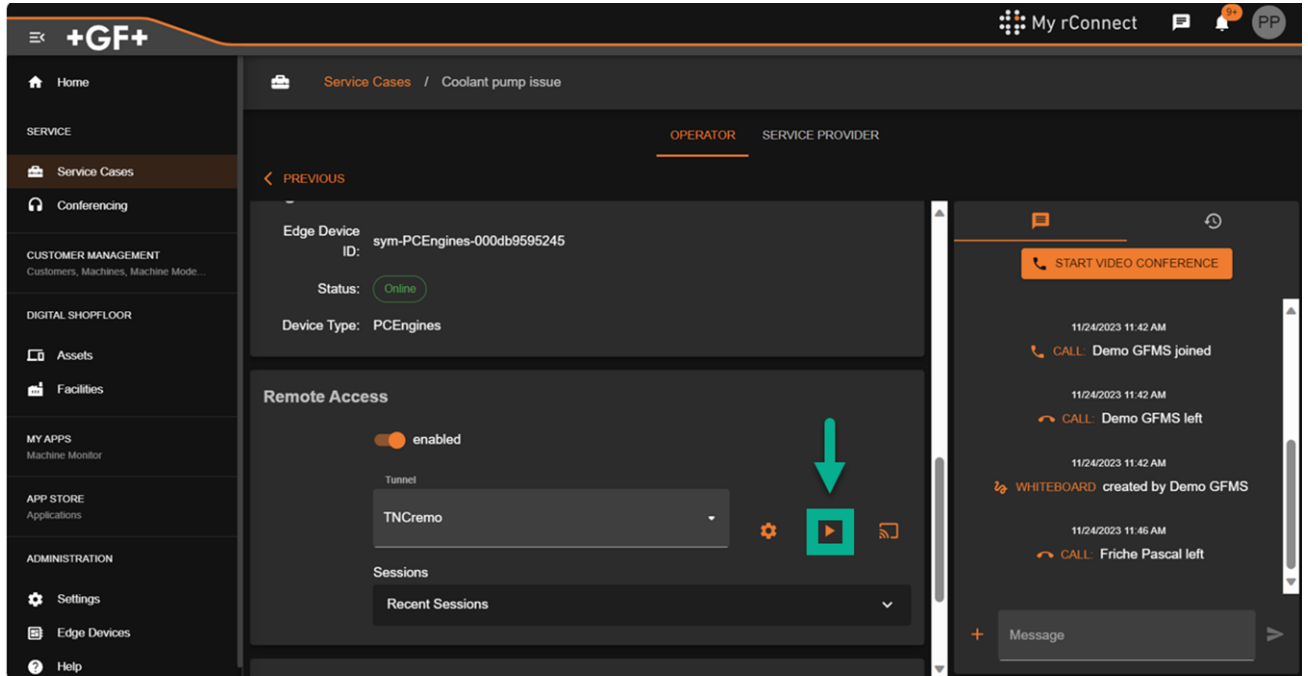
For milling machines with Heidenhain without CENOWER, the endpoint should be with name **TNCremo** as shown below.



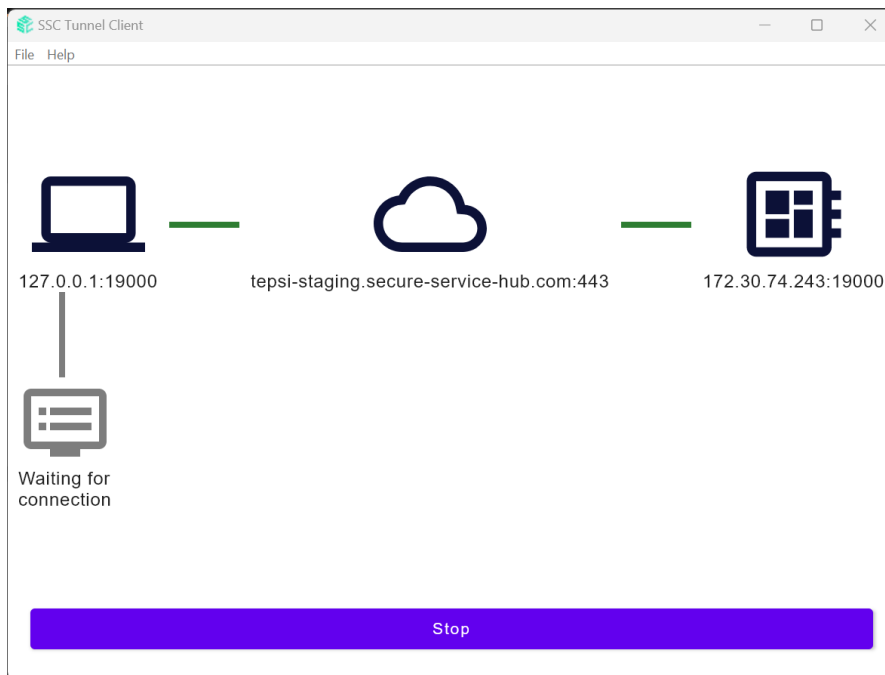
Furthermore, you also need **TNCremo** application on your laptop or PC.

2.3.6 Launching the SSC Tunnel

To launch SSC Tunnel, you need to select appropriate endpoint according to the machine type and simply click on the **play** button as shown in the following screenshot. Please note you can only do this when remote access is enabled within an open service case for the relevant machine.



2.3.7 SSC Tunnel client installer



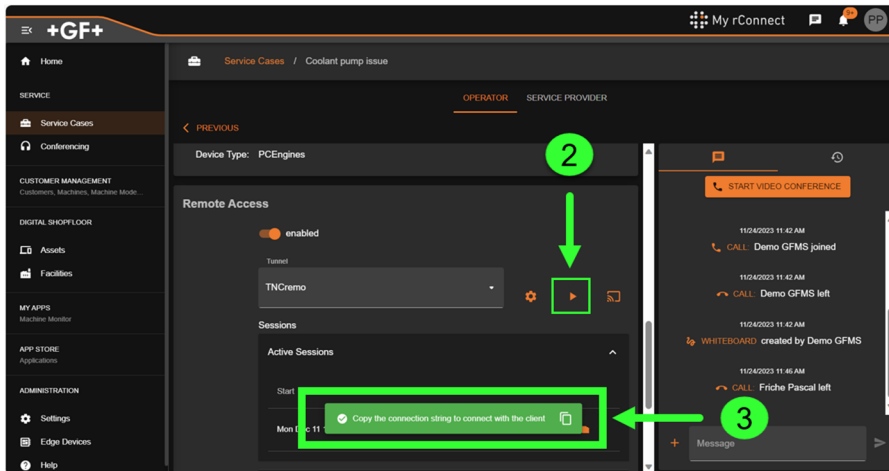
If you have installed the SSC tunnel client installer, after clicking on the play button, the client will launch automatically and connection to the machine will be setup automatically.

2.3.8 SSC Tunnel standalone

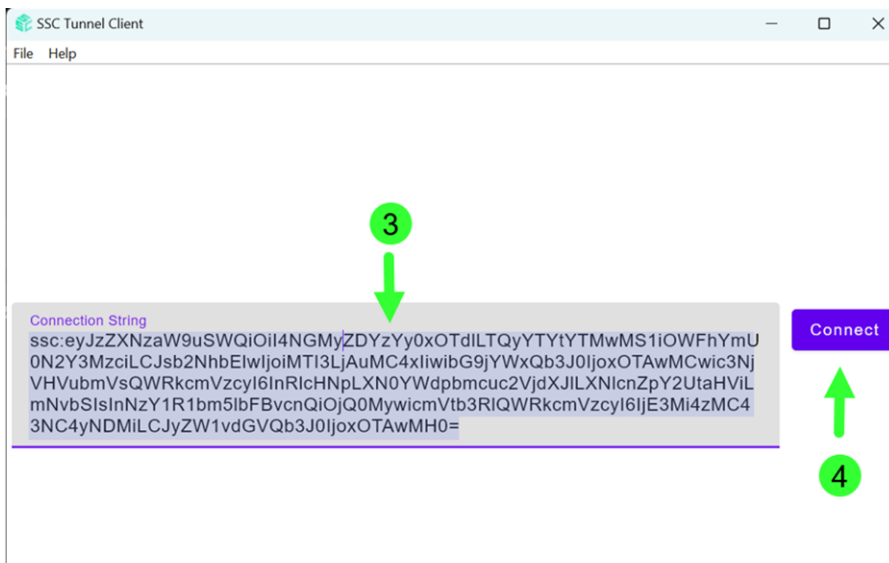


1. Open SSC Tunnel client downloaded.

You can also pin the application in your task bar.

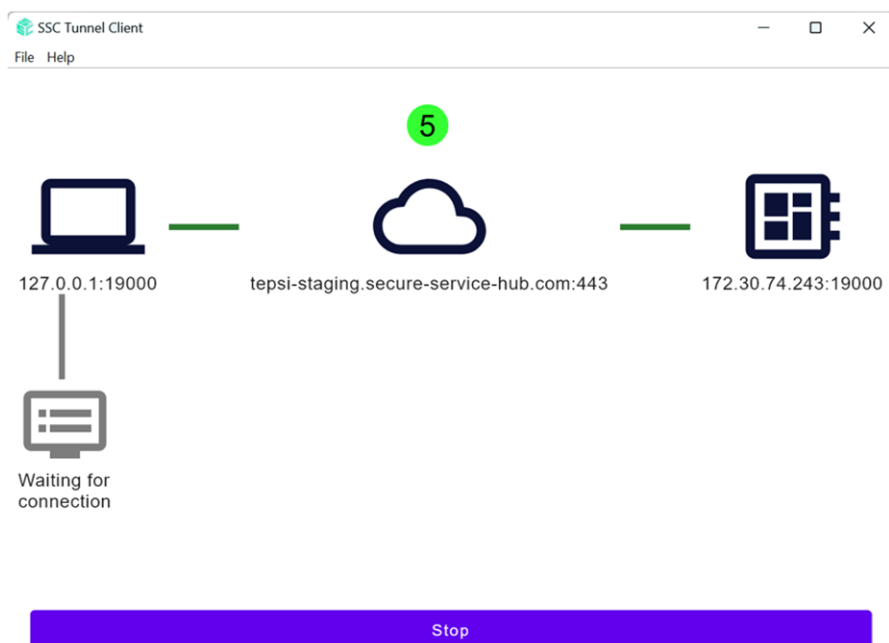


2. Click on the play button.



3. Copy the connection string.

4. Paste it into the open SSC Tunnel client and click on the **connect** button.



5. After that, connection to the machine, will be established.

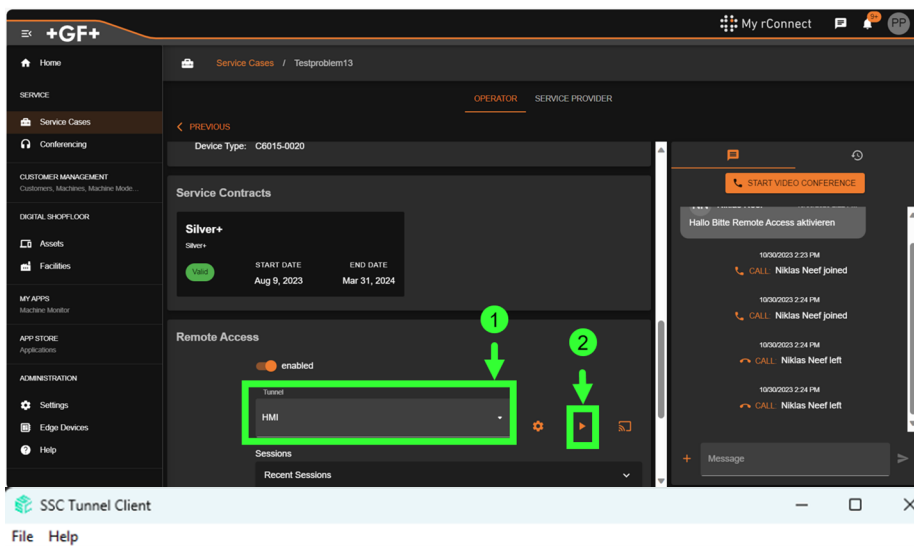
2.3.9 File transfer



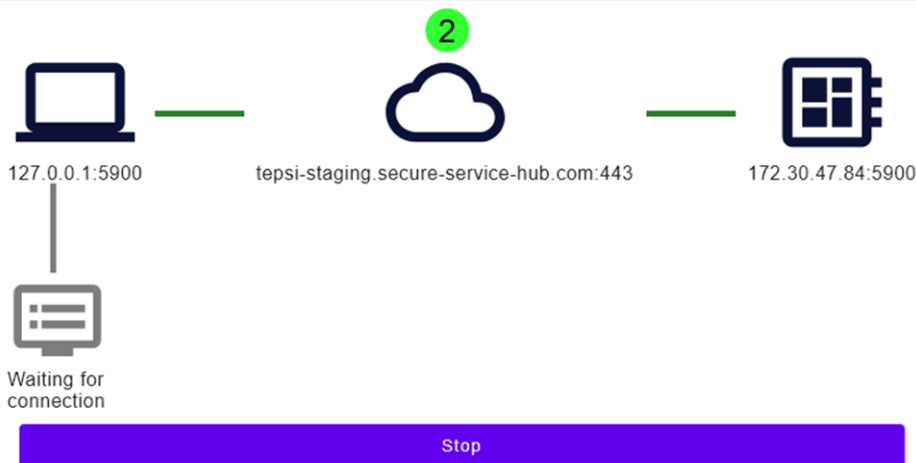
Once the SSC Tunnel client has been launched and appropriate connection must be established, **you can transfer files using various applications based on various machine types.**

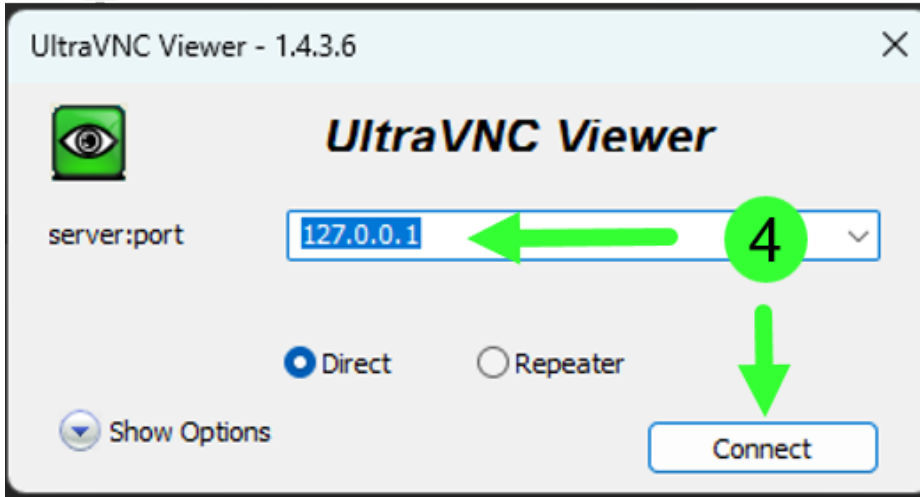
2.3.9.1 Windows based machines

For windows-based machines like EDM or Laser, you should follow the following steps.



1. Select **HMI** endpoint and launch the SSC Tunnel client.
2. Ensure if the connection via SSC tunnel has been established.





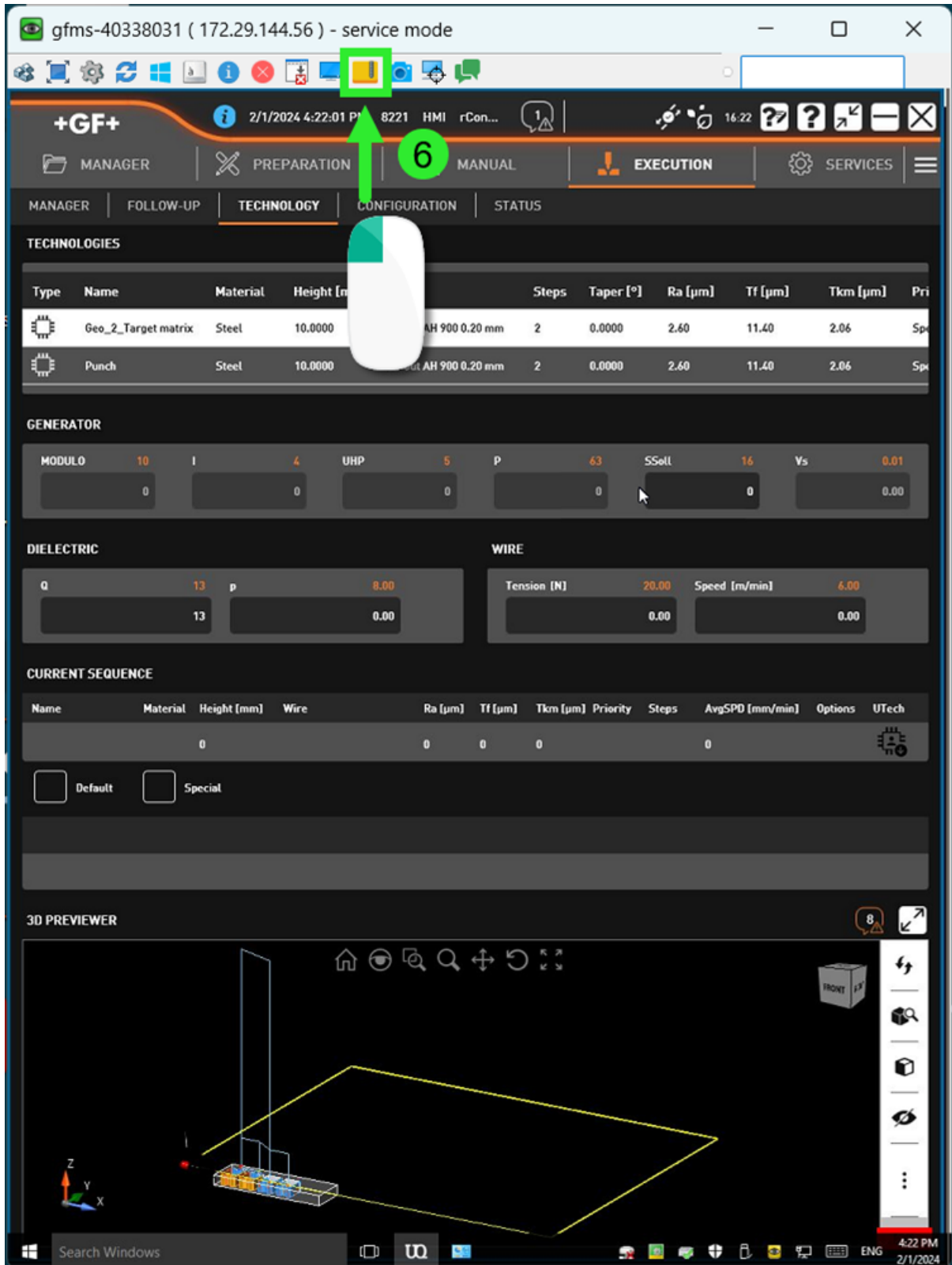
3. Launch Ultra VNC Viewer on your laptop or PC. Please note other VNC viewer will not work.

4. Enter localhost IP 127.0.0.1 and click on the Connect button.

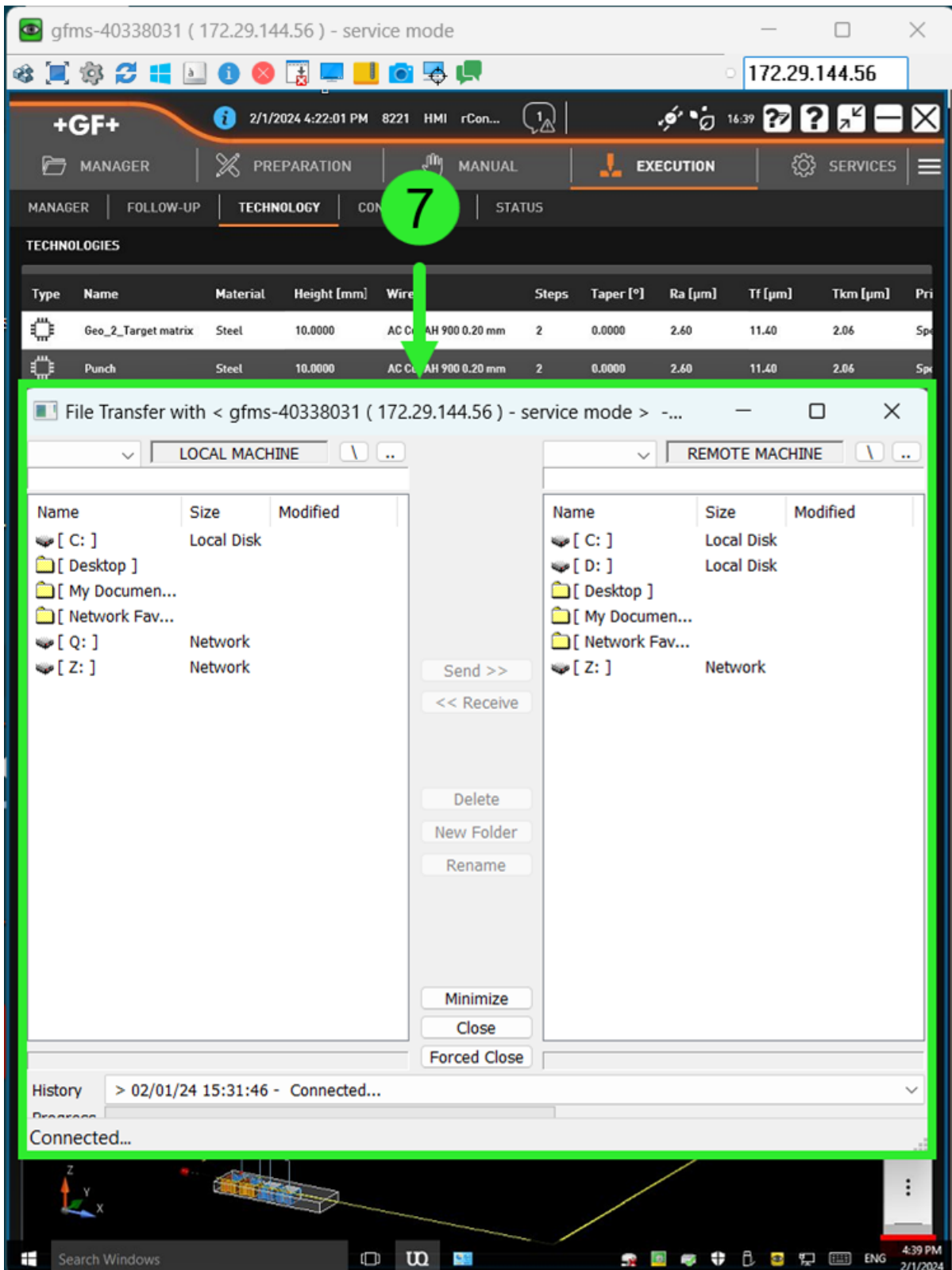
5. Enter relevant password and Log On.



- 6. You'll be connected to the machine via VNC. Please click on the **Open File Transfer** button (green frame on the next picture).

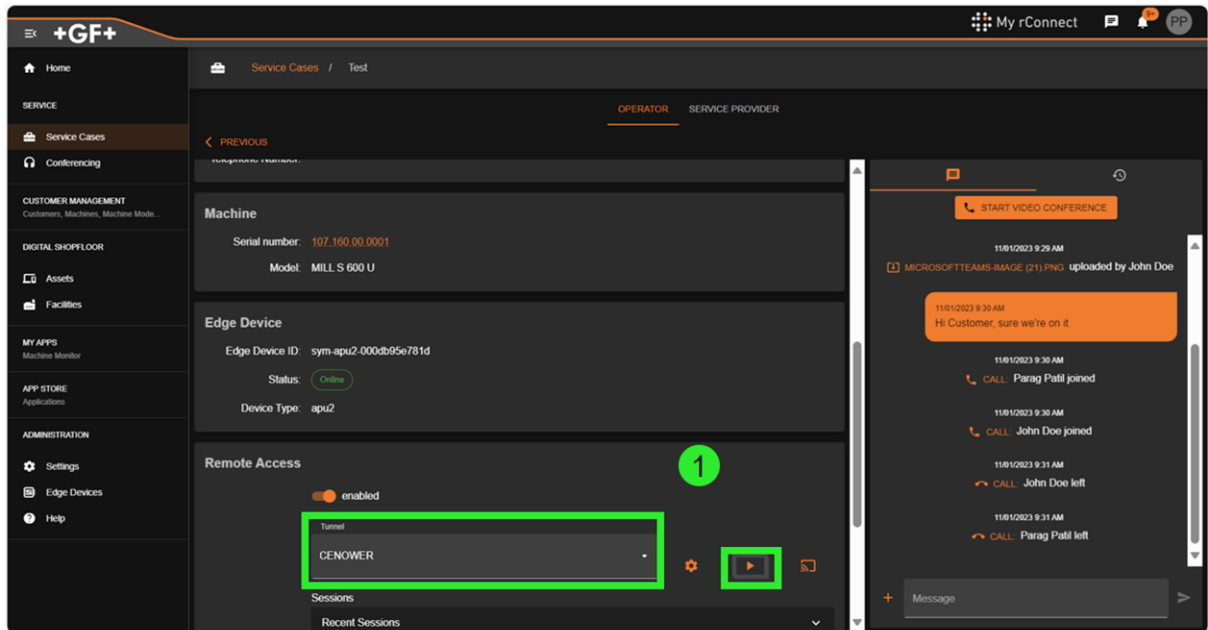


7. You can now use VNC Viewer's file transfer functionality to exchange files.

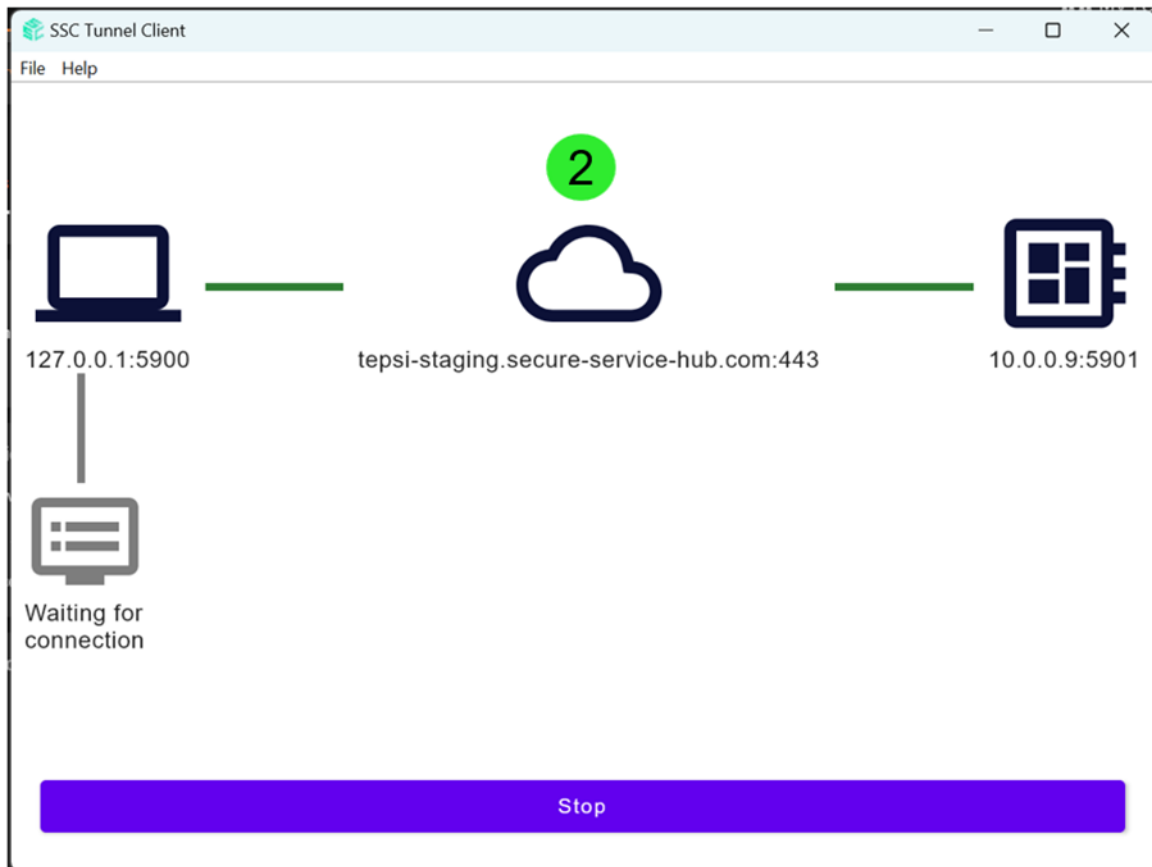


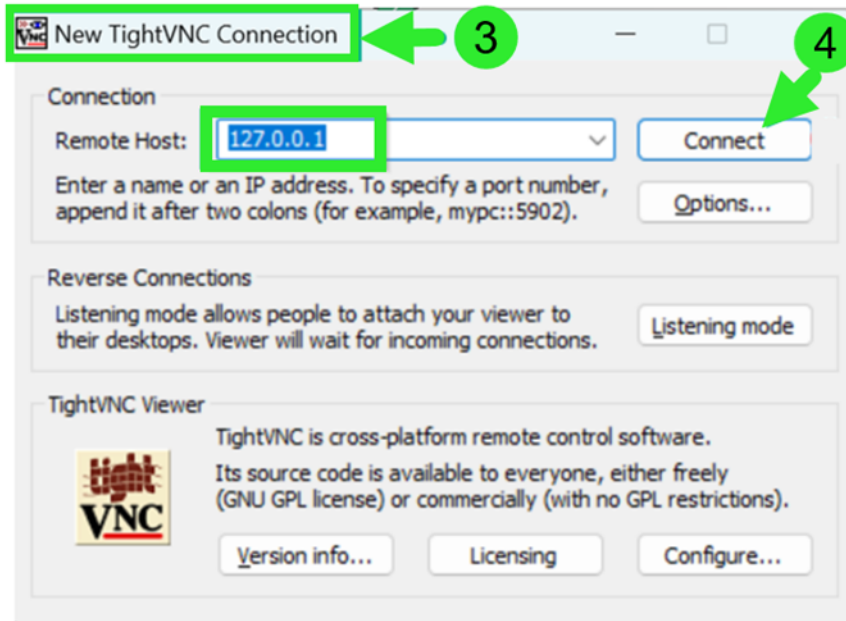
2.3.9.2 Milling with CENOWER

1. Select CENOWER endpoint and launch the SSC Tunnel client.



2. Ensure if the connection via SSC tunnel has been established.

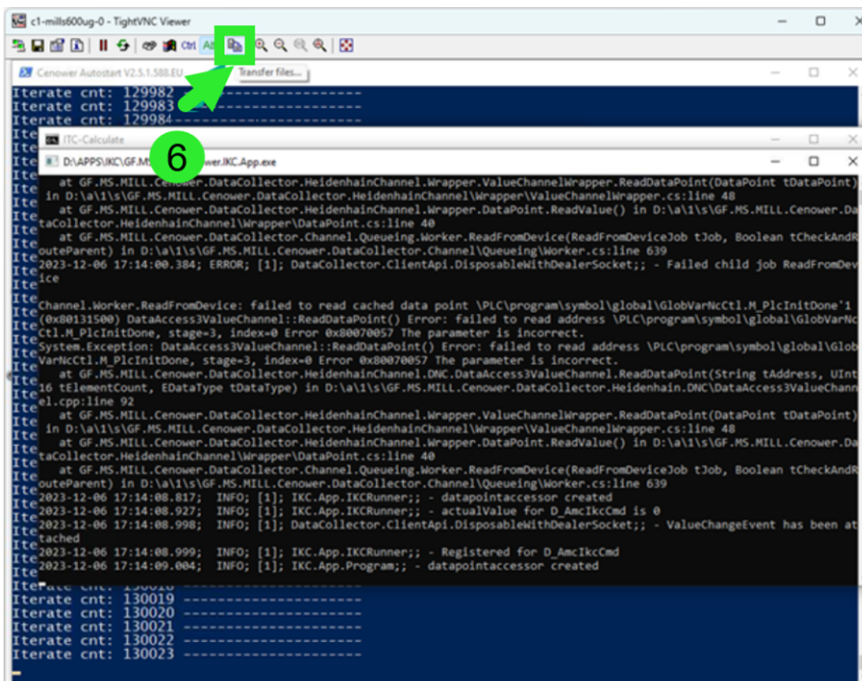
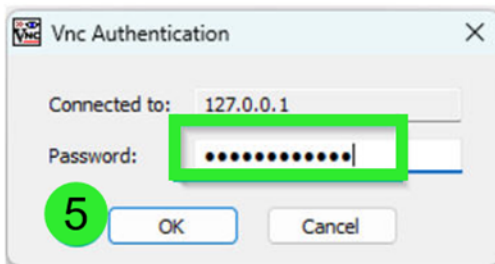




3. Launch **TightVNC Viewer** on your laptop or PC. Please note *other VNC viewer will not work!*

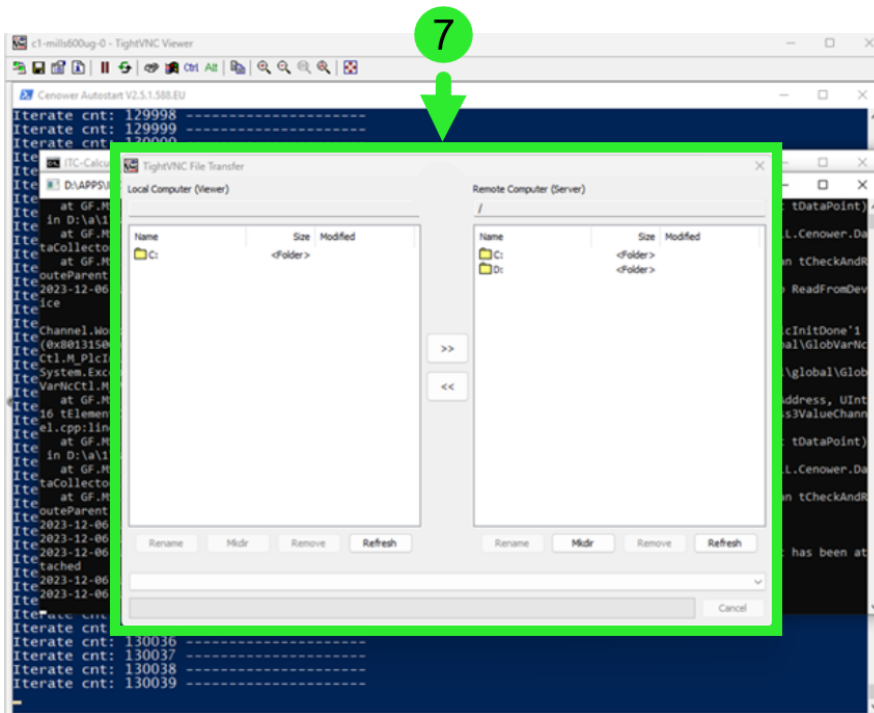
4. Enter localhost IP 127.0.0.1 and click on the **Connect** button.

5. Enter relevant password and click **OK**.

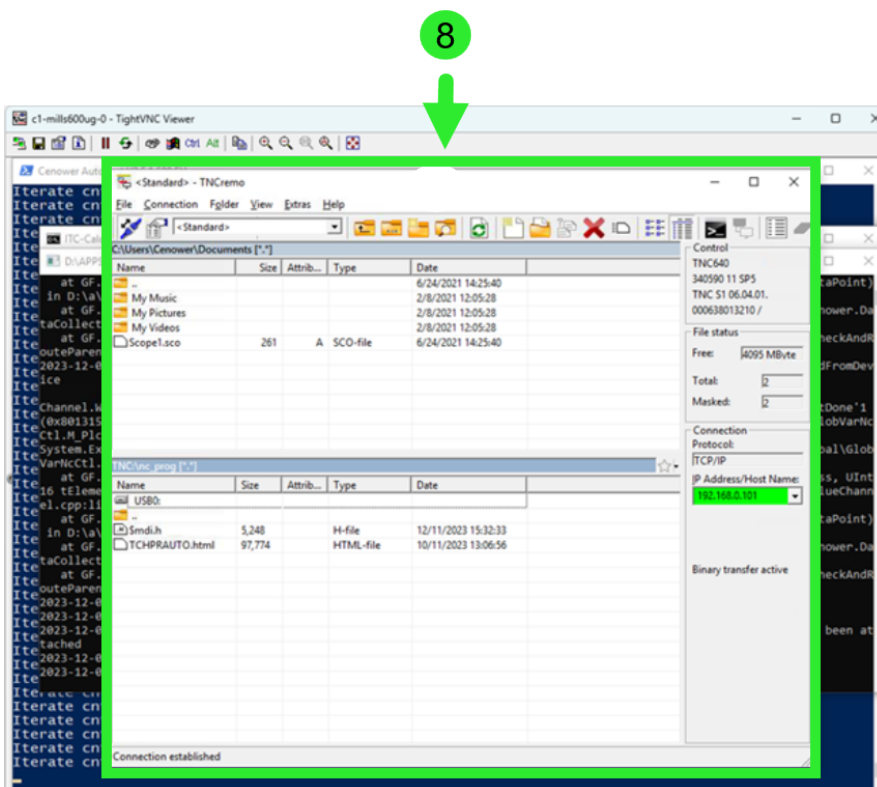


6. You'll be connected to the **CENOWER** via VNC.

Please click on the **Open File Transfer** button (green frame on the picture)



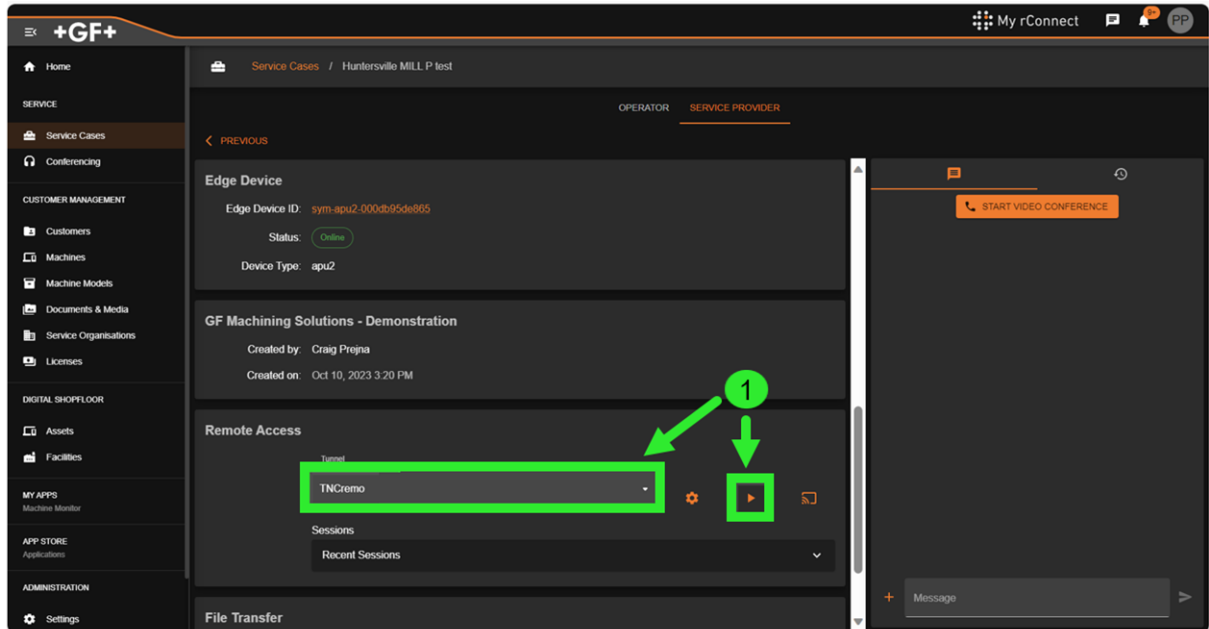
7. You can now use TightVNC Viewer's file transfer functionality to exchange files



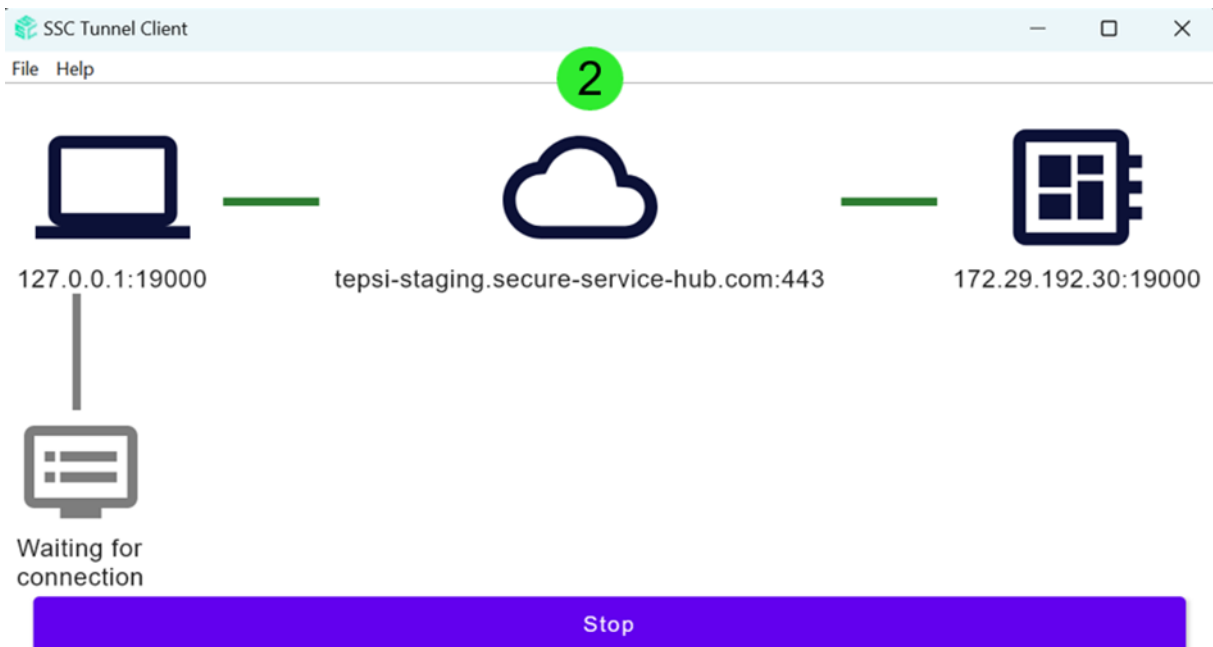
8. To transfer files between CENOWER and HMI you can use TNCremo or other applications.

2.3.9.3 Milling Heidenhain without CENOWER

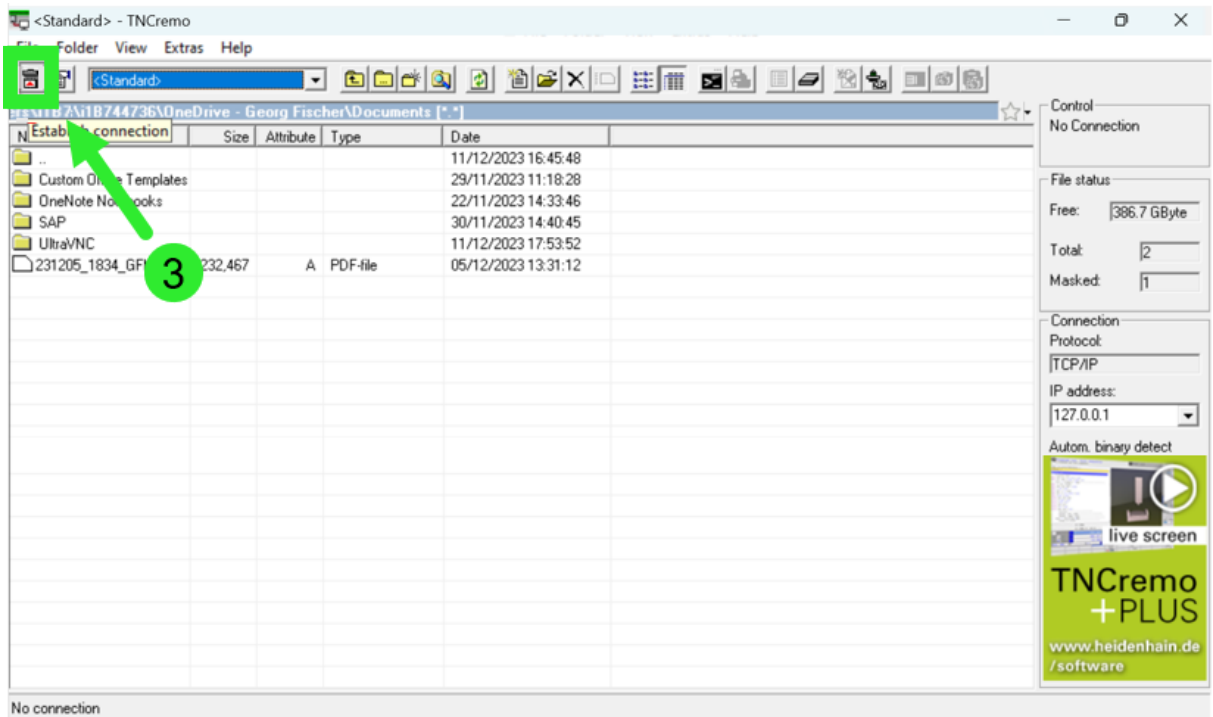
1. Select **TNCremo** endpoint and launch the SSC Tunnel client.



2. Ensure if the connection via SSC tunnel has been established.



3. Launch **TNCremo client** on your laptop or PC. Please note other VNC viewer will not work. Click on the **Connect** button (green frame on the next picture).



4. You'll be connected to the HMI. You can now use TNCremo file transfer functionality to exchange files.

