

# My rConnect

# Apps management by the customer

### **Content:**

- <u>1. Apps front page</u>
- 2. install main Apps for My rConnect
  - 2.1 GFMS OPC UA Apps
  - o <u>2.2 GFMS Machine Monitor</u>
  - o 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

# +GF+

# 2 Install Apps through My rConnect

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

1. Data Connect	Cata Connect Data Connect Materia Institution Institution Institution	Apps allowing reading and using the data coming from the machine.
2. GFMS Machine Monitor	CFESS Machine Monitor           CFESS Machine Monitor           CHESS Machine Monitor	Apps that display data and machining efficiency from connected machine(s).
3. SSC Tunnel Client	SSC Tunnel Client 3.5.1   Installer (msi)   Windows	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,



# 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

Machine Selection	Asset *	
Configurations	CUT X 500 591,200.004.0006	× •
	CUT X 500 591 200.004.0006	
	MILL \$ 200 U 107.150.00.0100	
	CUT P 550 Pro 12345	
	CUT X 500 591,200.004,0008	
	MILL 5 400 U 107.109.00.1049	

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	Butter time KPI data (seconds). *
	300
Configurations	Device TimeZone override (seave empty if uncertain)
Agreements	
	OPC UA Endpoint *
	opc.tcp://10.0.0.9:4840/GFUnitServer
	OPC UA litername (save empty for anonymous authentication)
	user
	OPC UA Password
	password

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.



#### 3. Agreements

Machine Selection Configurations	Please read the following Agreements carefully. We need your consent in order to be able to install and use the Application.	Accept the terms of use and the privacy agreement.
Agreements	I accept the Privacy Agreement.	If you want to have, an idea press on the underlined words to be able to read the contract.
		Press ont the "Install" button.
⊘ The installat	ion of the Application was triggered successfully.	After the installation you will get a "successful" message



# 2.2 GFMS Machine Monitor



GFMS Machine Monitor

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

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To install the Apps, please press the install button.

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

1. Machine Selection

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

2. Configurations

3. Agreements

app:

button

UT X 350 2311775-008	× -
UT X 350 2311775-008	
NLL P 500 U 107.121.00.0099	
UT P 550 Pro 123.123.123.	
	UT X 350 2311775-008 ILL P 500 U 107 121 00 0099 UT P 550 Pro 123 123 123 123

CANCEL NEXT

My rConnect User documentation GF Machining Solutions

My rConnect Apps 04.2024

#### **GF Machining Solutions**





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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.





#### 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	٣	Machine	۷	Job name	7
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.bia	

#### 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.

Mana	ge Notificati	ons							
<b></b>	Receive notific	ations v	when a	machine is	Out of Servic	e for longer th	nan 5 minuto	e(s)	
	5 minute(s)								
	Receive notific	ations v	when a	machine is	Waiting for lo	onger than 10	minute(s)		
	10 minute(s)				-				
<u></u>	Receive notific	ations v	when a	machine is	Offline for lo	nger than 15 r	ninute(s)		
	15 minute(s)				<b>•</b>				
	Receive notific	ations o	during	the time per	iod of 11:18:	00 and 17:36:	00		
	Start time 11:18	0	to	End time 17:36	$\bigcirc$				
								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:

<ul> <li>Technical Efficiency</li> </ul>	<ul> <li>Utilization</li> <li>Efficiency</li> </ul>	Setup Ratio	Availability	<ul> <li>Allocation</li> <li>Efficiency</li> </ul>
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.	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.	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.	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.	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.



#### 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.

😑 🙆 Machine M	lonitoring / CoC Loso	ne - CUT P 550 Pro #306		0
Machine activity		Acti 3 d	Niyan kast	Cartings
		COC LOSON	E - CUT P 550 PRO #306 - WAITING 2023/05/17 10:03:15	
			Executed with the second	ting 9 service
3 days ago			today Unkno	win
PERFORMANCE ACTIV		IESSAGES		
Top 15 🗸 We	arming -	messages by number of occ	currences	
Occurrences Y	ю т	Severity 7	Message	۳
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.	
	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.1090	Warning	Slug can not be fixed on '4 PIECE_Copy1' 'CT12-R008_1'	



# 2.3 SSC Tunnel Client







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.
- 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.
- 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.

		📫 My rConnect	F 📍 P
T Home	Service Cases / Test		
SERVICE	OPERATOR SERVICE PROVIDER		
🖴 Service Cases	< PREVIOUS		
Conferencing	· · · · · · · · · · · · · · · · · · ·	Þ	Ð
CUSTOMER MANAGEMENT Customers, Machines, Machine Mode	GF Machining Solutions - Demonstration	START VIDEO CO	NFERENCE
DIGITAL SHOPFLOOR Assets, Facilities	Created by: Parag Patil Created on: Oct 4, 2023 10:14 AM		
MY APPS Machine Monitor	Remote Access		
APP STORE Applications			
ADMINISTRATION	<u>+™ 1 * </u>		
Settings	Sessions		
Edge Devices	Recent Sessions v		
? Help			
	File Transfer	Message	>

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.

<b>■</b> +GF+		👪 My rConnect	F 📍 P
fr Home	Service Cases / Test		
SERVICE	OPERATOR SERVICE PROVIDER		
🖴 Service Cases	< PREVIOUS		
		Þ	Ð
CUSTOMER MANAGEMENT Customers, Machines, Machine Mode	GF Machining Solutions - Demonstration	START VIDEO CO	NFERENCE
DIGITAL SHOPFLOOR Assets, Facilities	Created by: Parag Patil Created on: Oct 4, 2023 10:14 AM		
MY APPS Machine Monitor	Remote Access		
APP STORE Applications	Tunnet		
ADMINISTRATION			
Settings	Sessions		
Edge Devices	Recent Sessions v		
? Help			
	+ File Transfer	Message	>

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.

<b>≍</b> +GF+		🟥 My rConnect 🛛 🔎 🕑
★ Home	Service Cases / Coolant pump issue	
SERVICE	OPERATOR SERVICE PROVIDER	
🖴 Service Cases	PREVIOUS	
	-	<b>–</b> 9
CUSTOMER MANAGEMENT Customers, Machines, Machine Mode	sym-PCEngines-000db9595245	START VIDEO CONFERENCE
DIGITAL SHOPFLOOR	Device Type: PCEngines	11/24/2023 11:42 AM
<b>⊑a</b> Assets		CALL: Demo GFMS joined
Facilities	Remote Access	11/24/2023 11:42 AM
MY APPS Machine Monitor	enabled	CALL Demo GFMS left  11/24/2023 11:42 AM  LIANTERPART Demo GENS
APP STORE Applications	TNCremo 🚹 🔹 🏚 🛌	2 WHITEBOARD created by Demo GFMS
ADMINISTRATION	Sessions	← CALL: Friche Pascal left
Settings	Recent Sessions V	
Edge Devices	+	Message
? Help	· · · · · · · · · · · · · · · · · · ·	

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.

<b>■ +GF</b> +		🟥 My rConnect 🛛 🔎 🕑
+ Home	Service Cases / Coolant pump issue	
SERVICE	OPERATOR SERVICE PROVIDER	
🖴 Service Cases	< PREVIOUS	
	- Edge Device	<b>⊨</b> ⊙
CUSTOMER MANAGEMENT Customers, Machines, Machine Mode	ID: sym-PCEngines-000db9595245	START VIDEO CONFERENCE
DIGITAL SHOPFLOOR	Device Type: PCEngines	11/24/2023 11:42 AM
<b>⊑a</b> Assets		🐛 CALL: Demo GFMS joined
Facilities	Remote Access	11/24/2023 11:42 AM
MY APPS Machine Monitor	enabled	<ul> <li>CALL: Demo GFMS left</li> <li>11/24/2023 11:42 AM</li> </ul>
APP STORE Applications	TNCremo	WHITEBOARD created by Demo GFMS
ADMINISTRATION	Sessions	CALL: Friche Pascal left
Settings	Recent Sessions V	· ·
Edge Devices	+	Message
? Help		



# 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.
- 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.

# +GF+



VNC Authentication 127.0.0.1:5900



Password:

Log On

- Launch Ultra VNC Viewer on your laptop or PC. Please note other VNC viewer will not work.
- Enter localhost IP 127.0.0.1 and click on the Connect button.
- 5. Enter relevant password and Log On.

5



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

📴 gfms-40338031 ( 172.29.144.56 ) - 9	service mode			-		×
🕸 🗐 🏟 😂 📫 💽 🚯 🗒 🖷	📃 🖻 🐺 🖡			0		
+GF+ 0 2/1/2024 4:22:01	P1 8221 HMI rd	Con (1)		16:22 ?	<b>?</b> 🖉 –	$-\times$
🗁 manager 🛛 💥 preparation	6 M	ANUAL	L EXECUTION	<u>ې</u>	SERVICES	₅   <b>≡</b>
MANAGER FOLLOW-UP TECHNOLOGY	CONFIGURATION	STATUS				· - 1
TECHNOLOGIES						
Type Name Material Height [n		Steps	Taper [°] Ra (µm)	Tf (µm)	Tkm (µm)	Pri
t∰E Geo_2_Target matrix Steel 10.0000	AH 900 0.	20 mm 2	0.0000 2.60	11.40	2.06	Spi
다. Steel 10.0000	ut AH 900 0.	20 mm 2	0.0000 2.60	11.40	2.06	Spx
GENERATOR						
MODULO 10 I 4 I	UHP 5	P	63 SSell	16 Vs		.01
0 0	0		•	•	0	.00
DIELECTRIC		WIRE				
Q 13 p	8.00	Tension [N]	20.00 Spe	ed [m/min]	6.00	
13	0.00		0.00		0.00	
CURRENT SEQUENCE						
Name Material Height (mm) Wire	Ra (µm)	Tf (µm) Tkm (µm)	Priority Steps A	rgSPD (mm/min)	Options UT	ech
•	0	0 0	0		1	io I
Default Special						
3D PREVIEWER					8	2
	}					47
					ABONL Pa	_
						<b>6</b> 9.
	~					69. — 1
						69       
						8   0   Ø 
z y						8   0   Ø   .
Z Y X						\$   0   Ø   .



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.



# +GF+

🚾 New TightVN0	Connection	<b>-</b> (	3	- 🗆	4
Connection					
Remote Host:	127.0.0.1		~	Conne	ct
Enter a name o append it after	r an IP address. T two colons (for e	o specify a kample, my	port number, c::5902).	Options	5
Reverse Connec	tions				
Listening mode their desktops.	allows people to a Viewer will wait fo	attach your or incoming o	viewer to	Listening	mode
TightVNC Viewer					
	TightVNC is cros	s-platform r	emote contro	software.	
VNC	Its source code i (GNU GPL license	s available e) or comme	iewer to ponnections. Listening mode mote control software. p everyone, either freely cially (with no GPL restrictions). :ensing Configure Configure 		
	Version info		icensing	Configur	e
Vnc Authenticat	tion	>			
Connected to:	127.0.0.1				
Password:	•••••				
5	Const				
UK UK	Cancer	_			
<b>周</b> -1					- 0 ×
	🔊 २ २ २ २   🔀				- 0 ×
Cenower Autostart V2.5.1.588.EU	Transfer files				×
tterate cnt: 129983					- 0 X
tte II D:\APPS\IKC\GF.M. 6	er.IKC.App.exe	hannel Wranner V	alueChannelWranner	ReadDataPoint(DataPo	- D X
in D:\a\1\s\GF.MS.MILL.C at GF.MS.MILL.Cenower. tetaCollector.HeidenhainCha	enower.DataCollector.Heid DataCollector.HeidenhainC onel\Wranner\DataPoint.cs	enhainChannel\Wr hannel.Wrapper.D	apper\ValueChannelW ataPoint.ReadValue(	<pre>rapper.cs:line 48 ) in D:\a\1\s\GF.MS.</pre>	.MILL.Cenower.Da
te at GF.MS.MILL.Cenower. teouteParent) in D:\a\1\s\G te2023-12-06 17:14:00.384;	DataCollector.Channel.Que F.MS.MILL.Cenower.DataCol ERROR; [1]; DataCollector	ueing.Worker.Rea lector.Channel\Q .ClientApi.Dispo	dFromDevice(ReadFro ueueing\Worker.cs:l sableWithDealerSock	mDeviceJob tJob, Boo ine 639 et;; - Failed child	olean tCheckAndR job ReadFromDev
ice te Channel.Worker.ReadFromDe	vice: failed to read cach	ed data point \P	LC\program\symbol\g	lobal\GlobVarNcCtl.	_PlcInitDone'1
(0x80131500) DataAccess3V te Ctl.M_PlcInitDone, stage= System.Exception: DataAcc	alueChannel::ReadDataPoin 3, index=0 Error 0x800700 ess3ValueChannel::ReadDat	t() Error: faile 57 The parameter aPoint() Error:	d to read address \ is incorrect. failed to read addr	PLC\program\symbol\g ess \PLC\program\sym	global\GlobVarNc mbol\global\Glob
at GF.NS.MILL.Cenower. 16 tElementCount, EDataTy	tage=3, index=0 Error 0x8 DataCollector.HeidenhainC pe tDataType) in D:\a\1\s	0070057 The para hannel.DNC.DataA \GF.MS.MILL.Ceno	meter is incorrect. ccess3ValueChannel. wer.DataCollector.H	ReadDataPoint(String eidenhain.DNC\DataAc	g tAddress, UInt ccess3ValueChann
<pre>ite el.cpp:line 92 at GF.MS.MILL.Cenower.J in D:\a\1\s\GF.MS.MILL.C </pre>	DataCollector.HeidenhainC enower.DataCollector.Heid	hannel.Wrapper.V enhainChannel\Wr	alueChannelWrapper. apper\ValueChannelW	ReadDataPoint(DataPo rapper.cs:line 48	pint tDataPoint)
te at GF.MS.Hitt.Cenower. te at GF.MS.MILL.Cenower. te at GF.MS.MILL.Cenower.	nnel\Wrapper\DataPoint.cs DataCollector.Channel.Que	:line 40 ueing.Worker.Rea	dFromDevice(ReadFro	mDeviceJob tJob, Boo	olean tCheckAndR
te 2023-12-06 17:14:08.817; 122023-12-06 17:14:08.927; 2023-12-06 17:14:08.927;	<pre>INFO; [1]; IKC.App.IKCRu INFO; [1]; IKC.App.IKCRu INFO; [1]; DataCollector</pre>	nner;; - datapoi nner;; - actualV .ClientApi Disco	ntaccessor created alue for D_AmcIkcCm sableWithDealerSock	d is 0 et:: - ValueChangeFr	vent has been at
te tached te 2023-12-06 17:14:08.999; te 2023-12-06 17:14:09.004;	INFO; [1]; IKC.App.IKCRu INFO; [1]; IKC.App.Progr	nner;; - Registe am;; - datapoint	red for D_AmcIkcCmd accessor created		
Iterate cnt: 130010 Iterate cnt: 130019					
Iterate cnt: 130020 Iterate cnt: 130022 Iterate cnt: 130023					

- 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)

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3 <b>.</b> 1 1	🕞   🛷 🏨 Chi, Alt   🗞   🍳 🍳 🍭 🍭   🔀	-	
Iterate cnt: Iterate cnt: Iterate cnt	129999 129999		_ U X
Ite Ite	TightVNC File Transfer		× <u> ×</u>
Ite D:\APPS\I	Local Computer (Viewer)	Remote Computer (Server)	- D X
Lte in D: Wall It at G.H It at G.H It at G.H It at G.H It at G.H It at Collecto It at Collecto It at Collecto It at Collecto It at Collecto It at G.H It at G.H It at G.H It at G.H It at G.H It at G.H It at Collecto It at	Name Size Modified	Name     Size     Moders       C1     -diolders       D1     -diolders	fed ICenower.Da in tCheckAndR > ReadFromDev CInitDone'1 kal\GlobVarNec \global\Glob kddress, UInt s3ValueChann : tDataPoint) I.Cenower.Da in tCheckAndR
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Ite <sup>2023-12-06</sup> Ite			Cancel
Iterate cht Iterate cht: Iterate cht: Iterate cht: Iterate cht: Iterate cht:	1 300 36 300 37 1 300 38 1 300 38 1 300 39 		

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).

to and ard > - TNCremo	D D				– 0 ×
Folder View Extr	ras Help				
Standard>		-		KQ 🗿 🋍 🛋 🗆 🖿 🏥 🏢 🖬 🗐 🖉	12 to 10 to
TSALL 2\\18744736\0p	eDrive - G	eora Eisc	her\Docume		Control
N Estable connection	Size	Attribute	Tune	Date	No Connection
	0.20	THERE	1,100	11/12/2023 16:45:48	
Custom Ok e Templates	:			29/11/2023 11:18:28	File status
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🗎 SAP				30/11/2023 14:40:45	Free.  386.7 GByte
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4. You'll be connected to the HMI. You can now use TNCremo file transfer functionality to exchange files.

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