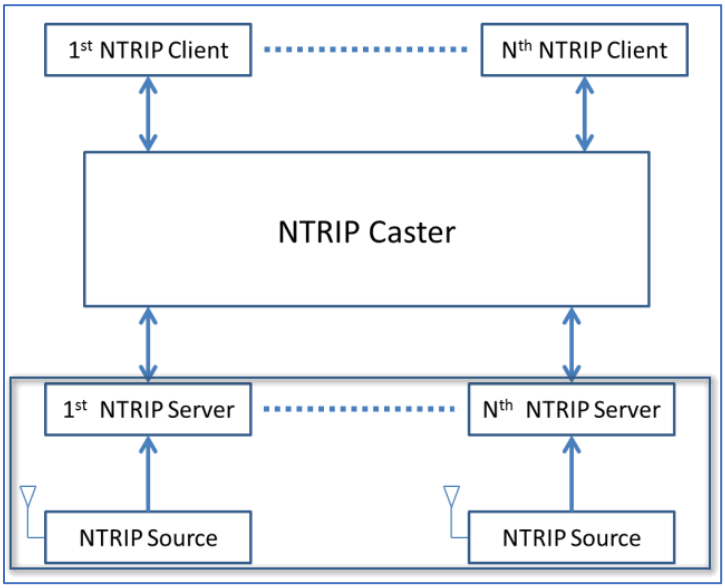
Setup Ntrip Caster

Contents

1. Introduction to Ntrip

Network Transport of RTCM via Internet Protocol (Ntrip) is a protocol for streaming differential data over internet. It includes:

- Ntrip Source: Provide differential data and send to Ntrip Server
- Ntrip Server: Send data to Ntrip Caster
- Ntrip Caster: Data management center, receive and send data
- Ntrip Client: Download data from Ntrip Caster

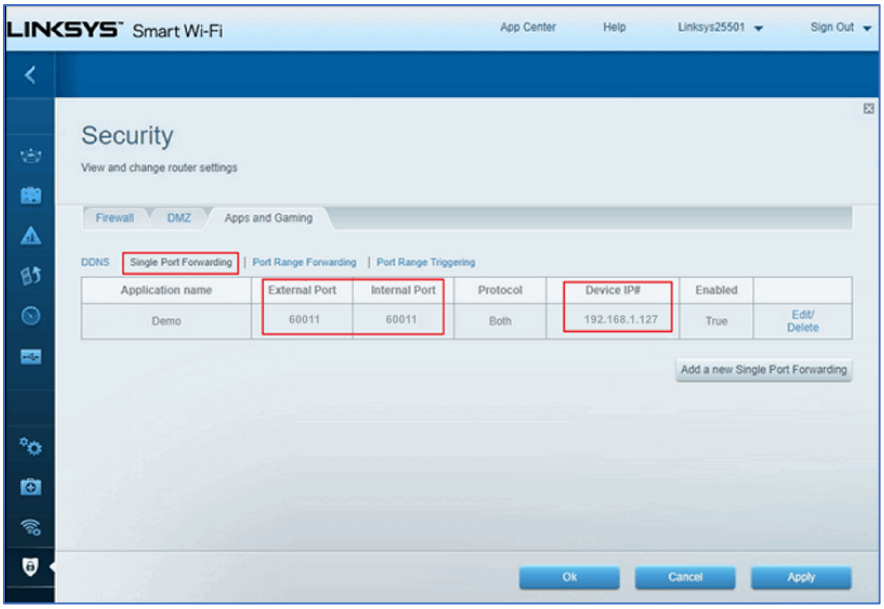


Normally the Ntrip Source and Ntrip Server are integrated into the GNSS receiver, basically we call it [Base/Reference Station]. Ntrip Caster is normally a software running on the computer. And Ntrip Client is normally called [Rover].

2. Setup Ntrip Caster

2.1 Prepare Router

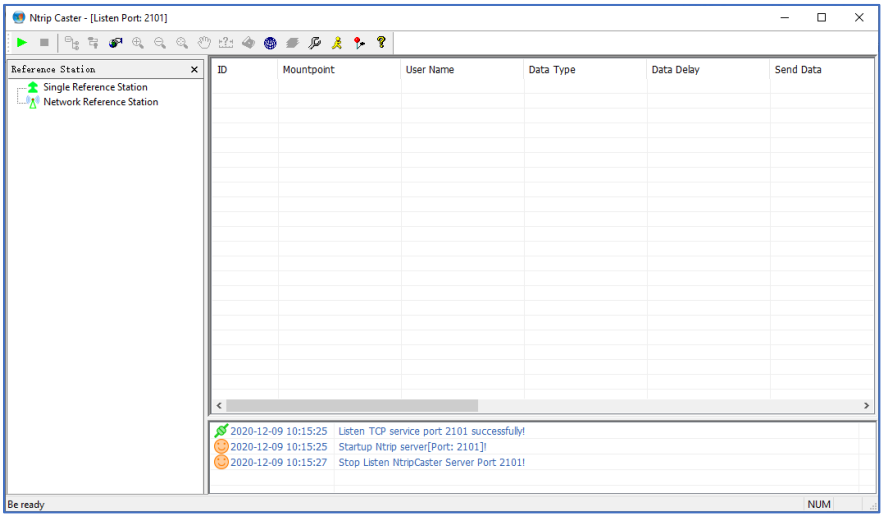
- Better to have static IP for the router. Otherwise, the IP may change after restart router.
- Need to access the router and make port forwarding rule (Add TCP Protocol).



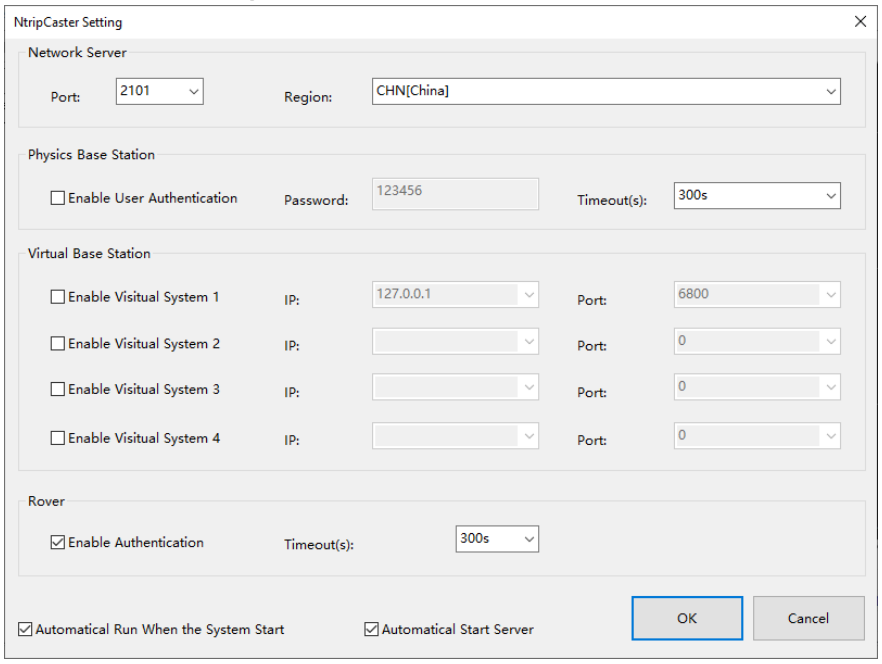
- Access router to give PC reserved IP. Otherwise, the computer IP may change after restart.

2.2 Start Software

- Not suggest to use Windows XP platform. You PC may be attacked and crash the software.
- It is suggested to start the software as administrator.



2.3 Software Setting



Network Server	Port	The internal port to be used in Ntrip Caster
	Region	Select the country
Physical Base Station	Enable User Authentication	If enabled, user will need the password to base correction data If not enabled, user can access with any password
	Password	The password is needed when base uploads data[1]
	Timeout(s)	Software will offline/release the mountpoint if no data transmit
Virtual Base Station		Leave it unchecked
Rover	Enable Authentication	If enabled, user will need user name and password to connect the server[2] If not enabled, user can access with any user name and password

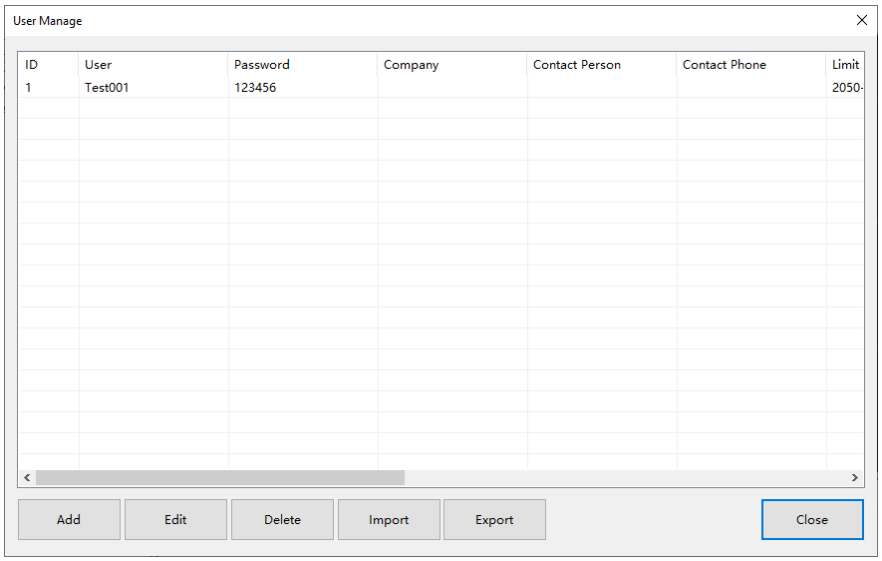
[1] The base correction data is allowed to upload only when the password is input in base Ntrip setting.

[2] Only when rover authentication is enabled, the "user manage" function is activated. And only the authenticated user can access the mountpoint.

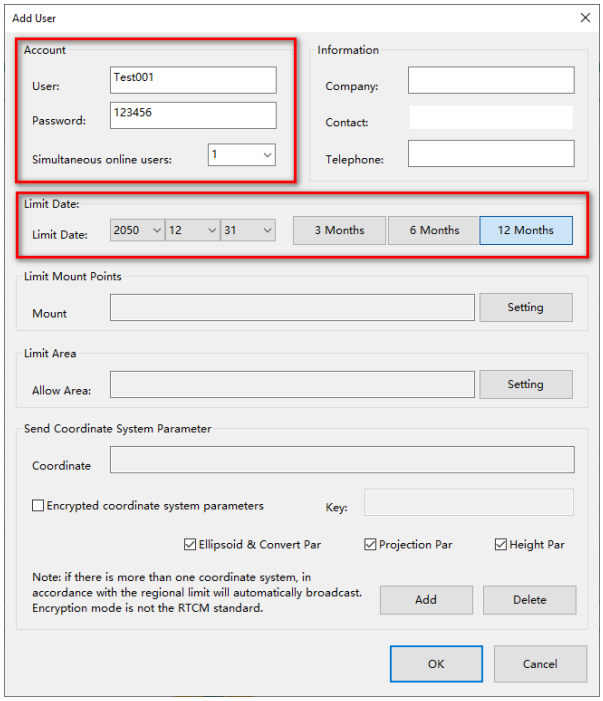
	Timeouts(s)	Software will offline/release the mountpoint if no data transmit
Automatically Run When the System Start		Start software with system
Automatically Start Server		Run server when software is started

2.4 User Manage

In the previous step, if the rover authentication is enabled, user manage function is activated. We can create user account here.

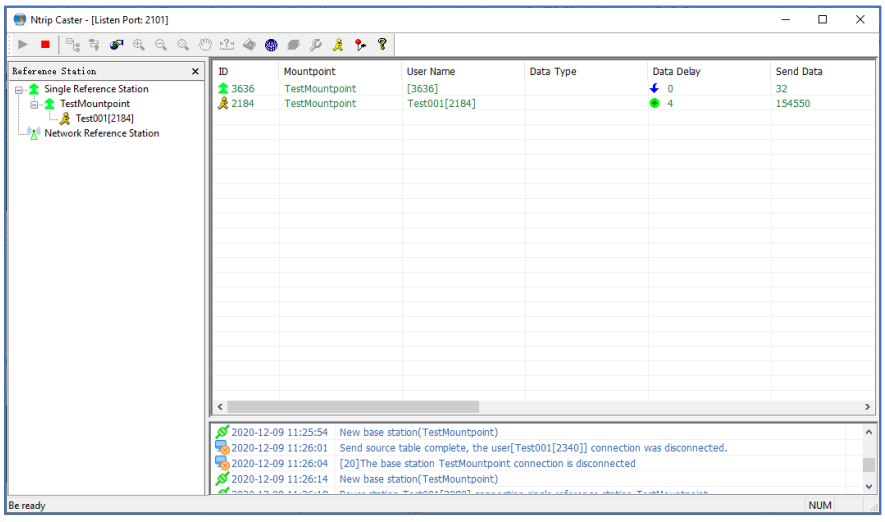


Click [Add] to add user account. For normal operation, user just need to input user, password and limit date information. The other functions will be introduced at the end of the document.



2.5 Start Service

Start the service. Now the base station can upload mountpoint to the server and rover can connect to the mountpoint.



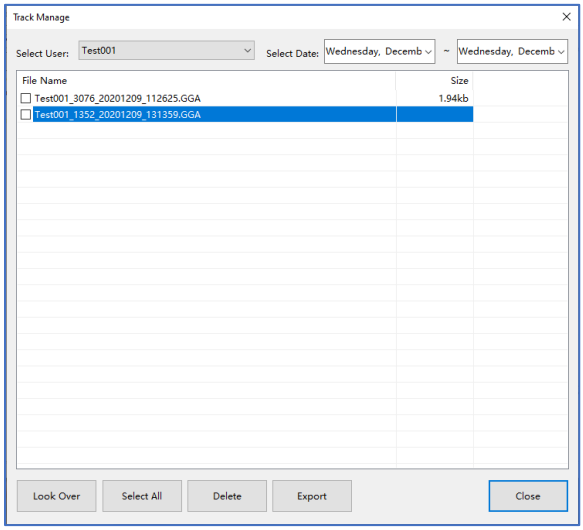
If the server is uploading the GGA information, the solution status, coordinate and IP address can be viewed on the software.

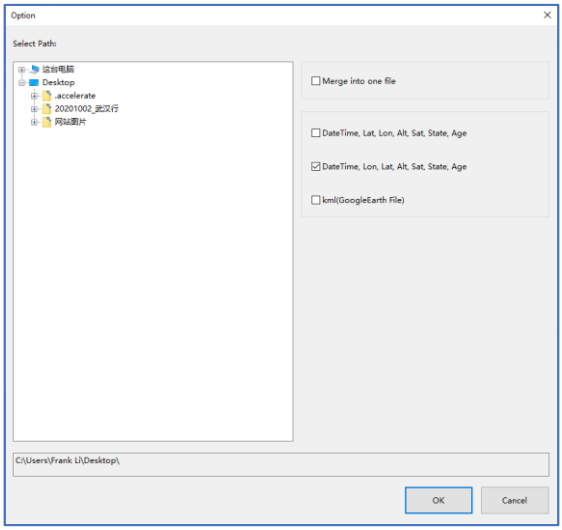
Send Data	Receive Data	Login Time	Position State	Coordinate System	Current Position	IP Address
32	167432	20-12-09 13:05:03	Base			127.0.0.1
53822	1296	20-12-09 13:05:47	(36)Fixed[1]		031d05m03.8929s, 121d31m49.3721s, 61.7630	192.168.109.195

3. Other Functions

3.1 Track Manage

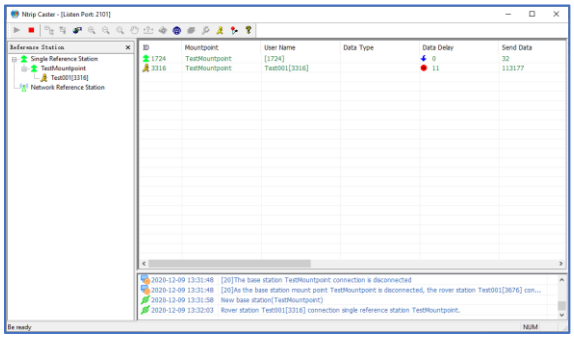
Select the user name in [Track Manage] page, all the coordinate from GGA message can be exported. Please note, if the current file is been using, the data cannot be exported.

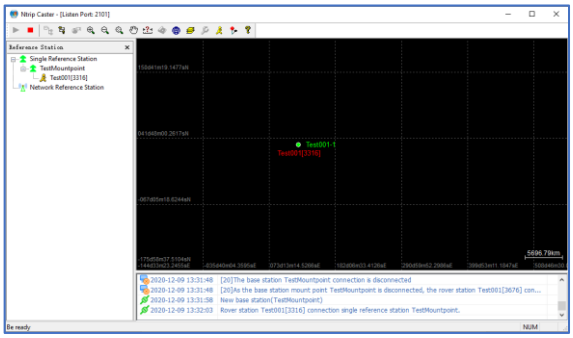




3.2 Map Function

On the software, we can switch between list view and map view . In map view, we can measure the distance.





3.3 Coordiante Syetem

The software is able to transmit coordinate system through RTCM3 1021~1027. On field data collection software, end user can choose to use RTCM1021~1027 coordinate system and doesn't need to input manually. The supported parameters are:

- Ellipsoid parameter
- Projection parameter
- Seven parameters
- Geoid parameters