Configuration Example

Version 1.0

Software version 4.6.4.7

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NTRIP CASTER USING NETHUB

1. Configure NTRIP Caster

1. Go to the tab *Settings*.

J Net Hub	
 Net Hub Map Receivers Receivers TP1 Settings Connections Auto Tasks NTRIP Caster Auto Spectrums RAW TCP accounts FTP accounts Hub Logs Email notifications 	Ceneral settings Display Name: New Hub Raw TCP Server Enabled Address: 00.00 Port: 8002 Start Ntrip Caster Enabled Address: 00.00 Port: 8002 Use Authentication: Login Password Use Authentication: Login Password Use Autonts Start Spectrums Browse. Sort by: Receiver Id Harmonics, MH: 31 01 22 24 27 17 1226 Auto Tasks Browse. Sort by: Receiver Name Browse. Sort by: Receiver Name Administrator E-mail
	Administrator E-mail: Save Refresh

Figure 1. Settings. NTRIP Caster

2. Enable Ntrip Caster, specify IP-address, port and authentication scheme for incoming Ntrip-connections.

Add bases.

- 3. Specify *Login* and *Password* for *Use authentication* scheme. This scheme allows any logged users get corrections without restrictions.
- 4. You have to enable authentication scheme *Use Accounts* to control client access rights to Ntrip Caster specified by required options.
- 5. Select Generate Auto Mount Points, to switch rovers to the nearest station.
- 6. Click Start.

2. Add bases.

1. Add connection settings for the receivers which are used as bases.

ub	* Connect S	FR 🔻	ort	COM1	-	Advanced			
Мар		eceiver Name TP1	 laud Rate	115200		0			
Receivers	, in the second s			115200	•				
Settings			 				Ok	Cancel	Dele
Connections									
Auto Tasks									
NTRIP Caster									
RAW TCP accounts									
Ftp accounts									
Hub Logs									
Email notifications									

Figure 2. Connections. Connection settings.

Connected receiver will appear on the left.

2. Configure Mount Points. To do this, go to the tab *Base/Rover*. Specify name, country and city for the base. Select the corrections from the list.

7 Net	Hub						
			Display Namo	TD1	Conn	ortions 1 -	
I - H	ub		Receiver Id	3W101QKZ0I0I03VZB2PQNQ2V1Z	/dev	/ser/a COM1:115200 Handshake:True	Disconnect
	Мар	aning ()	Vendor Serial Number	JAVAD GNSS 00015	,,		(Distoniett)
•	Receivers		Firmware Version	3.6.0a2 Feb,18,2014			
	🕨 🛸 TP1		Board Version Model	TRIUMPH_3 TRIUMPH1			
	Settings		UpTime	1d00h24m55s			
	Connections		Position	55°47'54.44"N 37°31'15.16"E H:37	8.24m		
	Auto Tasks	Reports - Actions	 Update Firmwar 	re 🔻			
	NTRIP Caster	Measurements Sky	plot Spectrums C	Cycle Slips Orientation Options	Base/Rover	Settings	
	Auto Spectrums	Base				Rover	
	RAW TCP accounts	Use receiver as re	ference base			Use receiver as rover	
	FTP accounts	Public base name:	FP1			Select reference base:	
	Hub Logs	Country F	Russia		•		
	Email notifications	City	Moscow			Select correction type:	
		Network					
		Allowed corrections:				Select free port for corrections redirect:	
		DGPS RTCM {1,3	1,3}				
		DGPS RTCM {9,3	4,3} 3}				
		RTK RTCM (18,19	,22,3}				
		RTK RTCM (20,21	9,23,24}				
		RTK RTCM {20,21	1,23,24} min				
		RTK RTCM3 GD f	ull				
		RTK RTCM3 GGD) min) full				
		RTK RTCM3 GGD	full eph				
		RTK RTCM3 3.0	}				
		RTK CMR+ {10,0,	9}				
		RTK JPS max					
		RTK RTCM3 MSN	4				
							· ·
							Refresh Save
						Rover	Spectrums

Figure 3. Mount Points settings

Mount Point name is formed as follows: Public base name + "_" + correction number (in the list).

Name	Messages IDs	Mount Point Name
DGPS RTCM {1,31,3}	1, 31, 3(10)	1
DGPS RTCM {41,3}	9, 34, 3(10)	2
DGPS RTCM {9,34,3}	41, 3(10)	3
RTK RTCM {18,19,22,3}	18, 19, 22(10), 3(10)	4
RTK RTCM {20,21,22,3}	20, 21, 22(10), 3(10)	5
RTK RTCM {18,19,23,24}	18, 19, 23(10), 24(10)	6
RTK RTCM {20,21,23,24}	20, 21, 23(10), 24(10)	7

RTK RTCM3 GD min	1006(10), 1008(10), 1033(10), 1003	8
RTK RTCM3 GD full	1006(10), 1008(10), 1033(10), 1004	9
RTK RTCM3 GGD min	1006(10), 1008(10), 1033(10), 1003, 1011	10
RTK RTCM3 GGD full	1006(10), 1008(10), 1033(10), 1004, 1012	11
RTK RTCM3 GGD full eph	1006(10), 1008(10), 1033(10), 1004, 1012, 1019, 1020	12
RTK RTCM3 3.0	1003 , 1011, 1005 (10), 1007 (10), 1033 (10)	13
RTK CMR {10,0,1}	10, 0, 1(10)	14
RTK CMR+ {10,0,9}	10, 0, 9(10)	15
RTK JPS min	RT, GT, NT, SI, rc, cp, 2r, 2p, BI, ET	16
RTK JPS max	RT, GT, NT, SI, rc, cp, DC, EC, 2r, 2p, D2, E2, BI, ET	17
RTK RTCM3 MSM	1006(10), 1008(10), 1074, 1084, 1094, 1104, 1114, 1124	18

Source table to all available Mount Points can be received via any tcp-client, for example internetbrowser.



Figure 4. Chrome. Ntrip Source Table.

There are two Mount Points TP1_6 and TP1_14 here.

Additional Auto Mount Point is created for each correction type. It is called

Public base name + "_" + correction number (in the list). Client, which connects to

Auto Mount point will switch to the nearest appropriate.

3. In order the base will be able to transmit the corrections, the correct antenna parameters and the exact coordinates of base should be entered.

let Hub		and the second s		
Hub	General Log-files TriPad Positioning Base Rover	Ports Networking Event Advanced		
Мар	Reference Position	an a		ſ
Receivers	Coordinate system: Geodetic 🔹)	
👻 🏴 🤝 TP1	Antenna Phase Center Position (APC)	Antenna Reference Point Position (ARI	P)	
Parameters Files	Lat. 55 ° 47 ' 54.560244 " N • W84 •	Lat. 00 ° 00 ' 00.000000 " N •	• W84 •	
Greis commands	Lon. 037 ° 31 ' 15.024093 " E 🔻	Lon. 000 ° 00 ' 00.000000 " E •	·	
Settings	Alt. +383.2163	Alt. +0.0000		
Connections	Get from receiver APC -> ARP	APC <- ARP		
Auto Tasks				
NTRIP Caster	L1 to ARP Offsets			
RAW TCP accounts	JAV_TYRANT Height, m: 0			
Ftp accounts	Easting, m: 0 Northing, m: 0			
Hub Logs		Con the Dark		
Email notifications	Reference Position Averaging Mode off	Antenna type (for RTCM 2.x and 3.0)	JAV TYRANT	ers
	Reference Position Averaging Interval 180	Antenna Serial Number	HXCGG486A NONE set of L2 APC 0.000	DO
		Antenna Setup ID	ITT3750323 NONE Dffset of L2 APC 0.000	DO
			ITT3750323 SCIS Iffset of L2 APC 0.000	DO
	DTCM 2 - Cattions	DTCM 2 Cettingen	JAVGRANT_G3 NONE	
	RTCM 2.x Base Station Identifier 0	RTCM 3.x Reference Station Identifier	JAVGRANT_G3+GP_JVGR	
	Enable CA/L1 in RTCM 2.x Message on	/par/rtcm3/base/l2c	JAVRINGANT_DM_JVDM	
	Enable P/L1 in RTCM 2.x Message off		JAVRINGANT_DM_SCIS	
	Enable P/L2 in RTCM 2.x Message on 🗸		JAVRINGANI_DM_SCIT	
	Maximum Number of Satellites for0		JAVTRIUMPH_VS_NONE JAV_AIRANT	
	Refresh Apply		JAV_GRANT-G3T_NONE Save	Configuration to Scrip
	Greis com	nmands mode, press Ctrl for Help Tip, Ctrl	JAV_RINGANT_G3T JAVC	
			JAV_RINGANT_G3T NONE JAV_TRIUMPH-1 NONE	
			JAV_TRIUMPH-1R	
			Send Clear Start Logg	ing Load Script

Go to *Receivers* → *Receiver* (*TP1*) → *Parameters* → *Base*.

Figure 5. Base parameters. Exact coordinates and antenna type.

Coordinates can be entered manually or got from the receiver. Select the antenna type in the *Reference Antenna parameters* group.

3. NTRIP-clients managing. NTRIP accounts.

1. Go to the tab *Ntrip Caster* ► *Accounts*. Add account.

NTRIP-clients managing. NTRIP accounts.

2. Enable account. Specify Login and Password.

lub	Accounts Clients Statistics		
Map Receivers	✓ Enabled Login autoExp	Password •••	Options (Expiration Date 7/31/2013
🕨 🍽 🥌 TP1			Simultaneous connections 10 🗘
Settings			Auto Mount Points
Connections			Ok Cancel Delete
Auto Tasks			
NTRIP Caster			
RAW TCP accounts			
Ftp accounts			
Hub Logs			
Email notifications			
			Add new Ntrip Account Refresh list

Figure 6. Ntrip Caster. Accounts.

- 3. Add options. Following options are available:
 - Expiration Date.
 - Connection Count.
 - Auto Mount Point.

4. Monitoring and statistics

h	Accounts Clients Statistics			
Мар	Account: autoExp Connections: 2			
Receivers	Mount Point: AUTO 6 (TP1 6)	Start: 2013/07/01 16:53:49	Connection Time: 00 min 10 sec	Traffic: 7.81(KB)
🍽 🤝 TP1				
Settings	Mount Point: TP1_6	Start: 2013/07/01 16:53:49	Connection Time: 00 min 10 sec	Traffic: 7.81(KB)
Connections				
Auto Tasks				
NTRIP Caster				
RAW TCP accounts				
Ftp accounts				
Hub Logs				
Email notifications				

1. You can monitor connected clients on the Ntrip Caster > Clients tab.

Figure 7. Ntrip Caster. Clients.

The table shows the clients currently connected to the Ntrip Caster. Clients are grouped into account. The following information is provided for each client:

- Mount Point
- Connection start time
- Connection duration
- Traffic
- 2. Statistics is available on the *Ntrip Caster* > *Statistics* tab. Select time period and click *Get*.

Monitoring and statistics

ub	Accounts Clients Statistics			
Мар	Over Deried C 6/1/2012	R- 7/1/2012 -		
Receivers	Over Period C 0/1/2013			
🕨 🍬 TP1	Account	Connections C	Count	Total Connection Time
Settings	autoExp		10	11 min
Connections	Mount Point	Start	Finish	Connection Time
Auto Tasks	AUTO_6	2013/07/01 16:16:40	2013/07/01 16:16:53	00 min 13 sec
NTRIP Caster	AUTO_6	2013/07/01 16:16:46	2013/07/01 16:16:53	00 min 07 sec
RAW TCP accounts	AUTO_6	2013/07/01 16:17:05	2013/07/01 16:17:25	00 min 20 sec
Ftp accounts	AUTO_6	2013/07/01 16:17:13	2013/07/01 16:17:33	00 min 20 sec
Hub Logs	AUTO_6	2013/07/01 16:36:49	2013/07/01 16:38:44	02 min 55 sec
Email notifications	AUTO_6	2013/07/01 16:38:46	2013/07/01 16:39:03	00 min 17 sec
Email notifications	AUTO_6	2013/07/01 16:39:04	2013/07/01 16:42:30	03 min 26 sec
	TP1_6	2013/07/01 16:39:04	2013/07/01 16:42:30	03 min 26 sec
	AUTO_6	2013/07/01 16:53:49	2013/07/01 16:54:25	01 min 36 sec
	TP1_6	2013/07/01 16:53:49	2013/07/01 16:54:25	01 min 36 sec
				Export Details to Excel Print Details

Figure 8. Ntrip Caster. Statistics

The table contains one row for each account, and includes the following information:

- Connection count
- The total time of all connections in minutes
- 3. Detailed statistics is available for each account. It shows a list of all the connections for the period. There is the following information for each connection:
 - Mount point
 - Connection start time
 - Connection finish time
 - Connection duration

Both general and detailed statistics can be printed and exported to a spreadsheet Excel.



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