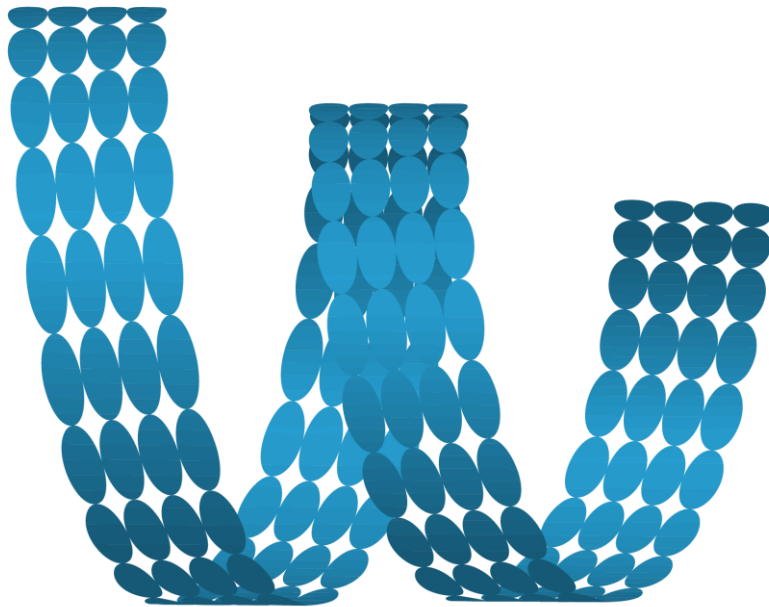


Technische Hochschule Wildau

Telematik



WeatherStationServer User's Manual

Wildau, 11.5.2015

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1. General Information

1.1. System Overview

1.2. Organization of the Manual

1.3. References

<http://www.arbowebforest.com/android/ArboWebForestUserManual.pdf>

2. System Summary

2.1. System Configuration

2.2. User Access Levels

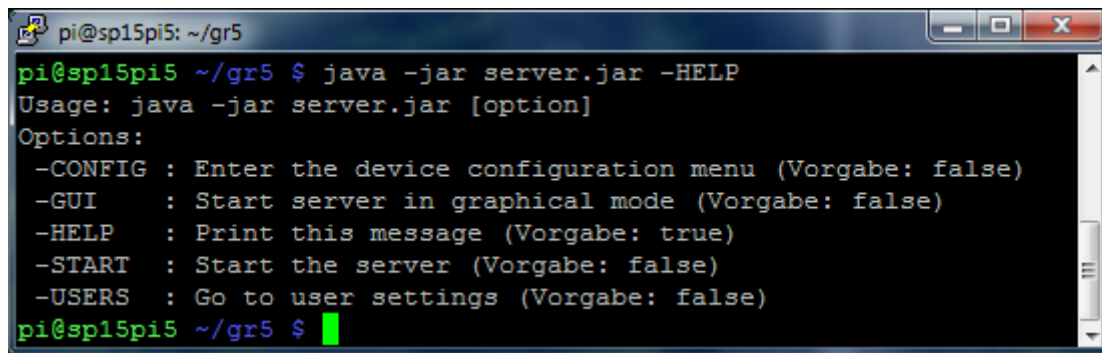
3. Using the Server

3.1. Run the application

Server and Administration application are combined together. To run the application you need to open terminal and type:

```
java -jar server.jar [option]
```

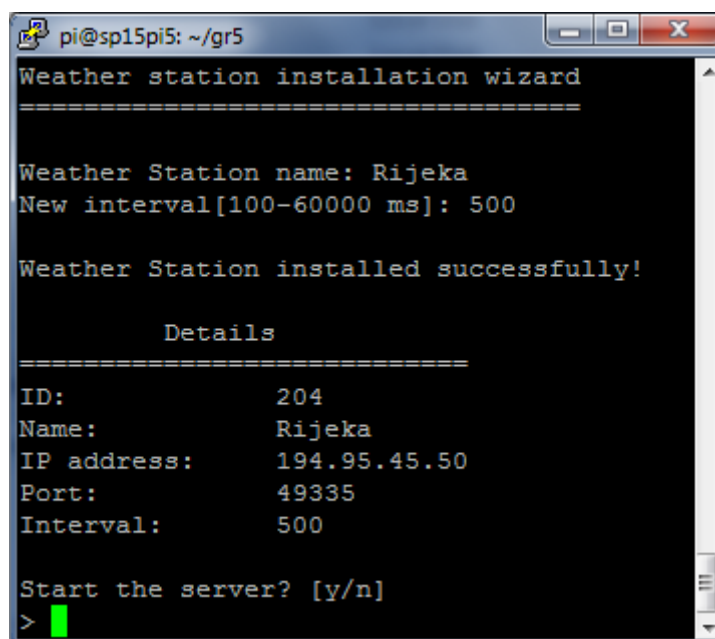
If you enter the wrong argument or run application with **-HELP** pargument you will get the list of all available options. (*Figure 1*)



```
pi@sp15pi5: ~/gr5
pi@sp15pi5 ~/gr5 $ java -jar server.jar -HELP
Usage: java -jar server.jar [option]
Options:
  -CONFIG : Enter the device configuration menu (Vorgabe: false)
  -GUI    : Start server in graphical mode (Vorgabe: false)
  -HELP   : Print this message (Vorgabe: true)
  -START  : Start the server (Vorgabe: false)
  -USERS  : Go to user settings (Vorgabe: false)
pi@sp15pi5 ~/gr5 $
```

Figure 1- Help

3.2. First use



```
pi@sp15pi5: ~/gr5
Weather station installation wizard
=====

Weather Station name: Rijeka
New interval[100-60000 ms]: 500

Weather Station installed successfully!

      Details
=====
ID:           204
Name:         Rijeka
IP address:   194.95.45.50
Port:        49335
Interval:    500

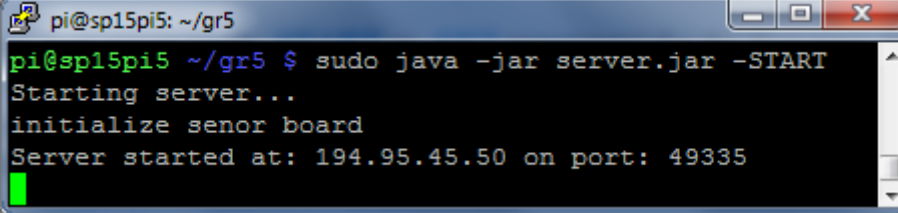
Start the server? [y/n]
>
```

Figure 2- Installation wizard

When you start server (with **-START** or **-GUI** arguments) for the first time, the Installation Wizard would appear (*Figure 2*). Then you will be asked for the basic information about the device that you are registering. You must enter unique *Name* in order to successfully add a new device. Notice that ID, IP address and PORT will be inserted automatically.

3.3. Starting the Server

After installing the server you can simply run it with **-START** argument. (*Figure 3*)

A terminal window titled 'pi@sp15pi5: ~/gr5' showing the command 'sudo java -jar server.jar -START' being executed. The output shows 'Starting server...', 'initialize sensor board', and 'Server started at: 194.95.45.50 on port: 49335'.

```
pi@sp15pi5: ~/gr5
pi@sp15pi5 ~/gr5 $ sudo java -jar server.jar -START
Starting server...
initialize sensor board
Server started at: 194.95.45.50 on port: 49335
```

Figure 3- Server started

In case that the monitor is connected to the Weather station you can display current values in 7-segment digits by running the application with **-GUI** argument

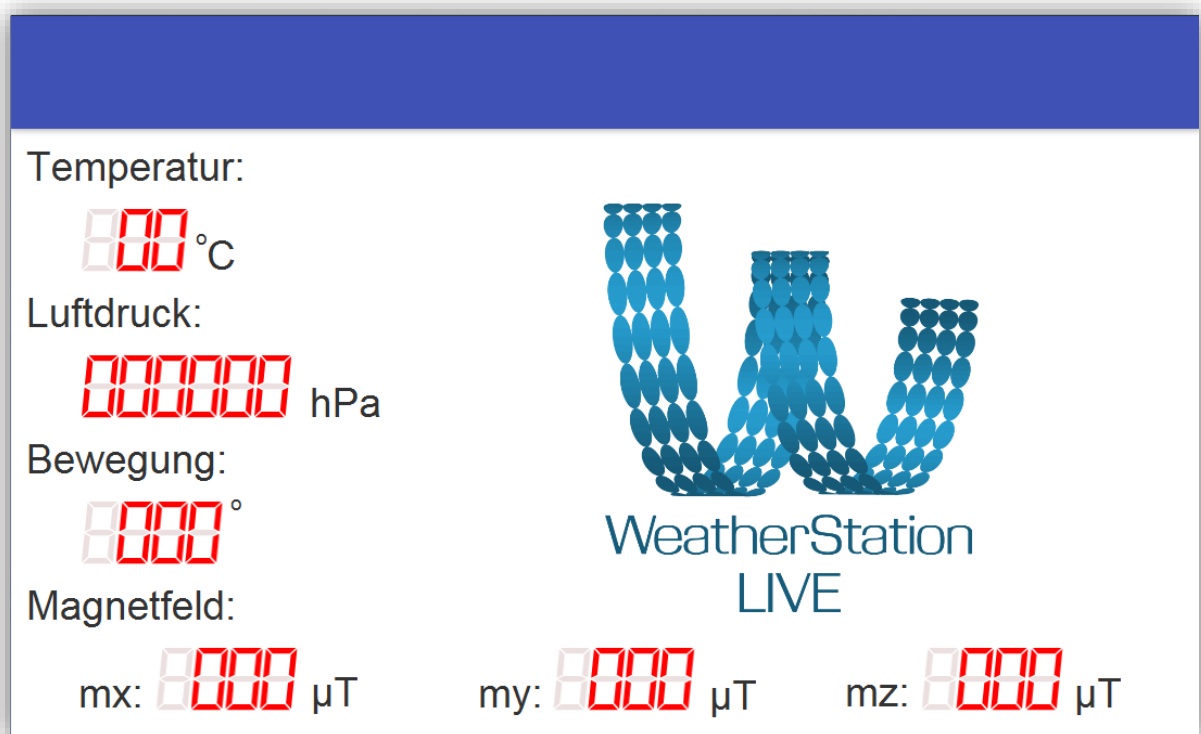
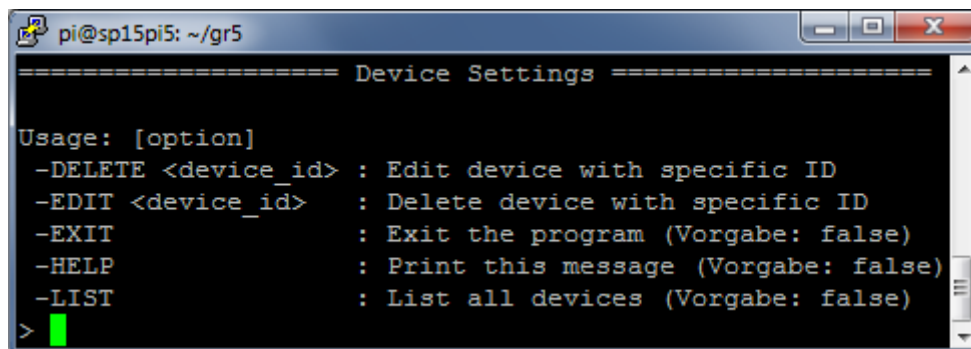


Figure 4- GUI application displayed on monitor

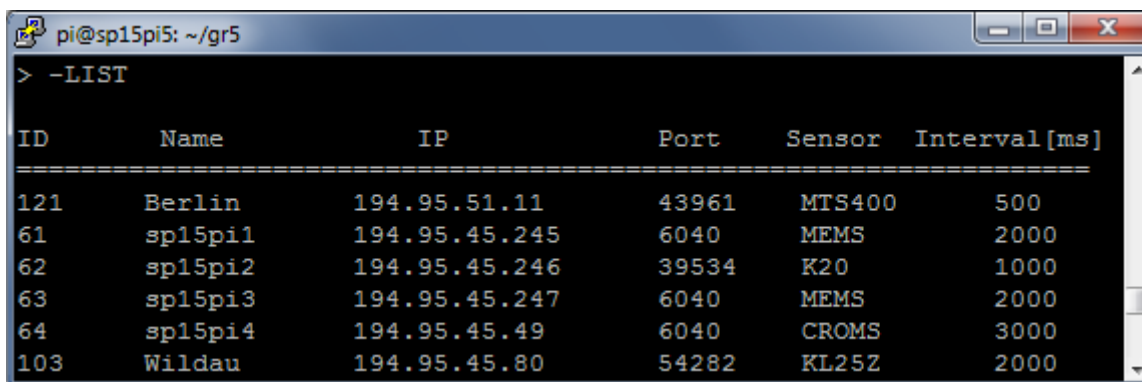
4. Device settings

In the Configuration menu you can show all the devices, and also edit or delete them.



```
pi@sp15pi5: ~/gr5
===== Device Settings =====
Usage: [option]
-DELETE <device_id> : Edit device with specific ID
-EDIT <device_id>    : Delete device with specific ID
-EXIT               : Exit the program (Vorgabe: false)
-HELP              : Print this message (Vorgabe: false)
-LIST              : List all devices (Vorgabe: false)
>
```

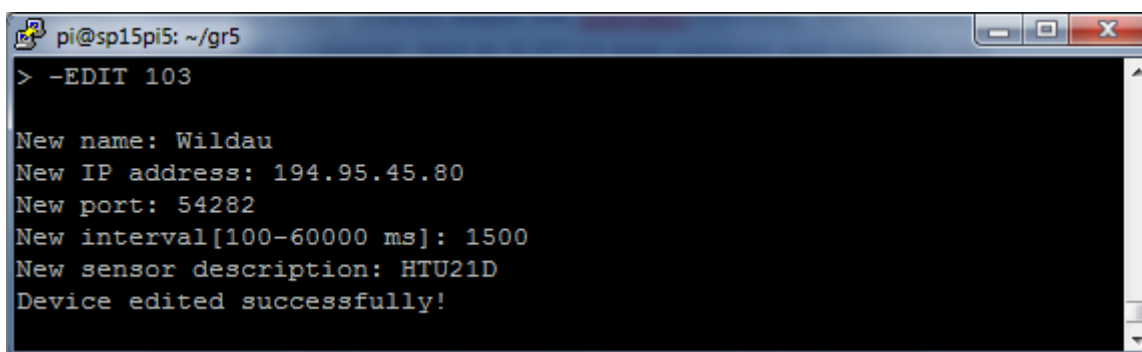
Figure 5- Configuration menu



```
pi@sp15pi5: ~/gr5
> -LIST
```

ID	Name	IP	Port	Sensor	Interval[ms]
121	Berlin	194.95.51.11	43961	MTS400	500
61	sp15pi1	194.95.45.245	6040	MEMS	2000
62	sp15pi2	194.95.45.246	39534	K20	1000
63	sp15pi3	194.95.45.247	6040	MEMS	2000
64	sp15pi4	194.95.45.49	6040	CROMS	3000
103	Wildau	194.95.45.80	54282	KL25Z	2000

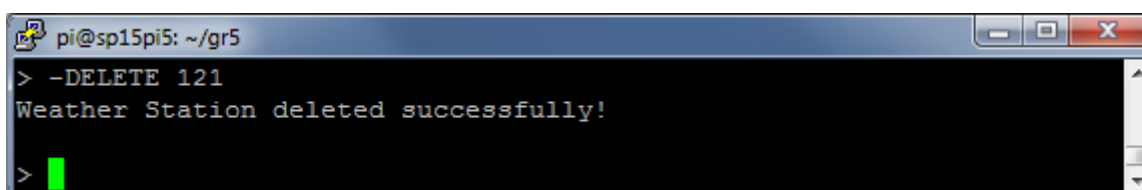
Figure 6- Device listing



```
pi@sp15pi5: ~/gr5
> -EDIT 103

New name: Wildau
New IP address: 194.95.45.80
New port: 54282
New interval[100-60000 ms]: 1500
New sensor description: HTU21D
Device edited successfully!
```

Figure 7- Editing a device

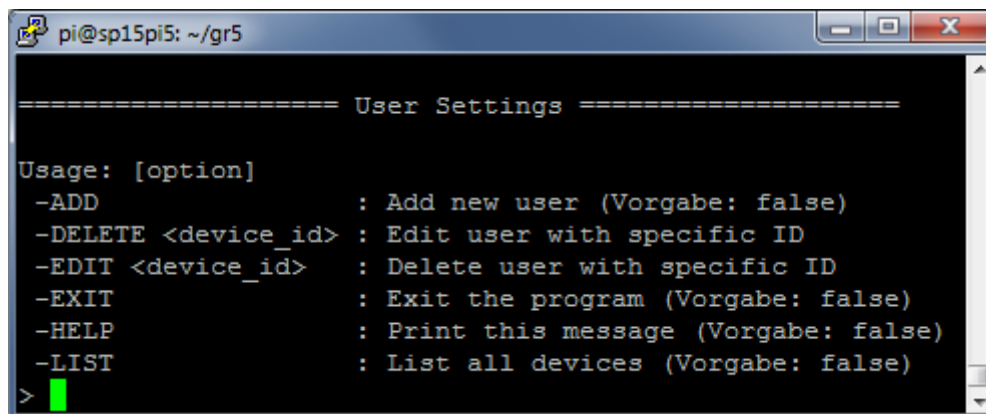


```
pi@sp15pi5: ~/gr5
> -DELETE 121
Weather Station deleted successfully!
>
```

Figure 8- Deleting a device

5. User settings

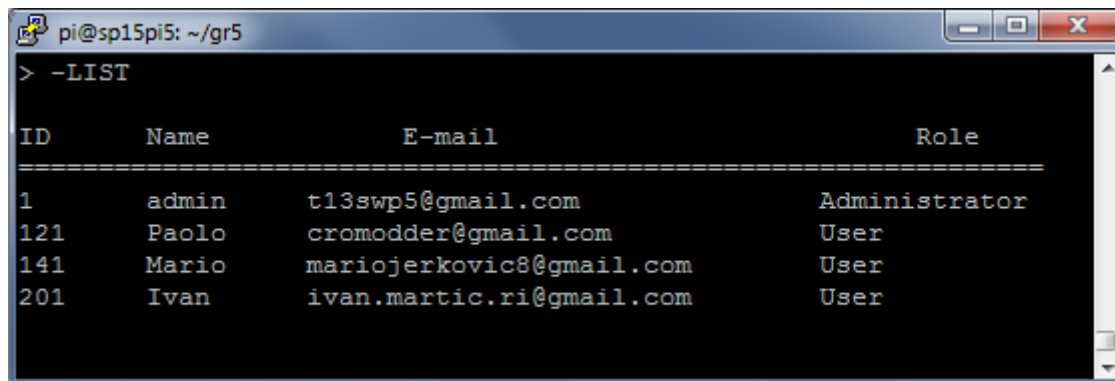
In the User menu you can show all the users, add new user and edit or delete the existing one.



```
pi@sp15pi5: ~/gr5
===== User Settings =====

Usage: [option]
-ADD                : Add new user (Vorgabe: false)
-DELETE <device_id> : Edit user with specific ID
-EDIT <device_id>   : Delete user with specific ID
-EXIT               : Exit the program (Vorgabe: false)
-HELP               : Print this message (Vorgabe: false)
-LIST               : List all devices (Vorgabe: false)
>
```

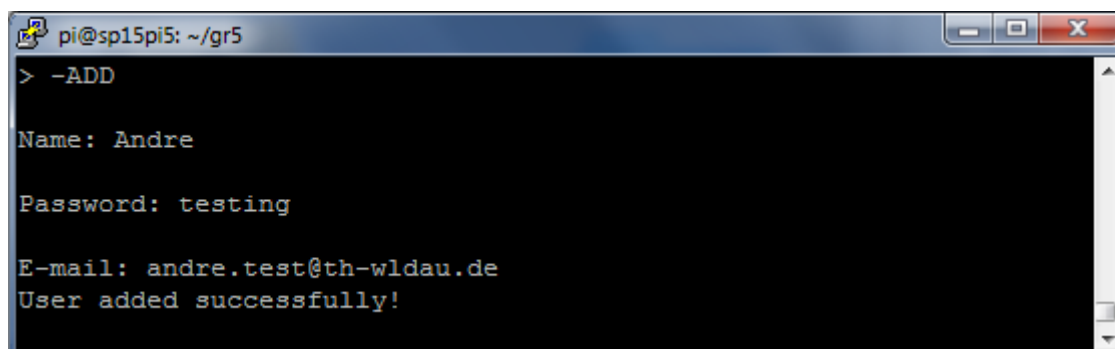
Figure 9- User menu



```
pi@sp15pi5: ~/gr5
> -LIST

ID      Name      E-mail      Role
=====
1       admin    t13swp5@gmail.com  Administrator
121     Paolo    cromodder@gmail.com User
141     Mario    mariojerkovic8@gmail.com User
201     Ivan     ivan.martic.ri@gmail.com User
```

Figure 10- User listing



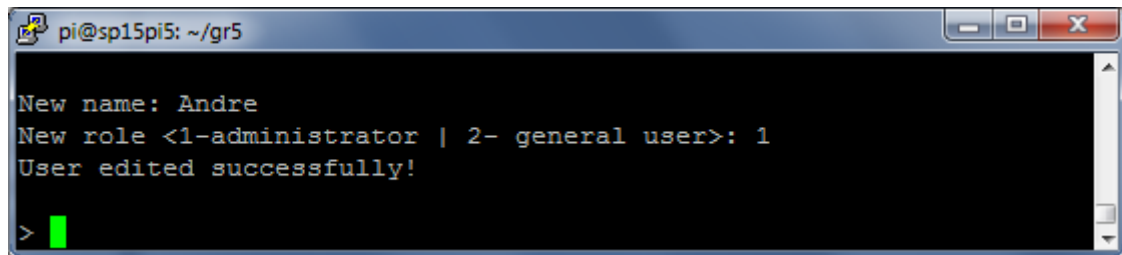
```
pi@sp15pi5: ~/gr5
> -ADD

Name: Andre

Password: testing

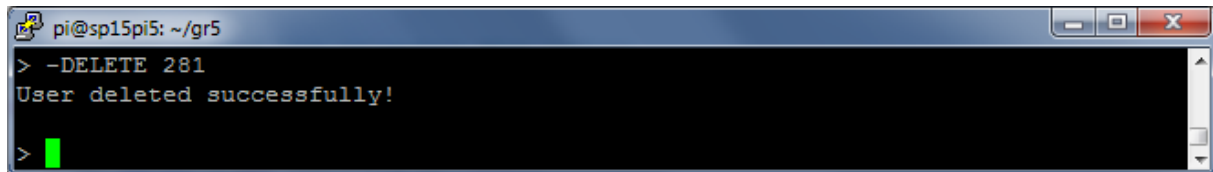
E-mail: andre.test@th-wldau.de
User added successfully!
```

Figure 11- Adding new user

A terminal window titled 'pi@sp15pi5: ~/gr5' with standard window controls. The terminal text shows a sequence of prompts and responses for editing a user: 'New name: Andre', 'New role <1-administrator | 2- general user>: 1', and 'User edited successfully!'. A green cursor is visible on the line following the success message.

```
pi@sp15pi5: ~/gr5
New name: Andre
New role <1-administrator | 2- general user>: 1
User edited successfully!
>
```

Figure 12- Editing existing user

A terminal window titled 'pi@sp15pi5: ~/gr5' with standard window controls. The terminal text shows the command '-DELETE 281' being entered, followed by the confirmation message 'User deleted successfully!'. A green cursor is visible on the line following the success message.

```
pi@sp15pi5: ~/gr5
> -DELETE 281
User deleted successfully!
>
```

Figure 13- Deleting user

6. Exiting the program

To exit a program just enter **-EXIT**.