Production server overview

The server is running Ubuntu 18.04. But the program will also work if the server is upgraded to version 20.04. Other versions of the program have not been tested. In addition to root, the server has an user called juuso. All the program code files can be found from the snowledge folder in juuso user's home directory.

Server maintenance

There is no automatic package update on the server, so it would be advisable for someone to visit the server once a month to update the server with *sudo apt update && sudo apt -y upgrade*. When the command is run, a question about the disk space to be used may appear in the command window after a while, which is answered by pressing Y and enter.

Sometimes when user logs into the server, a message may appear stating that a server restart is required. In this case, you may want to restart the server, either from the command window with *sudo reboot* or from the Tavu cloud management website.

Running the application

If there is no snowledge folder in path /home/juuso/snowledge, user can fetch those with *git clone https://github.com/oona988/snowledge.git.*

When starting the program, first navigate to the right folder with *cd /home/juuso/snowledge/src/map-app*. Here you can install the necessary npm packages with the *sudo npm install* command and start the React build with the *sudo npm run build* command. Then navigate to backend directory with *cd /home/juuso/snowledge/src* and install required npm packages with *sudo npm install*. Now you can launch the app with the command *sudo pm2 start app.js*.

The commands can also be found at the end of this documentation. If the program crashes, pm2 saves the logs in the *home/juuso/.pm2/logs* folder.

Software packages installed on server

Nginx

Nginx is a program that routes traffic from port 80 to port 3000 to run the application without administrative privileges behind port 3000. It also enables access to it by contacting default port 80. Nginx configuration for application can be found from /etc/nginx/conf.d/snowledge-instanssi.conf.

PM2

This tool allows the program to run in the background so that the server can be used while the program is running. Use this tool with the commands start, stop, restart. Pm2 has also been used to create a startup script for the server, which makes the program run automatically if the server needs to be restarted.

MySQL

The program database is implemented as a MySQL database. The database can be accessed directly from the command line with admin rights, or by using a pallas user created in the database, which is also used by the program.

Node.js

The application is running with Node.js tool.

Commands

For managing pm2 tool:

sudo pm2 start app.js

sudo pm2 stop app.js

sudo pm2 restart app.js

For checking if the application is running:

sudo pm2 list

For creating and saving startup script for pm2 tool:

sudo pm2 startup

sudo pm2 save

Building the frontend application from path /home/juuso/snowledge/src/map-app:

sudo npm install

sudo npm run build

Starting the whole application from path /home/juuso/snowledge/src:

sudo npm install

sudo pm2 start app.js