

Text Search Application with Python and gRPC

This document outlines the steps to set up and run a Python-based text search application. The application leverages gRPC for communication and utilizes secure channels to search through large text files.

Prerequisites

- Python 3.8 or higher installed on your system
- Access to a terminal or command line interface

Setup

1. Virtual Environment:

```
Bash
virtualenv python3
```

2. Activate Virtual Environment:

```
Bash
source python3/bin/activate
```

3. Install Dependencies:

Navigate to your project directory and run the following command to install required packages from a requirements.txt file:

```
Bash
pip3 install -r files/requirements.txt
```

Running the Server

1. Start the Server:

Execute this command to start the server:

```
Bash
python serve.py
```

Ensure all necessary certificates are in place for successful server startup.

Running the Client

1. Search for Strings:

Use the client script with the search term as an argument to search for a specific string within the file. Here's an example:

```
Bash
python client.py 'g9uH85RY'
```

Running the Server as a Linux Service

1. Copy Service File:

Copy the Rinne_lookup.service file to the systemd service directory:

```
Bash
sudo cp Rinne_lookup.service /etc/systemd/system/
```

2. Reload Daemons:

```
Bash
sudo systemctl daemon-reload
```

3. Enable the Service:

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Bash

```
sudo systemctl enable Rinne_lookup.service
```

4. **Start the Service:**

Bash

```
sudo systemctl start Rinne_lookup.service
```

5. **Check Service Status:**

Bash

```
sudo systemctl status Rinne_lookup.service
```

Note:

- Ensure the service file points to the correct location of the binary file on your Linux system.

These steps provide a comprehensive guide to setting up and operating the text search application.