

Server-Side

A comprehensive cheat sheet for managing server-side deployments using Localweb, covering essential commands, configurations, and monitoring techniques. Includes Nginx and Systemd configurations.



Localweb Basics

Starting the Application

Starting the Uvicorn server with `uv` :

```
uv run uvicorn app.main:app
--host 0.0.0.0 --port 8001
```

This command starts the server on port 8001, accessible from any IP address.

Enabling auto-reload:

```
uv run uvicorn app.main:app
--host 0.0.0.0 --port 8001 -
--reload
```

The `--reload` flag automatically restarts the server on code changes.

Setting the log level:

```
uvicorn app.main:app --host
0.0.0.0 --port 8001 --reload
--log-level info
```

Adjust the `--log-level` to control the verbosity of the logs (e.g., `info`, `debug`, `error`).

Stopping the Application

Gracefully stopping the server:

```
kill -15 <pid>
```

Sends a SIGTERM signal, allowing the server to shut down gracefully. Replace `<pid>` with the actual process ID.

Avoid using `kill -9 <pid>` :

This sends a SIGKILL signal, which immediately terminates the process without allowing it to clean up resources or finish ongoing tasks.

Accessing Documentation

Swagger UI:

```
https://staging.api.git-
learn.com.br/docs
```

Interactive API documentation.

ReDoc:

```
https://staging.api.git-
learn.com.br/redoc
```

Alternative API documentation viewer.

Nginx Configuration

Configuration File

Editing the Nginx configuration file:

```
sudo nano /etc/nginx/sites-available/gitcourse-api.conf
```

This opens the configuration file for the `gitcourse-api` site.

Example Configuration:

```
server {  
    listen 80;  
    server_name staging.api.git-learn.com.br;  
  
    location / {  
        proxy_pass http://localhost:8001;  
        proxy_set_header Host $host;  
        proxy_set_header X-Real-IP $remote_addr;  
    }  
  
    location /docs {  
        proxy_pass  
http://localhost:8001/docs;  
        proxy_set_header Host $host;  
        proxy_set_header X-Real-IP $remote_addr;  
    }  
  
    location /redoc {  
        proxy_pass  
http://localhost:8001/redoc;  
        proxy_set_header Host $host;  
        proxy_set_header X-Real-IP $remote_addr;  
    }  
}
```

Applying Changes

Testing the configuration:

```
sudo nginx -t
```

Checks the Nginx configuration file for syntax errors.

Reloading Nginx:

```
sudo systemctl reload nginx
```

Applies the changes without interrupting existing connections.

Systemd Service

Service File

Creating the Systemd service file:

```
sudo nano /etc/systemd/system/gitcourse-backend.service
```

This creates a service file to manage the backend application.

Example Service File Configuration:

```
[Unit]
Description=GitCourse Backend Service
After=network.target

[Service]
User=deploy
WorkingDirectory=/home/deploy/git-course-backend-staging
ExecStart=/home/deploy/.local/bin/uv run uvicorn app.main:app --host 0.0.0.0 --port 8001
Restart=on-failure

[Install]
WantedBy=multi-user.target
```

Managing the Service

Reloading Systemd daemon:

```
sudo systemctl daemon-reload
```

This reloads the systemd manager configuration.

Starting the service:

```
sudo systemctl start gitcourse-backend
```

Starts the `gitcourse-backend` service.

Restarting the service:

```
sudo systemctl restart gitcourse-backend
```

Restarts the `gitcourse-backend` service.

Checking the service status:

```
sudo systemctl status gitcourse-backend
```

Displays the current status and logs of the `gitcourse-backend` service.

Bash Aliases

Setting up Aliases

Defining the alias:

```
alias stage-backend='cd /home/deploy/git-course-backend-staging'
```

This creates an alias named `stage-backend` to quickly navigate to the staging directory.

To make it permanent, add this line to your

`~/.bashrc` or `~/.zshrc` file.

Applying the alias:

```
source ~/.bashrc or source ~/.zshrc
```

Reloads the shell configuration to make the alias available in the current session.

Using the Alias

Navigating to the directory:

```
stage-backend
```

This command will change the current directory to

```
/home/deploy/git-course-backend-staging
```