Here's a comprehensive document for setting up and running a container using **Podman**, with steps to ensure it restarts automatically on VPS reboot.

Running an API with Podman and Configuring Auto-Restart on VPS Reboot

1. Install and Verify Podman

1. Install Podman on your system (if not already installed):

   ```
   sudo apt update
   sudo apt install podman -y
   ```

2. Verify the installation:

   ```
   podman --version
   ```

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2. Build and Run Your API Container

A. Navigate to Your API Directory

Make sure you're in the directory where your `Dockerfile` is located. If you don't have a `Dockerfile`, create one for your API.

Example `Dockerfile`:

```
FROM node:18

WORKDIR /usr/src/app

COPY package*.json ./
RUN npm install

COPY . .

EXPOSE 5002

CMD ["npm", "start"]
```

B. Build the Podman Image

Build your container image:

```
podman build -t plugspace-backend .
```

C. Run the Container

Run your API container and map the desired port:

```
podman run -d --name plugspace-backend -p 5002:5002 --restart unless-stopped plugspace-backend
```

Explanation of flags:

- `-d` : Run the container in detached mode (in the background).
- `--name plugspace-backend` : Assigns a name to the container.
- `-p 5002:5002` : Maps port `5002` of the container to port `5002` on the host.
- `--restart unless-stopped` : Ensures the container restarts unless explicitly stopped.

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3. Verify the Running Container

Check the status of your container:

```
podman ps
```

You should see your `plugspace-backend` container running.

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4. Configure Auto-Restart on VPS Reboot

Since Podman doesn't include a daemon like Docker, we need to create a `systemd` service to ensure the container restarts on VPS reboot.

A. Generate a Systemd Unit File

Generate a `systemd` service file for your container:

```
podman generate systemd --name plugspace-backend --files
```

This command will create a file named `container-plugspace-backend.service` in the current directory.

B. Move the Service File

Move the generated service file to the `systemd` directory:

```
sudo mv container-plugspace-backend.service /etc/systemd/system/
```

C. Enable and Start the Service

Enable the service to start on boot:

```
sudo systemctl enable container-plugspace-backend
sudo systemctl start container-plugspace-backend
```

D. Verify the Service

Check the status of the service to ensure it's active:

```
sudo systemctl status container-plugspace-backend
```

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5. Test the Setup

1. Reboot your VPS to confirm the container restarts automatically:

   ```
   sudo reboot
   ```

2. After reboot, check if the container is running:

   ```
   podman ps
   ```

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6. Manage Your Container

A. Stop the Container

If you need to stop the container:

```
podman stop plugspace-backend
```

B. Start the Container

Start the container manually:

```
podman start plugspace-backend
```

C. Remove the Container

Remove the container and the associated service:

1. Stop and remove the container:

```
podman stop plugspace-backend
podman rm plugspace-backend
```

2. Remove the systemd service:

```
sudo rm /etc/systemd/system/container-plugspace-backend.service
sudo systemctl daemon-reload
```

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7. Logs and Debugging

To view the container logs:

```
podman logs plugspace-backend
```

For troubleshooting the systemd service:

```
sudo journalctl -u container-plugspace-backend
```

Conclusion

You've successfully configured your API to run in a Podman container and ensured it restarts automatically on VPS reboot using a `systemd` service. This setup is lightweight, portable, and reliable.

Let me know if you need further clarifications!