**Comprehensive Guide to Hosting ASP.NET Core Web MVC on Your Domain**

**Prerequisites**

* A VPS running Ubuntu 24.04
* An ASP.NET Core Web MVC application
* A domain name pointing to your VPS's IP address (148.135.137.232)

**Step-by-Step Guide**

**Step 1: Prepare Your ASP.NET Core Application**

1. **Navigate to the Project Directory:**
2. cd /var/www/serviceacademy/Service\_Academy1
3. **Publish Your Application:**
4. dotnet publish -c Release -o /var/www/serviceacademy/publish

**Step 2: Create and Configure the Systemd Service**

1. **Create the Systemd Service File:**
2. sudo nano /etc/systemd/system/serviceacademy.service
3. **Add the Following Configuration:**
4. [Unit]
5. Description=Service Academy ASP.NET Core Application
6. [Service]
7. WorkingDirectory=/var/www/serviceacademy/publish
8. ExecStart=/usr/bin/dotnet /var/www/serviceacademy/publish/Service\_Academy1.dll
9. Restart=always
10. RestartSec=10
11. SyslogIdentifier=dotnet-serviceacademy
12. User=deployuser
13. Environment=ASPNETCORE\_ENVIRONMENT=Production
14. [Install]
15. WantedBy=multi-user.target

Save and close the file (Ctrl+O, Enter, Ctrl+X).

1. **Reload Systemd and Start the Service:**
2. sudo systemctl daemon-reload
3. sudo systemctl start serviceacademy.service
4. sudo systemctl enable serviceacademy.service
5. **Check the Status of the Service:**
6. sudo systemctl status serviceacademy.service

**Step 3: Install and Configure Nginx**

1. **Install Nginx:**
2. sudo apt update
3. sudo apt install nginx
4. **Create Nginx Configuration File:**
5. sudo nano /etc/nginx/sites-available/serviceacademy
6. **Add the Following Configuration:**
7. server {
8. listen 80;
9. server\_name bsutneuextsrv-edu.online;
10. location / {
11. proxy\_pass http://localhost:5000;
12. proxy\_http\_version 1.1;
13. proxy\_set\_header Upgrade $http\_upgrade;
14. proxy\_set\_header Connection keep-alive;
15. proxy\_set\_header Host $host;
16. proxy\_cache\_bypass $http\_upgrade;
17. proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;
18. proxy\_set\_header X-Forwarded-Proto $scheme;
19. }
20. }

Save and close the file (Ctrl+O, Enter, Ctrl+X).

1. **Enable the New Configuration:**
2. sudo ln -s /etc/nginx/sites-available/serviceacademy /etc/nginx/sites-enabled/
3. **Disable the Default Configuration:**
4. sudo rm /etc/nginx/sites-enabled/default
5. **Test and Reload Nginx:**
6. sudo nginx -t
7. sudo systemctl reload nginx

**Step 4: Update DNS Records**

1. **Update DNS Records:**

Ensure your domain's DNS records are pointing to your VPS's IP address (148.135.137.232). This is typically done through your domain registrar's control panel.

1. **Verify DNS Propagation:**

Use the dig command to verify that the DNS records are correctly pointing to your VPS:

dig bsutneuextsrv-edu.online

Ensure the output shows your VPS's IP address (148.135.137.232).

**Step 5: Verify the Website**

1. **Access Your Website:**

Open a web browser and navigate to your domain:

http://bsutneuextsrv-edu.online

1. **Check for Errors:**

Ensure that your website loads correctly and that there are no errors. You can check the Nginx logs for any issues:

sudo tail -f /var/log/nginx/error.log

**Troubleshooting: Address Already in Use Error**

If you encounter the "Address already in use" error, follow these steps:

1. **Identify the Process Using Port 5000:**
2. sudo lsof -i :5000
3. **Stop the Conflicting Process:**
4. sudo kill -9 <PID>

Replace <PID> with the actual Process ID.

1. **Restart Your ASP.NET Core Application:**
2. sudo systemctl start serviceacademy.service
3. sudo systemctl status serviceacademy.service

**Alternative: Change the Port**

If stopping the conflicting process is not an option, change the port your ASP.NET Core application listens on:

1. **Edit the Systemd Service File:**
2. sudo nano /etc/systemd/system/serviceacademy.service
3. **Modify the ExecStart Line to Use a Different Port:**
4. ExecStart=/usr/bin/dotnet /var/www/serviceacademy/publish/Service\_Academy1.dll --urls "http://localhost:5001"
5. **Reload Systemd and Restart the Service:**
6. sudo systemctl daemon-reload
7. sudo systemctl restart serviceacademy.service
8. sudo systemctl status serviceacademy.service
9. **Update Nginx Configuration:**
10. sudo nano /etc/nginx/sites-available/serviceacademy

Change the proxy\_pass line to match the new port:

proxy\_pass http://localhost:5001;

1. **Reload Nginx:**
2. sudo nginx -t
3. sudo systemctl reload nginx

**Summary of Commands**

1. **Publish Your Application:**
2. dotnet publish -c Release -o /var/www/serviceacademy/publish
3. **Create and Configure the Systemd Service:**
4. sudo nano /etc/systemd/system/serviceacademy.service
5. sudo systemctl daemon-reload
6. sudo systemctl start serviceacademy.service
7. sudo systemctl enable serviceacademy.service
8. sudo systemctl status serviceacademy.service
9. **Install and Configure Nginx:**
10. sudo apt update
11. sudo apt install nginx
12. sudo nano /etc/nginx/sites-available/serviceacademy
13. sudo ln -s /etc/nginx/sites-available/serviceacademy /etc/nginx/sites-enabled/
14. sudo rm /etc/nginx/sites-enabled/default
15. sudo nginx -t
16. sudo systemctl reload nginx
17. **Update DNS Records:**
18. dig bsutneuextsrv-edu.online
19. **Verify the Website:**
20. http://bsutneuextsrv-edu.online
21. sudo tail -f /var/log/nginx/error.log
22. **Troubleshoot "Address Already in Use" Error:**
23. sudo lsof -i :5000
24. sudo kill -9 <PID>
25. sudo systemctl start serviceacademy.service
26. sudo systemctl status serviceacademy.service
27. **Alternative: Change the Port:**
28. sudo nano /etc/systemd/system/serviceacademy.service
29. sudo systemctl daemon-reload
30. sudo systemctl restart serviceacademy.service
31. sudo systemctl status serviceacademy.service
32. sudo nano /etc/nginx/sites-available/serviceacademy
33. sudo nginx -t
34. sudo systemctl reload nginx

By following this comprehensive guide, you can successfully set up and host your ASP.NET Core Web MVC application on your domain using Nginx as a reverse proxy. If you encounter any specific issues or need further assistance, please let me know!

COMMANDS USE

sudo git clone https://github.com/OnionPatchTv/Service\_Academy1.git serviceacademy - **CLONE COMMAND**

sudo chown -R deployuser:deployuser /var/www/serviceacademy **– permission ?**

sudo apt update **– check latest packages**

sudo apt install postgresql postgresql-contrib – **postgresql download command**

sudo -i -u postgres – **postgre create user**

sudo nano /etc/postgresql/16/main/pg\_hba.conf – **Modified something in this code but it is important**

sudo nano /etc/postgresql/16/main/postgresql.conf – **also modified something in this code**

sudo systemctl restart postgresql – **restart sql**

sudo nano appsettings.json **– update databse or appsettings. Json (must be on the repository directory)**

/var/repo **– new repository**

sudo git init --bare serviceacademy.git – **initialize a blank repository**

sudo nano /var/repo/serviceacademy.git/hooks/post-receive **- auto deployment file name**

sudo chmod +x /var/repo/serviceacademy.git/hooks/post-receive – **permission?**

sudo nano /etc/systemd/system/serviceacademy.service –

sudo systemctl start serviceacademy.service

sudo systemctl enable serviceacademy.service

sudo systemctl status serviceacademy.service

sudo nano /var/repo/serviceacademy.git/hooks/post-receive

sudo chmod +x /var/repo/serviceacademy.git/hooks/post-receive

sudo git clone /var/repo/serviceacademy.git /var/www/serviceacademy/Service\_Academy1

$ cd /var/www/serviceacademy/Service\_Academy1

git init

git remote add origin /var/repo/serviceacademy.git

git fetch origin

git reset --hard origin/master

sudo chown -R deployuser:deployuser /var/www/serviceacademy/Service\_Academy1

cd /var/www/serviceacademy/Service\_Academy1

dotnet publish -c Release -o /var/www/serviceacademy/Service\_Academy1/publish

sudo nano /etc/systemd/system/serviceacademy.service

sudo systemctl daemon-reload

sudo systemctl start serviceacademy.service

sudo systemctl enable serviceacademy.service

git remote add vps ssh://deployuser@148.135.137.232:/var/repo/serviceacademy.git

git push vps master

ssh [deployuser@148.135.137.232](mailto:deployuser@148.135.137.232)

ls -ld /var/www/serviceacademy/publish

cd /var/www/serviceacademy/Service\_Academy1

dotnet publish -c Release -o /var/www/serviceacademy/publish

sudo chown -R deployuser:deployuser /var/www/serviceacademy/publish

sudo chmod -R 755 /var/www/serviceacademy/publish

sudo nano /etc/systemd/system/serviceacademy.service

sudo systemctl daemon-reload

sudo systemctl start serviceacademy.service

sudo systemctl enable serviceacademy.service

sudo systemctl status serviceacademy.service

sudo ln -s /etc/nginx/sites-available/serviceacademy /etc/nginx/sites-enabled/

sudo rm /etc/nginx/sites-enabled/default

sudo nginx -t

sudo systemctl reload nginx

sudo systemctl status serviceacademy.service

cd /var/www/serviceacademy/publish

dotnet Service\_Academy1.dll

cd /var/www/serviceacademy/.git/hooks

sudo nano /var/repo/serviceacademy.git/hooks/post-receive

chmod +x /var/repo/serviceacademy.git/hooks/post-receive – make executable

ssh-keygen -t ed25519 -C [21-02866@g.batstate-u.edu.ph](mailto:21-02866@g.batstate-u.edu.ph) – **SSH KEY PAIR**

/home/deployuser/.ssh/ud\_ed25519? – **file directory of ssh**

**Passphrase – “vanillatwilight”**

**AGENT PID = 14818**

**git remote set-url origin** [**git@github.com:OnionPatchTv/Service\_Academy1.git**](mailto:git@github.com:OnionPatchTv/Service_Academy1.git) **- push new ssh**

**git push origin master – command to push**

Sure, here are the steps to redeploy or rebuild your ASP.NET Core Web MVC application:

**1. Stop the Current Service:**

sudo systemctl stop serviceacademy.service

**2. Navigate to Your Project Directory:**

cd /var/www/serviceacademy

**3. Pull the Latest Changes from Your Repository:**

git pull origin main

*Note: Replace main with the appropriate branch name if necessary.*

**4. Restore Dependencies and Build the Project:**

dotnet restore

dotnet publish -c Release -o /var/www/serviceacademy/publish

**5. Restart the Service:**

sudo systemctl start serviceacademy.service

**6. Check the Service Status:**

sudo systemctl status serviceacademy.service