**Spring Boot + NGINX : Creating and Accessing APIs**

## Step 1: Create Two APIs in Spring Boot

**File:** src/main/java/com/example/demo/controller/HelloController.java

java

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package com.example.demo.controller;

import org.springframework.web.bind.annotation.\*;

@RestController

@RequestMapping("/api")

public class HelloController {

@GetMapping("/hello")

public String hello() {

return "Hello from Spring Boot!";

}

@GetMapping("/greet")

public String greet(@RequestParam(defaultValue = "Guest") String name) {

return "Greetings, " + name + "!";

}

}

API Endpoints:

* GET /api/hello → returns plain text
* GET /api/greet?name=Alex → personalized greeting

## Step 2: Build and Run Spring Boot Application

### If using Gradle:

./gradlew build

### If using a pre-built .jar (e.g., /opt/nsbpay/NSBPay.jar):

java -jar /opt/nsbpay/NSBPay.jar

Test APIs:

curl http://localhost:8080/api/hello

curl http://localhost:8080/api/greet?name=Alex

## Step 3: Configure NGINX as Reverse Proxy

### **1. Create NGINX Config File**

sudo nano /etc/nginx/sites-available/springboot

Paste the following:

nginx

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server {

listen 80;

server\_name localhost;

location / {

proxy\_pass http://localhost:8080/;

proxy\_set\_header Host $host;

proxy\_set\_header X-Real-IP $remote\_addr;

proxy\_set\_header X-Forwarded-For $proxy\_add\_x\_forwarded\_for;

proxy\_set\_header X-Forwarded-Proto $scheme;

}

}

### **2. Enable the Config**

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

If it says “File exists,” skip this step.

### **3. Remove Default to Avoid Conflict**

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

### **4. Test and Restart NGINX**

sudo nginx -t

sudo systemctl restart nginx

If you still see a **"conflicting server name"** warning:

* Double-check you removed /etc/nginx/sites-enabled/default
* You can also change server\_name in your config to something unique like springboot.local and map it in /etc/hosts if desired.

## Step 4: Access APIs via Port 80 (NGINX)

Now that NGINX is routing traffic:

curl http://localhost/api/hello

curl http://localhost/api/greet?name=Alex

Or open in browser:

* <http://localhost/api/hello>
* <http://localhost/api/greet?name=Alex>

## 🔧 Troubleshooting Tips

| **Issue** | **Fix** |
| --- | --- |
| Whitelabel Error Page or No static resource | Check controller is in a scanned package and mapped correctly |
| NGINX conflict on port 80 | Remove default config or change server\_name |
| API not reachable via browser | Confirm Spring Boot is running and NGINX is restarted |