🧪 Running Playwright Tests on a Remote PC via Selenium Grid

This document outlines the step-by-step process to configure and execute Playwright tests on a remote machine using Selenium Grid.

◇ Step 1: Setup Selenium Grid on the Remote PC

1.1 Start the Selenium Hub

java -jar selenium-server-4.29.0.jar hub

1.2 Start the Selenium Node

java -jar selenium-server-4.29.0.jar node --port 5556 --hub http://10.0.0.241:4444

✅ Make sure port **4444** is the default hub port and **5556** is the custom node port.

1.3 Verify Hub & Node

- Visit: http://10.0.0.241:4444/ui
- Or run:

curl http://10.0.0.241:4444/status | jq '.value.nodes'

- Output should list connected nodes.

◇ Step 2: Get the Remote PC's IP Address

Run this command on the remote machine:

ip a

Look for the IP under the Ethernet interface (e.g., enp1s0). Example:

inet 10.0.0.241/24

✅ This is the IP to use in your Playwright test.

◇ Step 3: Install Playwright on the Local PC

3.1 Create Project Directory

```
mkdir playwright-selenium-project
cd playwright-selenium-project
```

3.2 Initialize Node.js Project

```
npm init -y
```

3.3 Install Dependencies

```
npm install -D @playwright/test selenium-webdriver
```

◇ Step 4: Configure Playwright for Selenium Grid

4.1 Create playwright.config.js

```
const { defineConfig } = require('@playwright/test');

module.exports = defineConfig({
 use: {
  launchOptions: {
   executablePath: false // Playwright will use Selenium WebDriver
  }
 },
});
```

◇ Step 5: Create Playwright Test File

5.1 Create Folder and File

mkdir tests

Create tests/example.js:

```
const { test } = require('@playwright/test');
const { Builder } = require('selenium-webdriver');

test('run test on remote machine', async () => {
  const remoteGridUrl = 'http://10.0.0.241:4444/wd/hub';

  const driver = await new Builder()
    .usingServer(remoteGridUrl)
    .forBrowser('chrome')
    .build();

  try {
    await driver.get('https://example.com');
    console.log('Test running on remote machine');
  } finally {
    await driver.quit();
  }
});
```

◇ Step 6: Run the Test

npx playwright test tests/example.js

✅ The test should open a browser on the **remote PC** and run successfully.

◇ Step 7: Troubleshooting & Tips

- **Check if Selenium Grid is Up**:

curl http://localhost:4444/status

Expected Output:

{"value":{"ready":true}}

- **Verify Node Connection**: Visit: http://localhost:4444/ui
- **Firewall/Port Issues**: Ensure ports 4444 (hub) and 5556 (node) are open and accessible.
- **Same Network**: Ensure both machines are on the same LAN or connected via VPN.

✅ Now your Playwright tests can run on a remote machine via Selenium Grid!