Technical Assessment: Operations & IT Specialist

Time Expectation: ~4 Hours

Format: Infrastructure as Code (Scripting) or Virtual Machine image (ISO/OVA)

The Scenario

You have been tasked with provisioning a secure web server for a new internal tool. We need a script that takes a fresh, minimal installation of Linux (Ubuntu 24.04 LTS preferred) and configures it automatically.

Please provide a **Bash script** (or an Ansible Playbook) that automates the following configuration steps.

Requirements

1. System & User Management

- Update all system packages to the latest version.
- Create a new user named `deploy_admin`.
- Grant `deploy_admin` sudo privileges without requiring a password.
- **Hard Requirement:** The script must check if the user exists before trying to create it (Idempotency check).

2. Security Hardening

- Configure the SSH daemon to run on Port **2022**.
- Disable `root` login via SSH.
- Install and configure a Firewall.
    - *Policy:* Deny all incoming traffic by default.
    - *Allow:* SSH (Port 2022) and HTTP (Port 80) or HTTPS (Port 443).

3. Web Server Configuration

- Install Nginx.
- Ensure the web service is enabled to start on system boot.
- Replace the default `index.html` with a custom HTML file containing the text: *"Server Provisioned by [Your Name] on [Current Date]"*.
- Bonus: Use Docker and HTTPS (self signed certificate)

4. Automation & Maintenance

- Create a scheduled task (Cron job) that runs every 10 minutes.
- The task should append the current memory usage (`free -m`) to a log file located at `/var/log/memory_usage.log`.

Deliverables

Please upload your solution to a public Git repository (GitHub) or provide a Zip file containing:

1. The configuration script(s).
2. A `README.md` file explaining:
    - How to run your script.
    - Any prerequisites.
    - Why did you choose specific configurations.

Note: You can also send a Virtual Machine image (ISO/OVA).