DevOps Candidate Assessment: Ansible with WordPress on VirtualBox

Introduction

Welcome to your DevOps assessment exercise. Your task is to manually set up a VirtualBox VM and use Ansible, a powerful automation tool, to automate the provisioning and configuration of a web environment running WordPress. Please document the entire process and configurations in a single `README.md` file in your project repository.

Assessment Tasks

1. Manual VM Setup with Debian 12

- **Objective**: Manually set up a VirtualBox VM with Debian 12.
- **Deliverable**: Document the setup process in the `README.md`.

2. NGINX Web Server Installation and Configuration

- **Objective**: Automate the installation and configuration of NGINX on the Debian VM using Ansible.
- **Deliverable**: A functional static webpage served and accessible from the host machine.

3. MySQL Database Server Setup

- **Objective**: Automate the installation and basic setup of a MySQL server using Ansible.
- **Deliverable**: A MySQL database and user specifically for WordPress.

4. WordPress Installation and Configuration

- **Objective**: Automate the WordPress installation and configuration process using Ansible, ensuring it utilizes NGINX and connects to the MySQL database.
- **Deliverable**: A functional WordPress site.

5. Documentation and Version Control

- **Objective**: Provide comprehensive documentation and use version control effectively.

- **Deliverable**: A `README.md` covering all steps and configurations, and a version-controlled repository with clear commit history.

6. Bonus Challenge: Security Hardening (Optional)

- **Objective**: Implement basic security measures for the VM, NGINX, MySQL, and WordPress.
- **Deliverable**: Documented security measures in the `README.md`.

Evaluation Criteria

- Completion of the Task
- Code Quality and Organization
- Proper Use of Git and Commit Messages
- Attention to Detail
- Quality of Documentation
- Error Handling and Robustness
- Innovative Problem-Solving
- Adaptability and Learning Curve
- Communication Skills

Notes on Ansible Deliverable

- **Develop Ansible Playbooks**: Create detailed playbooks for each task.
- **Inventory and Host Management**: Configure the Ansible inventory and manage SSH configurations.
- **Use of Ansible Modules and Roles**: Leverage modules and roles for efficiency.
- **Variable Management and Templating**: Utilize variables and templates for configurations.
- **Error Handling**: Implement robust error handling in your playbooks.
- **Testing and Idempotency**: Ensure your playbooks are tested and idempotent.
- **Documentation**: Provide clear documentation within playbooks and in `README.md`.
- **Version Control**: Use Git for version control and maintain a clear commit history.

Final Notes

This assessment is designed to showcase your technical skills, problem-solving abilities, and attention to detail. We encourage you to approach each task with creativity and a focus on quality. Should you have any questions or need clarifications during this assessment, please do not hesitate to reach out.