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**Summary Report**

**DevOps Phase 2**

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November 23, 2023

**Project 1**

20F-0290

20F-0204

20F-0132

**DevOps Assignment Summary Report**

**Project Selection:**

1. Metabase
2. Magento
3. Vue Storefront

**Task 3 & 4: Setup Local Development Environment**

* **Metabase:**

1. **Docker Compose:**

* Create a docker-compose.yml file for Metabase.
* Define necessary services, including Metabase and any required databases.
* Specify environment variables for configuration.
* Navigate to the directory containing your docker-compose.yml file.
* In the same terminal, run the command to start Metabase: docker-compose up
* After the previous command completes, open your web browser and go to http://localhost:3000.
* You should see the Metabase setup page.

1. **Ansible:**

* Create an Ansible playbook (metabase.yml) for setting up Metabase.
* Include tasks to install Docker, set up required dependencies, and configure Metabase.
* Use the cd command to navigate to the directory containing your Ansible playbook file.
* Execute the command to run the Ansible playbook: ansible-playbook metabase.yml
* After the playbook has executed successfully, verify that Metabase is deployed and running on your VMs. You can access Metabase by navigating to the specified port in your web browser like I do at: <http://localhost:3000>.
* **Magento:**

1. **Docker Compose:**

* Develop a docker-compose.yml file for Magento.
* Specify services like Magento, MySQL, and optionally, a web server.
* Set environment variables for configuration.
* Create a new file named docker-compose.yml in your chosen directory.
* Navigate to the directory containing your docker-compose.yml file.
* Run the command to create a volume for persistent data: mkdir magento-data
* In the same terminal, run the command to start Magento: docker-compose up
* After the previous command completes, open your web browser and go to http://localhost:3000.

1. **Ansible:**

* Formulate an Ansible playbook (magento.yml) for Magento deployment.
* Tasks should cover Docker installation, dependencies setup, and Magento configuration.
* Use the cd command to navigate to the directory containing your Ansible playbook file.
* Execute the command to run the Ansible playbook: ansible-playbook magento.yml
* **Vue Storefront:**

1. **Docker Compose:**

* Craft a docker-compose.yml file for Vue Storefront.
* Define services such as Vue Storefront API, ElasticSearch, and any additional components.
* Incorporate environment variables for configuration.
* Create a new file named docker-compose.yml in your chosen directory.
* Run the command to start Vue Storefront: docker-compose up

1. **Ansible:**

* Develop an Ansible playbook (vue-storefront.yml) for Vue Storefront.
* Tasks should encompass Docker installation, dependency setup, and Vue Storefront configuration.
* Use the cd command to navigate to the directory containing your Ansible playbook file.
* Execute the command to run the Ansible playbook: ansible-playbook Vue-store Front.yml

**Conclusion:**

In this DevOps assignment, we successfully established local development environments for Metabase, Magento, and Vue Storefront using Docker Compose and Ansible playbooks. For Metabase, we created a docker-compose.yml file, defining services and databases, and automated the process using an Ansible playbook (metabase.yml). The same approach was employed for Magento, where a comprehensive docker-compose.yml file facilitated the local setup, complemented by an Ansible playbook (magento.yml) for automation. In the case of Vue Storefront, we crafted a docker-compose.yml file and an Ansible playbook (vue-storefront.yml) for deployment. The use of these DevOps tools not only streamlined the deployment process but also enhanced consistency and reproducibility across different environments. Docker Compose facilitated the orchestration of multi-container applications, while Ansible playbooks automated tasks, ensuring efficiency and error-free deployment. The combination of Docker and Ansible proved to be a powerful solution, emphasizing the role of DevOps practices in achieving seamless transitions from local development to production environments.