

## Re-basing Warehouse Management System (WMS) into Docker Container Environment

Driver	@Jacob Farrow
Approver	@Jacob Farrow
Contributors	@Jacob Farrow
Objective	The objective of this project is to re-base the Warehouse Management System (WMS) into a Docker container environment to enhance deployment flexibility, scalability, and maintainability. By containerizing WMS components, we aim to streamline the deployment process, simplify dependency management, and improve resource utilization.
Due date	22 Apr 2024
Key outcomes	<b>Expected Outcomes:</b> <ol style="list-style-type: none"><li>1. Containerized WMS components for easy deployment.</li><li>2. Improved scalability through container orchestration.</li><li>3. Enhanced resource utilization and efficiency.</li><li>4. Simplified dependency management and version control.</li><li>5. Streamlined development and testing workflows with Docker-compose.</li></ol> <b>Success Metrics:</b> <ol style="list-style-type: none"><li>1. Decrease in deployment time by X%.</li><li>2. Increase in system scalability, measured by the ability to handle X% more concurrent users.</li><li>3. Reduction in infrastructure costs by X% due to improved resource utilization.</li><li>4. Increase in developer productivity, measured by X% decrease in time spent on environment setup and configuration.</li><li>5. Reduction in system downtime incidents by X%</li></ol>
Status	IN PROGRESS

### 🤔 Problem Statement

The current deployment model of the Warehouse Management System (WMS) is rigid and inefficient, leading to challenges in managing dependencies, ensuring consistency across environments, and scaling the system as demand grows. Additionally, manual deployment processes are error-prone and time-consuming, hindering agility and innovation.

### 🎯 Scope

Must have:	<ul style="list-style-type: none"><li>• Dockerization of WMS components</li><li>• Docker-compose configuration</li><li>• Networking setup</li><li>• Data persistence</li></ul>
Nice to have:	<ul style="list-style-type: none"><li>• Kubernetes deployment</li><li>• Continuous Integration (CI) pipeline</li><li>• Container orchestration</li></ul>
Not in scope:	<ul style="list-style-type: none"><li>• Major feature enhancements</li><li>• Legacy system compatibility</li><li>• Infrastructure maintenance</li></ul>

 [COS5019-B\\_2023-4\\_Team3](#)

Client must be authenticated to access this resource.

► Milestones and deadlines

Milestone	Owner	Deadline	Status
Dockerization of WMS components	@Jacob Farrow	27 Feb 2024	DONE
Docker-compose configuration	@Jacob Farrow	27 Feb 2024	DONE
Networking setup	@Jacob Farrow	8 Apr 2024	IN PROGRESS
Data persistence	@Jacob Farrow	8 Apr 2024	IN PROGRESS
Kubernetes deployment	@Jacob Farrow	8 Apr 2024	TODO
Continuous Integration (CI) pipeline	@Jacob Farrow	22 Apr 2024	TODO
Container orchestration	@Jacob Farrow	22 Apr 2024	TODO

🔗 Reference materials