

COSC 310

Deployment & Installation Guide

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This guide walks you through setting up the Task Management System from scratch.

The system uses a single-container architecture that includes both frontend and backend.

Prerequisites

Ensure you have the following installed:

- Docker and Docker Compose
 - Git
 - Text editor for configuration files
 - Terminal/Command Prompt access
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Step 1: System Setup

1.1 Clone the Repository

```
git clone <repository-url>
cd task-management
```

1.2 Environment Configuration

Create a .env file in the backend directory with the following variables:

MongoDB Configuration

```
MONGO_URI=mongodb+srv://Task-Management:Task-Management@task-management.hv94y.mongodb.net/?retryWrites=true&w=majority&appName=Task-management
```

Application Configuration

```
PORT=3200
```

```
URL=http://localhost:5173
```

Email Configuration (Brevo SMTP)

```
BREVO_USER=86ee30001@smtp-brevo.com
```

```
BREVO_PASS=IUQCtfTH6Yq0A3Ra
```

```
BREVO_SENDER=abdullahmohsin21007@gmail.com
```

JWT Configuration

```
REFRESH_TOKEN_SECRET=765c067688757d7b626a9d7485d65488f2bdb4b3b4d8f6db5d5c788f2114d18d
```

```
ACCESS_TOKEN_SECRET=9bde322987a3bd56f4bdf4cc9448e8e43eb8a050cbd0e647a9d0b80a7f8ff64e
```

Step 2: Docker Setup

2.1 Build and Start Containers

```
# Start all services
docker-compose up -d
```

```
# Verify container is running
docker ps
```

Expected Output:

CONTAINER ID	IMAGE	STATUS	PORTS
abc123...	mochi21/taskmanagement	Up 2 minutes	0.0.0.0:3200->3200/tcp

2.2 Application Access

- Application URL: <http://localhost:3200>

Step 3: System Architecture

The application uses a single container that:

- Builds the frontend during the first stage of the Dockerfile
- Sets up the backend in the second stage
- Serves the frontend build output from the backend's public directory
- Runs on port 3200
- Uses environment variables from `./backend/.env`

Step 4: Verification

4.1 System Health Check

- Application is accessible at: <http://localhost:3200>
- Backend Health Check: <http://localhost:3200/api/health>
- MongoDB connection is established (check container logs)

4.2 Test Basic Functionality

- Register a new user
- Log in with credentials

- Create a test task
 - Verify the task appears on the dashboard
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Troubleshooting

Common Issues

1. Container Won't Start

- Check Docker logs:

`docker logs task-management-container`

- Verify port availability:

`lsof -i :3200`

2. MongoDB Connection Issues

- Verify MONGO_URI in the .env file
- Check network connectivity to MongoDB cloud instance

3. Email Notifications Not Working

- Verify Brevo SMTP configuration in the .env file
 - Check backend logs for SMTP errors
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Useful Commands

View container logs
`docker logs task-management-container`

Restart container
`docker-compose restart`

Stop container
`docker-compose down`

Rebuild and start container
`docker-compose up -d --build`

Support

- For additional support or to report issues: Contact system administrators
- Review application logs in Docker container
- Check the project's issue tracker