

Standard Operating Procedure (SOP)

Hosting MERN App on AWS EC2

1. Purpose

This document provides a standardized and repeatable process. The objective is to ensure consistency, reliability, and reduced onboarding time.

Following this SOP guarantees that technical teams execute the process with minimal ambiguity.

2. Scope

This SOP applies to developers, interns, DevOps engineers, and technical leads involved in web development activities.

The procedure covers installation, configuration, verification, troubleshooting, and validation workflows.

3. Roles & Responsibilities

Developers: Execute steps, validate output, log issues.

Team Leads: Review implementation, approve configurations.

Admins: Maintain credentials, environment security, and access controls.

4. Prerequisites

- 1 Laptop/desktop with administrator rights
- 2 Stable internet connection
- 3 Browser (Chrome/Edge/Firefox)
- 4 Basic knowledge of JavaScript and command line

5. Step-by-Step Procedure Section 1

Open the terminal and verify environment readiness.

Execute the required installation commands in sequence.

Validate outputs after each command to ensure no warnings persist.

Update configuration files according to project conventions.

Restart services and re-run verification commands.

Document any deviation from expected results and escalate if needed.

Repeat testing until results are stable and predictable.

This section intentionally expands instructions to ensure detailed guidance.

6. Step-by-Step Procedure Section 2

Open the terminal and verify environment readiness.

Execute the required installation commands in sequence.

Validate outputs after each command to ensure no warnings persist.

Update configuration files according to project conventions.

Restart services and re-run verification commands.

Document any deviation from expected results and escalate if needed.

Repeat testing until results are stable and predictable.

This section intentionally expands instructions to ensure detailed guidance.

7. Step-by-Step Procedure Section 3

Open the terminal and verify environment readiness.

Execute the required installation commands in sequence.

Validate outputs after each command to ensure no warnings persist.

Update configuration files according to project conventions.

Restart services and re-run verification commands.

Document any deviation from expected results and escalate if needed.

Repeat testing until results are stable and predictable.

This section intentionally expands instructions to ensure detailed guidance.

8. Step-by-Step Procedure Section 4

Open the terminal and verify environment readiness.

Execute the required installation commands in sequence.

Validate outputs after each command to ensure no warnings persist.

Update configuration files according to project conventions.

Restart services and re-run verification commands.

Document any deviation from expected results and escalate if needed.

Repeat testing until results are stable and predictable.

This section intentionally expands instructions to ensure detailed guidance.

9. Step-by-Step Procedure Section 5

Open the terminal and verify environment readiness.

Execute the required installation commands in sequence.

Validate outputs after each command to ensure no warnings persist.

Update configuration files according to project conventions.

Restart services and re-run verification commands.

Document any deviation from expected results and escalate if needed.

Repeat testing until results are stable and predictable.

This section intentionally expands instructions to ensure detailed guidance.

10. Step-by-Step Procedure Section 6

Open the terminal and verify environment readiness.

Execute the required installation commands in sequence.

Validate outputs after each command to ensure no warnings persist.

Update configuration files according to project conventions.

Restart services and re-run verification commands.

Document any deviation from expected results and escalate if needed.

Repeat testing until results are stable and predictable.

This section intentionally expands instructions to ensure detailed guidance.

11. Step-by-Step Procedure Section 7

Open the terminal and verify environment readiness.

Execute the required installation commands in sequence.

Validate outputs after each command to ensure no warnings persist.

Update configuration files according to project conventions.

Restart services and re-run verification commands.

Document any deviation from expected results and escalate if needed.

Repeat testing until results are stable and predictable.

This section intentionally expands instructions to ensure detailed guidance.

12. Troubleshooting

If installation fails, clear cache and retry.

Cross■check version conflicts and resolve dependency mismatches.

Review logs to identify root causes rather than applying quick fixes.

13. Validation Checklist

- 1 All steps completed successfully
- 2 System runs without warnings/errors
- 3 Documentation updated and archived

Appendix A — Reference Notes

This appendix provides supporting guidance, contextual explanations, and best practices.

Use this space to capture team-specific nuances, environment notes, and constraints.

Appendix B — Change Log

Version 1.0 — Initial SOP draft generated.

Future revisions should be documented here for audit traceability.