

AI Tool Justification & Risk Assessment Report

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AI Tool Justification

AI Tool Used:

ChatGPT (AI assistant)

Purpose of Use:

- Troubleshooting ELK installation issues
- Understanding Elasticsearch configuration
- Interpreting system logs
- Structuring incident report professionally
- Clarifying SIEM architecture concepts

Justification:

The AI tool was used as a technical support and learning aid to:

- Accelerate debugging process
- Interpret error logs
- Provide structured reporting guidance
- Improve technical documentation quality

The AI did not:

- Generate fabricated log data
- Execute attacks
- Modify system configurations automatically

All implementation steps were manually performed and verified by OluwaseunQuadri

AI Risk Assessment

1. Risks Identified

- Over-reliance on AI for troubleshooting
- Potential inaccurate recommendations
- Security risks if AI suggestions are blindly followed
- Data privacy concerns when sharing logs externally

2. Mitigation Measures

- Verified all commands before execution
- Avoided sharing sensitive credentials
- Used AI as advisory tool only
- Cross-checked documentation where necessary

3. Ethical Considerations

- AI was used responsibly
- No academic dishonesty involved
- AI functioned as technical assistant, not content replacement.

Reflection

The process of deploying and troubleshooting the ELK stack provided hands-on experience in:

- SIEM deployment
- Log aggregation
- Security configuration management
- Real-world troubleshooting under constraints

Although Elasticsearch security configuration presented challenges, resolving these issues improved understanding of cluster configuration, TLS, and service management in Linux environments.