

Mastering Elasticsearch

A Complete Guide from
Fundamentals to Production Mastery



Understand
how Elasticsearch
works under the hood



Design
high-performance
indexes



Query
with the full
Query DSL



Tune
relevance and
improve ranking



Leverage
vector and
semantic search



Operate
reliable clusters
in production



Python



Java



JavaScript



REST API

STEVE T.

Mastering Elasticsearch

A Complete Guide from Fundamentals to Production
Mastery

Steve T. Publications

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A Complete Guide from Fundamentals to Production Mastery

About this book: Elasticsearch is the world's most popular search and analytics engine, powering everything from e-commerce product search to real-time log analysis at global scale. This book takes you on a complete journey from absolute beginner to production-ready expert. You will learn how Elasticsearch works under the hood, how to deploy it across any environment, how to design indexes for maximum performance, how to write sophisticated queries using the full Query DSL, how to tune relevance and ranking, how to leverage modern vector and semantic search, and how to operate clusters reliably in production. Every chapter includes hands-on code examples in Python, Java, JavaScript, and REST API, along with real-world case studies drawn from actual deployments. Whether you are building your first search feature or managing a multi-terabyte cluster serving millions of queries per day, this book gives you the knowledge and practical skills to succeed.

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Beats: Lightweight Shippers

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Client Libraries: Python, Java, JavaScript/TypeScript

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Application Integration Patterns

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Chapter Summary

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Chapter 19: Production Case Studies

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Case Study 1: E-Commerce Product Search Platform

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Case Study 2: Real-Time Log Analytics at Scale

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Case Study 3: Security Information and Event Management (SIEM)

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Case Study 4: Document Search and Knowledge Base

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Chapter Summary

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Chapter 20: Conclusion and Future Directions

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Key Lessons from Production Experience

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The Future of Search: AI, Vectors, and Beyond

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Building a Search Culture in Your Organization

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Final Thoughts

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Appendix: Comprehensive Reference

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Common CLI Commands and cURL Examples

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REST API Endpoints Quick Reference

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Query DSL Pattern Library

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Configuration Parameters Reference

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Client Library Code Snippets

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References

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