CASE STUDY

SQUARESHIFT

Elevating Enterprise Search: Solr to Elasticsearch Migration

2x	70+	50%
Faster query response	Indices Migrated	Automated Snapshot

CLIENT

A global professional services firm modernized its search capabilities by migrating from Solr to Elasticsearch v8.16.1 on a cloud-native ECK Operator v3.0.0 deployment within Google Kubernetes Engine (GKE).

PROJECT CONTEXT

- Migrating from legacy Solr to the Elastic Stack.
- Deploying the ECK environment entirely on GKE.
- Ensuring production-grade security, scalability, and observability.
- Executing a seamless, reliable migration of all data from Solr to Elasticsearch.

PROJECT OBJECTIVES

- Establish a new, best-practices ECK setup from scratch for all environments.
- Data Migration: Migrate all data from Solr to Elasticsearch using custom scripts, optimising search workloads.

SOLUTION DELIVERY

- Deployed ECK v3.0.0 with Elasticsearch v8.16.1 on GKE (3 master, 3 hot, 3 cold nodes).
- Used custom Python scripts to execute seamless Solr-to-Elasticsearch data transfer.
- Configured Snapshot/Restoration workflows to safeguard all migrated data.
- Designed production security model: RBAC and Field/Document-Level Security.
- Implemented Stack Monitoring, slow logs, ILM tuning, and autoscaling recommendations.

TECHNOLOGY STACK