Ninja Stock Analytics

TATA CONSULTANCY SERVICES

Stock Analytics application – Receives the Data feed from various sources (NSE, Sentiment indicators & Currency rates) and Build the portfolio strength/value for a given trade strategy.

- **Pain Areas**
  - Long time to market
  - Inconsistent in application logs
  - Unavailability of Unified application strength
  - Frequent downtime

- **Areas of Improvement:**
  - Missing Collaboration
  - Environment inconsistency

- **Goal Statement:**

  Reduced Cost/time to delivery
  Deploy with reliable/repeatable process
  Reduce deployment downtime
  Ensure High Availability

- **Identified Solutions:**

  Unified Code Repository

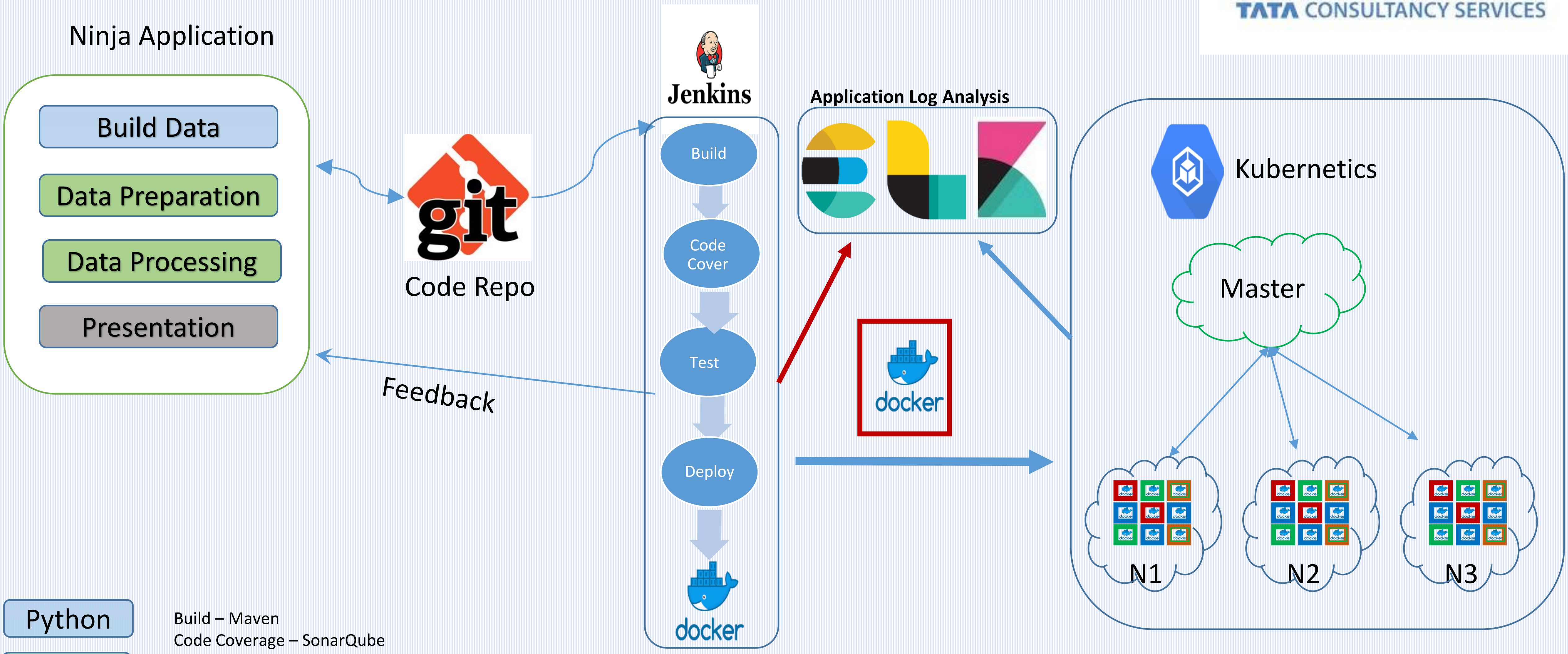
  Pipeline the process from Build to Deploy for Continuous Integration

  Use Containerized applications to eliminate the environmental inconsistency

  Use Kubernetes cluster to ensure Continuous Delplyment & High Availability

  Improve the Health & Build monitoring using ELK(Elastic Search, Logstash & Kibana)

Solution Architecture



Python

Java

JSP

Build – Maven
Code Coverage – SonarQube

Application Log Analysis
Elastic Search
LogStash
Kibana

Enhancements in pipeline

Application in Use..

Story #1
Change the application to consider sentiment analysis indicator for the strategy

Story #2
Change the currency from INR to USD, based on the rate

Achieved Benefits:

- Reduced time to market
- Inconsistent environment to immutable environment
- Zero downtime for change deployment
- High Application availability
- **Scalable Unified Application log monitoring & Log analytics**

Benefits in Pipeline:

- Build Logs monitoring with ELK stack in pipeline

Questions