Knowledge Management Information Tool Analytics with Distributed Database Engine

Kavitha Megalageri (Graduate Research Assistant), Dr. Leonel Lagos, Dr. Himanshu Upadhyay
Applied Research Center, Florida International University, Miami, Florida

INTRODUCTION

- The D&D KM-IT is a web-based knowledge management information tool custom built for the deactivation and decommissioning (D&D) user community
- The system allows interested users to post information which goes through a custom work flow
- To better improve the performance and user experience, the analysis of server logs is being conducted using MongoDB
- MongoDB is a document database that provides high performance, high availability, and easy scalability
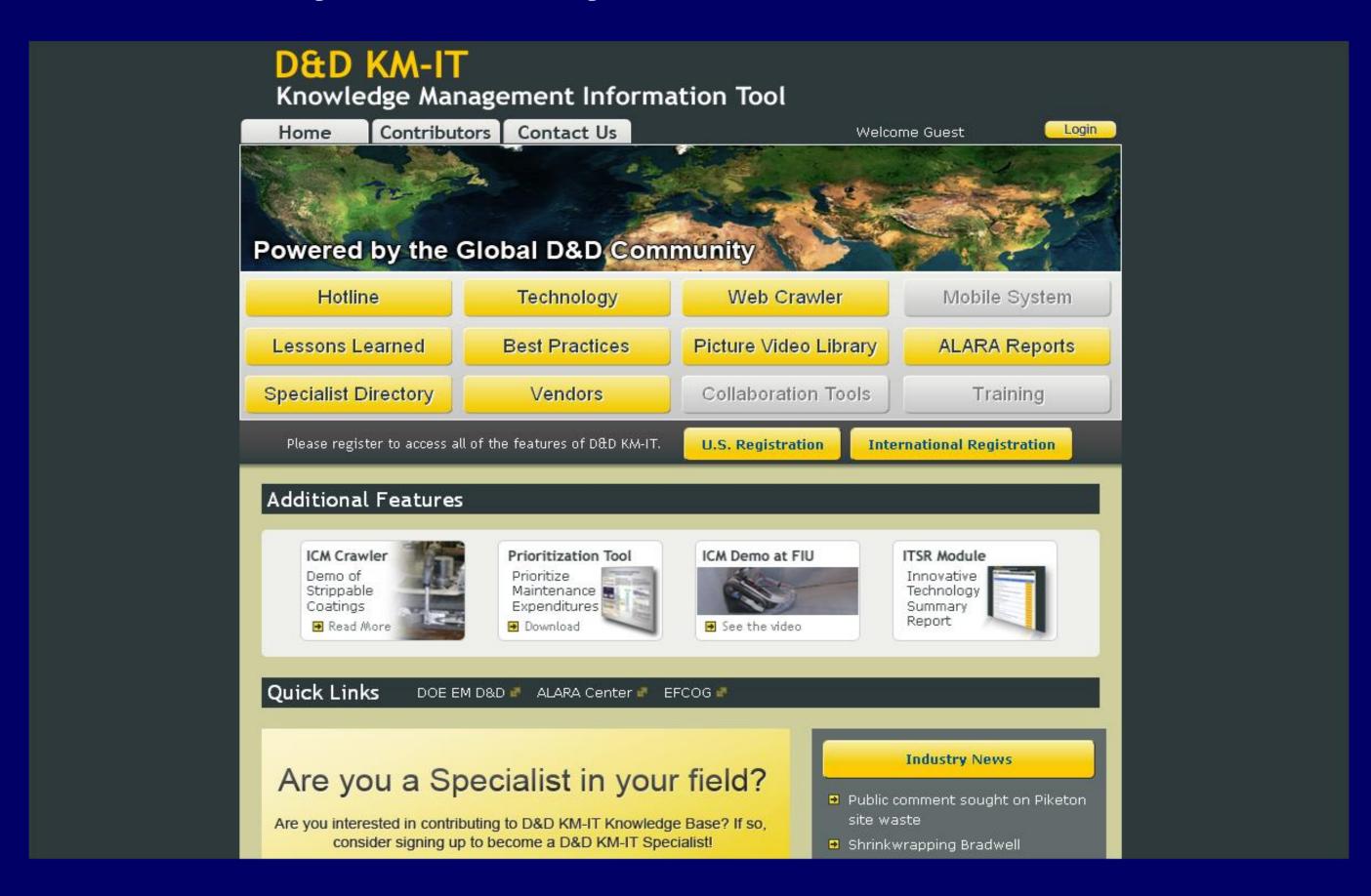
Fig 1. Deactivation and Decommissioning Knowledge Management Information Tool

OBJECTIVES

- Feasibility study of Distributed Database Engine, MongoDB for web analytics
- Analyze server logs to evaluate D&D KM-IT module usage
- Generate useful information from the analysis

METHOD

- The server logs were loaded and stored in MongoDB for analysis
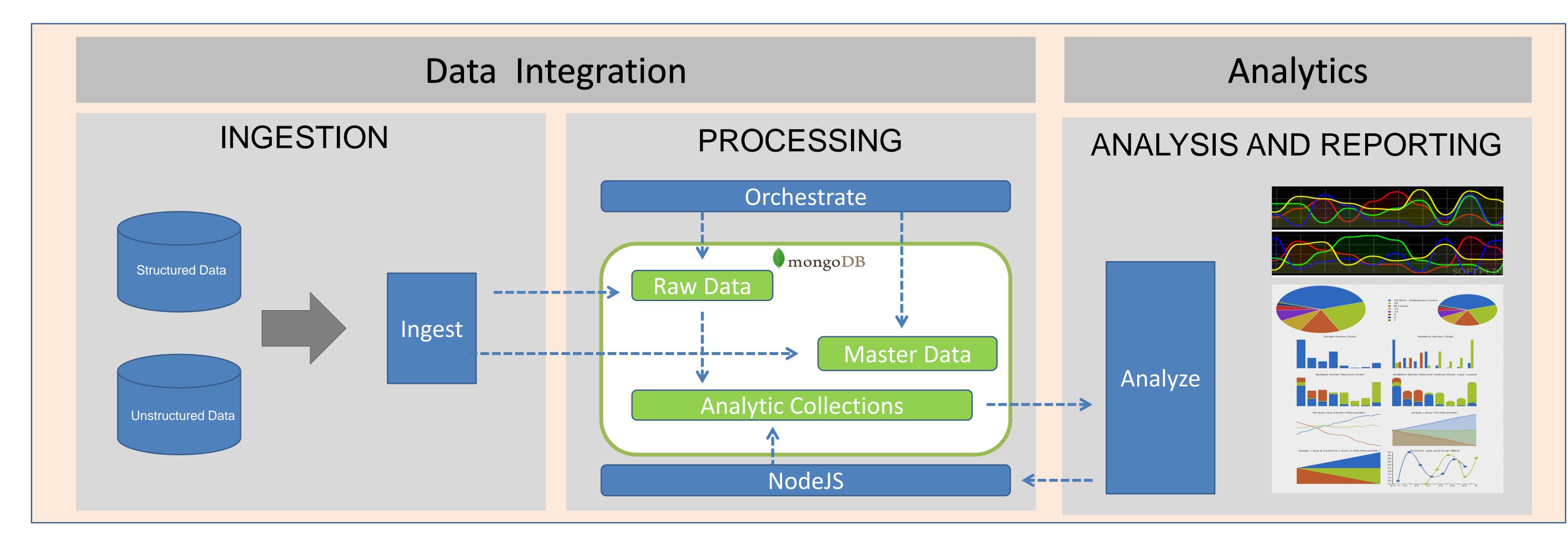- Analysis and visualization was performed using NodeJS and Java Script library

Fig 2. MongoDB Architecture

RESULTS

- It was possible to store log files in MongoDB
- Log files with different time stamps and groups from different servers can be aggregated
- Queries can be written to extract meaningful information from aggregated log files (e.g. users from different countries/organizations)

CONCLUSION

- MongoDB is useful for server log analytics as the analyst can immediately access, analyze, and visualize MongoDB data based on the requirements
- The information can be extracted to develop custom reports
- Optimized queries can be run for fast data access

PATH FORWARD

- Custom queries need to be developed to extract information leading to improved user information

ACKNOWLEDGEMENTS

- Mr. Clint Miller
- Mr. Walter Quintero
- Ms. Peggy Shoffner