FANDS INFONET PVT. LTD.

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A Fast AND Steady Approach

FANDSKILL
Behavioral Skills for Corporate

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Cassandra – Developer Track

Duration
2day

Introducing Cassandra
- A Quick Review of Relational Databases
- Use Cases for Cassandra
  - Large Deployments
  - Lots of Writes, Statistics, and Analysis
  - Geographical Distribution
  - Evolving Applications

Installing Cassandra
- Basic CLI Commands
- Connecting to a Server
- Describing the Environment
- Creating a Keyspace and Column Family
- Writing and Reading Data

The Cassandra Data Model
- The Relational Data Model
- Clusters
- Keyspaces
- Column Families
  - Column Family Options
- Columns
  - Wide Rows, Skinny Rows
  - Column Sorting
- Super Columns
  - Composite Keys
- Design Differences Between RDBMS and Cassandra
  - No Query Language
  - No Referential Integrity
  - Secondary Indexes
  - Sorting Is a Design Decision
  - Denormalization
- Design Patterns
  - Materialized View
  - Valueless Column
  - Aggregate Key

The Cassandra Architecture
- System Keyspace
- Peer-to-Peer
- Gossip and Failure Detection
- Anti-Entropy and Read Repair
- Memtables, SSTables, and Commit Logs
- Compaction
- Bloom Filters

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Configuring Cassandra
- Keyspaces
  - o Defining Keyspaces
- Creating a Column Family
  - o Designing Column Families
- Replicas
- Replica Placement Strategies
  - o Indexes in Cassandra
    - Primary
    - Secondary

Planning Your Data Model

Managing and Accessing Data in Cassandra
- About Writes in Cassandra
- Managing Stored Data
- About Transactions and Concurrency Control
- About Inserts and Updates
- About Deletes
- Simple Get
- Batches Deletes

Cassandra CLI

Cassandra web console

Java: Hector Client API
- Initializing a cluster
- Creating a template
- Accessing data
- Hector Pool Architecture
- Using CQL

Introduction to Pelops (Java)

Monitoring
- Logging
- Cassandra MBeans
- Runtime Analysis Tools

Maintenance
- Ring Information
- Snapshot