

## **CLLOUDERA APACHE HBASE COURSE CONTENT**

### ❖ **INTRODUCTION TO HBASE:**

- What Is HBase?
- HDFS and HBase
- HBase Usage Scenarios

### ❖ **THE HBASE DATA MODEL:**

- Overview of the HBase Data Model
- Designing Tables
- Column Families
- Cells and Versions

### ❖ **THE HBASE SHELL:**

- Running the Shell
- Creating the Tables
- Accessing Data in Tables
- Administration
- Scripting
- Hands-On Exercise

### ❖ **HBASE ARCHITECTURE:**

- Components of an HBase Cluster
- Regions
- Flushes and Compactions
- Reading and Writing to HBase
- Bloom Filters and Block Cache
- WAL and Crash Recoverys

### ❖ **SCHEMA DESIGN:**

- Schema Fundamentals
- Designing for Locality
- Timeseries Data
- Reverse Timestamps
- Secondary Indexes
- Schema Design Examples

### ❖ **THE HBASE API:**

- Administrative Classes
- Basic Operations
- Advanced Operations
- Non-Java APIs

### ❖ **HBASE CONFIGURATION AND TUNING:**

- Configuration Overview
- System Requirements
- HBase Run Modes
- ZooKeeper
- Java and Garbage Collection
- Performance Tuning
- Troubleshooting

❖ **HBASE ADMINISTRATION:**

- Monitoring
- Backup
- Tools
- Compression
- Managed Operations
- Capacity Planning

❖ **CONCLUSION:**

❖ **APPENDIX A: HFILE FORMAT:**

❖ **APPENDIX B: CLOUDERA ENTERPRISE:**

❖ **APPENDIX C: HIVE AND HBASE:**

- What Is Hive?
- Hive vs. HBase
- Use Cases
- Integrating Hive and HBase

❖ **APPENDIX D: MAPREDUCE AND BULK LOADS:**

- What Is MapReduce?
- HBase and MapReduce
- Bulk Loading with MapReduce



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