

KAÏNA-COM TRAINING CATALOGUE

Big Data: Modeling, Technology and Architecture



Nos locaux
KAÏNA-COM France
LE CARRÉ HAUSSMANN II
6 Allée de la Connaissance
77 127 Lieusaint



Contact
+33(0)9 50 20 91 64



E-mail
info@kaina-com.fr



Site Internet
www.kaina-com.fr

KDS008 – Big Data: Modeling, Technology and Architecture

Reference KDS008

Experience

- Beginner
- Intermediate
- Advanced

Duration Training Program:

- 3 days

Training Method

- I: i-learning, individual training (web-based training)
- V: v-learning, virtual class
- C: c-learning, classroom training

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Price 2.049,00 € HT

Prerequisite None

Audience Developers, Architects, Product Managers and Managers who wants to know about Big Data.

Continued on next page



KDS008 – Big Data: Modeling, Technology and Architecture, Continued

Objective

Today companies have the capability to collect large amount of data. Handling large amount of data requires new technologies that are able to collect, cleanse, process and store effectively significant amount of information.

Many companies reached the conclusion that not using this collected data is actually losing large amount of money. Big Data market is estimated to surpass \$200 billion this year.

There is a tremendous business in Big Data and with the right methodologies and tools this row Data can be available for use. This course provide the basis for Big Data and NoSQL DB environment, architecture, process and available tools. The course will also present Big Data methodologies and deployment recommendations

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KDS008 – Big Data: Modeling, Technology and Architecture, Continued

Course Contents

Course Contents :

Table 1: KDS008 - Course Contents

Chapter	Description
Introduction	<ul style="list-style-type: none"> • Definition: Big Data, NoSQL • The need for Big Data technology • Tradition technologies Vs Big Data technologies
Big Data Architecture	<ul style="list-style-type: none"> • Big Data Architecture
Data Collection & Ingestion	<ul style="list-style-type: none"> • Streaming Concept <ul style="list-style-type: none"> – Rest API • Apache Kafka <ul style="list-style-type: none"> – AWS Kinesis, Azure Event Hub • Apache Flume • Log Stash • Commercial solutions – Splunk, Logz.io
Hadoop	<ul style="list-style-type: none"> • What is Hadoop? • Hadoop Architecture • Hadoop File System (HDFS) <ul style="list-style-type: none"> – Architecture – NameNode & DataNode • Hadoop MapReduce • Apache YARN • Apache Oozie, Sentry, Tez, HCatalog, ZooKeeper, Ambri, Knox, Falcon • Hadoop Distribution <ul style="list-style-type: none"> – Examples: Cloudera, Hortonworks • Hadoop Performance Best Practices
Apache Pig	<ul style="list-style-type: none"> • Apache Pig

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KDS008 – Big Data: Modeling, Technology and Architecture, Continued

Course Contents, continued

Chapter	Description
Apache Storm	<ul style="list-style-type: none">• Apache Storm
Apache Spark	<ul style="list-style-type: none">• Concept & Architecture• Programming with Spark• Spark Streaming• Spark SQL, Datasets, and DataFrames• MLlib• GraphX
Big Data DB types	<ul style="list-style-type: none">• Big Data DB types
Key-Values Stores	<ul style="list-style-type: none">• Redis
Column Family Stores (Wide Column Stores)	<ul style="list-style-type: none">• Apache HBase• Apache Cassandra
Document Databases	<ul style="list-style-type: none">• MongoDB<ul style="list-style-type: none">– Architecture & Data Model– JSON query– Performance Best Practices
Graph Databases	<ul style="list-style-type: none">• Mathematical Graph as a DB• Architecture and components
'SQL' over Hadoop	<ul style="list-style-type: none">• Apache Pig!• Apache Sqoop• Apache Hive<ul style="list-style-type: none">– Architecture – Batch Processing– Apache Impala– Massively Parallel Processing (MPP)

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KDS008 – Big Data: Modeling, Technology and Architecture, continued

Course Contents, continued

Chapter	Description
Big Data Deployment	<ul style="list-style-type: none">• Local Data Center• Hosting Services<ul style="list-style-type: none">– AWS, Azure, Google• Pros and Cons
Big Data Northbound Interfaces	<ul style="list-style-type: none">• Big Data to OLAP• BI Visualization• Scaling BI over Big Data
The End	<ul style="list-style-type: none">• Trends & Conclusions• Q&A• Course's Evaluation

