Big Data Architecture Workshop

Category: AI, Data & Analytics | **Vendor:** Various

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Big Data Architecture Workshop (BDAW) is a learning event that addresses advanced big data architecture topics. BDAW brings together technical contributors into a group setting to design and architect solutions to a challenging business problem. The workshop addresses big data architecture problems in general, and then applies them to the design of a challenging system. Throughout the highly interactive workshop, students apply concepts to real-world examples resulting in detailed synergistic discussions. The workshop is conducive for students to learn techniques for architecting big data systems, not only from Cloudera's experience but also from the experiences of fellow students.

About This Course

Big Data Architecture Workshop (BDAW) is a learning event that addresses advanced big data architecture topics. BDAW brings together technical contributors into a group setting to design and architect solutions to a challenging business problem. The workshop addresses big data architecture problems in general, and then applies them to the design of a challenging system. Throughout the highly interactive workshop, students apply concepts to real-world examples resulting in detailed synergistic discussions. The workshop is conducive for students to learn techniques for architecting big data systems, not only from Cloudera's experience but also from the experiences of fellow students.

Who Should Attend

Senior Executives

CIOs and CTOs

Business Intelligence Executives

Marketing Executives

Data & Business Analytics Specialists

Innovation Specialists & Entrepreneurs

Academics, and other people interested in Big Data

Learning Outcomes

Upon successful completion of this course, participants will be able to:

More specifically, BDAW addresses advanced big data architecture topics, including, data formats, transformation, real-time, batch and machine learning processing, scalability, fault tolerance, security and privacy, minimizing the risk of an unsound architecture and technology selection.

Detailed Course Outline

Workshop Application Use Cases

- Oz Metropolitan
- Architectural questions
- Team activity: Analyze Metroz Application Use Cases

Application Vertical Slice

- Definition
- Minimizing risk of an unsound architecture
- Selecting a vertical slice
- Team activity: Identify an initial vertical slice for Metroz

Application Processing

- Real time, near real time processing
- Batch processing
- Data access patterns
- Delivery and processing guarantees
- Machine Learning pipelines
- Team activity: identify delivery and processing patterns in Metroz, characterize response time requirements, identify Machine Learning pipelines

Application Data

- Three Vs of Big Data
- Data Lifecycle
- Data Formats
- Transforming Data
- Team activity: Metroz Data Requirements

Scalable Applications

- Scale up, scale out, scale to X

  Determining if an application will scale

  Poll: scalable airport terminal designs

  Hadoop and Spark Scalability

  Team activity: Scaling Metroz

Fault Tolerant Distributed Systems

- Principles

  Transparency

  Hardware vs. Software redundancy

  Tolerating disasters

  Stateless functional fault tolerance

  Stateful fault tolerance

  Replication and group consistency

  Fault tolerance in Spark and Map Reduce

  Application tolerance for failures

  Team activity: Identify Metroz component failures and requirements

Security and Privacy

- Principles
- Privacy
- Threats
- Technologies
- Team activity: identify threats and security mechanisms in Metroz

Deployment

- Cluster sizing and evolution
- On-premise vs. Cloud
- Edge computing
- Team activity: select deployment for Metroz

Technology Selection

- HDFS
- HBase
- Kudu
- Relational Database Management Systems
- Map Reduce
- Spark, including streaming, SparkSQL and SparkML
- Hive
- Impala
- Cloudera Search
- Data Sets and Formats
- Team activity: technologies relevant to Metroz

Software Architecture

- Architecture artifacts
- One platform or multiple, lambda architecture
- Team activity: produce high level architecture, selected technologies, revisit vertical slice
- Vertical Slice demonstration

Additional Course Details

Nexus Humans Big Data Architecture Workshop training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Big Data Architecture Workshop course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Big Data Architecture Workshop?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Big Data Architecture Workshop course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Big Data Architecture Workshop training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Big Data Architecture Workshop?

Yes, we provide corporate training, dedicated training, and closed classes for Big Data Architecture Workshop. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for Big Data Architecture Workshop?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Big Data Architecture Workshop training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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