# Big Data on Amazon Web Services

**COURSE OVERVIEW:**

Big Data on Amazon Web Services (AWS) introduces you to cloud-based big data solutions and Amazon Elastic MapReduce (EMR), the AWS big data platform. In this course, we show you how to use Amazon EMR to process data using the broad ecosystem of Hadoop tools like Pig and Hive. We also teach you how to create big data environments, work with Amazon DynamoDB and Amazon Redshift, understand the benefits of Amazon Kinesis, and leverage best practices to design big data environments for security and cost-effectiveness.

**WHO WILL BENEFIT FROM THIS COURSE?**

- Individuals responsible for designing and implementing big data solutions, namely Solutions Architects and SysOps Administrators
- Data Scientists and Data Analysts interested in learning about big data solutions on AWS

**PREREQUISITES:**

- Basic familiarity with big data technologies, including Apache Hadoop and HDFS
- Working knowledge of core AWS services and public cloud implementation
- Basic understanding of data warehousing, relational database systems, and database design

**COURSE OBJECTIVES:**

- Understand Apache Hadoop in the context of Amazon EMR
- Understand the architecture of an Amazon EMR cluster
- Launch an Amazon EMR cluster using an appropriate Amazon Machine Image and Amazon EC2 instance types
- Choose appropriate AWS data storage options for use with Amazon EMR
- Know your options for ingesting, transferring, and compressing data for use with Amazon EMR
- Use common programming frameworks available for Amazon EMR including Hive, Pig, and Streaming
- Work with Amazon Redshift to implement a big data solution
- Leverage big data visualization software
- Choose appropriate security options for Amazon EMR and your data
- Perform in-memory data analysis with Spark and Shark on Amazon EMR
- Choose appropriate options to manage your Amazon EMR environment cost-effectively
- Understand the benefits of using Amazon Kinesis for big data

**COURSE OUTLINE:**

**Day 1**

- Overview of Big Data, Apache Hadoop, and the Benefits of Amazon EMR
- Amazon EMR Architecture
- Using Amazon EMR
- Launching and Using an Amazon EMR Cluster
- Hadoop Programming Frameworks

**Day 2**
- Using Hive for Advertising Analytics
- Using Streaming for Life Sciences Analytics
- Overview: Spark and Shark for In-Memory Analytics
- Using Spark and Shark for In-Memory Analytics
- Managing Amazon EMR Costs
- Overview of Amazon EMR Security
- Data Ingestion, Transfer, and Compression
- Using Amazon Kinesis for Real-Time Big Data Processing

**Day 3**
- Using Amazon Kinesis for Real-Time Big Data Processing
- AWS Data Storage Options
- Using DynamoDB with Amazon EMR
- Overview: Amazon Redshift and Big Data
- Using Amazon Redshift for Big Data
- Visualizing and Orchestrating Big Data
- Using Tableau Desktop or Jaspersoft BI to Visualize Big Data

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Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their cloud technology investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

What sets SLI apart is not only our immense selection of trainings options, but our convenient and consistent delivery system. No matter how complex your environment is or where you are located, SLI is sure to have a training solution that you can count on!

**Premiere World Class Instruction Team**
- All SLI instructors have a four-year technical degree, instructor level certifications and field consulting work experience.
- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

**Enhanced Learning Experience**
- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

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- Enthusiastic Student Services team available to answer any questions and ensure a quality training experience