

Apache Storm, developing applications for Big Data



SII-343 3 Days (21 Hours)

Description

In this training, you will learn to develop applications allowing you to process data and services placed in the Cloud in real time. You will also discover the advantages of Storm compared to traditional Big Data and understand its real-time distributed computing system.

Who is this training for ?

For whom

Designers, developers.

Prerequisites

Aucune

Training objectives

- Process data placed in the Cloud in real time
- Coordinate exchanges
- Develop services for the Cloud
- Synchronize data between a private Cloud and a social network

Training program

Le Big Data

- Definition of the scope of Big Data.
- The Hadoop project, positioning of the Storm project.
- The basic concepts of Big Data projects.
- Difference between private and public Cloud Computing.
- Big Data architectures based on the Storm project.
- Demonstration Examples of Storm use.

Introduction au projet Apache Storm

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We are at your disposal De Lun - Ven 09h00-18h00

- Defining the development environment.
- Creating projects based on Storm.
- Defining Storm components (spout and bolt).
- Defining Storm flows.
- Data model (key, value).
- Hands-on Use the Storm API to manage user records.

Scalabilité horizontale

- Definition of high availability.
- Possible topologies.
- Parallelization of calculations and data processing.
- Scalability of Web servers.
- Using Storm cluster.
- Database scalability.
- Practical work Manage the increase in load by increasing web servers.

Traitement des messages garantis

- Definition of a "fully processed" message.
- Lifecycle of a message.
- The Storm API for defining reliability .
- Strategy for implementing reliability for an application using Big Data.
- Practical work Regulate customer messages and ensure their follow-up.

Tolérance aux pannes

- Management of Bolts.
- The Apache Kafka project.
- Definition of transactions.
- Transactional topology and Storm cluster.
- Roles of Nimbus and ZooKeeper.
- Practical work Using ZooKeeper for distributed negotiation.

Développement de services pour le Cloud

- Programming services with the different languages ??Clojure, Java, Ruby, Python.
- Introduction to new languages.
- Practical work Apply interoperability in real-time Big Data.

Interconnexion avec les réseaux sociaux

- Using Twitter4J.
- Configuring access security.
- Event management with Storm.
- Defining callback.
- Practical work Synchronize data between a private Cloud and a social network.