

## Analyzing Big Data with Microsoft R (20773)

- **Formato do curso:** Presencial
- **Localidade:** Porto
- **Data:** 18 Mar. 2019 a 25 Mar. 2019
- **Preço:** 1170€
- **Horário:** Pós-laboral - das 18h30 às 22h00
- **Duração:** 21 horas

The main purpose of the course is to give students the ability to use Microsoft R Server to create and run an analysis on a large dataset, and show how to utilize it in Big Data environments, such as a Hadoop or Spark cluster, or a SQL Server database.

### Destinatários

- The primary audience for this course is people who wish to analyze large datasets within a big data environment.
- The secondary audience are developers who need to integrate R analyses into their solutions.

### Pré-requisitos

- Programming experience using R, and familiarity with common R packages
- Knowledge of common statistical methods and data analysis best practices.
- Basic knowledge of the Microsoft Windows operating system and its core functionality.

### Objectivos

- Explain how Microsoft R Server and Microsoft R Client work
- Use R Client with R Server to explore big data held in different data stores
- Visualize data by using graphs and plots
- Transform and clean big data sets
- Implement options for splitting analysis jobs into parallel tasks
- Build and evaluate regression models generated from big data
- Create, score, and deploy partitioning models generated from big data
- Use R in the SQL Server and Hadoop environments

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# Programa

## Microsoft R Server and R Client

- What is Microsoft R server
- Using Microsoft R client
- The ScaleR functions

## Exploring Big

- Understanding ScaleR data sources
- Reading data into an XDF object
- Summarizing data in an XDF object

## Visualizing Big Data

- Visualizing In-memory data
- Visualizing big data

## Processing Big Data

- Transforming Big Data
- Managing datasets

## Parallelizing Analysis Operations

- Using the RxLocalParallel compute context with rxExec
- Using the revoPemaR package
- Creating and Evaluating Regression
- Clustering Big Data
- Generating regression models and making predictions

## Creating and Evaluating Partitioning Models

- Creating partitioning models based on decision trees.
- Test partitioning models by making and comparing predictions

## Processing Big Data in SQL Server and Hadoop

- Using R in SQL Server
- Using Hadoop Map/Reduce
- Using Hadoop Spark