

## Event Hub and Stream Analytics

CODICE	DT0098
DURATA	2 gg
PREZZO	800,00 €
EXAM	

### DESCRIZIONE

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The presentation to participants of main services used for the IoT infrastructure developments takes place through a practical workshop.

Attendees will experience three services: IotHub, IotCentral and Stream Analytics, deepening the logic of data collection and writing in a cloud context.

Moreover, general-purpose data storage and visualisation services will be presented along with those IoT specific solutions, to overview the dataflow from data collection to data visualisation.

### TARGET

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Data Engineer, Data Scientist, Data Analyst, IoT Data Scientist

### PREREQUISTI

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Nessuno

### CONTENUTI

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Modulo 1:

- Internet of Things: Introduction to IoT, Type of solutions, Introduction to Ingestion services
- Azure IoT Hub: Introduction to Azure IoT Hub, Device or Gateway,
- Communication Protocols, Device Registration, Device Communication to Cloud, Cloud to Device Communication, Message Routing
- Azure Stream Analytics: Introduction to Azure Stream Analytics, Processing
- Real-Time of messages, Definition of a Stream Analytics Job (Input, Output, Query and Function), The SAQL language, Aggregation in SAQL (the “time window” functions)
- Azure IoT Central: Introduction to Azure IoT Central, Device, Templates,
- Data Visualization, Device Communication to Cloud, Cloud to Device
- Communication

- IoT Solution Store Data: Store IoT data: Data Stores involved (Azure Storage, Data Lake Store, Azure SQL)
- IoT Solution Data Visualization: Architecture of an IoT solution:
- Presentation Layer, Azure components used for the frontend of an IoT solution
- Power BI Real-Time Streams: Analyse the Real-Time IoT flows within Power BI
- Power BI Historical Data: Analyse the IoT historical data within Power BI
- Predictive Maintenance: Introduction to Predictive Maintenance

## Modulo 2

- Hands On Laboratory