

# IBM InfoSphere DataStage v11.5 - Advanced Data Processing

Course code: KM423G

This course is designed to introduce you to advanced parallel job data processing techniques in DataStage v11.5. In this course you will develop data techniques for processing different types of complex data resources including relational data, unstructured data (Excel spreadsheets), and XML data. In addition, you will learn advanced techniques for processing data, including techniques for masking data and techniques for validating data using data rules. Finally, you will learn techniques for updating data in a star schema data warehouse using the DataStage SCD (Slowly Changing Dimensions) stage. Even if you are not working with all of these specific types of data, you will benefit from this course by learning advanced DataStage job design techniques, techniques that go beyond those utilized in the DataStage Essentials course.

Affiliate	Duration	Course price	ITB
Praha	2	23 600 Kč	0
Brno	2	23 600 Kč	0
Bratislava	2	940 €	0

The prices are without VAT.

## Course terms

Date	Duration	Course price	Type	Course language	Location
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The prices are without VAT.

## Who is the course for

Experienced DataStage developers seeking training in more advanced DataStage job techniques and who seek techniques for working with complex types of data resources.

## What we teach you

Use Connector stages to read from and write to database tables

Handle SQL errors in Connector stages

Use Connector stages with multiple input links

Use the File Connector stage to access Hadoop HDFS data

Optimize jobs that write to database tables

Use the Unstructured Data stage to extract data from Excel spreadsheets

Use the Data Masking stage to mask sensitive data processed within a DataStage job

Use the Hierarchical stage to parse, compose, and transform XML data

Use the Schema Library Manager to import and manage XML schemas

Use the Data Rules stage to validate fields of data within a DataStage job

Create custom data rules for validating data

Design a job that processes a star schema data warehouse with Type 1 and Type 2 slowly changing dimensions

## Required skills

DataStage Essentials course or equivalent.

## Course outline

- Unit 1 –Accessing databases Topic 1: Connector stage overview • Use Connector stages to read from and write to relational tables • Working with the Connector stage properties Topic 2: Connector stage functionality • Before /

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- After SQL • Sparse lookups • Optimize insert/update performance
- Topic 3: Error handling in Connector stages • Reject links • Reject conditions
- Topic 4: Multiple input links • Designing jobs using Connector stages with multiple input links • Ordering records across multiple input links
- Topic 5: File Connector stage • Read and write data to Hadoop file systems
- Demonstration 1: Handling database errors
- Demonstration 2: Parallel jobs with multiple Connector input links
- Demonstration 3: Using the File Connector stage to read and write HDFS files
- Unit 2 – Processing unstructured data
- Topic 1: Using the Unstructured Data stage in DataStage jobs • Extract data from an Excel spreadsheet • Specify a data range for data extraction in an Unstructured Data stage • Specify document properties for data extraction.
- Demonstration 1: Processing unstructured data
- Unit 3 – Data masking
- Topic 1: Using the Data Masking stage in DataStage jobs • Data masking techniques • Data masking policies • Applying policies for masquerading context-aware data types • Applying policies for masquerading generic data types • Repeatable replacement • Using reference tables • Creating custom reference tables
- Demonstration 1: Data masking
- Unit 4 – Using data rules
- Topic 1: Introduction to data rules • Using the Data Rules Editor • Selecting data rules • Binding data rule variables • Output link constraints • Adding statistics and attributes to the output information
- Topic 2: Use the Data Rules stage to validate foreign key references in source data
- Topic 3: Create custom data rules
- Demonstration 1: Using data rules
- Unit 5 – Processing XML data
- Topic 1: Introduction to the Hierarchical stage • Hierarchical stage Assembly editor • Use the Schema Library Manager to import and manage XML schemas
- Topic 2: Composing XML data • Using the HJoin step to create parent-child relationships between input lists • Using the Composer step
- Topic 3: Writing Hierarchical data to a relational table
- Topic 4: Using the Regroup step
- Topic 5: Consuming XML data • Using the XML Parser step • Propagating columns
- Topic 6: Transforming XML data • Using the Aggregate step • Using the Sort step • Using the Switch step • Using the H-Pivot step
- Demonstration 1: Importing XML schemas
- Demonstration 2: Compose hierarchical data
- Demonstration 3: Consume hierarchical data
- Demonstration 4: Transform hierarchical data
- Unit 6: Updating a star schema database
- Topic 1: Surrogate keys • Design a job that creates and updates a surrogate key source key file from a dimension table
- Topic 2: Slowly Changing Dimensions (SCD) stage • Star schema databases • SCD stage Fast Path pages • Specifying purpose codes • Dimension update specification • Design a job that processes a star schema database with Type 1 and Type 2 slowly changing dimensions
- Demonstration 1: Build a parallel job that updates a star schema database with two dimensions

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