Enterprise Computing Solutions - Education Services

TRAINING OFFERING

You can reach us at:

Arrow ECS B.V., Kromme Schaft 5, 3991 AR Houten, The Netherlands

Email: education.ecs.nl@arrow.com
Phone: +31 20 582 6109

Db2 12 for zOS: Basics for DBA Beginners

CODE:	LENGTH:	PRICE:
CV042G	40 Hours (5 days)	€3,900.00

Description

Db2 12 for z/OS DBAs can develop fundamental skills or recognition through lectures and hands-on exercises of:

- TSO/E and ISPF
- Data sets
- Db2 Objects
- Structured Query Language
- Db2 Commands
- JCL and SDSF
- Db2 Utilities
- Db2 Logging
- Db2 Program Preparation

The course materials cover Db2 12 for z/OS.

Objectives

- Describe several services provided in a z/OS environment
- Explain workloads in the batch environment
- Explain workloads in the online environment
- Describe job roles in a z/OS environment
- Log On to TSO/E
- Navigate TSO/E and ISPF
- Use TSO commands
- Setup and utilize JCL (Job Control Language)
- Utilize SDSF
- Describe the different types of data sets in a z/OS environment
- Allocate data sets and list data set information and content
- Create and modify data set content
- Give an overview of the Db2 12 environment
- Describe and utilize Db2 Objects
- Describe and utilize several DB2 Utilities
- Describe the Db2I (Db2 Interactive Facility) environment
- Use SPUFI (SQL Processing Using File Input) to compose and execute SQL
- Setup and execute Db2 Commands
- Understand Db2 Logging
- Describe Db2 program preparation process
- Understand Db2 startup and shutdown
- Understand and utilize Db2 recovery strategies

Audience

This beginning DB2 basic course is for z/OS database administrators who need to acquire the basic skills required to administer a DB2 database in a z/OS environment.

Programme

Unit 1Introduction

- The modern Mainframe Environment
- Defining z/OS
- What are the benefits of z/OS?
- Typical z/OS workloads
- Batch processing
- Online Transaction Processing
- Job roles in the Mainframe environment
- z/OS Components and Services
- UNIX System Services
- The Parallel Sysplex Environment
- z/OS Management Interfaces

Unit 2TSO/E and ISPF

- Emulators
- z/VM systems
- 2.1. TSO/E
- TSO Logon panel
- Changing passwords
- Additional logon panel options
- The Reconnect option
- TSO READY prompt
- TSO HELP command
- LISTALC command
- PROFILE command
- Changing PROFILE
- LOGOFF command
- Scripting support
- 2.2. ISPF
- What is ISPF
- ISPF command
- ISPF Primary Option Menu
- Primary Option Menu Areas
- Action Bar
- Options option
- ISPF Settings
- Global Color Change Utility
- Function Keys
- Option or Command Prompt
- Keylist Utility
- F3 Exit
- F1 Help
- F2 Split
- ISPF Navigation Techniques
- PFSHOW
- More ISPF commands
- Option listing
- ISPF Command Shell
- TSO Command Prefix

Unit 3Data Sets

- Data sets
- Types of data sets
- DASD versus Tape
- Volumes
- Storage allocation
- Data set naming conventions
- Catalogs
- Storage Management
- Checkpoint
- 3.2. Sequential Data Sets
- Creating data sets
- Utility Selection Panel
- Data Set Utility Panel
- Creating a data set
- Allocate New Data Set
- Creating a sequential data set
- Editing a sequential data set

- ISPF Editor
- ISPF Editor primary commands
- ISPF Editor line commands
- Data Set List Utility
- Data set name wild cards
- Data Set List Utility
- DSLIST results
- Select Action
- HELP on Line Commands
- DSLIST by volume
- 3.3. Partitioned Data Sets
- Partitioned data sets
- Creating a PDS
- PDS members
- Creating a PDS member Library Utility Panel
- DSLIST Utility
- PDS Member List
- Member Actions
- 3.4. VSAM Data Sets
- VSAM data sets
- VSAM data set components
- Creating a VSAM data set

Unit 4JCL and SDSF

- 4.1. JCL
- Batch Jobs versus Online Transactions
- Batch job activities
- Creating the batch job
- JCL: Job Control Language
- Statement format
- JOB statement
- EXEC statement
- DD statement
- Instream Input Data Set
- Instream Output Data Set
- DD DUMMY
- Sample Jobstream 1
- Sample Jobstream 2
- Submitting the job
- Notification
- 4.2. SDSF
- SDSF
- SDSF Primary Option Menu
- Output and Held queues
- PREFIX command
- Working with queue query
- Select command
- ? command
- Canceling or Purging output
- Sample jobstream 1 revisited
- Sample jobstream 2 revisited

Unit 5Db2 Relational Database Concepts

- Relational Database Systems
- Db2 for z/OS and Db2 family
- The Db2 Optimizer
- Benefits of Db2 for z/OS
- Database
- Tables
- Indexes
- Primary Key
- Relationships
- Referential Integrity
- Integrity Rules
- Data domains
- Table scan access
- Index access

- Interacting with Db2
- Transactions

UNIT 6 Structured Query Language (SQL) and SPUFI

- Structured Query Language (SQL)
- SQL categories
- SELECT statement
- SELECT list
- FROM clause
- Simple SELECT statement
- SUBSTR function
- SELECT with SUBSTR function
- WHERE clause
- SELECT with WHERE clause
- IN operator
- WHERE with IN operator
- BETWEEN operator
- WHERE with BETWEEN operator
- LIKE operator
- WHERE with LIKE operator
- ORDER BY clause
- The NULL value
- SELECT with ORDER BY
- Putting it all together
- Joining tables
- Correlation Names
- Additional criteria
- Cartesian products
- Executing SQL
- SQLCODE

Unit 7 Db2 Objects

- 7.1. Databases and Table Spaces
- Db2 objects
- The Db2 catalog
- Storage group
- Database
- Table Space
- Segmented table space
- Partitioned table space
- Partition By Growth table space
- Partition By Range table space
- VSAM data sets
- 7.2. Tables, Indexes and Views
- Table
- Partitioned table
- Index
- Clustering index
- Index space
- Partitioned index
- View
- 7.3. Qualified names, Implicit Object Creation, and SQL statements
- Qualyfing Db2 objects
- Implicit object creation
- DML statements
- Insert statement
- UPDATE statement
- DELETE statement
- COMMIT statement
- ROLLBACK statement

Unit 8The Db2 System

- The Db2 system
- System parameters
- Required address spaces
- Optional address spaces

- Started tasks
- Master address space
- System databases
- Directory
- Catalog
- System database data sets
- Data pages
- Buffer pools
- Buffer pools: Read operations
- Buffer pools: Write operations
- System buffer pools
- Db2 logging
- Bootstrap data set
- Db2 locking
- Integrity issues
- Transaction locks
- Isolation Levels
- User interfaces

Unit 9Db2 Commands and Program Preparation

- Accessing Db2
- Db2 Commands
- Db2 commands
- Command format
- DISPLAY DATABASE
- DISPLAY DATABASE SPACENAM
- Other DISPLAY DATABASE options
- DISPLAY BUFFERPOOL
- DISPLAY DDF
- DISPLAY LOG
- DISPLAY THREAD
- ARCHIVE LOG
- STOP DATABASE
- START DATABASE
- STOP DATABASE SPACENAM
- START DABATASE SPACENAM
- Executing commands
- Executing commands: TSO
- Executing commands: Batch
- Executing commands: SDSF
- Program Preparation
- Db2 program preparation
- Source program
- Precompiler
- Compile and link edit
- Database Request Module
- Bind plan
- Bind plan
- EXPLAIN
- Program execution

Unit 10 Db2 Utilities

- Utility categories
- Utility and Tools Packaging
- Standalone utilities
- Service aids and samples
- Online utilities
- UNLOAD utility
- UNLOAD control statement
- LOAD utility
- LOAD utility steps
- Restrictive states
- Db2| Utility Generator
- Utility Panel One
- Utility Panel Two
- Utility batch job
- DSNUPROC

- SYSUTIL table
- DISPLAY UTILITY command

Unit 11 Db2 Shutdown, Startup, and Recovery

- Buffer Pools and Logging
- Normal Db2 Shutdown
- Restart phases
- Starting Db2 after a normal shutdown
- Abnormal Db2 shutdown
- Starting Db2 after an abnormal shutdown
- Log initialization
- Current status rebuild
- Forward log recovery
- Backward log recovery
- Object backup and recovery
- COPY utility
- Table space recovery
- RECOVER utility

Unit 12 Course Summary

- z/OS topics
- Db2 for z/OS topics
- Other Db2 courses
- Db2 for z/OS certifications
- Course Evaluation

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
02 Dec 2024	Virtual Classroom (CET / UTC+1)	CET	English	Instructor Led Online		€3,900.00
06 Jan 2025	Virtual Classroom (GMT / UTC)	GMT	English	Instructor Led Online		€3,900.00
10 Mar 2025	Virtual Classroom (GMT / UTC)	GMT	English	Instructor Led Online		€3,900.00
07 Apr 2025	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€3,900.00
16 Jun 2025	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€3,900.00
14 Jul 2025	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€3,900.00
22 Sep 2025	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€3,900.00
20 Oct 2025	Virtual Classroom (GMT / UTC)	BST	English	Instructor Led Online		€3,900.00
01 Dec 2025	Virtual Classroom (GMT / UTC)	GMT	English	Instructor Led Online		€3,900.00

Additional Information

This training is also available as onsite training. Please contact us to find out more.