

DB2 for LUW: Administration in Linux/UNIX/Windows Environments Eğitimi

Süre: 5 Gün

Db2 LUW Yönetimi Eğitimi

Db2 LUW Yönetimi Eğitimi, Linux, UNIX ve Windows ortamlarında Db2 geliştirme ve yönetiminden sorumlu programcılar, analistler ve DBA ekipleri için 5 günlük online bir eğitimidir. Programda Data Studio, SQL, depolama, güvenlik, yedekleme ve izleme konuları ele alınır. Mevcut müfredatı ve katılım koşullarını aşağıda inceleyebilir, ekibinizin ihtiyacına uygun eğitim planlaması için kurumsal teklif isteyebilirsiniz.

Eğitim açıklaması | Eğitim içeriği | Katılım koşulları

Bu eğitim, verimli bir Db2 LUW ortamı geliştirmek ve sürdürmekten sorumlu olan uygulama programcıları, tasarımcılar, analistler ve DBA'lara yöneliktir. Eğitim; Linux, UNIX veya MS Windows için Db2 tarafından uygulanan ilişkisel teknolojinin tüm yönlerini tanıtacak şekilde sınıf ortamını uygulamalı atölye ortamıyla bir araya getiriyor.

Bu eğitimde neler öğreneceksiniz?

- SQL ifadelerini kodlamak için Command Center veya SQL yürütme ortamlarını (örneğin WinSQL) kullanma
- System Catalog kullanımı
- Veri bütünlüğünün korunması için Db2 tarafından kullanılan kilitleme stratejisi ve kullanımı
- Kullanılabilir diğer farklı geliştirme ortamları
- Geliştirme Merkezi'ni kullanarak Depolanmış Prosedürler ve UDF'lerin kullanımı ve uygulanması
- Farklı türlerdeki dizinler ve Index Advisor kullanımı
- Visual Explain kullanımı
- Health Center kullanımı ve diğer ilgili bilgiler
- Yardımcı programların geliştirilmesi ve çalıştırılması
- Journal'lerin kullanımı
- Replication Center hakkında bilgiler
- Task Center kullanımı
- Event Analyzer kullanımı

- Indoubt Transaction Manager hakkında bilgiler
- Memory Visualizer kullanımı
- Yapılandırma Asistanı (Configuration Assistant) hakkında bilgiler

Kimler Katılmalı?

Linux, UNIX, AIX veya Windows ortamları için Db2'de uygulama geliştirme veya uygulama ile ilgili faaliyetlerde bulunması gereken veya bu faaliyetlere dahil olan herkes.

Eğitim İçeriği

Introduction to Db2

- Db2 LUW editions; The Db2 Tool Family; Basic terms: Instance, Database, Partitioned database, Tablespace, Tablespace management, Table/Row/Column; Result Set; View; Materialized Query Tables (MQT); Nulls; Referential Integrity; Db2 System Catalog; 1 Syscat Views; SYSSTAT Views; SYSIBM Views; Tables Relationships; Attributes; The Attribute or Built-in Datatype; LOBS - Large Objects; Identity column; Sequences; XML; XML basics; Parsing; SQL compatibility (9.7); Oracle and Db2 terminology.

SQL Execution

- Command Line Processing: Advantages, Disadvantages, Execution; Command Line Processing parameters; Command Editor advantages; Command Editor; Wizard Control Center; Other products.

Data Studio

- Features; Database development; Working with an instance; Creating a database; Instance details; Database details; Creating database objects; Managing database security; Table creation; Viewing the columns; Analyze impact; Generate DDL; Generating an Entity-Relationship diagram; Data development projects and creating scripts; Creating a Data Development project; Default application process settings; Creating SQL AND XQuery scripts; Using the SQL and XQuery editor to create SQL scripts; 6 SQL scripts assist; Executing the script; Viewing the results; Execution log; Editing table data; Maintaining the database; Buffer pool; Tablespaces; Reorganizing data; Updating the catalog statistics; Running Runstats; Export; Running Export; Moving data format; Load/Import data; DB2 logging; Changing the logging; Backing up and recovering databases; Restore; Rollforward; Recover; Data Studio; Perspective; Database administration views; Instances; Schemas; Tables; Indexes; Security; Creating users; Managing database security permissions; Analyze Impact; Generating an Entity-Relationship diagram; Populating a table; Generate DDL; Database maintenance; Tablespaces; Buffer Pools; Reorganizing Data And Gathering Statistics; To reorganize data using data studio tooling; Updating the catalog statistics; Scripts; Scripts data development; Utilities - Export; Running Export; Moving Data Format; Load/Import data; Utilities - Logging; Utilities - Backing up and recovering databases;

Backup; Utilities - Restore; Utilities - Rollforward; Utilities - Recover.

Data Definition Language

- Control Center; Command Line Processing; CONNECT; A Script File; Instance; Create/Drop database; Parameters; Create/Drop Database Wizard; Create/Drop database - possible errors; Tuning the database; Control Center execution; Adaptive Compression DB2 10; Database configuration parameters; Partitioned database; Tablespace; Physical Storage organization; Tablespace management; Database-Managed Space (DMS); How to create and view your tablespaces; Containers; Tablespace settings; Viewing tablespaces; Output explanation; Viewing Containers; Bufferpools; Block-Based Buffer Pools; Viewing Buffer pools; Which buffer pool is assigned to tablespaces; Buffer Pool utilization; Performance implications; Self-Tuning Memory Manager (STMM); STMM modes of operation; Activating Self-Tuning Memory; Determining which memory consumers are enabled for self tuning; Verifying which buffer pools are enabled for self tuning; Controlling DB2 memory consumption for an instance; Disabling Self Tuning Memory; Tablespace Creation (Wizard); Create/Drop Table; Command Line Processing; Create/Drop Table (Wizard); Control Center Execution; Table partitioning feature; Creating a range partitioned table command line prompt; Adding partitions; Removing partitions; Table partitioning feature wizard; Materialized Query Tables (MQT); Why use MQTS; MQT drawbacks; Creation of MQTS; MQT parameters; Data initially deferred; Refresh Deferred/Immediate; Parameters - Maintained by System/Users; Disable/Enable Query Optimisation; MQT Materialized Query Tables; DB2 9; Views; ALTER command; Generating DDL; Generating DDL - Control Center; Set integrity; Set Integrity Wizard; Partitioned table; Deep compression.

SQL

- SQL Limits; SELECT; SELECT with a predicate; Fetch First; DB2 9 FETCH FIRST in ROWS ONLY AND ORDER BY; Built In Functions; SCALAR functions; GROUP BY; GROUP BY HAVING; Version 8 changes; SCALAR FULLSET; Complex SQL; Table Joins Equality; Table Joins Not Equal; Subselects or Subqueries; Correlated Subselects; Unions; INTERSECT/EXCEPT Version 9; EXCEPT/EXCEPT ALL; INTERSECT/INTERSECT ALL; JOINS: Inner Joins, Left Joins, Right Joins, Full Joins, Joins adding a WHERE clause; Nested Tables; COALESCE; CASE; UPDATE; UPDATE using subSELECT; UPDATE features; DELETE; TRUNCATE Table; INSERT; INSERT USING subSELECT/SELECT FROM INSERT; SELECT FROM INSERT; SELECT FROM UPDATE/DELETE; MERGE Version 9; Common Table Expressions.

Locking Strategy

- What resources can be locked?; How to set the locking; Locking configuration parameters; 1 Locking terms; Duration of a lock; Isolation level; Commit/Rollback; To find out what locks are held; SAVEPOINTS.

Indexing

- Physical data management; Indexes; Candidates for indexing/not for indexing; Types of index; B-Tree layout; Types of indexes; SQL index creation; SQL creation wizard; SYIBM.SYSINDEXES; Design Advisor; Utilities; RUNSTATS; REORG; Access strategy: Stage 1/2 predicates Version 8; DB2 access paths; Single table access: scan, index access, direct index lookup, matching index scan, non matching index scan, index access only, multiple index access; Join methods; Outer/Inner Table; Optimizer considerations; NESTED LOOP JOIN (NLJ); MERGE JOIN (MJ); HYBRID JOIN; HASH JOIN; Conclusion; FILTER FACTOR; EXPLAIN; EXPLAIN tables; DB2EXPLN OUTPUT; PARALLELISM; Visual Explain; Query tuning; Query Tuning execution; MDC - Multi-Dimensional Clustering; MDC: how it works, terminology, inserting records, creation; Statistical view; Statistical view overview syntax.

Extra DB2 Facilities

- Table check constraints; Triggers: Types of trigger, Requirements, Syntax, Triggers Wizard; TRIGGERS - the catalog; Stored procedures: advantages, Types of stored procedures, An SQL procedure, An external procedure; Stored procedures: writing external, Calling the stored procedure, SQL procedure language; UDF (User Defined Functions): Creation of the UDF, Registration of the UDF, Using the UDF, UDF Wizard; Creating A New User Defined Function Using Data Studio; Security levels; Label Based Access Control (LBAC); Security Label Component - examples; Security policies; Grant security label to user; Security labels; Create table; Security levels data control language commands; Row protection inserting; Row protection Select/Insert; Column level security: select, insert; Removing or modifying LBAC definitions; ADMIN_MOVE_TABLE; ADMIN_MOVE_TABLE syntax.

Utilities

- Utility summary; Export; Import; Differences between Import/Load utilities; LOAD: LOAD parameters, Load Graphical Mapper on ASC files; A backup and recovery strategy; Backup utility; Parameters; Backup wizard; Restore utility; Restore wizard; RUNSTATS; RUNSTATS wizard; REORG index/table; REORG wizard; QUIESCE; QUIESCE wizard; INSPECT; REORGCHK; Output table stats; Output index stats.

Embedded Applications

- Sample C program; Development stages; PRECOMPILE command; BIND command; db2bfd - BIND FILE DESCRIPTION tool command; JAVA(SQLJ); Declaring Host Variables db2dclgn.

Logs, Snapshot, Event Monitor DB2PD & Trace

- Recovery Logs; What parameters are available to control logging; How are the log files allocated?; Where are the log files stored?; Configuring database logging Wizard; Error Logs; Manual reading of the log; Snapshot & event monitor; EVENT MONITOR; DB2PD; TRACE DB2TRC; TRACE parameters.

Configuration Parameters

- Database Manager (or Instance) configuration parameters; Viewing configuration parameters; Instance configuration parameters; Instance configuration parameters recommendations; Performance Drawer; Monitoring Drawer; Administration Drawer; Diagnostic Drawer; Applications Drawer; Environment Drawer; To obtain configuration parameters; Database configuration parameters; Database configuration parameters recommendations; Logging Drawer.

Db2 Security

- Authentication; Authorization; Permissions; Categories; Administrative authority; Instance authorities; Database authorities; Privilege; Database roles; Trusted contexts and connections; Data Control Language: GRANT, REVOKE; DB2 security tools; SYSADM authority: Granting SYSADM authority, Viewing SYSADM authorities, Revoking SYSADM authority; DBADM authority: Viewing DBADM authorities, Revoking DBADM authorities; Viewing Authorities Control Center; Roles; Trusted contexts; Catalog tables; DB2 audit: Concept, Auditable objects.

Other Options

- Recommended tools Versus Control Center tools; Activity Monitor; Memory visualization; Health Center: Using, Configure, The database health indicator settings, Recommendation Adviser; Journal; Replication Center: The CAPTURE program, The APPLY program, The CAPTURE program; Task Center; Event Analyzer; Configuration Assistant; Indoubt Transaction Manager.

XML

- Traditional methods for managing XML data; XML: introduction, XML layout example, XML layout; Terms - Elements; Elements syntax; Document Element; Terms: NAMESPACE, ATTRIBUTES; XML elements vs. attributes; Avoid xml attributes?; XDM; Well-formed XML; Table creation: xml datatype, what happens when you create an table; Creating a full-text index; Create INDEX STATEMENT; Comparing xml indexes with relational indexes; Index data types; Accessing the data example; Understanding of XPATH expressions; Creating the index using the Wizard LUW; How are the indexes used?; Logical/Physical index; EXPLN ACCESS METHODS USING XML; Query language; Querying XML; CREATE TABLE - example; INSERT - example; Plain SQL; XPATH text search and retrieval of XML data; DB2 SQL/XML functions: XMLPARSE - example, XML Document, XMLEXISTS, XMLEXISTS examples: XMLTABLE; XQUERY; Executing XQUERY; Transforming the result set; Functions; Converting XML to HTML; Conditional logic; Hybrid queries; Embedding Xqueries in SQL.

Relocate the Database

- Introduction to relocating databases; Tools for data and object movement; Why use the db2relocatedb tool?; How the db2relocatedb tool works; The db2relocatedb parameters; db2relocatedb examples.

Ön Koşullar

Db2 for LUW: Introduction & Fundamentals