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education

course description

NonStop SQL/MP essentials U4181S

course overview

This 4-day course is an introduction to the HP NonStop™ SQL/MP database product and serves as a prerequisite to more advanced courses. Hands-on lab sessions provide practical experience with creating databases and generating queries to access the data. Upon completion of this course, you will understand relational database concepts and terminology.

audience

- Anyone working with or interested in the NonStop SQL/MP product
- Anyone responsible for managing or designing a database or developing embedded SQL programs

benefits to you

- Relational database concepts and terminology
- NonStop SQL/MP components
- SQL/MP database structures
- SQL/MP conversational interface
- SQL/MP queries
- SQL/MP database object creation and management

prerequisites

Concepts and Facilities course

next steps

- NonStop SQL/MP Programming course
- NonStop SQL/MP Database Management course
- NonStop SQL/MP Query Design for Performance course
- NonStop SQL/MP Database Quick Start course

to order

You can order this course online at <http://education.hp.com>. At the site, select a country, then choose "registration" or "Book a course" and fill out the online registration form.

why hp education?

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- Focus on job-specific skills
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NonStop SQL/MP essentials (U4181S)

module	key topics
relational database definitions	<ul style="list-style-type: none">• Components of a relational table• Relational database structure• Primary and foreign keys in a relational table• How relationships are formed in a relational database• Characteristics of a relational database management system
NonStop SQL/MP relational database management system (RDBMS)	<ul style="list-style-type: none">• NonStop SQL/MP RDBMS overview• Advantages of using NonStop SQL/MP• Starting and stopping an SQLCI session• Major components of NonStop SQL/MP• Operating environment of NonStop SQL/MP• Interaction of NonStop SQL/MP and other Tandem products such as Transaction Monitor/MP (TM/MP), FastSort, DP2, and the file system• Different interfaces to a NonStop SQL/MP database• Hierarchical structure of system catalogs, user catalogs, and user tables <p>NonStop SQL/MP Database Structure</p> <ul style="list-style-type: none">• Characteristics and functions of Nonstop SQL/MP objects• Types of database access paths (table versus index)• Difference between a protection view and a shorthand view• Using the SQLCI FILEINFO utility to display table characteristics <p>Nonstop SQL/MP Conversational Interface Overview</p> <ul style="list-style-type: none">• Standard sublanguage groups and their functions• Common SQL statements and their functions of each SQL sublanguage group• SQL utilities and extensions, and description of their functions <p>Lab Exercise (30 minutes)</p> <ul style="list-style-type: none">• Become familiar with objects in the sample database and explore the capabilities of the NonStop SQL/MP online help facility
NonStop SQL/MP conversational interface (CI) setting up an SQLCI session	<ul style="list-style-type: none">• Using standard SQLCI commands• Setting up and saving SQLCI environment attributes• Setting up and saving SQLCI session attributes• Creating an SQLCI session log• Executing saved session and environment command files• Executing other utilities from within an SQLCI session• Creating CATALOG and MAP DEFINES <p>Lab Exercise (30 minutes)</p> <ul style="list-style-type: none">• Set up your own SQLCI environment and save the settings for later use <p>Ad Hoc Query Processing</p> <ul style="list-style-type: none">• Components involved in the query execution process• Three ways of executing ad hoc SQL queries• Functions of the PREPARE and EXECUTE statements• Functions of the DISPLAY STATISTICS and EXPLAIN statements <p>Lab Exercise (30 minutes)</p> <ul style="list-style-type: none">• Run predefined SQL queries
retrieving data from the database	<p>Generating ad hoc queries for a single table</p> <ul style="list-style-type: none">• Using the INVOKE command to display table attributes and describe the column projection• Using the SQL clauses (WHERE, ORDER BY, GROUP BY, AND HAVING) in a query• Developing SQL predicates with LIKE, BETWEEN, and IN; comparison and compound predicates; and using these predicates in a query• Using expressions in a select list or a search condition• Using aggregate functions in a select list or search condition <p>Lab Exercise (1.7 hours)</p> <ul style="list-style-type: none">• Access individual tables using SQL clauses, predicates, expressions, and aggregate functions to retrieve specified data from the database <p>Generating Ad Hoc Queries for Multiple Tables</p> <ul style="list-style-type: none">• Concepts of join, union, and Cartesian product• Obtaining column definitions with the INVOKE statement and identifying join columns• Syntax of join conditions, predicates, and clauses <p>Lab Exercise (1.7 hours)</p> <ul style="list-style-type: none">• Retrieve data from several tables using appropriate SQL clauses to return specified data <p>Generating Subqueries</p> <ul style="list-style-type: none">• Concepts of subquery• Syntax of subquery

NonStop SQL/MP essentials (U4181S)

creating a NonStop SQL/MP database

- Catalog
- Table and Partition
- Index
- Constraint
- View
- Comment
- Collation

Lab Exercise (1.7 hours)

- Use SQLCLI to create NonStop SQL/MP objects to comply with specifications

loading a NonStop SQL/MP database

- Using the INSERT statement to load a single row of data into a NonStop SQL/MP database
- SQL utilities CONVERT, COPY, and LOAD

Lab Exercise (45 minutes)

- Learn how to propagate your database

modifying database data

- Creating user-defined transactions and committing or rolling back the transaction
- Inserting, updating, or deleting a row or set of rows in a single table with specified data and selection criteria

Lab Exercise (45 minutes)

- Learn how to keep your database up-to-date

NonStop SQL/MP management functions

- Generating the syntax to alter or drop a NonStop SQL/MP object
- Impact and considerations of altering or dropping SQL objects in the database
- Security issues related to adding, altering, or dropping an SQL object from the database
- Object dependencies related to these functions
- Appropriate SQLCLI and NonStop Kernel utilities that can be used to manage a production database

Lab Exercise (30 minutes)

- Learn how to remove objects from your database

**for more
information**

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