Training: Micro Focus
VT120 - Vertica Essentials

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<th>MATERIALS</th>
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<td>Traditional</td>
<td>Digital materials</td>
<td>2880 USD</td>
<td>4 days</td>
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LOCATIONS

Krakow - 5 Tatarska Street, II floor, hours: 9:00 am - 4:00 pm
Warsaw - 17 Bielska Street, hours: 9:00 am - 4:00 pm

TRAINING GOALS:

The Vertica Essentials course explores the capabilities of the Vertica platform solution, and prepares you to manage the operational success of your deployment.

During this course, you will learn:

- The architectural elements of a Vertica cluster
- How to load and manage data in the database
- How to manage database users and resources
- How to back up and restore the database
- Introductory information about Vertica’s built-in analytic functions
- How to work with semi-structured data
- Database security environment concerns

This class combines lectures with hands-on laboratory exercises performed in a live Vertica database cluster.

Upon successful completion of this course, you should be able to:

- Describe Vertica’s database and data storage structures
- Load and remove data from a Vertica database
- Optimize the database to improve query performance
- Create and manage database users and resources
- Back up and restore a Vertica database
○ Find additional information and resources for working with Vertica

Audience/Job Roles

This course is intended for database administrators, database architects, data analysts, and application developers.

CONSPECT:

○ Introduction to the Training Environment
  ○ Accessing the training environment and reviewing its contents and structure
  ○ Reviewing the Student Guide
  ○ Starting and stopping a Vertica database

○ Vertica Overview
  ○ Describe the building blocks of the Vertica platform

○ Introduction to Projections
  ○ Read a projection DDL to determine its structure
  ○ Identify replicated and segmented projections
  ○ Use the database K-safety value to identify dependent nodes

○ Loading Data
  ○ Review the structure of tables and projections
  ○ Load data using Vertica’s hybrid storage model
  ○ Manually run the moveout and mergeout tasks

○ Query Execution
  ○ Generate a query plan
  ○ Time a query
  ○ Profile a query
  ○ Identify the database epochs
  ○ Find data loaded at different epochs

○ Optimizing the Database
  ○ Create a comprehensive database design using Management Console
  ○ Review the Database Designer output files
  ○ Deploy the comprehensive database design

○ Partitioning Data
  ○ Create partitioned tables
  ○ Load data into partitions
  ○ Move partitioned data into archive tables

○ Removing Data
- Remove data by dropping and truncating tables
- Bulk delete data from tables
- Purge delete vectors
- Remove data by dropping partitions

- Database User Management
  - Create new database users
  - Create new database user roles
  - Assign a role to a user
  - Create a role hierarchy

- Table Access Privileges
  - Assign inheritable privileges to a database schema
  - Limit access to database columns and rows by role
  - Restrict non-administrative access to system tables

- Resource Management
  - Review the default resource pools and parameters
  - Create a new resource pool
  - Test the user access to the new resource pool

- Database Backup and Restore
  - Create a backup configuration file
  - Back up the database
  - Review the database backups
  - Restore the database

- Overview of Analytic Functions
  - Discuss the structure of an analytic query
  - Review Vertica-specific functions:
    - Conditional events
    - Gap filling and interpolation
    - Pattern matching
    - Geospatial definitions
    - Predictive analytics through machine learning

- Securing the Database
  - User authentication options
  - Securing your environment from outside threats
  - User authorization options

- Flex Tables and Semi-Structured Data
  - Define and describe semi-structured data
- Create new flex tables and their supporting tables
- Load data in different formats into a flex table
- Explore data stored in flex tables

- Introduction to Vertica SQL on Hadoop
  - The challenges for accessing information in data lakes
  - The SQL on Hadoop architecture
  - Integrating Vertica and Hadoop information

- Next Steps
  - Find additional information on using Vertica
  - Review additional Software Education training
  - Introduce Micro Focus Software Vertica Certification
  - Introduce Vertica Community portals

**REQUIREMENTS:**

To be successful in this course, you should have the following prerequisites or knowledge:

- Intermediate knowledge of RDBMS concepts (understanding databases and schemas, database normalization, etc.)
- Basic understanding of SQL (familiarity with basic SQL syntax, ability to troubleshoot syntax errors, etc.)
- Basic experience with the Linux operating system (how to change directories and list the contents, how to view and edit files, etc.)

**Difficulty level**

![Difficulty Level](image)

**CERTIFICATE:**

The participants will obtain certificates signed by Micro Focus (course completion).

This course prepares you also for such related Micro Focus certification exam: VT120C-90-ASP - Vertica Accredited Software Professional EXAM.

**TRAINER:**

Authorized Micro Focus Trainer.