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Education Solutions

## IBM Netezza Performance Server in Database Processing Using SAS® Software

**Course Length:** 2 days      **CEUs** 1.2

### AUDIENCE

This workshop is designed to show how to take existing SAS programs and transform processing to take advantage of an IBM Netezza Performance Server massively parallel environment. Typical SAS processes will be assessed and conversion of processing methodologies to a Netezza based environment will be taught and discussed.

### PREREQUISITES

Knowledge of SAS programming and SQL basics.

### COURSE TOPICS

#### Introduction and SAS/Access Architecture

- What is Netezza Performance Server?
- Innovation
- Performance
- Simplicity
- IBM Netezza Analytics
- Netezza's Approach to Data Warehousing
- Multiple Engine Architecture in SAS
- Interface Engine
- SQL Pass-Through Facility
- SAS/Access Interface to Netezza supported features

#### Libname Statements with Netezza

- Libname Syntax  
*Arguments*
- Netezza Libname Statement Examples  
*SAS/Access Libname Statement*
- Connecting to a Database with a Libname Statement  
*Explorer Window*
- Efficiency Considerations
- Workshop Session

#### Procedures Supported by SAS Inside Netezza

- Proc Means / Summary
- Proc Tabulate
- Proc Report
- Proc Sort
- Proc Rank
- Proc Freq

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- Workshop Session

### SQL Pass-Through

- SQL Procedure Pass-Through Facility
- Syntax for the SQL Pass-Through Facility
- Overview of SQL Procedure Interactions with SAS/Access
- Select Expression
- Connect Statement
  - Arguments*
  - Connect Statement Examples*
- Disconnect Statement
  - Arguments*
  - Disconnect Statement Example*
- Execute Statement
  - Arguments*
  - Useful Statements to Include in Execute Statements*
- Connection to Component
  - Arguments*
  - Example*
- SQL Pass-Through Facility for Netezza
  - Special Catalog Queries*
- Temporary Table Support for Netezza
  - Establishing a Temporary Table*
  - Terminating a Temporary Table*
  - Examples*
- Libname Capabilities vs. The Proc SQL Pass-Through Facility
  - Libname Statement*
  - PROC SQL Pass-Through Facility*
- Embedded Libnames
  - Example*
- Workshop Session

### IBM Netezza Analytics

- What they are
- How to use them
- Syntax Required
- Reference Discussion
- Workshop Session

### Bulk Loading and Unloading in Netezza

- Bulk Loading Data into Netezza Tables
  - Examples*
- Bulk Unloading Data from Netezza Into SAS Data Sets



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### *Examples*

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### **Deploying and Using SAS Formats in Netezza**

- Using SAS Formats

#### *How It Works*

#### *Process*

- Deployed Components for In-Database Processing
- User-Defined Formats in The Netezza Data Warehouse
- Publishing SAS Formats

#### *Overview of the Publishing Process*

- Running the %Ind \_Publish\_Formatsmacro

#### *%Ind \_Publish\_Formats Macro Syntax*

#### *Arguments*

#### *Tips for using the %Ind \_Publish\_Formats Macro*

#### *Special Characters in Directory Names*

#### *Netezza Permissions*

#### *Format Publishing Macro Example*

- Using the SAS\_Put() Function in the Netezza Data Warehouse

#### *Implicit use of the SAS\_Put() Function*

#### *Explicit use of the SAS\_Put() Function*

- Determining Format Publish Dates
- Workshop Session

### **Advanced SAS and Netezza Concepts**

- Data Set Options for Netezza
- Passing SAS Functions to Netezza
- Passing Joins to Netezza
- Workshop Session

### **Netezza Naming Conventions and Data Types**

- Naming Conventions for Netezza
- Data Types for Netezza
  - String Data*
  - Numeric Data*
  - Date, Time, and Timestamp Data*
  - Netezza Null Values*
- Libname Statement Data Conversions
- Workshop Session

### **Macro Variables with Netezza**

- Macro Variables for Netezza
- Workshop Session