# Informatica PowerCenter 9.x: Developer Level II

## *Course Description*

### Delivery Methods
- Public Instructor-led training
- Onsite Instructor-led training

### Course Duration
- Three Days of instructor-led training
- 60% lecture, 40% hands on lab

### Target Audience
- Integration Developers with six months or more experience with PowerCenter

### Prerequisites
- PowerCenter Developers with one year or more of professional experience

OR
- Completion of Informatica PowerCenter Level 1 Developer training class

### Pricing
- R 14,000 excluding VAT

## *Course Overview*

This four day, instructor-led course complements and extends "PowerCenter 9.x Level One Developer" with advanced topics and extended labs. The course is intended for developers with more than six months of PowerCenter 9.x experience. Topics covered include: High Availability, Pipeline Lookup and Dynamic Lookup expressions, the SQL transformation, and the Transaction Control transformation. Additional topics include extended use of parameter files, pivoting data, session and workflow recovery, use of command line utilities, and Mapping Architect for Visio. The course includes an extensive series of performance tuning workshops that include methodology, mapping design and cache management with memory optimization.

## *Objectives*

After successfully completing this course, students should be able to:
- Describe the Informatica PowerCenter architecture
- Describe user defined and advanced functions
- Describe how to Normalize and Denormalize data using PowerCenter
- Describe the Stored Procedure transformation and its two modes of use
- Describe the SQL Transformation
- Describe PowerCenter source-based, target-based, and user-based transaction control
- Describe constraint-based loading
- Describe the Transaction Control transformation for data-driven transaction ontrol.
- Describe built-in, optional, and mapping design recovery capabilities
- Describe built-in and optional High Availability functions
- Describe PMCMD and PMREP command-line functionality
- Describe PowerCenter Performance Tuning Methodology including performance counters, thread utilization, source, target, and integration service bottlenecks, and the impact of the update-else-insert setting.
- Describe the effect of mapping design on performance.
- Apply these design principles by building a new mapping.
- Describe the effect of caching and RAM on performance.
- Describe the transformations that cache data, the DTM buffer pool, and the use of cache calculators.

## *Course Agenda*

1. **PowerCenter Overview**
   - Describe the Components of the PowerCenter 8 architecture and define key terms
   - Describe PowerCenter's optional and built-in high availability features

2. **Mapping Variables and Parameter Files**
   - Describe the use of mapping variables in a mapping.
   - Determine the structure of a parameter file.
   - Establish the use of parameter files in mappings and sessions.
   - Describe the flexibility of using parameter files to build mapping expression logic

3. **User-Defined and Advanced Functions**
   - Describe User Defined Function Create Entity Types
   - Describe and implement advanced functions

4. **Pivoting Data**
   - Describe the use of the normalizer and aggregator transformations to normalize and denormalize data

5. **Dynamic Lookups**
   - Describe the use Dynamic Lookups to determine insert or update to a target.
   - Explain the utilization of Update Strategies to tag a row insert, update, delete or reject.

6. **Stored Procedure and the SQL Transformations**
   - Describe the use of the Stored Procedure transformation in a mapping or mapplet.
   - Describe the uses of the SQL transform.

7. **Error Handling**
   - Describe database errors and how to load them to an error table.

8. **Transaction Processing**
   - Describe Source based and Target based transaction controls with and without high availability option
   - Describe the use of PowerCenter constraint-based loading in databases with referential integrity constraints

9. **Transaction Control Transform**
   - Describe the use of the transaction control transformation for data-driven transaction control
   - Describe control when data is committed to disk or the target database

10. **Workflow and Task Recovery**
    - Describe workflow and task recovery with and without the high availability option
    - Recover tasks and workflows that stop, abort, or terminate
    - Explain and use PowerCenter's built-in recovery capabilities
    - Explain the user-designed recovery techniques
    - Design error handling strategies appropriate for the intended purpose of a Workflow

11. **Command Line Utilities**
    - Use pmcmd to start, restart, and recover workflows
    - Use pmrep for object export, mass validation, object import, backup, and EBF migration of a unit or work

## *Course Agenda (Continues...)*

**12.  Performance Tuning: Methodology**
- Describe Performance counters
- Describe Busy percentages and how they help in bottleneck isolation
- Describe Thread utilization to identify a target bottleneck
- Describe Thread utilization to identify a transformation bottleneck
- Describe Thread utilization to identify a source bottleneck
- Describe Types of target bottlenecks: database, network, disk, and PowerCenter
- Describe Three alternatives to the update-else-insert scenario
- Describe How transaction control impacts performance
- Describe Types of source bottlenecks: database, network, disk, and PowerCenter
- Describe Tune the line sequential buffer
- Describe External loader effects on target bottlenecks

**13.  Performance Tuning: Mapping Design**
- Explain types of data type conversion: port-to-port, expression-to-port, and explicit
- Identify which transformations increase or decrease the number of rows
- Explain the performance implications of the Stored
- Procedure vs. the SQL transformation

**14.  Performance Tuning: Caching and Memory Optimization**
- Describe data caching and RAM memory optimization techniques to improve session performance
- Describe DTM buffer pool optimization

**15.  Performance Tuning: Partitions**
- Describe how pipelines and partitions affect performance
- Describe three options for merging partitions: sequential, concurrent, and file list
- Describe how partitioning affects the DTM buffer pool

## Onsite Training

On-site training courses are designed to meet your specific business needs and requirements. Convenient and cost-effective, on-site training events are delivered at your location to reduce impact on your day-today business. Onsite training is ideal for companies who desire the flexibility of training at their location. You set the date and time, and we come to you! We provide a blending approach to learning – instructor-led training with hands on exercises and coaching – that encourages team building and collaboration, all in the convenience of your office.

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- Your team is accessible
- You pick the date

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## About Infoflow:

Infoflow for the past eight years has focused on Sales, Support and Training of the Informatica Data Integration Platform.

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