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Informatica PowerCenter

From Fundamentals to Advanced ETL - 2 days

FA-0249 · 2 days

DevOps, Cloud & Infrastructure · Data & Analytics

Introduction

Empower your ETL journey with real industry tools, Linux-based workflows, and expert-led insights.

Informatica PowerCenter is the industry-standard ETL platform that transforms data chaos into seamless, actionable pipelines. In today's data-driven institutions—from financial services to e-commerce—mastery of ETL is essential for delivering timely and reliable insights.

This two-day accelerated course immerses participants in the core tools and architectures of Informatica PowerCenter, not within the comfort of theory, but directly on Ubuntu servers. Guided by an instructor with over 30 years of industry experience, students gain not just knowledge but the practical capability to design, execute, and optimize ETL workflows in environments mirroring real-world operations.

Learning outcomes

By the end of this course, participants will be able to:

- Navigate and articulate Informatica PowerCenter architecture and components.
- Install and configure Informatica PowerCenter on Ubuntu Linux servers, including client and server components.
- Build and execute mappings, sessions, workflows, and Mapplets using Designer, Workflow Manager, and Monitor.
- Employ core and advanced transformations (e.g., Router, Filter, Joiner, Aggregator, Lookup, Rank, Update Strategy) effectively.
- Implement slowly changing dimensions, normalization, update strategies, and stored procedures.
- Optimize performance and apply reusable ETL constructs in production-quality environments.
- Integrate hands-on Linux ops (e.g. PMCMD, PMREP, file permissions, automation scripts) as part of enterprise-grade deployment.

Prerequisites

- Basic SQL knowledge and understanding of relational databases.
- Familiarity with Linux command line (navigating, editing, permissions).
- Access to Terminal for SSH.
- VS Code

Training outline

1. 1. Foundations & Setup

Overview of ETL and Informatica Role in Data Integration

- ETL lifecycle and why Informatica PowerCenter matters
- PowerCenter architecture: Repository Service, Integration Service, Client Tools

Ubuntu Server Preparation

- Setting up Linux Servers (packages, networking, Java runtime)
- Linux essentials for Informatica: users, groups, file permissions, monitoring logs

Informatica Installation on Linux

- Downloading and deploying the server components (Repository, Integration)
- Installing client tools (Designer, Workflow Manager, Monitor)
- Configuration and validation on Ubuntu environment

2. 2. Designer & Basic ETL Workflows

Introduction to PowerCenter Designer

- Creating source definitions (flat files, RDBMS)
- Target definitions and mapping basics

Building a Basic Mapping

- Using Source Qualifier, Expression, Filter transformations

- Mapping logic and transformation chaining

Workflow Construction and Execution

- Workflow Manager: sessions, workflows, linking tasks
- Starting jobs via Workflow Monitor; monitoring and logs

3. 3. Core Transformations Deep Dive

- Routing and Filtering flows (Router, Filter)
- Data aggregation and ranking (Aggregator, Rank)
- Combining datasets (Joiner)
- Lookup operations—connected and unconnected
- Hands-on: Build a mapping with multiple transformations, run it on Linux server via PMCMD

4. 4. Advanced Techniques: Reusability & Strategies

- Mapplets and reusable transformations
- Slowly Changing Dimensions (Types 1 & 2), Update Strategy, Normalizer, Using Stored Procedures

  Parameterization and Variables
  - Creating reusable workflows via parameters and variables
  - Designing dynamic session metadata

5. 5. Administration & Command-Line Controls

Running Informatica from CLI

- Using PMCMD and PMREP for workflow control, repository maintenance

- Backup, migration, version control basics for repository management
- Scheduling workflows via Linux cron jobs; environmental best practices

6. 6. Performance Optimization & Real-Time Scenarios

- Pushdown optimization, session tuning, optimizing lookup & aggregation
- Designing scalable ETL pipelines for large datasets
- Real-world scenario walk-through: ingesting data, ETL transformation, loading, monitoring, scheduling within Ubuntu servers

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