

The Pentaho BI Certification Training course provides an overview of Business Intelligence and Data warehousing concepts. The course imparts the essential knowledge and skills required to use Pentaho Business Intelligence (BI) Suite effectively. The Pentaho BI course is aimed at both technical and non-technical Business Intelligence practitioners. The course introduces delegates to various Pentaho tools and their features. The course teaches how to integrate Pentaho BI suite with Big Data stack like Hadoop, HDFS. During the course, the delegates will gain an understanding of Pentaho tools, business reporting concepts and Pentaho data integration.

The training program will be delivered by Certified Pentaho BI Professionals. Pentaho is an open source platform to build BI solution. It provides ETL (Extract, Transform, load), reporting and data integration capabilities. The course enables the delegates to prepare, access and analyse any data quickly and powerfully. Throughout the course, the delegates will be introduced to the concepts of Pentaho, various product offerings, use Pentaho Report Designer to design and publish custom reports and advanced features of reporting. The delegates will also learn about ETL concepts, PDI features, transformation, file formats for KJB and KTR and Pentaho BA Server.

## Prerequisites

The delegates are expected to have:

- Knowledge of basic Database concepts
- Familiarity with IT terms
- Understanding of any one programming language
- Understanding of Data warehouse concepts

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## Course Objectives

- Get insights into the architecture of Pentaho BI Suite
- Execute multiple data integration, analytics and transformation
- For analysis, generate complex reports and dashboard
- Use Pentaho BI Server for creating reports
- Understand Pentaho Business Analytics and Pentaho Dashboard
- Integration of Pentaho with Big Data Stack like Map Reduce, HDFS
- Plan and deploy report in automated manner using Pentaho Kettle
- Learn how to performance tune PDI jobs and transformations

## Introduction to Pentaho Tool

- Pentaho user console
- Overview of Pentaho Business Intelligence and Analytics tools
- Database dimensional modelling
- Using Star Schema for querying large data sets

- Understanding fact tables and dimensions tables
- Snowflake Schema
- Principles of Slowly Changing Dimensions
- Knowledge of how high availability is supported for the DI server and BA server
- Managing Pentaho artifacts
- Knowledge of big data solution architectures

## Introduction to Pentaho BI Suite

- Describe Pentaho
- Pentaho BI (CE vs. EE)
- Pentaho Data Integration (PDI)
- Pentaho Report Designer (PRD)
- Pentaho Metadata Editor (PME)
- Pentaho Schema Workbench (PSW)
- Dashboard Capabilities

## Data Architecture

- Designing data models for reporting
- Pentaho support for predictive analytics
- Design a Streamlined Data Refinery (SDR) solution for a client

## Clustering in Pentaho

- Understanding the basics of clustering in Pentaho Data Integration
- Creating a database connection
- Moving a CSV file input to table output and Microsoft Excel output
- Moving from Excel to data grid and log

## Pentaho Report Designer - Basic

- PRD Layout
- Understanding its Basic Features
- Designing Basic Report Containing Graphical Chart
- Conditional Formatting
- Studying the PRPT File Format
- Building a Basic Report in PDF Report

## Pentaho Report Designer – Advanced

- Working with Group
- Group Header
- Group Footer
- Data Source Connection
- Query Designer
- API Based Reporting
- Passing Parameter
- Using Formula
- Designing Report with Subreport

## Pentaho Data Integration Development

- Create an ETL job
- Knowledge of the Pentaho Data Integration (PDI) steps
- Explain the PDI steps to create an ETL transformation
- Explain the use of property files

## Pentaho Data Integration – Introduction

- Define Extract, Transform, Load (ETL) Concepts
- PDI GUI Layout
- Repository
- Wizard
- Marketplace
- Supported Data Types for Connectivity

## Pentaho Data Integration – Transformation

- What is Transformation?
- Variable
- Step
- Hop
- Various Input Steps
- Various Output Steps
- Transformation Steps
- Scripting
- Big Data Steps
- Integration with Hadoop HDFS and NOSQL MongoDB
- PDI and Map Reduce

## Pentaho Data Integration – Job and More

- What is PDI-job?
- Integrating Report
- Entries
- Job Orchestration
- Logging
- Understanding Repository
- Database Repository
- File Based Repository
- Example with Job Containing Multiple Entries

## Pentaho BA Server and USER Console

- Pentaho Business Analytics
- User Console Navigation
- JPivot
- Analysis Tools
- Using Data Sources
- Integrating Report on BI

## Security

- Securing data
- Integrating user security with other enterprise systems
- Extending BA server content security
- Pentaho's support for multi-tenancy
- Using Kerberos with Pentaho

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