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Essential Skills for BI and Analytics Professionals

Learn via: **Classroom**

Duration: **3 Days**

Overview

Every organization, both private and public sector, is challenged today to turn data into information and information into impact. This is the age of analytics and data-driven business, but the path from data to value can be complex. The right competencies to acquire, integrate, analyze, and act upon data are essential survival skills.

Everyone who works in the field of BI and analytics, regardless of their role, needs to have a broad understanding of the many connected and interdependent parts of a complex information ecosystem. Business and technical success with BI and analytics requires continuity among all of the components from initial data acquisition to ultimate business impact and vertical cohesion of architectures, technologies, processes, and organizations. Teams are most successful in BI and analytics when they share common understanding and terminology, and when each team member has an understanding of and appreciation for the roles and contributions of all other team members. The Essential Skills for BI and Analytics Professionals Skills workshop is designed to do just that with three days of in-depth, interactive training.

Prerequisites

There are no prerequisites for this course.

Who Should Attend

- Everyone working in the field of BI and analytics who needs a strong foundation
- BI and analytics teams that benefit by understanding the roles, responsibilities, and contributions of every team member

What You Will Learn

- Dimensions, concepts, and practices of modern business intelligence
- Data management and data integration techniques as the foundation of BI and analytics
- Techniques to turn data into meaningful measures, metrics, and KPIs
- Dashboard and scorecard design and development techniques
- How analytics is applied for data-driven discovery, diagnosis, and prediction
- How big data is changing the shape of the industry

Outline

1.1 BI and Analytics—Then and Now

- Definitions
- Evolution
- Components
- Perspectives
- Program Orientation

1.2 Supporting the Organization

- BI and Analytics Stages
- Descriptive BI and Analytics
- Diagnostic BI and Analytics
- Discovery BI and Analytics
- Predictive BI and Analytics
- Prescriptive BI and Analytics

1.3 Architecture and Methodology

- Data Integration Architecture
- Data Types
- Ecosystem
- Data Warehouse Implementation
- Data Warehouse Operation
- Evolution

1.4 Data Management

- Data Governance
- Data Quality
- Data Profiling
- Roadmap

1.5 BI Technology

- The Technology Stack
- Technology Architecture
- Technology Management

2. Data Integration

2.1 Data Integration Concepts

- The Need for Data Integration
- The Challenges of Data Integration
- Data Integration Architectures
- Data Integration Projects

2.2 Requirements Analysis for Data Integration

- Integration Requirements Concepts
- Source Data Requirements
- Data Unification Requirements
- Data Aggregation and Summary Requirements
- Data Quality Requirements
- Data Capture Requirements
- Audit, Balance, and Control Requirements
- Metadata Capture Requirements
- Service Level Requirements

2.3 Data Integration Functional Design

- Functional Design Concepts
- Source/Target Mapping
- Data Capture Design and Specification
- Data Transformation Design and Specification
- Data Cleansing Design and Specification
- Identity and Key Management
- Design for Integrated Data Delivery
- Data Integration Process Design

2.4 Data Integration Technical Design

- Technical Design Concepts
- Data Flow Design
- Workflow Design
- Service Level Design
- Process Management Design

3. Performance Management

3.1 Performance Management Concepts

- Defining Performance Management
- Performance Management Processes
- Performance Management Applications

3.2 Business-Aligned Performance Management

- The Balanced Scorecard
- Strategy Mapping
- Performance Indicators

3.3 Scorecards and Dashboards

- Performance Scorecards
- Performance Dashboards

4. Analytics

4.1 Analytics Concepts

- Analytics Defined
- Data Analytics and Business Analytics
- Why Analytics?
- Analytics Processes
- Analytics Foundations

4.2 Analytics Architecture

- The Big Picture
- Data Architecture
- Process Architecture
- Technology Architecture

4.3 Analytic Modeling

- The Roles of Models
- Kinds of Models
- Problem Modeling
- Solution Modeling

4.4 Applied Analytics

- Five Kinds of Analytics
- Analytics Use Cases

5. Performance Management

5.1 Big Data Concepts

- What Is Big Data?
- What Is Big Data Analytics?
- Big Data Use Cases
- Why Big Data Now?
- Kinds of Big Data
- Sources of Big Data
- Working with Big Data

5.2 Big Data Processes

- Business Case
- Technical Case
- Data Sourcing
- Data Preparation and Storage
- Big Data Analytics
- Consumption and Application

5.3 Big Data Architecture

- The Role of Architecture
- Process Architecture
- Analytics Architecture
- Technology Architecture
- Big Data ... Big Architecture

5.4 Big Data Technology

- The Technology Landscape
- Infrastructure
- Analytics
- Data Sources
- The Core Technologies: MapReduce
- The Core Technologies: Hadoop

Workshop

- Working with Your People, Projects, Processes and Data
- Choose from the following list of topics for a tailored workshop:(It is recommended that you select two topics for approximately 4.5 hours of workshop activity.)
- Program Planning

- BI and Analytics Maturity
- Roadmapping
- Data Integration
- Balanced Scorecard, Strategy Map and KPIs
- Scorecard/Dashboard Design
- Analytic Modeling (Spreadsheet Engineering Approach)
- Big Data Business/Technical Case and Big Data Maturity