

# POWER BI

Complete Practical & Real-time Training Sessions



*A Unit of SequelGate Innovative Technologies Pvt. Ltd.*

→ ISO Certified Training Institute

→ Microsoft Certified Partner

## What is Power BI?

Power BI is a suite of business analytics tools that deliver insights throughout your organization. Connect to hundreds of data sources, simplify data prep, and drive ad hoc analysis. Produce beautiful reports, then publish them for your organization to consume on the web and across mobile devices. Everyone can create personalized dashboards with a unique, 360-degree view of their business. And scale across the enterprise, with governance and security built-in.

In our training course, we provide complete information on Power BI Architecture, Working, DAX, MDX and End User Report Access using Power BI including Mobile Reports, Google Analytics, YouTube and Microsoft One Drive Integration.

**All Training Sessions are Completely Practical & Real-time**

Every session includes Study Material and Practice Material. Session Handouts.

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CREDITS: ISO Certified Learning Center. Microsoft Certified Learning Partner. [www.sqlschool.com](http://www.sqlschool.com)

# POWER BI LIVE Training - Course Curriculum

## Module I: Power BI Basics, Visuals

### Chapter 1: Introduction to Power BI

- ✓ Need for Big Data and BI Technologies
- ✓ Purpose of BI & Power BI Suite of Tools
- ✓ Power BI as a Self-Service BI, Scope
- ✓ Comparing Power BI with Microsoft MSBI
- ✓ Comparing Power BI @ Tableau, QlickView
- ✓ Power BI as an End-to-End BI Tool
- ✓ Microsoft Data Platform Technologies
- ✓ Collaboration, Visualization and IOT
- ✓ Power BI with Reporting Services (SSRS)
- ✓ Power BI For Data Scientists, AI Scope
- ✓ Power BI For Business Analysts
- ✓ Power BI Job Roles and Responsibilities
- ✓ Power BI Component :Overview, Lab Plan
- ✓ MCSA Examination for Power BI: 70-778

### Chapter 2: Power BI Architecture

- ✓ Power BI Architecture - in Detail, Tools
- ✓ Power BI - Integrations in Real-time
- ✓ Need for Power BI Service and Cloud
- ✓ Need for Power BI Report Server, SSDT
- ✓ Power BI Report Server & Report Builder
- ✓ Power BI Mobile Report Publisher Tool
- ✓ Types of Reports in Power BI - Ineractive
- ✓ Analytical, Paginated & Mobile Reports
- ✓ Office Online Server & SharePoint Server
- ✓ Content Packs, Cortana - Q&A Features
- ✓ API Integration: LIVE Streaming DataSets
- ✓ Configure Power BI Cloud, Basic Usage
- ✓ Installing Power BI Desktop, Gateways
- ✓ Installing Excel Publisher & Analyser

### Chapter 3: Using Power BI Desktop

- ✓ Install and Configure Power BI Desktop
- ✓ Understanding Power BI Desktop Tool
- ✓ In-Memory, SMDL and Vertipaq Options
- ✓ Visuals, Fields, Pages and Filters
- ✓ Report, Data and Relationship Options
- ✓ Concept & Use of PBIX and PBIT Files
- ✓ Designing Simple / Basics Reports in PBI
- ✓ Get Data from DAT Files, Basic Reports
- ✓ Enter Data from Excel Files, Basic Reports
- ✓ Creating PBIX Files and Re-Use
- ✓ Creating PBIT Files & Data Import Options
- ✓ Database Connections with Power BI
- ✓ Import and Direct Query - Data Loads
- ✓ Table Reports, Matrix and Chart Reports
- ✓ Interactive Visuals and Focus Mode

### Chapter 4: Hierarchies and Filters

- ✓ Creating Hierarchies with Report Fields
- ✓ Data / Drill Options - Auto & Manual
- ✓ Data Explore Options : Spotlight, Focus
- ✓ Expand, Goto Next Level and Drill-up
- ✓ See Data, Export Data, See Records
- ✓ Include and Exclude Options, Multi-Field
- ✓ Filters and Real-time Usage with Power BI
- ✓ Using Report Filters and Page Filters
- ✓ Using Drill-down Filters and Visual Filters
- ✓ Apply and Clear Options with Value Filters
- ✓ Adding Text Box, Images, Buttons Shapes
- ✓ Big Data Access with Power BI

### Chapter 5: Power BI Visual Properties - 1

- ✓ Fields, Formats and Analytics Options
- ✓ Table Visuals & Properties, Filters
- ✓ Data Bar and Data Scaling Options
- ✓ Divergent Property, Data Labels
- ✓ Matrix : Sub Totals, Grand Totals
- ✓ Drilldown Options : Row and Column
- ✓ Stacked Bar Chart, Clustered Colum Chart
- ✓ Stacked and Clustered Colum Chart
- ✓ 100% Stacked Bar and Column Charts
- ✓ Area & Stacked Area Chart. Ribbon Chart
- ✓ Waterfall Chart, Scatter Chart, Pie Chart
- ✓ Line, Doughnut Tree Map, Funnel, Gauge
- ✓ DETAILED Properties of Every Visual
- ✓ General, Lables, Values, Legend Options
- ✓ Axis, Title, Markers, Filter Options

### Chapter 6: Power BI Visual Properties - 2

- ✓ Map Reports and Filled Map Reports
- ✓ ArcGIS Maps and Real-time Usage. Options
- ✓ Longitudes and Latitudes. Bing Maps
- ✓ Color Analytical Maps, Styles, Options
- ✓ KPI Reports - Target, Value and Trend
- ✓ Plot Area & Responsiveness Properties
- ✓ Sentiment Colors, Color Saturations
- ✓ Breakdowns, Title, Axis Properties
- ✓ Category & Data Labels, Constant Lines
- ✓ Working with SLICER Visual : Value Filters
- ✓ Horizontal and Vertical Slicer Filters
- ✓ Single Select and MultiSelect Options
- ✓ Frown (Errors), Details. Lock Aspects
- ✓ Custom Visuals and PBIVIZ File
- ✓ PBI : Options and Settings, VM Settings

## Module II: ETL and Data Modeling

### Chapter 7: Power Query & M Language - 1

- ✓ Power Query [M Language] - Purpose
- ✓ Power Query Usage & Operation Types
- ✓ Power Query Architecture and Usage
- ✓ QUERY Concept, Properties, Validations
- ✓ Power Query for Data Mashup Operations
- ✓ Basic Data Types, Literals and Values
- ✓ Expressions and Primitives in M Lanuage
- ✓ LIST : Syntax, Examples and Usage
- ✓ RECORD : Syntax, Examples and Usage
- ✓ TABLE : Syntax, Examples and Usage
- ✓ Power Query Connection Formats, Settings
- ✓ let, source & in statements in M Lang
- ✓ Power BI Canvas: Edits, Applied Steps
- ✓ Queries and Applied Steps, Edit Queries

### Chapter 8: Power Query & M Language - 2

- ✓ Data Sources with Excel, File Formats
- ✓ Data Sources with Database Connections
- ✓ BLANK Data Sources Creation & Scope
- ✓ Creating LIST, RECORD, TABLE Queries
- ✓ Functions in Power Query and Usage
- ✓ Defining Functions and Invoke Options
- ✓ Mashup Operations in Powe Query Editor
- ✓ Row Filters, Column Filters, Renames
- ✓ Promoting Headers and Query Settings
- ✓ MERGE Queries For Combining Queries
- ✓ Inner Join and Left/Right Outer Joins
- ✓ Left Anti Join, Right Anti Join, Full Join
- ✓ UNION All, Group By and Aggregations
- ✓ Close and Apply Options. Data Imports

### Chapter 9: Power Query & M Language - 3

- ✓ Creating Parameters in Power Query
- ✓ Intrinsic & Query Parameters, Usage
- ✓ Parameter Data Types, Default Value Lists
- ✓ Static Lists, Dynamic Lists For Parameters
- ✓ Reports with Range Values - Usage
- ✓ Parameters with PBIT Reports, Prompts
- ✓ New Queries from Dataset Fields, Usage
- ✓ Removing Duplicate Rows and Columns
- ✓ Column Delimiters and Field Formatting
- ✓ Change Type and Transform Operations
- ✓ Replace Values & Errors, Transpose
- ✓ Group By Aggregations, Fill, Reverse Rows
- ✓ Format Options in M Language
- ✓ Pivot and Unpivot Options in Power Query
- ✓ Data Type Conversions & Format Options

### Chapter 10: Power Query & M Language - 4

- ✓ Data Modelling Options with Power Query
- ✓ Modelling Operations - Custom Columns
- ✓ Query Transforms, Sort Direction, Statistics
- ✓ Enabling / Disabling Loads. ToList Options
- ✓ Creating Parameters & Variables. Functions
- ✓ Date and Time Columns. String Functions
- ✓ Advanced Edit Options, Custom Queries
- ✓ Custom Functions in Power Query M Lang
- ✓ Grouping and Sub Groups with Queries
- ✓ Binning with Groups and Query Formats
- ✓ SubString Functions, Splits (Row, Column)
- ✓ Parsing XML and JSON Files. Formatting

### Chapter 11: DAX Basics

- ✓ DAX : Importance and Real-time Usage
- ✓ DAX Data Types and DAX Calculations
- ✓ Syntax, Functions, Context Options
- ✓ ROW Context and Filter Context in DAX
- ✓ DAX Functions. Aggregates and Usage
- ✓ Creating and Using Measures with DAX
- ✓ Creating and Using Columns with DAX
- ✓ Vertipaq Engine & Special Characters
- ✓ Operators in DAX - Real-time Usage
- ✓ Quick Measures in DAX - Auto validations
- ✓ PowerPivot xVelocity & Vertipaq Store
- ✓ In-Memory Processing : DAX Performance
- ✓ Date and Time & Text Functions
- ✓ Time Intelligence Functions in DAX
- ✓ Logical & Mathematical Functions

### Chapter 12: DAX Functions, Expressions

- ✓ Data Modelling with DAX. Creating Roles
- ✓ Currency Conversions, Field Formatting
- ✓ SUM and SUMX Functions: Differences
- ✓ CALCULATE(), CALCULATEX() Functions
- ✓ CALCULATETABLE Functions. VAR, VARP
- ✓ DATESMTD, DATESQTD, DATESYTD
- ✓ ENDOF(), FirstDay(), LastDay()
- ✓ SAMEPERIODLASTYEAR, STARTOF()
- ✓ Other DAX Functions and Examples
- ✓ DAX Expressions with Quick Measure
- ✓ DAX Usage for Row Level Security
- ✓ Creating Roles with Power BI Desktop
- ✓ DAX Filters and Multi Value Conditions
- ✓ Manage Roles and Membership Options
- ✓ VIEW AS ROLE. Information Functions

# Module III: Power BI Service (Cloud)

## Chapter 13: Power BI Service (Cloud) - 1

- ✓ Power BI Cloud Account and Workflow
- ✓ Power BI Workspace : Options and Use
- ✓ App Workspace Creation in Real-time
- ✓ Publish Reports from Power BI Desktop
- ✓ Reports and Datasets in Power BI Cloud
- ✓ Pinning Report Pages and Visuals
- ✓ Dashboard Creation and End User Access
- ✓ Creating Tiles in Dashboards. Web, Mobile
- ✓ Creating Mobile Reports with Tiles
- ✓ Adding Images, Web Content and Videos
- ✓ Q & A (Cortana) for Visuals. QR Codes
- ✓ Enabling Interactive Visuals. Embed Codes
- ✓ Report Shares and Dashboard Shares
- ✓ App Publish Options and App Updates

## Chapter 14: Power BI Service (Cloud) - 2

- ✓ Power BI Report Edits in Cloud, Visuals
- ✓ Download PBIX Reports from Cloud
- ✓ SharePoint Integration, PPTX and Excel
- ✓ Dashboard Properties and Operations
- ✓ Report properties and Operations
- ✓ Dataset properties and Operations
- ✓ Report Insights, Related Items and Metrics
- ✓ Quick Insights and Shared. URLs
- ✓ Analyse in Excel Options, Pins
- ✓ Excel Publishing to Power BI Cloud
- ✓ Excel Pivot Reports with Power BI
- ✓ File Import, Upload and Worksheets
- ✓ Excel Publisher and Pins - Dashboards
- ✓ Excel Analyser and Pivot Reports

## Chapter 15: Power BI Service (Cloud) - 3

- ✓ Content Packs : Creation and Use
- ✓ Organizational and Service Level
- ✓ Content Packs from Azure MarketPlace
- ✓ Worksheets and Dashboards with Excel
- ✓ Gateways - Installation, Configuration
- ✓ Personal and Enterprise Gateways
- ✓ NT SERVICE\PBI EgwSERVICE Account
- ✓ Dataset Refresh Options and Schedules
- ✓ Managing Gateways - Gateway Clusters
- ✓ Azure Databus Integration, ODG Logs
- ✓ Dataset Security and Management Options
- ✓ Power BI Reports with Azure Data Sources
- ✓ Power BI Reports with Microsoft OneDrive
- ✓ Power BI Reports with Google Analytics
- ✓ SaaS Components, OneDrive with PowerBI

## Chapter 16: REST APIs & Power BI Admin

- ✓ REST APIs with Power BI Cloud
- ✓ Streaming Datasets Creation in Power BI
- ✓ API: Usage. Sub Keys and Channels
- ✓ Push and Pubnub Datasets in Power BI
- ✓ Azure Stream for Real-time Data Reports
- ✓ Using Streaming Sets in Tiles
- ✓ Real-time Data Tracking Visuals (Interactive)
- ✓ Power BI Report Server & Integration
- ✓ Tenant IDs, Subscriptions. Paginated Reports
- ✓ Power BI Mobile Publisher
- ✓ Power BI Vs Tableau, SSRS, SharePoint
- ✓ Licensing & Pricing Plans

### Project 1:

**For Everyone Real-time Project Implementation  
@ Climate Control Environment**

**Course Includes: Project Solution  
Explanations, Handouts**

**Project 2:**

**For SQL Server T-SQL Registrations : Real-time Project Implementation @ ERP Database**

**Course includes: Resume Preparation, Mock Interviews**

**Course Includes: FAQs: Chapter wise, Study Material, POCs**

Reach us for Free demo today.

Course Curriculum @ <http://sqlschool.com/PowerBI-Training.html>

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