Workshop	
Name	Synergetics-Standard-SQL Server 2012 Analysis Services
Duration	3 Days
Objective	Product Appreciation and its application in Enterprise solution space with hands-On exposure. This program provides implementation and solution-level information on SQL Server 2008 BI Platform from a Developers Perspective.
Participants' Entry Profile	Participants attending this course must have: • Concepts of Relational Database Design & Implementation • Understanding of OLTP Applications • Working experience of Visual Studio as an IDE
Training Methodology	The workshop will follow Synergetics methodology of **Concept Visualization** **Active Experimentation** **Application Development**. The workshop will be **100% Hands-On** with each participant having access to system during the session

Setup Requirements	
Hardware and Software Requirements	**Hardware Requirement** Inte1 Pentium 4, 4 GB Ram, **Software Requirement** Windows Server 2008 R2 (SP1) Microsoft IIS 6.x or above Microsoft SQL Server 2012 SP1 with BI Stack Microsoft SQL Server tabular model Instance Microsoft SQL Server MOLAP Instance Microsoft Visual Studio.NET 2010 AdventureWorks2012 and AdventureWorksDW2012 Sample Databases Sql Server Data Tools
Training Lab Requirements	Whiteboard Recommended size - 6 feet by 4 feet Whiteboard markers – Red, Blue, Green, Black Video Projector (1024 X 768 resolutions**)**

Course Contents

Day 1

- **Understanding Business Intelligence**

  - Introducing Business Intelligence
  - Reviewing Data Warehousing Concepts
  - The Purpose of a Data Warehouse
  - The Structure of a Dimensional Database

- **Analysis Services Architecture**

  - Physical Structures
  - Analysis Services Components
  - Logical Architecture

- **Building Your First Cube**

  - Exploring Business Intelligence Development Studio
  - Creating a Cube
  - Using the Cube Wizard without a Data Source
  - Reviewing the Cube Structure in the Cube Designer
  - Generating a Schema
  - Using the Schema Generation Wizard
  - Loading Data into the Relational Schema
  - Processing and Browsing a Cube

- **Designing Dimensions**

  - Reviewing the Adventure Works Data Warehouse Structure
  - Building a Standard Dimension
  - Deploying a Dimension
  - Changing Attribute Properties
  - Creating a Time Dimension
  - Modifying a Data Source View
  - Creating a Parent-Child Dimension
  - Adding an Self Referencing Dimension
  - Totaling Data for Non–Leaf-Level Data Members
  - Managing Levels within a Parent-Child Dimension

Day 2

- **Designing Measure Groups and Measures**
  - Adding Measure Groups to a Cube
  - Changing Properties for Measure Groups and Measures
  - Specifying Dimension Usage
  - Browsing Multiple Measure Groups
  - Aggregating Semiadditive Measures
  - Calculating Distinct Counts
  - Creating Simple Calculations
  - Adding a Calculation to a Cube

- Applying Conditional Formatting

➢ Designing Aggregations and Hierarchies

- Understanding Aggregation Design
- Using the Aggregation Design Wizard
- Inspecting Aggregations
- Changing Partition Counts
- Adding Attributes to the Aggregation Design
- Aggregating User Hierarchies
- Optimizing Aggregations
- Using the Query Log
- Viewing Usage Data
- Using the Usage-Based Optimization Wizard
- Maintaining the Query Log

➢ Using MDX

- Core MDX Functionality
- Querying with MDX
- Executing MDX Queries
- Working with Basic MDX Queries
- Calculated Members and Named Sets
  - ➢ Creating Tuple-Based Calculated Members
  - ➢ Creating an MDX Calculation for Percent of Total
  - ➢ Creating an MDX Calculation for Percent of Parent
- Hierarchical Navigation
- Time Series Functions
- Tuples and CROSSJOIN
- Filtering and Sorting
- Numeric Functions and Conditional Expressions
- Top and Bottom Performance Analysis

➢ Extended Dimension Features

- Defining Dimension Relationships
- Using a Referenced Relationship Type
- Using a Many-to-Many Relationship Type
- Supporting Currency Conversions
- Localizing Cubes
- Adding Translations
- Browsing Translations
- Organizing Information with Folders and Perspectives
- Organizing Measures
- Using Perspectives

➢ Interacting with Cubes

- Implementing Actions
- Adding Drillthrough
- Dynamically Adding Members to a Dimension

Day 3

➢

➢ SSAS Enhancements

- **Server Instance and Server Monitoring**
  - VertiPaq Engine for Tabular Model Databases

- Schema Rowsets for Analysis Services in VertiPaq Mode and Tabular Models
- Event Tracing Infrastructure

- **Tabular Modeling**
  - Author Tabular Models in Business Intelligence Development Studio
  - Tabular Model Designer Diagram View
  - Partitions in Tabular Models
  - Security Roles in Tabular Models
  - Row Level Security in Tabular Models
  - Key Performance Indicators in Tabular Models
  - Hierarchies in Tabular Models
  - DirectQuery Mode
  - Memory Paging in Tabular Models
  - New DAX Functions
  - Administer a Tabular Model Database in SQL Server Management Studio
  - Support for images
- **Multidimensional Modeling**
  - Scalable String Storage for MOLAP Engine
  - Support for Large Tables
- **PowerPivot for Excel**
  - New Version of PowerPivot for Excel in SQL Server 2012
  - New DAX Functions
- **PowerPivot for SharePoint(Overview & Demo Only)**
  - PowerPivot Configuration Tool
  - BISM Connection Files in SharePoint
  - More Configuration Settings and Server Health Rules for PowerPivot for SharePoint