

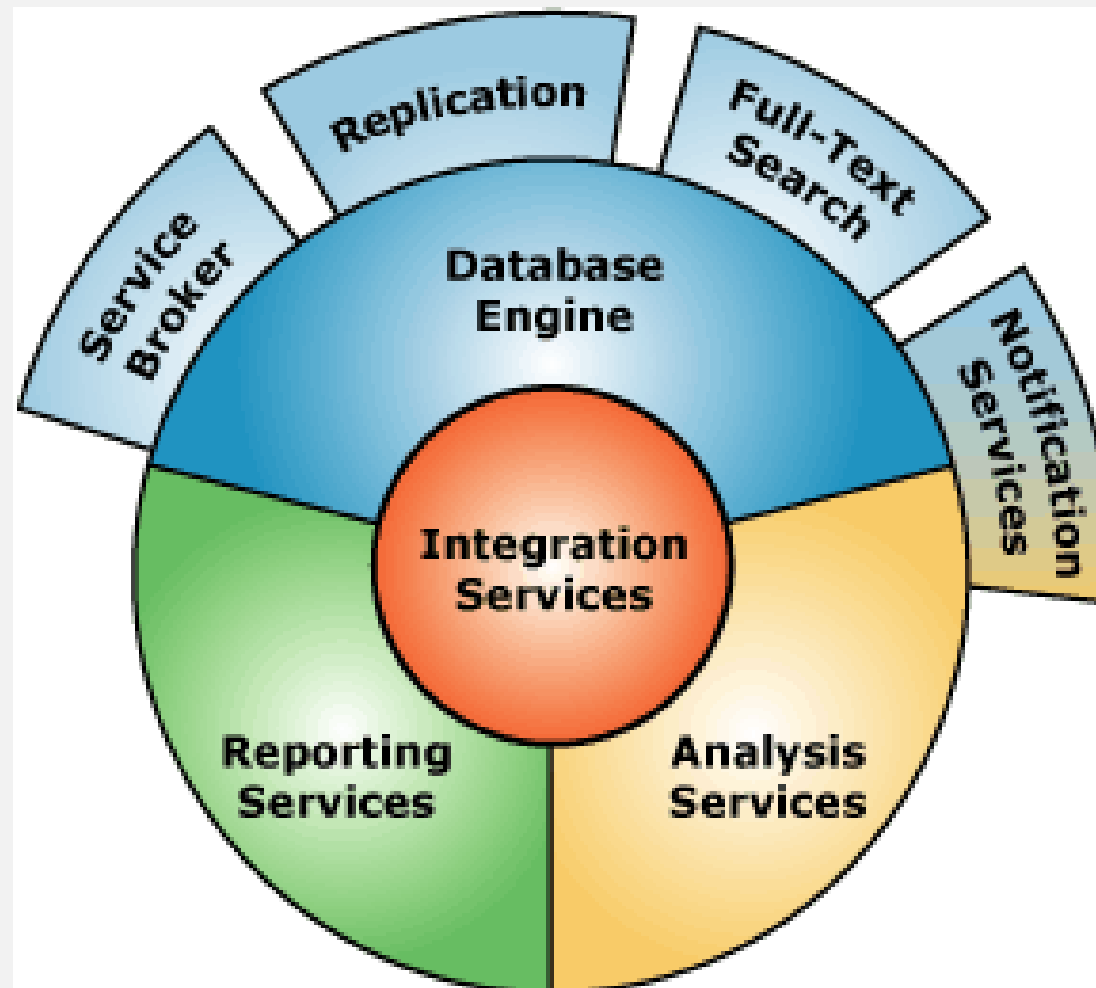
# 1. Getting started with MS-SQL Server.

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## 1.1 Intro:

- ❑ SQL Server is a relational database management system, or RDBMS, developed and marketed by Microsoft.
- ❑ SQL server is tied to Transact-SQL, or T-SQL, the Microsoft's implementation of SQL that adds a set of proprietary programming constructs.
- ❑ SQL Server works exclusively on Windows environment for more than 20 years.
- ❑ In 2016, Microsoft made it available on Linux. SQL Server 2017 became generally available in October 2016 that ran on both Windows and Linux.

## 1.2 SQL Server Key Components:



## 1.3 SQL Server key components:

### 1.Database Engine:

- ❑ The core component of the SQL Server is the Database Engine.
- ❑ The Database Engine consists of a relational engine that processes queries and a storage engine that manages database files, pages, pages, index, etc.
- ❑ The database objects such as stored procedures, views, and triggers are also created and executed by the Database Engine.

### 2. SQL Server Analysis Services (SSAS):

SAS is the data-analysis component of SQL Server. It can create OLAP (OnLine Analytical Processing) cubes — sophisticated programming objects for organizing data inside a relational database — and do data mining (pulling relevant data out of a database in response to an ad-hoc question).

### **3. SQL Server Reporting Services (SSRS)**

❑ SSRS is a component of SQL Server that provides reporting regardless of a database's operating system.

### **4. SQL Server Integration Services (SSIS):**

❑ SSIS is a component of SQL Server that does the Extract, Transform, and Load (ETL) process that cleans up and formats raw data from source systems for inclusion in the database as ready-to-use information.

# SQL SERVER – What is – DML, DDL, DCL and TCL

## DML

DML is abbreviation of **Data Manipulation Language**. It is used to retrieve, store, modify, delete, insert and update data in database.

Examples: Delete, UPDATE, INSERT statements

## DDL

DDL is abbreviation of **Data Definition Language**. It is used to create and modify the structure of database objects in database.

Examples: CREATE, ALTER, DROP statements

## DCL

DCL is abbreviation of **Data Control Language**. It is used to create roles, permissions, and referential integrity as well it is used to control access to database by securing it.

Examples: GRANT, REVOKE statements

## TCL

TCL is abbreviation of **Transactional Control Language**. It is used to manage different transactions occurring within a database.

## 1.5 SQL Server Version History:

Version	Year	Release	Code name
8.0	2000	SQL Server 2000	Shiloh
8.0	2003	SQL Server 2000 64-bit Edition	Liberty
9.0	2005	SQL Server 2005	Yukon
10.0	2008	SQL Server 2008	Katmai
10.25	2010	Azure SQL database (initial release)	Cloud database or CloudDB
10.50	2010	SQL Server 2008 R2	Kilimanjaro (aka KJ)
11.0	2012	SQL Server 2012	Denali
12.0	2014	SQL Server 2014	SQL14
13.0	2016	SQL Server 2016	SQL16
14.0	2017	SQL Server 2017	Helsinki
Not yet released	2019	SQL Server 2019 CTP	Seattle