SQL Azure - INTRODUCTION

❋ Microsoft Azure is a cloud computing platform.

❋ It provides the infrastructure to build, deploy and managing applications and services.

❋ This is made possible with a global network based data centers managed by Microsoft.

❋ The provide services include PaaS and IaaS

❋ SQL Azure extends its support to

   ✓ Various programming languages,

   ✓ Microsoft-specific Tools and frameworks and

   ✓ Third-party based software's.
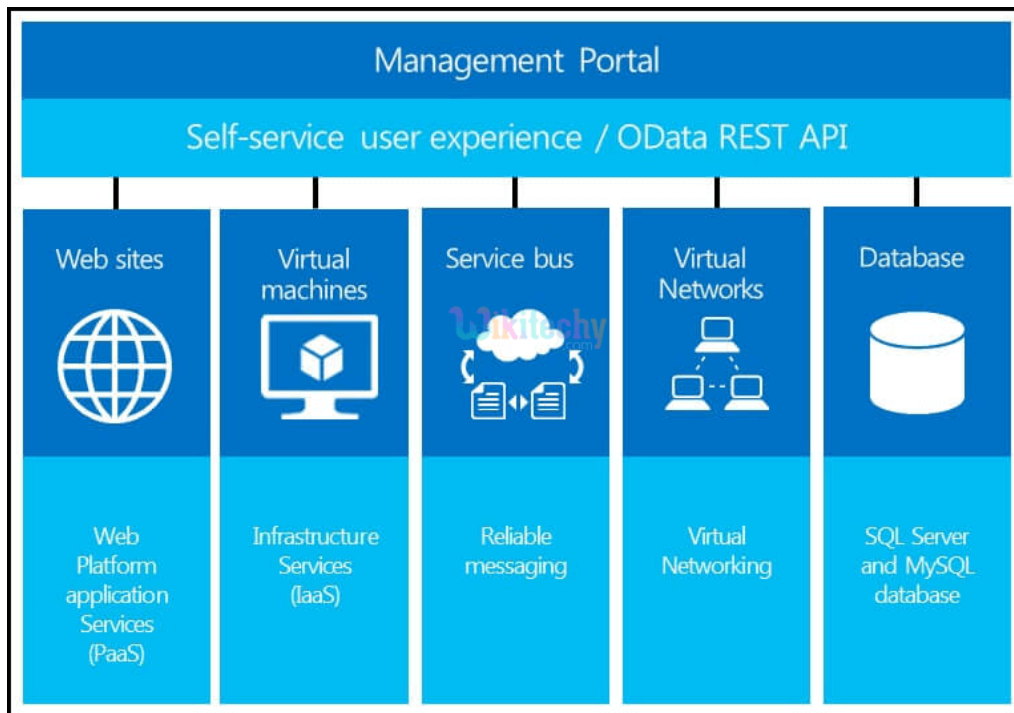

Fig1. SQL Azure Environment

Microsoft Azure SQL Database:

* It is a cloud-based service that offers data-storage facility which is part of Azure Services Platform.
* Azure SQL Database permits users to make relational queries against stored data.
* The data is stored in the form of structured, semi-structured, or even unstructured documents.
* Querying features includes data search, data analysis and data synchronization.

How SQL Azure Works:

* SQL Database uses a special version of Microsoft SQL Server.
* This special version allows storing multiple copies of databases with
  * ✓ Business continuity,
  * ✓ Disaster recovery with backups,
  * ✓ Geo-replication,
  * ✓ Elastic scale and
  * ✓ Rapid provisioning.
* Only a subset of SQL Server functionality is exposed in SQL Azure DB.
* Data types such as string, numeric, date and Boolean are supported.
* XML-based format is implemented for data transfer.

* SQL Database uses T-SQL for querying.
* Tabular Data Stream (TDS) protocol is used to access the service over the Internet.

How to use SQL Azure DB:

* Organizations can use SQL DB to build applications and transfer them to SQL Azure.
* The other way is to build applications on Windows Azure and store the data in the cloud.
* With Transact-SQL (T-SQL) query language, there is a high rate of fault tolerance.
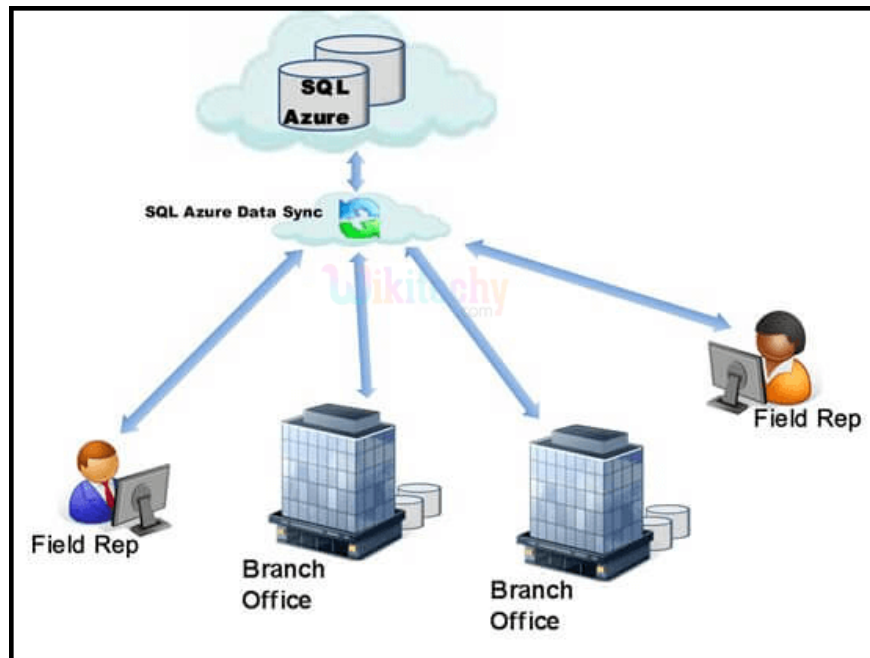* This eases the task of data synchronization as shown below:

Fig2. Data Synchronization with SQL Azure

Differences in SQL Azure from SQL Server.

* SQL Azure doesn't support all T-SQL commands.

* SQL Server data types like XML or functions are not supported.

* Cross-database joins is not permitted.

* Maximum allowed database size is just 50 GB.

* The present release does not perform scheduled backups and restores.