**SQL Server Transaction Replication**

Transactional replication is an automated periodic distribution of changes between databases. Data is copied in real-time from the primary server (publisher) to the receiving database (subscriber).

**Transactional replication components:  
Publisher** - The Publisher is a database that makes data available to other locations.  
**Distributor** - The Distributor is a database that acts as a station for replication specific data associated with one or more Publishers.  
**Subscriber** - Subscriber is database instance that consumes replication data from a publication is called a Subscriber.  
**Article -** An article is the smallest set of data that can be configures for replication.  
**Publication –** Publication is a grouping of articles published together.  
**Subscription –** Subscription is a request to receive data from one or more publications.

Transactional replication works on a transaction basis. Every committed transaction gets scanned for changes applied to replication articles. Scanning of the changes is done by a log reader agent, which reads through the transaction log of the publisher database. If there are changes on the published object, those changes get logged on the distributor in the distribution database. From there they make their way to the subscribers. Transactional replication allows for close to real time synchronization. While there are several options to allow for bidirectional data movement, transactional replication was originally designed to work one way only.

SQL Server replication agents run as scheduled jobs under SQL Server Agent. Replication agents can also be running from the command line and by applications that use Replication Management Objects (RMO). SQL Server replication agents can be monitored using Replication Monitor and SQL Server Management Studio. They are necessary to define the process and also its activity afterwards.