SQL Server Alwayson AG Feature was introduced in 2012

Prerequisites to Setup AG:

1. Windows Servers should be part of Windows Cluster
2. Each Individual DB Server should have identical drives with identical folders.
3. SQL Servers should be installed with same Edition and Same Version

VMSQL01 – SQL 2019 – Enterprise Edition – Source — Primary AG Replica

VMSQL02 - SQL 2019 – Enterprise Edition – Destination – Secondary AG Replica

VMSQL03 - SQL 2019 – Enterprise Edition – Destination – Secondary AG Replica

SQL Server 2012 — Total AG Replica’s → 5 (1 Primary, 4 Secondary)

SQL Server 2016 – Total AG Replica’s → 9 (1 Primary, 8 Secondary)

Developer Edition:

1. **AlwaysAG Feature** should be ENABLED under SQL Config. Manager for all DB Servers.
2. SQL Services should be set to run under Domain Windows Service Account
3. Add Windows SQL Service Account in All AG Replicas (Primary DB Server, All Second DB Servers) and Grant SysAdmin Previliges

DB LogShipping:

Primary DB – Read and Write Operations

Secondary DB

1. Norecovery — No Read and No Write Operations. DB will be in RESTORING Status. (No Bkps)
2. Standby – Only Read Operations. No WRITE Operations.

Failover:

1. Automatic failover is not possible
2. Manual Failover is possible

DB Mirroring:

Principal DB – Read and Write Operations

Mirror DB – Restoring Status

Norecovery — No Read and No Write Operations. DB will be in RESTORING Status.

–No backups are allowed.

Failover:

Automatic failover – Witness DB Server is mandatory

Manual Failover – Witness is not required.

Alwayson AG:

Primary AG Replica: VMSQL01

Secondary AG Replica’s: VMSQL02, VMSQL03