**AlwaysOn Troubleshooting and Tips**

1. **Failover Cluster Manager**
   1. Check if the Cluster Service is running.
   2. If you don't see the Cluster Object you can right click and connect.
   3. Run Cluster Validation- Right Click on the Cluster name….
   4. Check if all the resources- Role, Node, Network, Core Resources are Online (when you stand on the cluster, at the down in the middle of the screen).
   5. Use the SQL Server AlwaysOn Dashboard (All supposed to light with Green).
   6. Use Power shell if needed for information and action.
   7. Use the Cluster Dmv's.
   8. Error Log. You need to stand on each resource to view his Error log (you can find it in the right part of the screen).
   9. When node Majority is setup the Witness in the FCM (fail over cluster manager) will be without information. Only when the file share is configured.
   10. In multi subnet only one Cluster IP will be online.
2. **SQL Dashboard** 
   1. Quorum need to be in Normal State.
3. **Servers**
4. **Network-**
   1. Check the communication (Ping) between the nodes, both ways and to the DNS names (Cluster, Listener) and to the File share if any.
5. **Availability Group**
   1. If the Databases is suspended you can right click and resume.
   2. Database State-
      1. Not Synchronized. One or more databases in the replica are not synchronized or have not yet been joined to the availability group.
      2. Synchronizing. One or more databases in the replica are being synchronized.
      3. Synchronized. All databases in the secondary replica are synchronized with the corresponding primary databases on the current primary replica, if any, or on the last primary replica.
      4. NULL. Unknown state. This value occurs when the local server instance cannot communicate with the WSFC failover cluster (that is the local node is not part of WSFC quorum).
6. **Failover**
   1. You can manually failover by right click on the Availability Group and Failover or from the Dashboard (Top Right).
   2. If Database is out of sync failover can't be done.
   3. The availability group can failover to the secondary while the windows cluster stay hosted in the primary node.
   4. In multi subnet environment the failover will include the time the Listener IP will replace the one that exists and the new IP will be updated in the cache.
   5. You can failover the hosting node of the windows cluster from the FCM- right click on the cluster object.
7. **General Information**
   1. You can back up the Cluster configuration by using Windows Backup Feature.
   2. It is not recommended to Restart the Server right away. Try to find the core of the problem. if the Databases is not Synchronizing (Primary) Synchronized (Secondary) You can lose data.
   3. If the Windows Cluster Is up and just one node is running the log will increase (saving transactions for the second node)