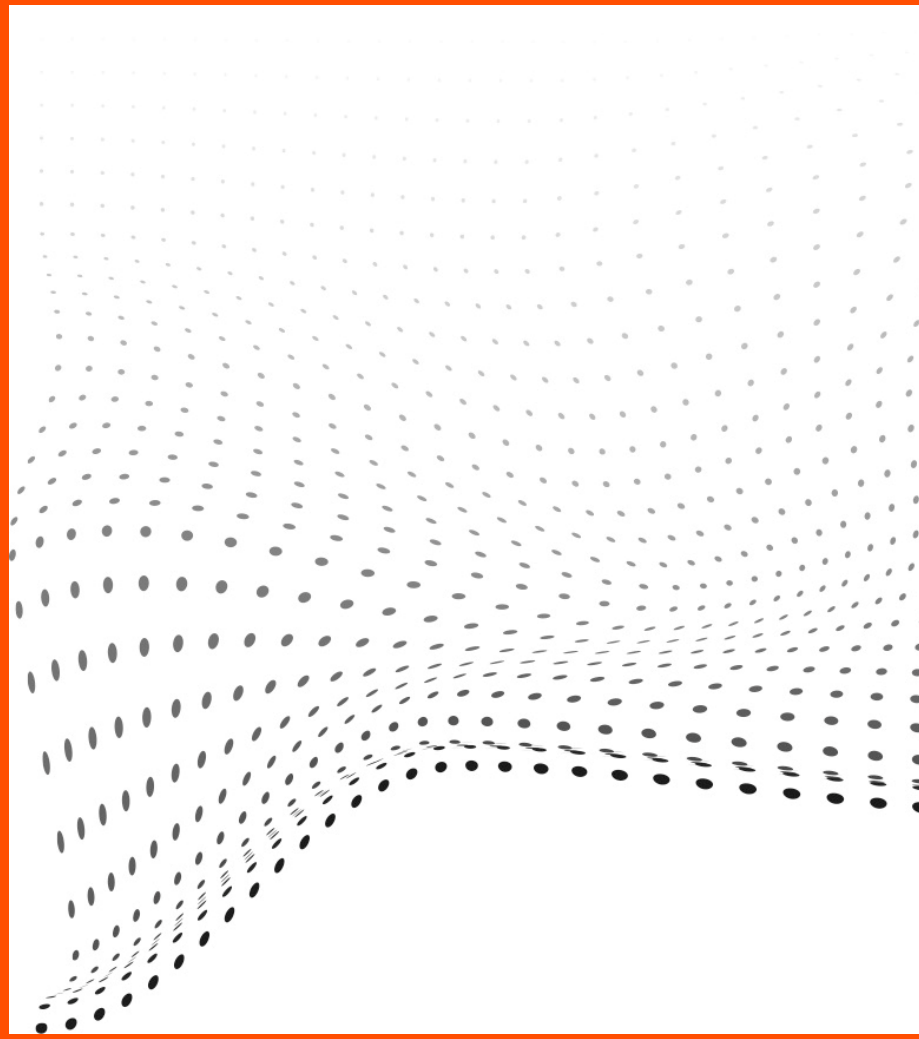
DB BITS

SOLUÇÕES
EM GERÊN
DE DADOS

Zero to Hero in 16 Hours: HADR on SQL Server

Module 8: AOAG III

Combining the solutions and more



Goals

- Read only routing
- Failover Clustering Instances and Availability Groups combined
- Best Practices

Read-only routing for AO AG

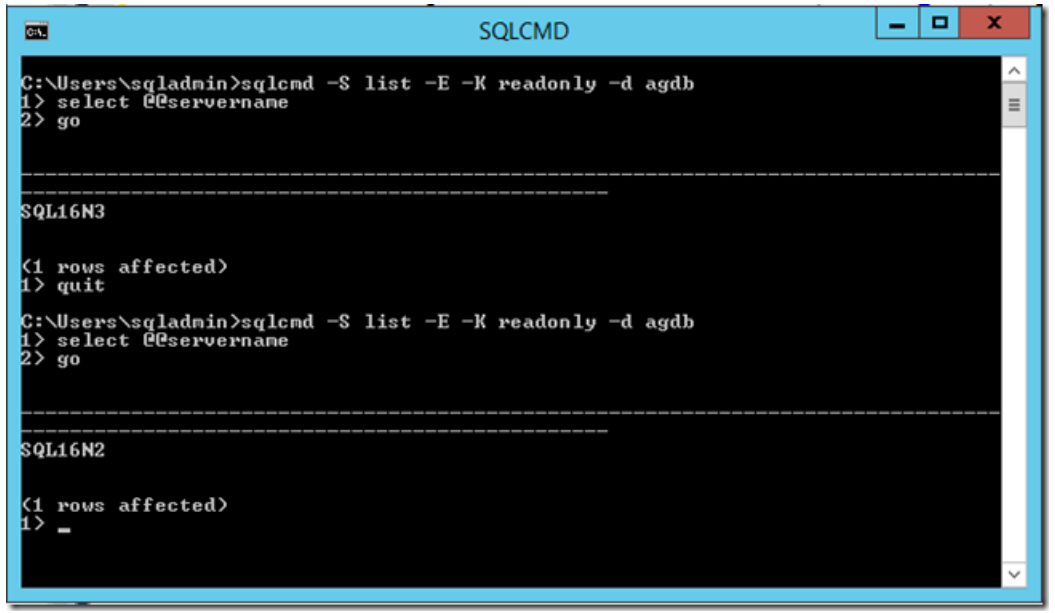
- Must have a Listener
- Round-Robin Balance
- Connection string: Read-only (read-intent connection request)
- SQL SERVER 2016+
- Every Replica needs to have a READ_ONLY_ROUTING_URL (TCP://SQL16N3:1433’)
- ALTER AVAILABILITY GROUP ag MODIFY REPLICA ON N'SQL16N1' WITH (PRIMARY_ROLE (READ_ONLY_ROUTING_LIST=(('SQL16N3', 'SQL16N2'), 'SQL16N1')))

Read-only routing for AO AG

```
ALTER AVAILABILITY GROUP [AGPombo]
MODIFY REPLICA ON N'SQL13' WITH (PRIMARY_ROLE(READ_ONLY_ROUTING_LIST = ((N'SQL12',N'SQL11'))))
GO
USE [master]
GO
ALTER AVAILABILITY GROUP [AGPombo]
MODIFY REPLICA ON N'SQL12' WITH (SECONDARY_ROLE(READ_ONLY_ROUTING_URL = N'TCP://SQL12:1433'))
GO
ALTER AVAILABILITY GROUP [AGPombo]
MODIFY REPLICA ON N'SQL12' WITH (PRIMARY_ROLE(READ_ONLY_ROUTING_LIST = (N'SQL11',N'SQL13')))
GO
USE [master]
GO
ALTER AVAILABILITY GROUP [AGPombo]
MODIFY REPLICA ON N'SQL11' WITH (SECONDARY_ROLE(READ_ONLY_ROUTING_URL = N'TCP://SQL11:1433'))
GO
ALTER AVAILABILITY GROUP [AGPombo]
MODIFY REPLICA ON N'SQL11' WITH (PRIMARY_ROLE(READ_ONLY_ROUTING_LIST = (N'SQL12',N'SQL13')))
GO
```

Read-only routing for AO AG

- BCP or SQLCMD use –K ReadOnly
- Server=tcp:MyAgListener,1433;Database=Db1;IntegratedSecurity=SSPI;**ApplicationIntent=ReadOnly**;MultiSubnetFailover=True



(from the trenches) Troubleshooting AO Ags Bnecks

SYNC:

- REDO process on secondary
- All read-only use SNAPSHOT Isolation

Directly impacts:

- Long transactions on Primary;
- REDO on Secondaries

ASYNC:

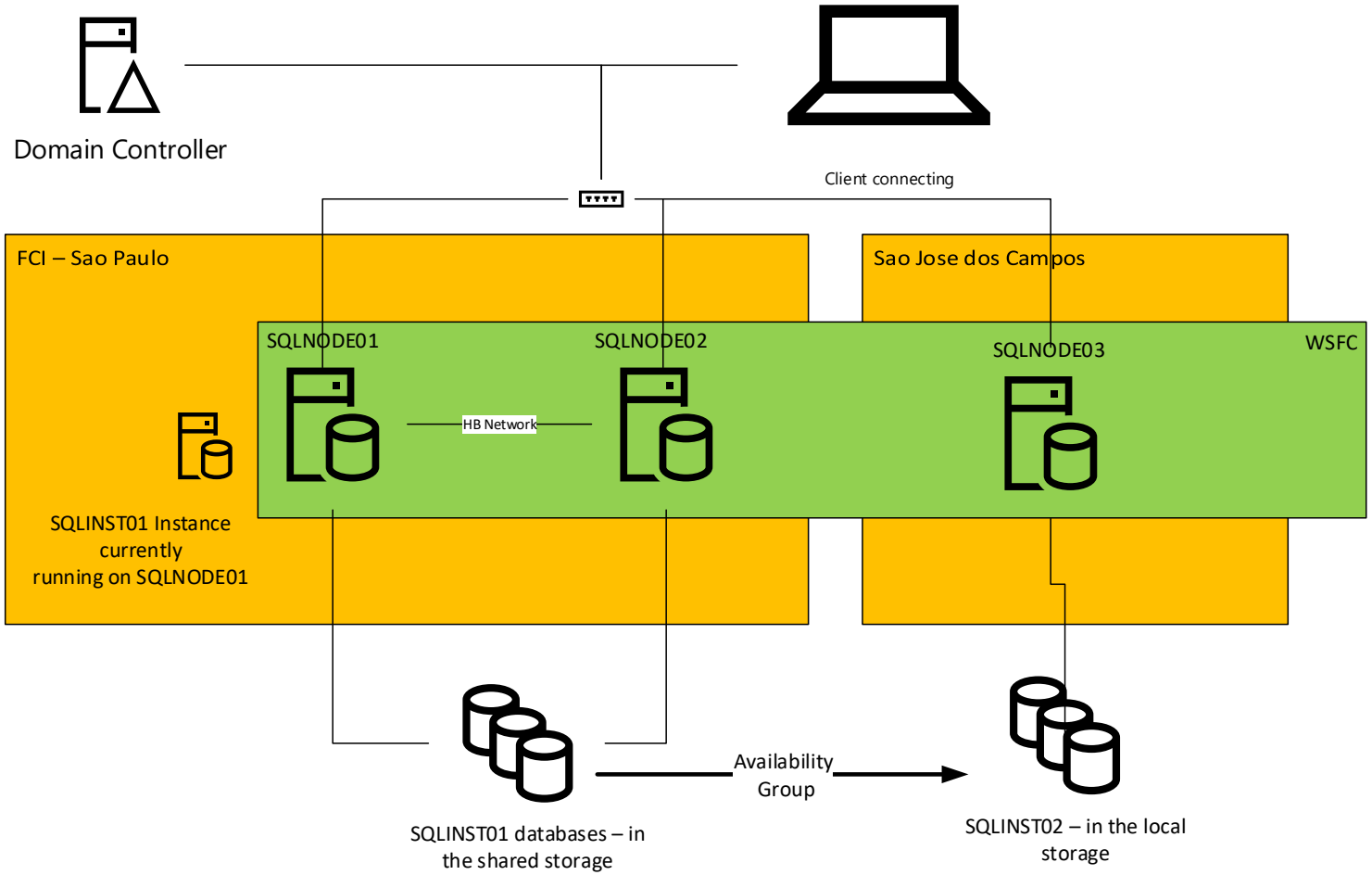
- Bottleneck can be anywhere, however, won’t directly affect the Primary.

(from the trenches) Troubleshooting AO Ags Bnecks

Most common causes:

- Long transactions on Primary
- High network latency or low throughput

AO FCI and AO Ags combined



Best Practices

- External objects from the Database (Jobs, Logins, Linked servers);
- Don’t forget the Indexes on the Secondaries;
- The Canary table;
- Make sure the TCP url for the endpoint is properly formed, test PING with the exact address (alter availability group [AG-Racoon] modify replica on 'CL-LAB01\LAB01' with (ENDPOINT_URL='TCP://CL-LAB01:7022'))

Fim do módulo