SQL Server 2022 Contained Availability Groups

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@DBADuck everywhere

- SQL Server Certified Master
- PowerShell DBA / Trainer
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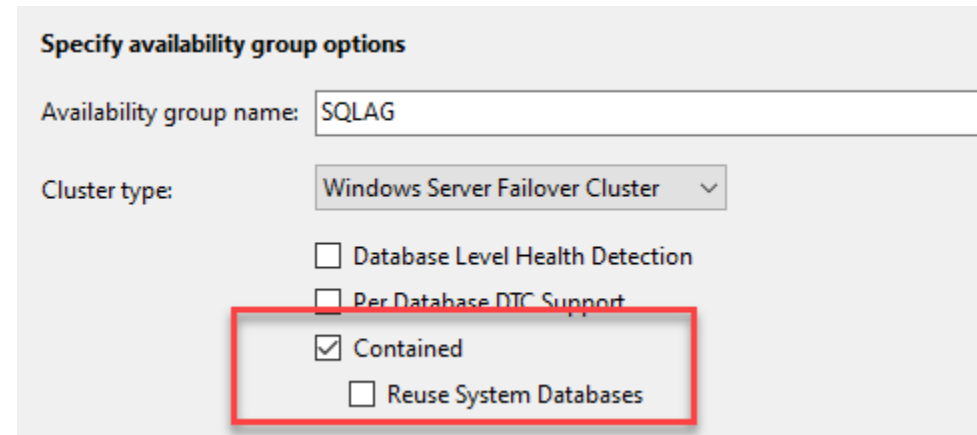PASS Data Community SUMMIT

Agenda

- Introduction to Contained Availability Groups

- Creation and Configuration

- Limitations

- Demo: Contained Availability Groups in Action

Introduction to Contained AGs

- What are they?

- Contained system databases
  - master, msdb
  - NOT copies, but special blank databases

- Logins, Linked Servers, Jobs

- It is all about Context (how you connect)

Creation and Configuration

- New options (`CONTAINED`, `REUSE_SYSTEM_DATABASES`)

- Copies master, msdb to

  - [AG_NAME]_master

  - and [AG_NAME]_msdb

Specify availability group options

Availability group name: SQLAG

Cluster type: Windows Server Failover Cluster

☐ Database Level Health Detection
☐ Per Database DTC Support
☑ Contained
☐ Reuse System Databases

- Copies sysadmin logins to the new master

- Autoseeding needs to be used for the system dbs

On Creation of contained system dbs

- All sysadmin accounts are copied to the new master

- Connect to the listener to create new AG logins

  - I will show you another way in Demo.

- Connect to the listener to create new Contained Jobs.

Read-Only Routing in Contained AG

- ApplicationIntent=ReadOnly as normal

- Connecting to a database in the contained AG

- User needs access to the database in the AG to be able to connect.

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Limitations

- Not a Security Boundary

- If logins have permissions to the instance, you can see databases outside of Contained AG.

- [Contained Availability Groups](#)

- sp_configure needs to be run from an Instance Level and will not work in the Contained AG context.

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Not Supported

- SQL Server Replication (of any type)

- Distributed Availability Groups

- Log Shipping where target is in the AG

  - Log Shipping *from* the AG is supported

TDE in a Contained AG

- Create Server Certificate in Master

- SQL will check both master databases for the Server certificate

- To move the Server Certificate to the contained master, it is the same as moving a certificate

Contained Availability Groups in Action

Demo

Review

- Contained Availability have master, msdb

- Only SQL Server 2022 Enterprise

Session evaluation
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Thank you

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