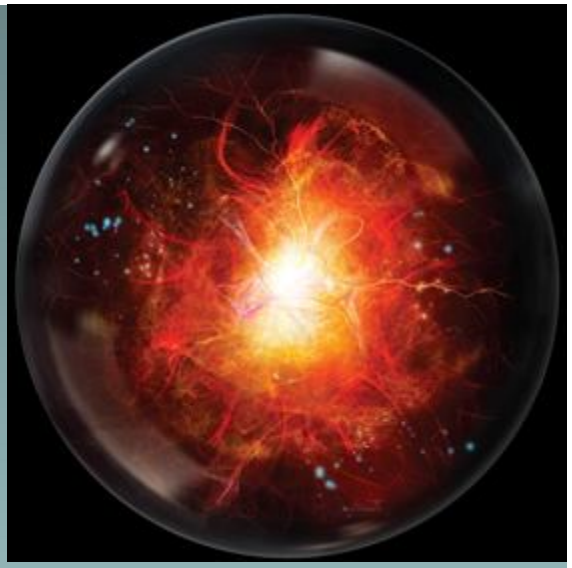
Tuning SQL Server Transactional Replication



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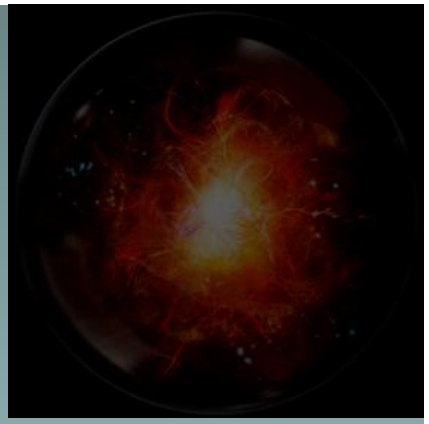
What is in this session



- SQL Replication Architecture
- Pre-requisites for SQL Replication
- Database Recovery Models
- Database File settings
- Distribution Settings
- Tuning Replication Agents
- Measuring Latency
- Measuring Performance of Replication
- Questions

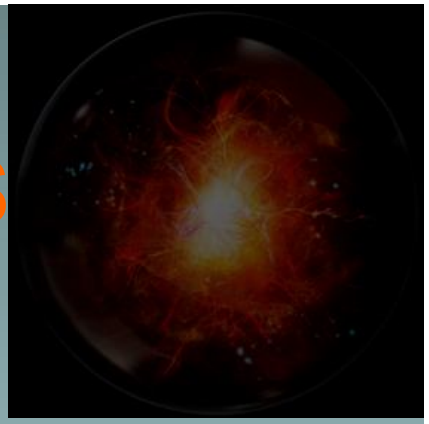
SQL Replication

- Is SQL Replication a HIGH AVAILABILITY SOLUTION?
- How it works
- Agents that are being used
  - Log Reader
  - Distribution
  - Queue Reader
  - Snapshot
  - Merge

Database Recovery Models

- SQL Server Database Recovery Models
- Which one suits best for my Replication database
- What is advantage with using BULK LOGGED model in SQL Server replication
- How does Recovery model affect SQL Replication
- Distribution DB – What is to be used

Database File Settings



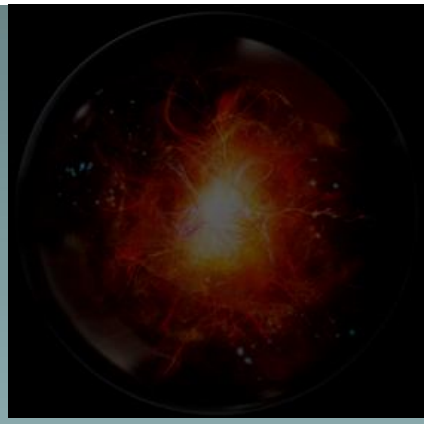
- Database File and File Groups
- How does improper sizing of Database Files affect replication
- Distribution DB – how to optimize

- Server Settings
- Storage
- Tempdb Placement

Tuning Replication Agents

- Distribution size: Size the distribution database to high value.
- Use independent agents for publications
- Use –MaxCmdsInTran in log reader
- Increase value for -ReadBatchSize in log reader
- Increase value for –ReadBatchThreshold in Log reader
- Increase value for -CommitBatchSize in Distribution
- Increase value for –CommitBatchThreshold in distribution
- Increase value for –MaxBCPThreads in distributor
- Decrease -PollingInterval in log reader
- MAXDOP for Distribution System can be 4, half the number of logical CPUs

Measuring Latency

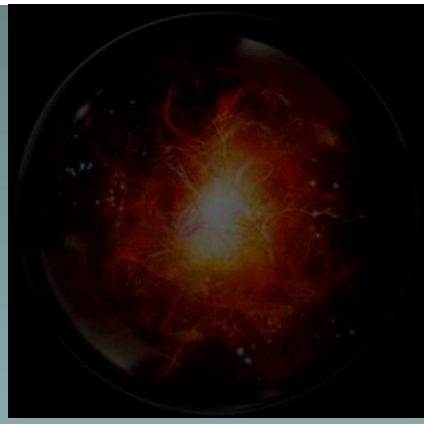


- What is latency?
- Tracer Tokens and how to use it to measure Latency
- Is frequent usage of tracer token good for Replication?
- Other ways to measure
  - Perfmon
  - SQL Scripts
  - SMO
  - Powershell

Measuring Performance

- Using perfmon
- Using Replication Monitor
- 3rd party tools
  - Baseline with peak load
  - Base line with off load

Questions



Questions????

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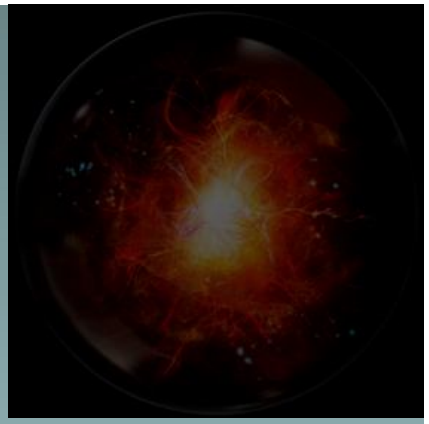

Thank you