



Video 7

Exchange 2007 Database

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Where we're going



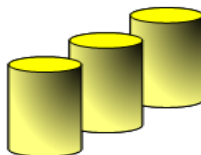
- Exchange 2007 Database Overview
- What's changed from 2003?
- Storage Groups and Databases
- Limitations
- Best Practices

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E-2007 Database



Mailbox Store



Storage Group

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Database Overview – Part 1

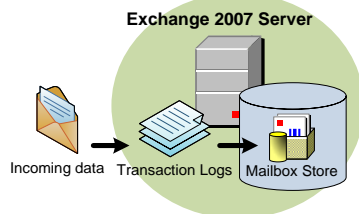


- **How Exchange stores data:**

- Databases built on a heavily extended version of JET
- Each database has a 16tb limit...
- Single Instance Storage (SIS) provides large space savings
- Database uses transaction logs (and memory) to initially store data

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Database Overview – Part 2



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What's Changed



- **This is what's different with databases in Exchange 2007:**

- The names have changed: mail store = mail database
- There is no .stm file anymore. All data is in the .edb
- Transaction logs have shrunk from 5mb to 1mb
- Transaction log numbering limits have been expanded from a million to 4 billion!
- Lost Log Resilience keeps last several log files in memory

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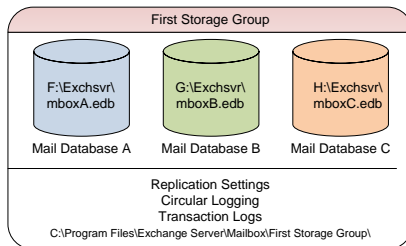
SGs and DBs – Part 1



- **The relationship between Storage Groups and Databases**
 - Storage groups are *virtual* containers for databases
 - They can hold up to five databases each
 - Transaction logs are handled at the storage group level
 - Local Continuous Replication limits you to a single database per storage group

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SGs and DBs – Part 2



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Limitations



- **Limitations**
 - Theoretical size cap is not a practical size cap
 - For Standard, there is an artificial 50gb cap on database sizes (SP1 = 150gb)
 - Memory Cost
 - Default Mailbox size limit is 2gb (can be changed)

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Best Practices



- **Try to follow these guidelines:**

- Use the 1:1 model for storage groups and databases
- Isolate databases and transaction logs on separate disk spindles/subsystems
- Leave Circular Logging disabled
- Perform regular FULL backups
- Store logs somewhere with plenty of space, just in case
- If you have multiple databases, set maintenance schedules so they don't conflict
- Implement Local Continuous Replication, if nothing else
- Don't forget about the artificial 50gb limit

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Wrap-up



- **Where we've been:**

- Architecture of the Exchange 2007 Database
- The ways the database has changed with 2007
- How Storage Groups and Databases work
- Limitations
- Best Practices

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