

Building a robust and highly available Exchange Server 2010 organization on any sized budget

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Agenda

- Exchange Server 2010 roles
- What is HA
- HA in Previous Versions of Exchange
- HA in Exchange Server 2010
 - CAS Role
 - HT Role
 - Mailbox Role (DAGs)
- Demo

Exchange 2010 Server Roles

In Exchange Server 2010, servers are installed with specific functional roles:

- Hub Transport Server role
- Mailbox Server role
- Edge Transport Server role
- Client Access Server role
- Unified Messaging Server role



What is High Availability

High availability:

- Implements system design that ensures a high level of operational continuity
- Is measured by the percentage of time the application is available

Availability Target	Permitted Annual Downtime
99%	87 hours, 36 minutes
99.9%	8 hours, 46 minutes
99.99%	52 minutes, 34 seconds
99.999%	5 minutes, 15 seconds

HA in Previous Versions of Exchange

- SCC (Single Copy Cluster)
- CCR (Cluster Continuous Replication)
- SCR (Standby Continuous Replication)
- LCR (Local Continuous Replication)
- NLB* (Network Load Balancing)

*for CAS and Hub roles only

HA for Exchange Server 2010 roles

- CAS Role
 - NLB
 - CAS Arrays
- Hub Transport Role
 - >1 per site
 - Shadow Redundancy
- Edge Server Role
 - Multiple MX records
 - Load Balancing

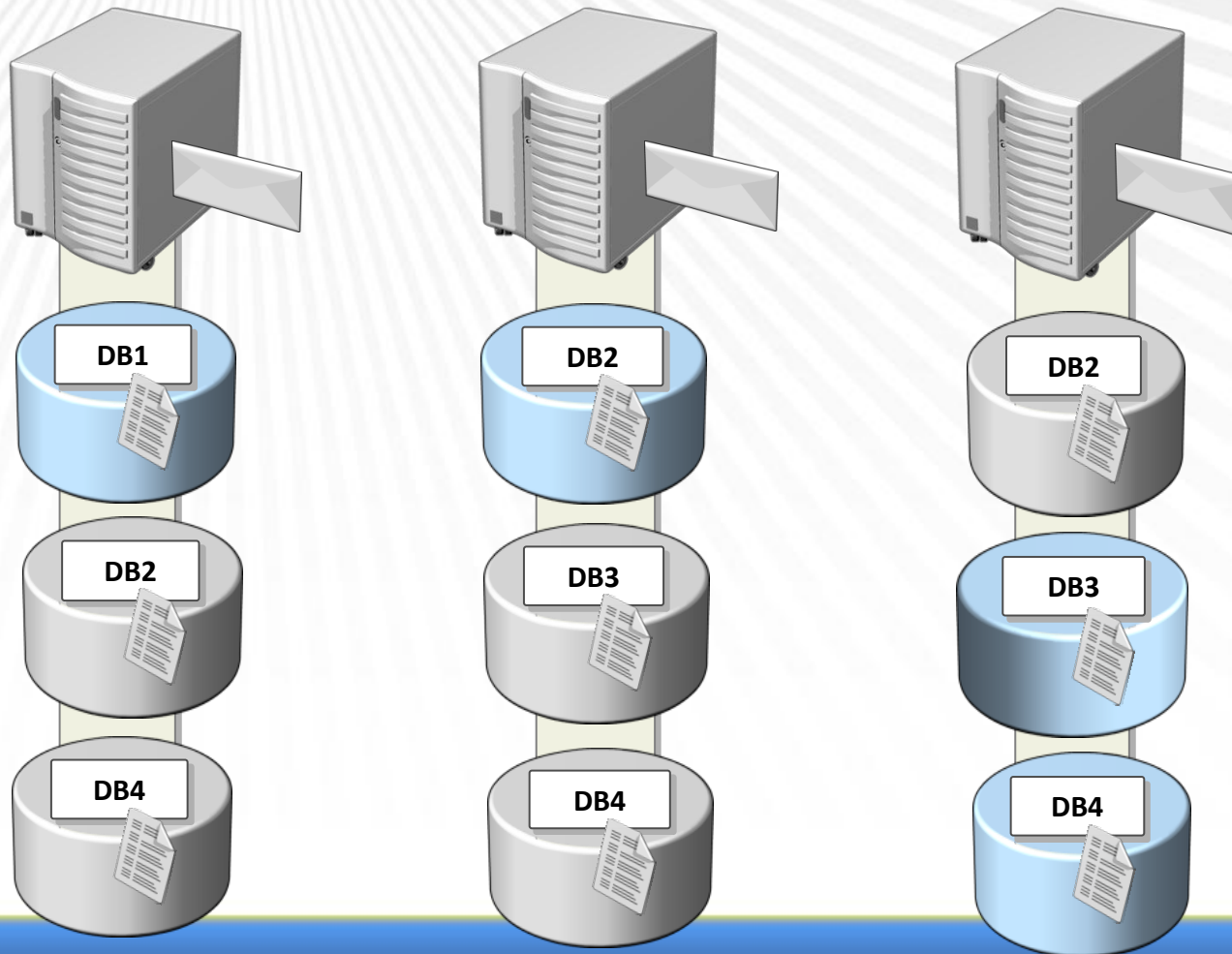
Database Availability Groups (DAGs)

A DAG is a collection of servers that provides the infrastructure for replicating and activating database copies. DAGs:

- Require the failover clustering feature, although all installation and configuration is done with the Exchange Server management tools
- Use Active Manager to control failover
- Use an enhanced version of the continuous replication technology that Exchange Server 2007 introduced
- Can be created after the Mailbox server is installed
- Allow a single database to be activated on another server in the group without affecting other databases
- Allow up to 16 copies of a single database on separate servers
- Define the boundary for replication
- Do not require dedicated mailbox servers

How are databases protected in a DAG?

Continuous replication protects databases across servers in the DAG



Configuring databases for High Availability

After creating a DAG, adding Mailbox servers to the DAG, and configuring the DAG, you must still do the following:

- Create database copies
- Set truncation lag time
- Set replay lag time
- Set preferred list sequence number

Demo

- DAG Creation
- DAG Configuration
- Client failover

Relevant courses at Springhouse

- 10135 – Configuring, managing, and troubleshooting Microsoft Exchange Server 2010
- 6423 – Implementing and managing Windows Server 2008 clustering

Q&A

- Questions?
- Aaron Harclerode
 - Aaron.harclerode@springhouse.com

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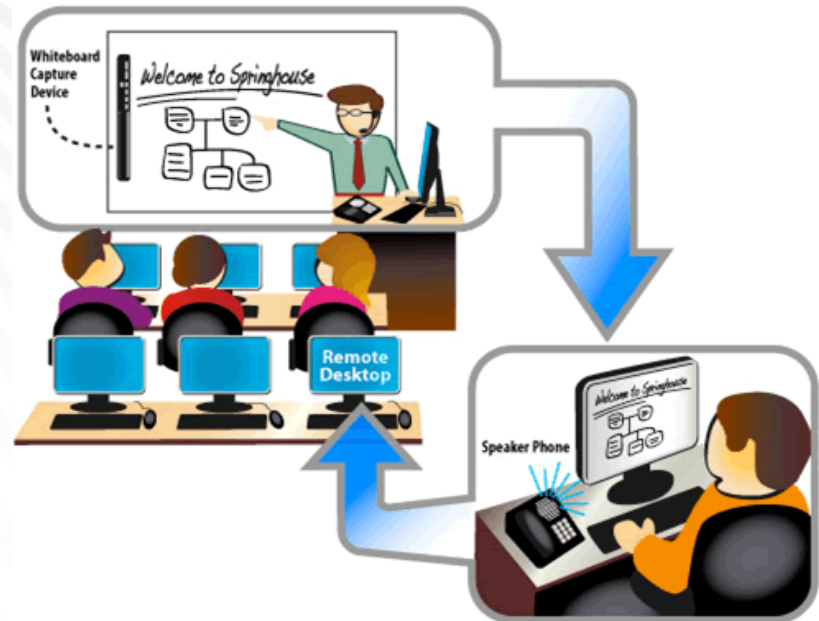
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