![Microsoft]

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Microsoft SQL Server 2016
High Availability

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Thomas Palm   Sales Solutions Professional

About Me

Profile

DBA and Senior Consultant, Microsoft Certified Solutions Expert, Trainer and SQL Server Enthusiast

- Working in IT since 1998
- SQL Server since version 7.0
- Focus on SQL Server infrastructure and mission critical systems
- Microsoft Certified Trainer and MCSE: Data Platform
- Microsoft P-TSP Data Platform
- Friend of Redgate
- PASS Chapter Leader Bavaria and SQL Saturday Organizer

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Microsoft CERTIFIED Trainer

FRIEND OF redgate 2016

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Our company.

Trivadis is a market leader in IT consulting, system integration, solution engineering and the provision of IT services focusing on ORACLE® and Microsoft technologies
in Switzerland, Germany, Austria and Denmark. We offer our services in the following strategic business fields:
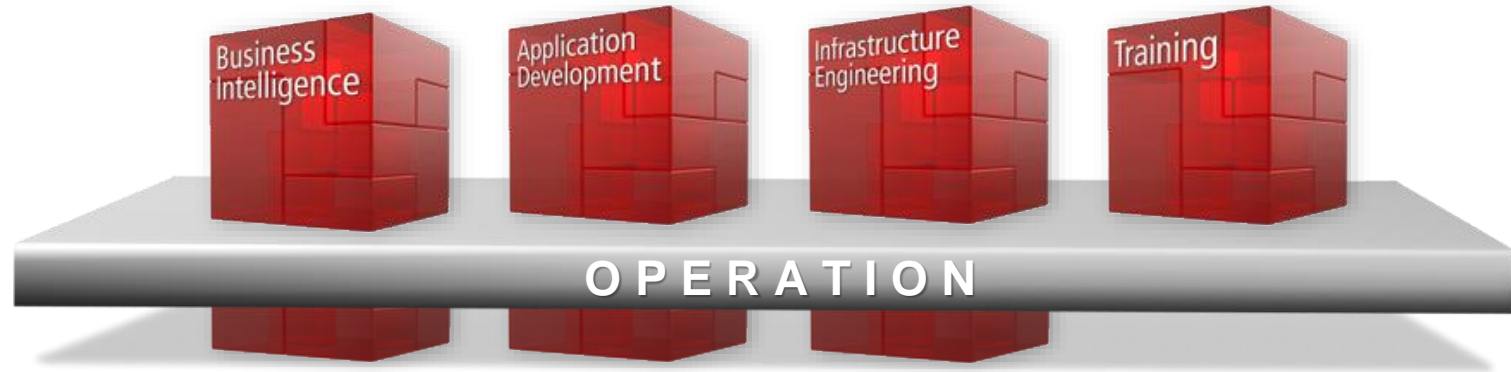
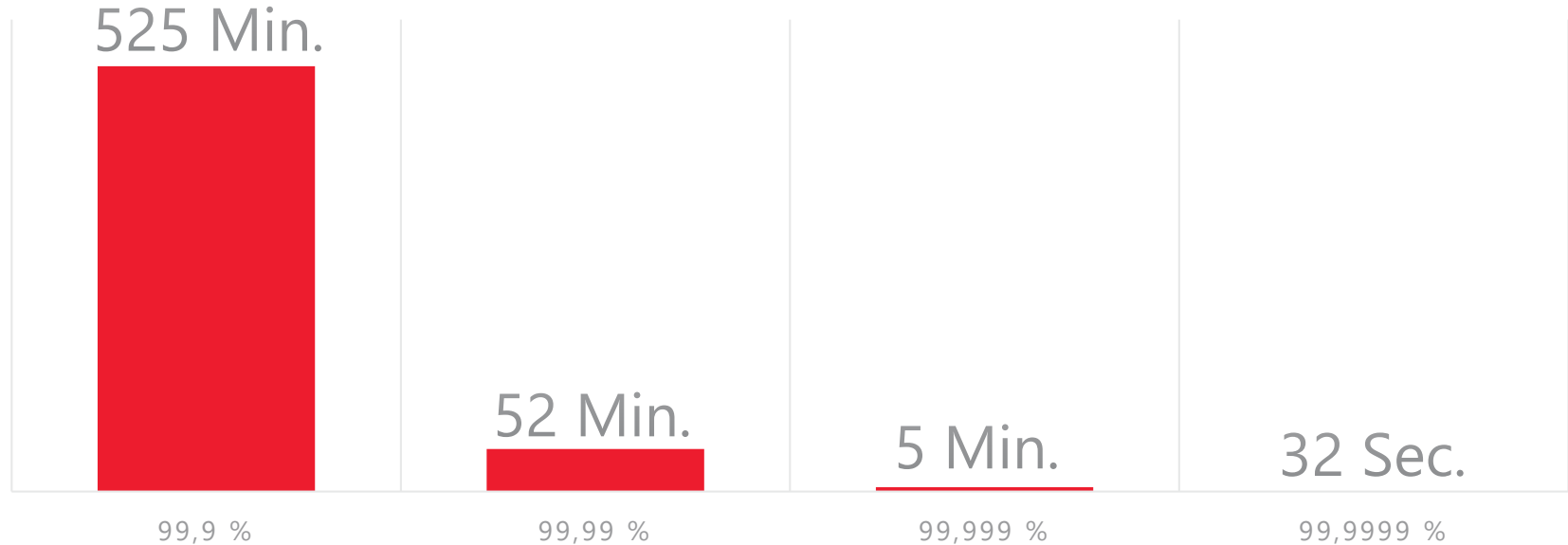Trivadis Services takes over the interactive operation of your IT systems.

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VIENNA

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BASEL

ZURICH

BERN

GENEVA

LAUSANNE

- 14 Trivadis branches and more than 600 employees

- 200 Service Level Agreements

- Over 4,000 training participants

- Research and development budget: CHF 5.0 / EUR 4 million

- Financially self-supporting and sustainably profitable

- Experience from more than 1,900 projects per year at over 800 customers

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High availability, what does that mean?

Downtime per year

| 525 Min.	52 Min.	5 Min.	32 Sec.
99,9 %	99,99 %	99,999 %	99,9999 %

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High Availability Topology – Failover Clustering

- Operates on instance level

- Multiple nodes possible

- Transparent

- Shared storage required

- Not useable in the cloud - actually

- Restrictions in Standard Edition

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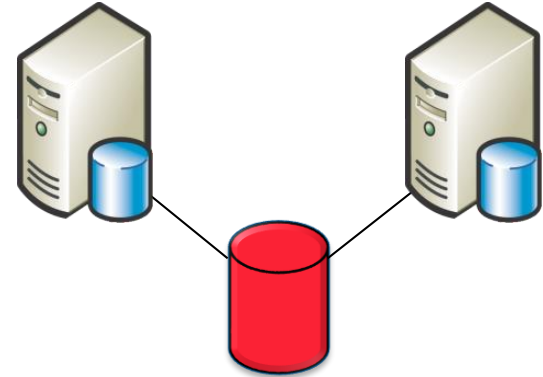
High Availability Topology – Availability Groups

- Operates on database level

- Group related databases

- Fast failovers

- Transparent failover

- Readable secondaries

- Restrictions in Standard Edition

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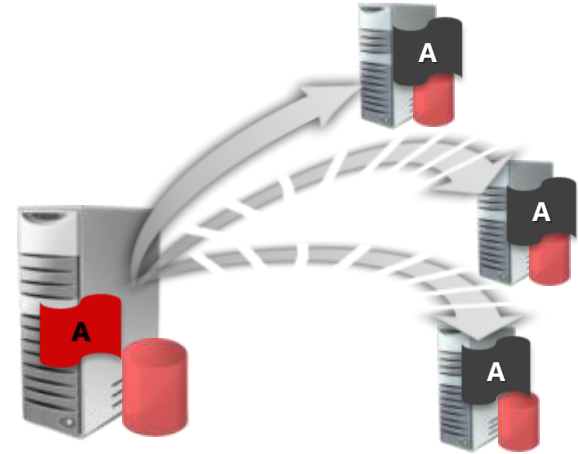
AlwaysOn – data availability for your needs

Data availability on database or instance level

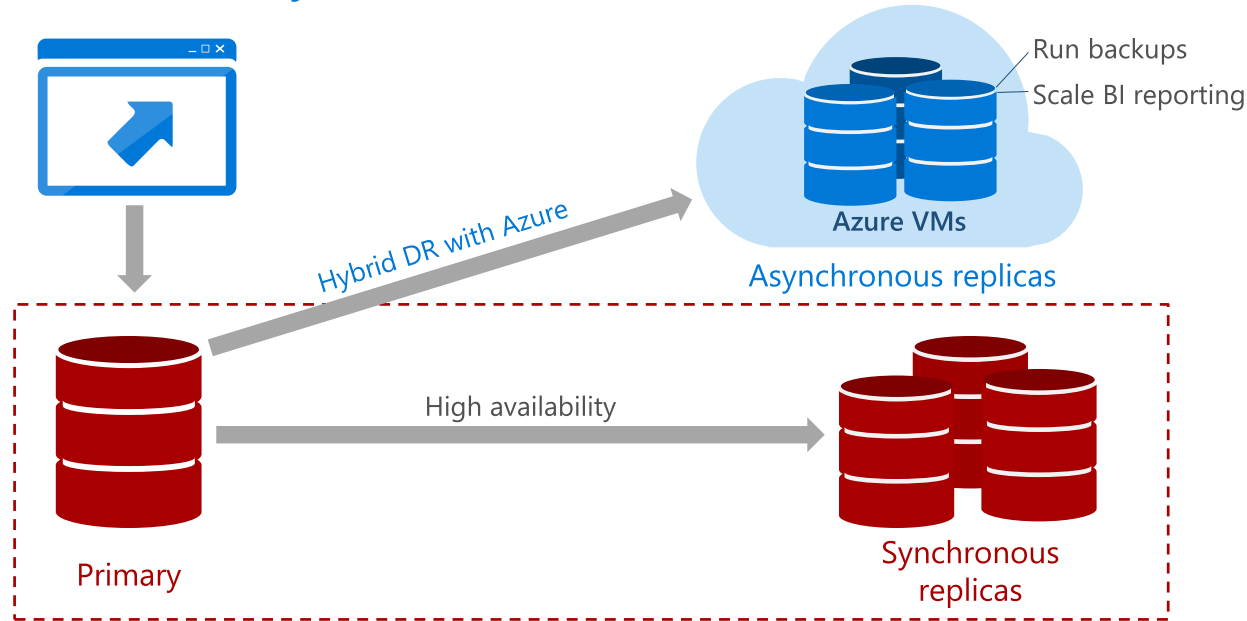**AlwaysOn Availability Groups**
Availability on database level

**AlwaysOn Failover Clustering**
Availability on instance level

Primary   Secondary

HIGH AVAILABILITY

FAIL-SAFE

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Enhanced AlwaysOn, Simplify HA & DR
increased operational efficiencies with hybrid cloud

Enhanced AlwaysOnNEW*

Run backups

Scale BI reporting

Azure VMs

Asynchronous replicas

Hybrid DR with Azure

High availability

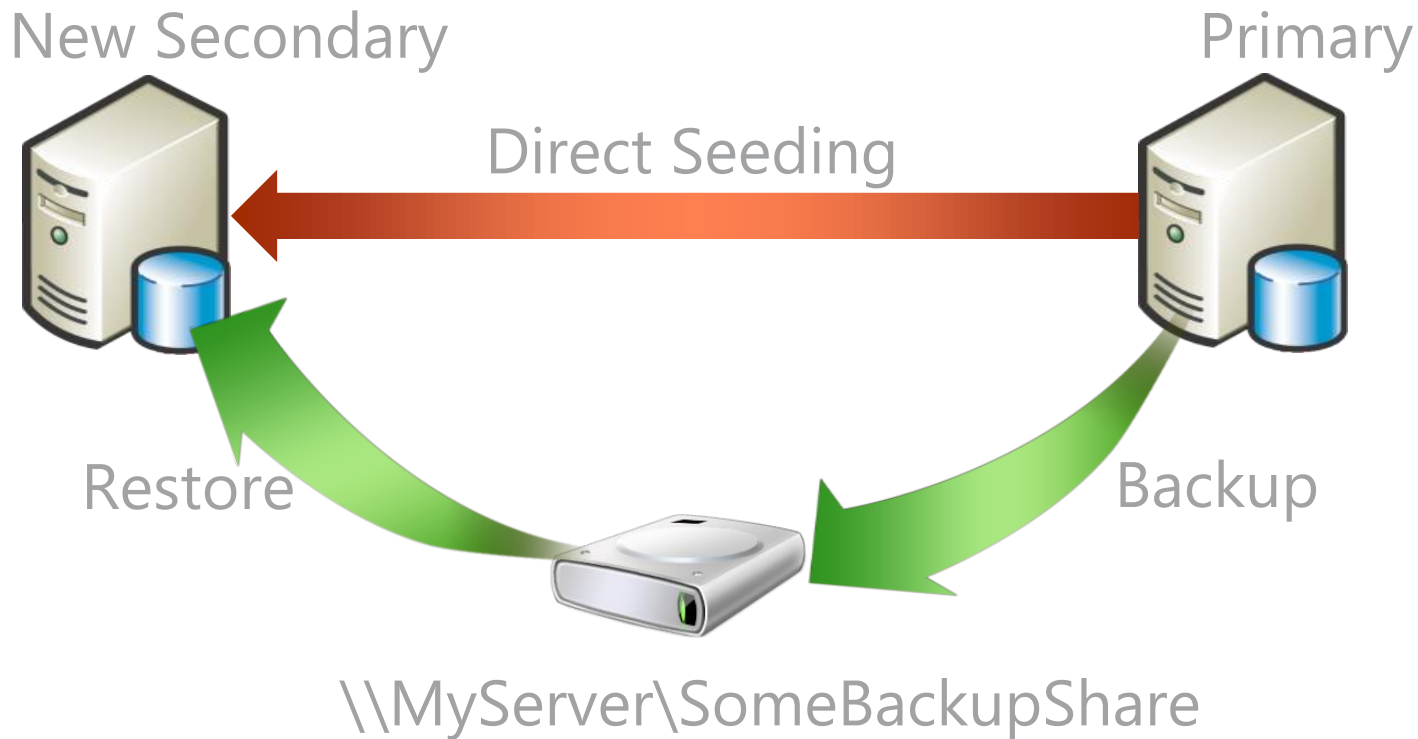Primary

Synchronous replicas

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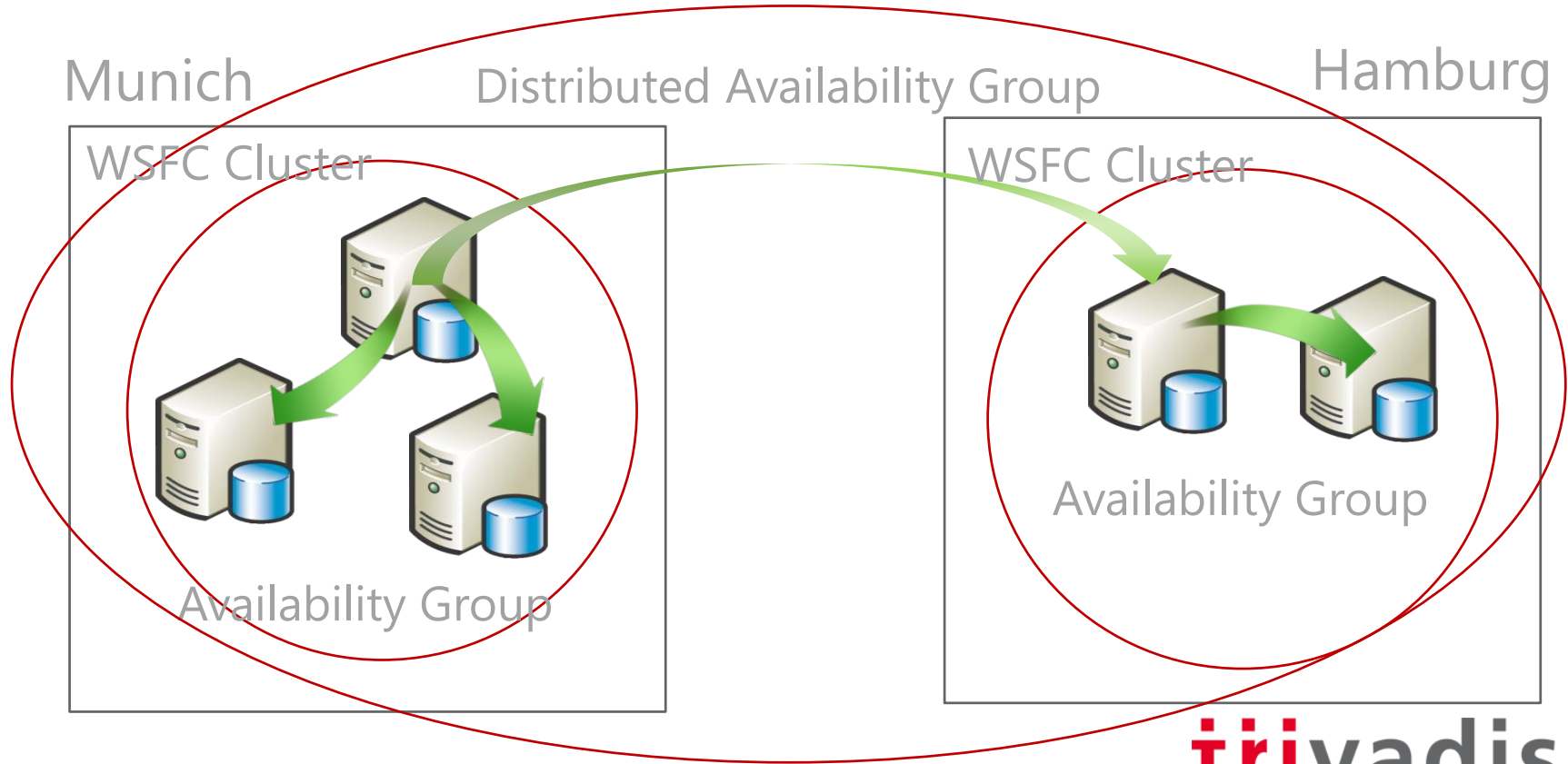
SQL Server 2016 - AlwaysOn Improvements

- Optimization of transport layer for AlwaysOn

- Parallel Redo on secondary replica in order to keep up with primary

- Support for Group Managed Service Accounts

- Read-Only Load Balancing through Routing List

- Check database health

- and more
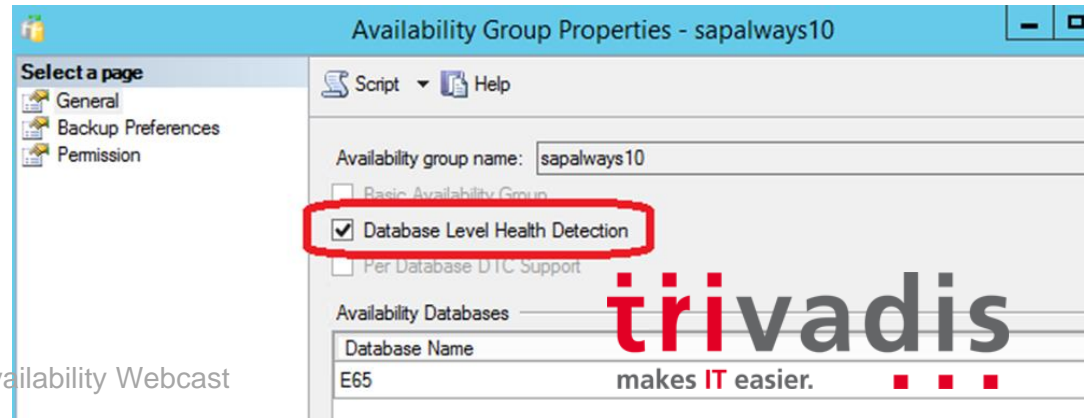
SQL Server 2016 – AlwaysOn Automatic Seeding

New Secondary

Primary

Direct Seeding

Restore

Backup

\\MyServer\SomeBackupShare

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SQL Server 2016 –Stretch AlwaysOn configurations

Questions and Answers…

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