

Microsoft Azure

SQL to Azure

Simon Schwingel
Cloud Solution Architect



Agenda

- Ausgangssituation (Beispiel)
- PaaS oder IaaS?
- Migrationspfade
- Deep Dives
 - IaaS via Azure Site Recovery
 - PaaS via SQL Deployment Wizard

34

Azure regions
around the world
enable worldwide
presence



offen

BETRIEBSSYSTEME



DATENBANKEN



ORACLE®



ENTWICKLUNGS- PLATTFORMEN



nodeJS



python™



DEVOPS



FRAMEWORKS & LAUFZEIT- UMGEBUNGEN



Platform Services

Security & Management

- Portal
- Azure Active Directory
- Azure AD B2C
- Multi-Factor Authentication
- Automation
- Scheduler
- Key Vault
- Store/Marketplace
- VM Image Gallery & VM Depot

Services Compute

- Cloud Services
- Service Fabric
- Batch
- RemoteApp

Web and Mobile

- Web Apps
- API Apps
- Mobile Apps
- Logic Apps
- API Management
- Notification Hubs

Data

- SQL Database
- Data Warehouse
- DocumentDB
- Redis Cache
- Azure Search
- Storage Tables

Hybrid Operations

- Azure AD Health Monitoring
- AD Privileged Identity Management
- Domain Services
- Backup
- Operational Analytics
- Import/Export
- Azure Site Recovery
- StorSimple

Integration

- Storage Queues
- BizTalk Services
- Hybrid Connections
- Service Bus

Developer Services

- Visual Studio
- Azure SDK
- VS Online
- App Insights

Analytics & IoT

- HDInsight
- Machine Learning
- Stream Analytics
- Data Lake
- Data Factory
- Event Hubs
- Data Catalog
- IoT Hub
- Mobile Engagement

Media & CDN

- Media Services
- Content Delivery Network (CDN)

Infrastructure Services

OS/Server Compute

- Virtual Machines
- Container Service

Storage

- BLOB Storage
- Azure Files
- Premium Storage

Networking

- Virtual Network
- Load Balancer
- DNS
- Express Route
- Traffic Manager
- VPN Gateway
- App Gateway

Datacenter Infrastructure



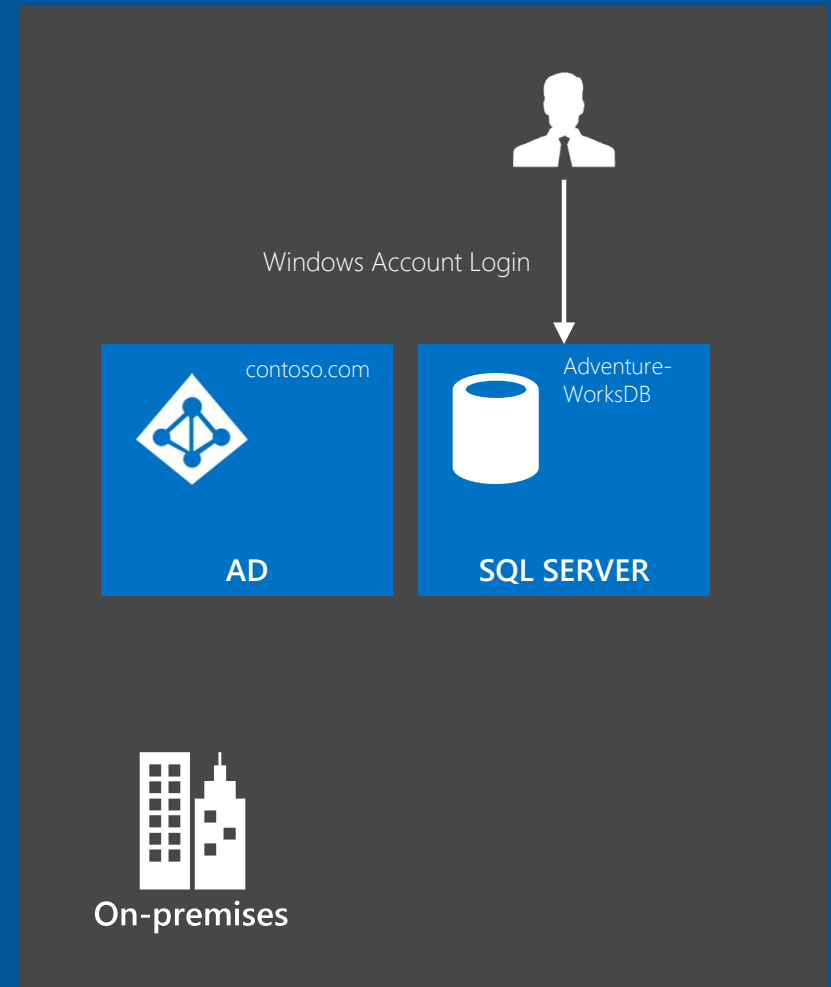
Ausgangssituation

Lokaler Domain Controller (contoso.com)

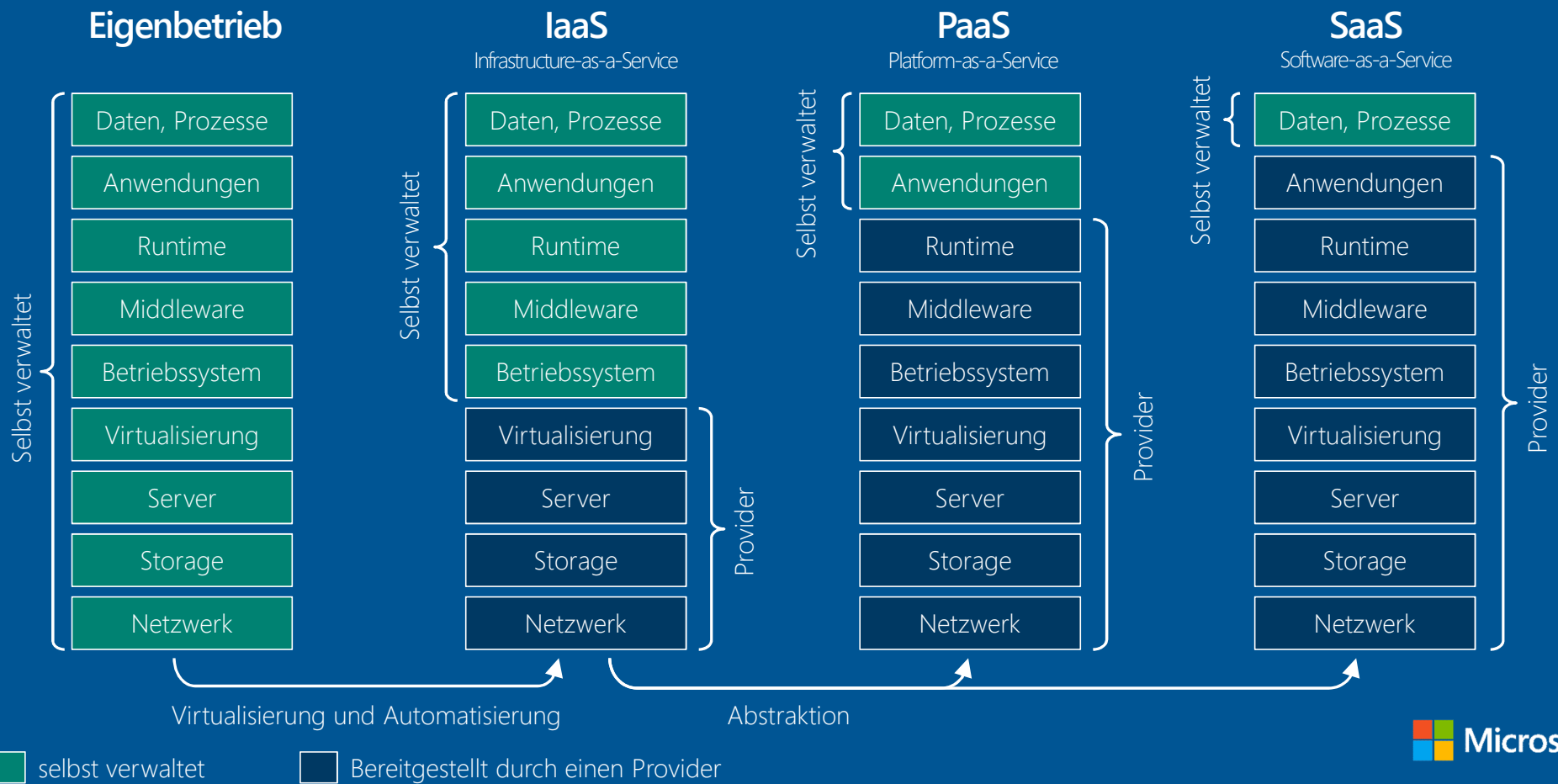
Lokaler SQL Server

SQL Server ist Mitglied der Domain

Benutzer authentifizieren sich mit Windows Account am SQL Server



PaaS vs. IaaS



PaaS vs. IaaS

IaaS

Infrastructure-as-a-Service

- Virtuelle Hyper-V Maschinen
- Voller Administrator-Zugang
- Auswahl aus verschiedenen Basis-VM-Images
- Verantwortung für die Wartung des Gast-OS verbleibt beim Nutzer



Virtual Machines

SQL
Oracle
MySQL

PaaS

Platform-as-a-Service

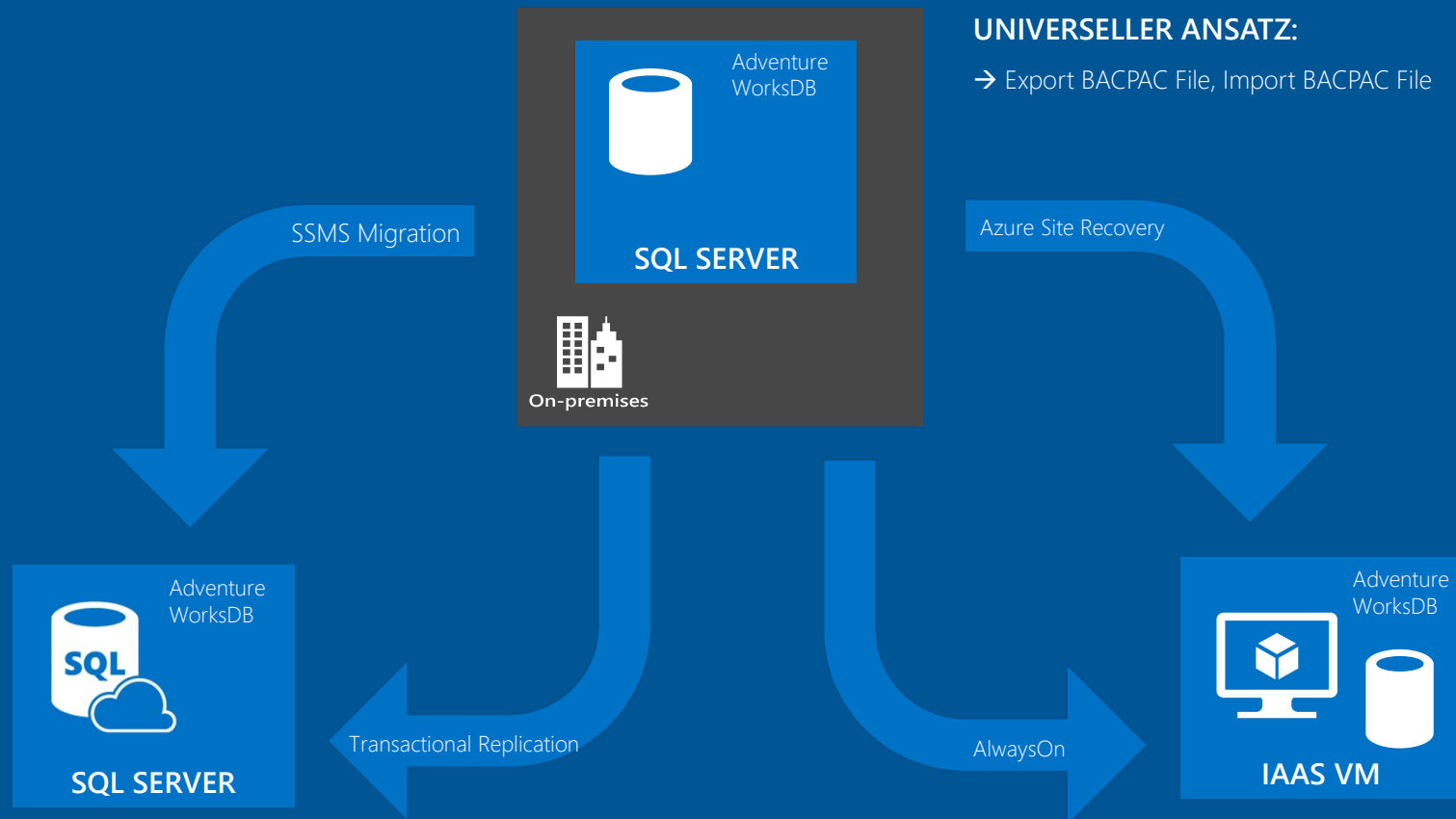
- Hosting-Umgebung für Datenbanken
- Schnelle Bereitstellung
- Automatisiertes Management der Umgebung durch Azure



SQL Service

Basic
Standard
Premium

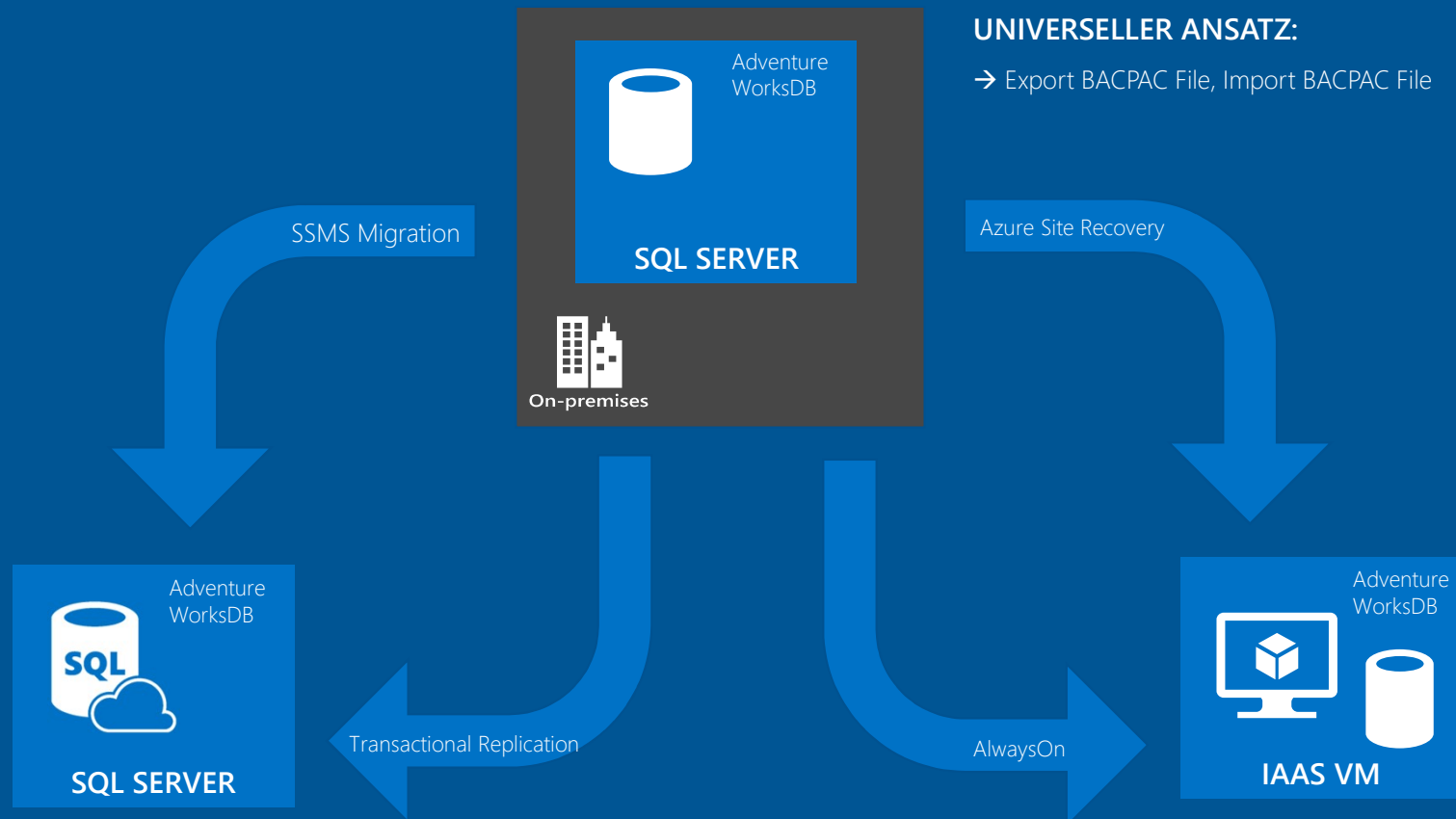
Migrationspfade



PaaS

- Migration per SQL Management Studio Migration Wizard

Migrationspfade

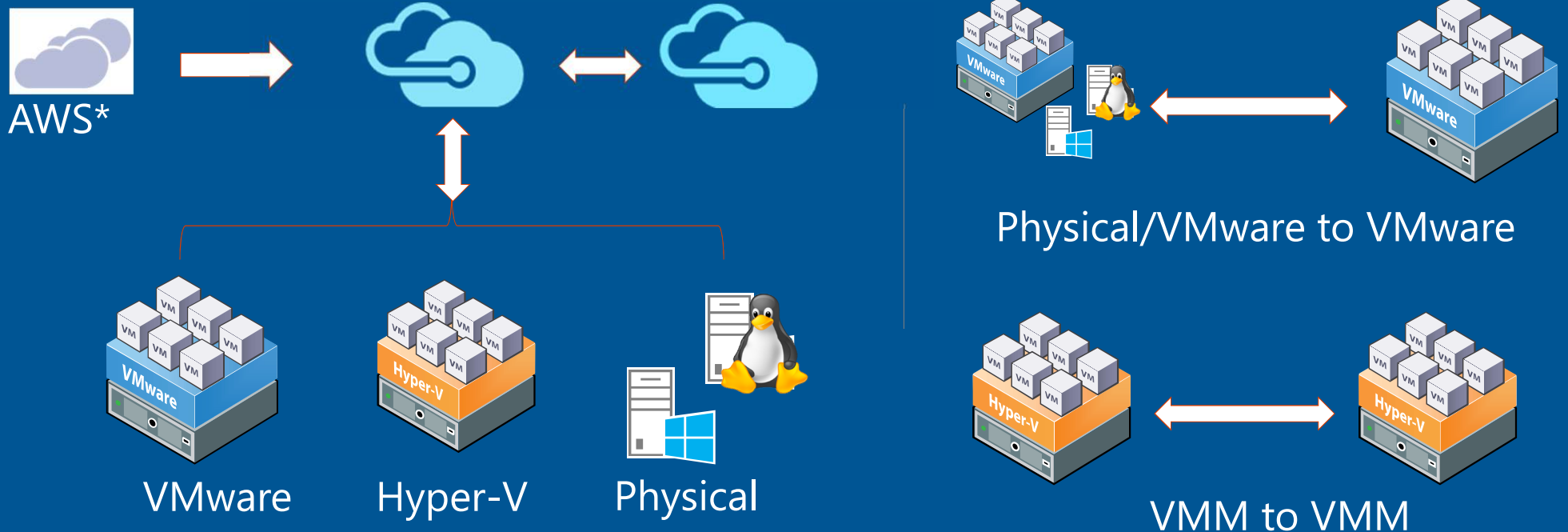


Azure Site Recovery: The Complete Disaster Recovery Solution

Site to Azure

Any Cloud

Site to Site

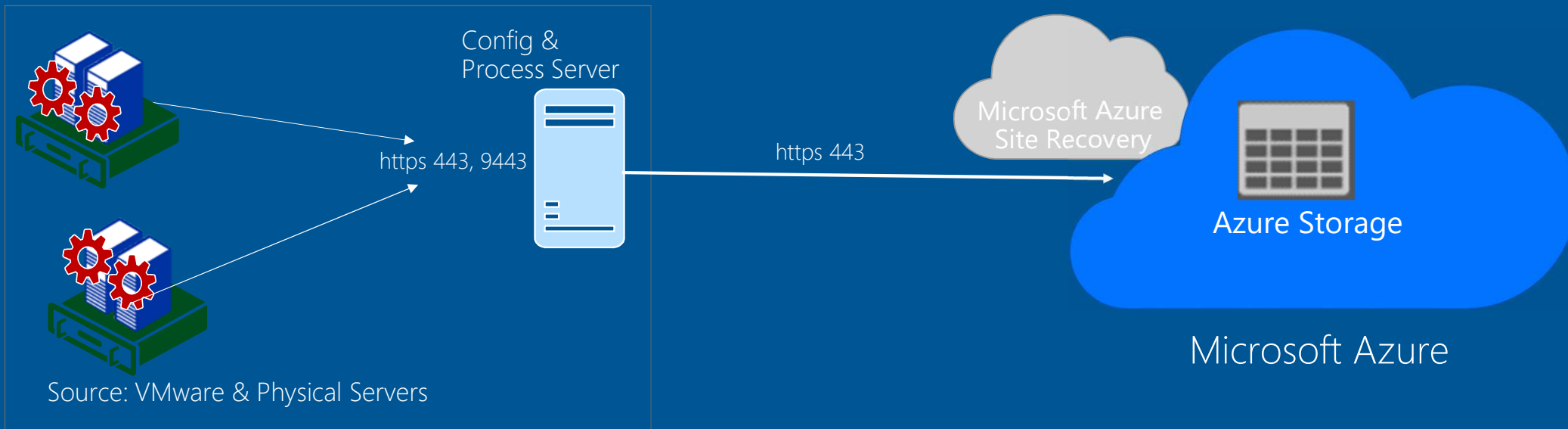


ASR: Multiple Scenarios, One Solution

Disaster Recovery | Migration | DevTest

- ✓ Automated VM level Replication
- ✓ RPO of seconds and RTO of minutes
- ✓ No impact DR Drills with Test Failover
- ✓ Planned and unplanned failover
- ✓ Orchestrated Recovery Plans for Disaster Recovery
- ✓ Failback support
- ✓ Migrate to Azure from anywhere
- ✓ Create on-demand test copies in Azure

VMWare and Physical Servers Replication



On Premises Datacenter



Config & Process Server – Used for Caching, Compression, Encryption & Management



Mobility Service – Captures all data writes from memory



IaaS

- Migration SQL Servers nach Azure per ASR

Web Ressourcen

- **Azure Portal**

<https://portal.azure.com>

- **Azure Documentation Center**

<https://docs.microsoft.com/en-us/azure/>

- **Sample Databases**

<https://github.com/Microsoft/sql-server-samples/releases/tag/wide-world-importers-v1.0>

- **SQL Server database migration to SQL Database in the cloud**

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-cloud-migrate#migrate-a-compatible-sql-server-database-to-sql-database>

- **Transactional Replication**

<https://docs.microsoft.com/en-us/azure/sql-database/sql-database-cloud-migrate-compatible-using-transactional-replication>

