

# Change your skills

from an onpremise DBA to a cloud DBA

SQLSaturday #1015 - Vienna

**kramer & crew**  
Der IT-Regisseur.



# Our Partners

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Gold



**dbWatch**

Silver



Global



# Björn Peters

Kramer&Crew

Senior Consultant Microsoft Data-Platform

SQL Server since version 6.5

Azure Meetup Hamburg Organizer

PASS Deutschland e.V. Member

Volunteer, Speaker, MVP

Father, Husband, Snowboarder, Cyclist,  
Geek



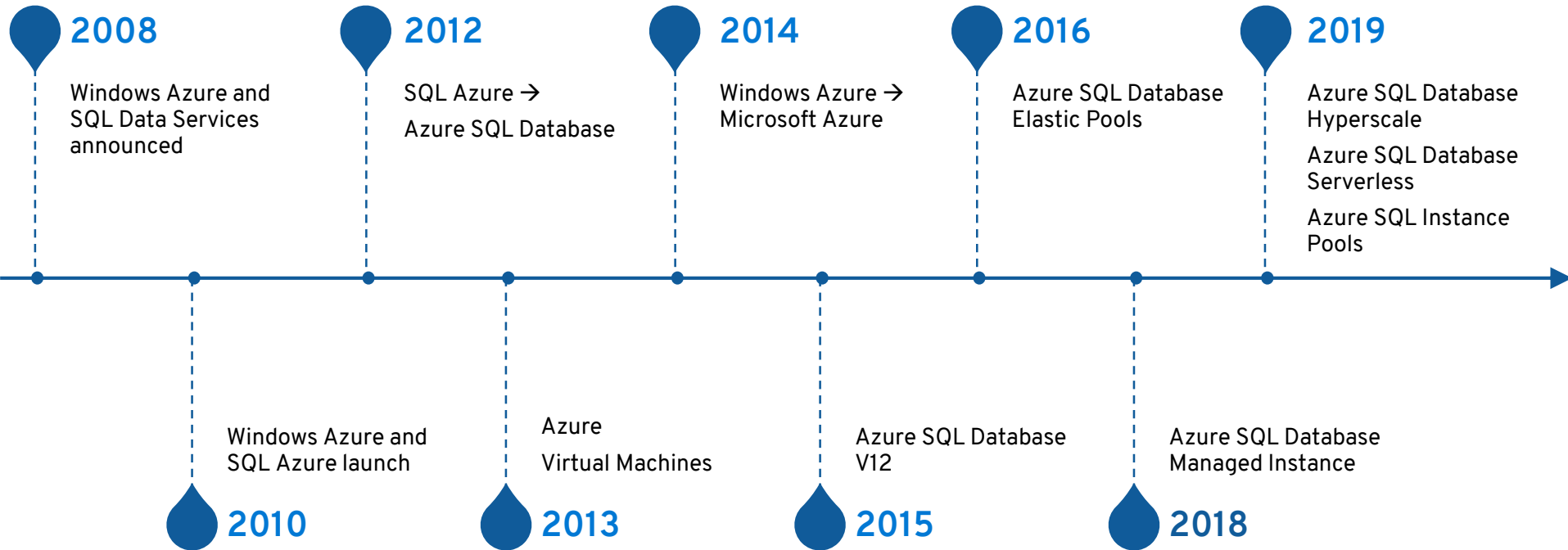
[www.sql-aus-hamburg.de](http://www.sql-aus-hamburg.de)

Nothing special  
No Differences  
Just a SQL Server ;-)

# Agenda

- ✓ Introduction to SQL (Server) on Azure
- ✓ Deploy & Configure
- ✓ Security
- ✓ Performance & Availability
- ✓ Learning & Certification

# Introduction to Azure SQL



# Azure Ecosystem

Azure  
Accounts and  
Subscriptions

Azure Portal

Azure  
Marketplace

Azure APIs  
and CLIs

Azure  
Resource  
Manager

Azure Monitor

Azure  
Regions and  
Datacenters

Azure SLA,  
Compliance,  
and Trust

# Azure SQL

## SQL Server on Azure Virtual Machines



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Best for re-hosting and apps  
requiring OS-level access and  
control

Automated manageability  
features and OS-level access

Infrastructure as a Service



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## Azure SQL Managed Instance



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Best for modernizing existing  
apps

Offers high compatibility with  
SQL Server and native VNET  
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Platform as a Service

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## Azure SQL Database



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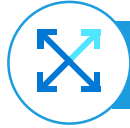
Best for building new apps in the cloud

Pre-provisioned or serverless compute and Hyperscale storage to meet demanding workload requirements

# IaaS vs PaaS



Business continuity



High availability



Automated backups



Long term backup retention



Geo-replication



Scale



Advanced security



Version-less

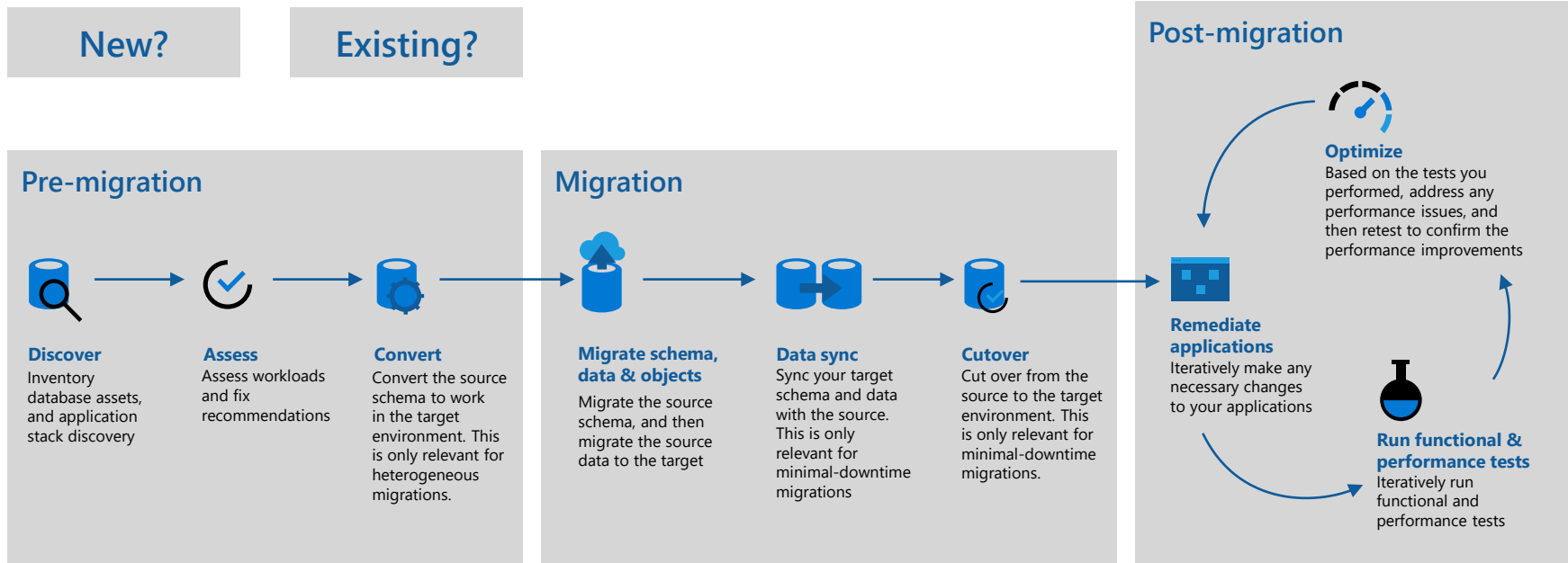


Built-in monitoring



Built-in intelligence

# New deployment vs. Migration



# That's Azure SQL

# Security capabilities and tasks

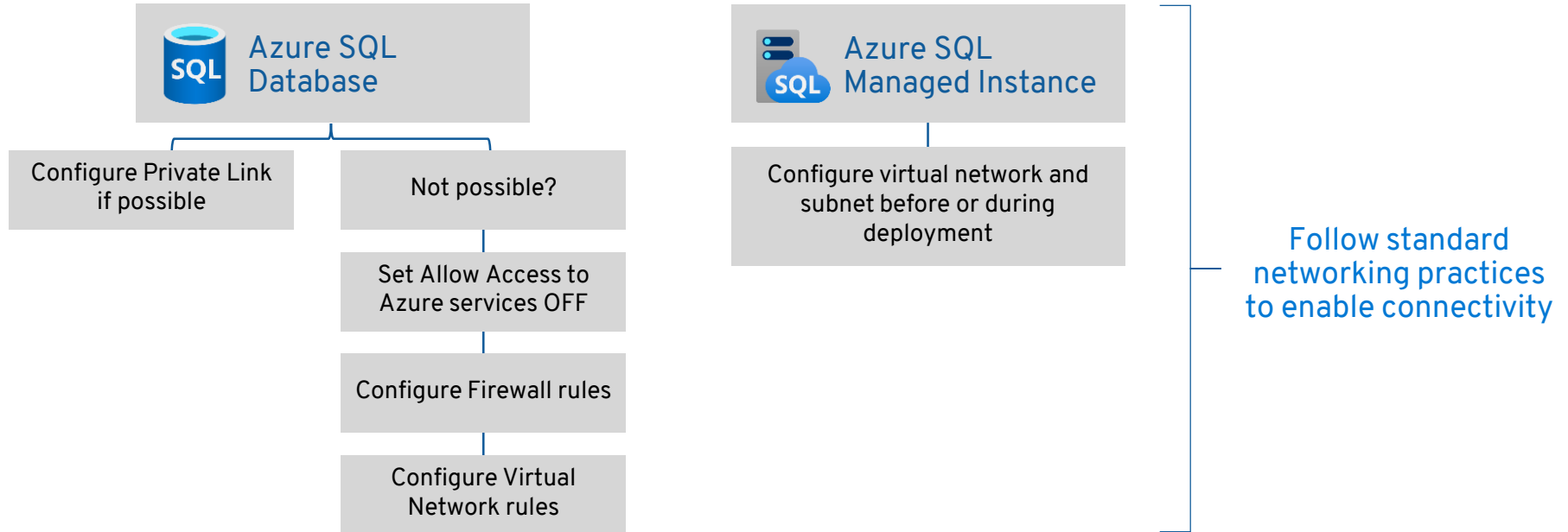
## Security capabilities

- Active Directory Authentication
- Azure RBAC and locks
- Auditing
- Data encryption
- Dynamic Data Masking
- Advanced Data Security

## Security tasks

- Setup and configure network Security
- Setup and configure data protection
- Setup and configure authentication and authorization
- Monitoring security

# Setup and configure network security



# Setup and configure authentication and authorization

Deploy with a SQL server admin

Create other admins

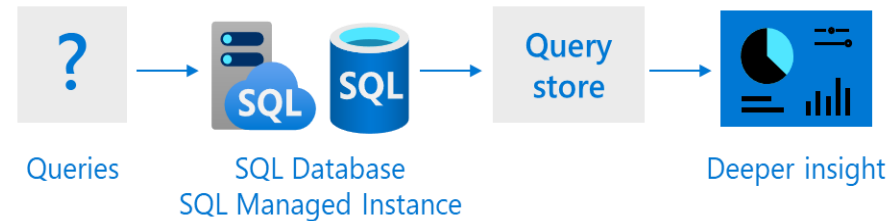
Admins can create users

Grant access just like SQL



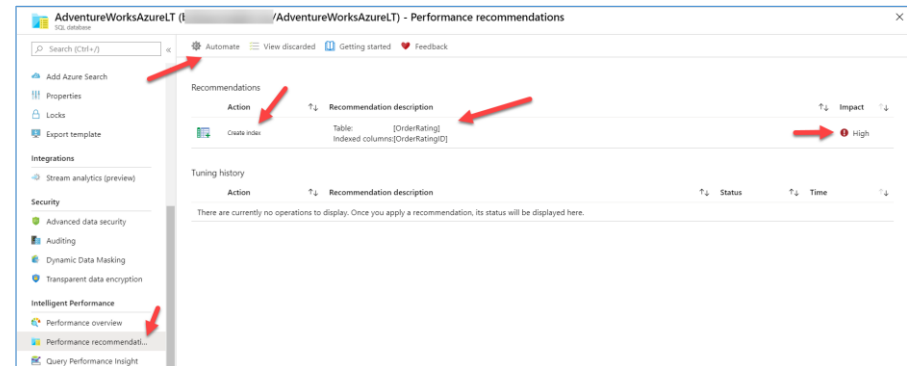
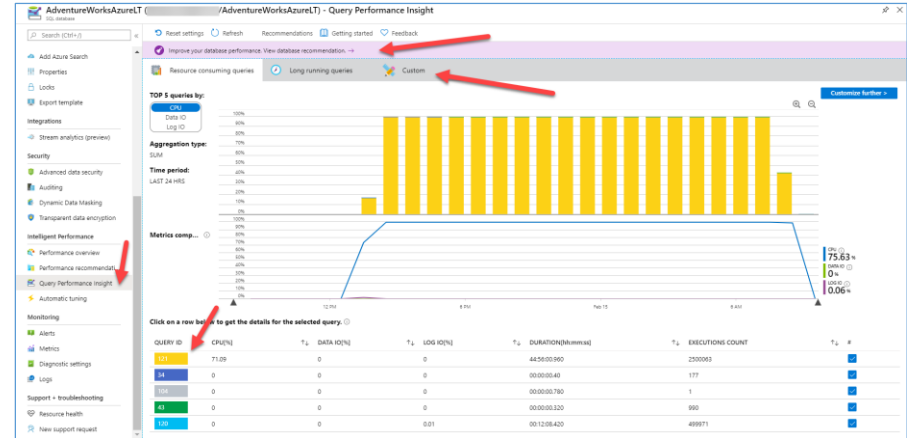
# Monitoring and Troubleshooting Performance

- Azure Monitor Metrics, Alerts, and Logs
- Dynamic Management Views
- Extended Events
- Lightweight Query Profiling on by default
- Query Plan Debugging with SET statements
- Query Store on by default
- Performance Visualizations in portal



# Automatic Tuning with Azure SQL Database

- Index Recommendations
- ML approach based on DMVs and Query Store
- Parameterized Query Recommendations
- View in DMVs and Azure Portal

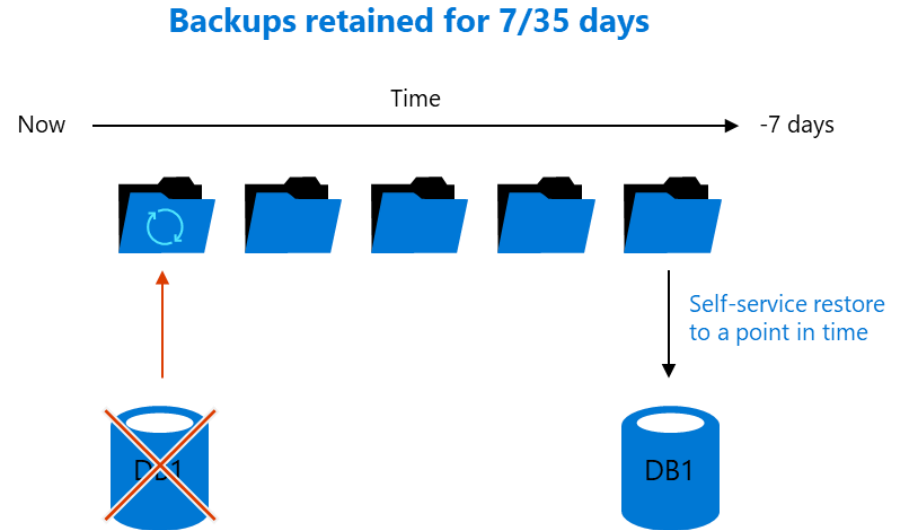


# Backup and restore

## Auto backups and Point in Time Restore (PITR)

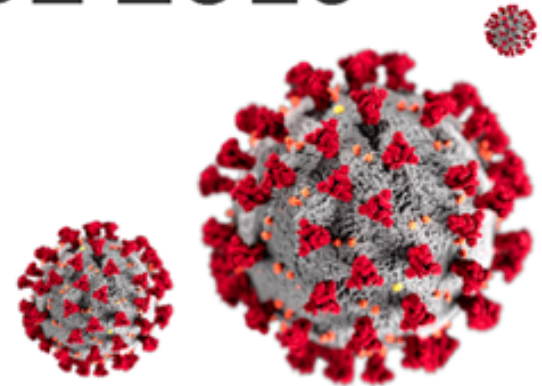
- Full Database backup once a week
- Log Backups every 5-10 minutes
- Differential Backups every 12 hours
- Backup files on Azure storage with RA-GRS replicated
- Backup Integrity checks
- Restore to new database
- Long-term retention (up to 10 years) of backups
- Geo-restore of databases if primary region down
- Restore backups of deleted databases

## Manual COPY\_ONLY Backup/Restore with Managed Instance



# CORONAVIRUS DISEASE 2019

# COVID-19



# Levels



# Our Partners

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## Humanitarian IT conference

SATURDAY, 16.01.2021 VIA TEAMS

Small Croatian towns of Petrinja, Sisak and Glin have been seriously hit with a massive earthquake on 29th December 2020.

Microsoft Most Valuable Professionals from all around Europe are organizing humanitarian IT conference to help the victims which lost their loved ones and their homes. Join us in one of the kind conference with top MVP speakers in 4 tracks on Saturday, 16th January 2021 from 9AM till 5PM.

THANK YOU!

[Donate now for Earthquake Victims](#)

## How to Register

Please **donate 50€ minimum** per person as an entry fee at Earthquake fund relief

send us the payment confirmation to  
**mvp\_for\_Banija@ms-community.org**  
to register

on 15.01. you'll receive a Link for the conference on Teams platform

## Organizers



Nenad Trajkovski



Tomislav Lulic



Bernardin Katic

# Resources



Microsoft Learn: Azure SQL fundamentals learning path  
[aka.ms/azuresqlfundamentals](https://aka.ms/azuresqlfundamentals)



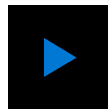
Select the Azure SQL Workshop  
[aka.ms/sqlworkshops](https://aka.ms/sqlworkshops)



How to choose tool  
[aka.ms/chooseazuresql](https://aka.ms/chooseazuresql)



Azure SQL documentation  
[aka.ms/azuresqldocs](https://aka.ms/azuresqldocs)



More videos from our team  
[aka.ms/dataexposed](https://aka.ms/dataexposed)



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