Change your Skills

from an on-premise DBA to a cloud DBA

Bjoern Peters

Björn Peters

Kramer&Crew

Senior Consultant Microsoft Data-Platform & Azure

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

@sql-aus-hh

Nothing special
No Differences
Photo by Patrick Fore on Unsplash

Azure

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Azure Ecosystem

Accounts and Subscriptions	Portal	Marketplace	APIs and CLIs
Resource Manager	Regions and Datacenters	Monitor	SLA, Compliance, and Trust

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Azure SQL

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Azure SQL

SQL Server on Azure Virtual Machines

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

Best for modernizing existing apps

Offers high compatibility with SQL Server and native VNET support

Platform as a Service

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Azure SQL Database

Best for building new apps in the cloud

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

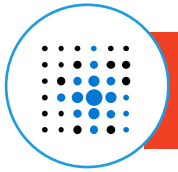
Infrastructure as a Service

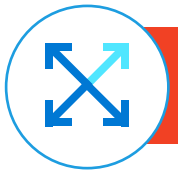
Platform as a Service

Let me show you...

Azure SQL – Portal Deployment

IaaS vs PaaS


Business continuity


High availability

Automated backups

Long term backup retention

Geo-replication

Scale

Advanced security

Version-less

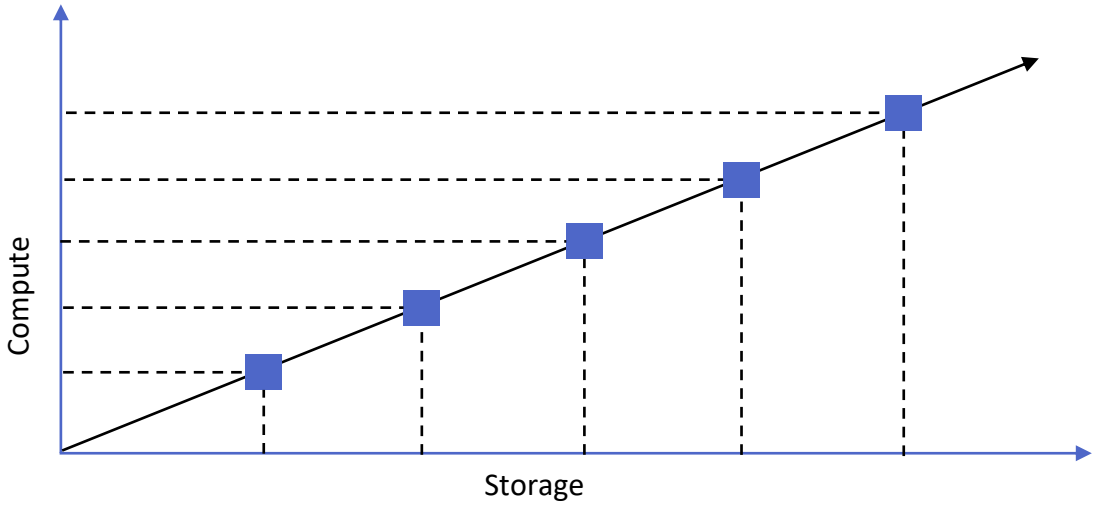
Built-in monitoring

Built-in intelligence

Purchasing models - SQL Database

DTU model

Simple, preconfigured



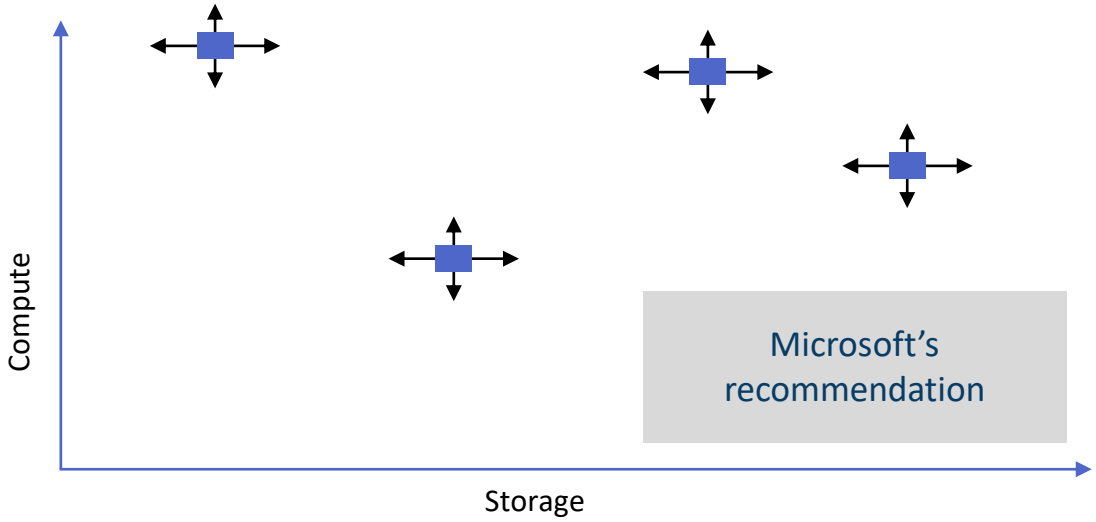
Pre-packaged, bundled unit that represents the database power

Designed for predictable performance, but somewhat inflexible and limited in options

DTU sizing offers simplicity of choice

vCore model

Independent scalability



This model allows you to independently choose compute and storage resources. It also allows you to use Azure Hybrid Benefit for SQL Server and Reserved Capacity to gain cost savings.

Best for customers who value flexibility, control and transparency

Differences

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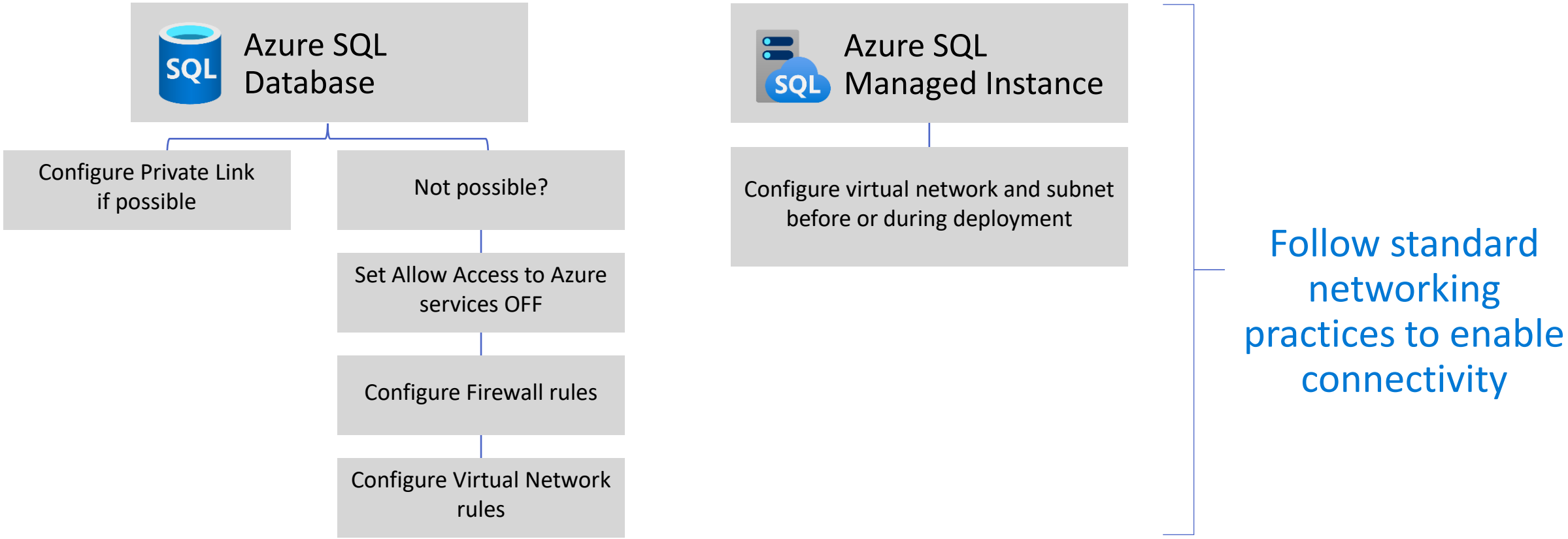
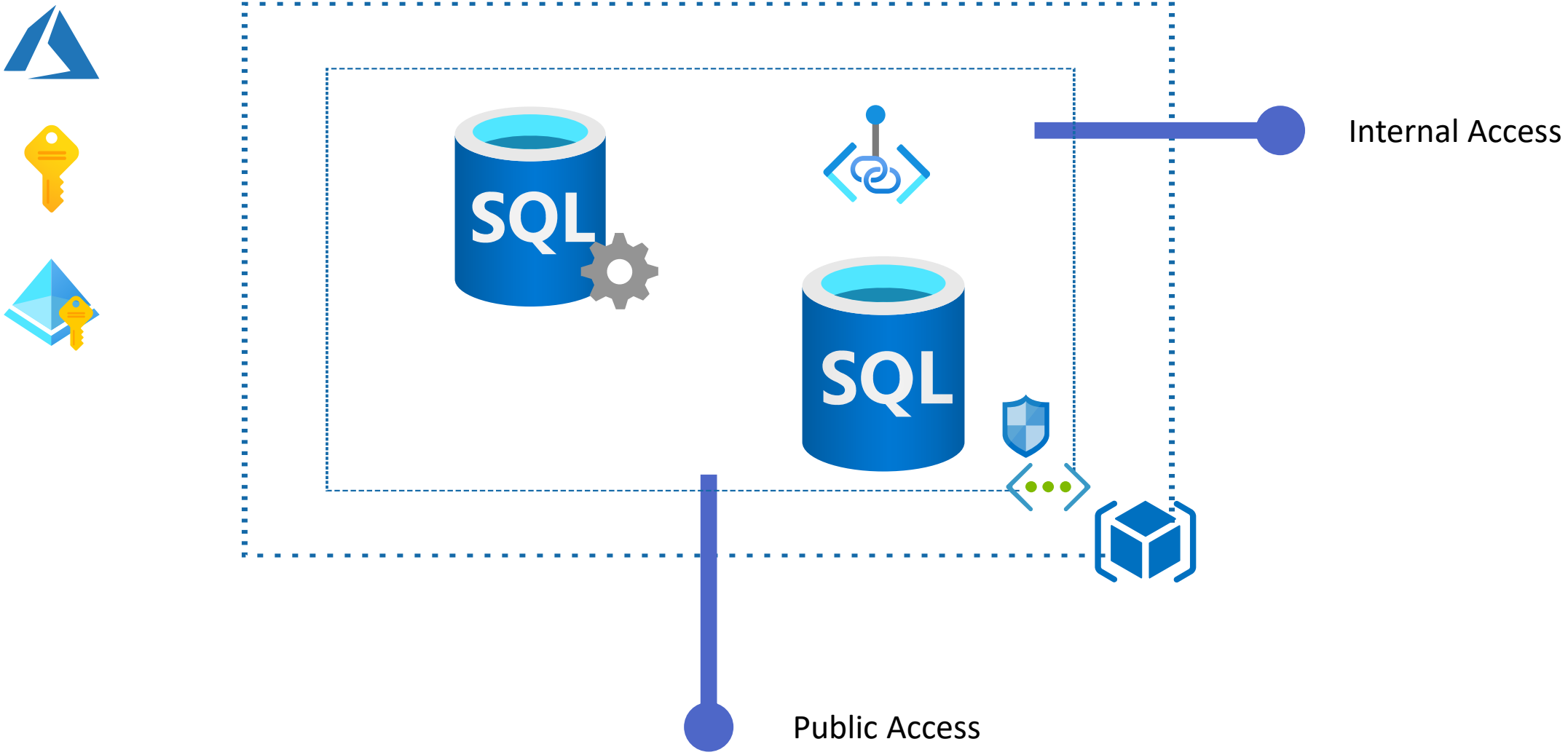
Setup and configure network security



Networks / Connections



Security capabilities and tasks

Security capabilities

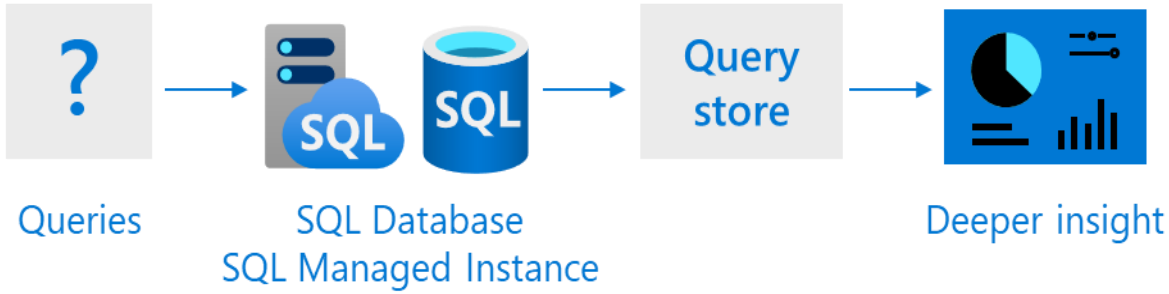
- Active Directory Authentication
- Azure RBAC and locks
- Auditing
- Data encryption
- Dynamic Data Masking
- Advanced Data Security

Security tasks

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

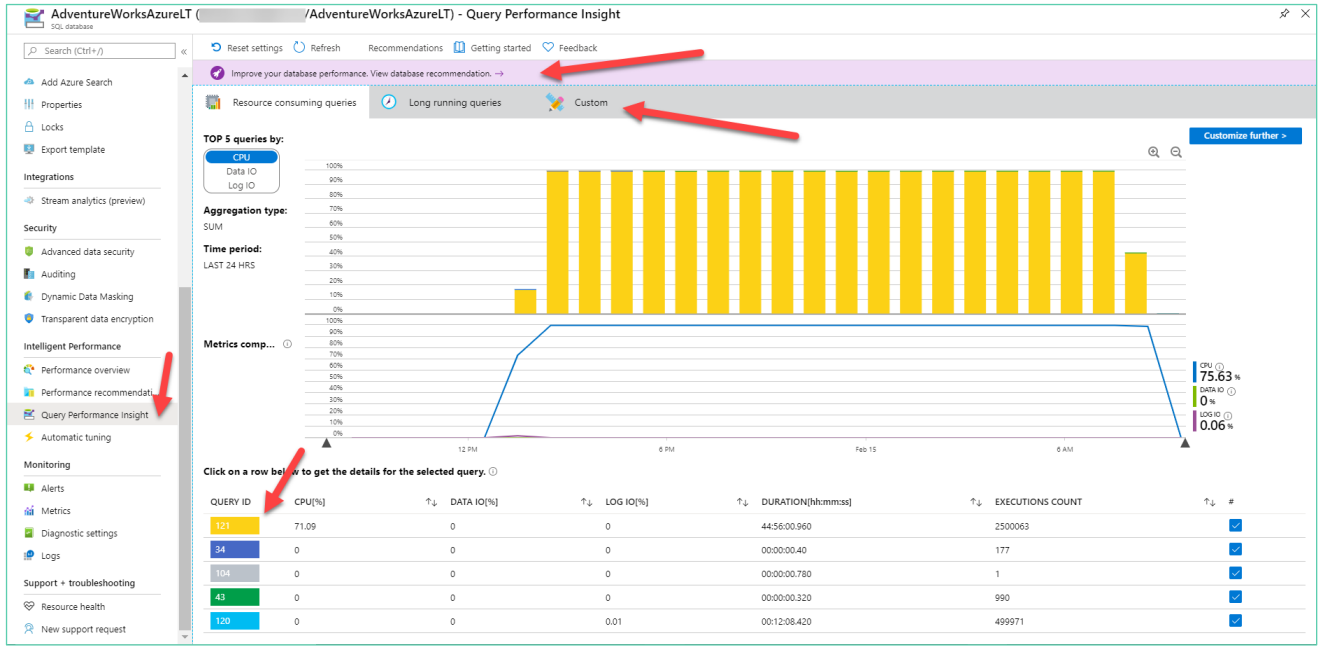
Monitoring and Troubleshooting Performance

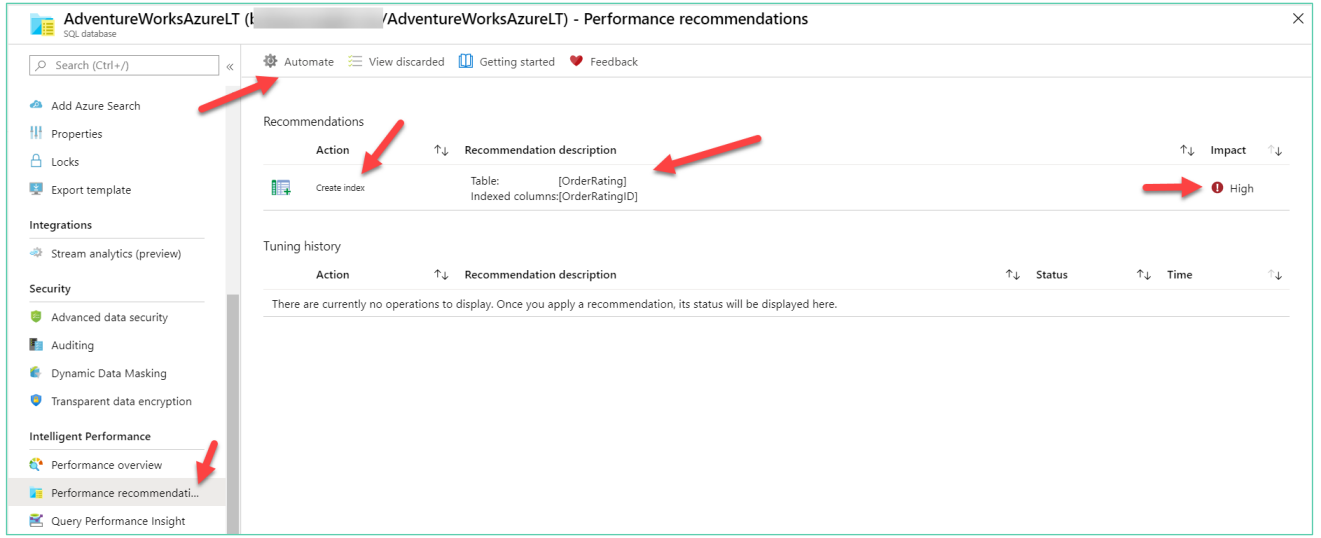
- Azure Monitor Metrics, Alerts, and Logs
- Dynamic Management Views
- Extended Events
- Lightweight Query Profiling on by default
- Query Plan Debugging with SET statements
- Query Store on by default
- Performance Visualizations in portal



Automatic Tuning with Azure SQL Database

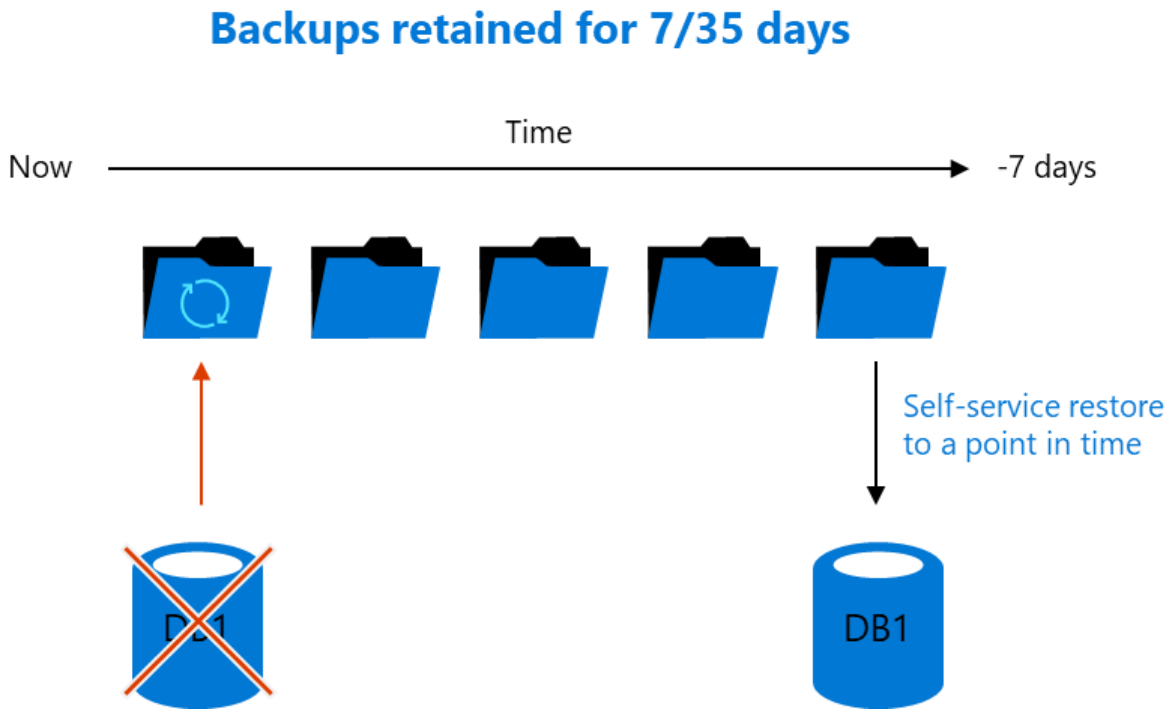
- Index Recommendations
- ML approach based on DMVs and Query Store
- Parameterized Query Recommendations
- View in DMVs and Azure Portal





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

PowerShell

Let me show you...

It is really just a SQL Server

Nothing special
No Differences
It‘s just a
SQL Server ;-)
Photo by Patrick Fore on Unsplash

Levels

Microsoft
CERTIFIED
FUNDAMENTALS

Microsoft
CERTIFIED
ASSOCIATE

Microsoft
CERTIFIED
EXPERT

Resources

Microsoft Learn: Azure SQL fundamentals learning path
aka.ms/azuresqlfundamentals

Select the Azure SQL Workshop
aka.ms/sqlworkshops

How to choose tool
aka.ms/chooseazuresql

Azure SQL documentation
aka.ms/azuresqldocs

More videos from our team
aka.ms/dataexposed

Björn Peters

@sql_aus_hh

www.sql-aus-hamburg.de