



# Where is My SQL Agent?

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Taiob Ali



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### Data Professional

Microsoft Data Platform MVP. 14 Years working with Microsoft Data Platform. Microsoft and MongoDB certified. Worked in ecommerce, healthcare and finance industry.

### Giving Back

Board member NESQL user group and PASS DBA virtual group. Organizer of Boston SQL Saturday. Frequent speaker at local and virtual user groups, SQL Saturdays, and azure events.

### When Not Working

Running – One 26.2 and many 13.1 miles. Learning US history. Shuttling 3 kids.

# Use of SQL Server Agent

Integrity  
Checks

Index  
Maintenance

Update  
Statistics

Purge Old data

Track Blocking

Collecting  
WMI

Long Running  
Queries

Wait Statistics

Collecting  
DMV





On-Premise

*VS.*



Cloud

## On-Premise

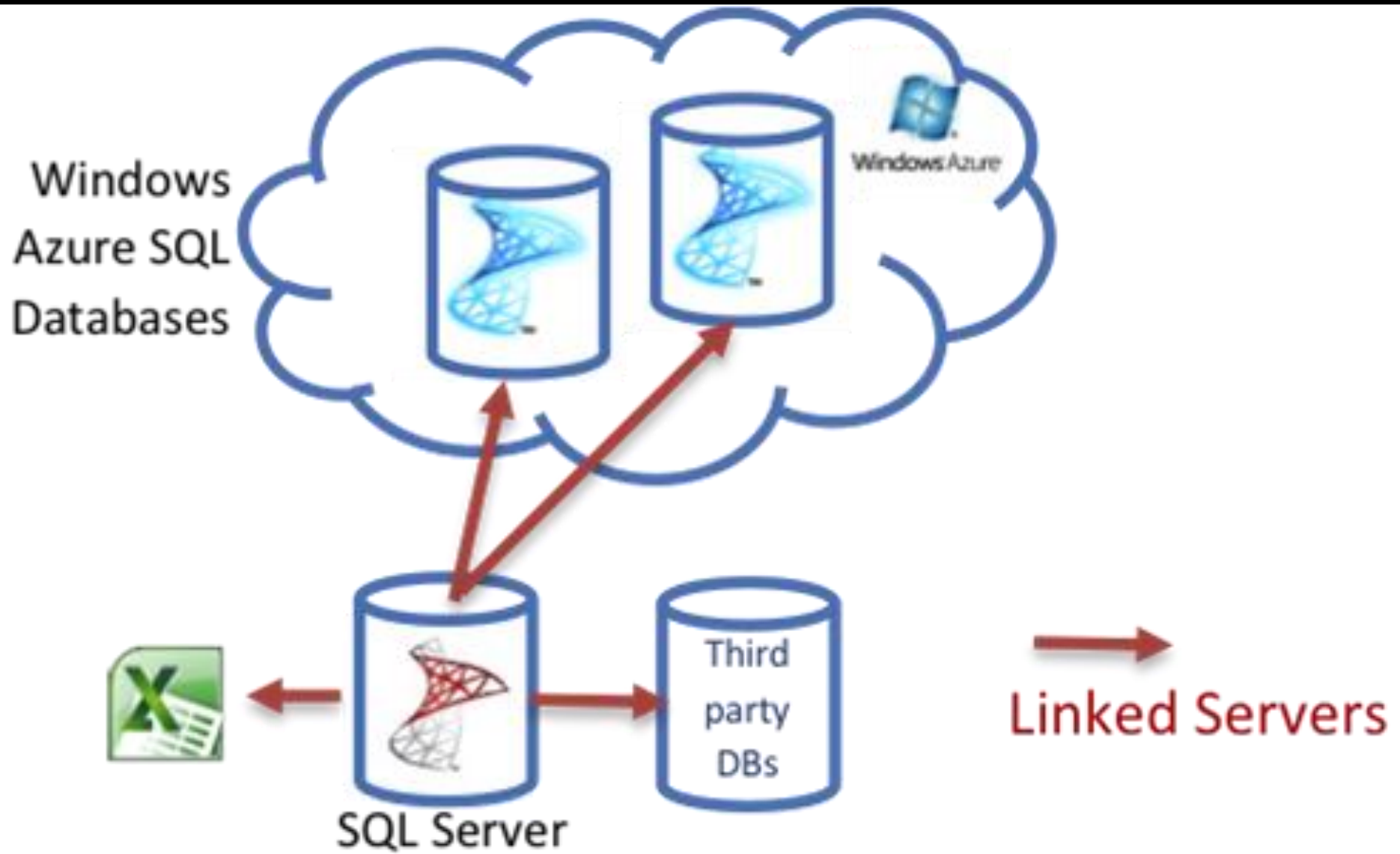
- Linked Server
- PowerShell/  
Windows  
Scheduler
- 3<sup>rd</sup> Party  
Scheduler

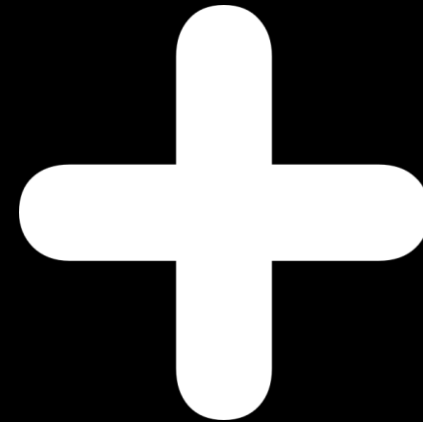
## Azure-IaaS

- SQL Server on  
Azure VM
- PowerShell/Azure  
VM Windows  
Scheduler

## Azure-PaaS

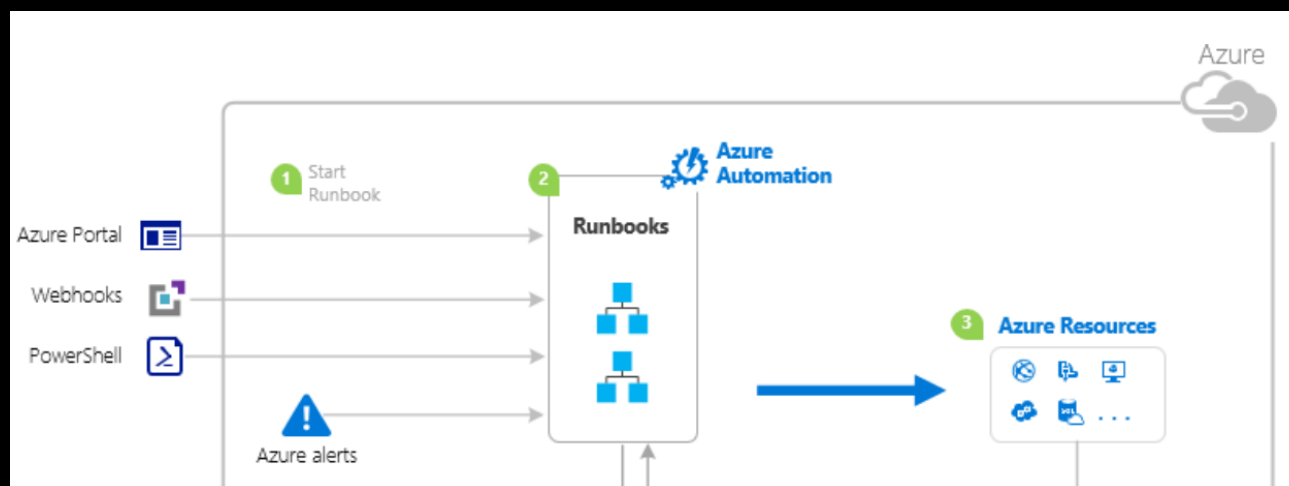
- Azure  
Automation
- Azure Function
- Elastic Job Agents
- Web Jobs





<https://www.fullstackpython.com/powershell.html>

<https://www.adamtheautomator.com/create-jenkins-jnlp-scheduled-tasks-powershell-dsc/>

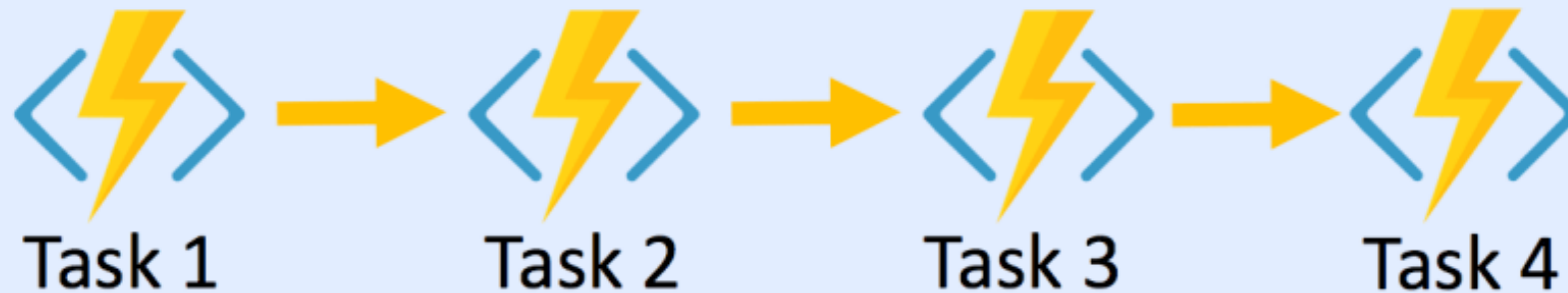






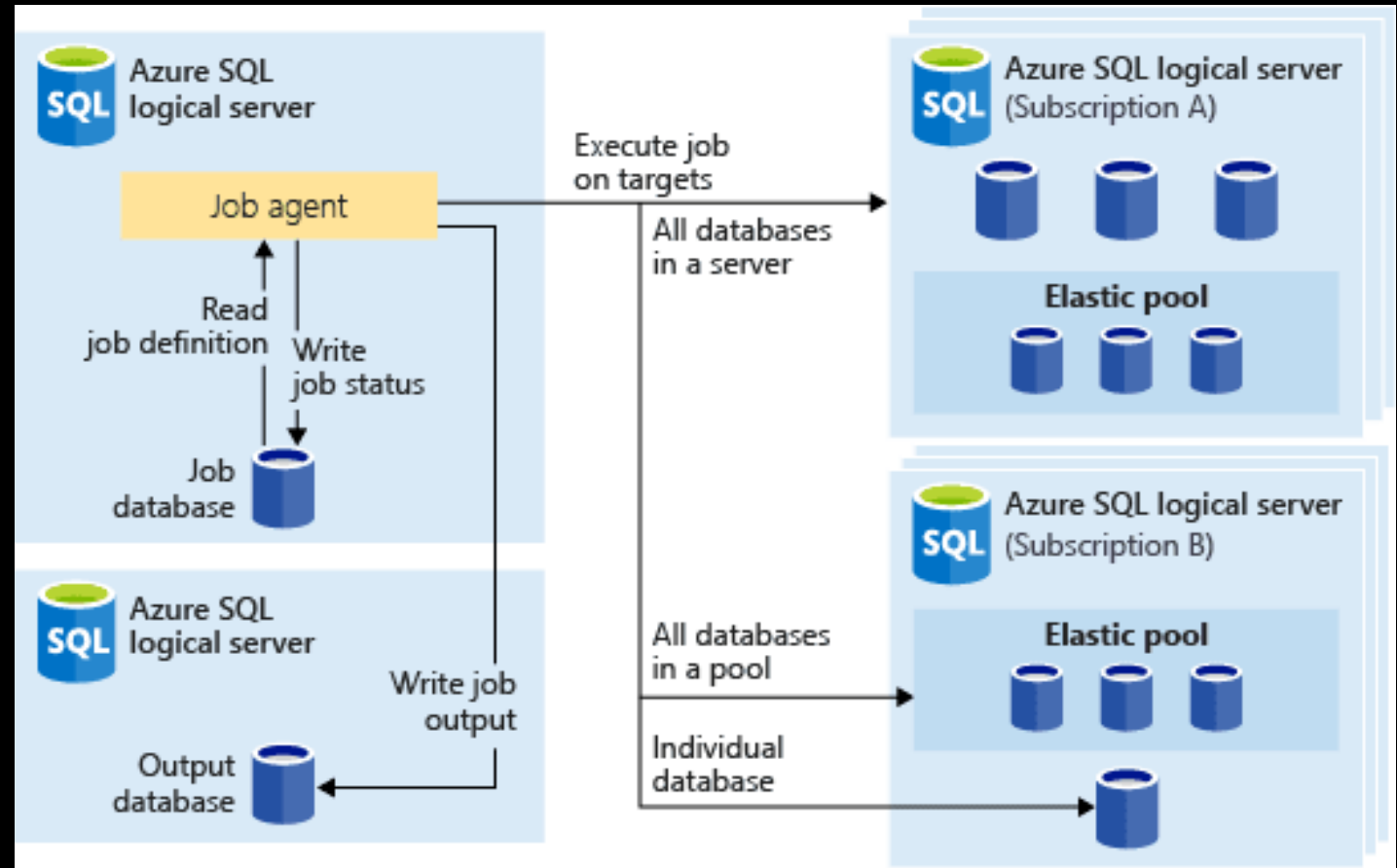
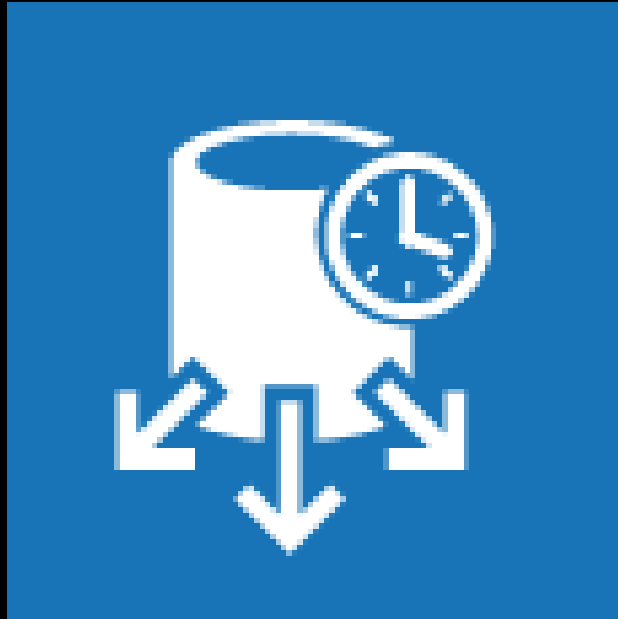
- Choice of language
- Pay per Use
- Max run time 10 minutes
- Bring your own dependencies
- Simplified integration
- Development flexibility
- Open source

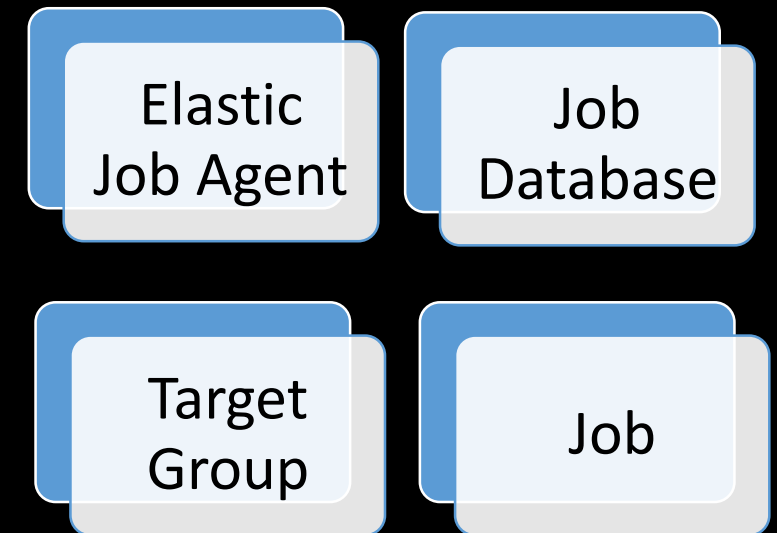
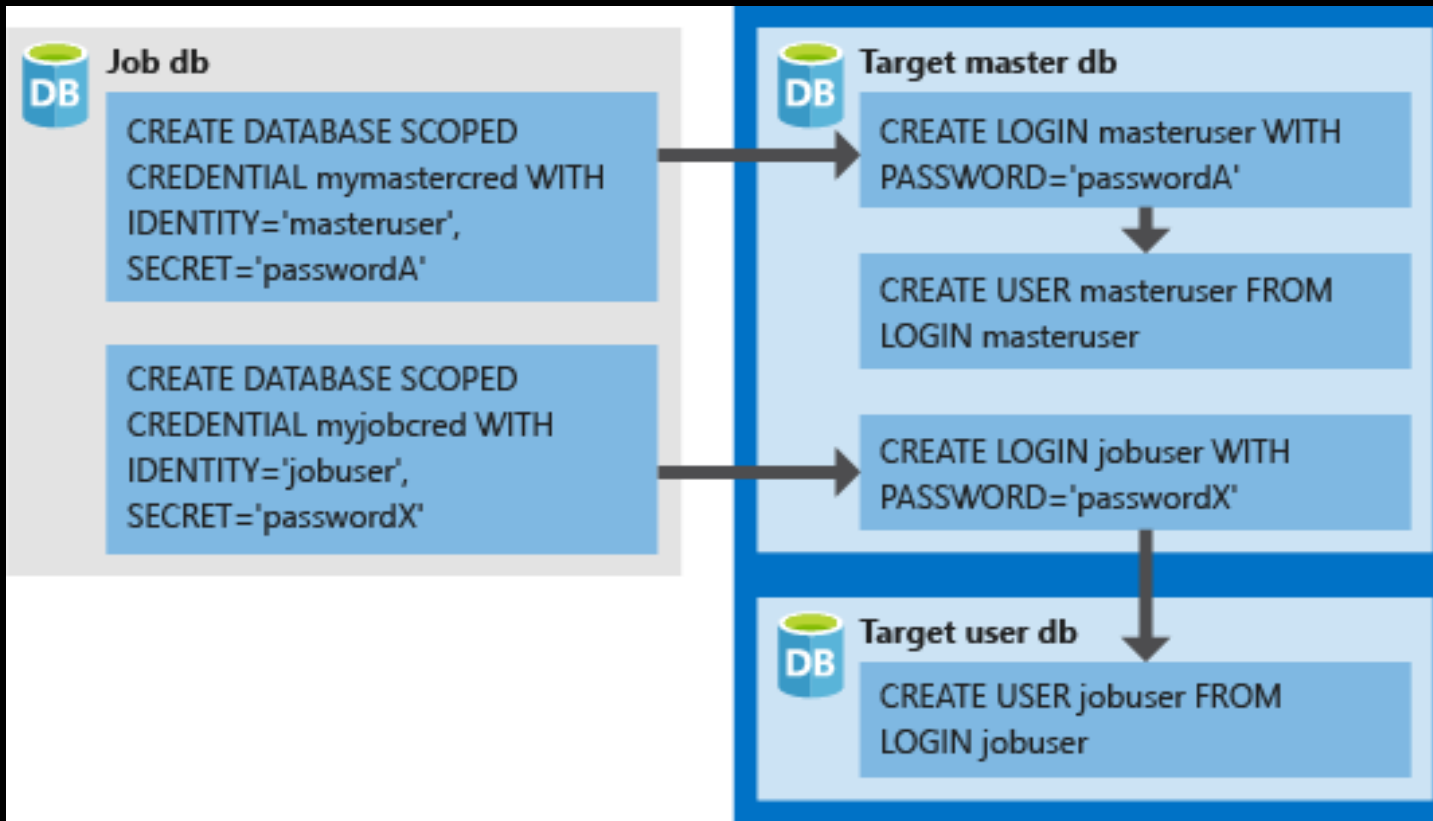
### Serverless Workflow

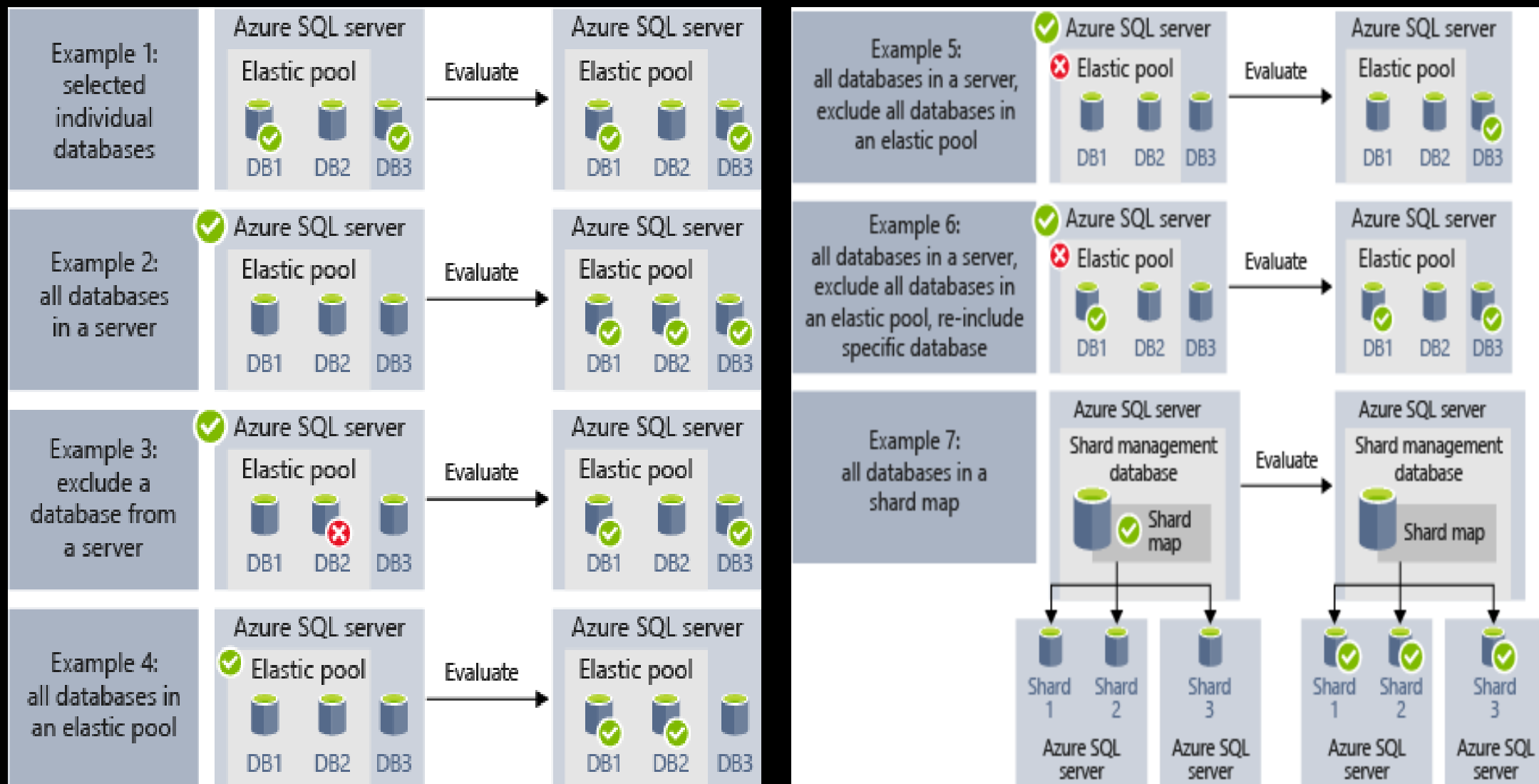


# New In Functions

- Business-critical apps with no cold start and network isolation
  - 60 minutes run time
  - No cold start
  - Up to 100 instances
- Serverless automation with PowerShell in GA
  - Automatic management of PS Module







## Tables

- System Tables
- External Tables
- GraphTables
- jobs\_internal.\_\_MigrationHistory
- jobs\_internal.command\_data
- jobs\_internal.job\_cancellations
- jobs\_internal.job\_executions
- jobs\_internal.job\_task\_executions
- jobs\_internal.job\_versions
- jobs\_internal.jobs
- jobs\_internal.jobstep\_data
- jobs\_internal.jobsteps
- jobs\_internal.script\_batches
- jobs\_internal.target\_associations
- jobs\_internal.target\_group\_memberships

## Views

- System Views
- jobs.job\_executions
- jobs.job\_versions
- jobs.jobs
- jobs.jobstep\_versions
- jobs.jobsteps
- jobs.target\_group\_members
- jobs.target\_groups
- jobs\_internal.current\_job\_version\_number
- jobs\_internal.database\_credentials
- jobs\_internal.target\_group\_members\_json
- jobs\_internal.visible\_jobs
- jobs\_internal.visible\_target\_groups
- jobs\_internal.visible\_targets\_formatted

## Stored Procedures

- System Stored Procedures
- jobs.sp\_add\_job
- jobs.sp\_add\_jobstep
- jobs.sp\_add\_target\_group
- jobs.sp\_add\_target\_group\_member
- jobs.sp\_delete\_job
- jobs.sp\_delete\_jobstep
- jobs.sp\_delete\_target\_group
- jobs.sp\_delete\_target\_group\_member
- jobs.sp\_purge\_jobhistory
- jobs.sp\_start\_job
- jobs.sp\_stop\_job
- jobs.sp\_update\_job
- jobs.sp\_update\_jobstep
- jobs\_internal.sp\_add\_job\_version



VS Code 1.46.1  
SQL2019 CU5  
SSMS 18.5.1  
PS 7.\*

# Wrap UP

Multiple  
Options

Hybrid  
Model

Multiple  
Language

Know  
Limitations

Scalability

Be Flexible



# Resource

- [Automate management tasks using database jobs](#)
- [Creating a Linked Server to an Azure SQL Database](#)
- [An introduction to Azure Automation](#)
- [Azure Automation runbook types](#)
- [Azure Functions Documentation](#)
- [An introduction to Azure Functions](#)
- [Use Transact-SQL \(T-SQL\) to create and manage Elastic Database Jobs](#)
- [Choose the right integration and automation services in Azure](#)



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