

BACKUP AND RESTORE OPTIONS FOR SQL SERVER IN AZURE

INDYDATA

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ABOUT ME

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WHAT WE WILL COVER

SQL SERVER OPTIONS IN AZURE

PLATFORM AS A SERVICE (PaaS)

INFRASTRUCTURE AS A SERVICE (IaaS)

PaaS BACKUP/RESTORE OPTIONS

AZURE SQL DATABASE

MANAGED INSTANCE

IaaS BACKUP/RESTORE OPTIONS

NATIVE BACKUPS

AUTOMATED BACKUPS

RECOVERY SERVICE VAULT

WHY WILL WE COVER IT?

TOO MANY CHOICES



SQL SERVER OPTIONS IN AZURE

HOW MANAGED IS MANAGED

PLATFORM AS A SERVICE (PAAS)

THE INFRASTRUCTURE IS FULLY MANAGED

PATCHING OF OS AND SQL SERVER

BACKUPS

TWO OPTIONS

AZURE SQL SINGLE DATABASE

AZURE SQL MANAGED INSTANCE

AZURE SQL SINGLE DATABASE

SINGLE DATABASE RUNNING ON AN AZURE SQL SERVER

NO CROSS-DATABASE OR CROSS-INSTANCE COMMUNICATION

NO SQL SERVER AGENT

AZURE SQL MANAGED INSTANCE

MANAGED INSTANCE OF SQL SERVER

CROSS-DATABASE QUERIES

SQL SERVER AGENT

INFRASTRUCTURE AS A SERVICE (IAAS)

SQL SERVER RUNNING ON AN AZURE VM

MARKETPLACE IMAGES AVAILABLE FOR SQL SERVER 2008R2 TO 2019

INFRASTRUCTURE IS CLIENT-MANAGED

OS PATCHING

SQL PATCHING

BACKUP/RESTORE OPTIONS FOR PAAS

BACKUP OPTIONS FOR PAAS

BACKUPS ARE FULLY MANAGED, INCLUDING:

- BACKUP SCHEDULE

- BACKUP LOCATION

CLIENT SETS BACKUP RETENTION (WITHIN LIMITS)

BACKUP FILES ARE NOT ACCESSIBLE

THIRD-PARTY TOOLS CANNOT BACK UP PAAS DATABASES

BACKUP SCHEDULE FOR PAAS

FULL BACKUP RUNS ON CREATION

LOG BACKUPS RUN ONCE FULL COMPLETES

BACKUP SCHEDULE

FULL WEEKLY

DIFFERENTIAL DAILY

LOG BACKUP EVERY 5-15 MINUTES BASED ON TRANSACTIONAL VOLUME

BACKUP LOCATION FOR PAAS

BACKUP FILES ARE GEO-REDUNDANT

THREE COPIES WRITTEN LOCALLY

COPY WRITTEN TO A PAIRED DATA CENTER FOR DISASTER RECOVERY

BACKUP RETENTION FOR PAAS

POINT-IN-TIME RECOVERY

DEFAULTS TO 7 DAYS (7-DAY LIMIT FOR BASIC AND HYPERSCALE TIER)

CAN BE INCREASED TO 35 DAYS

LONG-TERM RETENTION

WEEKLY BACKUPS

MONTHLY BACKUPS

YEARLY BACKUPS

COPY-ONLY BACKUPS FOR MANAGED INSTANCE

COPY-ONLY BACKUPS CAN BE TAKEN FOR MANAGED INSTANCE DATABASES

BACKUPS MUST BE WRITTEN TO AZURE BLOB STORAGE

PAAS RETENTION AND RESTORE DEMO

BACKUP/RESTORE OPTIONS FOR IAAS

NATIVE BACKUPS

IaaS IS SQL SERVER RUNNING ON AN AZURE VM

BACKUPS CAN BE TAKEN USING SQL SERVER AGENT JOBS

ROLL YOUR OWN

YOU CAN USE OLA HALLENGREN'S MAINTENANCE SOLUTION

OLA HALLENGREN'S MAINTENANCE SOLUTION

BACKUPS ARE EXECUTED USING THE DATABASEBACKUP STORED PROCEDURE

CREATING AND EXECUTING BACKUP JOBS IS THE SAME WITH TWO EXCEPTIONS

DIRECTORY IS REPLACED BY URL

MIRROR DIRECTORY IS REPLACED BY MIRRORURL

AUTOMATED BACKUPS

SET ON THE SQL SERVER VIRTUAL MACHINE

SCHEDULE OPTIONS

MANUAL – SCHEDULE FULL AND LOG BACKUPS

AUTOMATED – FULL AND LOG BACKUPS RUN BASED ON TRANSACTIONAL VOLUME

AUTOMATED BACKUP DEMO

AZURE RECOVERY SERVICES VAULT

ONE STOP FOR ALL YOUR BACKUPS

CONFIGURE VM BACKUPS AND SQL SERVER BACKUPS

VM BACKUP IS REQUIRED TO RUN DATABASE BACKUPS

CREATE BACKUP POLICY

Microsoft Azure Search resources, services, and docs (G+/-)

Dashboard > fbgsqlindyrg > fbgsqlindyrsv01 > Backup Goal > Configure Backup >

Create policy

SQL Server in Azure VM

Policy name ⓘ DailyPolicy-korp9vk

Full Backup

Backup Frequency
Daily at 7:30 PM UTC

Retention of daily backup point
Retain backup taken every day at 7:30 PM for 180 Day(s)

Retention of weekly backup point
Retain backup taken every week on Sunday at 7:30 PM for 104 Week(s)

Retention of monthly backup point
Retain backup taken every month on First Sunday at 7:30 PM for 60 Month(s)

Retention of yearly backup point
Retain backup taken every year in January on First Sunday at 7:30 PM for 10 Year(s)

Differential Backup Disabled

Log Backup

Backup Frequency
Every 2 hour(s)

Retained for
15 days

ⓘ Log backup for DBs in simple recovery model will be skipped.

AZURE RECOVERY SERVICES VAULT – THINGS TO KNOW

BACKUPS CAN BE LOCALLY REDUNDANT OR GEO-REDUNDANT

GEO-REDUNDANT COSTS MORE

FOR SQL SERVER VMs, SET VM BACKUP OS DISK ONLY

PORTAL SHOWS BACKUP HEALTH FOR EACH BACKUP ITEM

**IMPORTANT NOTE – IF A FULL BACKUP FAILS, BUT THE LOG BACKUP ARE RUNNING
SUCCESSFULLY, THE BACKUP STATUS WILL SHOW HEALTHY**

AZURE RECOVERY SERVICES VAULT – RESTORE

POINT-IN-TIME RESTORE AVAILABLE TO THREE DESTINATIONS

ALTERNATE LOCATION

OVERWRITE EXISTING DATABASE

RESTORE TO FILE

DESTINATION MUST BE IN THE SAME SUBSCRIPTION AS THE SOURCE

AZURE RECOVERY SERVICES VAULT DEMO

RESOURCES

AUTOMATED BACKUPS FOR AZURE SQL DATABASE AND MANAGED INSTANCE – [AUTOMATIC,
GEO-REDUNDANT BACKUPS - AZURE SQL DATABASE & AZURE SQL MANAGED INSTANCE | MICROSOFT DOCS](#)

OLA HALLENGREN'S MAINTENANCE SOLUTION – [SQL SERVER BACKUP, INTEGRITY CHECK,
INDEX AND STATISTICS MAINTENANCE \(HALLENGREN.COM\)](#)

BACKUP AND RESTORE OPTIONS FOR SQL SERVER ON AZURE VMs – [BACKUP AND RESTORE
FOR SQL SERVER ON AZURE VMs - SQL SERVER ON AZURE VM | MICROSOFT DOCS](#)

AZURE RECOVERY SERVICES VAULT FOR SQL SERVER – [TUTORIAL - BACK UP SQL SERVER
DATABASES TO AZURE - AZURE BACKUP | MICROSOFT DOCS](#)