

Azure Automation Your SQL Agent in the Cloud

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Work

- 11 years as DBA
- MCSE Data Management and Analytics
- 10 years in Merchant Marine

Outside Work

- Running—One 26.2 and Many 13.1
- Shuttling 3 kids

Giving Back

- Co-organizer NESQL User Group
- Frequent speaker local user groups, SQL Saturdays & Virtual groups
- Answering questions at #sqlhelp & dba.stackexchange
- Blog at sqlworldwide.com



<https://twitter.com/phgache/status/862795415552262145>

Why Azure Automation

Runbook

Automation Overview

Demo



Why Azure Automation

Automation

Lower Cost

Improve
Predictability

Integration

Configuration Management

DSC Pull Server

Track Changes

Rich Reporting

Update Management

Schedule Updates

Defined
Maintenance
Window

Exception List

Windows & Linux

Hybrid Cloud

Windows & Linux
OS

Common Scenario?



Mimic SQL Agent Functionality



Build / Deploy Resources



Configure VMs



Monitor



Protect



Govern

Azure Automation Components

Service

Software as a
Service (SaaS)

Runbook Editor

Test & Publish
Workbooks

Schedule Jobs

Runbook Gallery

Resources

Runbook

Jobs

Schedules &
Webhooks

Shared Assets

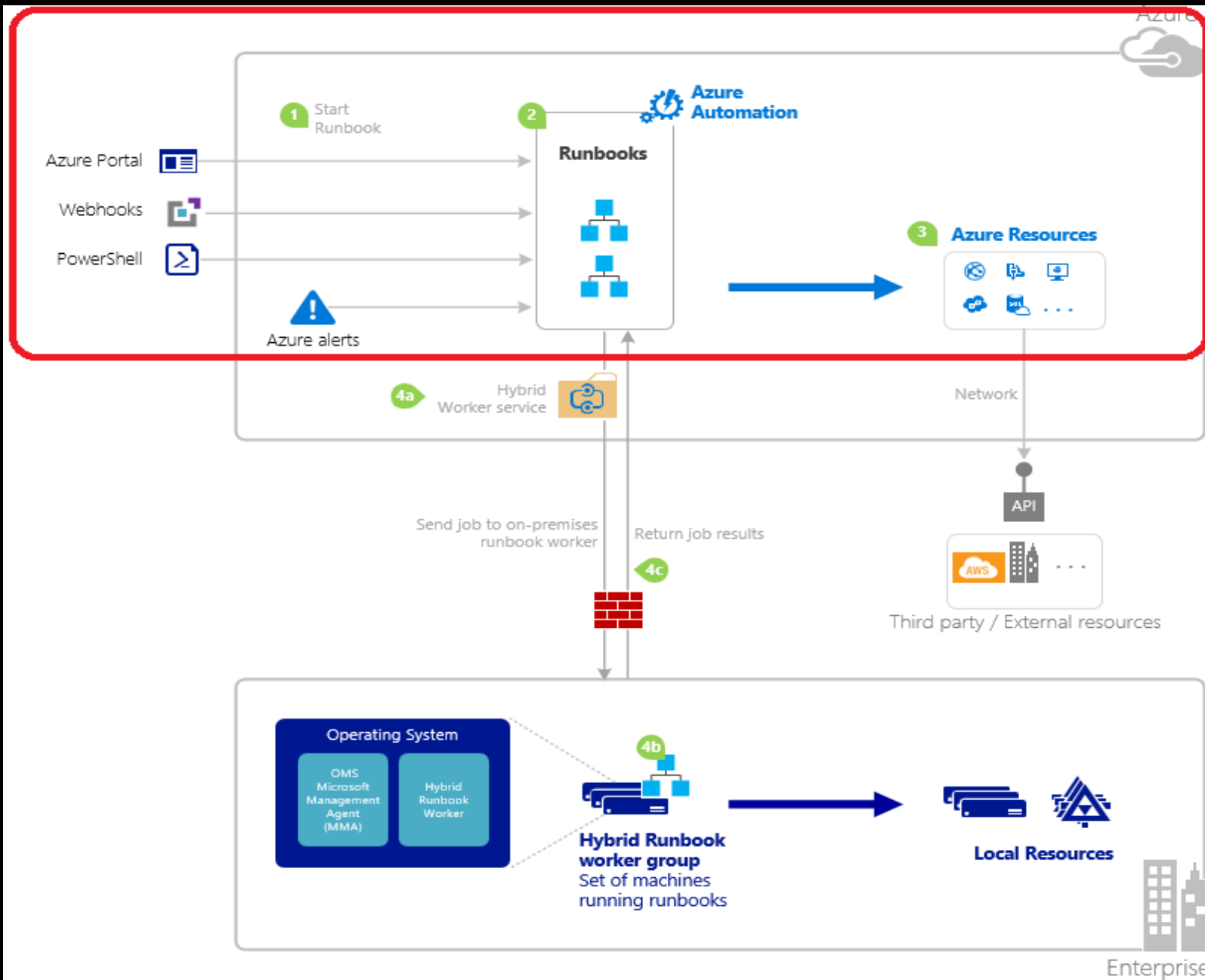
Target

Azure

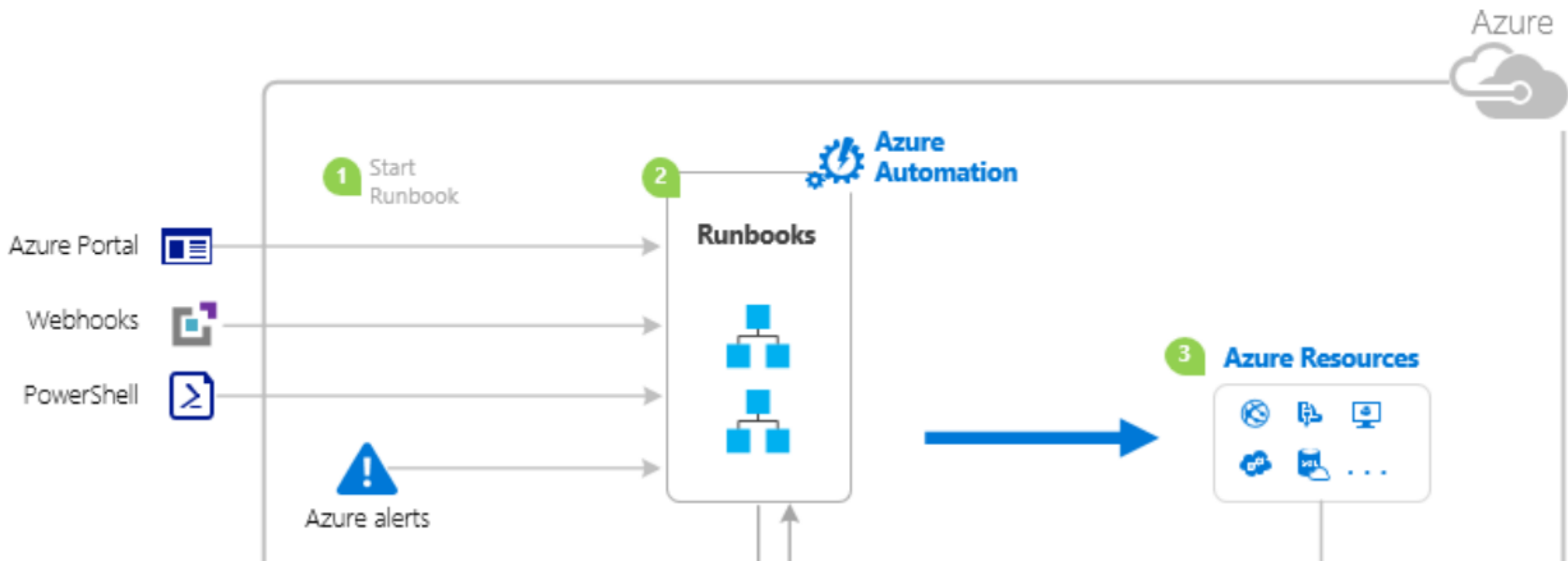
Other Cloud
Services

On-premises

Windows or
Linux



- 1 An actor starts a runbook
- 2 Azure automation notes that a runbook should be started
- 3 Cloud resources - Runbook acts on local Azure resources or other external resources reachable via the network
- 4a On-premises - Hybrid runbook group sends the runbook to an on-premises machine to run
- 4b Runbook acts on its local networked resources
- 4c Job results are returned



Automation Pricing



Process automation per job execution minute



Configuration management is per node.



500 free job minutes



No upfront cost



No termination fees



Pay only for what you use

Azure Automation Availability

Select regions ▾										
	United States								Canada	
Products	EAST US	EAST US 2	CENTRAL US	NORTH CENTRAL US	SOUTH CENTRAL US	WEST CENTRAL US	WEST US	WEST US 2	CANADA EAST	CANADA CENTRAL
– Management Tools										
Azure Advisor										
Backup	●	●	●	●	●	●	●	●	●	●
Site Recovery	●	●	●	●	●	●	●	●	●	●
Application Insights	●				●			●		
Scheduler	●	●	●	●	●	●	●	●	●	●
Automation		●			●	●				●

Types of Runbooks

Graphical

PowerShell using
UI

PowerShell
Workflow using UI

PowerShell

Text using
PowerShell script

Text using
PowerShell
Workflow

Beyond PowerShell

Text based on
Python.

PowerShell Workflow Advantage



Windows PowerShell
scripting syntax



Multi-device
management



Single task can manage
end-to-end processes



Automated failure
recovery



Connection and
activity retries



Task scheduling

When to Use Workflow



Long-running task



Task running on
multiple devices



Check pointing or
persistence



Asynchronous,
restartable



High availability
environments



Requiring throttling
and connection pooling

Use of Runbook

SQL Agent Function

- Purge Old Data
- Update Statistics
- Index Maintenance
- Response to Incidents

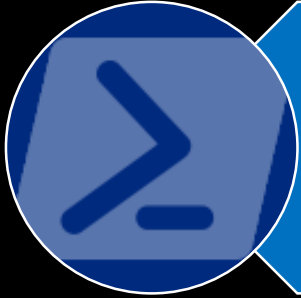
Azure SQL Database

- Vertically Scale
- Backup Azure SQL Databases to Blob storage
- Disaster Recovery

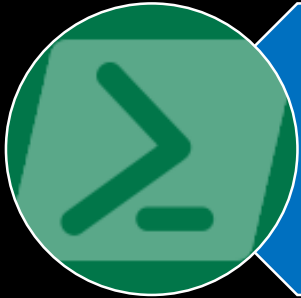
Virtual Machine

- Start/Stop a VM
- Backup an Azure VM and workloads
- Disaster Recovery
- Patch remediation

Runbook Gallery



Runbook from Gallery



Direct import only via Portal



Disclaimer: You should validate the contents of any Runbooks that you get from the Runbook Gallery and use extreme caution in installing and running them in a production environment. |



Resource

[Azure Automation overview](#)

[Automation pricing](#)

[Azure Automation Availability](#)

[Azure Automation Runbook types](#)

[PDF Book](#)

[Pluralsight Course](#)



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