Microsoft

Azure Arc

Maximizing Value with Azure Arc: Modernization without Migration

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Azure Business Lead, CEMA SMB

Hybrid and multicloud is a reality

Complexity

"I need to have health visibility in a single pane of glass to all my existing and future infrastructure and applications."

Compliance

"I need to manage security and incident management across my public cloud and datacenter assets."

Inconsistency

"I want my on-prem skills to work in the cloud, and my cloud skills to work on-prem."

Regulation

"Our DB layer must remain on-premises due to regulatory requirements."

Latency

"We can't take a dependency on the internet. If we lose connectivity, we still want to be able to access the data."

Legacy

"I want to leverage the latest cloud innovation for my legacy workloads and reduce labor costs."

Multicloud Datacenter Edge

Microsoft Azure

Single control plane with Azure Arc

Infrastructure

Connect and operate hybrid resources as native Azure resources

Azure Arc-enabled infrastructure

Servers | K8s | Windows Server | SQL Server | Linux

Services

Deploy and run Azure services outside of Azure while still operating it from Azure

Azure Arc-enabled services

Microsoft Copilot in Azure | Microsoft Defender | Azure Monitor | Microsoft Sentinel | Azure Update Manager | Azure Policy

Multi-cloud | Datacenter | Edge

Operate with AI-enhanced central management & security

Enabled by Azure Arc

Configuration management & governance

- Azure Update Manager
- Configuration Management
- Azure Policy
- Inventory Management

Resiliency and observability

- Azure Monitor
- Chaos Studio
- Site Recovery

Built-in security and control

- Microsoft Sentinel
- Microsoft Defender for Cloud
- Entra
- Key Vault

Universal AI assistant, portal and tools

- Copilot in Azure
- Azure Portal
- Powershell And CLI

Azure Services across your infrastructure

Azure

- Windows Server
- SQL
- Kubernetes
- Linux

Multi-cloud

- aws
- Google Cloud
- ORACLE

On-premises

- Azure Local
- vmware by Broadcom
- NUTANIX
- Microsoft Hyper-V

Azure Arc-enabled infrastructure

Bring on-premises and multi-cloud infrastructure to Azure with Azure Arc

Azure Arc-enabled servers

Organize, inventory, and monitor
Governance and Security
Simplified role-based operations
Physical, Virtual, Windows, Linux

Windows Server
suse
Red Hat
aws
AWS Linux 2

GENERALLY AVAILABLE

Azure Arc-enabled SQL Server

Organize, inventory, and monitor
Governance and Security
Use with your existing SQL servers
Free SQL Assessment

SQL

GENERALLY AVAILABLE

Azure Arc-enabled Kubernetes

Organize, inventory, and monitor
Governance and Security
Monitoring and Policy
GitOps-based zero-touch deploy

CANONICAL
RANCHER
OpenShift
AKS on Azure Stack HCI

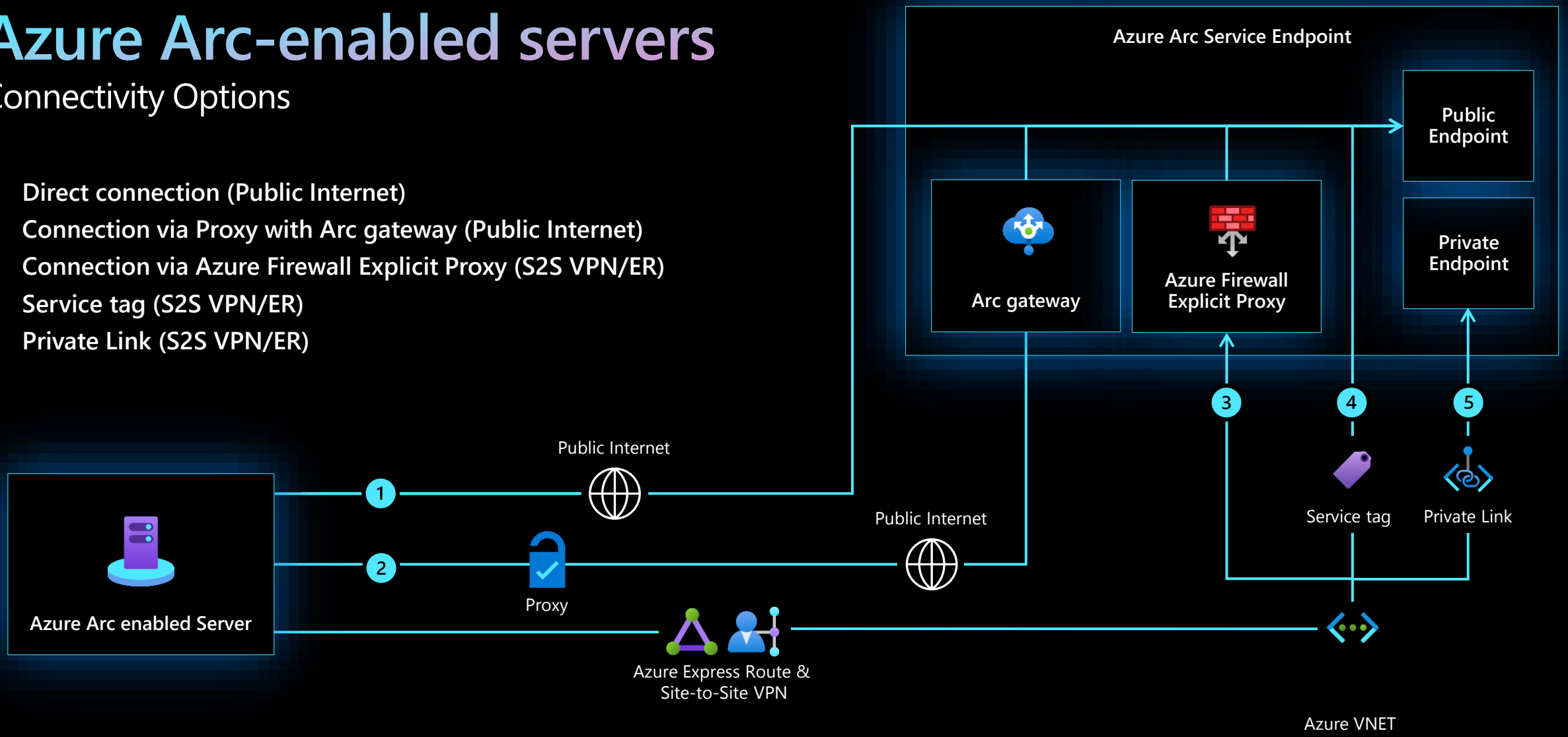
GENERALLY AVAILABLE

Deployment

Azure Arc-enabled servers

Connectivity Options

1. Direct connection (Public Internet)
2. Connection via Proxy with Arc gateway (Public Internet)
3. Connection via Azure Firewall Explicit Proxy (S2S VPN/ER)
4. Service tag (S2S VPN/ER)
5. Private Link (S2S VPN/ER)



Generally Available

Multicloud connector for centralized management

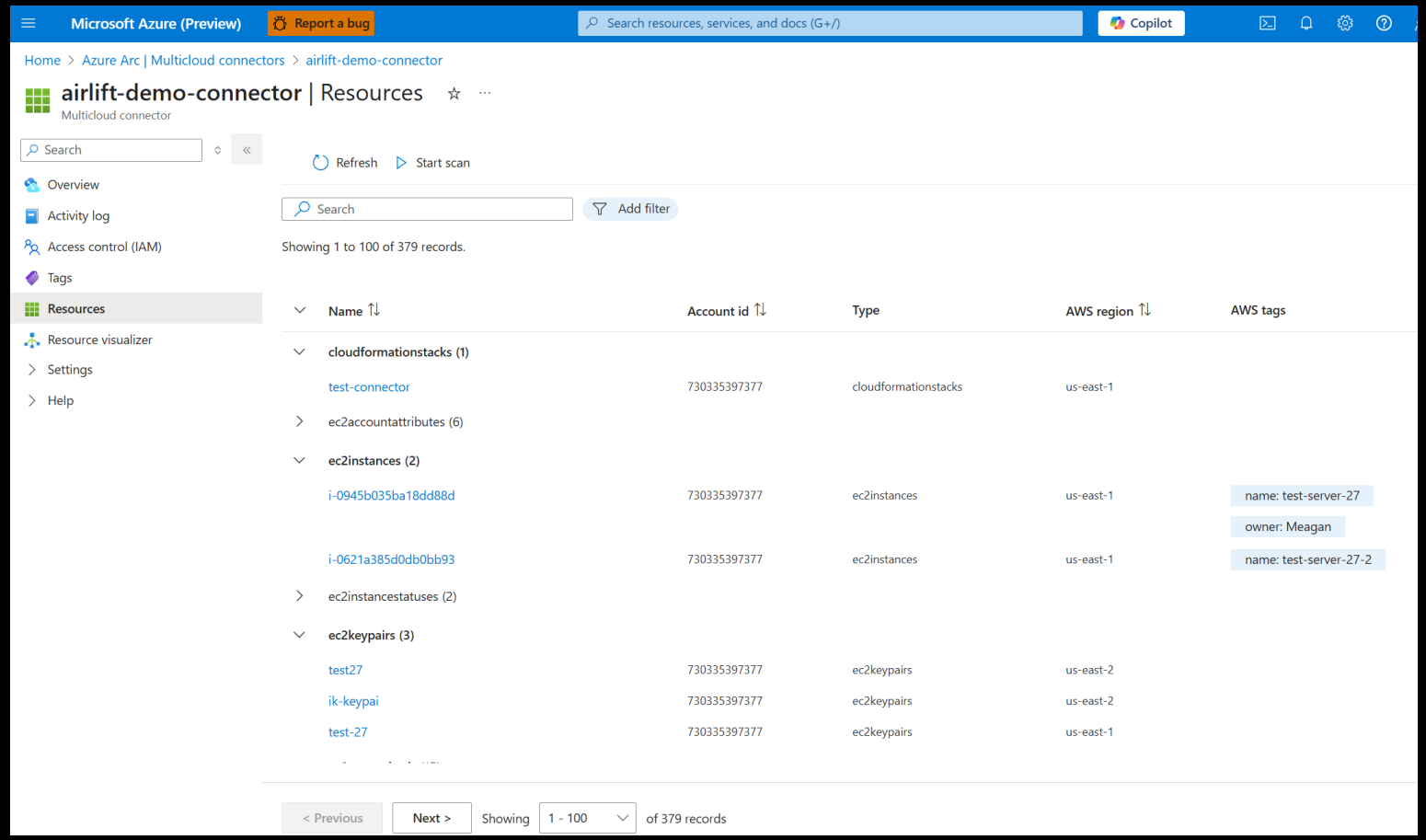
Consistent management tooling across AWS and Azure environments

Inventory

- Agentless discovery of AWS resources
  - Represent AWS resources in Azure with all AWS metadata (including AWS tags) enabling cross-cloud queries & report generation
  - Regular syncs to have up-to-date inventory
  - Supports 140+ resource types across 40+ AWS services

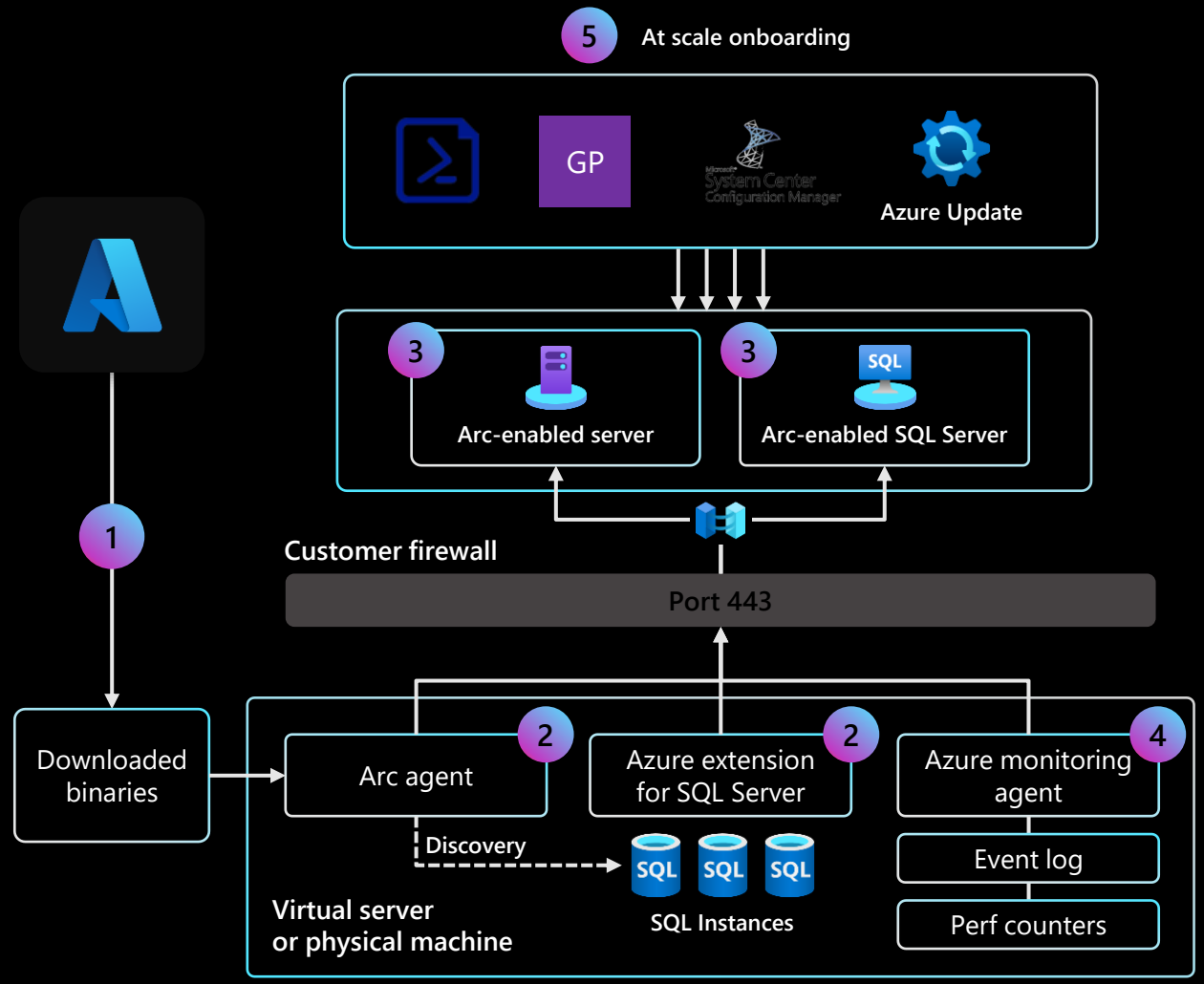
Arc onboarding

- Automatically installs the Arc-agent on discovered EC2 machines
  - Regular syncs to auto-discover new EC2 VMs
- Integration with Azure Policy to ensure Azure management services are enabled to all EC2 VMs



SQL Server enabled by Azure Arc architecture

1. Generate script and execute on Server
2. Local services created
3. Arc-enabled server and Arc-enabled SQL Server resources created
4. Azure monitoring agent
5. Onboard at scale



Windows & SQL Server management enabled by Azure Arc

Azure Arc-enabled Windows & SQL Server pricing

Azure Arc is FREE to install. Basic management services are free. L+SA or PAYG customers get additional value at no cost, and certain management services are paid.

- Best Practices Assessment
- Patching & Updates
- Resiliency & Recovery
- Database Observability
- Remote Support
- Configuration management

Microsoft Azure

Additional services ($)*

- Microsoft Defender for Servers
- Microsoft Sentinel
- Azure Monitor
- Log Analytics
- Purview Integration
- Synapse Link
- Extended Security Updates for Windows Server and SQL Server

No additional cost to L+SA or PAYG customer

No additional cost to L-only customer

- Tagging, management groups, activity logs, templates, Resource Graph, RBAC
- Manage license types
- Detailed Inventory
- Migration Assessment
- Database high availability

Customer servers and clusters

Windows Server management enabled by Azure Arc

Single pane of glass for 20+ Azure services

- Central inventory, governance and policy
- Automated patching and maintenance
- Cloud-based resiliency and configuration

These management services available at no additional cost for customers **with Software Assurance or enrolled in Windows Server 2025 pay-as-you-go**:

- Azure Update Manager
- Azure Policy guest machine configuration
- Azure change tracking and inventory
- Best Practices Assessment
- Azure Site Recovery configuration
- Network HUD & AccelNet
- Remote Support
- Windows Admin Center in Azure for Arc

These services are available at no additional cost through Windows Server Software Assurance (SA), active subscription licenses or pay-as-you-go subscription

Windows Server management enabled by Azure Arc capabilities

Not Supported
Supported
Paid Service

Customer Infrastructure

	Built-in capabilities	Release Date	Windows Server without Azure Arc	Basic Azure Arc capabilities	Windows Server management enabled by Azure Arc
Azure Control Plane	Tagging and inventory management		✗	✓	✓
	Microsoft Entra ID Authentication		✗	✓	✓
	Role Based Access Control (RBAC)		✗	✓	✓
	Azure Resource Manager		✗	✓	✓
	Windows Admin Center PREVIEW	Preview	✓	✓	✓
	Azure Migrate Assessments & Business Case		✗	✓	✓
New Azure mgmt. capabilities for Windows Server SA customers*	Azure Change Tracking and Inventory**	GA	✗	✓ $6/VM/month for both	✓ Will incur Logs Analytics Workspace cost
	Azure Policy Machine Guest Configuration	GA	✗	✓ $6/VM/month for both	✓
	Azure Update Manager	GA	✗	✓ $5/VM/month	✓
	Best Practices Assessment PREVIEW**	Preview	✗	✗	✓ Will incur Logs Analytics Workspace cost
	Remote Support PREVIEW	Preview	✗	✗	✓
	Azure Site Recovery configuration PREVIEW**	Preview	✗	✗***	✓ $25/VM/month
	Network HUD (WS 2025) PREVIEW	Preview	✗	✗	✓
	AccelNet (WS2025) PREVIEW	Preview	✗	✗	✓
Paid Azure services	Microsoft Copilot in Azure PREVIEW		✗	✓	✓
	Hotpatch, Microsoft Defender for Cloud, Azure Monitor, Microsoft Sentinel, ESUs + more		✗	✓ *Pricing*	✓ *Pricing*

*These capabilities are offered to customers with Windows Server Software Assurance at no additional cost.
**These services will likely incur Azure storage and compute costs, which will be charged to the customer.
***ASR Protection supported, but ASR Configuration Feature is exclusive to Windows Servers with SA

Description of the Windows Server management enabled by Azure Arc capabilities

✓ Supported

✓ Paid Service

	Customer Infrastructure	Description
Built-in capabilities	**Windows Server management enabled by Azure Arc**	
Tagging and inventory management	✓	Use tags to organize and inventory your servers, wherever they are running
Microsoft Entra ID Authentication	✓	Secure authentication and identity management for Arc-enabled servers
Role Based Access Control (RBAC)	✓	Manage access and permissions for resources consistently across hybrid and multi-cloud environments
Azure Resource Manager	✓	Project your hybrid and multi-cloud servers into Azure alongside your Azure resources
Windows Admin Center PREVIEW	✓	Use WAC in the Azure Portal for server-specific administration, troubleshooting, and diagnostics
Azure Migrate Assessments and Business Case	✓	Azure Migrate assessments to evaluate and build business cases for migrating on-premises workloads
Azure Change Tracking and Inventory**	✓	Tracks changes in VMs to help you pinpoint operational and environmental issues
Azure Policy Machine Guest Configuration	✓	Azure Policy guest configuration will audit and enforce settings within virtual machines
Azure Update Manager	✓	Automate, schedule, review and patch updates to your operating systems
Best Practices Assessment PREVIEW**	✓	Collect and analyzes server data that generates a list of issues to address with remediation guidance
Remote Support PREVIEW	✓	Allow a Microsoft support professional to solve your support case through access to your device remotely
Azure Site Recovery configuration PREVIEW**	✓	Replicate workloads running on physical and virtual machines**. Compute/Storage costs are not included.**
Network HUD (WS 2025) PREVIEW	✓	Monitor and remediate physical network configurations, optimizing performance and reducing latency
AccelNet (WS 2025) PREVIEW	✓	Delivers comprehensive management for workloads that need high networking performance, hosted on WS 2025 failover clusters
Microsoft Copilot in Azure PREVIEW	✓	Use AI to provide insights, automate tasks, and enhance management. Price not yet released in Public Preview.
Hotpatch, Microsoft Defender for Cloud, Azure Monitor, Microsoft Sentinel, ESUs + more	✓	Utilize best in class Azure security and governance services. These are paid additional services.

**These services will likely incur Azure storage and compute costs, which will be charged to the customer.

SQL Server enabled by Azure Arc pricing model

- Detailed Inventory
- SQL Best Practice Assessment
- Single sign-on
- Auto patching
- Auto backup
- Monitoring**
- TDE with Azure Key Vault**

Microsoft Azure

Additional services ($)*

- Microsoft Defender for SQL Server
- Log Analytics
- Purview Integration
- Synapse Link
- Azure Policy
- Azure Monitor
- HA/DR Inventory Management**
- Cluster aware patching and upgrades**
- Point-in-time restore**
- Backup long-term retention to Azure/S3**

No additional cost to *L+SA or PAYG* customer

No additional cost to *any* customer

Control plane functionality:

Tagging, management groups, activity logs, templates, Resource Graph, RBAC

Manage license type

Basic Inventory

Customers' servers and clusters

*Pricing for Azure Arc-enabled services and additional management services is consistent with Azure pricing.

** Not available today. On the product roadmap

Enabled features by license type

Not supported | Supported | Future support

Built-in capabilities	License Only	License with Software Assurance or SQL subscription	Pay-as-you-go
Connect to Azure	Included	Included	Included
SQL Server inventory	Included	Included	Included
Detailed database inventory		Included	Included
Azure AD auth		Included	Included
Best practices assessment		Included*	Included*
Auto patching		Included	Included
Auto backup		Included	Included
Monitoring		Included	Included
TDE with Azure Key Vault		Included	Included
Defender for SQL Server	Additional Cost	Additional Cost	Additional Cost
Purview premium	Additional Cost	Additional Cost	Additional Cost
HA/DR inventory management		Additional Cost	Additional Cost
License compliance management		Additional Cost	Additional Cost
Cluster aware patching and upgrades		Additional Cost	Additional Cost
Point-in-time restore		Additional Cost	Additional Cost
Backup long-term retention to Azure and S3		Additional Cost	Additional Cost

*Might incur additional charge on Log Analytics Workspace. Detailed example included in the next slide.

Best Practice Assessment

Provide proactive and actionable insights at scale to optimize entire SQL Server estate across on-premises and multicloud environments

Best Practices Assessment for SQL Server enabled by Azure Arc

Use Cases

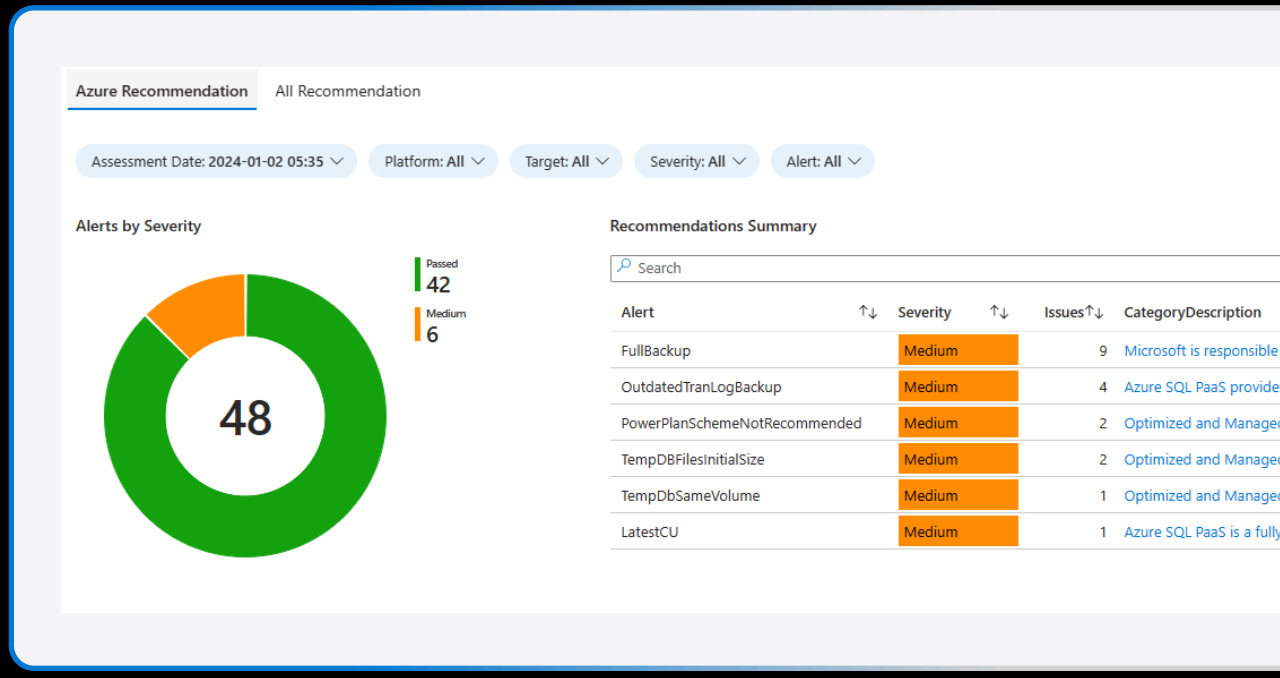
- Identify opportunities for performance optimization, improvement on security posture and compliance
- Perform proactive planning on disaster recovery and high availability
- Perform more accurate capacity planning on SQL Server resources

Key Capabilities

- 450+ rules to evaluate the configuration of SQL Server estate at scale
- Provide a prioritized list of the risks detected and step-by-step mitigation guidance
- Scan in intervals for most up to date results

Benefits

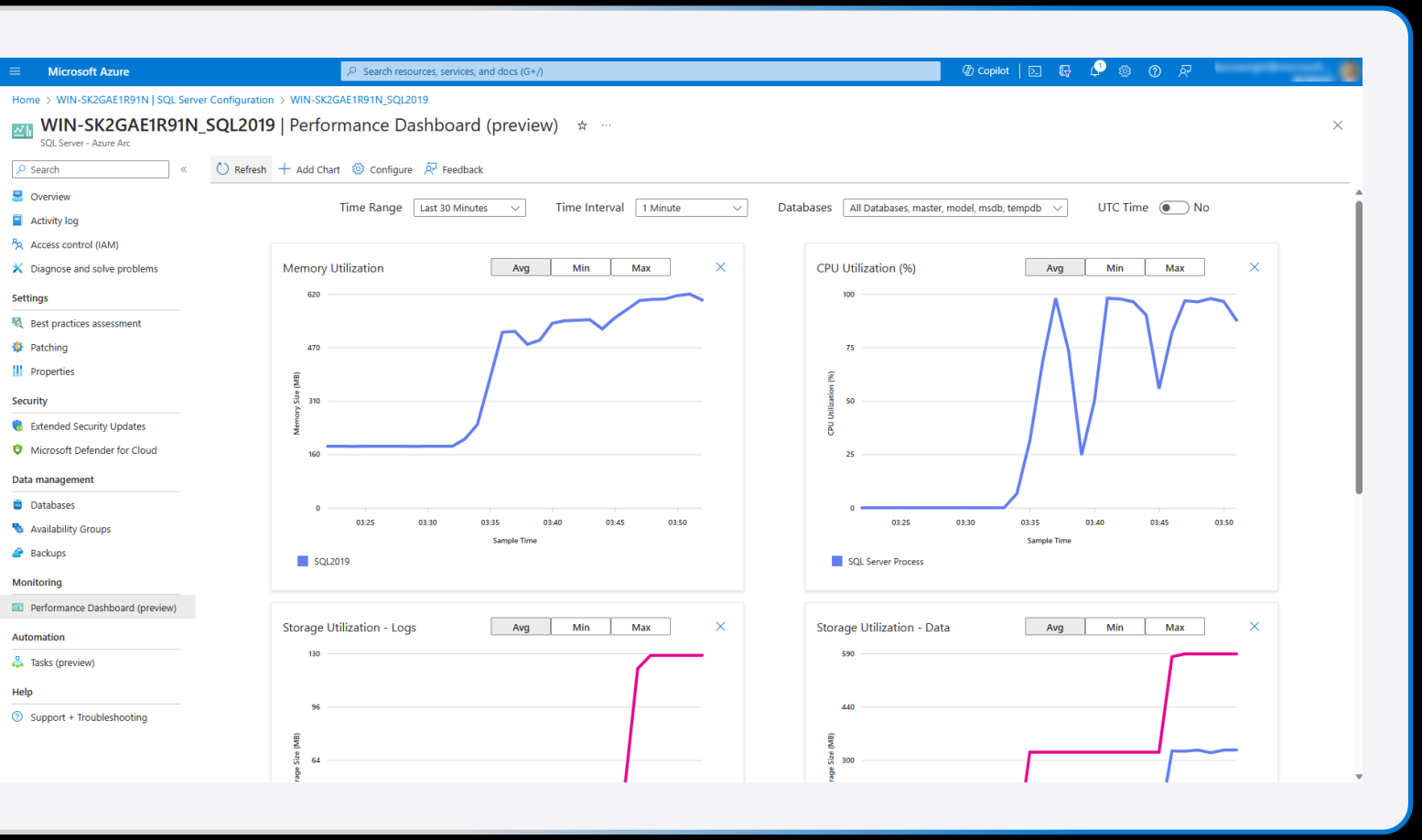
- Improve uptime and performance by mitigating the risks detected
- Enhance security and compliance posture
- Increase efficiency of DBA's routine operation by at-scale assessment



Performance intelligence

SQL Performance Dashboard

Now in Public Preview



View SQL Performance Metrics within the Azure

- Active Sessions
- CPU Utilization
- Database Storage Utilization
- Memory Utilization
- Performance Counters
- Storage I/O

Coming Soon

- Database Properties
- Wait Stats

Note: PII, EUII, Customer Content is NOT collected

Auto Backup

Automated backups

Now in Public Preview

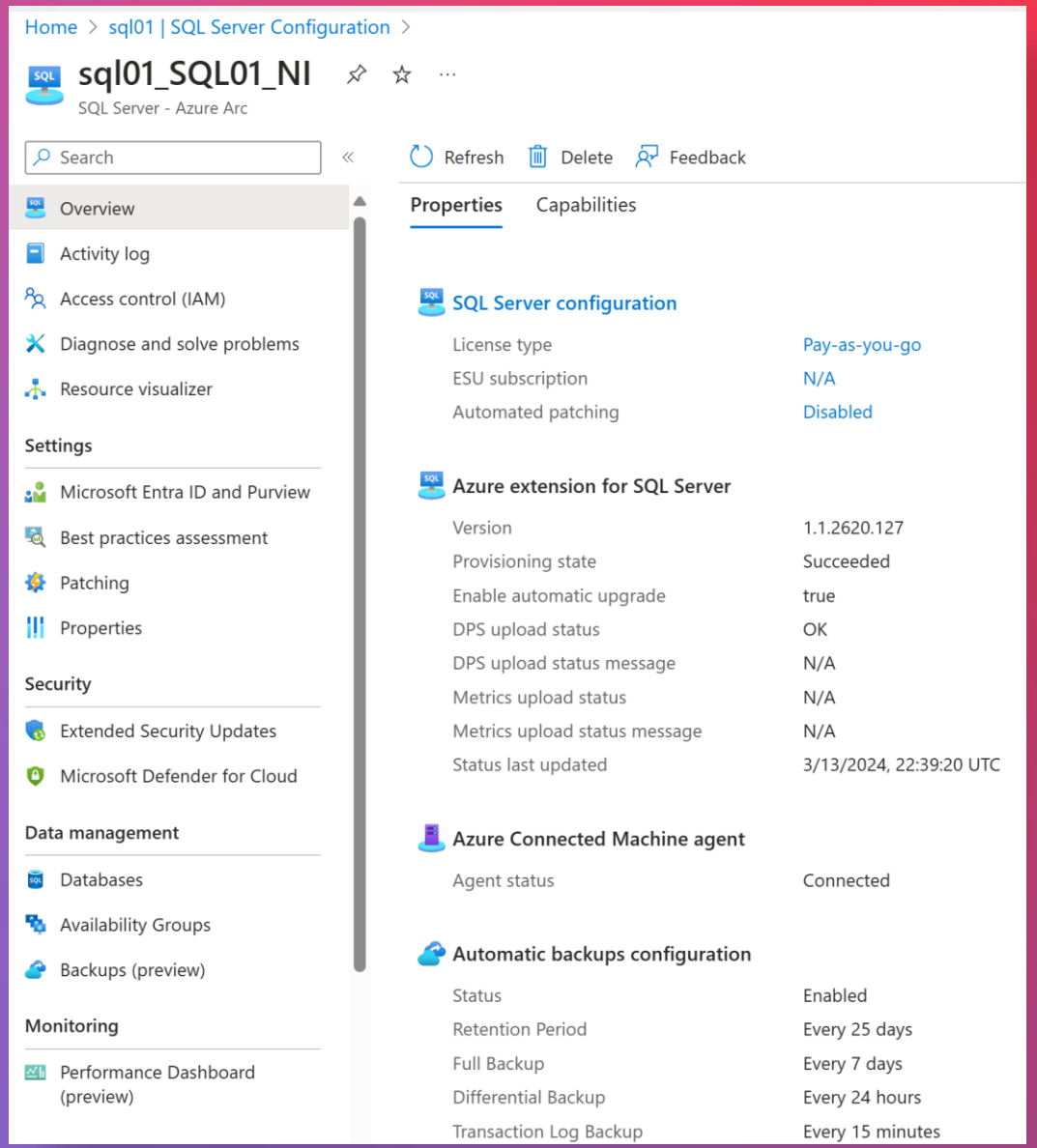
Perform backups automatically

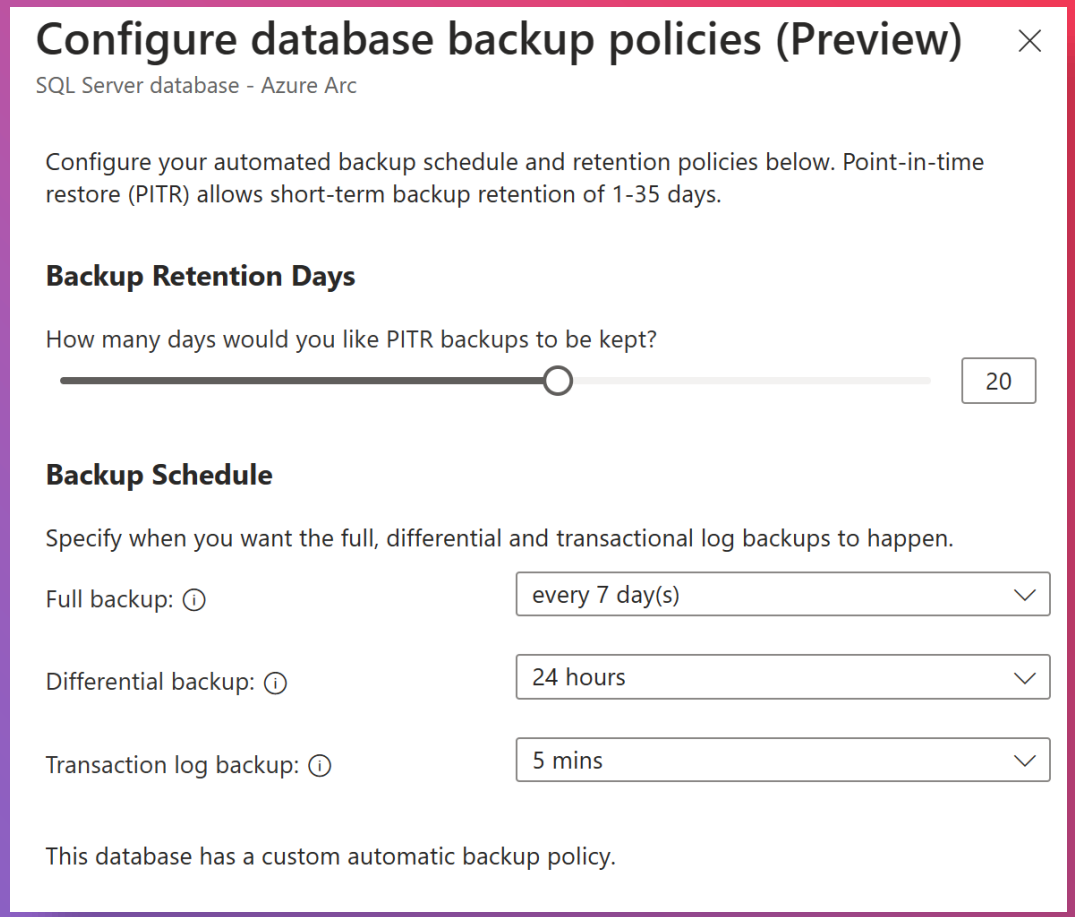
- User databases
- System databases

Built-in, disabled by default

The backups are native SQL Server backups

- Backup history is available in the msdb





Automated backup settings

Retention days (1-35)

- Days to retain the backup
- Value of 0 disables the backup

Backup schedule

- **Full backups:** Daily or weekly, default weekly
- **Differential backups:** Every 12 hours or 24 hours, default 24 hours
- **Transaction log backups:** Increments of 5 minutes, default 5 minutes

Backups are stored at the default backup location of the instance

Point-in-time restore

Now in Public Preview

You don’t need to:

- Connect to the physical machine
- Look for where backups are
- What can be restore point window

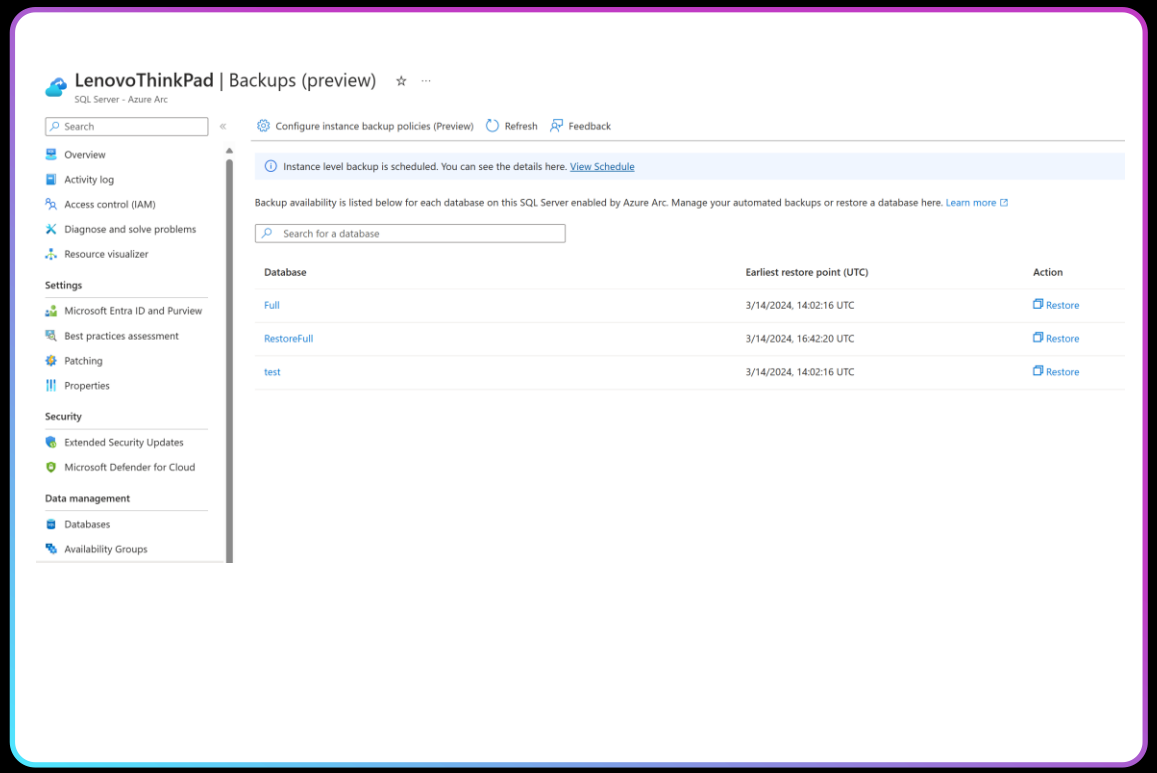
Restore to a point-in-time within the retention period

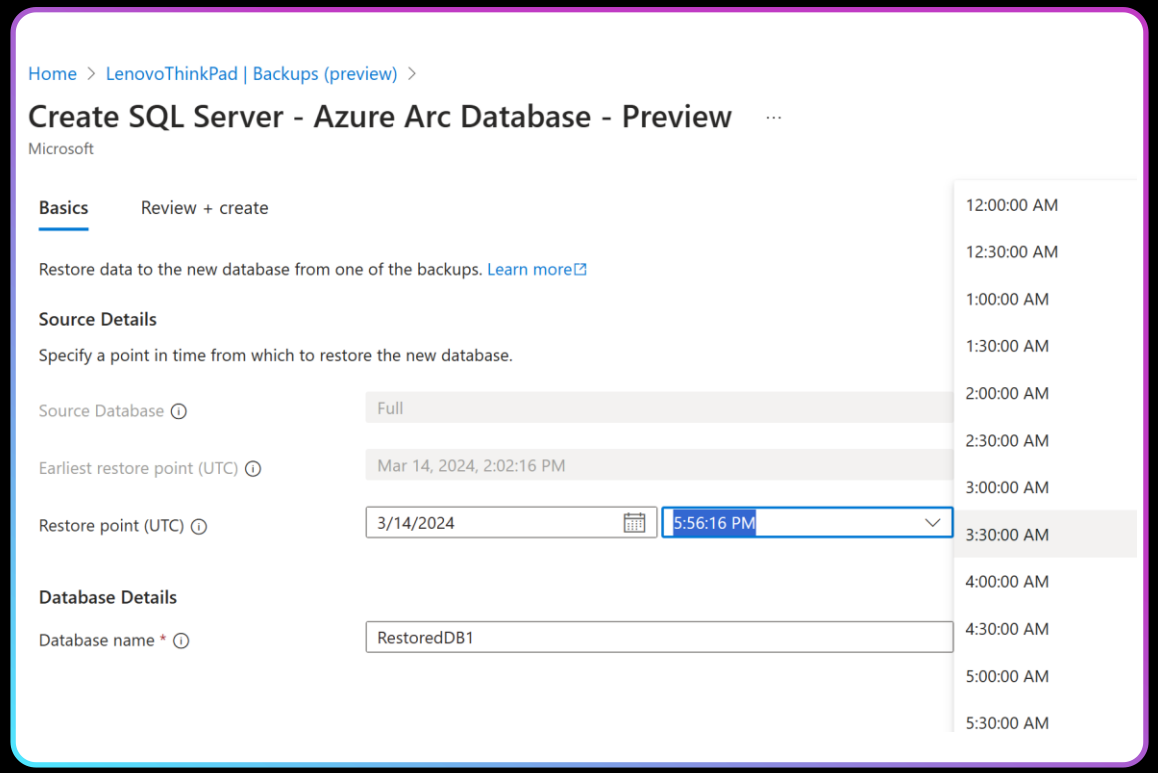
Restore as a new database to the same SQL server enabled by Arc instance

Prerequisites:

- Automated backups is enabled
- Backups are taken through automated backup

Point-in-time restore process



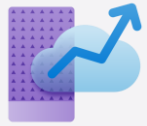


Migration

Phases of a successful cloud journey

Discovery
Inventory of all SQL Servers and application servers

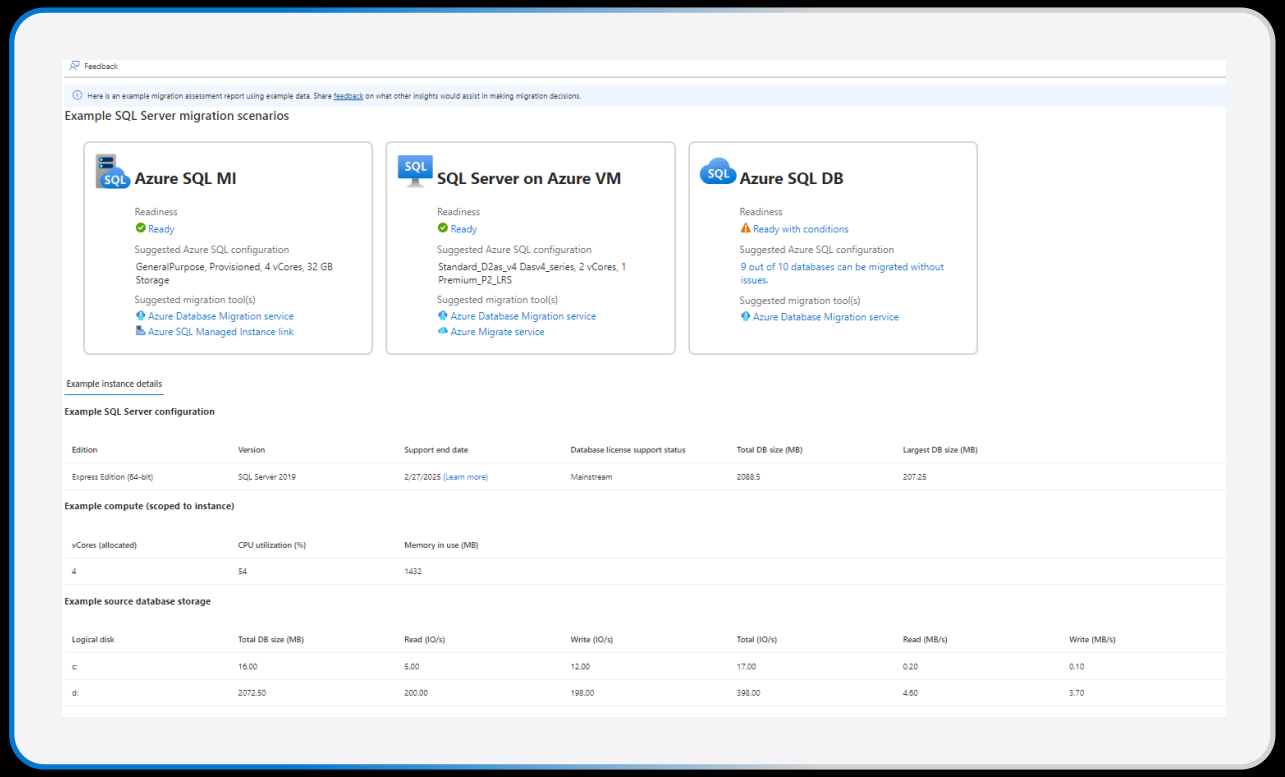
Planning
Secure, protect, and optimize



Execute
Azure SQL readiness, Azure SQL tier and size

Optimize
Replicate databases, test, and complete migration

NEW: SQL migration assessment in Azure Arc



Free to all customers running SQL Server anywhere
Available for all SQL Server editions, SQL Server 2012 and above

Enabled by default

Assessment is baked in when customers enable SQL Server with Azure Arc

Comprehensive and actionable assessment

Evaluate and measure the readiness of SQL Servers for Azure SQL, identify migration risks with mitigation actions

Best-fit recommendations on SQL IaaS/PaaS

Optimize for performance and cost with guidance on service tier, sizing and migration tooling

Out of box and continuous reporting

Discovery of SQL Server and its readiness reports are instant, automatic and continuous, with zero additional setup time

Pricing

New cloud billing model for SQL Server (pay-as-you-go*)

Better cost efficiency when paying only for what you use

SQL Server pay-as-you-go licensing enabled by Azure Arc
(per core per month/hour)

Pricing	Monthly rate	Hourly rate
Standard Edition	$73	$0.100
Enterprise Edition	$274	$0.375

Optimize asset capitalization

- Organizations that focus on EBITDA and capitalized expenses prefer to purchase their licenses
- Customers that bill on a cost-plus or other expense-based chargeback model will prefer the Pay-As-You-Go model

Optimize upfront costs

- Pay-As-You-Go doesn't have any upfront costs and is billed monthly but in the long term it may have a higher TCO

Optimize for periodic consumption

- Reduced IP cost of periodic workloads such as of ERP, payroll, giving campaigns and others
- Scale down the entire VM or stop SQL Server instance

Available on SQL Server 2014, 2016, 2017, 2019, and 2022 * Traditional Licensing Options are still available. More here.

SQL PAYG vs Other SQL agreements

	SQL subscription/EA/EAS/OV/OVS		Pay-as-you-Go
Infrastructure environment	On-premise		On-premise
Commitment	1 year or 3 year	✓	No commitment
Payment terms	Upfront	✓	Monthly (will be part of Azure bill)
CAPEX/OPEX	CAPEX	✓	OPEX
Purchase order	Required	✓	Not required
Charging granularity	Per Year	✓	Per Hour
VM/SQL Server instance is stopped	Charge	✓	No Charge
Decrease the #cores	Not Possible	✓	Any time
Increase the #cores	Another commitment with new start/end date	✓	Any time
Switch from SQL Std to Enterprise or vice versa	Not Possible Another commitment with new start/end date	✓	Any time
Compliancy	Need to follow up actual usage for any changes	✓	No need for follow up. Done automatically
Arc Agent	Not required	✓	Required
SQL Server – Fail-over Rights	Yes		Yes
Internet Connectivity	Not required	✓	Not required at all times. The usage is reported and accounted for by the billing logic when the connectivity is restored.

How to select license type for SQL Server

Customer control over cost optimization

Pay-As-You-Go

- Triggers Pay-As-You-Go hourly billing after SQL Server is connected
- Enables core Arc features

Software assurance or SQL Subscription

- Provides license usage visibility in Cost management + Billing via distinct $0 meters
- Enabled core features

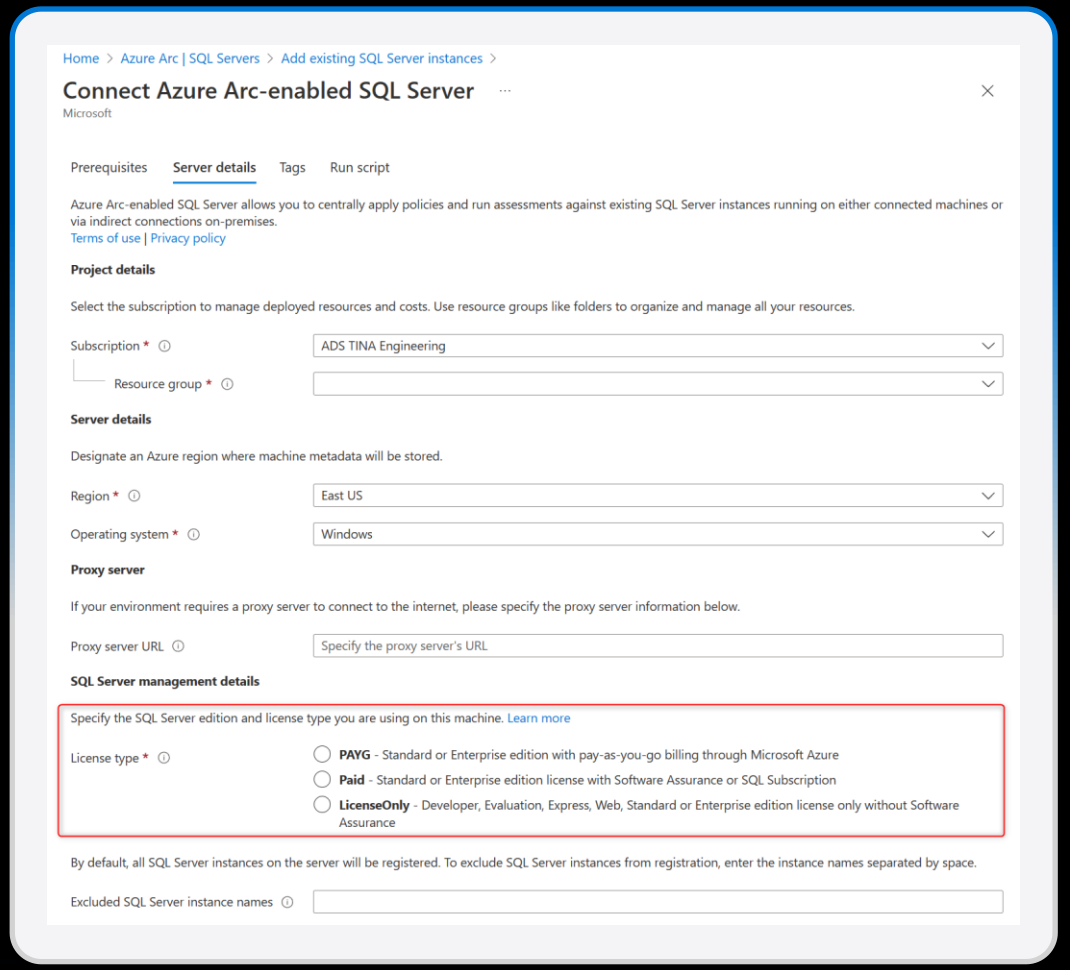
License only

- Provide license usage visibility in Cost management + Billing via distinct $meters
- Disables core features

Can alter the selection at any time

Use Azure portal or script to change between license types

Takes effect the next hour



Customer Targeting

Customer Targeting

1. CSP Subscription conversion → Customer purchases SQL Server licenses through CSP
    1. CSP Subscription Renewal → Target with SQL PayG through Azure Arc
    2. Active CSP Subscription → Target with SQL SA Reclass through Azure Arc
2. EA/EAS → Customer purchases SQL licenses through an Enterprise Agreement
    1. EAS Renewal → Target with SQL PayG through Azure Arc
    2. EA/EAS with Active SA → Target with SQL SA Reclass through Azure Arc
    3. EA/EAS True Ups (New Licenses) → Target with SQL PayG through Azure Arc
3. OV/OVS → Customer purchases SQL licenses through an Open Value Agreement
    1. OVS Renewal → Target with SQL PayG through Azure Arc
    2. OV/OVS with Active SA → Target with SQL SA Reclass through Azure Arc
    3. OV/OVS True Ups (New Licenses) → Target with SQL PayG through Azure Arc
4. SQL Servers hosted on AWS/GCP → Target with SQL PayG through Azure Arc

Requirements / Conditions

	Arc-enabled PAYG licenses	Arc-enabled instances with SA
Eligible Products	SQL Server >=2012 (SE & EE) Windows Server 2025 (SE & DC)	SQL Server >=2012 (SE & EE) Windows Server >=2012 (SE & DC)
Arc-enablement	Azure Arc enabled and connected to a subscription of the end-customer	Azure Arc enabled and connected to a subscription of the end-customer
Location	Hoster, Customer, AVS, AWS, GCP	Not on AWS or GCP
Licensing options	vCore & pCore	vCore & pCore
…		
ACR	ACR = PAYG monthly invoice	ACR = SA monthly reclass

How-to / Steps

	Arc-enabled PAYG licenses	Reclass of Arc-enabled instances
1	Creation of the customer Azure CSP Subscription	
2	Deployment of the Arc-Agent / -Extensions and connection to the Azure Sub.	
3	Set the licensing to **PAYG**	Set the licensing to **PAID**
4	**Stop** previous licensing (e.g. SPLA)	**Continue** current licensing
5	Start seeing **new ACR** in monthly reporting	
6	Start earning (ACR-based) **incentives** and **contribution** to DCO contract or MACC commitment	

+ *connect to Azure Lighthouse…*

Get started

Azure Arc-enabled servers generally available, get started today: https://aka.ms/Azure-Arc
Azure Arc-enabled Kubernetes generally available, get started today: https://aka.ms/Azure-Arc-Kubernetes
Try Azure Arc-enabled data services: https://aka.ms/hybrid-data-services

Learn more

Azure Arc Jumpstart: https://aka.ms/AzureArcJumpstart
Technical documentation: https://aka.ms/AzureArcDocs
Azure Arc Learning Path: https://aka.ms/AzureArcLearn

The Azure Arc Jumpstart project

- Provide a "zero to hero" scenarios for multiple environments and deployment type using as much automation as possible.
- Create a "supermarket" experience by being able to take "off the shelf" scenarios and implement it.
- Meeting Azure Arc customers and partners where they are.
- Agile, "startup-like" team.
- No detail is too small.
- Ready to go technical demos
- Jumpstart ArcBox is a sandbox environment that allows users to explore all the major capabilities of Azure Arc in a click of a button.
- Jumpstart Lighting is a show where people come to share their Azure Arc/Jumpstart/Hybrid experience.

Resources

Azure Arc complete overview

aka.ms/arc-introvideo

Introducing Azure Arc

aka.ms/arc-compete

Azure Arc compete deck

aka.ms/azurearcpricing
Azure Arc pricing page

aka.ms/arc-techcommunity

Deep dives on Azure Arc, best practices and more

aka.ms/arc-customerstories

Learn how customers are implementing Azure Arc

https://aka.ms/arc-feedback

Public Q&A forum

aka.ms/AzureArcJumpstart

Azure Arc Jumpstart

aka.ms/AzureArcJumpstartDemos

Azure Arc Jumpstart demos

Azure Arc-enabled Kubernetes & servers

aka.ms/arc-blog
Azure Arc: Extending Azure management to any infrastructure

aka.ms/arc-k8svideo

Kubernetes—Managing K8 clusters outside of Azure with Azure Arc

aka.ms/arc-serversvideo

Server management—Organize all your servers outside of Azure with Azure Arc

aka.ms/arc-serversdocs

Documentation for Azure Arc enabled servers

aka.ms/arc-k8sdocs

Documentation for Azure Arc enabled Kubernetes

Azure Arc-enabled data services

aka.ms/arc-datablog

Run Azure data services on-premises, at the edge, and multi-cloud with Azure Arc

aka.ms/arc-data-mechanicsvideo

Azure Arc-enabled data services demos including SQL and PostgreSQL

aka.ms/arc-ignite-video

Ignite 2021: Innovate across hybrid and multicloud with Azure Arc

aka.ms/arc-datadocs

Documentation for Azure Arc-enabled data services

Learn more

Azure Arc Jumpstart:
https://aka.ms/AzureArcJumpstart

Technical documentation:
https://aka.ms/AzureArcDocs

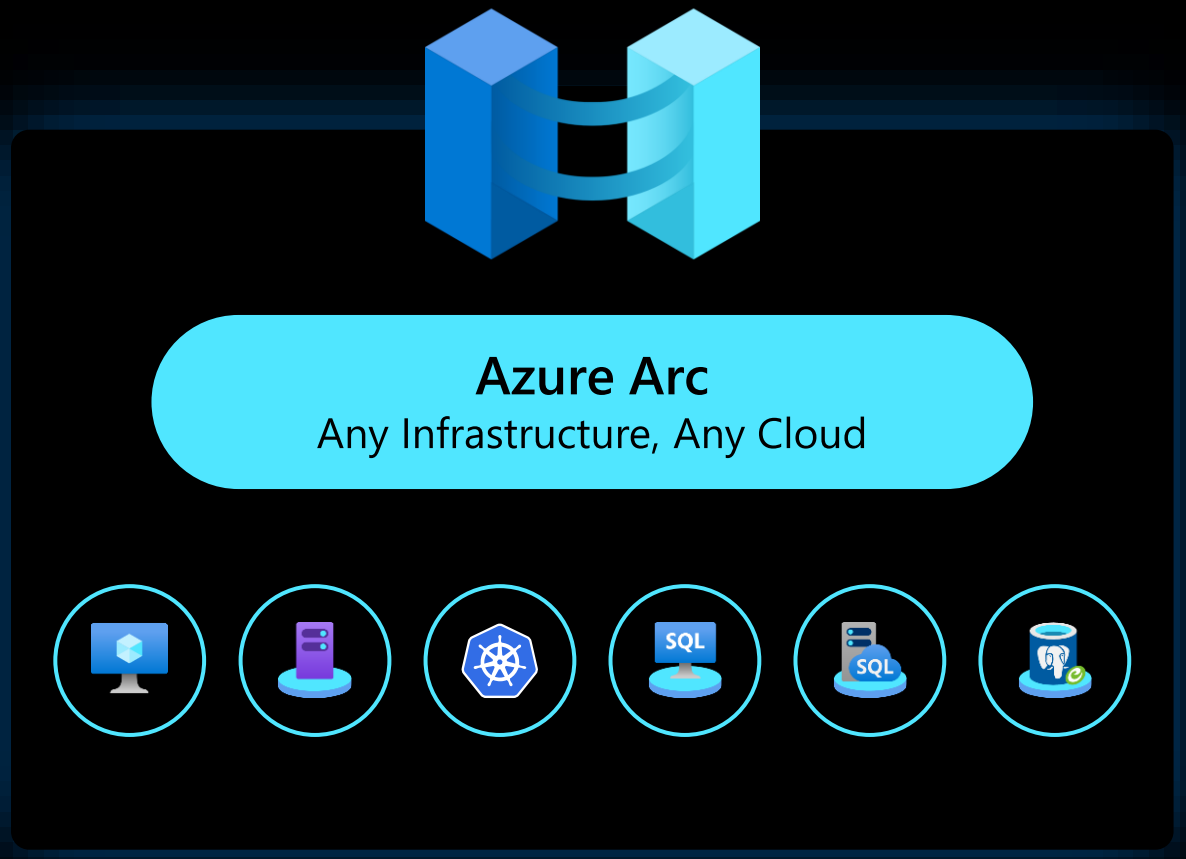
Azure Arc Learning Path:
https://aka.ms/AzureArcLearn

Azure Arc Learning Companion:
https://aka.ms/pathways

Azure Arc ESU Docs:
https://aka.ms/arcesudocs

Azure Arc Total Economic Impact Report:
https://aka.ms/arcforresterstudy

SQL Arc:
https://aka.ms/ArcSQL



Thank you