Microsoft

Manage, control and secure SQL databases with Azure Arc enabled SQL

April 17th

Microsoft

Speaker introductions:

Gijs de Witte
Director Partner Development Hosters & Telco
Microsoft GPS Western Europe

Russell Banks
Azure Infrastructure GTM Manager SMB
Microsoft Western Europe

Anders Bonde
WE Marketplace and AI Lead
Microsoft GPS Western Europe

Alex Luzes
Worldwide Partner + Factory Engagement Lead
Microsoft Corporation

Agenda

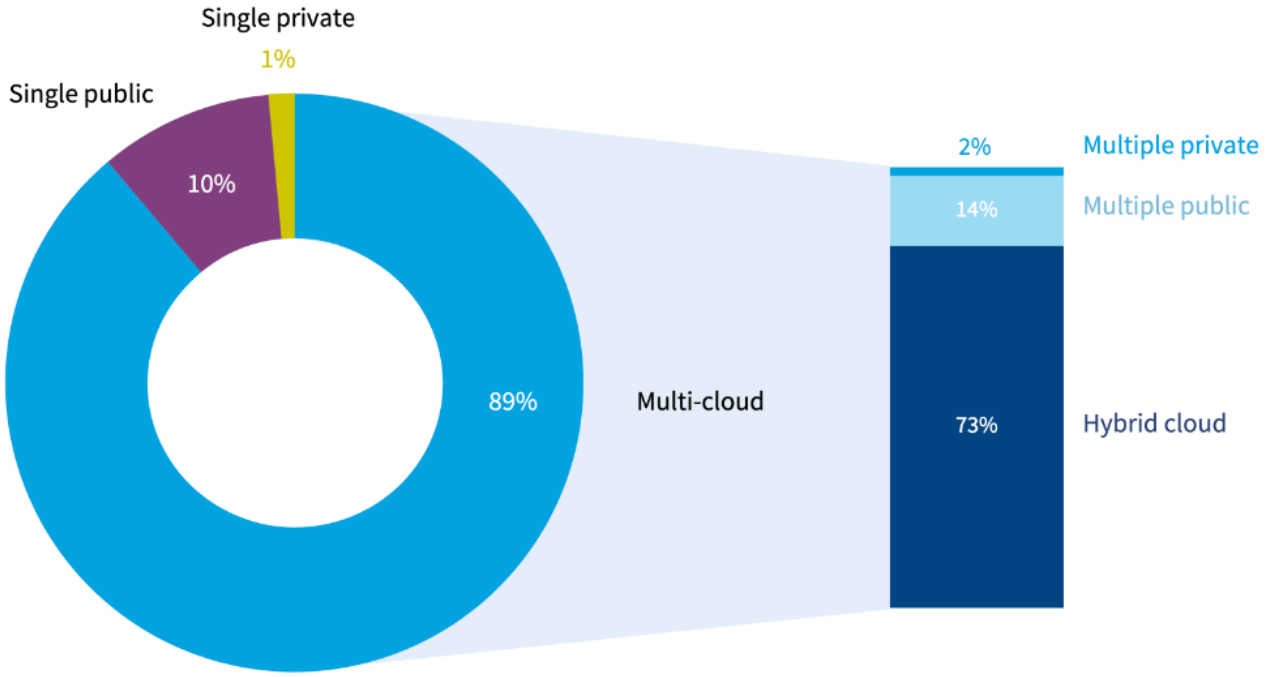
Welcome & Introductions	15.00 – 15.05 CET	Gijs de Witte
Hybrid cloud	15.05 – 15.15 CET	Gijs de Witte
Azure Arc enabled SQL	15.15 – 15.30 CET	Russell Banks
Recap and introductions to CMF	15.30 – 15.35 CET	Anders Bonde
Cloud Migration Factory for partners	15.35 – 15.50 CET	Alex Luzes
Q&A	15.50 – 16.00 CET	

Context

Market dynamics

- >5000 hosting providers across Western Europe
- Azure growth >25% YoY
- AI momentum around Azure AI, CoPilot etc
- Ever increasing need to improve security of infra & data
- Broadcom acquisition of VMware

Hybrid Cloud



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Source: Flexera 2024 State of the Cloud Report (Figure 8)
flexera

Five characteristics of a trusted hybrid cloud provider

Microsoft delivers across the board

1

Comprehensive continuum across on-premises, multi-cloud, edge, and disconnected scenarios

Environment Consistency

2

Allow you to maximize value in existing infrastructure and bring cloud services to any infrastructure

Maximize Value at Capex Costs

3

Offer a control plane to manage and secure any resource on-premises and across multiple clouds

Common Control Plane

4

Support key needs including data sovereignty, regulations and operating in harsh environments

Support Regulatory & Compliance

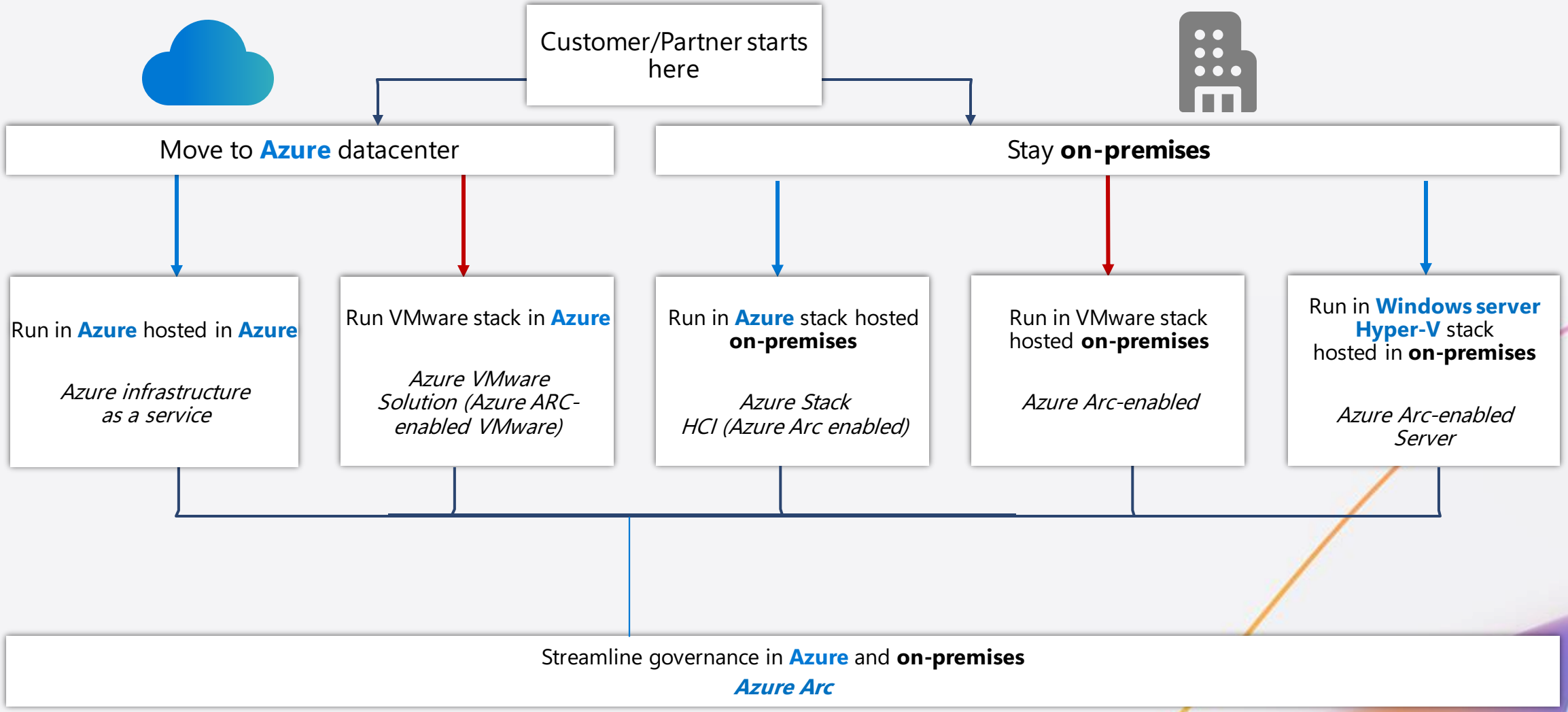
5

Have an ecosystem across hardware OEMs, MSPs, and ISVs to support diverse needs and geos

Partner certified & vertically integrated ecosystem

Azure Adaptive Cloud

Microsoft adaptive cloud offerings provide partners options, based on business & technical requirements.



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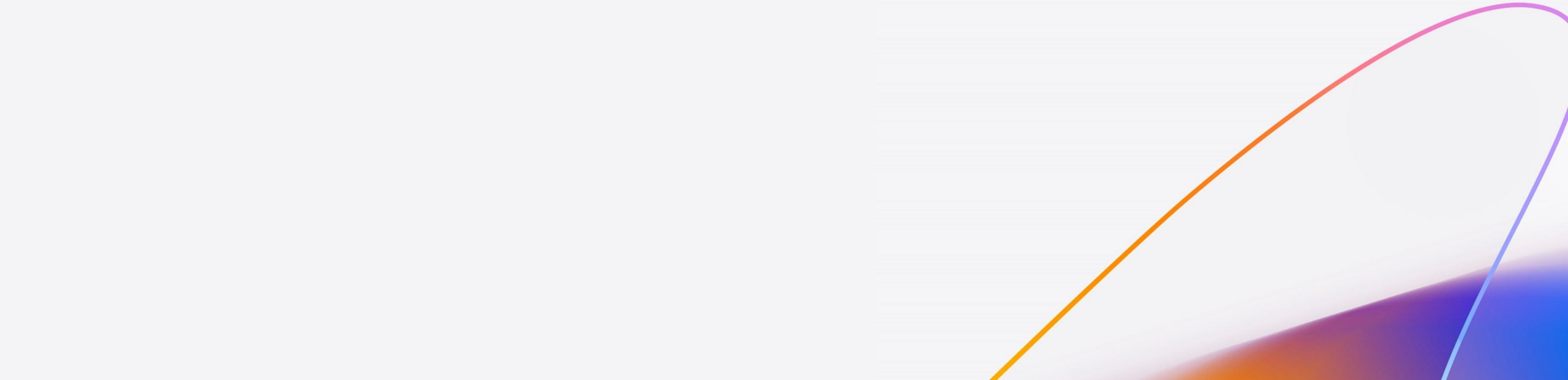
Azure Arc enabled SQL - Russell Banks



Bring cloud manageability to SQL Server anywhere

Manage, govern, and protect your SQL Server from Azure

Manage all SQL estate with better observability

Single view of all SQL Servers deployed on-premises, in Azure and other clouds

Capture key performance metrics and realize faster time-to-value with monitoring

Gain proactive & actionable insights with automated best practices assessment

Enhance business continuity

Manage Availability Groups inventory and track real-time health status

View Always-on Failover Cluster Instances and protect with Defender

Automated backups and point-in-time restore for seamless application of policy

Govern and protect all SQL estate using Azure

Protect your on-premises & multicloud data using Microsoft Defender for Cloud

Enhance security using Extended Security Updates as a service & auto patching

Central insights and governance across all SQL Servers with Microsoft Purview

Azure billing enabled by Azure Arc for SQL Server anywhere, with simplified onboarding

Microsoft Azure

Azure Arc-enabled data services

Existing apps

SQL Server enabled by Azure Arc

Organize, inventory

Enhanced security with Microsoft Defender for Cloud

Free SQL Assessment service

GENERALLY AVAILABLE

App modernization

Azure Arc-enabled SQL Managed Instance

Azure SQL Managed Instance on any infrastructure

Fully automated, evergreen SQL

Cloud billing model for on-premises

GENERALLY AVAILABLE

Azure Arc-enabled PostgreSQL

Azure Database for PostgreSQL on any infrastructure

Fully automated, single server

Scale up/down/out/in

PUBLIC PREVIEW

Deliver critical insights across entire SQL Server environments, optimize database performance and enable faster diagnostics

Monitoring for SQL Server enabled by Azure Arc

Benefits

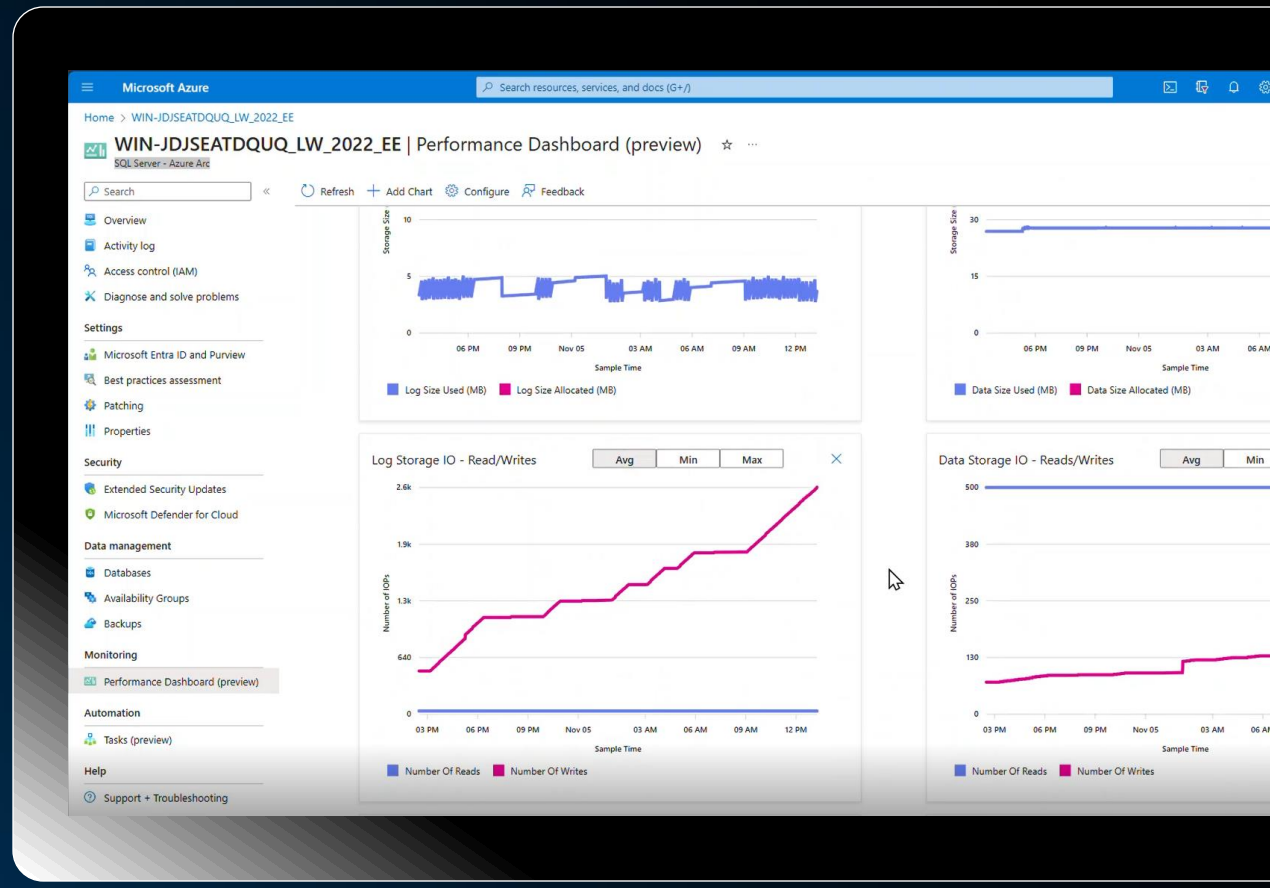
- **Reduce risks** of incidents, unplanned downtime and security breach
- **Increase the efficiency** of DBA's maintenance & troubleshooting tasks
- **Reduce the cost** of underlying infrastructure, with better capacity planning

Use Cases

- Monitoring as the first step in optimizing performance for applications
- Perform troubleshooting when incidents happen
- Identify security gaps, remain compliant or enforce SLAs

Key Capabilities

- View key SQL performance metrics in near real time right from the Azure Portal
- Out-of-box monitoring dashboards, with zero additional setup time
- All telemetry and logs securely stored in Azure for downstream analysis



Microsoft Azure

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

Best Practices Assessment for SQL Server enabled by Azure Arc

Benefits

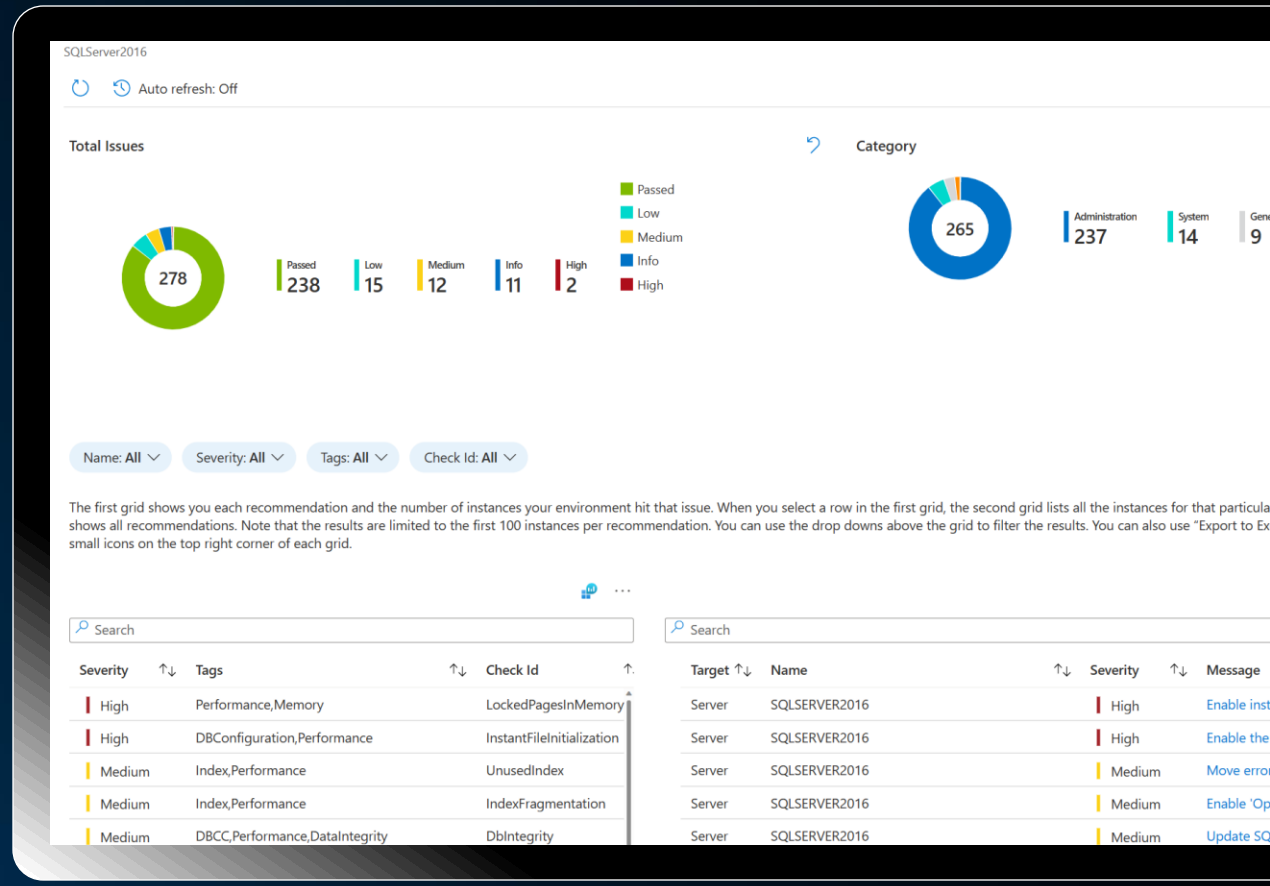
- **Improve uptime and performance** by mitigating the risks detected
- **Enhance security** and compliance posture
- **Increase efficiency** of DBA's routine operation by at-scale assessment

Use Cases

- Identify opportunities for performance optimization, improvement on security posture & 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 & step-by-step mitigation guidance
- Scan in intervals for most up to date results



Microsoft Azure

Protect SQL workloads through security posture management and allow timely responses to threats

Microsoft Defender for Cloud — Databases Protection

Benefits

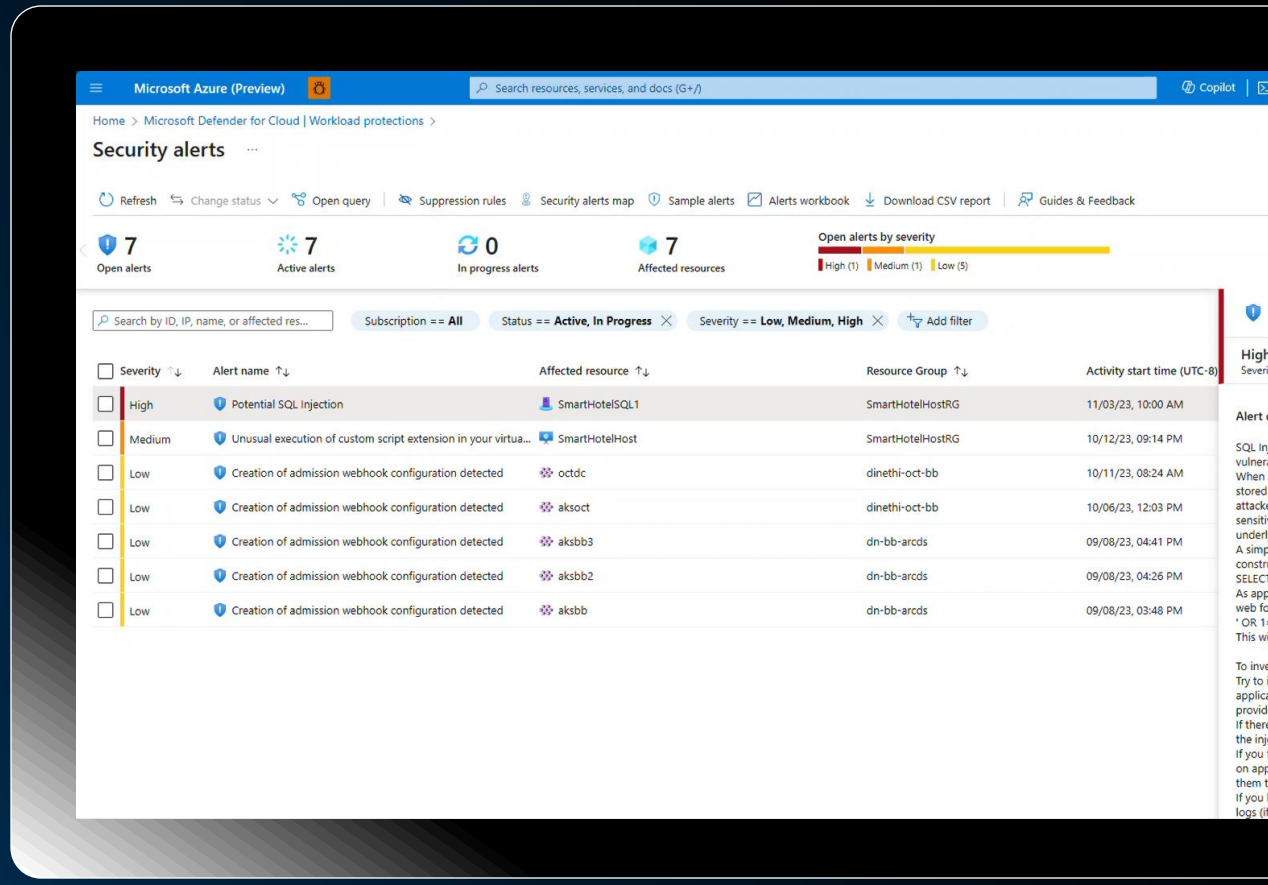
- **Reduce risk proactively** with contextual cloud security posture management
- **Drive compliance** with MS cloud security benchmark for multicloud environments
- **Enable protection** with more workload coverage & native integrations

Use Cases

- Mitigate risks generated from modern technology (open-source, container)
- Standardize security practice across various types of databases and across hybrid & multicloud infrastructure

Key Capabilities

- Discover, track, and remediate SQL workloads security misconfigurations
- Detect and response unusual and harmful attempts to breach SQL workloads
- Centralize security across all SQL estate, with one-click enablement



Microsoft Azure

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.

THE WORLD BANK

> [Azure Arc] ensured our entire SQL estate, on-premises & multicloud, were meticulously prepared for migration to Azure, guaranteeing a smoother and highly successful migration experience.
>
> – Chandra Kala Macha, Information Officer II, World Bank

SITUATION

- Sprawling IT operations across 130+ locations
- Various IT teams using multiple cloud providers and tools to manage the complex backend
- Difficult and time-consuming to monitor and secure on-premises SQL Server given the fact multiple teams need to be aligned and coordinated

SOLUTION

- **Consolidate:** World Bank adopted Azure Arc to address multiple issues including inventory management of their SQL estate, streamlining maintenance tasks such as backups and patching, best practices assessment and gaining insights on migration readiness.
- **Unify:** World Bank wanted a solution that could be used to manage both Azure and AWS servers, but that would also work with its Microsoft SQL Server stack.
- **Expand:** The Information Security Office at World Bank uses Defender for Cloud, Microsoft Purview. With Azure Arc, they extended those services to entire SQL estate, on-premises and across multicloud.

IMPACT

- **90% cost saving** from consolidating tools for monitoring, security and compliance
- **Streamline cloud migration** journey using Azure Arc
- Significantly **reduced security risks and non-compliance** at the levels of both compute resources and data workloads

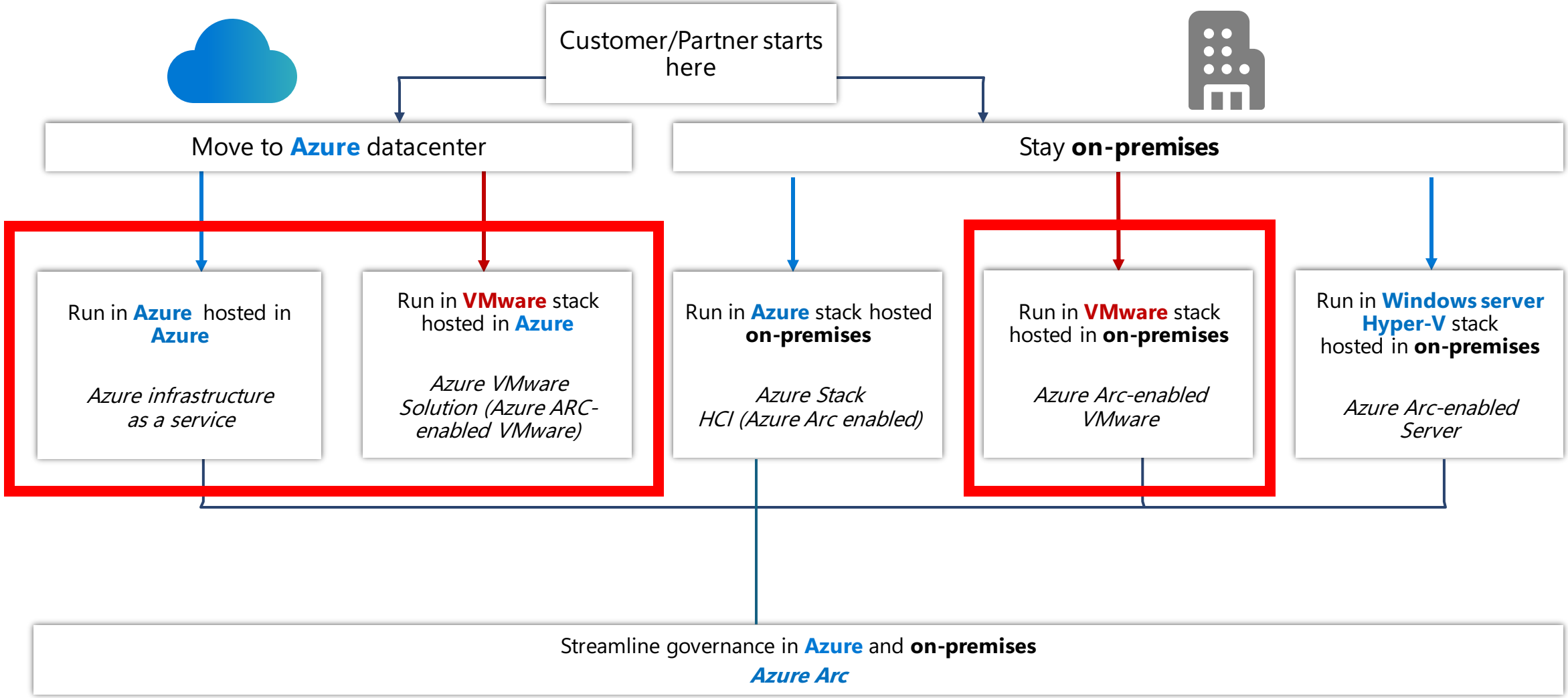
Read full story here

Microsoft

Recap and CMF Introductions – Anders Bonde

Azure Adaptative Cloud

Microsoft's suite of adaptive cloud offerings provide partners to react based on their own business and technical requirements.



Recap and intro to CMF

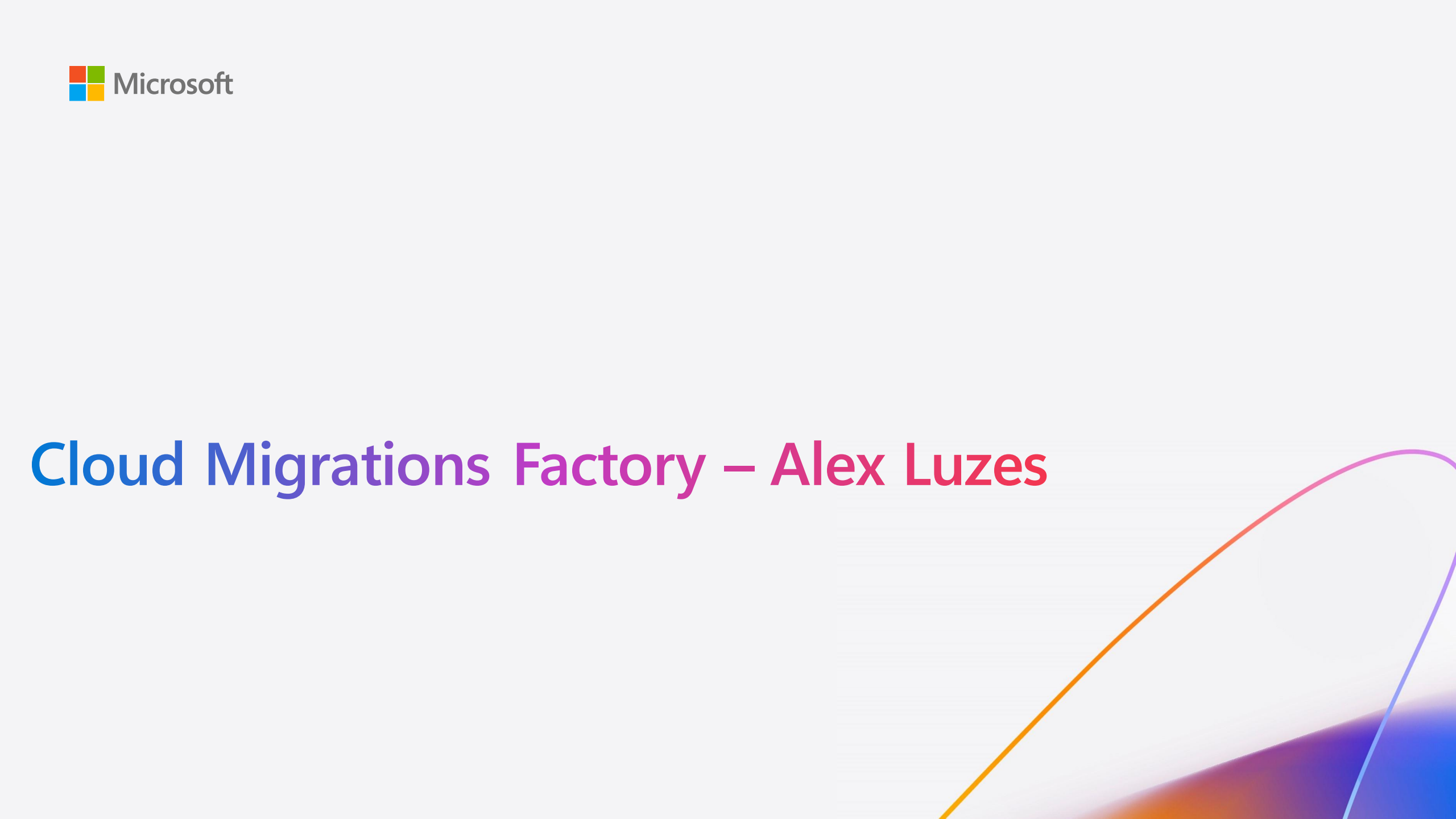
- The Perfect Storm: Azure Migration & AI (FOMO)
  - The preferred option is always a Cloud Migration – but not always possible
  - Position Arc if the customer is not ready to migrate – to be better prepared for the future

- Supporting Microsoft programs
  - AMM (Azure Migrate & Modernize) – Qualified Partner migrate, Microsoft fund
  - CMF (Cloud Migration Factory) – Microsoft migrate

- Azure Technical Resources are limited – use them wisely
  - Recommendation: **Use CMF whenever possible**!
  - CMF has many options: Servers, AVS, AVD, databases, app migration, analytics – and Arc!

Microsoft

Cloud Migrations Factory – Alex Luzes



Arc-enabled SQL Server with cloud data manageability

Manage, govern, and secure your SQL Server from Azure

Manage all your SQL estate via Azure Arc

Single view of all SQL Servers deployed on-premises, in Azure and other cloud

Fully automated technical assessment for SQL Server – no additional cost

Control and govern your entire data estate

Central insights and governance across all SQL Servers with Microsoft Purview

Purview access policies readily available for SQL Servers on-premises

Secure all your data using Azure security

Protect your on-premises data using **Microsoft Defender** for Cloud

Secure identities with **Single Sign-On** and **Azure Active Directory***

Easy connection enabled by Azure Arc for existing SQL Servers without migration

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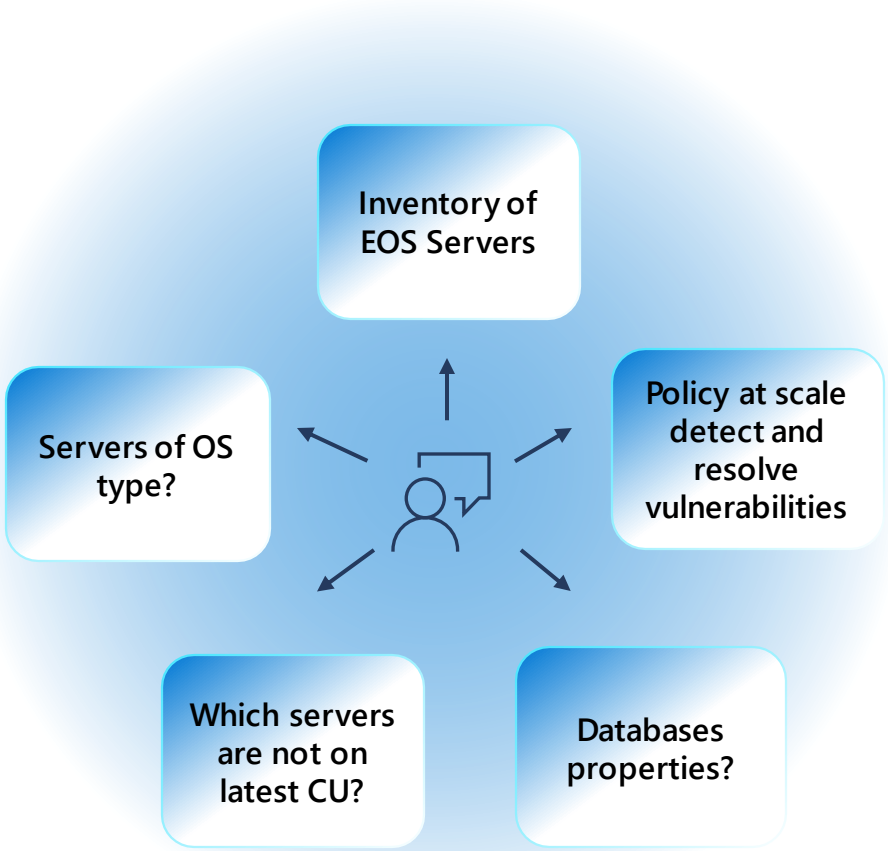
**SQL Server 2022 required for Azure Active Directory. All other features supported on SQL Server 2012, 2014, 2016, 2017, 2019, 2022, under L+SA or PAYG*

Single view of all SQL Servers from Azure Portal



Inventory Management

Single consistent view of all your SQL Servers deployed on-prem, Edge, Multi-cloud

Inventory and tag management using Resource Graph thus increasing the visibility of the entire data estate

License management using Azure portal to review license position and compare with the procurement state

Asset Management

Receive Extended Security Updates (ESU) for reduced price through Arc-enabled SQL Servers.

Govern, Protect, configure your hybrid and multi-cloud servers with Azure Policy, Defender and Azure Automation, centrally, securely and at scale

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CMF | Azure Arc for Windows & SQL Server migration scope

In Scope

Arc-enabled servers

Customers can onboard (using CMF Automated scripts) their existing Windows Server 2012 and above (physical servers or virtual machines) as Azure Arc-enabled servers, from:

- On-premises (Hyper-V or VMWare environments)
- Other cloud environments (AWS, GCP)

Arc-enabled SQL Servers (two-step process)

- The first step will onboard (using CMF Automated scripts) the server where the SQL Server is running on (Windows and Linux supported versions are in scope)
- The second step will onboard (using CMF Automated scripts) the installed *SQL Server 2012 and above* instances as Azure Arc-enabled SQL Servers.

Extended Security Updates (ESUs) through Azure Arc

- *Windows Server 2012/R2*
- *SQL Server 2012*

  Strong partnership needed with nominators to determine the optimum number of needed ESU licenses.

Out of CMF Scope

- Enabling Azure services post onboarding (Defender for Servers, Sentinel, Azure Monitor, Azure Update Manager, etc.)
- Change request process, including internal communication
- Any changes in the source (any time) & target environments (after handover)
- Any Application/Services related configurations and testing (Pre and Post Migration)
- Performing and configuring Backups, Monitoring & Alerts (Pre & Post Migration)
- High availability setup, configuration
- Disaster Recovery setup, configuration
- Any target environment setup & configuration
- Any other migration path not listed in the Scope

Note:

- Enrollment to ESUs can be done at any moment after the EOS dates (Oct 10th 2023 for WS2012). When enrolled, the servers will receive ESUs and the customer will be billed a one-time upfront charge for the months they missed after the end of support date.
- CMF automated scripts are implemented either through GPO on SCCM or Ansible

Benefits

- Virtual resources provided at **no cost**
- **Speed** – Agile engagement model for skilled capacity
- **Support** – Knowledge transfer to enable customer to maximize value of Azure Environment
- **Cost Benefit** reserved capacity, burstable SKUs, reduced operational costs

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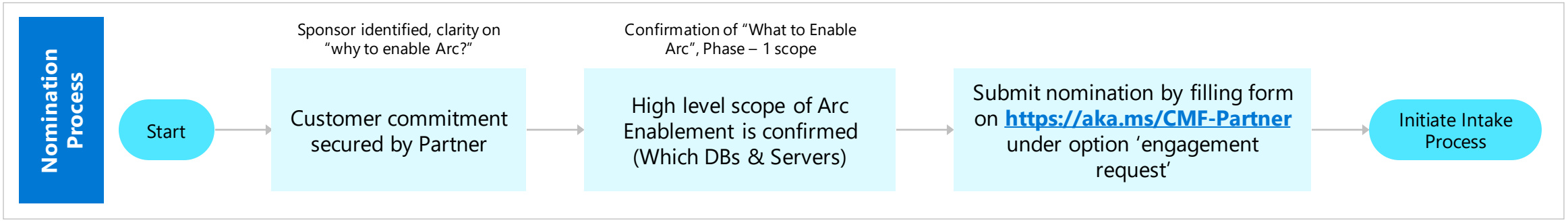
CMF | P+F nomination process



Nominate accounts by emailing the request to **https://aka.ms/CMF-Partner** under option 'engagement request' and provide the following information:

- Our SLA Commitment is to respond to any submission within 1 business day
- As soon as Intake process **validates scope and commitment** (usually 2 business days and depending on partner to provide responses), CMF team (Project Manager and Solution Architect) will be assigned within 1 business day after Intake Approval

Form Information:

Account Name
Account TPID (if applicable)
Scope of work : Arc Enablement
Date expected for Migration to Start
Your Contact information (Name and email)
Your PDM Email (If Applicable)

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CMF | CMF for partners

Rehost migration of Apps, Infra, and Data workloads delivered by Microsoft Customer Success resources at no cost

Server Migration: WS + Linux (including Arc enabled)	Azure VMWare Solution (AVS)	Azure Virtual Desktop (AVD)	Databases	App Migration	Analytics
• Source: On-prem, 3rd Party Cloud/DC; • Upgrade Win OS (up to 2 jumps) during replication if applicable (and customer confirms compatibility) • Automated scripts for Arc Enabled deployment (Windows) • Using 1st Party Tooling (Azure Migrate)	• AVS and HCX setup with Migrations of VMs • Deployment of AVS Environment using AVS Landing Zone Accelerator • On-Premises HCX configuration	• Modernize on-prem RDS to AVD • Migrate on-prem Citrix to AVD	NoSQL: Cassandra to MI for Apache Cassandra ; MongoDB to Cosmos DB for MongoDB **(vCore)** OSS DB: MySQL/PostgreSQL to Azure DB for MySQL/PostgreSQL ; Single Server to FlexServer SQL Server: SQL to IaaS on VM ; SQL to Managed Instance or Azure SQL DB (when no refactor needed) ; Automated scripts for Arc Enabled deployment	• .NET, Java Apps On-Prem to PaaS • Non .NET workloads (Containerized) workloads On-Prem to AKS/ACA • Apps/Self Hosted K8's running on Azure VM's to PaaS • WordPress migration to App Service	• SQL Server Reporting Services to Power BI • Azure Analysis Services to Power BI

Localized coverage:

All Time Zones:	English
ASIA:	Chinese, Japanese, Korean
EMEA:	Germany, French
LATAM:	Spanish, Portuguese

Partners + Factory

Partner owns overall cloud journey engagement; Factory execute delivery of rehost migration scope under Project SOW

Partners maintains eligibility for ECIF | AMM-PL funding for their services

Nominate your customers at: https://aka.ms/cmf-partner
More information: CSU Migration Factory Partner Desk MFPartnerDesk@microsoft.com

No Minimum or Partner Specialization Requirement

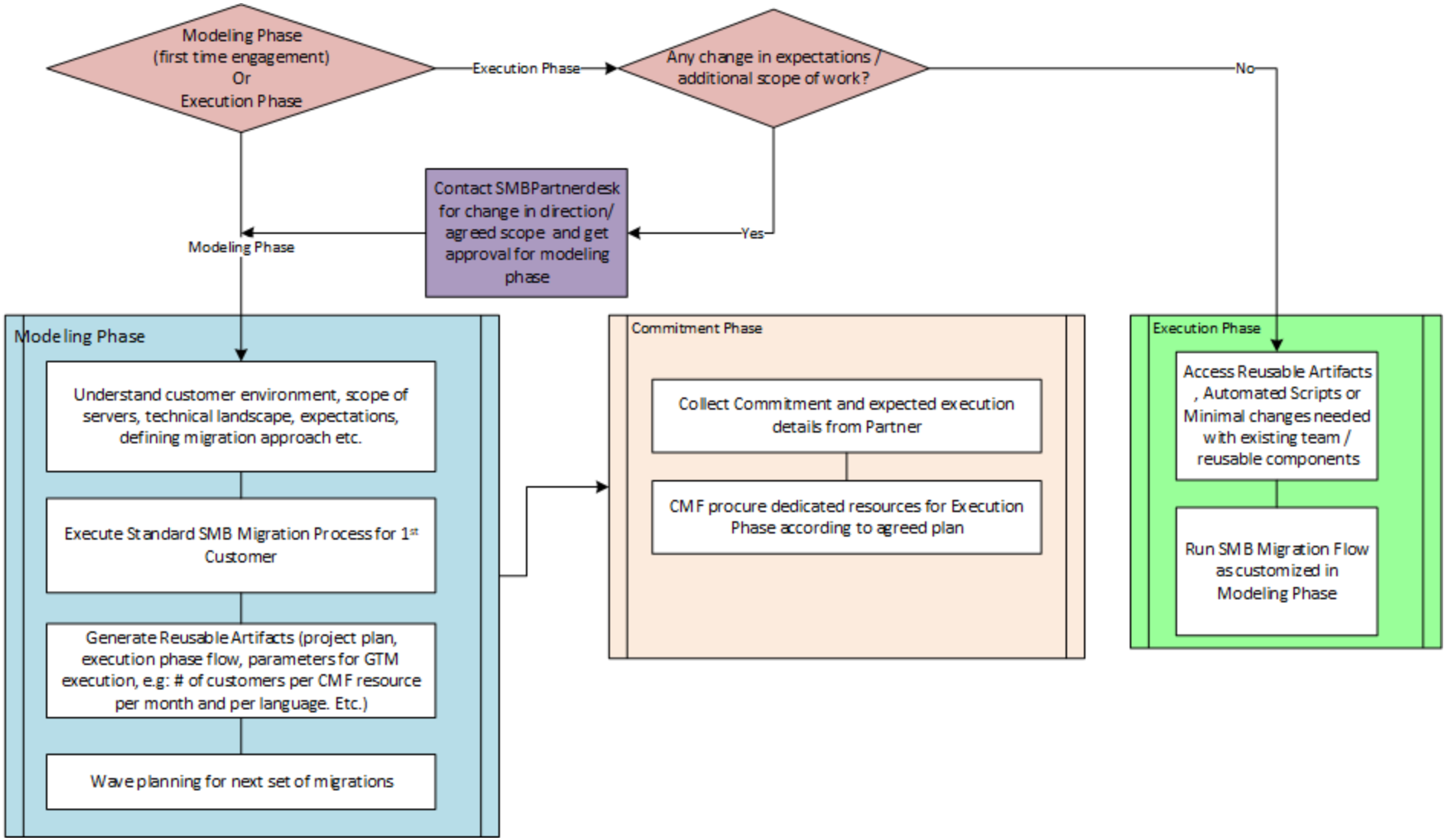
CMF SMB Scale Offer | Service Coverage (per customer view)

Average Customer Environment (usually less than 10 server total combination of Windows and Linux Servers)

Get your first workloads running in Azure in weeks

On-Premises			Azure	Additional services (not in scope of CMF)
Domain Controller	Additional Domain Controller setup on Azure VM		DC VM — Create new Domain Controller and replicate DC to this new server	Moving DC to Azure AD
VPN Server	Setup Azure VPN Gateway		VPN Gateway — CMF will configure a VPN	Customer and VAR connectivity (VPN Server and Express Route, etc.). CMF will provide support on how to configure the Azure VPN created for project
File Server	Azure Migrate — Replication and Cutoff migration	»	File Server VM — File Server will need to be configured after replication is completed	Moving File Server to Blob Storage
App Server	Azure Migrate — Replication and Cutoff migration	»	App VM — VM Replication and Cutoff migration	App modernization / Ap transformation
Database Server	Data Migration Solutions (ADS+DMS) (to minimize downtime) landing in IaaS AS-IS	»	SQL VM, MySQL PostgreSQL single — Data Migration Solutions (ADS+DMS) (to minimize downtime) landing in IaaS AS-IS	Other DB Server will need to be configured after replication is completed (when VM Replication is chosen)
	Azure Migrate — Replication and Cutoff migration	»	Other DBs on VM	
Remote Desktop Server	Lift & Shift Migration	»	Native AVD	Citrix and Horizon not in scope

CMF SMB Scale Offer | Process Flow



CMF | P+F offering choice

	Standard SI P+F offer	SMB Scale offer
What	**Partners leverage current traditional CMF offer with all the available scope**	**Partners leverage SMB Scale offer to execute high volumes migrations aimed at Longtail (lower SMB) market**
Target Segment	• Aimed at all segments (Enterprise + SMC Corporate + SMB)	• Aimed at Longtail SMB customers
Scope	• All current CMF traditional offer is available • Can be used in conjunction with Microsoft funding (ECIF or AMM-PL) as long as it does not cover the exact tasks performed by CMF team and are complimentary services (can include project management for CMF tasks) • No minimum requirements and no maximum thresholds. • It does NOT include any Network or Identity services (only Application/DB/Servers workload)	• Only Lift & Shift of current environment • Does include Domain Controller and Network workloads (lift + shift only) • Can be used with DCO contracts but another funding (like AMM-PL) is likely not an option as the model is straightforward end-2-end simple lift & shift migration.
Delivery Options	• Screen Shared Guidance -> no requirements • Hands-On-Keyboard -> with either the Direct (Unified Support or CMF agreement with end customer) or Indirect (must be on CSP tenant and partner must have PSfP) options	• Screen Shared Guidance -> no requirements • Hands-On-Keyboard -> Indirect (must be on CSP tenant and partner must have PSfP)
Coverage	• Shared coverage with CMF team globally distributed and current language support. • Lead time can vary depending on the current allocation per region/language. Can be from 0 to 6 weeks.	• Dedicated team per partner accordingly with Partner commitment. Multiple languages available per commitment. • Minimum Lead time for Execution Phase: 4 to 6 weeks. No lead time for Modeling Phase (only in English support)
Engagement options	• Nomination at https://aka.ms/cmf-partner for request for RFPs (validating scope only) or Engagement Request (actual project run). • Each nomination is assigned to a team that would validate scope and then work at the case accordingly with the technical scenario. • Multiple connections and sessions may be required.	• Nomination at https://aka.ms/cmf-smb for request for Modeling phase (validating scope and creating the data input for execution plan) or Execution Request (actual project run). • Modeling phase is run by central team and after project definition and commitment is submitted, the dedicated Execution team is created based on the plan (multiple language supported). • Once Execution phase, minimal connections are needed, aiming for maximum speed and scale
Winning Formula & Best Practices	• Partners can use CMF to jumpstart Customer migrations (having CMF executing a small scope at no cost, and hence speeding up the pre-sales process with customers) • Partners can use CMF to create more compelling responses to RFP and increasing the chances of winning new customers/projects • Specialized partners can dedicate their teams on high-end projects and leverage CMF to help deliver the migration and potentializing new customers (for example, an AI specialized partner can focus on the AI workload but need the data in Azure to start their project and we can deliver the data at no cost)	• Indirect or Direct providers and migrate thousands of customers at scale with minimal to no cost using CMF Scale offer • By leveraging the dedicated engine, partners can craft and create an end-2-end solution (including automation and dedicated scripts, for example, post migration services) with no shared delivery and in their local language support accordingly with the volume commitment