Azure Server Migration

What is Azure Server Migration?

Server Migration to Azure refers to the process of moving on-premises servers, virtual machines, or applications to Microsoft Azure, which is a cloud computing platform. This migration can include various types of servers and workloads, such as physical servers, virtual machines from platforms like Xen and Hyper V, or even VMs from other cloud providers like AWS or Google Cloud Platform.

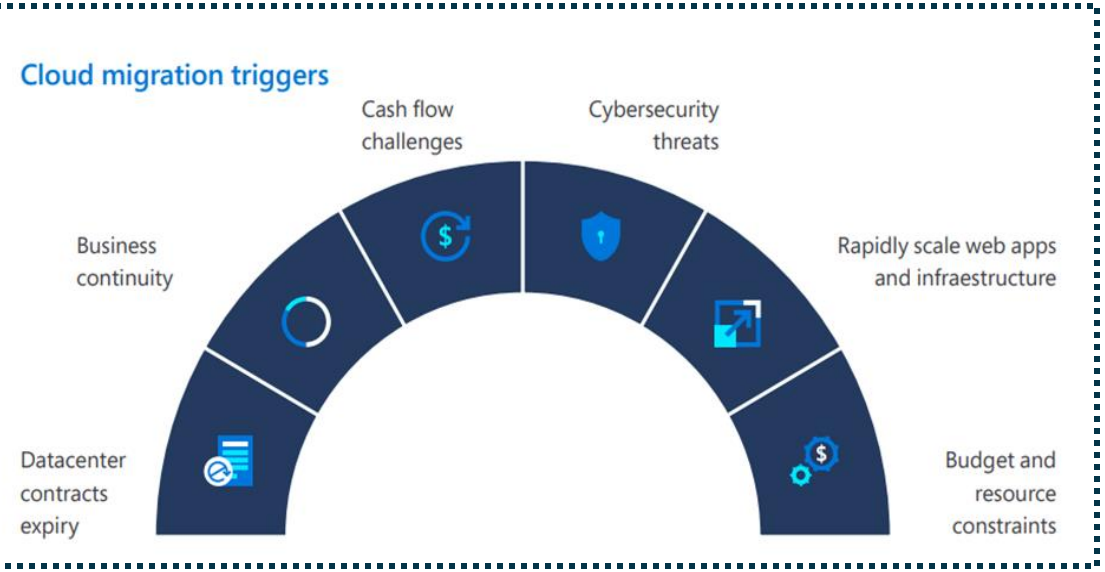
Here are some key aspects of Server Migration to Azure:

Assessment: Using tools like Azure Migrate to discover and evaluate on-premises workloads for cloud readiness.
Migration Planning: Defining cloud migration goals, understanding the digital estate, and finalizing a migration plan tailored to the organization's needs.
Preparation: Preparing Azure for migration, which includes setting up the Azure Migrate project and ensuring the necessary permissions and requirements are met.
Replication: Setting up a replication appliance and enabling replication of the on-premises servers to Azure.
Testing: Running test migrations to ensure everything works as expected before the full migration.
Execution: Performing the full migration to Azure, which involves moving data, applications, and services to Azure's infrastructure.

Why is Server Migration Required

Challenges faced by existing on-Prem customers?

- Scalability Bottlenecks , Operational Overhead
- Agility Constraints , Security Vulnerabilities
- Disaster Recovery Limitations, Innovation Hurdles
- Performance Challenges , Versioning Concerns
- Integration Issues , Limited Analytics Capabilities
- Compliance Complexities, Vendor Lock-In
- Skill Shortages



How do customers benefit from Migrating Servers to Azure

- Increased Scalability and Flexibility
- Multi-fold operational Efficiency
- Embracing power of cloud Native technologies
- Improved Security Posture
- Ensuring 99.99% of Business Continuity
- Effective integration techniques
- Overcoming Performance Bottlenecks
- Long-Term Cost Predictability & Cost optimization
- Faster and wider Global reach
- Risk Mitigation
- Managing Software Updates and Upgrades
- Navigating Regulatory Requirements
- Avoid Dependency on Specific Technologies
- Democratization of Azure technologies
- AI and ML Integration

These capabilities enhance the overall efficiency and intelligence of database management systems in the cloud.

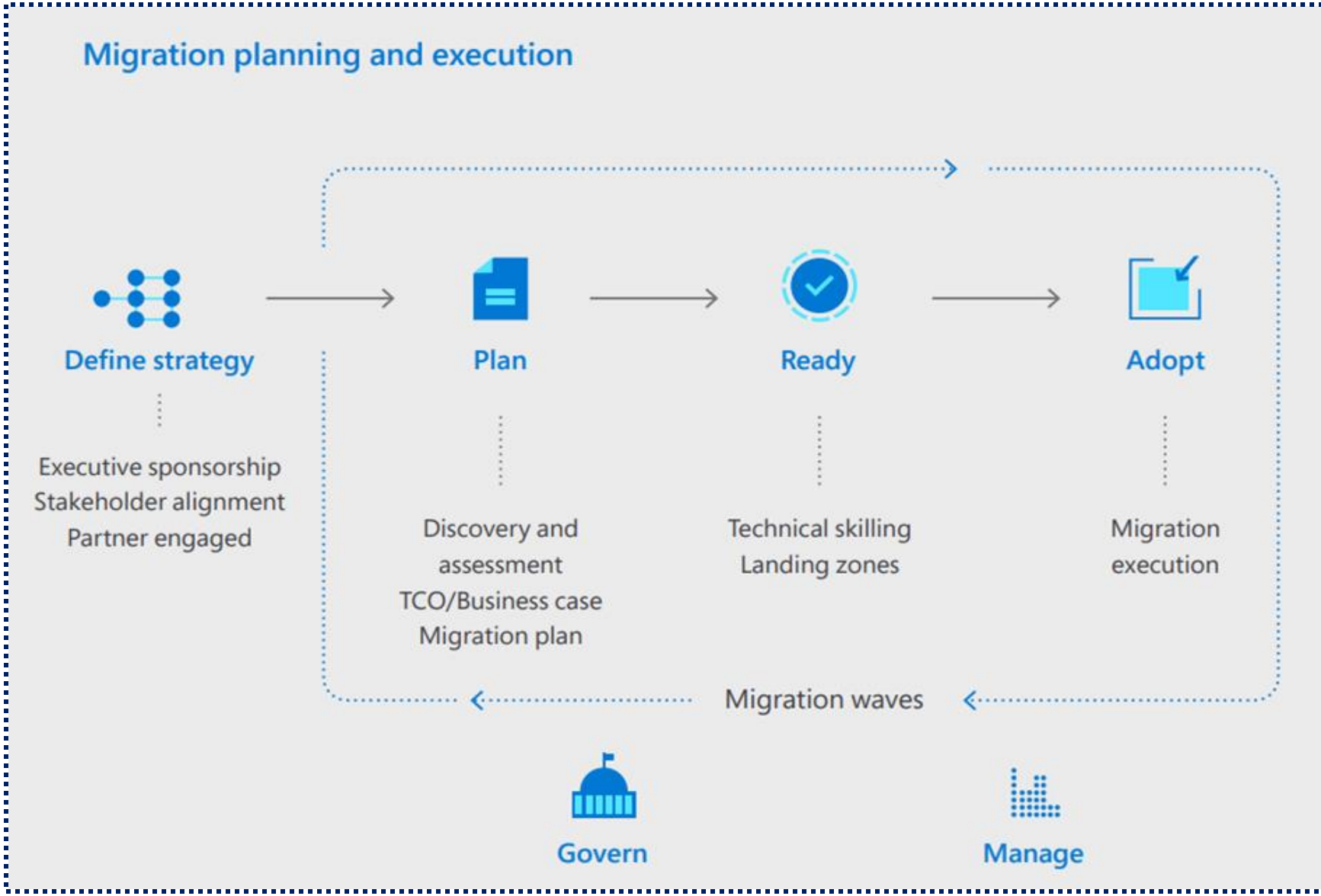
Azure Migration Focus Areas

Cloud Adoption Framework (CAF)

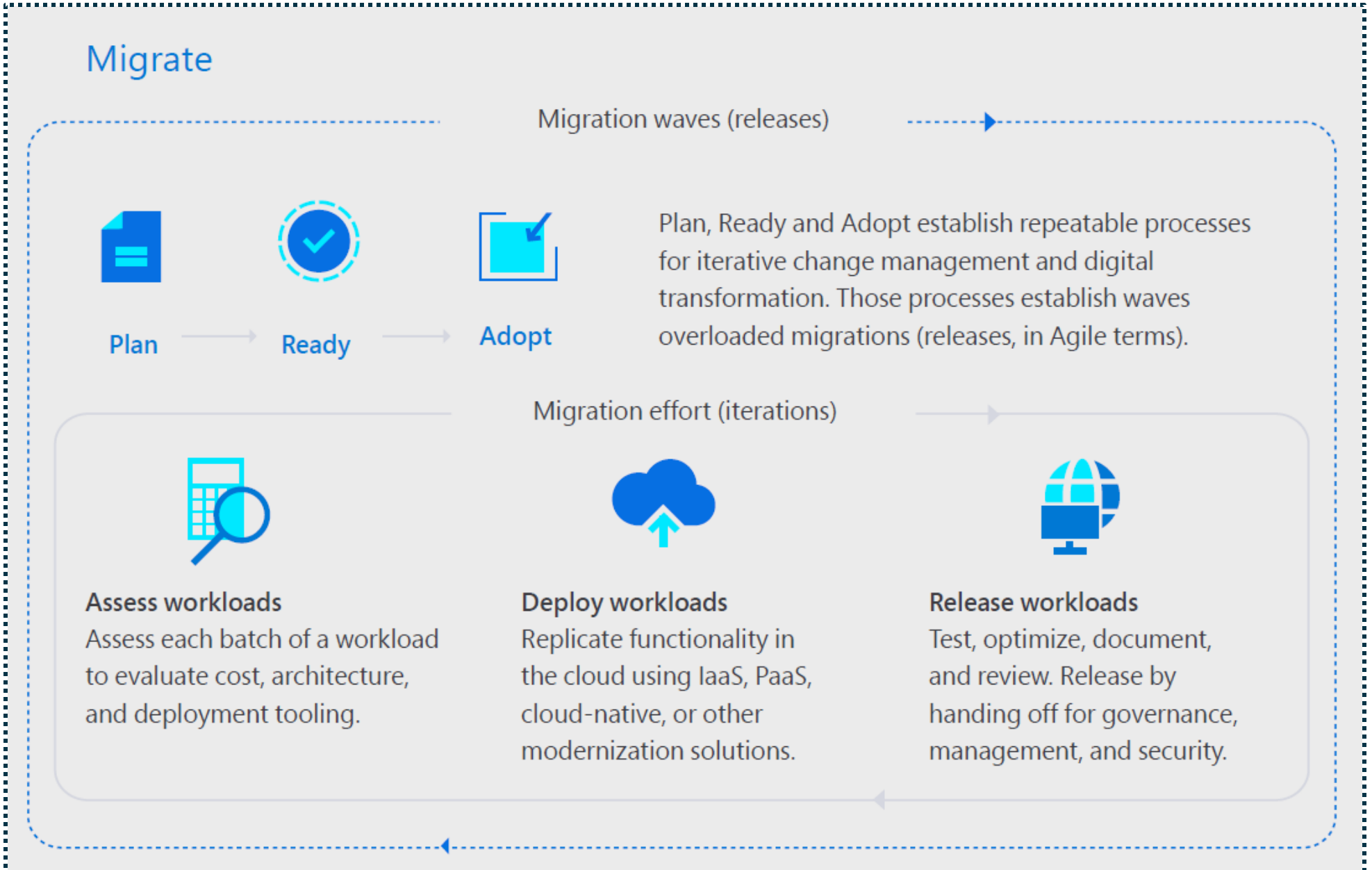
consolidates best practices from Microsoft and others, offering tools and guidance to shape technology and business strategies, driving desired outcomes in adoption efforts.

Each methodology contributes to the cloud adoption lifecycle, supported by the Cloud Adoption Framework (CAF) throughout each phase of the journey.

The framework utilizes methodologies to address common blockers, as depicted in the following diagram.



Azure Migration Waves and Iterations



Server Migration from On-prem to Azure
Saxon's Approach & Timelines

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
2 to 5 days	1 to 2 weeks	1 to 2 weeks	2 to 4 weeks	1 to 2 weeks
Define Migration Strategy	**Migration Planning**	**Getting Ready for Migration / Pre-Migration**	**Cloud Adoption phase/ Actual Migration**	**Post Migration (Govern, Secure, Manage)**

Disclaimer : These Timelines vary depending on the Architecture portfolio of the customer's environment , Viz. # of Servers, Workloads, Data volume, Dependencies etc.

Azure Migration (Cloud Adoption Journey – Phase wise approach)

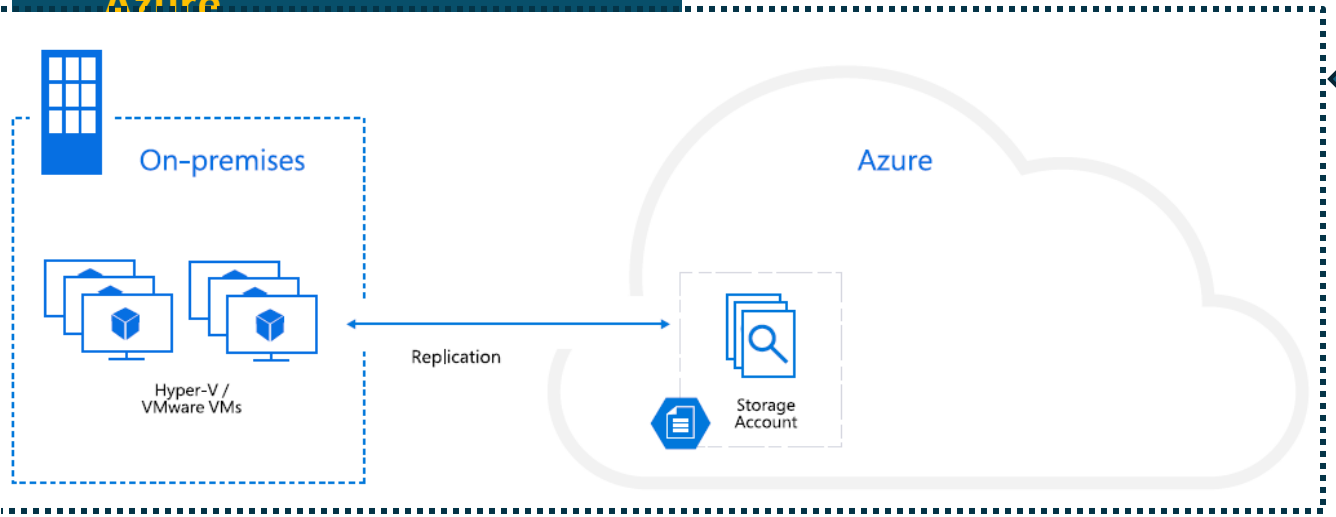
Migration stages	Sub phases	Tasks Summary
Define Migration Strategy	Discuss customer's (cx) Cloud Adoption Goals & Objectives	As part of Azure migration strategy, we will align the customer's cloud adoption strategy with their overall business goals, evaluating their existing IT landscape to identify suitable workloads for migration. We will clearly define desired outcomes related to cost savings, efficiency, scalability, and security improvements, while understanding the impact on business processes and outcomes. Assessing the financial impact, we will document cost-saving opportunities like reduced maintenance costs and Azure's pay-as-you-go pricing. We will evaluate technical aspects, including application compatibility with Azure, security requirements, performance expectations, and data storage needs, planning for any necessary refactoring or redesign. Articulating the reasons for migration, whether for scalability, agility, or cost savings, we will review the current on-premises infrastructure, including VMs and applications, identifying dependencies and potential challenges.
	Document Business Outcomes	
	Understand Financial Considerations	
	Understand Technical Considerations	
	Define Your Motivations for Cloud Adoption	
	Assess Existing Infrastructure and Workloads	
Migration Planning	Strategic Migration Assessment and Readiness	As part of our Azure migration planning, we will utilize Azure native tools such as the Strategic Migration Assessment and Readiness Tool (SMART) to prepare for the customer's migration, addressing business planning, training, security, and governance. We will identify the customer's cloud adoption path, document decisions, standardize processes, develop a comprehensive naming convention, and prepare for hosting workloads migrated from on-premises environments to Azure.
	Strategy and Plan Documentation	
	Azure Naming and Tagging Conventions	
	Landing Zone Considerations	
Getting Ready for Migration / Pre-Migration	Create & Deploy Azure Platform landing zone to host the workloads	In the Azure pre-migration phase, we will define your organization's requirements for security, compliance, and scalability, ensuring the landing zone aligns with these needs. We will test policies, security controls, and connectivity, and establish a platform landing zone for centralized services. We will set up the Virtual Network, establish VNet peering, configure a S2S VPN, and enhance security at various levels. We will create an application landing zone for specific workloads, develop and document naming and tagging standards, deploy an initial governance foundation, and prepare to host your migrated workloads.
	Create & Deploy workload landing zone components	
	Azure Naming and Tagging Conventions	
	Cloud Adoption Framework Foundation Blueprint	
	Cloud Adoption Framework Migration Landing Zone Blueprint	

Azure Migration (Cloud Adoption Journey – Phase wise approach)

Migration stages	Sub phases	Tasks Summary
Clod Adoption phase/ Actual Migration	Prepare Your Landing Zone for Migration	During the Azure migration phase, we will ensure the landing zone supports migration activities, plan the appropriate Azure regions, and outline necessary actions and roles for a successful migration. We will select servers, databases, and web apps for discovery, install and register the Hyper-V Replication provider, and set up a storage account for logs. We will configure Azure Monitor, Log Analytics, replicate Hyper-V VMs, provision resources, and create necessary components like a Bastion host and VM scale sets. We will track and monitor the process, run test migrations, migrate the VMs, cut over traffic, secure data with Azure Backup, and ensure workload availability with Azure Site Recovery.
	Select Azure Regions for Migration	
	Align Roles and Responsibilities:	
	Prepare Tools and an Initial Migration Backlog	
Post Migration (Govern, Secure, Manage)	Assess Workloads, Monitor & improve the performance, cost, operational efficiency, Security, Reliability (5 pillars of Well Architected Framework)	As part of the Azure Post Migration phase, we engage in a series of crucial activities to ensure a smooth transition for our customers. we assess workloads for cost, modernization, and tooling, ensuring security by managing traffic and deploying encryption. We monitor resource usage with Microsoft Cost Management and replicate workload functionality in the cloud, followed by rigorous testing and optimization for ongoing operation.
	Release Workloads	

Azure Migrate Phases

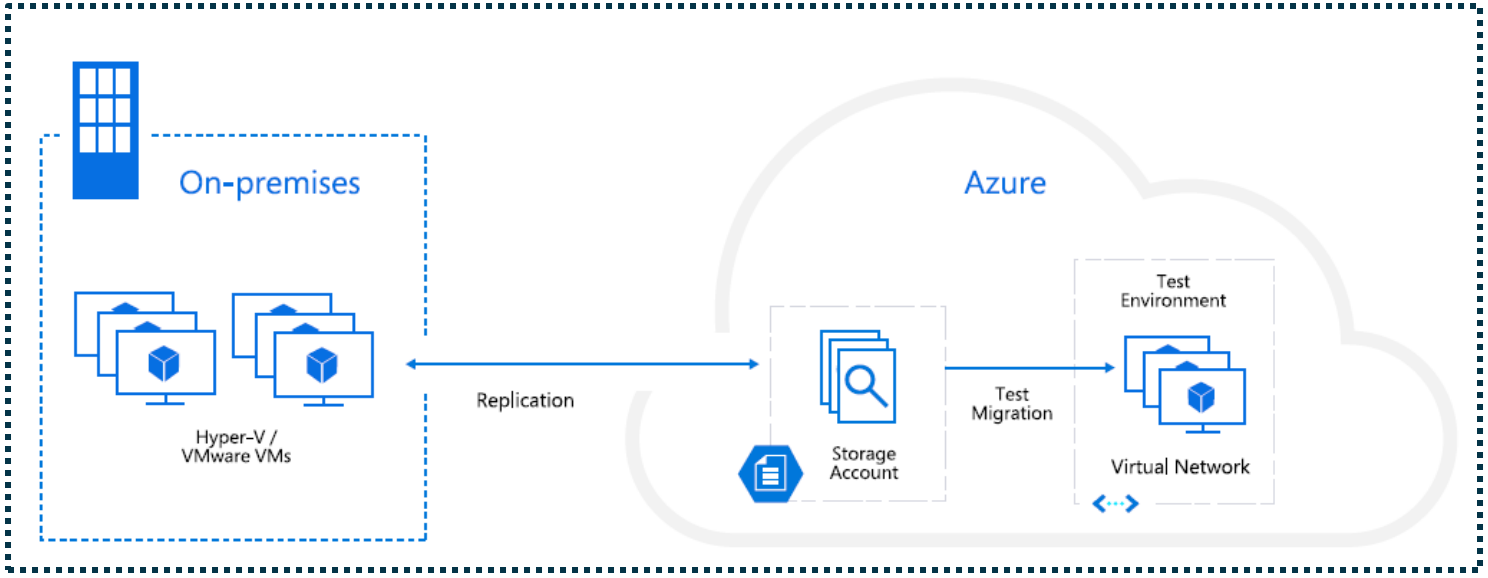
1. Replicate workloads to Azure



In the Migrate phase, we replicate on-premises VMs to Azure using asynchronous or synchronous methods to ensure no downtime. We ensure systems stay synchronized with their on-premises counterparts, syncing all data and updates.

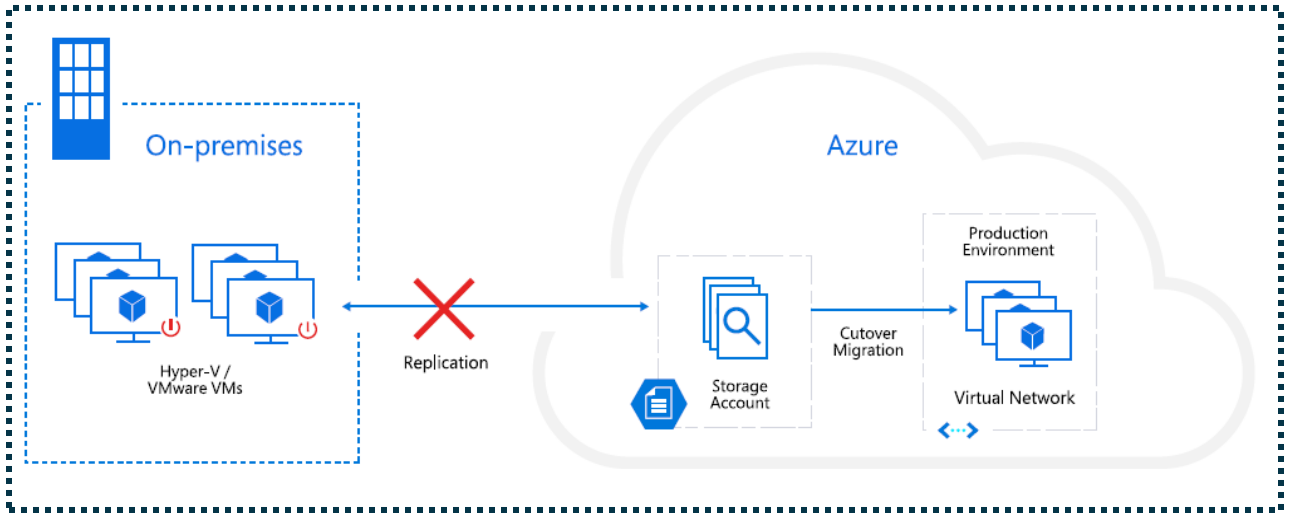
2. Test migration before final cutover

In the Adopt phase, we test the migration by creating an Azure VM with replicated data. This ensures system health and migration success without affecting on-premises operations. We test VMs in isolated Azure environments and perform a test migration for each machine before the full migration.



Azure Migrate Phases

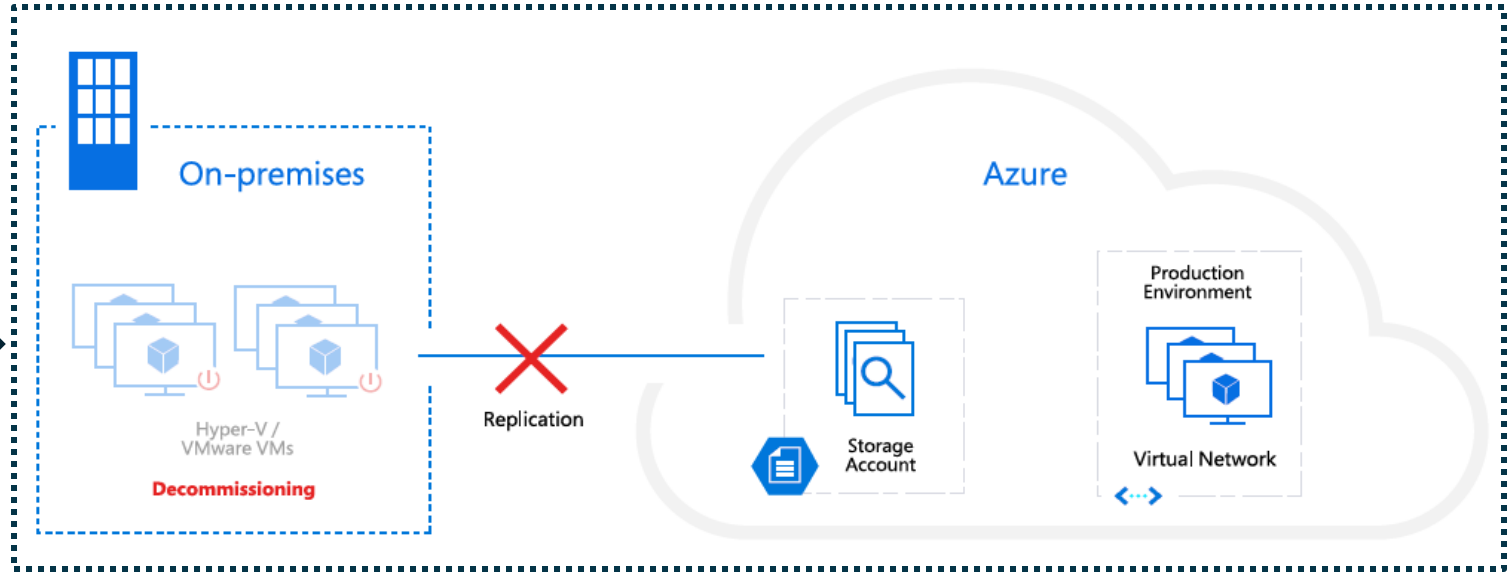
3. Cutover to complete the migration



After testing, perform the final cutover with Azure Migrate, which can turn off the on-premises application. You might need to update DNS records unless this is automated.

4. Decommissioning on-premises infrastructure

Once a workload is in production, previous assets can be decommissioned to cut costs. This involves shutting down and disposing of the assets, essential for completing migration and saving resources.



Saxon's Deliverables of Server Migration

1. **Migration Plan:** A comprehensive document outlining the migration strategy, timeline, and resources required.
2. **Inventory Assessment:** A detailed list of all on-premises servers, applications, and dependencies.
3. **Migration Tools Setup:** Installation and configuration of Azure Migrate and other necessary migration tools.
4. **Replication Configuration:** Setup of replication processes for on-premises VMs to Azure.
5. **Testing Plan:** A detailed plan for testing the migration, including test cases and success criteria.
6. **Test Migration Results:** Reports and feedback from test migrations, including any issues found and their resolutions.
7. **Cutover Plan:** A detailed schedule and procedure for the final cutover to Azure.
8. **DNS and Network Configuration:** Updates to DNS records and network settings to support the new Azure environment.
9. **Decommissioning Plan:** A plan for decommissioning on-premises assets, including disposal or repurposing.
10. **Backup and Recovery Plan:** Procedures for backing up data and recovering from potential migration failures.
11. **Performance Benchmarks:** Baseline performance metrics pre- and post-migration.
12. **Documentation:** Comprehensive documentation of the entire migration process, including configurations, troubleshooting steps, and best practices.
13. **Post-Migration Review:** A review of the migration process, including lessons learned and recommendations for future migrations.

About Us

C3IT Software Solutions is an Information Technology services and consulting company established in 2002. Working with Fortune 500, mid-tier as well as SMEs, C3IT enables organizations to bring about **business transformation through digital platforms**. Our expertise has enabled many organizations across industries achieve their key business objectives of driving organizational efficiencies, reducing costs, and improving Return on Investment from technology investments using insights from digital platforms and intelligent process automation. Our customer central includes enterprises in the Retail, Manufacturing, BFSI, Pharma, Renewable Energy and Hospitality domains, spread across US, Europe, Middle East & India.

C3IT is a **Microsoft Advanced Specialization Partner** for Modern Work which includes all Microsoft O365 services specifically Microsoft SharePoint, Power Platform, Microsoft Teams, Viva, and Power BI. We are a Microsoft Designated Solutions Partner for **Digital Apps, Data & Artificial Intelligence and Azure Infrastructure and DevOps**. Our technical consultants are Microsoft certified professionals, and we sponsor and renew technical certifications for all our people and make sure they are constantly learning and have expertise in state-of-the-art technologies. This ensures our customers get the best expertise on Microsoft platforms.

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