

# AZURE MIGRATION STRATEGY

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## 5 Key Steps to Your Success

“Coretek believes that Cloud technologies will improve your business operations, financial results, and reduce technology risks. We want to partner with you to ensure your business success.”

Clint Adkins, Director of Cloud Solutions.



# Azure Migration Strategy

The public cloud has become a mainstream IT infrastructure strategy for businesses across the globe. Cloud fundamentally changes how companies procure, leverage, and secure technology resources. Traditionally, enterprises purchase and support all aspects of technology, from infrastructure to software. By moving to the cloud, businesses can provision and consume resources only when they are needed.

There are many types of migrations to the cloud. You can focus on modernizing infrastructure, modernizing applications, or simplify data storage and visualization. This article will be focusing on modernizing infrastructure by migrating to Azure from an on-premises data center, a co-location data center, or Amazon Web Services (AWS).

Coretek is an expert in Azure migration strategies. Below is our proven approach.

## Coretek's Cloud Migration Methodology



## Step 1: Assess Your Environment

You can perform assessments manually, but I recommend leverage a tool such as Cloudamize, Movere, StratoZone, Data Migration Assistance (DMA) for SQL, and/or Azure Migrate to assess your current infrastructure. A tool will provide you a full picture of your data estate. These tools will not only give you insights into your existing server performance, but it will also offer you an estimated “right-sized” total cost of ownership (TCO) of your infrastructure running in Azure. These tools will list any known risks of migrating applications due to dependencies, compatibility, and performance.

## Step 2: Plan and Design of Your Environment

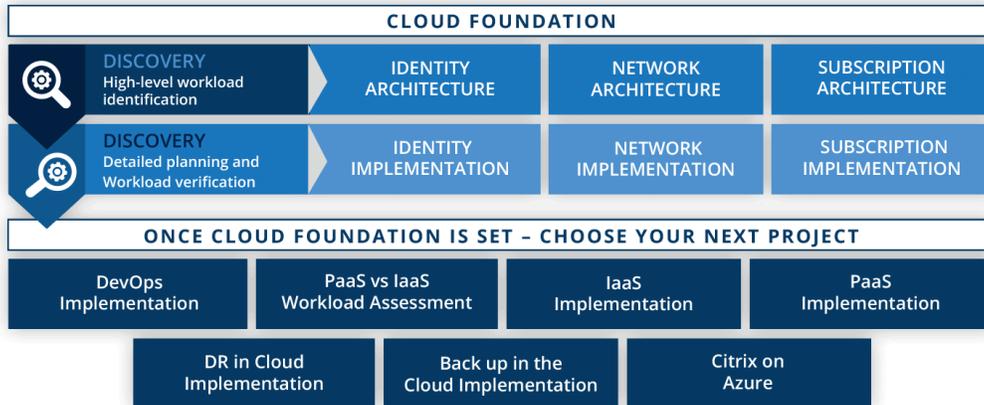
Once you have completed your assessment, it is recommended to define your Migration Strategy. There are four primary strategies available.

- **Rehost** - Often referred to as “lift and shift” migration, this no-code option lets you migrate your existing applications to Azure quickly. Each application is migrated as-is, which provides the benefits of the cloud without the risks or costs of making code changes.
- **Refactor** - Often referred to as repackaging; this cloud migration strategy involves some change to the application design but no wholesale changes to the application code. Your application can take advantage of infrastructure as a service (IaaS) and platform as a service (PaaS) products, such as Azure App Service, Azure SQL Database Managed Instance, and containers.
- **Rearchitect** - Modify or extend your application's codebase to scale and optimize it for the cloud. Modernize your app into a resilient, highly scalable, independently deployable architecture and use Azure to accelerate the process, scale applications with confidence, and manage your apps with ease.
- **Rebuild** - Rebuild an application from scratch using cloud-native technologies. Azure platform as a service (PaaS) provides a complete development and deployment environment in the cloud, without the expense and complexity of software licenses, the need for underlying application infrastructure, or middleware and other resources. With this cloud migration strategy, you manage the applications and services you develop, and Azure manages everything else.

If you are working with a single application suite, leveraging the Refactor or Rearchitect migration strategy is typically recommended. For purposes of this article, I usually recommend a Rehost strategy when migrating data centers to Azure.

|              | Rehost  | Refactor  | Rearchitect   | Rebuild   |
|--------------|---|---|---|---|
| Description  | Redeploy as-is to cloud   | Minimally alter to take better advantage of cloud   | Materially alter/decompose application to services  | New code written with cloud native approach   |
| Drivers      | <ul style="list-style-type: none"> <li>• Reduce Capex</li> <li>• Free up datacenter space</li> <li>• Quick cloud ROI</li> </ul> | <ul style="list-style-type: none"> <li>• Faster, shorter, updates</li> <li>• Code portability</li> <li>• Greater cloud efficiency (resources, speed, cost)</li> </ul> | <ul style="list-style-type: none"> <li>• App scale and agility</li> <li>• Easier adoption of new cloud capabilities</li> <li>• Mix technology stacks</li> </ul> | <ul style="list-style-type: none"> <li>• Accelerate innovation</li> <li>• Build apps faster</li> <li>• Reduce operational cost</li> </ul> |
| Technologies | IaaS  | Containers<br>PaaS  |   | PaaS<br>Serverless<br>Microservices   |

Once your migration strategy is defined, designing your environment for the future is critical. It is essential to properly plan for identity management, network architecture, subscription management, security plan, financial management plan, and tagging approach. We call this the Cloud Foundations and Design strategy. More detail can be found at the [Microsoft Cloud Adoption Framework](#) website.



## Step 3: Migration to Azure

Coretek typically migrates server infrastructure leveraging the Microsoft Azure Site Recovery (ASR) tool and databases to Azure SQL Managed instances using the Azure Database Migration Service. There are other tools to leverage, such as Azure Migrate, that are native tools from Microsoft.

We believe scheduling and coordination are essential to the success of any migration. Our recommended migration methodology will leverage Migration Groups. Each Migration Group is a highly managed five or six-week migration process. Below is a sample five-week migration process.



## Step 4: Manage Your Environment

On average, traditional IT shops tend to spend roughly 75% of their budget on maintenance and support activities, and only about 25% (or less) on strategic initiatives. Cloud computing can invert that equation. If planned and executed correctly, cloud computing can:

- Result in faster deployment of IT services at lower costs.
- Spread high upfront capital outlays associated with traditional IT investments across a pay only for what you use, consumption-based operating expense model.
- Allow organizations to focus on core business functions without the distraction of having to manage an extensive and costly IT infrastructure.
- Transfer the burden of system lifecycle management (which includes system upgrades and replacements of used or obsolete computing resources) to a cloud service provider.

Although many organizations are experiencing the benefits of transitioning IT workloads to the cloud, few can confidently say they have fully maximized or leveraged all of the cloud's capabilities, cost savings, or management efficiencies. For the early adopters and risk-takers in IT leadership, the transition to cloud services can be fraught with unfortunate surprises and missed expectations. Factors that impede progress include a lack of understanding of current cloud service provider capabilities and offerings as well as longstanding fears surrounding interoperability, security, data ownership, "hidden" costs, software licensing, provisioning management, and service level agreements – which all tend to foster inaction. Consequently, it's critical for an organization to either put together a comprehensive support plan or engage the help of a trusted, knowledgeable, and experienced partner like Coretek Services for long-term support through Managed Services.

## Step 5: Optimize Your Environment

Once the migration is complete and you have solidified your long-term support plan for your Azure environment, it is then time to optimize your environment. Optimization is a continuous process as technologies continue to change.

I believe in starting with performance and cost optimizations. They are the lowest hanging fruit and easy to implement. Azure enables you to have deep insights into your usage of data and infrastructure. You can increase or decrease resource performance based on actual results in Azure. Coretek makes these recommendations monthly to its Managed Services customers.

Next, I recommend focusing on security optimization. When moving to the cloud, you can reset and elevate your security posture and not bring a lot of the legacy risks along with you. One tool I would like to point out is Azure Secure Score found in Security Center. With so many services offering security benefits, it's often hard to know what steps to take first to secure and harden your workload.

The Azure Secure Score reviews your security recommendations and prioritizes them for you, so you know which suggestions to perform first. This helps you find the most severe security vulnerabilities so you can prioritize investigation. Secure Score is a tool that enable you to assess your workload security posture.

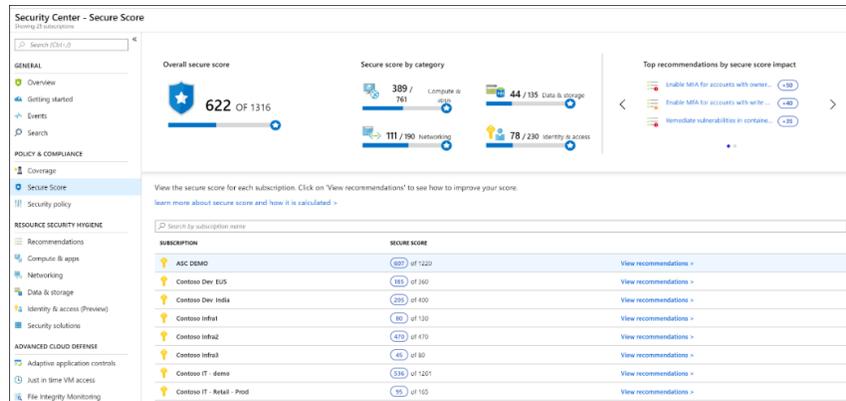


Figure 1 - Blurred for Security Purpose

After your security is optimized, focus on application and data modernization. Application and data modernization transforms your business into taking the most advantage of cloud services. This enables your applications to leverage the scalability, reliability, and performance of Azure, including allowing you to reach more customers and cut costs.

One of the most effective ways to realize these benefits is to utilize PaaS (Platform as a Service) services. PaaS is a complete development and deployment environment in the cloud, with resources that enable the delivery of everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications. Like IaaS, PaaS includes infrastructure (servers, storage, and networking) but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete application lifecycle. Each PaaS service has its own implementation strategy and can be found on [Microsoft Azure's Architecture Website](#). If you need any assistance, please don't hesitate to reach out to Coretek.

## About Coretek

Coretek Services is a privately-held cloud services company headquartered outside of Detroit, in Farmington Hills, Michigan. Guided by being the number one cloud service provider of Microsoft Azure in the country, Coretek offers complete managed services and transformative and strategic consulting cloud-first methodologies. Holding some of the most elite level partnerships including Microsoft, Citrix, iGel Software, and Lakeside, Coretek continues to drive solution strategies for Data Center Migration, Application Modernization, and Desktop delivery. Coretek Services is a Microsoft Azure Expert MSP and Cloud Solution Provider and can assist you through your Cloud Journey.

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