



THE NEED OF CLOUD MIGRATION

WHITEPAPER

DISCOVER HOW BUSINESSES ARE
DRIVING VALUE FROM THEIR
CLOUD-FIRST APPROACH.



INTRODUCTION

Today, organizations take big footsteps in leading the market with new technological trends. Cloud computing is one of the in-demand mainstream business technology that drives organizations to stay competitive. There are a host of reasons to adopt cloud technologies, such as the flexibility and efficiency that cloud technologies offer instantly to meet high bandwidth demands without the upfront costs of traditional IT practices.

With cloud-based services, organizations' IT system always stays close to them. ZiniosEdge provides advanced as well as secure cloud solutions to scale businesses further with years of expertise to improve production, process and management capabilities of companies by establishing the business environments on secure cloud platforms. In this whitepaper, let's explore the need for cloud migration and how you can achieve it successfully.

CLOUD SERVICES
INDUSTRY MARKED A
GROWTH OF OVER 380
PERCENT IN 10 SHORT
YEARS



WHY DO BUSINESSES NEED CLOUD MIGRATION?

Cloud computing is not an option for businesses today but an essential technology to stay ahead in the market and resilient to any market conditions. Small businesses with limited budgets realize the benefits of cloud computing and scale up to their needs. Shifting to cloud-based services not only improves business performance and reduces costs. It frees up space for core operations and improves overall efficiency. Cloud technologies today offering various services to scale businesses to the next level, such as Self-service access that provides :

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Cloud-based services enable enterprises to overcome the challenges encountered by traditional IT practices. It instantly impacts IT, teams':

- To reinvest in core strategic projects, reduce costs and manage them more efficiently..
- To improve security and reliability to facilitate application development.
- Create a digital transformation strategy that leverages data.



- Anyone on the cloud network can immediately retrieve and store data on the go.
- Enhances collaboration between employees, wherever they are.
- Improves document management because all the saved files are available in the exact location.
- Assures protection for your valuable data and IT infrastructure.
- Organizational mindset to data-driven thinking across organizations
- Opportunity to transform data as a strategic asset for businesses and maximize the value of business data.
- Lines of business with actionable data insights
- Meaningful interactions with their customers and stakeholders

CLOUD ENABLED THE WORLD TO BE DATA DRIVEN

BENEFITS OF BUSINESSES ADOPTING CLOUD MIGRATION

Flexibility

Companies investing in cloud-based services offer a high degree of flexibility. Remote cloud servers provide virtually unlimited bandwidth and storage. Businesses must scale immediately to support growth. Purchase and install on-premises equipment to enable employees to access applications and data on external servers remotely anytime, anywhere, as long as connected to the Internet.

Business Cohesion

Companies ensure reliable backup and disaster recovery solutions without configuring them with physical devices. Data stored in the cloud is mirrored back to the server and backed up immediately. Quickly re-access data after an outage reduces site downtime and increases productivity

Profitability

A significant advantage of cloud computing is the IT operating cost reduction. Remote servers eliminate the cost of software updates, data management, storage application, and internal storage device requirements. Usually, there is a down payment, and the company has to borrow services to use what it needs to ensure a return on its investment.

Collaboration

The cloud environment dramatically improves collaboration between teams and communities. That can remove the communication restrictions of traditional IT models and enables employees to work faster.



Scalability

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Auto Updation

Many cloud service providers provide regular system updates. That continuously meets IT requirements, providing 24-hour cloud server maintenance, including security updates that companies cannot offer.

PUBLIC CLOUD
MIGRATIONS CAN
REDUCE CARBON
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[HTTPS://WWW.ACCTURE.COM/NL-EN/BLOGS/INSIGHTS/CLOUD-TRENDS](https://www.accenture.com/nl-en/blogs/insights/cloud-trends)

PREREQUISITES FOR MIGRATING TO CLOUD

- Configure migration architect role
- Choose cloud integration level.
- Choose a single cloud or migrate to multiple clouds
- Configure a single KPI cloud
- Set a performance benchmark
- Prioritize component migration
- Complete refactoring required
- Create a data migration plan
- Go to production deployment
- Allocation of application resources

INTERNET OF
THINGS(IOT),
CONTAINER-AS-A-
SERVICE AND
ARTIFICIAL
INTELLIGENCE ARE
THE FASTEST-
GROWING CLOUD
SERVICES

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MIGRATION STAGES

The step-by-step process of cloud migration includes:

1. Planning
2. Choosing the right cloud environment
3. Migrating data and applications
4. Evaluating the success of your cloud migration

Stage 1: Assess

Investigate and evaluate on-premises resources such as applications and workloads to plan your migration to Azure.

Stage 2: Migrate

Investigate and evaluate on-premises resources such as applications and workloads to plan your migration to Azure.

Stage 3: Optimize

Investigate and evaluate on-premises resources such as applications and workloads to plan your migration to Azure.

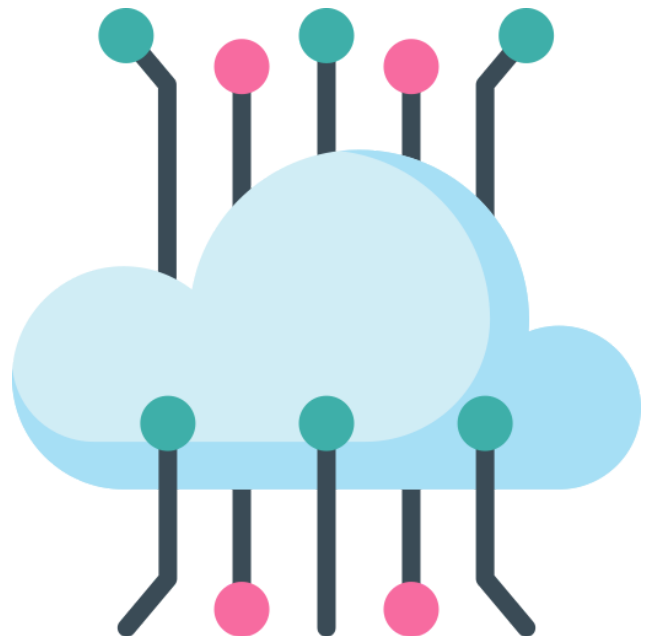
Stage 4: Secure and Manage

Protect your cloud environment & improve your management.

92 % OF
ENTERPRISES
HAVE A MULTI-
CLOUD STRATEGY;
82% HAVE A HYBRID
CLOUD STRATEGY

SERVICES PROVIDED WITH SECURED CLOUD NETWORK

- Easy configuration setup
- Fast data transfer with secure transport protocols.
- Content management over cloud
- Service desk management
- Management Information Systems
- Inventory creation and migration



MIGRATION STRATEGY APPROACHES

Migration Strategy is probably the most crucial part of cloud migration. Organizations move critical data and applications to the cloud at the peak of cloud adoption. However, trying to haul everything to the cloud at once is a dangerous move. The seven R approach illustrates identifying applications and figuring out the best strategy to migrate each application onto the cloud. The seven R's include:



Refactor

**Re-
platform**

Rehost

**Re-
purchase**

Relocate

Retain

Retire

REFACTOR USES
ADDITIONAL
CLOUD PROVIDER
SERVICES TO
OPTIMIZE COST,
RELIABILITY, AND
PERFORMANCE.



REFACTOR

Refactoring your business applications provides capabilities of the latest designed technology for cloud-native applications to inherit the characteristics of the cloud in mind. Restructuring Legacy apps to use cloud-native capabilities to create microservices deployments.

USE CASE STUDY:

Consider a small example of a Java application that runs on a traditional server, is connected to a database, and stores archive files to a storage location. When you migrate to AWS to move to the cloud, AWS is associated with services and storing files using Amazon S3. You can use Amazon S3 Glacier to keep costs down, and for databases, you can use Amazon DynamoDB to store your metadata. Amazon RDS MySQL or Aurora does not require a hefty license fee for database workloads. You can use Amazon ECS (Elastic Container Service) to host your web services, which has scalability and other features built into the AWS ecosystem.

ADVANTAGES

- Easy to maintain particular applications because of the usage of re-architected cloud-native features.
- Cost-effective Long-run migration maintenance

DISADVANTAGES

- Refactoring a line-of-business application requires much time recreating the application from scratch.

REFACTORING MAKES
SOFTWARE EASIER TO
UNDERSTAND

RE-PLATFORM



Re-platform is another common strategy which many companies establish to improve and reshape business applications. To make that available platform independently and take advantage of certain features with more time and cost-saving options. One approach is to remove the application from the traditional server, redesign it, change something in the application and then move to the cloud. In most cases, this involves some environment-specific configuration change. It is modified and does not include changes in specific business applications.

Take advantage of the platform's capabilities to:

- Implement microservices
- Enhance the Kubernetes ecosystem
- Acquire cloud capabilities

ADVANTAGES

- Quickly migrate applications to the cloud with less time investment and cost-effectiveness.
- Execute tasks inside AWS containers by leveraging native features for continuous improvement.

USE CASE STUDY:

Let's look at an example of a traditional server with a reform approach to deploy on an Elastic Kubernetes server, a traditional web application running on a traditional server. Unlike refactoring strategies, if you move your app to the cloud and make changes, your app doesn't need to do most refactoring. Instead, you can host your app in a traditional Docker-based image and then deploy that image to Elastic Kubernetes Service.

DISADVANTAGES

- Replatforming the project can sometimes lead to a full-scale refactoring project.

REHOST

Rehosting is nothing more than lifting and moving an application and moving it to the cloud. From the traditional server, select the application, get all the necessary software plugins to run on the traditional server, install and deploy the application in your local system. Amazon EC2 Instances (Amazon Elastic Compute Cloud) is one of the most accessible strategies to remove an application from a traditional server and then move it to Amazon EC2, most often to specific platform specifications.

USE CASE STUDY:

An example of load balancing or rehosting is using Elastic Load Balancer for lifting and shifting, which may not be directly just lifted and move within the AWS Ecosystem that allows using some of the services.

INCREASED
AVAILABILITY,
FASTER
NETWORKING SPEEDS,
REDUCED
TECHNICAL DEBT



ADVANTAGES

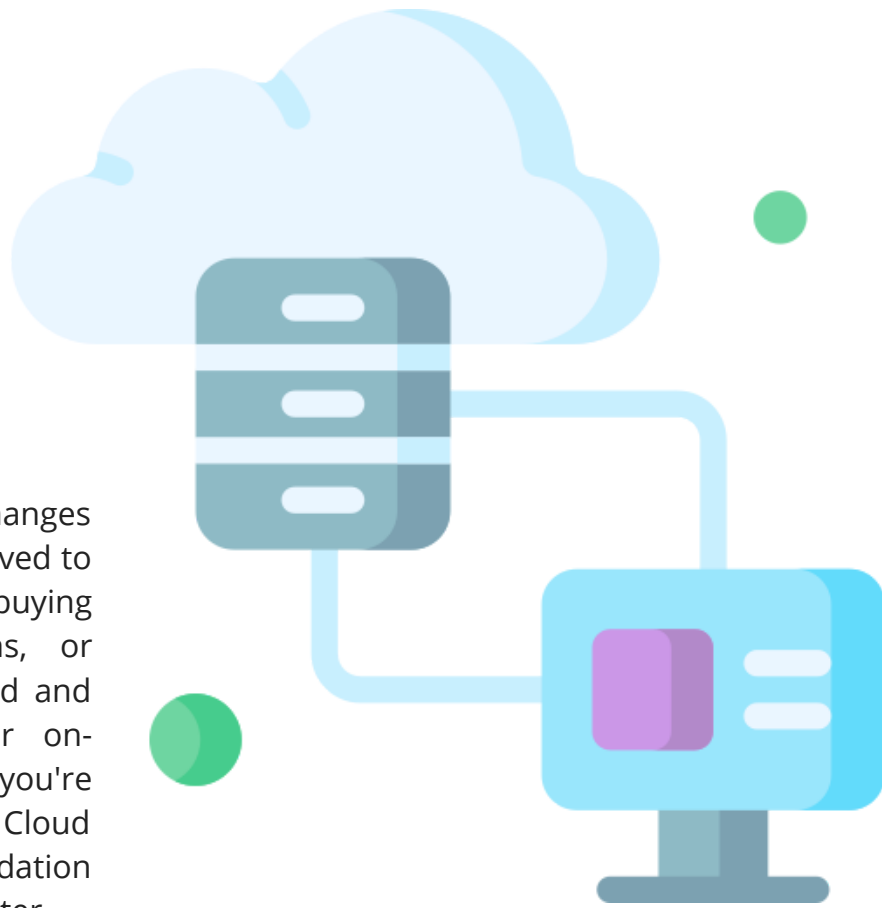
- Cost-effective because you are just going to lift and shift your application.
- Maintenance backup supported by commodity hardware running behind the cloud.

DISADVANTAGE S

- Can expect failures anytime.
- Not Scalable in the long run

RELOCATE

The relocation approach is structural changes in the way hypervisors are lifted and moved to the cloud. The process can do without buying new hardware, rewriting applications, or modifying existing operations—workload and migration compatibility between your on-premises environment and AWS. If you're migrating your infrastructure to VMware Cloud on AWS, use VMware Cloud Foundation technology in your on-premises data center.



USE CASE STUDY:

An example for relocation is migrating hypervisors by hosting an Oracle database to VMware Cloud on AWS, creating a cloud environment for on-premises applications, and relocating to the virtual machine using the "lift and shift" approach.

NO BUYING NEW
HARDWARE,
NO REWRITING
APPLICATIONS,
NO MODIFYING EXISTING
OPERATIONS

ADVANTAGES

- Adaptable configuration in virtual machines.
- Handle peak workloads for commercial websites.

DISADVANTAGES

- Security Weaknesses with service failures
- Lack of skills required to operate new infrastructure.

REPURCHASE

Repurchasing is the complete replacement of an application with Software as a Service (SaaS). Something that can be licensed and configured just by paying the royalties. Business intelligence and reporting tools are commonly purchased tools where you don't have to recreate the reporting tool. Just buy it to improve the performance of the reporting tool and application.



USE CASE STUDY:

Let's take a use case of migrating Customer-Relationship Software running on on-prem applications to AWS. Customize services to understand the customer dynamics and then replace customer relationship software with Amazon Connect.

IN REPURCHASE,
A NEW SAAS
SOLUTION
REPLACES THE
EXISTING ONE.

ADVANTAGES

- Scales in the long-run usage.
- Cost-benefit by leveraging the platform-specific services and pay for what you use

DISADVANTAGES

- Fails to support legacy applications incompatible with the cloud rarely.

PASSIVE STAGE APPROACHES

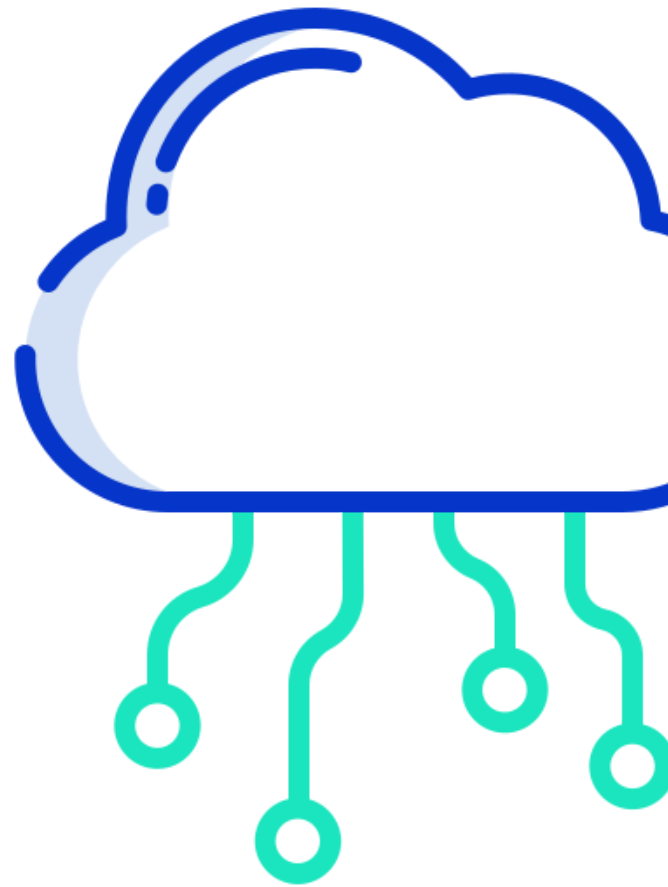
RETAIN

Retaining or Revisiting the application does not change the application. Moving the application from a traditional server when budget and time are running out or revisiting the application when migrating to the cloud.

USE CASE STUDY:

Since the application runs on a production line by nature, it will contain sensitive information that will be stored if there is a requirement for real-time latency. So, recommend file system encryption, which requires independence from the control application. The public cloud data centre is unlikely suitable for applications. Therefore, we will leave the application as it is for now.

IN REPURCHASE,
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ADVANTAGES

- Budget-friendly to maintain the existing traditional server.
- Rethink and revisit the strategy for competent application performance

DISADVANTAGES

- Maintenance and long-run sustainability require money investment.
- Hosting Static websites on traditional servers

PASSIVE STAGE APPROACHES

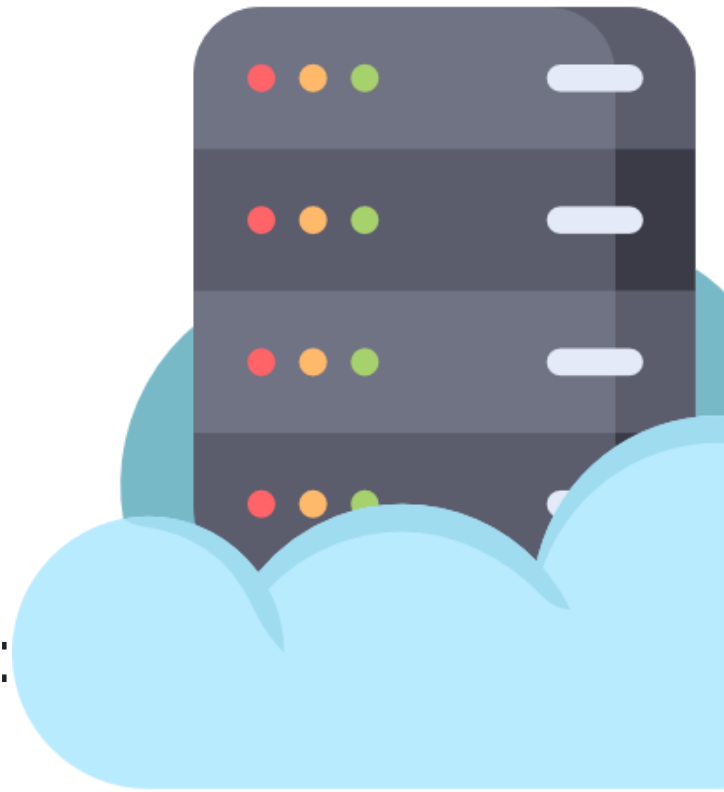
RETIRE

Retaining or Revisiting the application does not change the application. Moving the application from a traditional server when budget and time are running out or revisiting the application when migrating to the cloud.

USE CASE STUDY:

If you browse the app catalog, you'll find apps with a small number of users but are pretty expensive to license costs. Users must widely accept the latest implemented functionality provided by this application. Advise the remaining users to stop using the old application as soon as possible and move to the new standard application

IDENTIFY
ASSETS &
SERVICES THAT
CAN BE TURNED
OFF



ADVANTAGES

- Extract the data from the decommissioning application and store it in a cloud repository at a low cost.
- Leverage the efficiency of cloud storage.
- Migrate the data to an object format to further reduce costs

DISADVANTAGES

- Configure continuous reminders to "Revisit" the application because the technical or compliance status may have changed.

TOOLS TO ACCELERATE MIGRATION

Choosing the right cloud migration assessment tools makes your application integration software run faster. Some of the business tools that accelerate migration are:

- AZURE MIGRATION TOOLS
- AWS SERVER MIGRATION SERVICE
- AWS MIGRATION SERVICES
- CLOUDENDURE MIGRATION
- RIVER MEADOW SAAS TOOLS
- CLOUDHEALTH TECHNOLOGIES
- GOOGLE MIGRATION SERVICES
- VM IMPORT
- SNOWBALL
- DENSIFY
- DYNATRACE
- CLOUDSCAPE
- TURBONOMIC
- CARBONITE MIGRATE
- APPDYNAMICS
- SCIENCELOGIC

These tools help large-scale coordinate migrations and perform actual migrations of virtual machines to optimize processes in terms of network bandwidth consumption and time.

POST MIGRATION SUCCESS

A significant transformation like migrating to the cloud isn't only a technical change; it also requires strong leadership support. Thousands of organizations have successfully migrated with AWS by following certain best practices that can help you to set up for success

- Get stakeholders and seniors leaders aligned so they can be your champions when setbacks arise.
- Set measurable top-down goals that enable your company to transform and modernize moving faster than before.
- Train your teams, so they have the skills to operate on the cloud.
- Trust the process and don't let workload paralysis get in your way while implementing proven cloud migration best practices



Bring your cloud migration challenges to ZiniosEdge, we will help you to migrate successfully and enable you to realize the ROI faster.

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