

The background features a dark blue grid pattern that recedes into the distance. Several blue clouds of varying sizes are scattered across the upper half. Vertical lines with glowing blue dots at the top extend upwards from the grid. A large, light blue cloud is centered in the middle of the page, with a white rectangular box containing the text 'CLOUD MIGRATION' overlaid on it.

CLOUD MIGRATION

"Encapsulate the power of Cloud to help your organisation improve cost-efficiency, agility and scalability in today's digital world to see business results faster."

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Introduction

Digital transformation has become crucial for all businesses, from the small to the big shot organizations, irrespective of the industry. Organizations are being enforced by different technology drivers and businesses to embark on a digital transformation journey. The constraint is "sooner the better" to remain relevant and competitive, as the world operates increasingly through digital technology.

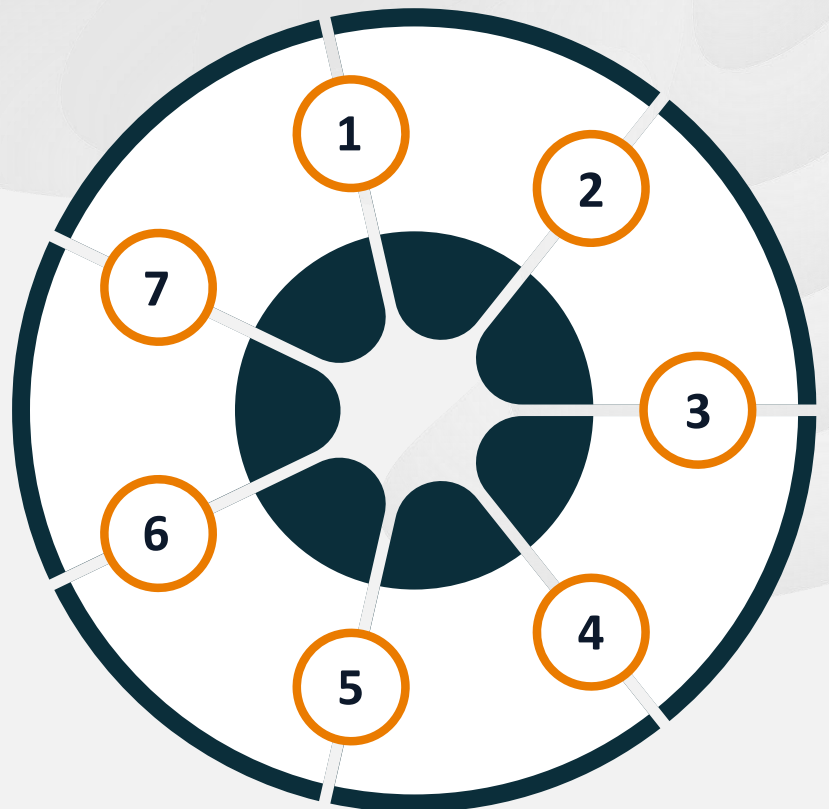
Therefore, companies across the industry verticals are on a Cloud Migration Marathon. Organizations that aspire to win in digital transformation must understand how to merge technology with a strategy for a successful journey. Digital transformation integrates digital technology across business functions that transform how Business operates and delivers to the external world.

In the current scenario, enterprises are operating in a volatile and uncertain world, where anything from an influencer tweet to a pandemic has the potential to disrupt an entire business/organization. The capability to act with agility is widening the gap between industry leaders and laggards. Cloud migration is not just about moving to the cloud; it is an iterative process of optimization to decrease costs and reach the full potential of the cloud. It influences all the company's aspects, including people, processes, and technology.



Why Migrate to the Cloud ?

- 1) **Reduced Cost**
- 2) **High Flexibility and Scalability**
- 3) **Enhanced Security**
- 4) **Better Disaster Recovery**
- 5) **Better Customer Reach**
- 6) **Increased Collaboration**
- 7) **Faster Time-to-Market**

**1**

Reduced Cost- Switching to the cloud helps organizations lower their capital expenses, as they no longer require to spend on teams or hardware to maintain it. Moreover, in a cloud model, you pay for resources only when used, allowing you to save money during periods of low usage.

2

High Flexibility and Scalability- Gaining operational agility is one of the prime reasons to adopt a cloud-based system in place. The potential to rapidly scale capacity up or down on remote servers makes a cloud system the apt choice for organizations with fluctuating bandwidth demands.

3

Enhanced Security- Cloud offers improved security against hacking and data theft. When data is stored off-site, visitors and employees are physically separated from accessing it. Additionally, Cloud service providers monitor data 24/7 to protect it from threats and undergo thorough yearly audits, offering more protection than what would be feasible for an on-site solution.

4

Better Disaster Recovery- A virtual, cloud-based server is completely hardware-independent, meaning that all programs, patches, apps, and data are safely backed-up. In the case of a disaster, all of that data can be pivoted up into a new system in minutes without mislaying any sort of functionality.

5

Better Customer Reach- Migrating applications to the cloud enables organizations to reach more customers and expand their geographical presence. Easy integration with mobile and social platforms helps them get more people through different channels anytime and anywhere.

6

Increased Collaboration- A cloud system makes collaboration easy. Team members and colleagues can use collaborative spaces to connect effortlessly, irrespective of their geographic location. They can share information and work closely and securely across a cloud-based platform, improving employee engagement.

7

Faster Time-to-Market- Moving to the cloud leads to faster time-to-market, whether you're reaching new markets, making the most of deployed infrastructure, or launching a new product. Having on-demand access to computing power means swift speed that can make a big difference in gaining market share and competitive advantage.



Cloud migration strategy with use cases

1. Rehost

UK's leading securities and facilities management group rehosted its IT operations on AWS and saved upto **50%** infrastructure costs.



With this approach, you "lift and shift" your applications, workloads, or databases from on-premises applications or servers to the cloud with no changes. This "lift and shift" pattern shifts data assets from on-premises to cloud infrastructure, especially embraced for large-scale migrations. Moreover, it also enhances the speed and performance of the cloud at a lower cost.

For instance, One of the UK's leading securities and facilities management companies had an extensive IT infrastructure to serve various organizational operations. It can save 40-50% costs by moving from an on-premise CapEx to a cloud-based OpEx model. It utilized the 'lift and shift' approach to migrate its entire IT operations to AWS cloud, including client desktop services, multiple websites, and SQL databases.



2. Re-platform

Pinterest increased infrastructure capacity by **80%** in non-peak hours.



This 'lift, tinker, and shift' strategy is an improved version of rehosting. Re-platform enables you to make configurational changes to the applications to suit the cloud environment without transposing their core architecture. Developers generally apply this approach to change the way apps interact with the database to run on managed platforms such as Google CloudSQL or Amazon RDS.

A well-known social media company, Pinterest migrated from AWS's legacy cloud to the next-generation cloud computing system when it hit over 250 million consumers and served more than 1K microservices with different tools and infrastructure layers. It heeded the 'lift, tinker, and shift' approach to move the micro-services to Docker containers powered by Kubernetes, reducing instance hours for the engineers and making it cost-effective.



3. Refactor/ Re-architect

Netflix saw an **8X** times increase in streaming members.

Sometimes referred to as re-architecting, this approach involves modifying applications to optimize for the cloud environment. While this option may be more time-taking and costly to deploy, it generally results in a longer-term cost reduction, as it most appropriately aligns resources with your requirements.



The perfect example of this type of approach is Netflix, which decided to migrate to the cloud when it experienced utmost database corruption for three days in 2008. Netflix chose to re-engineer all of their tech stacks and fundamentally change how they operate, with AWS as their cloud provider. Horizontal scalability, high reliability, and distributed systems in the cloud were significant to their success. The complete refactoring took them years, but it proved to be an impeccable approach for them. Today, it has eight times as many members as 2008 and is a global OTT platform in 130 countries.



4. Repurchase

Airbnb hoarded the expense of at least one operations position by shifting to **AmazonRDS**.



Well known as the "drop and shop" strategy, it generally means moving to a SaaS application with the same abilities. Effectively, it necessitates a licensing change in some cases—you drop the current on-premise license and start a new license agreement with a cloud provider for the solution. The more recent, upgraded cloud version gives you a better value with higher efficiency, savings on app storage, and maintenance costs.

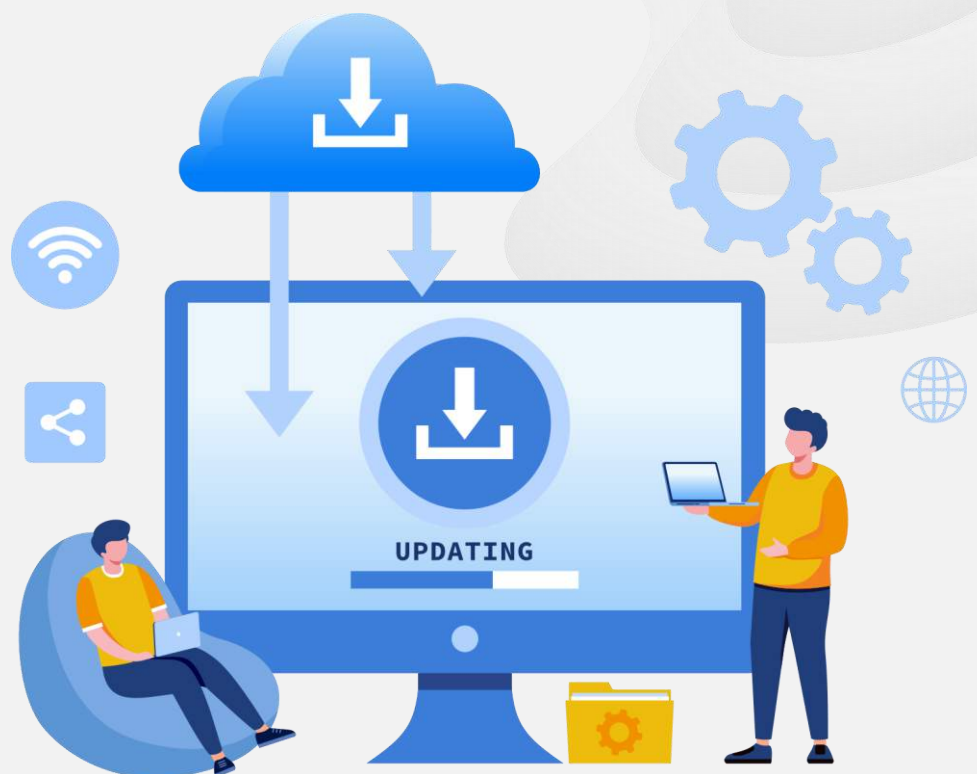
One such real-world example is **Airbnb** who switched to Amazon RDS and dropped MySQL during their migration to AWS (Amazon web services). Complex procedures such as replication and scaling were quite challenging to perform with MySQL. Amazon RDS handled and simplified much of the time-taking administrative tasks related to databases on their part. As a result, the engineers spent more time developing, and the complete database was migrated to Amazon RDS in just 15 minutes of downtime.



5. Retire

Autodesk improved its UX and security by retiring **209** application environments.

In the 'retire' strategy, you retire apps that are no longer required or productive for your IT departments. If an app is considered not worth migrating to the cloud, it can be downsized or eliminated. It allows you to investigate all your applications regarding their uses, dependencies, and costs to the company.

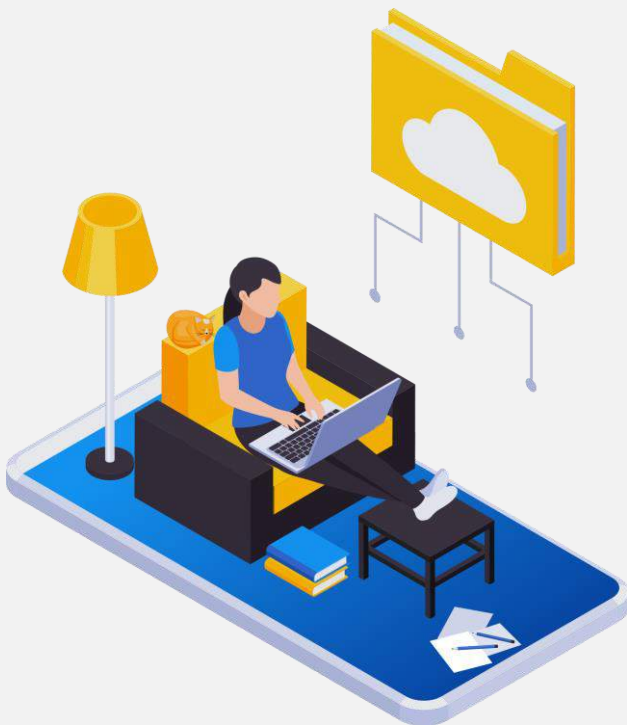


For example, Autodesk retired some apps during its migration to AWS to increase resilience, efficiency, and automation through large-scale modernization and migration. It retired 209 application environments that decreased the attack surface and migrated 239 applications with 97% cost efficiency. Altogether, the enterprise achieved improved business outcomes, reduced costs, better end-user experience, and more robust security.



6. Retain

Johnson & Johnson created a hybrid cloud environment to support their ongoing migrations to **AWS**.



Retaining, also referred to as revisit, is revisiting some crucial portions/applications of your digital assets that require a vital amount of refactoring before migrating them to the cloud. Organizations often use it in hybrid cloud deployment to ensure business continuity during large-scale migrations that take several years.

For example, **Johnson & Johnson** and Hess Corporation curated a hybrid cloud environment to support their ongoing AWS migration. It offers advantages of the cloud as well as keeping the critical workloads and confidential data on-premise.

Now that you're acquainted with the different cloud migration strategies, you are ready to plan and implement them. Consider every aspect of your Business while curating your migration strategies like security, costs, timeline, scaling needs, expertise, and business goals. Correct guidance and meticulous planning are crucial for a successful migration.



Best Practices for a Successful Cloud Migration

1 Know your IT portfolio inside out –the infrastructure, data, and applications

A fundamental part of the planning phase and portfolio discovery—this practice allows you to look deeper into the existing environment by evaluating each asset in terms of cost, performance, size, complexity, and internal dependencies. This assessment can then develop a business case and KPI metrics for each purchase to gauge their performance during and after migration. Automated discovery tools can be used to quickly gather information about on-premise data centers and applications, e.g., AWS Discovery Service.

2 Design your migration strategy

A step-by-step plan explained through 6 R's can go a long way. All you require is to start small with the least significant workloads and move forward in a confident way. Consider both technical aspects and business goals while developing your migration plan.

3 Select the right partner for your cloud migration journey

Choose a cloud consulting partner who has the technical expertise and managerial expertise, and a diverse portfolio. Your cloud provider must have a deep understanding of all aspects such as- tools, cost, security, compliance, cloud-skill requirements, and governance.

4 Prepare your existing IT environment and teams for transition

Training is instrumental in empowering staff to better adapt to the latest ways and facilitate smoother migration. To bring more transparency and clarity, you can establish a clear set of roles, responsibilities, and protocols for reporting and management. It's also crucial that you prepare the existing IT environment by optimizing the network connection, organizing resources, managing access, and implementing compliance, governance, and security systems.

5 Test and validate for optimization

Using the same business goals and individual application KPIs set during planning to accurately examine and validate the migration's success. It highlights the scope for optimization. For instance, you might see the requirement to refactor an initially rehosted application to the cloud. Since workloads on the cloud continually evolve, it may need improving the foundation.

6 Ensuring security and compliance

The migration process poses a security risk to enterprises because of the transfer of large volumes of data. Sensitive customer data is housed in a different environment. New access controls must be put in place. Besides basic security, there is also regulatory compliance that needs to be considered. Legislation such as GDPR mandates how and where data can be stored by an organization. Privacy laws vary at a global, national, and regional level. Each of these must be considered while picking a cloud provider and also during the actual migration.

To mitigate security and compliance risks, enterprises can choose to house sensitive data on-premise and move the rest to the cloud. Some enterprises look for cloud providers with configurable server locations, which guarantee that a server is geographically closer and accurately housed.



Build a cloud migration Plan that's apt for your Organization

Cloud migration may sound like a straightforward process of switching from physical infrastructure to virtual infrastructure. Still, in reality, the cloud strategy of a particular organization needs to be shaped entirely by the unique aspects of its Business. There is no one-size-fits-all cloud plan that works for every company, and not everyone undertakes a cloud migration for the same reason. Some might adopt it to lower capital expenses, while others need it to free up teams to work on other assignments.



Set out by drafting your organization's cloud migration goals. Refer to these three critical questions before choosing the right strategy for you:

- I. Why do we need to migrate?
- II. What do you want to accomplish?
- III. What criteria will you utilize to measure success?

Try to get the answers to these questions from every stakeholder to make tactical decisions. Choosing the right cloud solution can help you achieve better performance and tighter security while increasing efficiency and reducing costs.



Polestar Solutions

At Polestar Solutions, we have years of expertise and experience in deploying cloud computing solutions for our enterprise clients - Fortune 500, to unicorns and large enterprises. We ensure smooth and hassle-free migration of your applications, database, and servers and end-to-end analytics workflow deployment using industry-standard technologies such as Azure, AWS, GCP, Snowflake, Azure.

Get in touch and **explore our**
Cloud solutions today!



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