

WHITEPAPER

Legacy to Cloud Migration Strategies: Detailed Pros and Cons



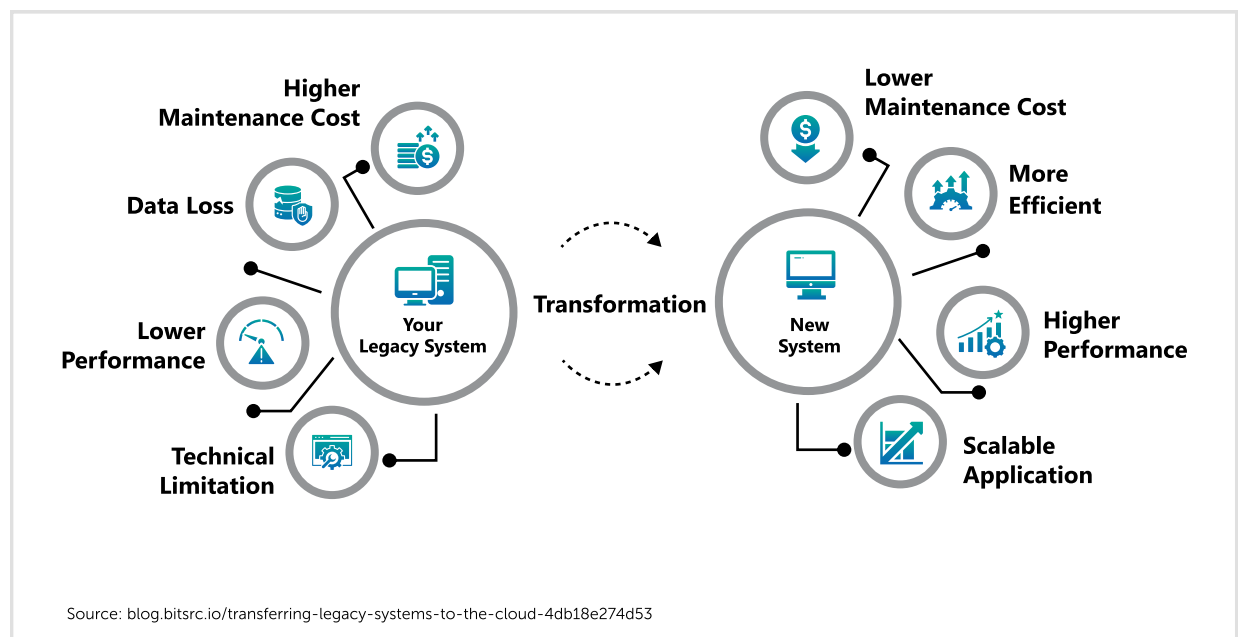
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Introduction

Legacy systems are silently draining resources and stifling innovation. They have become anchors that weigh down business agility. Businesses running their critical operations on these legacy systems often face numerous threats, including hardware failures causing unplanned outages, skyrocketing maintenance costs, and replacement parts scarcity. Other challenges that hinder business continuity and growth are limited scalability and security vulnerabilities that put entire business operations at risk. Addressing these challenges is crucial for businesses seeking digital transformation. The adoption of the cloud results in growing recognition that an enterprise can achieve along with substantial technological and other business advantages. Stromasys has helped businesses overcome these challenges through seamless migration from legacy infrastructure to the cloud. Various studies have reported that businesses migrating to infrastructure to optimize server capacity have experienced an **average annual cost reduction of around 30%**.

Migrating to cloud infrastructure offers several benefits, including reliability, stability, reduced costs, scalability, improved security, and enhanced operational efficiency.



Here is a white paper that navigates the strategic transition from legacy systems to cloud infrastructure. We will explore various cloud migration strategies, their pros and cons along with how they collectively drive innovation and digital transformation within businesses.

Source: keevee.com/cloud-migration-statistics

Why Cloud Adoption is Trending for Legacy Systems Migration?

According to a cloud cost management statistics report from G2, the cloud market is estimated to grow to **\$917 billion by 2025**, driven by businesses migrating to cloud-based infrastructure.

Migrating legacy infrastructure to a cloud environment eliminates the need to maintain these outdated systems. By doing so, businesses can not only reduce maintenance and operational costs but also enhance security, scalability, agility, and more. Moreover, legacy-to-cloud migration enables organizations to leverage modern technologies, working toward innovation and driving business continuity.



IDC reported that serverless computing gains traction has seen growth by 22% as DevOps prioritize efficiency and prefer reduced infrastructure management."

How Cloud Migration Works?

Cloud migration is a strategic approach that involves moving legacy systems to cloud infrastructure. The primary goal of this migration is to modernize the business infrastructure by leveraging modern technologies and reducing additional maintenance costs.

Also, legacy systems have limited support and are more prone to hardware failure that can disrupt operations. By migrating to a cloud environment through legacy modernization, businesses can not only prolong the life of legacy applications but also eliminate downtime challenges associated with aging systems. The IT department needs to analyze the legacy systems and see whether they are worth maintaining or not. Depending on this analysis, which migration strategy is to be adopted is decided.

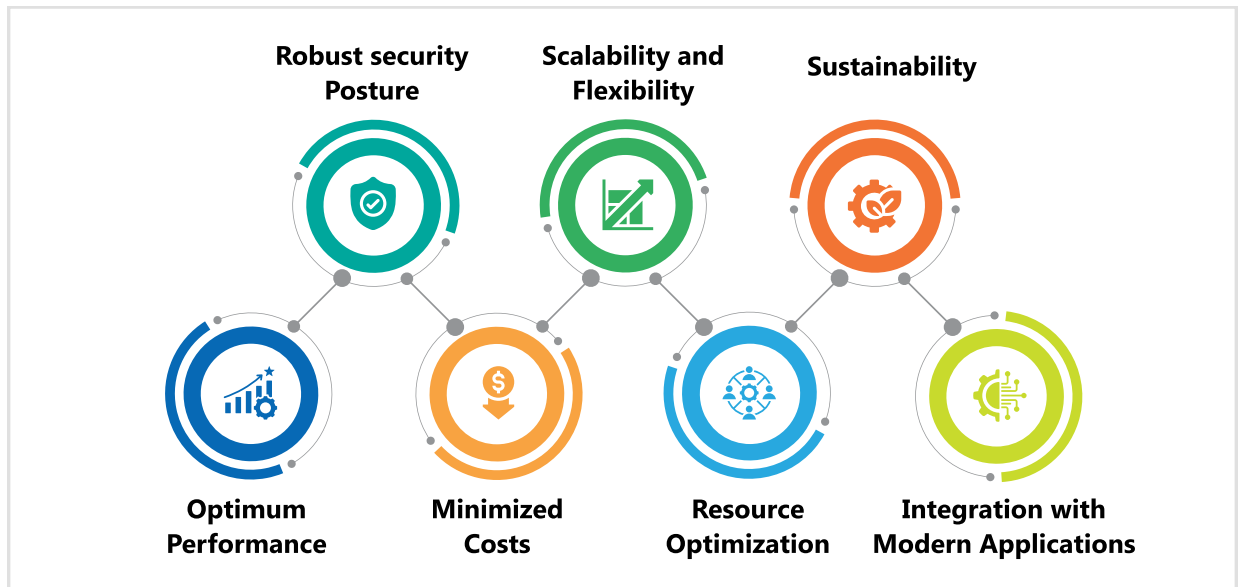
The primary step is to assess the legacy systems and identify which elements are to be migrated to the cloud, as well as what may require modifications. There are various cloud migration deployment models, including public, private, hybrid, and multi-cloud. Businesses can select from various cloud models that best suit their operational needs.

Source: 32 Cloud Cost Management Statistics Reveal Spending Trends



Key Benefits of Cloud Migration

Here are some significant benefits of legacy-to-cloud migration:



✓ Optimum Performance

Over time, the efficiency and productivity of legacy systems decreases. Scalability, hardware failure, and other challenges result in declining efficiency. Additionally, due to their outdated infrastructure, legacy systems are unable to leverage modern technologies to drive innovation, thereby putting them at a competitive disadvantage. By migrating to the cloud, businesses can seamlessly integrate with new technologies that can help elevate their operational efficiency.

✓ Robust security Posture

Cloud providers offer advanced security infrastructure with regular updates and patches. It ensures that businesses' sensitive information is secure from any cyber threats. Also, new security measures align with the latest regulatory compliance and standards.

✓ Minimized Costs

Aging systems are costly to maintain. They not only result in unplanned downtime but also impact the IT budget. By migrating legacy systems, businesses can not only reduce maintenance costs but also manage their other operational expenses more effectively. Also, cloud offers a pay-as-you-go subscription model. It means businesses only have to pay for the services they avail.



✓ Integration with Modern Applications

The cloud environment enables seamless integration with other applications, streamlining workflows and optimizing efficiency.

✓ Scalability and Flexibility

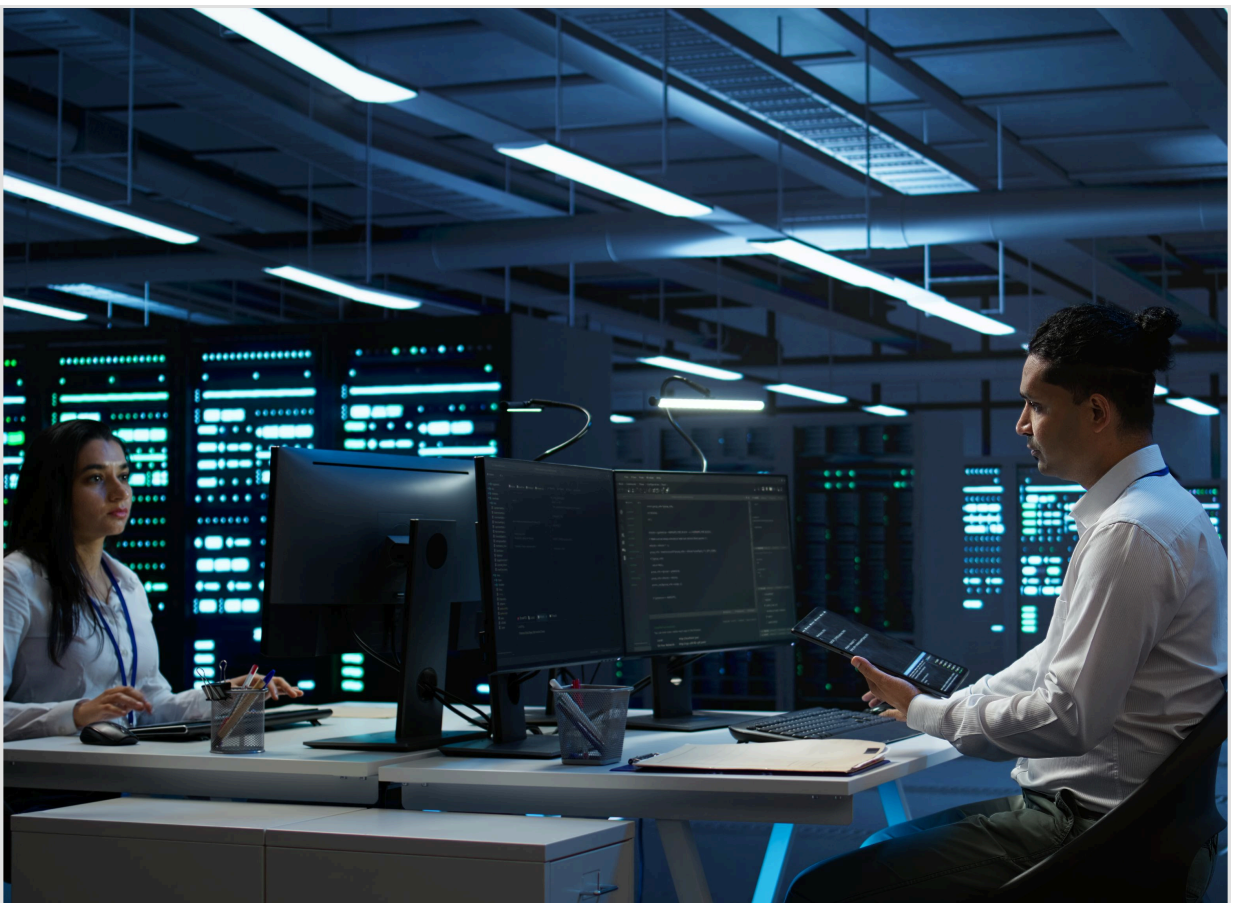
Cloud systems can be scaled according to growing business demands. They are built to accommodate large volumes of data during high surges without disrupting operations and causing downtime. Additionally, cloud infrastructure can be accessed at any time, from anywhere.

✓ Resource Optimization

By migrating to cloud infrastructure, businesses can now scale their resources upon demand. Earlier, the resources that were busy managing legacy hardware are now available to drive innovation and improve efficiency.

✓ Sustainability

Migrating to the cloud eliminates the need for any physical infrastructure. It means there is no need for any physical data center that will impact the environment. It reduces the carbon footprint, as well as the added real estate costs of managing those physical systems.





Statista reports have shown that post-migration, IT cost savings improve by 20% as migrating to cloud minimizes overall IT and operational expenses."

What are the Different Cloud Migration Strategies

Migrating legacy systems to a cloud environment is a strategic decision to optimize costs, improve performance, stay ahead of the competition, and achieve long-term business agility. Here are 6 Rs cloud migration strategies:



Rehost



Re-platform



Repurchase



Retain



Retire



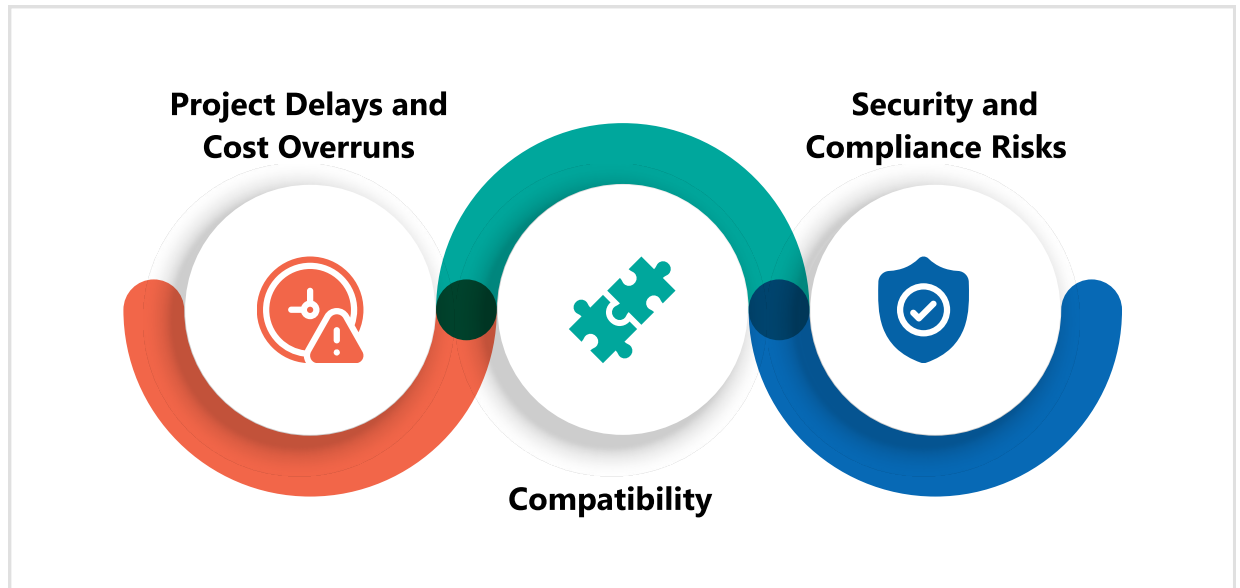
Refactor

- ✓ Rehost: Lift-and-Shift migration with no code changes.
- ✓ Re-platform: Minor modifications to leverage cloud capabilities.
- ✓ Repurchase: Replace with new SaaS solutions.
- ✓ Retain: Keep certain systems on-premises due to technical or regulatory constraints.
- ✓ Retire: Eliminate obsolete applications to reduce costs.
- ✓ Refactor: Redesign architecture for cloud-native compatibility and improved scalability.



Common Challenges in Legacy Systems Cloud Migration

Here are some common challenges in migrating legacy to cloud infrastructure:



✓ Compatibility

Before migrating to cloud infrastructure, it is essential to assess all applications and other assets to determine their compatibility with the cloud. Some legacy applications may not be compatible due to their outdated architecture. In such situations, what steps should be taken without impacting business operations?

✓ Project Delays and Cost Overruns

Transferring large volumes of data can be a challenging task. Therefore, it must be well-planned and executed to prevent data corruption or loss. Apart from this, there might be financial limitations, and an inaccurate budget can result in cost overruns. Therefore, it is necessary to properly evaluate the entire legacy infrastructure and estimate the budget before proceeding with the cloud migration process.

✓ Security and Compliance Risks

Legacy systems are monolithic architecture. They might not be getting security updates and patches from vendors. Additionally, they encounter compatibility issues with modern security applications and regulatory standards. Migrating them to a new cloud infrastructure can result in data leaks or security breaches. Therefore, it is recommended to fix those security vulnerabilities and eliminate any compliance concerns before migrating.



Pros and Cons of Legacy to Cloud Migration

Here is a detailed comparison between the pros and cons of migrating legacy systems to a cloud environment.

Aspects	Pros of Legacy to Cloud Migration	Cons of Legacy to Cloud Migration
Cost Efficiency	The cloud offers a pay-as-you-go model, which reduces maintenance and infrastructure costs.	Evaluate properly, as unexpected expenses may arise during the transition.
Scalability & Flexibility	Cloud resources instantly scale up or down depending on business needs.	There might be some legacy apps that may not scale well in the cloud without significant rework.
Performance & Reliability	Improved performance and applications can be assessed from anywhere, at any time. Eliminates hardware failure challenges.	When using shared cloud resources, there is a chance of variable performance and latency due to network dependency.
Security & Compliance	Enhanced security features and support the latest regulatory compliance standards.	Security challenges if the vulnerabilities are not resolved before migration.
Innovation & Agility	Access to modern tools, frameworks, and APIs. Adapting to the cloud enables businesses to deploy new features more quickly.	Staff training and user resistance can slow down the adoption of cloud services.
Physical Footprint	Eliminates the need for on-premises servers and data centers.	Dependency on cloud providers.
Easy Integration	Easily integrate with modern applications and third-party services.	Compatibility issues with older legacy applications.
Operational Efficiency	Streamlined operations and reduced downtime.	Migration projects can cause temporary disruptions.
Business Continuity	Improved disaster recovery and backup options.	Data migration risks like data loss and corruption if the migration process is not managed correctly.



Stromasys Success Stories

Here are real-world examples on how Stromasys Charon on the Cloud solution help businesses in transforming their legacy infrastructure:



From Hardware Dependency to Cloud Resilience: A Saudi Cement Manufacturer Reduce Costs 25% with Charon-SSP

A Saudi cement manufacturer migrated its critical Oracle EBS applications from legacy SPARC servers to AWS using Charon-SSP emulator, eliminating a single point of failure.

- ✓ Delivered 1-hour RTO disaster recovery
- ✓ Up to 25% power reduction
- ✓ Significant cost savings
- ✓ Preserved legacy Solaris applications



Orange Business Achieves 3+ Years of ERP Continuity with Charon-SSP Cloud Migration

Orange Business is a leading digital service integrator. They faced critical challenges with outdated Oracle eBusiness Suite 11i and Tungsten Markview systems, which were running on legacy SPARC hardware. They partnered with Stromasys to transform their aging legacy systems. Using Charon-SSP emulator with 16 emulated CPUs, they achieved:

- ✓ Seamless cloud migration in days
- ✓ Full system compatibility
- ✓ Eliminated hardware roadblocks without modifications
- ✓ Ensured 3+ years of continuous ERP operations



Banking Software Provider Achieves Cloud Scalability & Eliminates Infrastructure Dependencies with Charon SSP

A banking software provider transformed their event log management platform by migrating from its on-premises servers to the cloud using Charon-SSP emulation.

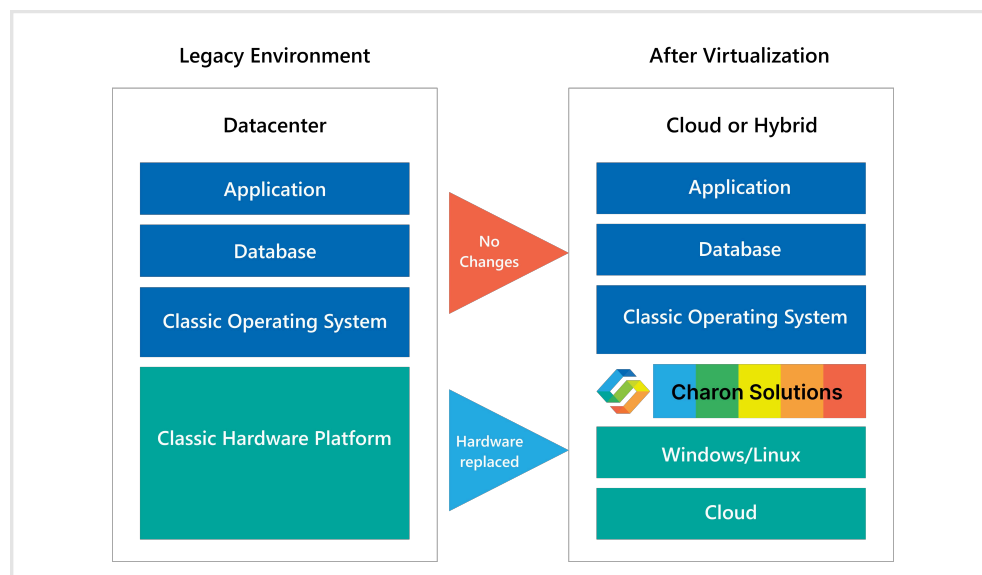
- ✓ Preserved existing Solaris-based applications
- ✓ Enabled greater scalability and simplified R&D management
- ✓ Streamlined global operations with minimal modifications
- ✓ Eliminated dependencies on local infrastructure



How Stromasys Can Assist with Seamless Cloud Migration

Stromasys is a global leader in providing legacy migration solutions and services worldwide. With more than 25 years of experience, Stromasys has provided its services in more than 70 countries.

Stromasys Charon on the Cloud solutions enable businesses to seamlessly migrate their legacy workloads, such as Solaris SPARC, PA-RISC, VAX Servers, DEC Alpha systems, and PDP-11 hardware, to leading cloud environments like Google Cloud, AWS, Azure, Oracle Cloud, and more by modifying existing code. It uses a lift-and-shift migration approach to migrate to a cloud environment. It enables businesses to preserve their legacy while leveraging modern technologies to drive innovation and ensure operational continuity in the face of disruptions.



With Stromasys, businesses have not only reduced their maintenance costs by up to 90% but also seen a 100% boost in overall performance.

Are you also interested in enhancing your operational efficiency and reducing additional maintenance costs? Visit our website at www.stromasys.com or contact our legacy experts.

[Talk to an Expert](#)



Businesses have reported more than 20% improvement in scalability with cloud migration due to on-demand resources support growth - Gartner."

Summary

Organizations are migrating to the cloud to reduce costs, innovate faster, optimize efficiency, and stay ahead of the competition. The 6Rs are a proven framework for migrating to the cloud seamlessly. With careful evaluation and planning, businesses can select the right cloud migration strategy that aligns with their operational requirements, thereby transforming their legacy systems and upgrading their infrastructure.



**Migrate legacy applications to the cloud
and modernize your IT infrastructure with
Stromasys Charon Solutions.**

Talk to an Expert



In Closing

Legacy systems present fundamental operational challenges that demand urgent solutions. Waiting for these aging systems to fail is not a reliable strategy—it's a recipe for disaster. Cloud migration offers a proven alternative, delivering cost optimization, improved operational efficiency, scalability, and enhanced security. These benefits drive innovation while ensuring business continuity.

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