

Migrating Mission-Critical Applications Using Cloud Managed Services

A Frost & Sullivan Executive Brief
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Introduction

As they embark on their cloud journeys, many businesses start with non-critical applications such as email or collaboration. Sensitive workloads—like financial, ERP, or CRM systems—are more likely to be left to a later phase of cloud implementation.

For many businesses, migrating such critical business applications may seem too daunting. Among more than 250 U.S. businesses surveyed by Frost & Sullivan, 68% stated that they felt that they faced “insurmountable challenges in migrating their workloads or data” when moving from the enterprise data center to a cloud environment. Cloud migrations are particularly concerning when major, legacy business applications are being moved. Among businesses surveyed by Frost & Sullivan, only 26% of businesses have migrated their SAP workloads to a HANA certified cloud platform to date. Nearly 70% cite concerns over workload migration as the key challenge that hinders them from moving their SAP applications.

But cloud migration doesn't have to be a challenge. By engaging a managed cloud service provider, you can mitigate many of the common issues of cloud migrations, and have a smooth deployment in the cloud, regardless of the type of workload you are deploying. In this executive brief, we present the biggest challenges of cloud migration, and how the right managed cloud provider will help you overcome them.

Six Common Challenges of Cloud Migration Overcome by Cloud Managed Services

Since 2012, cloud migration has ranked as a top challenge among enterprises. Whether due to lack of visibility regarding application dependencies, or lack of bandwidth availability, migration from one environment to another can be challenging.

As a result, businesses are increasingly choosing to enlist the help of a trusted advisor, such as a managed cloud service provider, to assist with the migration planning and execution. The result? The challenge of cloud migrations is greatly reduced. Among current managed cloud users that were surveyed by Frost & Sullivan, 57% relied on their managed cloud provider to help them develop a strategy for moving applications to the cloud. Additionally, 68% used their managed cloud provider to actually manage the migration project. Among these current managed cloud users, 82% considered their managed cloud provider's advice as **extremely important or very important** as they executed their migration.

Here are the top six reasons why migration is so challenging, and how the right managed cloud service provider can help:

CHALLENGE ONE **Potential for business disruption**

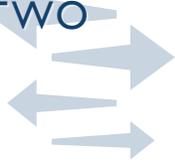


If a migration step is missed (for example, if a database continues to be mapped to the old location), applications can go down. When the migration is for a business-critical application like SAP or Oracle, the business tolerance for outages is typically low. If migrations are done online, network capacity may be strained or inadequate and disrupt performance of other workloads. If the migration of production workloads runs past the planned outage time, end users will need to potentially put in extra effort to catch up on processing the business transactions and recover from a revenue loss due to the prolonged outage.

How a Managed Cloud Provider Can Help

Managed cloud service providers offer the right combination of deep cloud expertise and automated tooling, coupled with professional services to help you plan every aspect of your migration. The right provider will ensure that every step is documented in runbooks and executed appropriately before a cutover to a cloud environment occurs. The right managed cloud provider can also offer workload and data redundancy and failover environments, which can be spun up in moments if something unexpected happens. Finally, with automated tools that handle tasks like workload discovery and mapping, DNS transfers and data formatting, the risk of human error impacting the migration is minimized. Managed cloud service providers will have a proven migration methodology that includes the right amount of testing and proven templates to use when creating a migration plan. They should also provide the leadership and governance help required for a successful, smooth migration.

CHALLENGE TWO



High bandwidth requirements

Data transfers—especially for large workloads or databases—require high capacity for a short time, which is often difficult to procure in a cost effective way. When businesses migrate, using existing capacity, bandwidth may be inadequate and business disruptions can occur.

How a Managed Cloud Provider Can Help

Your chosen managed cloud service provider can offer assistance in managing bandwidth needs to transfer workloads and applications, while maintaining routine operations, if necessary, during the migration. If additional bandwidth is needed for a short amount of time, the provider can assist you in procuring additional capacity in a cost effective manner. Most providers will have migration methods and tooling that allows most of the data to be migrated ahead of the final migration, thus making an incremental update the only necessary task during the actual final migration activities.

CHALLENGE THREE



Data Format Challenges

Ensuring that data is formatted appropriately for the target location is important to the migration process. For example, do the protocols for a database hosted on premises match the protocols for the new, online environment? If not, are API connectors available to make a data migration from one location to another successful? This effort adds complexity to the migration.

How a Managed Cloud Provider Can Help

By engaging with the right cloud managed service provider, you gain access to industry-leading tools that can automate some migration processes, like data formatting. Automated tools can apply the right API to each workload or database to be migrated, ensuring that the source workload will operate properly in the new, target cloud location. Automating this process again reduces the chance for human error, and mitigates migration risks.

**CHALLENGE
FOUR**



System Component or Application Dependency Mapping Challenges

Applications don't operate in a vacuum. Often, associated databases are used for a variety of applications. The enterprise has to plan appropriately to ensure that every application, workload, and database is remapped to the new location, to ensure proper function after the cutover is complete. The planning process can be arduous, particularly if handled manually. And errors can lead to an unsuccessful initial cloud deployment.

How a Managed Cloud Provider Can Help

As with data formatting, tools and planning processes that managed cloud service providers bring to the table can, first, help you ensure that you have an accurate picture of your current environment. The mapping process helps you visualize how each application and database maps to others. Doing so allows you to plan the necessary mapping changes to ensure that each database is mapped to the new, target, cloud locations that the workload(s) will be housed within.

**CHALLENGE
FIVE**



Security Challenges

Security is a top concern, not just for cloud hosting, but also for “data in transit.” Additionally, dropped packets during the migration can impact data integrity.

How a Managed Cloud Provider Can Help

The right cloud managed service provider places a high priority on the security of your data, and has taken many steps to safeguard it, even before you became their customer. Many managed cloud providers are even using the same infrastructure that they offer to you for their own internal workloads—and security of data is their top priority. Look for providers that offer the following:

- Proactive vulnerability assessments and management
- Network intrusion protection
- Firewall protection and DMZ options
- Industry compliance and external auditing
- Anti-virus and malware protection
- Internet security
- Data encryption capabilities
- Artificial Intelligence (AI) capabilities
- Automated security patching, to ensure that all services are as up-to-date as possible and are updated on a regular basis
- Proactive environment monitoring and alerts
- Incident response, including mitigation and remediation, as well as forensic analysis and recommendations for future prevention
- Disaster recovery

CHALLENGE
SIX



Regulatory Challenges

Data still falls under regulatory scrutiny, even during a planned migration. Steps must be taken to assure that compliance regulations are met and documented during the migration process.

How a Managed Cloud Provider Can Help

In terms of compliance, a managed cloud provider that both hosts and manages your applications is best poised to have 24x7x365 visibility into where a particular application resides, and can assure that any relocation continues to adhere to regulations. Look for a provider with broad and deep network connectivity and the ability to route traffic as needed to keep data within the required region.

The Last Word

With all of the potential for problems or application failure, it is no wonder businesses like yours find migrations challenging. Today's IT environment is complex, and each application is interdependent on other applications and databases. These interdependencies must be mapped, accounted for, and remapped to work properly when migrated to a new location. And all of it must be handled with an eye toward security and compliance. But with the assistance of a skilled managed cloud service provider, you can migrate even the most sensitive, business-critical workloads—like SAP and Oracle—with ease. By choosing a provider experienced in SAP or Oracle technology, as well as professional services, you're sure to execute a cloud migration with ease.

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