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13 Secrets You Should Know Before Migrating Operations to the Cloud

Moving operations to the cloud is now an easier decision to make - but here are some of the real world challenges you want to be aware of as you consider the move.



Introduction

For agencies, organizations, and IT operations alike, the shift to cloud computing has been nothing short of a game changer.

As the cloud has become mainstream, its primary benefits - agility, real-time collaboration, operational efficiencies, and reduced operational costs - are increasingly well known.

But the potential for cloud to deliver massive advantages doesn't mean they are instantaneous or automatic. Put another way - the cloud is not "magic." While most organizations realize tremendous benefits, those that don't plan properly can experience setbacks that wind up costing more time and money than anticipated.

The good news? You can mitigate unforeseen challenges through careful planning and deliberate execution.

That's why we compiled this checklist for you. Read onward to benefit from the sometimes painful lessons we've learned in close to 20 years' helping companies like yours better prepare for a transition to the cloud.

As you might well agree, it makes sense to kick the list off with the highest-level concern of all:



01

Your Motivations to Move to the Cloud Must be Clearly Tied to Your Business Goals

Cloud has certainly disrupted conventional technology. But the most profound transformation it brings may be to the way you manage your business.

It's fair to expect that cloud operations and security management will change many of your key business processes and workflows.

Recognizing this is essential, because if you don't plan for and link cloud appropriate management processes directly to high-level business goals, then you may encounter internal resistance or lackluster results.

More importantly, in order to realize the transformational value of cloud, a change in organization mindset may be needed.

This includes thinking about IT services – such as pure and hybrid cloud – as a path towards application modernization rather than a place to host virtual machines. This mindset change is centered around solution building.



02

Make Sure Priorities of Key Stakeholders Are Aligned

A common mistake we see is failing to gain alignment between priorities of the CIO and CFO within a company.

Too often, a plan will be created from the perspective of either the IT infrastructure or the financial goals of the company - not both. To ensure smooth transition and positive results, we recommend that the goals of both IT and Finance be considered. Once these key roles are on the same page, you can move forward and measure progress accordingly.

03 Educate Yourself and Stay Open to Options

Once you've identified the business goals you want to achieve, you are in a good position to consider the various options for a cloud migration.

The path you choose - including the pace and scale - will depend upon the needs of your organization. In making your choice, it pays to become familiar with six common migration strategies -

as first outlined by [Gartner](#), and refined by [Stephen Orban](#).

Each strategy within these "six R's" can have trade-offs when compared to the others. But by identifying the approach that best supports your environment and goals, you set your organization up for the smoothest possible migration.

R1: REHOSTING

Rehosting (aka “lift-and-shift”) is a scenario where you essentially move a premise-based application into the cloud without changing its code. This approach is often adopted when organizations need to move quickly to the cloud to meet a business case.

It can be a good first step, because you can later evaluate and move specific aspects over to native cloud services with greater ease. However, this method comes with its own risks. For example, it does not let you to realize cost efficiencies and feature advantages right from the start.



R2: REPLATFORMING

Re-platforming is a strategy where you identify some key aspects of an application that can be optimized before moving it to the cloud. You don't modify the core of the application - but calibrate managed services or consider a different software license or open source solution.

This strategy delivers only the basic benefits of cloud computing and may be appropriate for certain applications that don't require the full benefits of being cloud-native. The upside here is the potential to save considerable budget on licensing fees that you may currently pay - but this approach does require a fair amount of testing and oversight.



R3: REPURCHASE

Repurchase is a strategy whereby you move to an SaaS platform by buying a new product- for example when you move a CRM solution to salesforce.com or a CMS to Drupal.

This approach brings the initial challenge of requiring you to carefully - and manually - oversee the migration of this application's services. But it also tends to deliver major benefits of the cloud - like automatic upgrades, scalability, and cost efficiency - once you complete that step.



R4: REFACTOR

Refactor is also known as "re-architect." Refactoring is an application modernization approach that leverages the inherent technologies underpinned by the cloud (aka Cloud native services) to recreate the functionality of your existing application.

This involves the more sophisticated process of re-architecting and even recoding part of an existing application. Though this approach can take time, ultimately it offers improved agility, scalability, performance, and perhaps the lowest monthly spend.



R5: RETIRE

Retire is also commonly referred to as “decommission.” This is a situation where you identify legacy applications that still consume precious network resources, but no longer deliver any useful services – or at least, services that can’t be provided by another cloud-optimized application.



R6: RETAIN

Retain basically means you don’t do anything with a particular application right now. This may be appropriate in a scenario where an application was recently upgraded, and you’d like to get the most out of it before moving its services to cloud. Or it might be a situation where a particular application is not especially critical- so it’s appropriate to wait until a later date to consider for cloud migration.





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The bottom line is, transitioning applications will help you demonstrate the value of cloud to all areas of your organization. But, simply moving a premise-based app to the cloud probably won't deliver the value you're looking to get from the migration.

So, set early-stage expectations - and carefully select "the R's" that are most appropriate for your situation. Consider modern approaches to deploying applications, match capacity directly to demand, and leverage refactoring where possible to gain the maximum efficiencies of the cloud.

04

Create a Strong Management and Governance Foundation

In our experience, organizations that work through policies before putting enterprise workloads into production are most likely to enjoy a smooth transition.

For example, we recommend setting up a Cloud Center of Excellence (CCoE) comprised of at least one representative from each major department within your business. This team develops and manages the cloud strategy, governance, and best practices that the rest of the organization will leverage to transform the business.

Skipping this step can create problems further down the line. Remember, cloud operations affect a swathe of areas across the organization, so if you don't have a

cross functional team with a clear strategy in place, you'll constantly have friction. *(More to come on cloud strategy, below.)*

It's essential to gain organization-wide agreement on important governance items from the beginning. By incorporating governance into your management structure, you can prevent problems before it's too late to address them.

The goal here is to establish rules that align with legislation, regulations, industry guidelines, and internal policies so that as you proceed with your cloud implementation, things run automatically and in compliance.

Some of the main areas to address are: major security concerns, early governance around provisioning authority, and compliance policy as code.

After you have successfully moved to the cloud, the CCoE will take on an expanded role to enable and accelerate change. Change never stops in the cloud, with the pace of innovation continuing to accelerate.

This team will work collaboratively across the organization to increase the pace of innovation by leading out in adopting new technology, socialising success, driving change that aligns with true business value, and codifying change into an organizational methodology.



05

Establish Landing Zones

This involves items that need to be built before an application can be deployed - basically all the items that define the framework.

For example, a cloud landing zone can include guidance and best practice templates that a customer can deploy into their initial environment while having confidence the solution will grow to meet future business needs - including security and regulatory compliance.

This may apply to a single Cloud Service Provider (CSP), or may need to span multiple CSP's with reach back to traditional data centers.

A related idea here is to consider the "first mover tax" when moving to the cloud. This means that the first couple of applications that get moved take on more burden, but once these are taken care of you will be able to move the rest much more quickly and cost-effectively.



06

Design Your Tagging Strategy Early

Establishing tag names and acceptable values (essentially metadata) for your assets is a critical activity that needs to be addressed early

If you want to understand what's happening within your cloud operations, the tags have to be applied consistently. Tags are used to facilitate charge back, utilization, organizational cost, and ownership traceability.

The tags you establish will support governance tasks, such as likening and are not retroactive (historical data isn't updated if tags are changed).

But, consider that some names may mean very different things to specialist in different business areas – so it's important to agree that all tag names work well for everyone.

That's why we recommend that your CCoE team come together to gain agreement on how bits of data should be named in order to avoid any confusion or conflict with aspects of other workflows. Make sure all areas of the business agree on tag names that make sense to them, and don't cause confusion or conflict with aspects of other workflows





07

Choose Tools that Suit Your Business

As you prepare for and ultimately move some of your operations to the cloud, you'll find there is a wide range of tools that can be used to make the transition a smoother one for your organization.

On the one hand, it's great to have many options to choose from. On the other, you don't want to be unduly delayed by the research required to make decisions on each tool.

Cloud Service Expense Management (CSEM) tools are definitely worth consideration though. At a high level, these tools help you align IT infrastructure with financial team goals.

Practically speaking, they allow you to budget, track, reduce and optimize spend for externally sourced cloud providers on an ongoing basis. As you weigh your options, take a closer look at the key features and support available for providers such as CloudCheckr and CloudHealth.

08

Consider End-of-Life Support Requirements for Present Applications

We recommend you consider EOL Support Requirements for Applications. As one example, Microsoft Windows Server 2008 and SQL Server 2008 go EOL next year. So in this case, it would be prudent to consider their upgrade plan now instead of doing a migration and then an upgrade.





09

Identify Common Enterprise Patterns

To facilitate automation and leverage the efficiencies of the cloud, aim to identify processes or services across the enterprise that have characteristics in common.

Companies that have standards in play have an opportunity to build an implementation framework around those. This can help you to identify all the “like” services - and streamline which activities align with your core standards. Doing this prior to migration enables you to create migration groupings and even automate the baseline for each pattern to improve consistency and reduce operational burden.

10

Maximize Opportunities to Automate Processes

In the past, organizations have moved to the cloud while retaining traditional methods of deploying and operating enterprise workloads.

But that often requires manual efforts to provision and manage each server. Since a main benefit of cloud technology is to automate and simplify, one of the last things you want to do is retain processes that require manual intervention.

All too often, that leads to disappointing performance in terms of cost savings, uptime, and workload handling. We recommend automating as many IT processes as is practical to gain more efficiencies from the cloud.

Due to the dynamic nature of cloud, baking security automation and response orchestration into the automation framework is equally important.

Orchestration and automation tools that run on top of your virtual environment can help you reduce the manual efforts associated with provisioning, managing and securing cloud computing workloads.

When implemented properly, you reap the benefits of more predictable and reliable workflows - and that translates into fewer errors, lower risk, and reduced IT costs.

11

Consider Leveraging Advanced Cloud Native Services

Migrating to the cloud provides an opportunity to update and add services - including those you don't currently use in your on premise solution.

We recommend you consider using the services that cloud providers offer in areas such as artificial intelligence and machine learning to improve the security and resiliency of your applications. You can also utilize native capabilities for monitoring and alerting. The process of adding these services is often called opportunistic refactoring, as this migration path allows you to leverage the full capabilities of the cloud.



12

Recognize that Understanding the Costs Can Be Difficult

However, understanding the various elements of cloud provider quotes - including network hardware, infrastructure maintenance, and labor - can be difficult.

Working with a partner that can help you keep costs as transparent as possible will make the process smoother.





13

Develop a Clear Strategy for Moving to the Cloud

As mentioned, organizations that establish governance, work through policies, make a plan, and carefully follow through on the steps in that plan are better positioned to make a smooth transition to cloud.

As with any transformation initiative, there will be roadblocks along the way. Some will be technology or license changes, others may be staffing training deficiencies, but it's also common to encounter people or portions of the organization that resist this level of change.

Building plans to deal with roadblocks and detractors is a critical part of your cloud strategy.

So, based on all the guidance set out above, create a clear strategy that's right for your organization. Certainly, your plans should be flexible enough so they can be adjusted based on new information or new developments - but a simply-worded, clear strategy will help keep all stakeholders on the same path forward.

Bonus Tip: Choose a Service Provider Carefully

Selecting the right service provider makes all the difference in how smoothly your migration can proceed.

It's quite likely that the on-premise vendor you've relied upon for years will lack the inclination and experience to guide you skillfully on your cloud journey, so you'll need to look for a cloud specialist.

It's important that you work with an experienced partner who has been through the challenges of implementation and can craft a cloud strategy to drive business value. One who understands both traditional operations and cloud who can help translate not just the technology, but also your business processes, from on premise to hybrid to cloud native.

Certifications matter, as do premier partnerships with the industry cloud providers. When a service provider can offer examples of proven success in accelerating work processes and advancing goals with organizations of all sizes – it's usually a positive sign.



Conclusion

In this eGuide, we've provided you with a checklist to ensure you're on track for a smooth cloud migration. By considering the practical advice outlined here, you can better prepare your organization to realize the benefits of the cloud while minimizing the risk of disappointment.



Align important aspects of your cloud strategy with business goals



Choose the migration path that helps minimize disruption and maximizes results



Establish a cross-functional team that can set a management and governance strategy



Identify opportunities to automate like services to gain cloud efficiencies



Select a qualified service provider

The logo for SMX, featuring the letters 'S', 'M', and 'X' in a bold, white, sans-serif font. The 'X' is stylized with a red and orange gradient. A registered trademark symbol (®) is located to the upper right of the 'X'.

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