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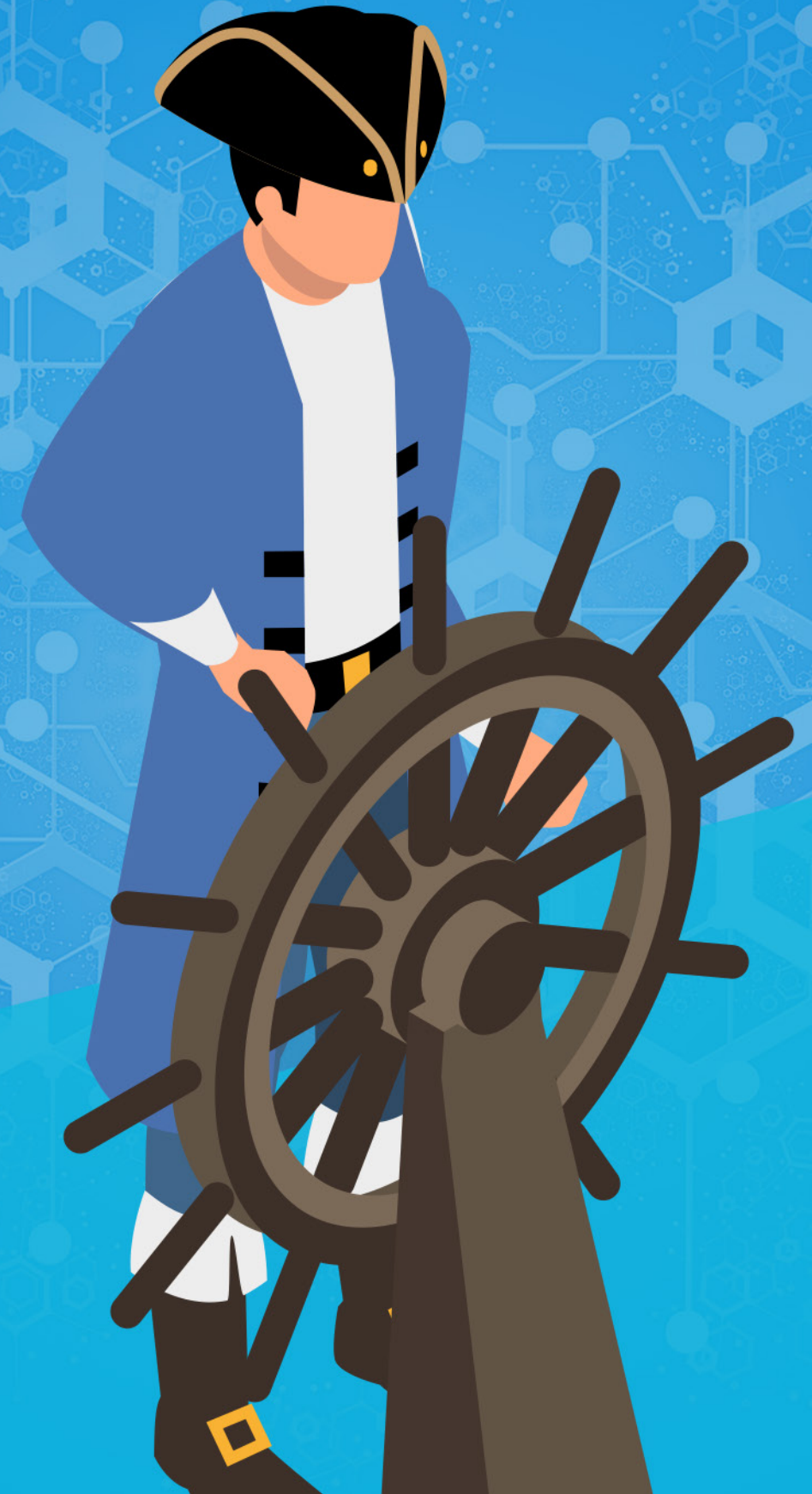# Your Checklist for Success

Everything You Need to Know About Cloud Migration

83%
of enterprise workloads will be in the cloud by 2020
Forbes

91%
of businesses use public cloud and

72%
use a private one
RightScale

Most enterprises actually utilize both options - with

69%
of them opting for a hybrid cloud solution.
RightScale

The cloud has arrived, and it's here to stay. If you haven't already moved your infrastructure, applications, and data to the cloud you could be falling behind your competition. In this paper we will consider:

- Why enterprises should move to the cloud
- The steps needed for a successful cloud migration
- Insights that will make your cloud migration journey easier
- Why mapping dependencies will limit the impacts of your move
- Migrate and validate: ensuring you've done it right the first time

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Why Migrate to the Cloud?

You might ask: why would a company want to deploy its data, servers, assets, applications, or any other elements into the cloud? If your IT infrastructure has always been on-prem, it can seem like a lot of hard work to move to a remote cloud infrastructure, especially when the results are uncertain.

But, while no-one can predict the future, there is a reason why cloud adoption has been such a success for businesses across the board, from finance and healthcare to banking, technology, and more. Some of the top benefits include:

- **Cost Reduction and Scalability:** Hardware and infrastructure are expensive, and this is true both in the cloud and on-prem, but not on the cloud you can leverage your cloud provider's expertise and economies of scale to adding or deleting resources as necessary. This is especially true for business that experience peaks and valleys in terms of traffic and data; they can get so much more out of the cloud as opposed to on-premises architectures. The cloud allows you to scale up and down compute power and storage as necessary, only paying for what you use.

- **Automation:** There is an ever-growing list of technical, financial, and administrative tasks that are challenging to the average business, and the cloud can automate many of these. Imagine updating software, maintaining infrastructure, and upgraded servers to keep them up to date; all this can be handled on the cloud externally.

- **Security:** Data protection, in today's complex attack landscape, is one of the most essential elements of any business. In case of threat or natural disaster, the cloud maintains your data in a secure location, protected by backups and support to ensure business as usual. Data is available anywhere, supporting collaboration and productivity.

Changing your Mindset for Cloud Success: The Psychological Factor

A move to the cloud is about more than just the physical location of your servers, applications, or data. For most successful enterprises, it is also about a shift in mindset, and getting your employees on board is an essential part of cloud adoption.

The transition to the cloud can be leveraged to strengthen your company's DevOps mindset. DevOps is a proven set of practices that combines software development (dev) and IT operations (ops) to shorten the systems development life cycle while still providing high software quality. DevOps utilizes principles from Agile software development methodology, such as a never-ending cycle of planning, coding, building, testing, releasing, deploying, operating, and monitoring. Like software development using DevOps, your cloud journey is not one that has a clear start and end. Instead, it feeds and nurtures a company culture of continuous improvement and change, with the cloud being your vehicle for success.

Unsuccessful cloud migrations frequently start in a siloed manner, advanced by key staff members but without a strong business plan or cloud expertise in place (as exemplified by a center-of-excellence).

Successful migrations begin with planning, the explanation of the need for change and the benefits expected to the broader organization, followed by the development of a core team that can lead the change and communicate progress to your entire business.

Quick wins are needed to establish morale; making smart choices and providing full transparency are critical success factors.

A Successful Cloud Migration: How Do I Start?

Create Baselines

WBy understanding your current infrastructure metrics it is then possible to measure the success of your cloud migration. Start by compiling a complete view of your on-premises or hybrid performance, and mapping it to relevant KPIs (Key Performance Indicators) to establish and track versus your cloud performance. Metrics to consider include page load times, CPU usage, availability and response, conversion times or churn rate, and cost. Metrics should cover different categories, such as infrastructure, application performance, and end-user experience or customer satisfaction.

Lift and Shift vs Re-Architect

Once you have strong visibility of your current IT architecture, you can sort through your applications and decide which to migrate, how, and when. Some can be moved as is—this is commonly known as "lift and shift" or in AWS's parlance, the "forklift migration strategy". This works well for self-contained applications without dependencies, tightly coupled applications, or stateless applications in which client data generated in one session is not saved for the next session with the client.

Other applications will need to be redesigned, either in whole or in part, and this may sometimes take more effort or cost than is worthwhile. Applications that are reliant on your legacy technology might be best left as they are, especially if you are planning a hybrid environment anyway.

When a redesign is in order, make sure to check that your cloud provider has the tools to help with the reconfiguration of workloads or assets. Always compare the migration effort to the expected return on investment; this cost analysis may make a tough process worthwhile, or highlight where a seemingly straightforward one an application to migrate should be left behind. **Some applications may need simple amendments, such as refactoring to support dynamic scaling or the dynamic application of resources.**

Not all applications belong in the cloud. Security and cost are two factors to consider as you make migration choices at this stage of the game.
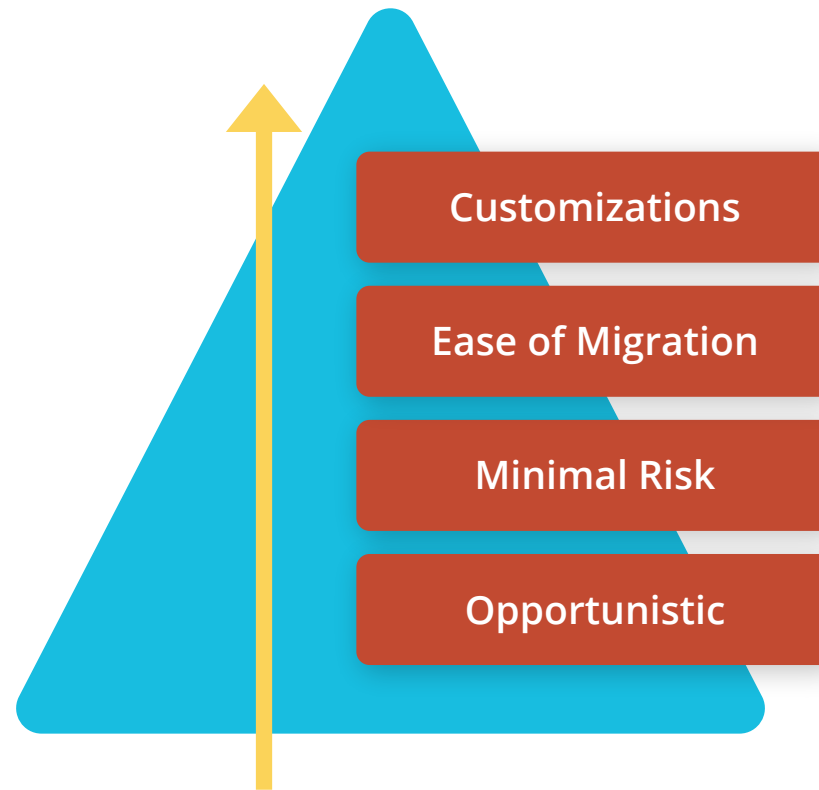
Understanding Application Dependencies

Once Once you know what you want to move, think application dependencies. What are the IT and Business impacts of moving these applications or workloads to the cloud?

Unfortunately, native cloud offerings such as AWS Application Discovery do not show dependencies, so you will need to choose a provider that provides full coverage and visibility of your data center, both before and after migration. A solid understanding of this is integral to building a roadmap for migration. The initial roadmap will provide the order in which to move applications that makes sense for your business. Some questions to consider about status and dependencies include:

1. **How important is this application?** How many users depend on it, and how sensitive is this application to downtime?

2. **Was the application developed externally or in-house?** If the latter, can your staff support the migration? If the former, can the developing vendor assist in the migration?

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3. **What are the operational standards of this application?** This can include technological considerations, or business and organizational needs. Is this application accessed globally? Does it involve automation? Is it sensitive to latency or uptime requirements, and does it have defined windows for maintenance, compliance, or SLAs that need to be considered?

4. **How many dependencies does the application have?** Obviously, fewer dependencies enable a more streamlined initial migration. Consider dependencies on platforms like SAP, Citrix, or others you may have created yourself. Also factor in interdependent workflows like analytics, monitoring, and collaboration tools.

5. **How complex are the processes?** Every initial cloud migration needs to minimize complexity. If your applications have unique dependencies, involve a lot of manual processes, or are synchronized with other applications in terms of downtime and uptime, they are probably not the right choices for a successful initial migration.

With a thorough understanding of your applications and their dependencies, you can then use business strategies to create a migration roadmap. Google Cloud Platform (GCP) provides an intuitive pyramid that can help your enterprise make intelligent choices about what to migrate when.

Customizations

Ease of Migration

Minimal Risk

Opportunistic

The first group of applications to migrate can be defined as "Opportunistic."; this includes examples where, perhaps, the existing hardware is in need of an update anyway, there is a clear ROI from cloud migration, or it is cheaper or simpler to run on the cloud. Such factors may enable quick business buy-in, and reduce the risk of your initial deployment.

After this, risk is a critical focus area. When uncovering dependencies you will have gained the visibility to understand the risk of migrating each application; this leads to the ability to list moves by riskiness, which can then be used to cross reference with the simplest migration opportunities from the top of that list.

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Migrate and Validate

Your baseline metrics are essential for understanding the success of your cloud migrations. Here are a few features to look for in your visibility and monitoring solution.
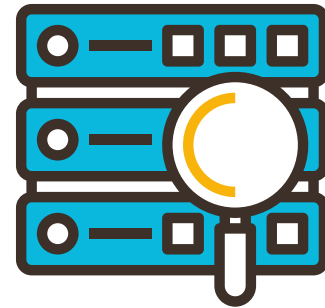
Continuous Scanning

Make sure that you're using cloud support that scans continually, instead of only sporadically, or during off-hours. This can provide an inaccurate view of your KPIs, and a false understanding of your environment. You can't know whether you've got it right if you're only measuring 'sometimes'.
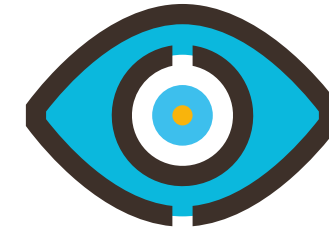
Agnosticity

You never know what the future will bring, so your vendor should provide across the board visibility, no matter what infrastructure you are using or what software you run.

No Credentials or Agents

The goal is to limit complexity and maintenance. Credentials and agents are a serious slow-down. In contrast, look for a vendor that provides insight based on traffic and wire data, and doesn't need access to the servers themselves.
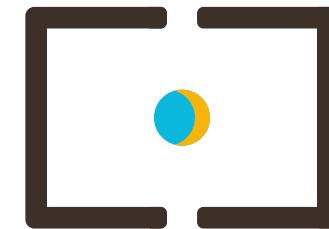
No Blind Spots

The only way to make sure you can see all dependencies and communications is to have insight into on-premises, private, and public cloud solutions, as well as hybrid infrastructures. A single pane of glass approach is the only approach to a successful migration with minimal mistakes.

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It All Starts with Visibility

Companies that struggle with cloud migration often cite the same reasons.

I didn't have the details I needed on my existing data center or of my application dependencies. There were blind spots, so migrating applications had a domino effect I couldn't anticipate.
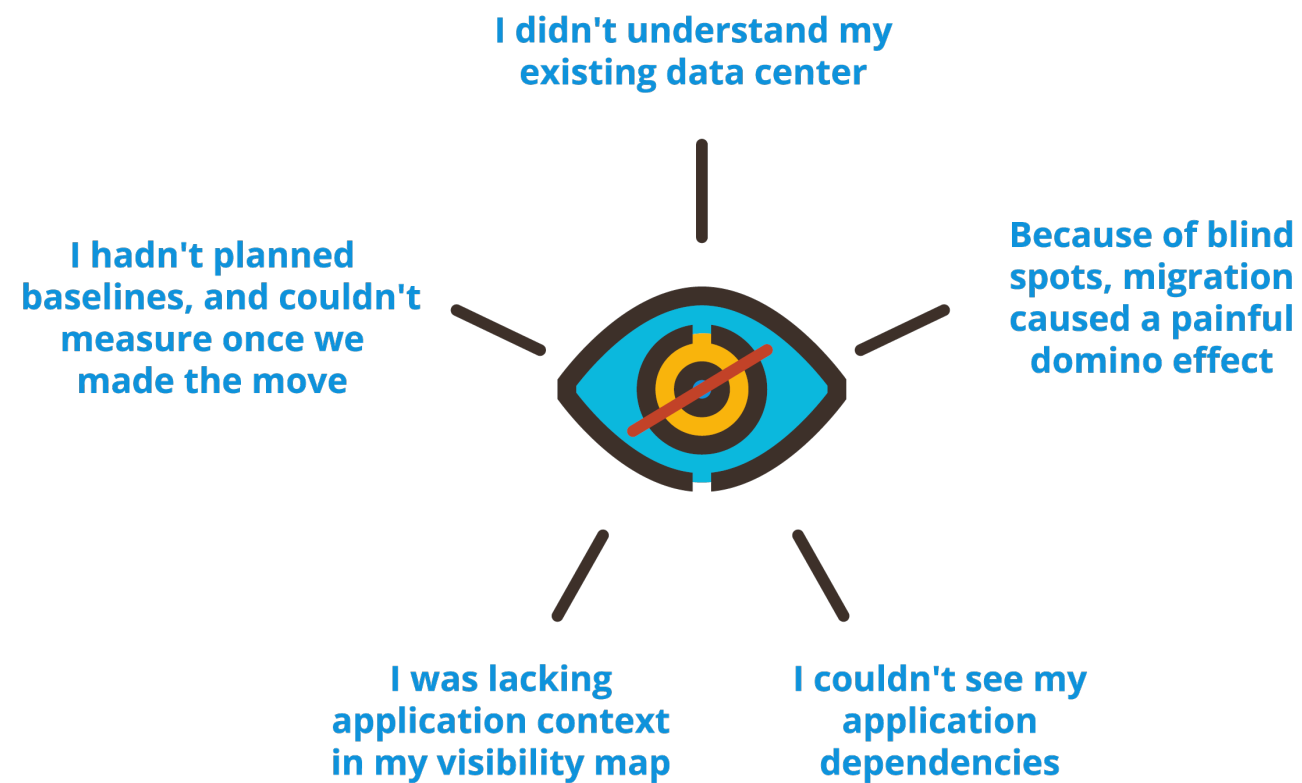*I didn't have a baseline to measure whether my cloud migration was a success.*

I had no application context, so I just started with what my gut feelings told me, or listened to the department head who shouted loudest.

These challenges make cloud migration more expensive, less transparent, and less effective, causing slowdowns, frustration and a much longer time to realize value.

In contrast, a successful cloud migration starts with a core understanding of your infrastructure, applications, data, and workloads, and continues with the ability to keep this full coverage and visibility at every stage of the DevOps cycle.

If you are considering making the move to the cloud, start with full visibility of applications and their dependencies to get it right the first time.

I didn't understand my existing data center

I hadn't planned baselines, and couldn't measure once we made the move

Because of blind spots, migration caused a painful domino effect

I was lacking application context in my visibility map

I couldn't see my application dependencies

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About Faddom

Faddom creates interactive, real-time maps of your entire IT ecosystem, offering granular detail. Our solution is completely platform-agnostic and has limitless use-cases. Uniquely, Faddom works without credentials, firewalls, or agents. With network discovery based on real traffic, you gain ultimate visibility of all dependencies and communications. Use this to efficiently assess costs, discover a hybrid ecosystem, or model workloads for migration.

Our platform is easy to deploy, highly scalable, and can be integrated with all of your current tools and products seamlessly. Whether you are primarily on the cloud, utilize hybrid or multi-cloud environments, or reside on-premises, Faddom can

be used to discover, plan, and maintain the most comprehensive real-time map for your application ecosystems. You can easily configure your map to manage IT assets by business context, prioritizing the right alerts and, more importantly, keeping your business running smoothly.

Contact us at
info@Faddom.com
to see a live demo.