

How to Build A Cloud Migration That's Right For Your Business

A WHITEPAPER BY

[deft]

How to build a cloud migration plan that's right for your business

It is no longer "if." Either your company is in the process of moving to the cloud or will be in short order. This truth can be an opportunity to unlock all those dreamed-about cloud benefits, or it can lead you into the cloud-washing trap so many companies get stuck in. The difference is simple — the right cloud migration plan. It can take many different shapes, but, just like the best companies, the right plan is always unique and always personal.

Cloud migrations may seem straightforward — swap out physical infrastructure for virtual infrastructure and call it a day. In reality, migration to the cloud **is never one-to-one**. Your cloud strategy will be shaped entirely by the unique aspects of your business. Just like there's no one-size-fits-all marketing plan or one-size-fits all financial model, there's no one-size-fits-all cloud migration plan.

Your cloud migration will depend on three things:

1. What your goals are for a cloud migration
2. What assets you're moving to the cloud and what their requirements are
3. What level of execution and support your cloud partner can offer

What to know before starting the cloud migration process

Start by drafting a clear definition of your company's cloud migration goals. Not everybody undertakes a cloud migration for the same reason, and knowing what your goals are will help you build a plan to meet them. A cloud migration can be an opportunity to clear out capital expenses in favor of operational expenses and to free up your tech team to work on other projects. It can give you better performance and tighter security, and it allows you to phase out your legacy systems. Before you make any tactical decisions, set your strategy with the following questions:

- Why are you migrating?
- What do you want to accomplish?
- What criteria will we use to measure success?

Before you get started, get buy-in on the answers to these three questions from each and every project stakeholder. This is going to save you countless headaches and sleepless nights as you go forward.



How to build a cloud migration plan everyone can follow

A good cloud migration plan is simple. Keep it simple. When everyone's working from the same page and the project has clear objectives and clear milestones, you won't get mired in discussions over which path is correct. To make sure things keep moving according to the agreed-upon plan, follow these steps:

- 1. Establish a clear leader.** Assign a project owner, ideally an impartial party who has the authority to demand execution and who can keep everyone informed.
- 2. Build a runbook.** Outline the process and get a copy into the hands of everyone involved in the migration, so they're all working from the same page.
- 3. Schedule check-ins.** Whether they take the form of meetings, calls or emails, set up a systematic way to keep everyone informed and a space for people to voice potential problems as they arise.

Here's a very simple example that shows why it's so important to plan ahead to determine your company's unique cloud needs.

A company wants to move its email to the cloud. It can easily do so — after all, you have Gmail, Office365 and others that are ready and waiting to support cloud email. The company's IT team is proactive and makes the switch. Email is in the cloud. However, this transition happens without checking in with other departments. Email is running fine, until compliance realizes that sensitive information is exchanged as part of the normal course of business. Now the company finds itself in violation of a specific compliance requirement and must rush to switch over to a private cloud, where it will have total control over the security environment. Looping in the right business units early in the process would have identified the risk and avoided a lot of stress, work and expense by getting the solution right the first time.

It's not just theoretical. You'd be surprised how often this exact situation occurs.

According to research from Gartner, Forrester, IDC, 451 Research (and countless others) more than 50 percent of cloud migrations exceed budget, exceed the migration window and/or result in unexpected business disruption. In our view, this is unacceptable. With the right plan, we can shed light on the unforeseen and execute a cloud migration within the schedule and budget allotted, with minimal risk to the company.

How to identify your cloud needs: What, Who, Where, How

Start by figuring out what, exactly, you are moving to the cloud. It seems dead simple, but it's amazing how many companies skip this step, then find the project ballooning as they discover more and more applications that need to move. It's by far the most common mistake we see at this stage of a cloud migration. An infrastructure assessment will tell you what needs to go where, so you can start getting a sense of what your cloud should look like.

A good assessment will answer the following questions:

- What are you moving?
- What are the RPO/RTOs of each application?
- What are the compliance and security requirements of each application?
- Who are the owners of each application and infrastructure component?

- Where do all your applications and data live and how much capacity are they utilizing?
- How does everything connect to your network?

Where are the dependencies and relationships — technically and operationally — between each application and infrastructure component?

We even have a handy [infrastructure assessment worksheet](#) for you to follow. You need to identify what's out there and how much capacity it requires, sure. But you also need to know if you shut down a collaboration server, will your email still work? What about your CRM application while your SAN is being migrated?

What

Consider assigning a dollar value to the impact of downtime for each application. That way you'll be able to quickly assess whether or not the risk of an application's migration is worth the cost — as well as what type of cloud, public or private, may best match your requirements.

It all starts with identification — simply understanding exactly what applications you have within your organization and whether or not they are in play for a move to the cloud. This is often where we'll find applications that are already in the cloud, completely unbeknownst to our clients.

Once you know what you have, prioritize your list of applications by how critical each is to your business. A straightforward approach is to assign each application a tier based upon its acceptable Recovery Time Objective or Recovery Point Objective (RTO / RPO). For instance, tier 1 could be for applications that can't be down for more than 10 minutes without significant impact on the business, while tier 5 could be for applications that can be down for more than

24 hours without having a substantial effect on the bottom line. These RTO / RPO windows will vary based on your business, but the point remains — know, in advance, exactly what is at stake. Here's an [application prioritization worksheet](#) to help you.

This is also a good time to also consider what regulatory restrictions your applications and data might have. Find out if anything is subject to HIPAA, PII and PCI compliance, or internal regulations. There is absolutely nothing worse than completing a migration plan only to have the brakes slammed at the last minute because no one bothered to understand the regulatory, compliance and security needs before moving the application or data.

Think back to our example above, where an email application was humming along on the cloud before anyone realized it was transmitting confidential information across a public cloud. Yes...this happens. All the time. Make sure you're looping in every stakeholder, including compliance, but identifying the who.

Who

Once you know what you have, the next step is identifying who manages each application that's slated to move to the cloud. As you do this, it's wise to also determine who needs access to these applications. These particular steps are often overlooked simply because it takes time to figure out who really owns each application and which groups are using them. It's crucial to the success of your migration,

however, to meet with the people who have their finger on the pulse of these applications. There's nothing like watching an application break when it's moved to the cloud, only to have an irate manager say "I could have told you that." Loop these people in early, so you can score their information, get their sign-off, and keep them informed throughout the process.

Where

Now that you know the what and the who, it's time to find the where. Which servers, hypervisors, etc. are these applications and their associated data running on? Where are they physically located, and what shape are they in? A cloud migration is a great time to jettison old infrastructure, and you might consider prioritizing applications that are running on hardware that's close to the end of its useful life.

Finding the applications is the easy part. You then have to figure out how much capacity they're really utilizing. All too often we see clients with 40 to 60 percent overhead for each application, just sitting there as unused capacity. It's bad for business when it's physical infrastructure, but when that kind of waste gets replicated in your cloud, it can

complain that they're spending 10 times what they planned on their public cloud. This is all because they began by replicating their physical infrastructure into the cloud instead of assessing what they needed and establishing a migration plan with clear, measurable objectives.

We typically recommend a maximum of 20 percent overhead for all cloud environments. This provides ample room to ramp up natural growth and enables you to utilize burst capabilities for peak usage – which effectively minimizes costs

be disastrous. The transfer of this excess capacity eliminates any efficiencies the cloud can deliver, all while driving up costs. We have people come to us everyday

How

The last step is looking at the how of your applications. Before you start moving them, you need to know how they're architected and connected. Identify which applications are architected for high availability and/or redundancy, so you know what can be migrated with minimal to no downtime. The flip side of this process is equally important — knowing which applications can't be migrated without operational impact. It is amazing how often no one knows what happens when a maintenance window is declared on each application.

Take the time to understand the relationships — both the technical and operational dependencies between each application and infrastructure component. If you move an app or shutdown a server, what are the ramifications? Trace the potential consequences of your actions before you start migrating. Doing this will save you hours, and tens of thousands of dollars.

Validating your cloud migration plan

We know how crucial insulating the business from risk is to our clients. To realize cloud benefits, after all, you have to make sure you're not introducing any vulnerabilities. That's why we recommend our clients execute test migrations before kicking off a full-scale cloud project. This will help you understand the actual time involved — as well as identify potential connectivity issues that were previously unknown.

Attempting an equipment cool down may sound silly, but it is really important. Each and every customer we migrate has an issue with at least one critical hardware component not coming back from a cool down, or not operating properly after a cool down. It's much easier to find a solution if you know which devices won't recover from the power down before you begin moving everything to the cloud. One customer we migrated found issues with a router's firmware that would have never come to light without this test. We were able to bring in a new router and address the issue quickly before we migrated. This brief test will save hours of time, thousands of dollars and countless headaches.

Declaring a maintenance window and powering down all of the applications and their associated infrastructure also gives your company an opportunity to see just how quickly applications can be brought back online post migration. With real data to work with, you can minimize the unexpected and incorporate the actual times into your cloud migration plan.

When we have the opportunity, the best way to run a test migration is to move a company's backup environment to the cloud. We'll even mix and match test migration applications based on the risk, running on backup infrastructure where possible when a production application's risk to the business is low. This gives everyone a much more accurate sense of how thorough the plan is and where we may run into pitfalls. Any bugs that we find can be worked out here and added to the cloud migration plan, further reducing the risk. It also gives us an opportunity to virtualize the backup environment, so it will match the migrated production environment.

How to find a partner that can turn your cloud migration plan into a reality

Of course the best way to control the risk of a cloud migration is to find a partner who has been through the process many times before. At Deft, we've spent the past 16 years managing cloud migrations day in and day out. That experience allows us to not just reduce your risk, but also help you capitalize on opportunities that are unique to your business.

[According to research from Gartner, IDC and 451 Research](#), more than 60 percent of companies have delayed a data center migration after completing the planning stage. Of that 60 percent, 40 percent said it was a lack of resources

holding them back, while 20 percent pointed to their lack of migration experience. Of course! No company should expect to have the resources or the expertise to manage a large-scale cloud migration in-house. This is a major shift for a business, one your average IT team won't have the capacity to manage. It's also a onetime affair, meaning your in-house talent is unlikely to have been through it before even once, let alone the thousands of times Deft has. We can make a plan that mitigates risk because we've seen the traps time and time again, and we know how to avoid them.

Additional Questions

For more information, visit www.deft.com or contact us at (312) 829-1111 and sales@deft.com

About Deft

At Deft, we are our clients' most Trusted Advisor.

The Deft team humanizes technology. We actively listen to our clients, learning and collaborating to develop tailored proposals that perfectly fit your company's needs.

We then design, build, operate, secure, and scale unique technology solutions with a singular purpose: to deftly deliver on the promise of technology for you and your customers.

Learn more at www.deft.com or contact us at (312) 829-1111.