



Guide to Cloud Transition

Stairway to Heaven: A Step-by-Step Guide to Cloud Migration

It might surprise you to learn that even though Led Zeppelin's rock anthem "Stairway to Heaven" achieved legend status the second it hit the airwaves in 1971, it didn't officially top the charts until 2007. That's because the ballad was never released as a single to the general public, instead only available as a track on the band's untitled album (known as Led Zeppelin IV) until everything wound up on iTunes.

You might think our point here is to talk about the magic of digital music on the cloud. Instead, we want to discuss the idea of narrowly-missed opportunities. Sure, if the track was never released as a single, it still would have been well-known enough to cause some guests at the party to sigh in exhaustion when it kicks on, and others to sing every word with total joy. But its reach would have been lessened, and consumers trying to buy the individual track would have been disappointed. Businesses today face a similar scenario. Failure to tap into cloud opportunities in the next few years (if you haven't already) might mean you never get the chance to do so, or when you do, you'll be too late to capture as much of the market as you might now. Forbes reports that "cloud leaders are growing revenue 2.3 times faster and, on average, are generating a 35% year-over-year increase in top-line revenue. They are faster, more agile, and more than twice as likely to see the cloud drive competitive advantage."


As Robert Plant and Jimmy Page composed, "Yes, there are two paths you can go by/But in the long run/There's still time to change the road you're on." When it comes to cloud computing, the time is now. Luckily, the time has also never been better. The potential of the cloud today pushes the edges of integration, and the problem for companies lagging behind is that customers know it. By 2020, 75% of business buyers expect that partners will anticipate their needs and reach out to them with relevant suggestions for services and innovation before the buyers themselves even know they need them, and 73% believe

products will order their own replacement parts, anticipate failures, and contact maintenance as-needed. No company can possibly imagine to meet those expectations without cloud computing.

Imagine a mobile software solution that keeps you informed in real time of key performance indicators and customer feedback tone on social media. Or one that gives you an eagle's-eye look at accounts and cash flow. Or one that does both. Not only that, but the data is backed up, can be restored after a disaster, and is secured on a daily basis from the most current methods of cyber-attack.

Cloud solutions and software make this kind of control and confidence possible, but integrating all the pieces of software into one functioning application is a massive chore many organizations don't know how to begin finishing. As Zep told it, "Your head is humming and it won't go/In case you don't know/The piper's calling you to join him."

Does that make us the Piper? If so, we don't mind. The "piper lead[s] us to reason," the dawning of a new day "for those who stand long/And the forests will echo with laughter." We can't promise to get echoes of laughter out of you, but the steps laid out in this guide will give you a practical path into using the cloud to your business' best advantage—a stairway to quality and success, which lies on the "whispering wind."



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1. DECIDE WHY YOU'RE CHANGING

The first step to cloud procurement is stating clearly why you want the cloud at all—not just what change are you going to be making, but why? Is it a new software to address bottlenecks in your workflow? A new platform to set up your development team to begin building a proprietary software? Or a remote infrastructure that will let you empty out the server room and use it for something else?

Some businesses are looking for third-party “software as a service” solutions (SaaS) to empower their workers, while others need the ability to develop and deploy their own software, but don’t want the cost or requirement of maintaining the infrastructure. These cloud pilgrims may seek out platform as a service (PaaS) solutions if they don’t need full access to the servers, or may choose infrastructure as a service (IaaS) for total control of the server’s processes, even though it’s housed and maintained elsewhere. All these solutions, either individually or deployed in tandem, will reduce the maintenance and break-fix burdens on your IT team and leave them free to focus on more business-forward projects.

Others still may simply want to reap the cost savings of transitioning hosting to the cloud without changing their actual operations as a result. In that case, you will possibly be reducing your footprint, but you won’t be making the absolute most of the opportunities the cloud presents for

increased agility in delivering service and solutions to both employees and customers. However, the cloud is never a drag and drop solution for anyone.

Cloud-based software solutions are developed to be used by many different companies, so customized features specific to your needs are unlikely to be integrated. For this reason, it’s important to assess what current features of your software or infrastructure are essential and make sure they’ll be preserved or improved by the cloud migration.



2. GET PRACTICAL

“If there’s a bustle in your hedgerow/Don’t be alarmed now:” the amount of planning and coordination that goes into a cloud migration becomes apparent quickly. Luckily, once you have a general sense of what you’re moving and why, the strategizing process gets easier with some ultra-specific questions and answers like the following:

What business goals will this new cloud computing support?

Outline clearly and in writing exactly what goals for your business will be more attainable or easier with cloud computing in play.

How does each of your software solutions integrate with others?

This question is one that will give tactical insight into the practical steps of your cloud transition. What functions or

operations form the core of your functionality, and how do the other pieces integrate? Knowing this answer will not only help you see what services are essential, but also what failures would be devastating.

Where are errors or lengthy transitions slowing efficiency?

What software is problematic, outdated, or unintuitive? These questions will help you refine your notions of how the cloud's potential can or should be maximized after your project is complete. If one piece of legacy software is sticking out like a sore thumb, ask yourself if now is the time to strategize forward.

What regulations govern our cloud usage?

This answer will vary by industry, and may be “none at all,” but it’s best to know before you start the journey if there are rules you have to follow along the way.

What operational changes will be needed after the transition?

Ask yourself not only how hard this climb is going to be, but what will change on arrival, and how the road ahead will look for yourself and employees. That’s not to say you shouldn’t proceed because there will be a learning curve or efficiency improvements, only that you need to know in advance the possible impact those scenarios might have on broader operations.

How much risk are we willing to assume?

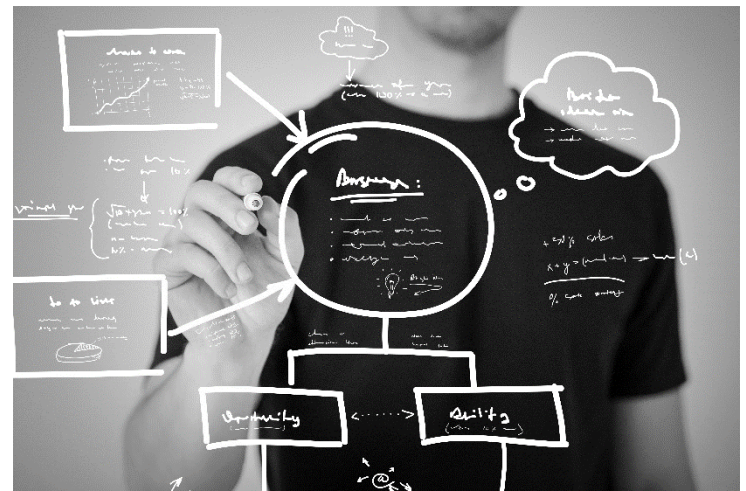
The more complex your cloud infrastructure gets, the more risky it might be. That’s why we always recommend partnering with a quality assurance expert to ensure nothing has been left to chance.

What are customers’ expectations of our company?

If your customers are like most today, they expect secure, functional mobile solutions that integrate seamlessly across devices and with other apps. No small feat—how will the cloud help you get there in the best way?

The answers to some of these questions might be enough to drive you away from the cloud, and if it isn’t the right

solution for you, that’s probably a good thing. Not every IT company would be willing to say that, but we are. But for those who are ready to benefit from a cloud transition, these answers can provide the foundation for deciding what applications to move to the cloud, and how to approach the process without compromising performance or the bottom line.



3. GET TACTICAL

The great thing about the cloud is that it’s a blank slate, where almost any type of software can be developed. If you’re looking for a custom solution to meet your exact needs, the development environment to build it is there, or if you’re looking for a ready-made solution, those are available too. That accessibility has the potential to be dangerous: Projects can spiral out of control in a million directions. So now that you know what you want to use the cloud for, and why, it’s time to get practical: the lady in “Stairway” may be “sure/All that glitters is gold,” but any savvy business leader knows otherwise. The greatest ideas about how to use the cloud, and the best planned outcomes imaginable, will never come to fruition without a carefully developed strategy grounded in practicalities. What kind of hybrid cloud solution will meet the needs you just figured out?

It’s important to remember going in that no two departments or businesses use the cloud in the same way. Some may never get much deeper than file sharing apps like Google Drive and Dropbox, internal messaging and

social services like Slack or Chatter, or a web conference service like Amazon Chime or UberConference. Others build custom software in the cloud to serve themselves and their clients according to their vision. Some companies, like banks and insurers, need to support both kinds of users at once. Just like your business is unique, so too will be your own little corner of the cloud.

Businesses who have already completed the cloud transition tend to use a mix of private and public cloud storage. According to a 2017 survey by RightScale, companies now run 79 percent of workloads in the cloud. Of those, 41% run on public clouds and 38% on private data centers the businesses themselves maintain. However, 85 percent of enterprises have a multi-cloud strategy, meaning they use both public and private servers. This is one way to control costs for applications where security isn't as essential, since public cloud servers are usually cheaper, or even free in the case of the Google suite. However, many companies want to ensure any application or software that contains sensitive customer or company data is stored on a private server.

There's also serverless architecture, an up-and-coming cloud approach. In these types of environments, custom "containers" of code remove the need for a server to constantly run, awaiting demand. Serverless architecture's potential to reduce costs is currently very dependent on the specific circumstances. but as innovation grows, we believe will show itself the way of the future, especially as quality assurance practices can be developed and applied. After all, the deployment of a cloud solution, whether it's replacing outdated servers or deploying a brand-new web app for customers, is only as successful as its long-term results.

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4. EVALUATE YOUR SECURITY NEEDS

That of course leads us to the question on everyone's mind: how secure is the cloud? This is certainly a valid concern for stakeholders at a business considering a cloud transition, but we believe it's one that gets overblown for the wrong reasons. Yes, the cloud puts businesses at risk, but often only because employees aren't properly trained in how to use the tools securely. In a Gemalto survey, it was reported that in the first half of 2017, there was a 13% increase in data breaches from the last half of 2016, and a 164% increase in stolen, lost or compromised records. However, the survey also found that a majority of these breaches were not caused by outside attacks, but rather by poor internal security practices.

The answer to our original question is this: the cloud is as safe as you make it. Employees must be trained on security best practices, and the policies around data security must be followed and enforced. If you choose a public cloud provider, make sure you or your IT department understand their security practices and data recovery strategies in case of disaster.

In addition to organizational best practices, third-party quality assurance can be used to identify these risks before they strike. Before actually installing your cloud solution and migrating all your data, experts can test your new software to make sure it integrates with your other tools and works smoothly. They can also identify any unknown

security risks or other concerns that might catch you unawares.



5. PLAN FOR THE NEXT STAIRCASE

Speaking of planning, other stakeholders hesitate to transition to the cloud because this shift represents a loss of control. Without owning an application and being in charge of how it grows and adapts, it can be a challenge to use it long term. We can all relate to this problem on a micro-level considering our operating system updates. Whether it's Microsoft, Android, or Apple, sometimes the updates just change everything and frustrate users. Perhaps that's one of the reasons only 34% of businesses said they planned their IT strategy beyond 12 months when surveyed in May 2017. You might think this lack of planning empowers you toward more flexibility, but it actually makes your business less agile. A lack of strategic planning means that in the time between conversations, your business is losing an edge while others hone theirs to market dominance.

Planning an IT strategy that includes the cloud long-term means carefully considering not just your current balance between public and private cloud servers, but what you might need in the future as your business grows. Be prepared to assume the additional costs for extra cloud storage, even if you won't be needing to until eighteen

months from now. You should also think about your customer: What role do online applications play in your business now, and how might that change in the next two years? Lastly, those planning to use the cloud long-term should try to avoid creating any bottlenecks or single points of failure in the system. For instance, if a single portal houses all your data and information, what will you do when the application is down and the provider won't answer the phone? Diversify your access points, plan for emergencies, and most of all, as we said earlier, double and triple check security often.

In fact, as the initial phase of your journey to the cloud concludes, it will be clear that you cannot, "with a word.../get what [you] came for." Any and every activity in the cloud needs to be supported by rigorous, structured, documented self-scrutiny and quality assurance testing. The internet is now an essential part of human life, and as a result, businesses must safely and holistically integrate it into their processes to stay relevant. A cloud migration is not usually an easy process, we'll be honest, but when well-managed, it can be an unbelievably beneficial one. Cloud computing offers businesses the opportunity to use customized, agile solutions to drive success. Good luck on your path—if, as you "wind on down the road," your shadow gets taller than your soul, and you need a quality assurance partner, give us a call.

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