7 Essentials

for a Successful Cloud-First Transformation

The critical stages that will get your
whole business safely into the cloud

Cloud in the enterprise has grown up.
It's no longer just a sandbox for developers,
or a sneaky backdoor way for business units
to get more IT resources fast.

Now, IT leaders are seeing the big picture:
cloud as the de facto model for delivering
the whole of IT to the whole of the business.
Increasingly, they're adopting a
Cloud-First mindset.

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And increasingly, they're finding no good reason
to keep that app or workload on-premises.

If you're thinking along the same lines, you're in
good company. Today, global corporations like
Time, Inc. and Netflix run their entire business
in the cloud.

All of them have made the journey from data centre
to cloud, and shown how to do it successfully.

We've captured the seven essential elements of
that journey in this ebook. It's a template for CIOs,
CTOs and other IT leaders who have an ambitious
Cloud-First vision, and who want to make sure
the whole business is along for the ride.

One thing to note before we start:
The seven essentials aren't necessarily a linear
process. How you structure your cloud journey
is up to you – but you should certainly evaluate
every one of these stages as you progress
on your journey.

Enjoy the ride!

Executive Buy-In

For any business that's currently running its own data centre(s), going Cloud-First is by definition a transformation project. And successful transformation projects are always driven by a senior executive.

Without that buy-in, you might get a few apps into the cloud, but you won't get the gnarly stuff there: the legacy systems, the customer databases, the back-office ERP.

You know the end result will be worth the hassle. But with no business sponsor, the minute things get difficult, others may become sceptical – and your progress will slow.

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Experience dictates that you get them on board by appealing to their own priorities. Which business pain points are they most concerned about – and how can cloud solve them?

For example

▶ The CEO may be concerned about staying ahead of competitors.

▶ The CIO may be feeling pressure to deliver new services faster and more efficiently.

▶ The CFO may be fretting about cash flow and looking for ways to save money.

▶ The CMO may be itching to respond faster to market changes, experiment with new approaches or make smarter use of analytics.

▶ And the CISO may be exercised by the need for more visibility, auditability and control.

If you can get buy in from all of these people, great. But if you can demonstrate even to one of them that making the journey to cloud will deliver the benefits they're seeking, you'll have a powerful sponsor. They'll be able to evangelise for you, and keep the whole business focused on why we're moving to cloud and what we'll be able to do when we get there.

PRO TIP
To keep your sponsor on board and cheerleading for you, you'll need to achieve some quick wins that align with their priorities – see Essential #3.

Resources to Help You Get Executive Buy-In:
How to partner with top execs
Business value of AWS
Gartner Magic Quadrant
IDC business assessment

amazon
web services

Aligning IT Staff

On the journey to cloud, you don't just need exec buy-in. You need your whole IT team on board – committed to achieving the vision, and prepared to work in completely new ways.

All evidence suggests that most techies love it. And what's not to love – cloud is a chance to learn new skills, play around with new ideas, test stuff out to see how it works, and actually make a difference to the organisation.

Most people will snap your hand off to get at some of that. But you may find that some of your people resist change. And any resistance will at best hinder your progress, and at worst derail the whole venture.

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So here's what you do:
Be very firm and clear about the certainty of the cloud journey: it's non-negotiable, there's senior exec sponsorship, and the results will be transformative for the business. You need everyone on board with you, engaged and excited for what the future will bring.

Of course there are bound to be worries – your data centre team will soon find themselves operating in a hybrid world, with progressively less on-premises infrastructure to manage, and an abundance of new and innovative cloud technologies to master. So it's essential that you articulate exactly how their role will change, over what timescale, and what opportunities they will have in the Cloud-First world.

When everyone's on board, you need to think seriously about skills. Great cloud skills are scarce, and in huge demand. So the best approach is to upskill your whole team as fast as you can – maybe using an external provider or partner for some rapid knowledge transfer.

Bear in mind that it's not just hard skills like learning the best way to move applications to the cloud (lift and shift, or re-architect?), or how to use emerging cloud-based services. A cloud environment is one of continuous delivery, integration and testing – which means your developers will need to work in concert with your operations people in a DevOps culture. So for best results, build both tech skills and workstyle skills into your training plan.

Resources to Help You Align Your IT Staff
Find comprehensive AWS training resources at
http://aws.amazon.com/training

Get Some Quick Wins

If you're committed to Cloud-First, it means that, at some point down the road, you're going to be moving some or all of your gnarlier systems to the cloud.

Before you start asking people to work on the tough stuff, you need to prove that the journey is worth it: that there are fantastic, tangible benefits from going to the cloud. And to keep everyone engaged, it's best to do this as quickly as possible.

The most effective way to do that is to get some quick wins. Identify one or more applications or workloads that can move quickly and easily to the cloud, and which will deliver very visible benefits to the organisation.

But which ones? Your existing apps are likely to have integrations with other systems that will complicate and slow down the move to cloud. So it's best to start with a net-new application, one that will deliver immediate and tangible benefits.

Look for apps that the business needs to meet its goals, but which have previously been deemed impractical to implement on-premises – perhaps because they're resource-hungry, or will only be needed occasionally, or would have meant a high-end hardware investment.

The need could come from anywhere in the organisation, but for best results, look for something that's personally important to your executive sponsor. What kind of app would accelerate innovation in the business, for example? What analytical functionality does Marketing need in order to go real-time?

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By identifying something really valuable to the business, setting it up really quickly in the cloud and starting to deliver immediate benefits, you'll show the organisation the real, tangible value of Cloud-First operation. Plus, your team will have gained valuable experience and skills in setting up and managing high-profile business apps in a cloud environment.

AWS Resources to Help You Get Quick Wins
Dev and test on AWS
Unilever case study
Nisa case study

Engage Partners

Even as you're learning and building experience, you can get some quick and valuable wins under your belt (see Essential #3). But as you start to turn your attention to your business-critical and/or legacy apps, the challenge starts to ramp up.

This is where you should consider enlisting the help of people who build, manage, transition or integrate critical IT systems in the cloud every day.

Try mapping the vendors wwhose applications you use against the accredited partners list maintained by your cloud provider.

Your cloud infrastructure or platform provider should be able to offer guidance and training. If that's AWS, we have a wealth of scheduled and bespoke training courses that can help, and our Professional Services division can provide consultancy and onsite assistance with your cloud transition. We also offer a free Cloud Adoption Framework (CAF), based on real-world best practice, to help you plan your cloud journey. If you're running packaged applications from

independent software vendors (ISVs), those vendors should be able to help, too. Try mapping the vendors whose applications you use against the accredited partners list maintained by your cloud provider. Again, if you go with AWS, you can browse our AWS partner network to identify ISVs who've ported their applications to our cloud platforms.

Thirdly, you may already have an established partnership with one or more systems integrators (SIs). These consultancies will almost certainly have established cloud practices to help clients reap the benefits of Cloud-First. They can help you draw up your Cloud-First strategy, and create a roadmap and action plan for putting it into practice.

A word of caution: if you bring partners and consultancies in to help with your cloud journey, it's essential to have your team work alongside them, and fully absorb the skills, knowledge and practices that come with a Cloud-First transition.

Your aim should be to learn everything you can from the external partner with a view to becoming self-sufficient once the initial transition period is over. As we've seen, life in a Cloud-First world is one of continuous development, testing and integration, so your team need to learn the skills to be able to operate in that way indefinitely.

At AWS, this is exactly the aim of our professional services team: to effect a full knowledge transfer so that the client's team can run in a business as usual fashion without further help. Other consultancies may try to persuade you that you need their help on an ongoing basis, but your aim should be to try to become as self-sufficient as possible as quickly as possible.

Resources to Help You Engage Partners
AWS Partner Network
AWS Professional Services

Establish a Centre of Cloud Excellence

We've already stressed a couple of times that once you're operating in a Cloud-First world, a DevOps style of operation becomes the norm.

In a DevOps scenario, your development and operations teams work closely together to build, test and deliver continuous iterations of your technology assets.

In this world, it's not uncommon to make and implement 4-5 updates to a given app in a given day. It's a far cry from the days when dev teams would work on an app until it was 'finished', then pass it over the wall to the operations team to implement and manage.

In the world of DevOps, you'll need to implement and instill a whole new set of working processes and a whole new working culture. And that's why it's critical to establish a Centre of Cloud Excellence as early as possible in your Cloud-First journey.

Your Centre of Cloud Excellence is a formal DevOps team whose job it is to establish and promote best practice throughout the IT function. It will probably include people from both development and operations, and you may want to include some IT security folk as well.

It may or may not be the team who worked on your first enterprise cloud projects. And you may or may not call it a Centre of Cloud Excellence. But one thing's for sure: this is where your journey to Cloud-First really accelerates – and this team is what keeps it on track.

So what should the team do? Its aim is to establish a culture of DevOps working, so it will do everything it can to define, communicate and oversee that culture. You'll probably want it to be responsible at least for the following:

Establishing best practice and company policy	Implementing monitoring
Making sure teams are cost-optimising	Automating as many processes as possible
Ensuring security is rock-solid	Addressing any barriers to adoption
Setting architecture guidelines	Setting build vs. buy guidelines
Maximising reusable technology	

An important thing to note: the Centre of Cloud Excellence is essential, but it shouldn't be a permanent fixture. The team should aim to put itself out of a job as soon as possible – by making DevOps second nature throughout the IT function. Once this is complete, the team can return to their day job and Cloud-First becomes business as usual.

Resources to Help You Establish a Centre of Cloud Excellence
AWS CloudWatch
AWS CloudTrail
AWS OpsWorks
AWS CodeDeploy

A Hybrid Adoption Framework

While many organisations have ambitions to move 100% to the cloud, the realities of enterprise IT mean it's likely to be a long journey.

Inevitably, there will be a period – which could last for some years – where you're operating a hybrid model: with some apps and workloads in the cloud, and others staying on-premises. The job of the CIO will be to continuously prioritise and re-evaluate what to move and what to keep, especially as the pace of innovation in the cloud opens up new opportunities virtually every day.

During this time, you'll need to continue to communicate the Cloud-First plan, especially as

If you're committed to Cloud-First, you'll need a well thought-out hybrid strategy that sees you moving portions of your legacy apps into the cloud, with a view to eventually shifting everything that will move.

that plan evolves. You'll need to keep your data centre team updated on when and how their roles

will change, and make sure they get appropriate experience and training to make the most of what cloud has to offer.

Because this dual-mode stage is not going to last forever. If you're committed to Cloud-First, you'll need a well thought-out strategy that sees you increasingly moving legacy apps into the cloud - including the big, monolithic, complex legacy applications that are critical to your business.

A small proportion of these legacy apps will never go into the cloud. These are the ones for which there's a good answer to the basic Cloud-First question: "Why NOT cloud"? It may be that the data is too sensitive, they can't be re-architected, or there is no viable financial or business advantage from moving them.

But for any application where there is a compelling argument for cloud, you'll need to set to work – pulling them apart and refactoring them into decoupled components that are better able

to benefit from cloud architecture. This is a huge task and by far the biggest step towards Cloud-First. Getting it right will require close co-operation between cross-functional teams, expertise and skills gained from engagement with partners (see Essential #4), and the guidance of your Centre of Cloud Excellence (see Essential #5).

Getting everyone on board and having a well thought out, well documented and well communicated hybrid strategy will make this transition period much easier to manage and much faster to complete.

Resources to Help You Implement a Hybrid Adoption Framework
Johnson & Johnson case study
St James Place case study

Reaching a "Cloud-First Standard"

Cloud-First is all about shifting the enterprise IT mindset from "Why cloud?" to "Why not cloud?" In this new world, you need a really convincing argument for keeping something on-premises.

And as cloud skills proliferate, DevOps becomes more embedded and cloud providers roll out more and more useful services, there are fewer and fewer arguments for keeping apps,

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data andworkloads on premises. The alternative is just too compelling:

- Much, much lower IT costs
- The agility to move faster than competitors
- An on-demand environment for experimentation and innovation
- Near-infinite resources to support game-changing initiatives

This is where every organisation wants to be – and when Cloud-First becomes your standard, you're there. You can move fast, deploy new services globally, improve your security posture, free up real estate, innovate on the fly, and respond to changes in an instant.

And in a market where so many organisations are held back by the many constraints of ageing on-premises systems, that's a huge advantage.

Resources to Help You Reach a "Cloud-First" Standard
Accelerating business innovation
Innovate with DevOps
AWS Marketplace

Conclusion & Next Steps

Moving to Cloud-First may be the biggest re-engineering of enterprise IT since minicomputers replaced mainframes / web-based apps replaced client-server *(delete according to how old you are)*.

You don't do change like that in an ad hoc way. Rather, you learn from those who have been there, done it, and transformed their organisation for the better.

The Seven Essentials outlined in this ebook are drawn from the experience of some of the world's most successful cloud practitioners, and some of the biggest enterprises on the planet. We hope it inspires you to follow in their footsteps.

And if you need some guidance along the way, AWS can either help directly or point you in the right direction.

Ready to learn more?
We've got lots of resources that will help you plan, manage and execute a Cloud-First transformation. Here are just a few to help you on your way.

Preparing for cloud
Cut through the waffle and mythology surrounding cloud security, compliance, culture, expertise and performance.
What They Don't Want You To Know About Cloud

Following cloud pioneers
Find out how Time Inc., Phillips and Nike have put Cloud-First mindset to work to achieve major benefits.
Watch These Short Videos

Are you ready for the next step?
Then it's time to give us a bit of detail on who you are and what you're doing and we'll get back to you to get the ball rolling. It will only take a couple of minutes of your time.
Contact Us