



# Microsoft Azure: Making Cloud Migration easy

**A step-by-step Azure  
migration guide**

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**A PARALLO EBOOK**

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Microsoft  
Partner

Gold Cloud Platform  
Gold Application Development  
Gold DevOps  
Silver Security

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# Chapter 1

## Great cloud platforms are seen not heard



**As a growing, ambitious software venture can you afford to be grappling with cloud platform issues? The platform your product sits on is a foundation to success. It is key to the scalability, flexibility, security and performance of your solution – but in many ways it is a ‘table stake’, something you must have to play the game.**

Do you want to free resources to focus on the continuous innovation of your product while keeping customers satisfied and engaged? Shouldn't you be able to forget about your cloud platform and focus on what really, really matters?

Migrating to Microsoft Azure is a strategic option for software application developers, SaaS creators and ISVs wanting to leverage a rock-solid platform while focussing on the innovation that drives their business growth.

This eBook is aimed at helping software application developers, SaaS creators and ISVs decide if a move to Microsoft Azure is the right path, and the steps to take to get there.

## Chapter 2

# Why migrate?



**Microsoft Azure provides the capabilities to extend the power of ISVs, levelling the playing field against competitors so they can focus on building great ideas and disrupting markets. Not only that, but Azure enables increased productivity and reduces operational costs. Azure provides ISVs with the capabilities to meet growing customer demands for agile, intelligent microservices.**

Microsoft Azure enables ISVs and SaaS creators to act faster, continue to innovate, and pivot their operations to what matters most.

So what are the main reasons a business might be considering a move to Azure?

## **Greater scalability and global market reach**

If you're using a local hosting platform, and you're looking to sell your services to customers in Iceland, the distance would have a negative impact on the user experience. Azure eliminates these performance issues with data centres across 61 different regions around the world. What this means is that ISVs can really leverage the scale and reach of Microsoft to access new markets quickly and be close to their customers.

## **Innovation capabilities**

For any business in the software application industry to remain competitive and relevant, continual innovation is essential. Microsoft Azure provides the capabilities to innovate rapidly and keep products moving forward, which gives ISVs a significant competitive advantage.

There are a number of out-of-the-box features that come with Azure; for example, Azure Communication Services. It delivers video, voice,

chat, and text messaging experiences anywhere users are - across applications, websites, and mobile platforms. So if an ISV is looking to integrate text messaging into their application, all they need to do is point to the Communication Services API and it's ready to use - hardly any coding is needed. Compare this with a locally hosted platform that would require building this feature from scratch, and you can see how quickly an ISV could be left behind.

## **Security**

Microsoft invests over \$1 billion per year in security services across their platforms. The features that are built into Azure - even those that come out-of-the-box - are built on leading-edge technology. Built-in security controls and unique threat intelligence identify and protect against rapidly evolving threats. The security tools and capabilities make it possible to create secure solutions on the Azure platform, while also ensuring confidentiality, integrity, and availability of customer data.

## **It's a more cost-effective solution**

Now more than ever, businesses are looking for ways to reduce costs, and ISVs are no exception. If you've been running on servers or virtual machines, you've probably noticed it's becoming increasingly expensive. Migrating to Azure - especially if it's done by a partner who includes modernisation along the way - means you end up on the Platform as a Service (PaaS) elements of Azure. These are far more granular and flexible in terms of scale; what this means is you only pay for what you use, and you can use a lot less when there's no load.

If you're looking to gain more traction in the international marketplace, seeking ways to innovate swiftly, if you understand the importance of being protected by leading edge security and you need a cost-effective way of achieving all this, then making the move to Microsoft Azure is the path for you.

## But wait, there's more – additional benefits of migrating to Azure

We've looked at some of the key drivers of deciding to migrate to Azure - global market reach, rapid innovation, heightened security and cost-effectiveness - and these are all obviously significant benefits as well. However, they're not the only ones.

Others include:

- **Automation** - Azure features out-of-the box tools with a significant amount of automation capability, including automated scaling to meet increased demand with instant reporting on what factors drove the increase. This will considerably improve overall service delivery
- **Increased speed to market** - with the robustness and scalability of the underlying technology, and the streamlined service delivery, ISVs can improve their software development practices and increase their release cycles
- **Cloud Confidence** - due to the optimised design of the environment, as well as enhanced monitoring and management, customers typically experience very high levels of availability if their application is architected correctly.

Microsoft Azure is ideal for those who want to realise value faster. Your application in Azure provides natural cloud benefits with the advantage of being able to rapidly scale out services, and it's the perfect platform to get your app to market quickly.

## Chapter 3

# Migration risks and how to mitigate them





At Parallo, we have years of experience building and migrating applications to Azure, so we've seen some of the pitfalls of migration. Not migrating with a planned and professional approach could potentially compromise your security, performance, availability and cost.

## The Azure footprint needs to be proactively managed

The issue here - and it's a common one - is people putting monitoring tools in place but not actually looking at them. It's all very well to have great visibility of what is going on, but if no one is paying attention to the alerts, it's pointless and whatever issues have been detected will remain.

At Parallo, we offer a mature [Managed Service](#) to proactively manage your Azure footprint, leveraging an application called Parallo Runtime. It's about knowing what to do when something happens:

- It enhances automated scaling and scheduling services to shut down
- It has automated self-healing actions to ensure performance and availability are always met
- It's an integral part of managing Azure comprehensively, while minimising the human cost
- It can incorporate bespoke self-healing processes to ensure continual improvement of the user experience

What we do is prevent the alerts becoming a torrent of information that's difficult for people to sift through and separate the important alerts from the non-important ones.

## Sprawl: A cost management, data governance and security issue

One of the benefits of cloud is the ease with which you can spin up new offerings. Unfortunately, it's also one of the pitfalls you need to be mindful of, because it can be an issue with cost management, security and data governance. For example, if your team is testing a new service, they may spin up a virtual machine and use production data to conduct the test. They might need remote access to the server, so they configure it to receive remote access requests, but if they do that in an incorrect manner, it could enable others to also access the server remotely and increase your attack vectors.

## A move to the cloud means a shift in mindset

It's a mistake to approach Azure with traditional IT thinking, trying to fit traditional models into the cloud world. Cloud changes some of the requirements and enforcing traditional IT models on cloud services can add complexity and create bottlenecks that can affect performance, availability, cost, and potentially security.

So how do you avoid these pitfalls? What's needed is governance and frameworks. When we're working with clients on Azure migrations, governance is at the forefront of what we do. Setting out from the start who can do what, who has the right to turn things on and off, who can see data, naming conventions and more are critical and can ensure that security, performance, availability and cost are always optimal.

## Bill shock

If an organisation starts using any public cloud without some form of governance and management in place, they're likely to end up with 'bill shock' i.e. unexpected escalations in cost. This happens when:

- Services are turned on and then forgotten about
- Services are scaled up without fully comprehending cost impact
- Errant applications wreaking havoc and scaling automatically or driving massive logging costs

Managing cost and ensuring there isn't bill shock isn't that difficult with clear governance and management in place, including having policies around who can authorise new services and so incur costs. Those people need to be made fully aware of the significance, and consequences, of any decisions they make.

It's important to get cost management in place **before migrating**, so that during the migration process, when many consumers might be new to Azure and turning on objects they may not understand the cost implications of, there are protections in place.

## Not keeping up with new features

There are new features coming out in Azure every week and in many cases they're cheaper, more secure and just plain better than their predecessors. However, keeping up with new developments is hard to do when running a business; it's time-consuming and never-ending.

## Not designing for resilience

No cloud provider can guarantee 100% uptime. There will occasionally be hiccups, so if your application needs very high levels of uptime, you need to ensure you design your application to be resilient, just as you would for on-premises applications.

[Read more about bill shock and how to avoid it](#)



## Chapter 4

# Migrating from legacy infrastructure – what to keep in mind



**It's important to conduct a thorough assessment of what your business requirements actually are, before migrating to any cloud platform. Specifically:**

- **On-premises** - you've already got sunk capital costs; you've purchased servers and storage. What can happen is that an organisation can get complacent when dealing with performance problems. Rather than finding out what's causing the problem, it can be quicker to just add more RAM or CPU. If that happens in the cloud, it's going to become very expensive very quickly, because everything that gets consumed has to be paid for. So it's important to keep in mind that there's a significant cultural change in moving from on-premise to a cloud platform, and that it has to be approached differently. The solution of just throwing 'more power' at an application or service will rapidly cause cost blow-out.
- **Other Public Cloud, e.g. Rackspace, AWS** - Make sure that the components of any application, when transferred to equivalent features on Azure, are specified correctly and that they work and behave the same way as the platform they've originated from. They need to be thoroughly tested before moving across.

If your Cloud migration is a "lift and shift", make sure to right size on the way across. This means understanding the actual load requirements of your workloads and sizing appropriately in the cloud. It's pretty easy to scale up a resource; however, depending on its type it can be challenging to scale down.

- **Private Cloud or other hosting provider** - Keep notice periods in mind, because you don't want to be paying for two cloud platforms at the same time. There can also be hurdles and roadblocks getting off hosting provider platforms, so bear in mind timeframes and requirements and plan early.

Sometimes it's challenging to get co-operation and participation from other public or private cloud providers; obviously it's not in their best interests to lose you as a customer. That's why it helps to have a partner like Parallo perform or assist the migration; we're experienced in dealing with all parties and ensuring a smooth transition.

## Chapter 5

# How do we do it? The Parallo approach



We've developed a specific methodology for ISVs and SaaS creators to migrate applications from on-premises or other cloud environments to Azure. Designed to minimise risk and maximise value it's based on four phases:

### 1. Phase One: Discover & Assess

Parallo Azure Solution Architects will conduct a high level discovery and assessment workshop to understand what you have, how you use it, what can migrate, and what can modernise on the way or once there.

### 2. Phase Two: Design & Plan

The Parallo team will drill down into more detail, and produce an Azure Application Framework specifically for your app(s). The App Framework details what components to use and how to setup Azure to ensure your App is secure, performant, and highly available. Costs will be optimised, and you can rest assured that utilisation of Azure is to a known good design.

### 3. Phase 3: Migrate & Modernise

Parallo will execute the Migration plan; create the appropriate Azure environments, build the deployment pipelines, and deploy your app to Azure using automated deployment methods.

### 4. Phase Four: Monitor & Manage

We configure Log Analytics, App insights, Security Centre, Sentinel and other alerting and monitoring to ensure that your App is secure, available, performant and cost appropriate. Parallo can handover monitoring and management to customers teams, or provide 24x7 services ongoing.

**Learn more about our four-phase methodology**



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## Why Parallo?

We believe that it's essential for you and your business to focus on your product – after all it is your business. We take away the technical noise of running SaaS apps, so you can zero in on product, prospects, people and customers.

As specialists in IT infrastructure and cloud transformation, we focus on customer solutions across both Microsoft Azure and on-premises infrastructure for our clients in New Zealand and Australia.

As a result of years of managing complex Azure environments we have collated our extensive IP to create the Parallo Runtime Automation Library. Runtime monitors, manages and self-heals our customers Azure environments. By leveraging Runtime, Parallo customers take advantage of a proactive service that ensures security, performance, availability, cost and compliance are monitored and managed effectively. With regular reporting you'll have total transparency of your public cloud service, preventing bill shock and facilitating informed decision-making. With 24x7 monitoring we proactively identify potential issues and take immediate steps to prevent any service disruptions.

Acting as a natural extension of your existing team Parallo have designed the Cloud Platform Management service to streamline your cloud adoption. As a core component of this service we proactively manage your public cloud consumption and put cost control mechanisms in place, along with presentation of your resources in a meaningful manner, so that you can ensure accurate billing and gain business insights. For example, we automatically analyse your spend every day, and using machine learning we detect anomalies and alert you if your usage is abnormal. For optimal consumption of public cloud resources, we regularly undertake right-sizing exercises to ensure the best possible configuration and eliminate any potential waste.

The unique value you receive lies in the personal attention and deep knowledge that we gain about your business, and our ability to tailor a service that is closely aligned to your requirements, and particular issues and opportunities.

# Conclusion

We know that you have a lot on your plate with continual innovation and development, keeping teams on track, meeting customer demands, and seamlessly delivering applications to market. Microsoft Azure is the ideal platform to develop and deliver your products rapidly, ensuring you remain competitive, relevant, and ahead of the curve. Hosting your software in Azure provides the natural cloud benefits such as access to highly secure, scalable, on-demand infrastructure with global reach. Most importantly, you'll have the ability to rapidly spin up or scale out services, so you can deliver your product to market faster.

Microsoft Azure Cloud Services offers ISVs and SaaS creators the ability to do away with high costs associated with owning and maintaining on-premise hardware. It is highly secure, highly compliant, massively scalable, and the ideal platform to get your app to market quickly.

**Start your Microsoft Azure migration with Parallo today**



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