



# Cloud Platform Commandments for Healthcare

How to maximise performance and  
optimise costs in Microsoft Azure

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by Symon Thurlow, Co-Founder & CEO

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# Contents

Common cloud challenges – do they sound familiar? .....	3
The promised land: Azure Well-Architected Framework.....	5
Commandments for building your cloud team .....	7
Commandments to cover Azure Cloud Platform fundamentals.....	9
Commandments to evolve your own platform with automation .....	11
The future of Healthcare with Microsoft Azure .....	13
The Parallo Approach: Proactive & Reactive CPM Services .....	14

# Chapter 1

## Common cloud challenges – do they sound familiar?

The sweeping technological shift to Cloud and Software-as-a-Service is not without its challenges. Some ISVs and SaaS providers in the Healthcare sector recognise they might need help navigating the cloud computing landscape, to identify the best ways of optimising operational costs, while coping with rapid growth and evolving customer demand.

When it comes to the management and governance of a public cloud platform like Microsoft Azure, businesses often struggle to balance between capitalising on the innovation available while also managing performance, availability, security and costs.

### Common cloud challenges typically include:

- **The realities of life as an ISV or SaaS provider** - the focus should be on dealing with rapid growth and product demands, not wasting time on the 'technical noise' of platform management. This can result in a reactive response to issues rather than a proactive approach.
- **Bill shock** - this usually happens when a business uses more Azure resources than they expect. Training, testing, research, managing daily costs, lack of appreciation for resource costs, sudden issues causing log file bloat – and these are only a few ways unexpected costs can arise. [Learn more about bill shock and how to avoid it.](#)

- **Getting proper cloud governance in place** - complex management and siloed teams with diverse processes are barriers to effective cloud governance. Without it, companies experience resource sprawl, and lack of naming conventions – which leads to difficulty scaling and poor platform security.
- **Inconsistent platform monitoring approaches across siloed teams** - configuration oversights, lack of full stack visibility, no documented processes for monitoring IaaS, PaaS and containers.
- **Availability issues** - outages and interruptions do occur, and without robust platform management controls in place, these can have a significant impact.

When these challenges aren't met, businesses can be overtaken as their competition beats them to the feature punch. Not only that, but business growth can stagnate, as you can get bogged down fighting fires instead of focussing on building solutions.

In this eBook, we'll take you through the Cloud Platform Commandments to help you meet these challenges. The goal is to eliminate technical noise and platform distraction, so that your business can achieve its performance, security, and availability goals with Microsoft Azure, with minimal costs and risks.

## Chapter 2

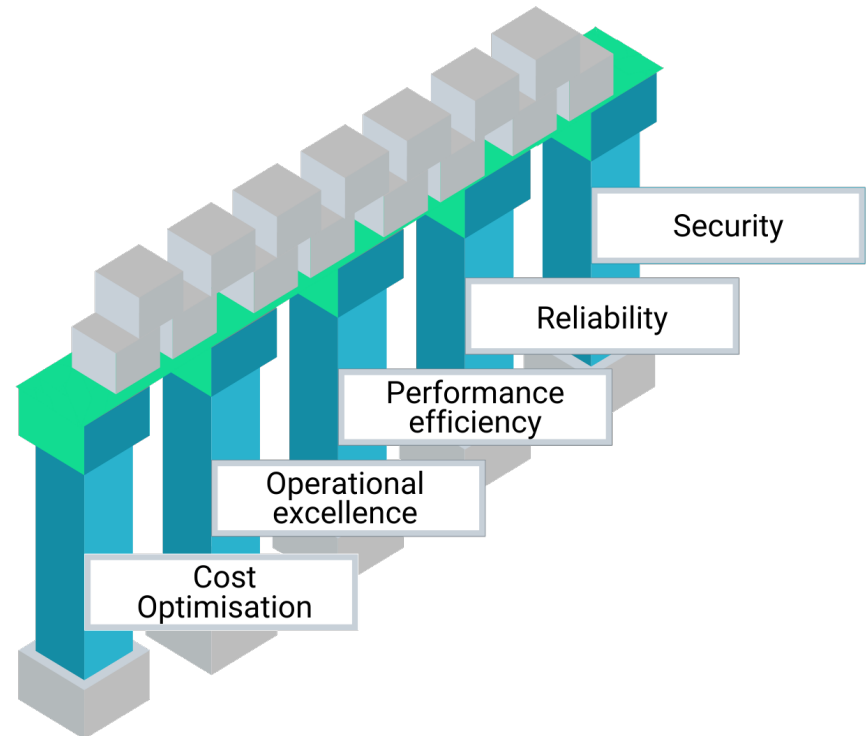
# The promised land: Azure Well-Architected Framework

The [Microsoft Azure Well-Architected Framework](#) is a technical guide for workloads in the cloud. It consists of five pillars of architecture excellence that ISVs using Azure should aim for:

1. Cost Optimisation - monitoring and managing your Azure bills by setting budgets, allocating sufficient resources and forecasting future spend.
2. Operational Excellence - complete visibility into the health and performance of your application to ensure the best experience for your customers.
3. Performance Efficiency - matching demand with resource availability, being able to scale up or down while maintaining performance.
4. Reliability - agreed upon availability and recovery processes according to business requirements, confident deployment of mission-critical systems.
5. Security - protecting applications and data from threats, being able to resist attacks, rapidly respond and recover from disruptions.

## How do you reach this promised land?

Based on years of experience with the Azure platform, Parallo has developed these Cloud Platform Commandments to help you find your way.



## Chapter 3

# Commandments for building your cloud team

As challenging as it may be to find the right people for your team, these roles are still essential to managing and maintaining your Azure platform.

### Cloud Commandment #1: Use solution architects to design your IT foundation

Build the capability to automate, create well-architected pipelines and remove roadblocks so that your developers can be more agile. To do this, your team needs a Solution Architect. They can do everything an infrastructure or technical architect does, but with a high-level strategic approach. They can analyse platform issues, develop best practises, and align the IT architecture to your business objectives.

### Cloud Commandment #2: Cultivate DevOps capability within your organisation

The Azure DevOps platform offers your team an end-to-end toolkit to develop and deploy software quickly. Your DevOps Engineers will be ultimately responsible for harnessing the platform to define and implement a robust, scalable, reliable, and realistic cloud solution that works for your customers.

**RESOURCE: A Microsoft Azure migration roadmap**

**This eBook** will help you learn how to accelerate and streamline your journey to Azure PaaS by migrating or extending your applications to Azure.

### Cloud Commandment #3: Incorporate a customer advocate within your product team

Site Reliability Engineering (SRE) is a way to approach this need. The role requires a customer advocate with operational experience (DevOps, System admin etc), who will provide a high-level perspective of the customer journey. They liaise with product owners, developers, and end-customers.

Their focus is to understand the customer's entire experience, and where it isn't great, to use application performance management tools to monitor and raise flags where necessary.

### Cloud Commandment #4: Azure experts that can liaise and lead the way

Your team must include Azure experts who are skilled scripters, capable of filling the gap between your operations and development teams and providing value to both. They are the go-to whenever issues with Azure crop up, and they keep up with all Azure updates and news so that whenever value can be added to the platform, they're on top of it.

The focus of these four commandments is to ensure that the Azure platform is being managed in such a way that it takes all the 'noise' and distraction away from the developers, so that they can just zero in on your product roadmap.



## Chapter 4

# Commandments to cover Azure Cloud Platform fundamentals

Public cloud platforms like Azure are a cost-effective, efficient, and technologically capable option for rapid application development and delivery, but you still need to drill down into the fundamentals to really get the most value out of them.

## Cloud Commandment #5: Choose PaaS over IaaS

We usually recommend that ISVs use Azure's Platform-as-a-Service (PaaS) over the traditional Infrastructure-as-a-Service (IaaS). PaaS reduces management overhead, freeing up your team to focus on their core tasks. You will also speed up innovation, increase workload resiliency and allow for easy future expansion.

The goal is to re-engineer your application and workloads to make full use of cloud-native services Azure provides. An added advantage of using PaaS over IaaS is pricing – with PaaS, the scale increments are much smaller than scaling per Virtual Machine.

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## Cloud Commandment #6: Constantly monitor platform usage, so you don't pay for what you don't need

Set up an automated process to understand usage, monitor change and perform remediation actions that would otherwise require manual intervention.

An example of this, is a daily automated process that we've designed to avoid bill shock, which analyses the last 24 hours of

reported usage and compares that to a three-day and seven-day average. If the last 24 hours exceeds typical average usage, then it automatically alerts teams so that they can pinpoint where exactly that extra usage came from.

Especially with Azure PaaS, it's crucial to optimise and organise your running environments so as to identify cost savings opportunities proactively. For example, another automated waste detection process we run will analyse your estate and flag where there are under-utilised resources, allowing your team to trim back.

**RESOURCE: 18 Azure cost optimisation tips to avoid bill shock**  
A list of **18 tips** to proactively reduce your spend in Azure.

## Cloud Commandment #7: Put security guard rails around your applications

It's universally agreed that security and data privacy are essential elements of managing any business today, particularly with the sensitive data Healthcare organisations have access to. We understand that sometimes managing your security posture in Microsoft Azure can sometimes take a back seat to more immediate business priorities. Azure Sentinel and Azure Security Centre are powerful tools within Microsoft Azure to ensure your platform is well protected.

If understanding these tools and getting the most out of the native security features of Azure is not high on your agenda, Parallo can help with simple managed security services in Azure, plus Application Security testing and vCISO consulting and advisory services.

**RESOURCE: Further, faster, safer: a security roadmap for SaaS creators and ISVs. A comprehensive security roadmap that leverages the power of Microsoft Azure, enabling you to get a complete picture of your security and compliance while continuing to focus on what you do best.**

## Chapter 5

# Commandments to evolve your own platform with automation



Automation is key to maximising the benefits of Azure. Although automated governance processes take time to build, the time-savings and consistency benefits of automation usually outweigh the effort required.

Collate all your IP into an automation library, one that monitors Azure environments 24x7 to ensure optimised behaviour across the 5 pillars outlined earlier - security, performance, availability, cost and operational excellence.

### Cloud Commandment #8: Ensure organisation-wide compliance by creating policies in Azure

When you first come on board with Azure, roll out a standard set of policies around the entire edge of the Azure footprint to ensure compliance, avoid misconfigurations and efficiently govern resources. Collect all the compliance information in a single centralised place so that you gain a clear understanding of governance.

With robust Azure policies, you can reduce the number of external processes in your organisation by implementing these policy guardrails into your Azure platform itself and increase developer productivity.

### Cloud Commandment #9: Evolve your automation library as you go

This is about developing custom scripts, processes, or containers to 'self-heal' recurring Azure issues. Once your set of alerts is in place, you'll start to identify any idiosyncrasies within your applications.

For example, there might be one component that falls over when it gets to a certain load. When you identify that - especially if you find out it's happening at 4:00 am, you can develop a 'self-healing' automation to ensure that solves the issue and you don't have to worry about any more 4:00 am calls - or more importantly, that it doesn't affect any of your customers.

### Cloud Commandment #10: Choose Azure Managed Services for reliable infrastructure and optimised expenses

If you've looked back over the previous nine commandments and are starting to wonder how you'll tick each of them off, Azure Managed Services is a great option. Bring in a team of readily available Azure experts to augment the management of your Azure footprint to minimise admin, optimise your costs and unlock business opportunities.

[Parallo's team of experts](#) can do this for you. We specialise in taking care of your platform, so you can take care of your product and free your focus.

# The future of Healthcare with Microsoft Azure

## Better patient experience, improved insights and unified data

Healthcare providers around the world are using technology to make fundamental changes in the way patient care is provided. Cloud capabilities are being integrated to enhance patient engagement and empower health teams with better clinical and operational insights, while ensuring privacy and compliance.

The [Microsoft Azure](#) offering for the healthcare industry is distinctive. It includes a range of services designed to deliver value faster and adapt to make more impactful decisions. Protecting patient data and ensuring privacy and HIPAA compliance are table stakes for healthcare infrastructure - something that Azure recognises and focuses on.

Azure brings together features to allow healthcare teams to gain a holistic view of the patient with insights for more informed, personalised care management including:

- Continuous patient monitoring for real-time and preventive care
- Improved health team communication and collaboration
- Improved clinical and operational insights based on centralised, up-to-date data
- Rapid data exchange and simplified management across various existing databases and systems
- Strict adherence to data sovereignty and industry compliance standards. (Azure covers more than 90 compliance certifications, including ISO 27001, and meets HIPAA regulatory requirements)

Since healthcare organisations make up a significant percentage of Parallo's customer base, we've developed our Cloud Platform Management and Security Services to leverage the competencies of the Azure platform and operationalise it for them.

We provide Health IT professionals guidance around efficient cloud platform implementation while ensuring HIPAA compliance, policies, safeguards and resources are in place. Our cloud adoption training program for technical teams ensures that once we've done the 'heavy lifting', your team can then manage the platform more effectively.

This is at the core of what we do. Our highly skilled team of experts will support you on your journey to transform your healthcare business.

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Cloud Platform Commandments for Healthcare

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Silver Security



# The Parallo Approach

## Proactive Cloud Platform Management

Staying across continuous innovation in the Azure platform, and how that applies to your use of Azure is a challenge. Add to that the need to proactively stay across security, performance, availability and cost, and you've got a big distraction away from your customers, prospects and product.

We offer a proven Cloud Platform Management service to suit your business and your unique needs. These include:

- The migration, design, build and running of Azure environments, from applications that only need a simple 'lift-and-shift' to Microsoft Azure, to total re-architecting and modernisation.
- An automation library - we've been managing complex Azure environments at scale since 2014. Over that time, we've collated our extensive IP to create the Parallo Runtime Automation Library. It monitors Azure environments 24x7 to ensure optimised behaviour across the 5 pillars of architectural excellence.
- App Transformation - we can transform your app to use the latest PaaS features facilitating automated scalability, lower cost, rapid deployment and lower operational overhead.

- Managing tech debt - we'll keep this to a minimum, while enabling the adoption of new technologies that move the needle. We'll clear out the backlog, ensuring that your app is leveraging the most efficient features, and not getting left behind.
- ChatOps – immediate access to our team via Slack or Microsoft Teams for advice and to answer simple questions so you don't get held up

With Parallo, you benefit from our direct line to Microsoft Premier Support, years of evolved experience, instant access to our massive automation library, and immediate access to and our extensive experience with the ISV niche.

*"With the Azure platform expertly managed by Parallo, we're now set up to be at the leading edge of the innovation curve."*

*- Mark McCaughan, Merlot Aero | CEO*

# Reaching the promised land

The Cloud Platform Commandments are focussed on optimising cloud platform management, specifically for Microsoft Azure. Automation is a key aspect of successful cloud platform management because it underpins everything else from cost savings to uptime.

As a growing ISV business, you already have a lot on your plate with increasing customer expectation and demand, staying ahead of the competition and seamlessly delivering applications to market. Our Azure Managed Services have their foundation in our desire to help you reach your full potential on the world stage.

Ultimately what we can promise is to free your focus to grow your products, prospects, and people.



If you'd like to learn more about how Parallo can help develop and enhance your cloud platform management strategy, [get in touch](#) and we'll have a chat about your requirements.

