



# Grow Your ISV Business with SaaS

Microsoft Practice  
Development  
Playbook



[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)

# About this Playbook

This playbook is intended for the business and technical leadership of independent software vendors (ISVs) that are considering building new applications, or transitioning existing applications using a traditional licensing and delivery model to using a software-as-a-service (SaaS) delivery mode.

## Objectives

The goal of this playbook is to help organizations that specialize in making and selling software, commonly referred to as ISVs, build or optimize an Azure-focused SaaS practice. This guide will help you understand how to define your practice strategy, hire and train resources, go to market, and optimize and grow your practice. Our goal is not to re-write the existing body of detailed guidance on how to perform any given recommendation; instead, we point you to resources that will help you.

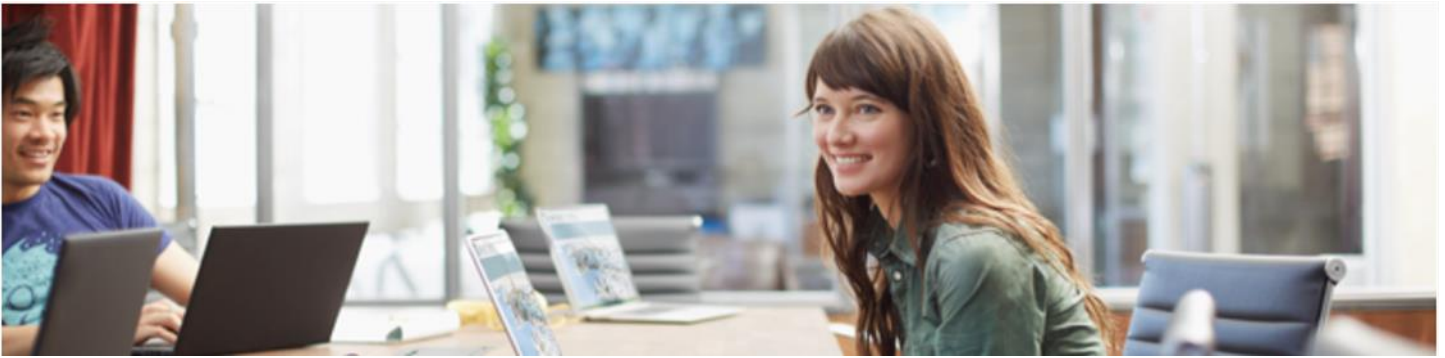
For the business side, this playbook provides valuable resources for driving new revenue opportunities, developing strategies for marketing, selling, and lead capture, as well as building differentiated and longer-term engagements with your customers through new service offerings like advanced data analytics, machine learning and business intelligence.

This playbook also offers technical guidance on several topics that range from key architectures and scenarios for building your SaaS app, to the technical skills your team will need and resources that you can use to accelerate learning as you get started and grow your practice.

## How this Playbook was Made

This playbook is part of a series of guidance that was written by Microsoft Partner [Solliance](#), in conjunction with the Microsoft One Commercial Partner group and other successful partners that have volunteered their time to provide input and best practices to share with the rest of the partner community.

To validate the guidance provided in this playbook, we worked with MDC Research to conduct a survey of 463 global partners. In this survey, we gathered insights on a range of topics, including how partners hire, compensate, and train resources; their business model, revenue and profitability; what practices and services they offer; and what skillsets they have in place to support their offers. The results of this survey are provided in line with the guidance found within this playbook.



## Using the Playbook Effectively

Review the playbook to familiarize yourself with the layout and content. Each section includes an executive summary and key actions for that specific topic. Review these summaries first to decide which areas to focus on. Go over content several times, if needed, then share with your team.

### TO GET THE MOST VALUE OUT OF THIS PLAYBOOK:

- Get your team together and discuss which pieces of the strategy each person is responsible for.
- Share the playbook with your sales, marketing, support, technical, and managed services teams.
- Leverage the resources available from Microsoft to help maximize your profitability.
- Share feedback on how we can improve this and other playbooks by emailing [playbookfeedback@microsoft.com](mailto:playbookfeedback@microsoft.com).

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# Partner Practice Development Framework

The partner practice development framework defines how to take a SaaS practice from concept to growth in five stages. It is the foundation of this playbook, and each phase of the framework is covered in a dedicated chapter in this playbook.



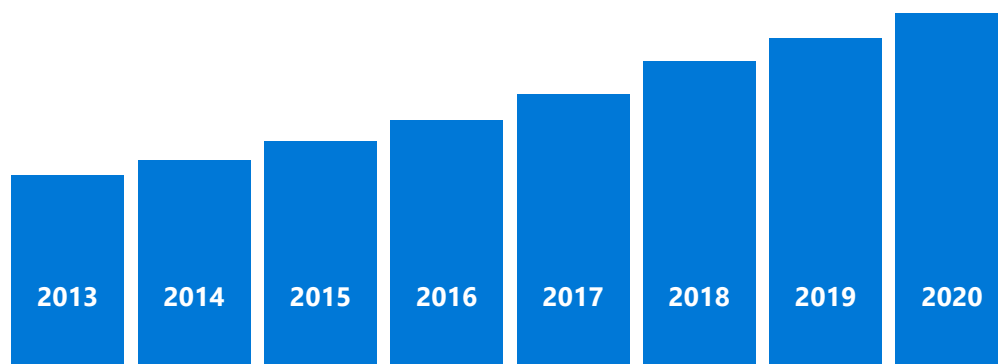
# The \$99.7B SaaS Marketplace Opportunity

SaaS represents an opportunity for independent software vendors (ISVs) to fundamentally transform their business to deliver greater value and sell software to a broader range of customers and streamline internal operations.

The evolution of SaaS, driven by advancements in cloud technology, has fundamentally changed the software industry, and how it operates. The promises of SaaS, lower development and support costs, streamlined sales cycles, unified deployment environments, and new, data-driven insights into customer behavior, along with a growing customer demand for cloud-based software solutions are fueling the SaaS opportunity for ISVs. As software buyers give more consideration to total cost of ownership (TCO), ease of use, and flexibility in their purchasing decisions, the SaaS mode of delivery is quickly becoming the preferred alternative to traditional, on-premises software deployments across all industries and business process categories, providing an unmistakable opportunity for ISVs.

<b>\$99.7B</b>	Forecasted size of SaaS marketplace by 2020 <sup>1</sup>
<b>21%</b>	Estimated growth of SaaS marketplace <sup>1</sup>
<b>11.2x</b>	Average revenue valuation for private SaaS ISVs <sup>2</sup>
<b>70%</b>	Percent of ISVs to update pricing and licensing in next 2 years <sup>2</sup>

Whether you are a cloud-native start-up or an existing ISV with legacy on-premises software solutions, SaaS represents an opportunity to deliver more value to your customers, while simultaneously increasing profitability and improving internal operations through reduced cost and complexity. This appeals to customers because SaaS solutions are engineered to be more purpose-built and are delivering better business outcomes than traditional software<sup>1</sup>. According to the Cisco Global Cloud Index, SaaS applications will make up 74% of all cloud workloads by 2020, up from 41% in 2013<sup>4</sup>.



Source: Cisco Global Cloud Index: Forecast and Methodology, editions 2013-2018 & 2015-2020

Additionally, interest in SaaS goes beyond changes to how companies deliver and license their applications. Bessemer Venture Partners, a Silicon Valley-based venture fund, noted in its State of the Cloud 2016 study that legacy software vendors are embracing the SaaS model aggressively. Legacy vendors are not only modernizing their applications but are also spending aggressively to purchase SaaS ISVs to gain access to the technology and talent they need, spending over \$50B annually to acquire SaaS companies<sup>3</sup>. Valuations for SaaS ISVs reflect the SaaS opportunity; while public legacy vendors are valued at 3.5x annual revenue on average, public SaaS ISVs are valued at 4.9x and private SaaS vendors at 11.2x<sup>5</sup>.



MDC Research survey participants have provided a list of the top factors influencing their decision to create a SaaS offering, which you can consider as you evaluate creating your own SaaS practice. The top three reasons are:

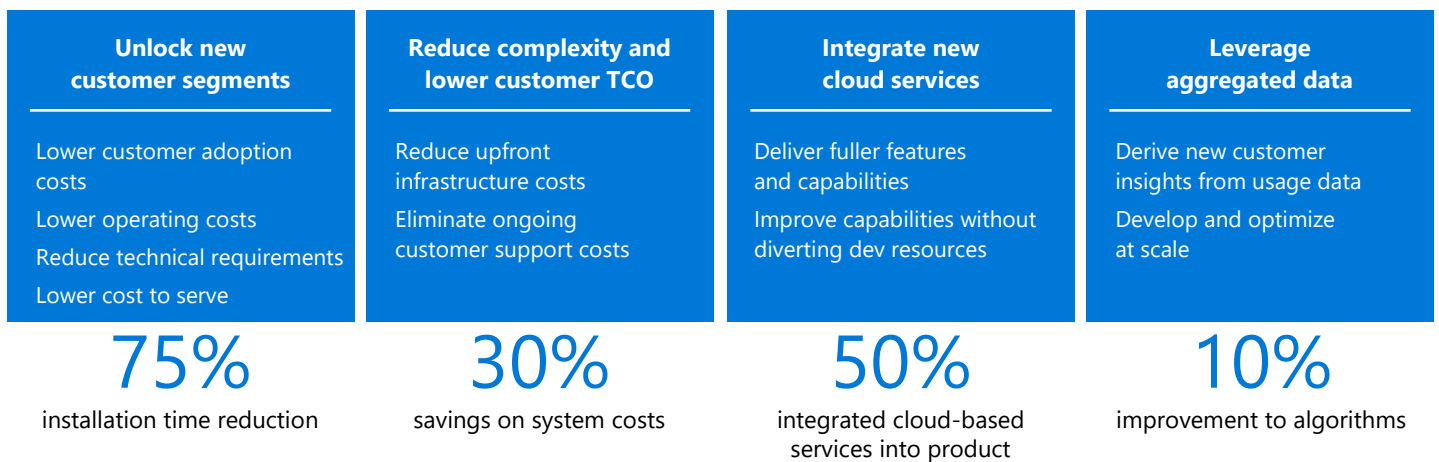
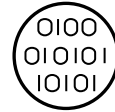
- Creating new opportunities to acquire new customers
- More consistent revenue streams
- The ability to implement product innovations



Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

## Key Benefits of the SaaS Model

The SaaS model allows you to deliver better experiences to broader range customers. According to a 2017 Keystone survey<sup>6</sup>, ISVs who developed a SaaS version of their software were able to unlock new customer segments and deliver significant additional value to their customers, including reduced complexity and lower TCO, expanded service offerings through the integration of new cloud services, improved analytics and business intelligence gained by leveraging aggregated data, shortened shipment cycles for updates and new features, and ease of maintenance and change management.



Source: Keystone, The Shift to SaaS: A High-Value Opportunity for ISVs, June 1, 2017

### UNLOCK NEW CUSTOMER SEGMENTS

Among MDC Research survey participants, 66% cited creating new opportunities to acquire new customers as the top factor in their decision to create a new SaaS offering. With SaaS, you can sell to a broader customer base, adding customer segments that were previously unprofitable, due to the lower cost to serve and reduced technical requirements enabled by operating SaaS on public cloud platforms. Adopting a SaaS model that runs on the public cloud also eliminates many barriers to geographic expansion. In a traditional model, expanding geographically often requires setting up local partnerships or sending a team of support engineers to client sites around the world, options that are expensive and time consuming. By running your software on the public cloud, however, you can take advantage of your cloud provider's global infrastructure and support to offer higher performance and lower latency for end users. This global infrastructure can support local data residency, sovereignty, and compliance requirements, as well.

### REDUCE COMPLEXITY AND LOWER CUSTOMER TCO

One of the single biggest benefits of shifting to SaaS delivery is that customer hardware and infrastructure can be moved into a single, unified infrastructure for application deployment. In most cases, the SaaS delivery model results in the realization of significant savings for your customers, due to the reduction in the complexity and cost of underlying infrastructure. On-premises applications often require customers to invest in a considerable amount of infrastructure to host software. Depending on the size of the company and the performance level of the application, these costs can easily spiral into the millions of dollars. The customer must continually invest in ongoing maintenance and support for these assets. With SaaS, you can free your customers from many of these costs by taking on the responsibility for hosting software through Microsoft or a PaaS/IaaS third-party partner. And, the benefits of a single application deployment



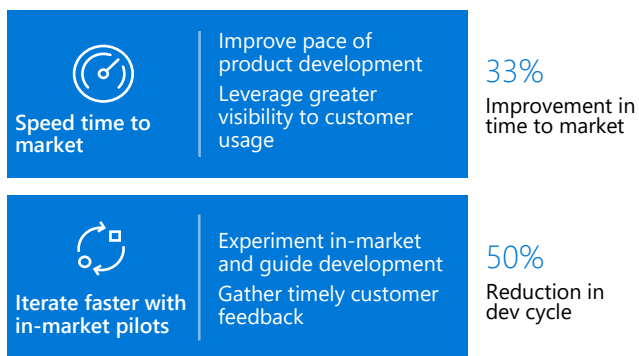
environment are not just for customers. A unified environment allows your development teams to focus more on high-value product feature development, and less on maintaining system infrastructure.

### INTEGRATE NEW CLOUD SERVICES

The integration of value-added cloud services allows you to improve your service offering by providing capabilities that previously would have been time and cost intensive to develop independently. Many of these services are available through the cloud platform ecosystem with minimal integration and support requirements. Nearly half of the companies surveyed reported integrating richer feature sets and capabilities into their SaaS product. Based on customer demand, advanced data analytics, business intelligence, visualization and collaboration tools were among the top capabilities companies added as they moved their software to the cloud. These services were incorporated either by integrating first-party services offered by Microsoft Azure and other cloud providers, or by partnering with another SaaS company.

### LEVERAGE AGGREGATED DATA

Cloud ecosystems facilitate easier collection of customer usage data, providing you with more detailed insights into customer needs and pain points. Insights generated through application data collection enable you to focus product development efforts on the features most important to your customers, and to deliver those features faster. Keystone survey participants reported increasing the speed of product development by 33%, contributing to a 50% reduction in their development cycles<sup>6</sup>.



Source: Keystone, The Shift to SaaS: A High-Value Opportunity for ISVs, June 1, 2017

By aggregating data collected across customers, you can also perform benchmarking and analysis for conducting rapid improvement of products and algorithms. Aggregating data across SaaS customers can help you to identify inefficiencies in the customer experience, causes of customer churn, and unmet needs. Perhaps more importantly, these aggregated customer data sets allow you to develop and optimize your algorithms at scale. Where you might not have access to this data in an on-premises model, a SaaS model provides for these types of scale effects.

### IMPROVE FINANCIAL PREDICTABILITY

One of the primary business benefits you will realize by switching to SaaS is a smoothing out of monthly recurring revenue streams. With a SaaS business model, customers typically pay recurring (monthly or annual) fees to access products, so as your customers are shifted to SaaS subscription or consumption plans from traditional licensing models, you will see your proportion of recurring revenue grow, increasing the confidence and reliability of financial performance. Software vendors using traditional software licensing often struggle with unpredictable revenue streams, which can be hard to plan around. If your ISV is seeking external funding, these unpredictable revenue streams can also be difficult to communicate to investors. Recurring revenue, on the other hand, is much easier to forecast, even considering customer turnover. New pricing models align your ISV's value with customers' business needs, driving increased revenue. The flexibility of SaaS pricing models allow pricing to be tailored to customer needs, allowing revenue generation to be more closely tied to usage and increasing the value you can capture across your customer base.



Source: Keystone, The Shift to SaaS: A High-Value Opportunity for ISVs, June 1, 2017

The SaaS model leads to accelerated sales by making it easier for customers to find and access trials and explore the potential value of your product offering. Cloud marketplaces provide a platform where you can showcase your software, helping you eliminate complex software demos and environments. One of the biggest challenges facing traditional ISVs is getting customers over the hurdle of initial installation and up-front capital costs. Traditional perpetual licensing models require customers to pay for licenses and any required infrastructure to run the application up front, which can be a significant capital expense. If your software requires specialized infrastructure to run, it can result in dramatic limitations to your addressable market.

By offering SaaS solutions, in contrast, you can get customers set up more rapidly, since it requires limited infrastructure to set up and configure. A SaaS licensing model reduces the large upfront investment traditionally required and reduces the perceived risk in the buying decision, thereby shortening the decision-making process. A smaller monthly payment is also often easier to fund than a large, up-front capital investment. Participants in Keystone's survey reported up to 75% reduction in installation time, cutting down the time required to get customers running to 2-3 weeks from 3-

## SHORTEN SALES CYCLES

6 months for an on-premises solution<sup>6</sup>. This increase in flexibility lets you capture heavy users overlooked in traditional licensing models, while adding new light-use customers who cannot justify a full license purchase.



Focus on user experience and business needs

Communicate directly with the SaaS purchaser – typically a business owner  
Expand sales and marketing efforts to owners and end users



Shorten sales cycles with simple trials and demos

Eliminate complex software demos and environments  
Showcase software in cloud marketplaces



Drive active usage through resellers

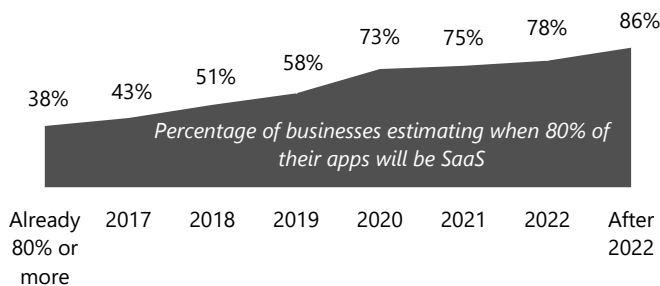
Maintain reseller reach by helping them transition to managed service provider networks

Source: Keystone, The Shift to SaaS: A High-Value Opportunity for ISVs, June 1,

## The SaaS Market

SaaS has revolutionized how the software industry operates and continues to be one of the leading drivers of change in the software industry, redefining how ISVs are building and deploying software, and changing how customers are consuming and purchasing software. The growing customer demand for scalable cloud-based SaaS solutions with more robust features and capabilities, which spans virtually all industry verticals, is not only attracting an influx of cloud-native startups, but also forcing ISVs with legacy on-premises applications to rapidly build robust cloud-based offerings, or risk obsolesce and shrinking market share. According to the 2017 State of the SaaS-Powered Workplace, 73% of organizations say that nearly all (>80%) of their applications will be SaaS by 2022<sup>8</sup>.

**73% of organizations say that nearly all (80%+) of their apps will be SaaS by 2022**



Likewise, IDC<sup>7</sup> predicts spending on public cloud and infrastructure across all geographies will reach \$160 billion in 2018, an increase of 23.2% over 2017, with SaaS being the largest cloud computing category, capturing nearly two thirds of all public cloud spending in 2018. SaaS spending will be dominated by application purchases, which will make up more than half of all public cloud services spending through 2019.

### SOURCES

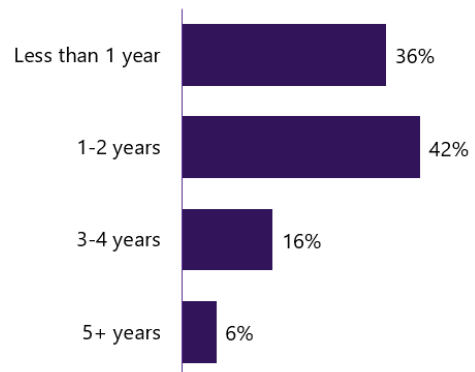
- <sup>1</sup>Gartner, "Forecast: Public Cloud Services, Worldwide, 2016-2020, 2Q17 Update", September 28, 2017
- <sup>2</sup>Flexera, "Software Licensing 2016: Seismic Shifts – Shaky Foundations", July 26, 2016
- <sup>3</sup>Bessemer Venture Partners, "State of the Cloud Report 2016", September 7, 2016
- <sup>4</sup>Global Cisco Cloud Index: Forecast and Methodology, editions 2013-2018 & 2015-2020
- <sup>5</sup>Ibid
- <sup>6</sup>Keystone, The Shift to SaaS: A High-Value Opportunity for ISVs, June 1, 2017
- <sup>7</sup>IDC, Worldwide Semiannual Public Cloud Services Spending Guide, January 18, 2018

## Growing Revenue with SaaS

Creating a SaaS practice offers the opportunity to impact your top and bottom lines, allowing you to deliver greater value to a broader range of customers while simultaneously streamlining internal operations, reducing costs and complexity. SaaS pricing models align pricing to customer success and improve customer purchase justification tied to application usage. Adopting monthly customer subscription invoicing or payment plans makes it easier for you to report, analyze and identify business and customer trends, providing deeper insights that can be used to reduce customer churn, increase customer lifetime value (CLV), and grow their business.

MDC Research asked partners about profitability associated with their first SaaS offering. Half of the partners surveyed reported generating between \$50K and \$1M in SaaS revenue during the last 12 months, with 78% predicting that their first SaaS offering would achieve profitability within 2 years, and 36% of the those predicting profitability in less than 1 year.

**First SaaS Offering Deployment**  
(n=463)



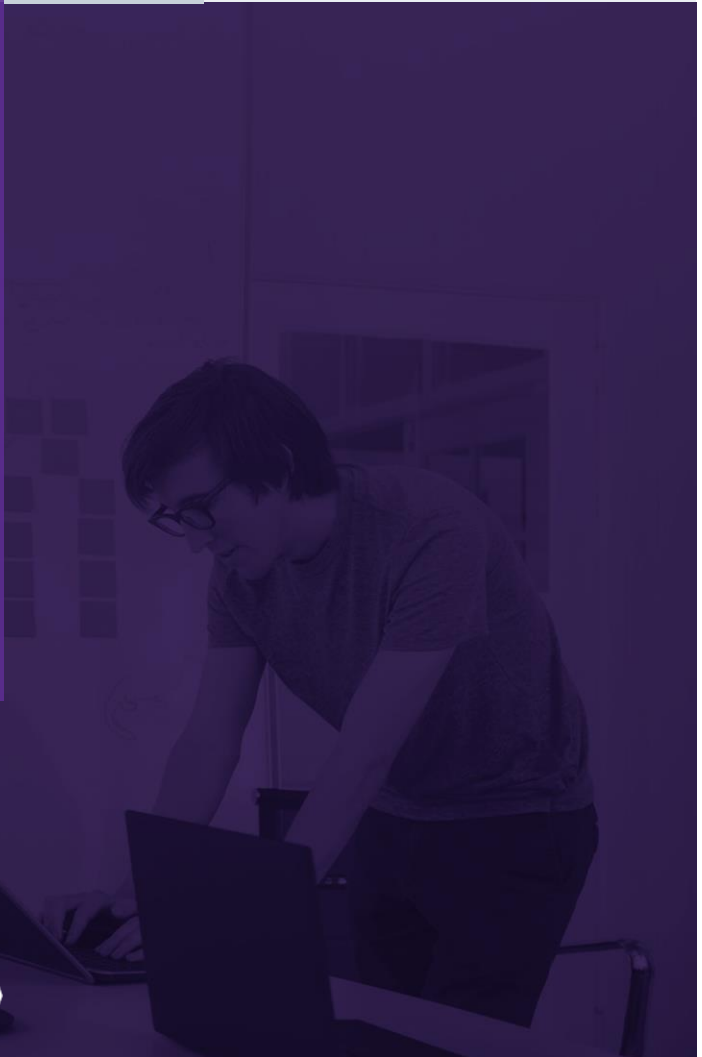
Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

Microsoft  
Partner  
Network

# Define Your Strategy

## Grow Your ISV Business with SaaS

[aka.ms/practiceplaybooks](http://aka.ms/practiceplaybooks)



# Executive Summary

Now that you understand the opportunity SaaS represents, the first step is to define the strategy you will use to build your SaaS practice. Like the foundation of the house, thinking through your strategy is critical to long-term success, and it will be time well spent.

We begin by providing an overview of the maturity model for the SaaS practice, and touch on foundational concepts required to develop a successful and profitable SaaS practice. Your practice may have expertise in just one of the areas, across multiple, or all areas. For each area, we provide details about the nature of the business opportunity, and the key Microsoft products and services leveraged in delivering solutions that capitalize on the opportunity.

Then we will guide you through the process of defining your offer and its value proposition. This is a critical piece of your strategy – specifically, the definition of what you will sell and why customers will want to buy it. We provide you guidance on what other successful partners are doing, as well as recommendations on what to include in your own SaaS offerings.

We will help you drill into how to price your offer base, including what pricing strategy to use to drive adoption of your offer, and how to minimize your risk by establishing up-front fees and payment terms. The ultimate goal is to help you build a solid business plan that addresses your team, marketing, sales, and financial aspects.

Then we dive deeper into sales to help you define your pre-sales and post-sales engagement process, and how to compensate sales executives.

If you are not yet a Microsoft partner, we will give you an overview of what you need to know about the [Microsoft Partner Network](#), the programs you can leverage to grow your practice, how to earn competencies that yield additional benefits, and how to maximize the benefits you get from the program.

After that, we'll give you a head start in how to identify potential customers when starting your practice, as well as potential service offerings.

We'll conclude this section by helping you understand support — how to support your customers, Microsoft's support offerings, and the support-related benefits you get from establishing competencies in the Microsoft Partner Network.

Let's get on to defining your practice strategy.

## Top 5 things to do

Here are the top 5 things you should absolutely do when defining the strategy for your practice.

- Define your practice focus
- Understand SaaS practice requirements
- Define and design the solution offer
- Establish your pricing strategy
- Develop your engagement process

# Define Your Practice Focus

This playbook focuses on the SaaS practice, and will help you transform your business using a SaaS model to deliver greater value to customers, sell software to a broader range of customers, and streamline your internal operations.



## APPLICATION DEVELOPMENT

Build scalable, cloud-based applications, leveraging microservices architectures and serverless computing – enabling you to provide value-added services in your offering, and allowing customers to more easily adopt and implement your applications.



## INTEGRATE CLOUD SERVICES

Deliver fuller features and capabilities for customers, without diverting developer resources, by using services available on Microsoft’s Azure platform.



## DEVELOPER OPERATIONS

Streamline Developer Operations (DevOps) with a unified application deployment environment. Build, manage, and continuously deliver great solutions by leveraging the powerful DevOps and ALM features of Microsoft’s development platform.



## DATA COLLECTION

Gain greater insights into customer usage through application data collection and aggregation to drive product improvements and innovation.

# Understand the SaaS Practice

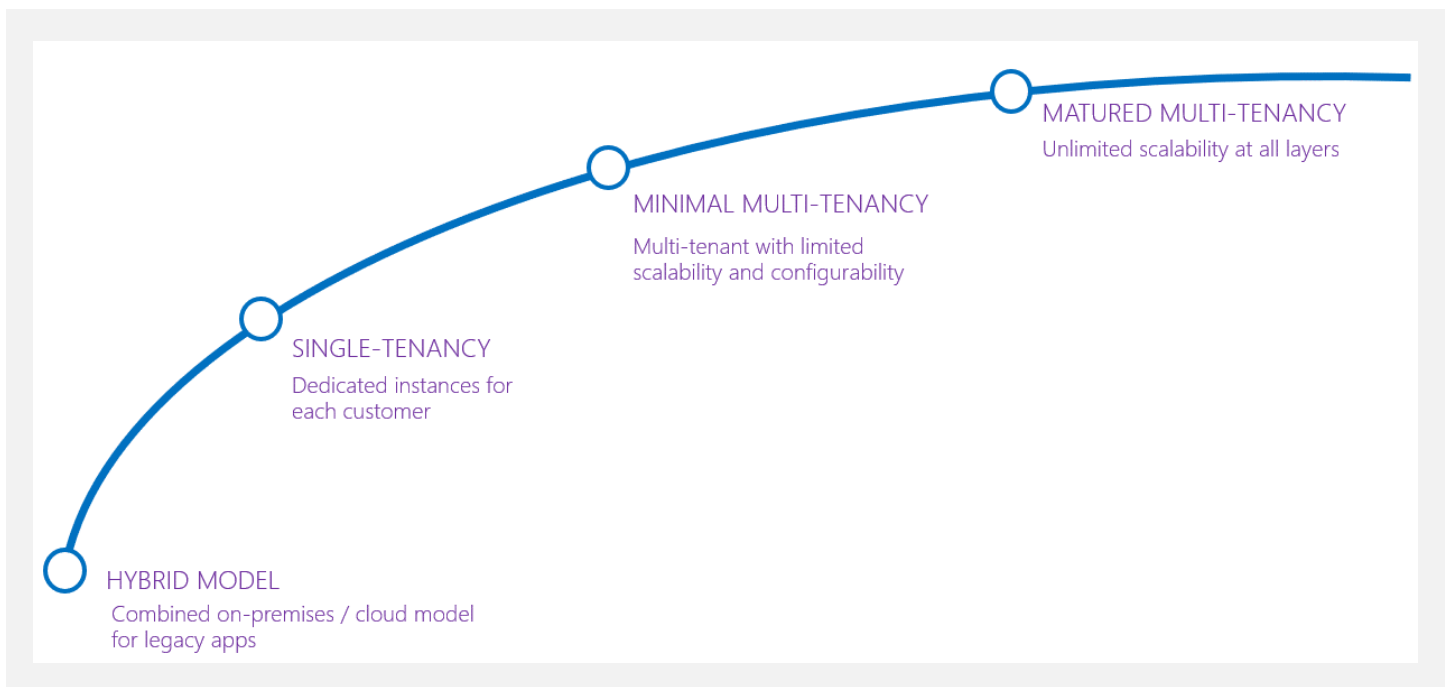
SaaS defines a business and software delivery model which provides game-changing improvements in efficiency, security, analytics, and flexibility, resulting in greater customer value delivery and increased value capture for ISVs.

The demand for SaaS spans almost all industry verticals and business processes, providing you with nearly unlimited opportunities to establish a SaaS practice. If you have not made the transition to SaaS, you should plan to adapt your business model to reflect these changes, enabling you to sell your software more broadly and better monetize the value of your IP.

## The SaaS Maturity Model

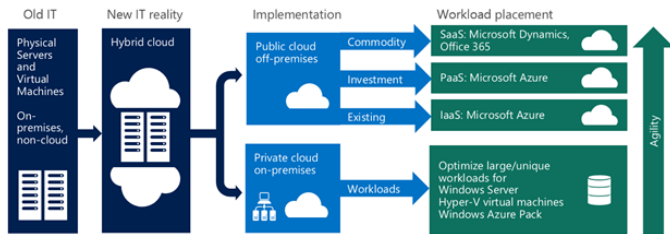
Creating a SaaS practice may mean transitioning legacy software that started with traditional, perpetual licensing to SaaS using an iterative approach, migrating a SaaS application started with a subscription business model using on-premises or hosted platforms to the public cloud, or building a cloud-native SaaS application. Regardless of where your journey begins, you will likely take an iterative approach to developing an offering. When designing a SaaS application, you must carefully choose the model that best fits the needs of your application, business goals, and customer requirements. The SaaS Practice Maturity Model outlines a general progression of models used in this process, with each level providing greater access to the full benefits of SaaS. If you are looking to migrate a legacy application to SaaS, a hybrid model leveraging virtualization, microservices, and cloud services may provide the quickest return on investment, and reduce the complexity and time required to begin taking advantage of the benefits of SaaS. For many cloud-native ISVs, your SaaS journey will begin with a multi-tenant SaaS application, and progress from there, allowing you to more quickly and fully realize the benefits of SaaS. You may choose to start and end at any level of the model, based on your individual business practices, needs, and customer requirements.

### SAAS PRACTICE MATURITY MODEL



### HYBRID MODEL

At this level, you will maintain both traditional and SaaS application models during a transition phase. According to the partners surveyed by MDC Research, the most common approach to SaaS is evolving an existing on-premises or hosted application, so this will be a common starting point for many software vendors.



The length of the transition phase is driven by product challenges, or end customer cloud readiness (size and rate of decline of their legacy business), and in some cases may last years or until products are retired. An example would be hosting functional aspects of an application on the cloud using Azure App Service and Azure Service Fabric to host microservices, while continuing to store data on an on-premises server or hosted datacenter. A hybrid SaaS model can provide some benefits of SaaS, such as improving capabilities through the integration of new cloud services but will typically not provide a reduction in complexity or lower TCO and will not simplify DevOps activities.

### SINGLE-TENANCY

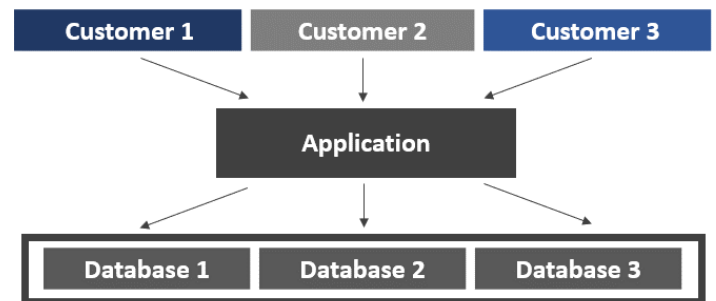
The single-tenancy level allows for all aspects of your application to run in the cloud. To maintain tenant (customer) isolation, the application is installed repeatedly, once for each customer (tenant). Each instance of the application is a standalone instance, so it never interacts with any other standalone instance. Each instance of the application has only one tenant, and the tenant has its own database.

Customer 1	Customer 2	Customer 3
• Application	• Application	• Application
• Database	• Database	• Database

This approach provides the greatest tenant and database isolation, but the isolation requires that sufficient resources be allocated to each database to handle its peak loads. The use of containers or virtualization can help simplify deployment and environment standardization. At this level, you will realize many of the benefits of SaaS, including reduced complexity and lower TCO, since applications live completely in the cloud. Due to limited resource sharing, however, data-driven insights into customer behavior are still difficult to obtain.

### MINIMAL MULTI-TENANCY

This level involves multi-tenancy concepts, with the same applications serving multiple customers, but often uses a database-per-tenant model. Tenants can customize the application through a self-service tool. Scalability at this level is determined based on workload and is independent of the number or scale of the individual databases.

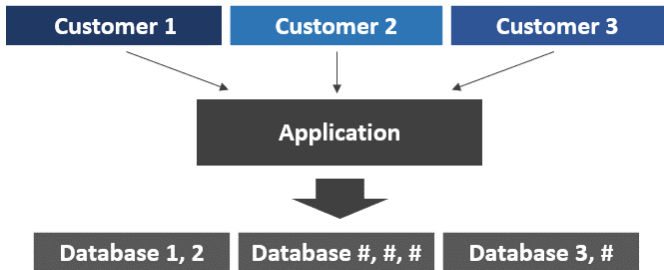


When databases are deployed in the same resource group, they can be grouped into elastic database pools. The pools provide a cost-effective way of sharing resources across many databases. This pool option is cheaper than requiring each database to be large enough to accommodate the usage peaks that it experiences. Even though pooled databases share access to resources they can still achieve a high degree of performance isolation. By sharing the application layer and enabling database pooling, you will recognize most of the benefits associated with SaaS and can begin collecting data across SaaS customers, but will still be limited by database isolation.



**MATURE MULTI-TENANCY**

At the mature multi-tenancy level of the model, you can fully realize the promises of SaaS. By sharing all resources across tenants, you can lower cost per tenant, reduce application deployment complexity and easily collect aggregated data across customers. This pattern also allows a hybrid model in which you can optimize for cost with multiple tenants in a database or optimize for isolation with a single tenant in their own database.



A multi-tenant database necessarily sacrifices tenant isolation. The data of multiple tenants is stored together in one database. A multi-tenant database shares compute and storage resources across all its tenants. Therefore, the multi-tenant database carries an increased risk of encountering noisy neighbors, where the

workload of one overactive tenant impacts the performance experience of other tenants in the same database. In general, multi-tenant databases have the lowest per-tenant cost.

**AN EVOLUTIONARY SALES PLAY**

Another way to look at the maturity model is to understand how opportunities in the SaaS practice are sold to customers. By incrementally transitioning your app, this can be an evolutionary play that gets your SaaS practice in the door and expands your engagement with the customer as the sophistication of your SaaS solution deepens. This approach allows you to plan out and incrementally change your business model to support SaaS, picking complementary products or features to develop for SaaS, deploying those to a subset of customers to get feedback, experimenting with pricing models, and deploying new features to improve customer value. With each step in the maturity model, you can begin to capitalize on the benefits of the cloud associated with SaaS, from reduced complexity and cost to integrated cloud services and richer customer data analytics.



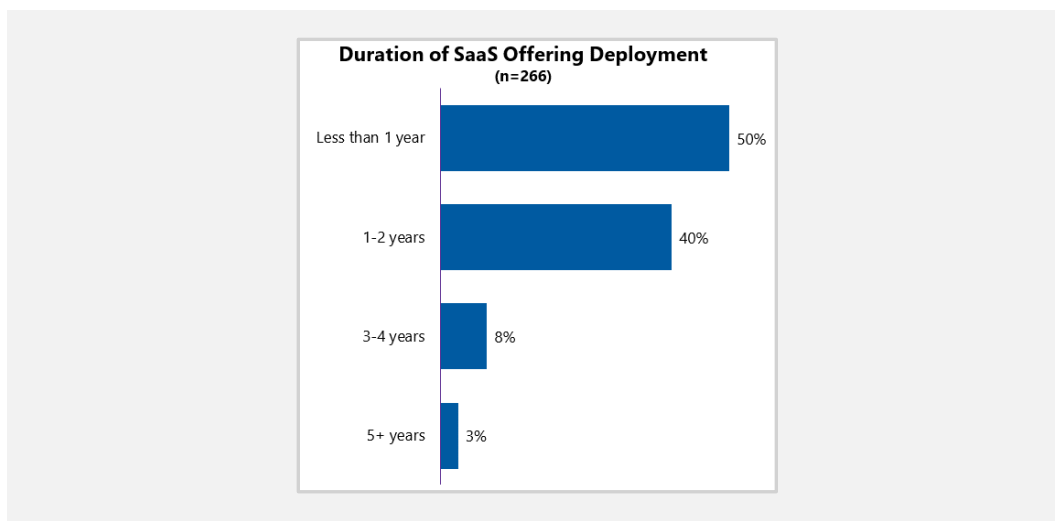
## Simplify Key Challenges of Moving to a SaaS Model

If you are currently selling software under a traditional, perpetual licensing model, it may seem intimidating to think about shifting to SaaS. It often requires a substantial change in how you create, design, deliver, and sell software, significant technical investment, changes to pricing and contracts, and communicating these changes to customers. However, the benefits of transitioning to SaaS, such as improved software performance and revenue predictability, and more efficient product development processes outweigh these costs.



Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

Building a SaaS offering is an investment in both a new operating model and technology. 90% of ISVs reported that they were able to complete deployment of their SaaS offerings within two years, with 50% reporting that it took less than one year to deliver their SaaS offering.



Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

**TECHNICAL CHALLENGES**

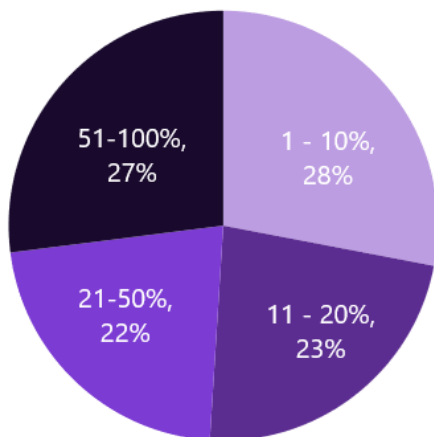
When transforming an application to a multi-tenant SaaS architecture, you must often rearchitect or rewrite your application. This can take a significant amount of time depending upon the end application design and business model complexities. If you have requirements for data or applications to remain on-premises, you must also overcome unfamiliarity with deploying hybrid platforms. You may also have to deal with concerns around cloud data security when looking at hosting applications and data on public cloud platforms.

Given the complexities and time often involved in migrating an existing application to SaaS, you may want to consider starting with a hybrid model, selecting some products and features of your application to moving into cloud services, while continuing to maintain other components on-premises or in hosted datacenters.

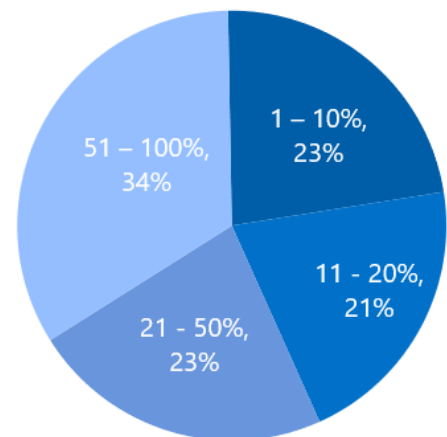
**BUSINESS MODEL CHALLENGES**

Converting from conventional licensing to usage-based can involve significant changes to your business model and organizational structure. Without proper planning, it can be disruptive to ongoing business performance while the SaaS transition is occurring. As you develop and apply new pricing and sales models for SaaS, you may also experience challenges associated with the conversion from an operating expense (OPEX) to a capital expenditure (CAPEX) sales model. The business areas involved in your SaaS practice may also be more diverse than might be expected. About half of the ISVs MDR Research surveyed reported that more than 21% of their organization is involved in the planning, building, and deployment of their current SaaS offerings, and most are projecting an increase in the next year.

**Current Proportion of Organization Involvement in SaaS**  
(n=463)



**Projected Proportion of Organization Involvement in SaaS**  
(n=463)



Currently, an average of 32% of organizations are involved in SaaS

Next year partners anticipate an average of 39% organizational involvement in SaaS

Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

According to the partners surveyed by MDC Research, the business areas most often impacted by creating a SaaS offering include engineering, customer support, sales, marketing, and operations.

Key Departments Impacted by SaaS Offerings Planning by ISV Focus

	Total (n=218)	Primary ISV (n=128)	Secondary ISV (n=90)
Engineering	69%	68%	70%
Customer support / success	67%	65%	69%
Sales and marketing	64%	58%	<b>72%</b>
Operations	55%	48%	<b>64%</b>
Finance	29%	28%	31%
Human resources	21%	23%	19%
Legal	23%	27%	19%
Development	1%	1%	1%
IT	< 1%	1%	0%

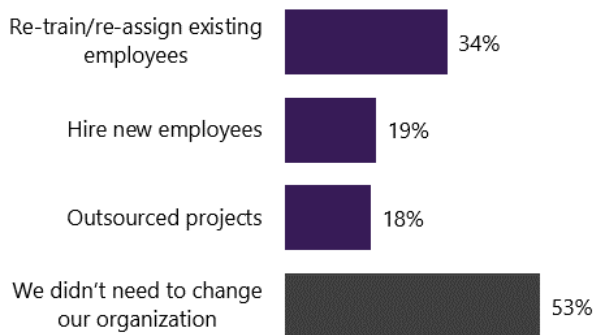
Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

■ Highest frequency by segment

— Denotes statistically higher percentage compared to another segment

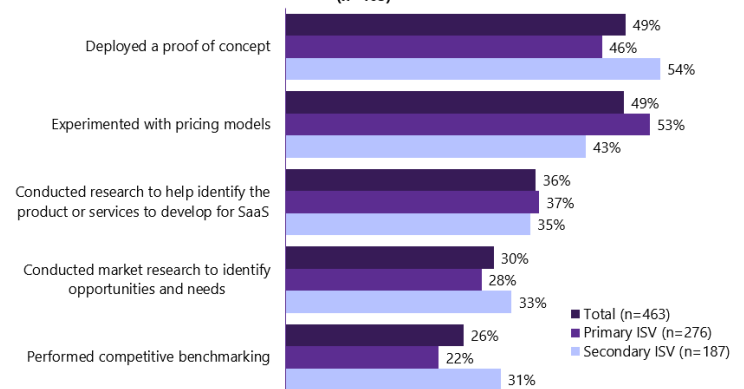
For just under half of the organization surveyed, a SaaS business model required changes to their organization, mostly in the form of retraining or reassigning existing employees into new roles to support the new business model.

Actions Taken to Scale Organization for SaaS (n=463)



As the first step in addressing the challenges of changing business models, 49% of survey responders reported that they deployed a proof-of-concept (POC) or experimenting with pricing models.

Steps in Business Model Change (n=463)



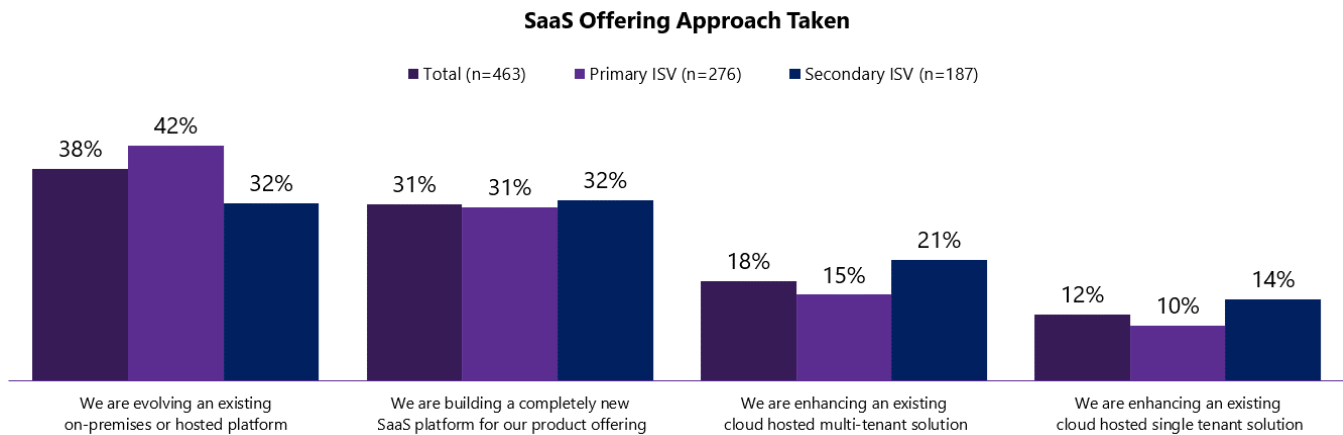
CUSTOMER CHALLENGES

While many customers are demanding SaaS, there can still be challenges around communicating pricing and contract changes, as well as migrating existing customers to a new SaaS platform. If you are migrating a legacy application, it is possible to migrate customers incrementally, based on their readiness, to lessen the operational impact and alleviate concerns.

## Where Do You Begin?

Your journey to SaaS is likely to be unique, driven by your organization’s individual situation, but it is important to note that most ISVs now see the transition to SaaS as a question of “when,” not “if.” While the key drivers influencing your decision to create a SaaS practice will help define the path you take, other factors such as market services, your market position, the nature of your application portfolio, and the competitive landscape of your target market can play a large role in determining how you approach and build your SaaS practice.

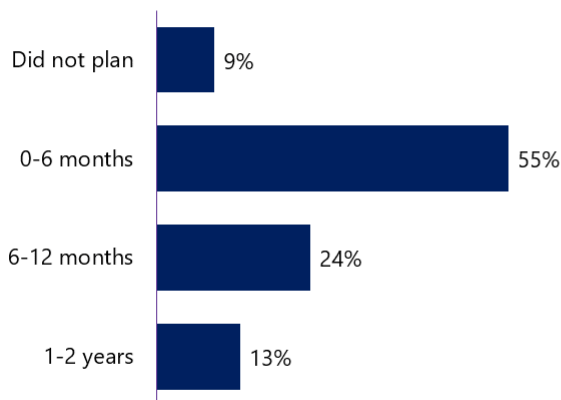
The most common approach, however, is evolving an existing on-premise or hosted platform. More than two thirds of the ISVs MDC Research surveyed are involved in transitioning existing on-premises or hosted applications to a SaaS model or building a completely new SaaS platform for their product offering.



## PLANNING

Proper planning for your SaaS offering can help to alleviate some of the problems experienced by other ISVs. Most SaaS ISVs MDC Research surveyed reported that they did not do enough planning up front, possibly contributing the 50% of responders also reporting spending more than predicted to implement their first SaaS offering. It is important for you to consider the organization and business model impacts up front, and plan accordingly, prior to starting your SaaS transition. How much time do you need for planning? Of the organizations surveyed, most (55%) reported spending six months or less planning for the deployment of their first SaaS offering, which was, in general, not enough.

**Time Spent Planning SaaS Offering Before Implementation**  
(n=463)

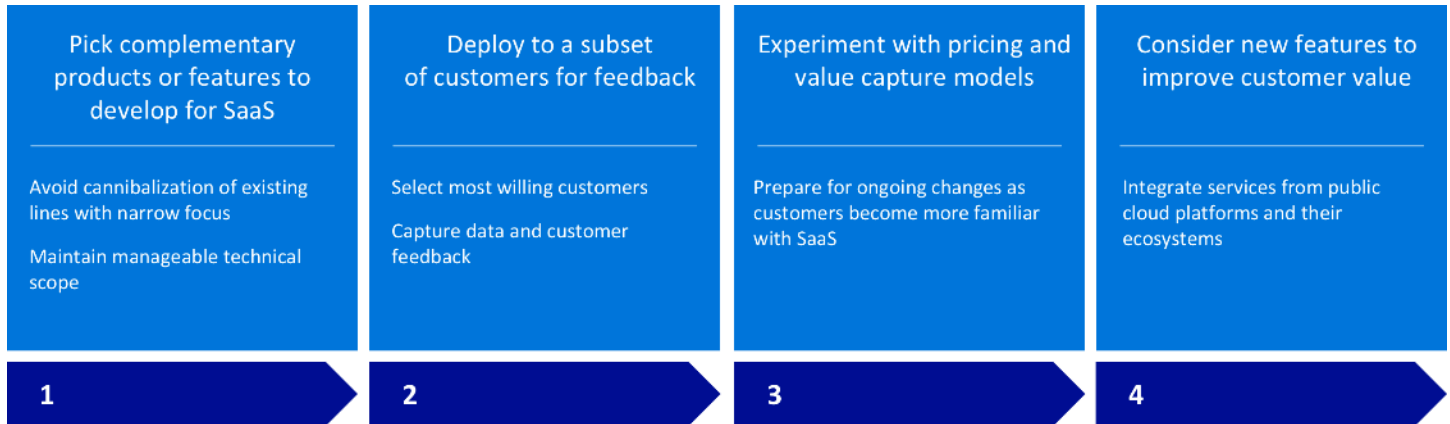


	Total (n=463)	Primary ISV (n=276)	Secondary ISV (n=187)
Did not plan	9%	9%	8%
0-6 months	55%	51%	<b>61%</b>
6-12 months	24%	26%	20%
1-2 years	13%	14%	10%

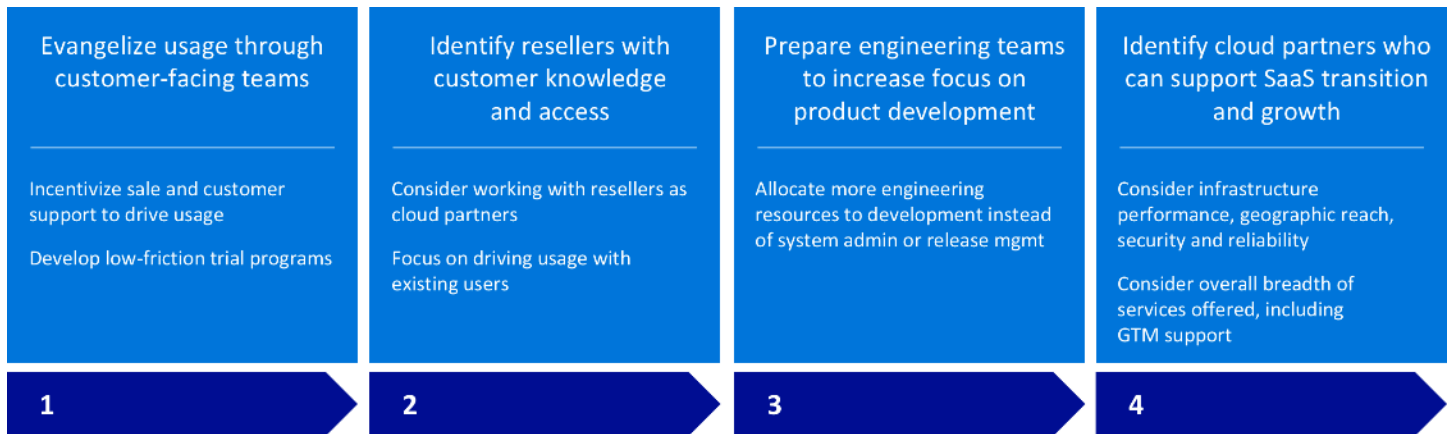
■ Highest frequency by segment  
 \_\_\_ Denotes statistically higher percentage compared to another segment

## What Should You Sell?

With SaaS opportunities available in virtually every industry vertical, you should look at your organization’s core strengths and competencies when deciding what market your SaaS offering should target. As you begin a SaaS practice, you can take a phased approach, picking select products or features to develop for SaaS, and rolling those slowly out to customers, so they can experiment with various pricing and value capture models.



Internally, you need to be preparing for operational changes, modifying sales practices, identifying cloud partners and resellers who can support your SaaS transition and future growth, and shifting engineering resources to accommodate less infrastructure support, and more development.



# Case Studies and Vertical Opportunities

Partners have found opportunity in SaaS either by providing horizontal solutions that are applicable regardless of industry vertical, or by focusing their solutions and growing their domain expertise within specific verticals. The following sections introduce some of the possible vertical specific solutions as motivation for the types of solutions partners may choose to deliver.

## Case Studies

One important avenue Microsoft provides is a track record of successful partner engagements. A track record of customer success is an easy way to build confidence in the solutions your practice develops and helps win over customers. Microsoft provides a [Partner Stories](#) website, which contains a collection of case studies highlighting how ISVs have made their practices successful, including artifacts like case study PDFs, PowerPoint slides summarizing the key learnings and videos. Use these case studies to help you position your offering to customers and to identify potential solution partners whose practices may complement yours.

SaaS case studies can be found on the Azure website under [Business SaaS apps](#), and other customer case studies are available from the [Microsoft Customer Stories](#) website. It is recommended you check back periodically for new case studies that empower your efforts as a partner.

## Cross-Vertical Opportunities

### **MAKING EDISCOVERY MORE MANAGEABLE, EFFICIENT, AND INSIGHTFUL**

Electronic discovery (eDiscovery) refers to any process in which electronic data is sought, located, secured, and searched with the intent of using it as evidence in a civil or criminal legal case. The size of the eDiscovery market continues to expand, topping \$10 billion in value globally, as data volumes grow, and its forms proliferate.

[Relativity](#) built RelativityOne, its SaaS eDiscovery solution, with the assistance of Microsoft's One Commercial Partner (OCP) on Microsoft Azure, using a hybrid approach, with some resources still hosted on-premises. During product planning they considered AWS but decided on Azure due to partnership advantages with Microsoft, including Build-with, co-marketing and co-selling with its field sellers. Relativity more readily controls technology updates to end users. Predictable revenue streams come in the form of subscription fees, as well as through fees for hosting data.

RelativityOne's introduction disrupted the industry. The software is the 400-pound gorilla in the eDiscovery software space, counting, according to the company,

75% of the Fortune 500 and 98% of the Am Law 200 as users. In the old model, its software would often be paired by clients with other software tools. Clients did not have to use all Relativity modules (e.g. processing) to provide a soup-to-nuts eDiscovery solution for end users. Channel partners would stitch together these software tools and offer implementation, consultation, and support to their clients, often provided through proprietary platforms and/or as managed services. RelativityOne's introduction threatened the ecosystem, specifically Relativity's channel partners, by moving from providing just software to services as well.

### **ELECTRONIC SIGNATURES**

[DocuSign](#) is a not-born-in-the-cloud SaaS application, with four datacenters, using SQL Server, in the United States and Europe that they run themselves. Recently, they have started to expand globally using Azure services, due to regulatory and data sovereignty reasons (Canada, Australia, Japan). They selected Azure due to use cases for integration Office 365, and a good Microsoft partnership.



## The Content Management Opportunity

In 2011, Finland-based [M-Files](#) decided to migrate its enterprise content management (ECM) solution to the cloud, choosing Microsoft Azure as the foundation for its SaaS offering. Building its SaaS solution on Azure has enabled M-Files' developers to create new features to meet customers' needs faster. Azure provides scalability and availability features "out of the box" that would not be economical for M-Files to develop internally. Additionally, the money and headcount that M-Files saves by not building and maintaining on-premises infrastructure can be channeled back into development. According to a 2016 ECM Market Share Analysis published by Gartner, since switching to Azure, M-Files has grown six times faster than the pace of the ECM market.

Central to the M-Files architecture is Azure SQL Database, which has provided the following benefits:

- Elastic database pools in SQL Database provides M-Files a solution which is between three and 10 times less costly than standalone database instances, helping them prevent over-provisioning and enabling them to provide their customers with better performance and scalability at no additional cost.
- M-Files reported that the addition of updatable non-clustered columnstore indexes in Azure SQL Database and in Microsoft SQL Server 2016 helped it to achieve over 10 times faster queries in critical workloads without significant performance cost on online transaction processing. M-Files engineers were able to implement this solution with no application code changes and provide an instant performance boost to both its clients on-premises and M-Files Cloud Vault users in Azure.
- Using Transparent data encryption, M-Files has been able to encrypt all data without impacting database performance, keeping data storage for its customers compliant with various regulatory requirements for data security, such as the Health Insurance Portability and Accountability Act (HIPAA) or Food and Drug Administration (FDA) life-science data regulations in the United States. Moreover, because transparent data encryption happens at the I/O level, M-Files can easily use it to enforce dynamic permission management in M-Files Cloud Vault. Transparent data encryption also eases the burden for M-Files developers because they do not need to develop this security feature from scratch.



## The Financial Services Opportunity

The financial industry is dictated by regulations that change frequently, and customers need easier ways to process financial records and collaborate with their accountants and government to keep up with those changes. For [SnelStart](#), the producer of popular financial- and business-management software for small- and medium-sized businesses in the Netherlands, the solution was to extend its services by becoming a cloud-based SaaS provider.

SnelStart ran a successful software business for years, using a traditional development model: code, package, ship, and repeat. Over time, as the pace of change grew faster and faster, and the costs of producing and shipping software increased, they found they were limited in how frequently they could release software, making it difficult to meet their customers' changing needs. By moving from desktop software to a SaaS offering built on Azure, SnelStart was able to increase its time-to-market for new features and updates, and reduce the costs associated with software development. SnelStart accomplished this by making the most of built-in services, automating management using a familiar environment in C#, and optimizing performance and

scalability using the Azure SQL Database platform. Migrating to a cloud model also enabled SnelStart to fix bugs and provide new features rapidly, without customers needing to download and upgrade software.

Azure SQL Database enabled SnelStart to easily and transparently move customers' on-premises business-administration data to Azure, while simultaneously providing a convenient container that provides isolation, a boundary for authentication, authorization, and easy backup and restore capabilities. In addition, SnelStart was a large-scale early adopter of elastic pools. Elastic pools help the company limit costs and manage performance requirements more efficiently. Using elastic pools, they have been able to optimize performance based on the needs of their customers, without over-provisioning. Azure SQL Data Warehouse also plays a role in the SnelStart security and management story by helping the company gather telemetry data, such as intrusion detection, user activity logging, and connectivity.

Since moving to an Azure cloud-based solution, SnelStart has been able to support rapid customer growth while offering innovative features and services.



## The Insurance Opportunity

Today's insurance marketplace requires that carriers be faster, nimbler, and more creative than ever before. They need systems designed to implement change quickly and easily and to work elegantly with one another. [Duck Creek Technologies](#) introduced their open, flexible platform to bring liberating strategies like SaaS solutions, codeless configuration and an open architecture to the industry supporting a robust and growing set of APIs and RESTful services, providing all of the components and capabilities carriers need to quickly move from concept, development and implementation to go-live production while easing the burden of carriers so they can focus on bringing their next great ideas to life with newfound speed and gracefully intuitive input.

Duck Creek OnDemand SaaS Solution has more than 5 years of production experience with its SaaS Solution. With a mission to help carriers focus more on their business and customers and less on cost, carriers uniquely benefit from:

- Up-to-date software and content allowing carriers to focus on their business demands while Duck Creek

updates and maintains software upgrades, maintenance and circular content

- Completely managed High Availability Infrastructure with SLAs – reduce operational costs while Duck Creek manages environments, backups, recovery, monitoring and security
- Comprehensive Support Management – completely managed Level 1, 2 and 3 support including help desk, incident triage, and engineering SMEs
- Pre-built 3rd Party Integrations – Duck Creek Anywhere Managed Integrations provide out-of-the-box fully managed and maintain integrations to popular 3rd party services such as geo-location, MVR look-ups, data pre-fill, e-signature, analytics and many more

Duck Creek is the leading P&C SaaS solution provider focusing on moving all customers to their SaaS Solution, but maintains on-premises products as well. The product runs entirely on Microsoft technologies (.NET, SQL Server, Azure Cosmos DB, etc.).



# The Microsoft Approach to SaaS

IT organizations need to get back into the game by looking to new innovations that support applications and services that drive the business forward. The good news is that Microsoft has been delivering SaaS applications and services in this model in Microsoft Azure for several years and has developed a series of innovations from that experience.

As you prepare for SaaS, it is important to select a cloud platform that can be a partner in growth. First, you should consider the infrastructure performance of a partner, starting with essential cloud services such as compute and storage, as well as geographic reach and security and reliability since customers frequently consider the cloud platform SaaS applications run on as part of their vendor selection process. Second, you should explore the value-added services provided by a cloud platform. This extends beyond the core cloud services into areas like advanced data analytics and artificial intelligence (AI), business intelligence (BI) and visualization, and communication and collaboration tools. You should also consider the breadth of services available from other SaaS vendors in the platform ecosystem that could facilitate the development and performance of your software. Finally, a good platform partner should offer go-to-market support. This can

include access to its network of sellers and cloud partners who can package your software as part of a solution to other customers on the platform, support for lead generation through marketplace promotion, and access to a wide range of enterprise customers.

The Microsoft Azure platform enables partners to better serve and engage customers by providing an ever-expanding set of cloud services to help organizations meet business challenges. Use business insights and intelligence from Azure to build SaaS applications that provide operational efficiency, data security, and flexible scale—while doubling revenue opportunity compared to traditional packaged applications (according to the AMI-Partners Global Model). Easily integrate with Office 365, Dynamics CRM, or leverage unmatched sales and marketing with co-marketing and co-selling partners through the Azure Marketplace.



Monetize	Innovate	Expand
<p><b>Grow your revenue</b> by achieving operational efficiencies, lowered risks, predictable costs, easy scalability to capture new business, and high speed to market</p>	<p>Solve customer’s problems by developing <b>cutting-edge solutions</b> using the latest in Microsoft technology</p>	<p><b>Reach a wider customer base</b> with Microsoft go to market programs including marketplaces, co-selling and co-marketing</p>

MONETIZE YOUR APPLICATIONS



Maximize revenue	Reduce costs	Scale easily	Lower your risks
<ul style="list-style-type: none"> <li>Retain your customers by capitalizing on growing customer appetite for cloud-based solutions</li> <li>Profit from differentiated offerings by using Microsoft Azure services to support mobile, media services, IoT, machine learning, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Optimize your operations and drive down costs by moving to Microsoft Azure</li> <li>Realize simplified application development with "build once" unified applications for cross-platform deployment</li> </ul>	<ul style="list-style-type: none"> <li>Auto-scale services in Azure according to the demands of your application</li> <li>Respond to customer demands and easily scale solutions with a worldwide network of Microsoft-managed datacenters</li> </ul>	<ul style="list-style-type: none"> <li>Rely on the most trusted cloud that offers comprehensive compliance coverage</li> <li>Safeguard your customer's data with state-of-the-art Microsoft Azure services</li> </ul>

BUILD DIFFERENTIATED OFFERINGS



Focus on delivering value to customers	Build your apps, your way	Power decisions and apps with insights	Rely on first class development tools and support
<ul style="list-style-type: none"> <li>Build, manage and deliver your applications quickly and simply using the most advanced and deeply-integrated cloud services</li> <li>Harness Azure's secure, intelligent cloud services platform and tools to deliver differentiated applications to customers</li> </ul>	<ul style="list-style-type: none"> <li>Use an open and flexible platform that meets you where you are and adds value to your existing investments</li> <li>Modernize your applications across hybrid cloud environments, balancing flexibility and control</li> </ul>	<ul style="list-style-type: none"> <li>Build more intelligent applications by using artificial intelligence capabilities, cognitive services, and predictive analytics services such as Machine Learning</li> <li>Enhance your application with access to productivity data from Office 365 and business data from Dynamics 365</li> </ul>	<ul style="list-style-type: none"> <li>Use world-class developer tools to create applications for including Visual Studio, Xamarin, Azure DevOps Projects, and Azure DevTest labs</li> <li>Get support on your application development journey through the various partner programs offerings and trainings</li> </ul>

REACH MORE CUSTOMERS

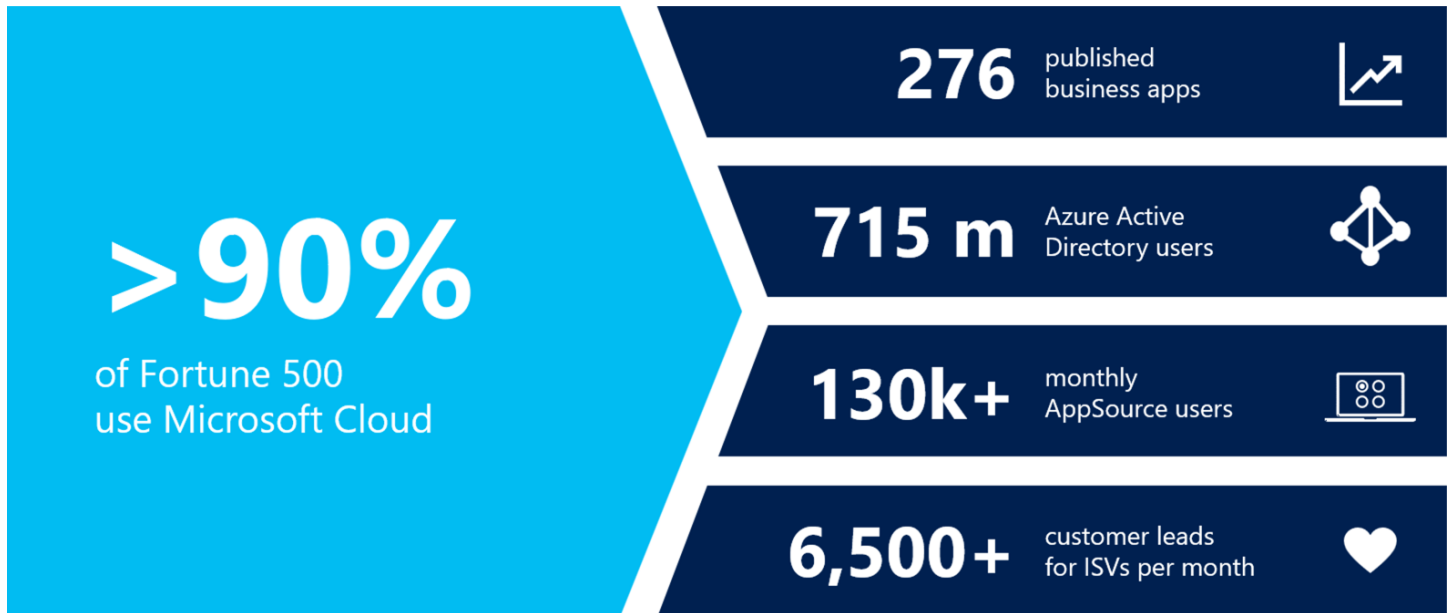


Reach new customers through geographical expansion	Connect with Microsoft community	Promote your applications
<ul style="list-style-type: none"> <li>Market and distribute your applications on <b>AppSource</b> to reach business users</li> <li>Onboard your applications on <b>Azure Marketplace</b> to reach customers</li> </ul>	<ul style="list-style-type: none"> <li>Benefit from exposure to the Microsoft sales force and some channel partners</li> <li>Receive and share marketing and sales leads with Microsoft community</li> </ul>	<ul style="list-style-type: none"> <li>Grow your business with joint campaign planning</li> <li>Enter new markets with the go-to-market support from Microsoft</li> </ul>

Why Build SaaS with Microsoft?

A trusted global leader. Committed to partners. A leading SaaS platform.

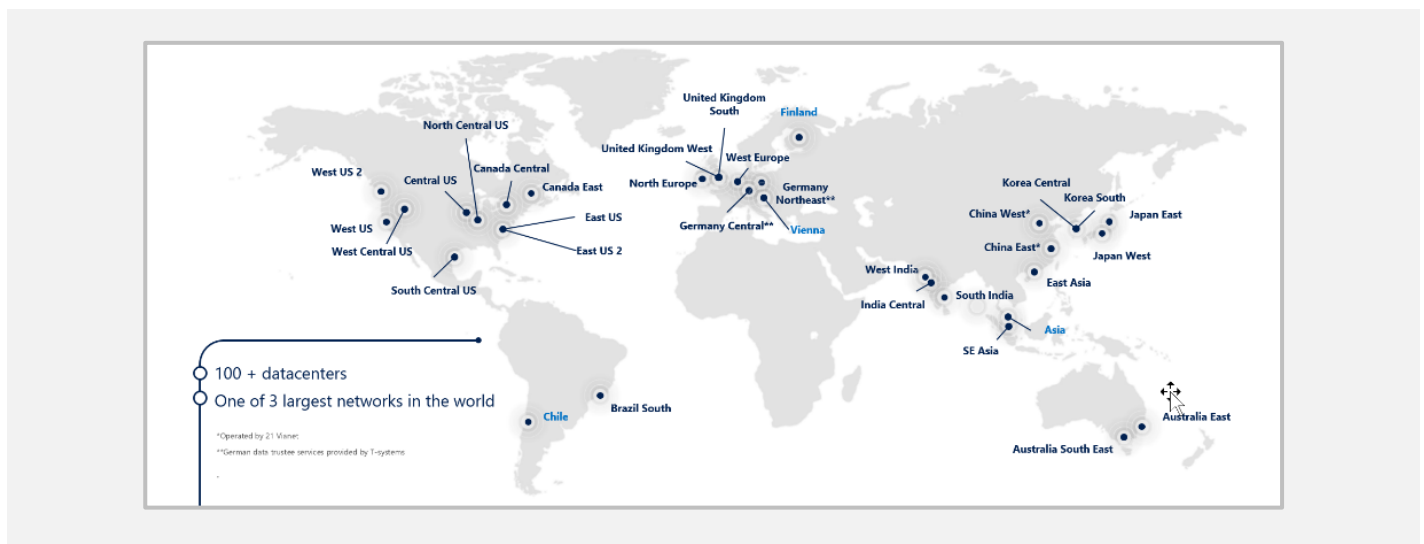
More than 90% of Fortune 500 companies use the Microsoft Cloud, which offers a fully integrated stack for any kind of data from on-premises, hybrid, or fully in the cloud, with an open cloud platform that supports a wide variety of operating systems and programming languages.



Source: Microsoft

**48 REGIONS AND COUNTING**

In order to help organizations meet data residency, sovereignty, and compliance requirements, Microsoft has a worldwide network of more than 48 Microsoft-managed datacenter regions. Microsoft also continues to make significant investments in geo-expansion through our local and sovereign offerings in more than 10 unique geographic regions worldwide, allowing your organization to continue growing globally.



## Why Choose the Microsoft Cloud?

Microsoft offers the most connected, comprehensive set of cloud solutions (Azure, Office 365, Microsoft Dynamics), with an unmatched breadth and depth of capabilities from platform to productivity applications to business solutions. Our integrated portfolio of cloud services works across devices and is supported by one of world's largest developer and partner ecosystems. From a customer perspective, this means a lower cost and complexity associated with the product/services integration, IT provider management, and support.

### **THE ONLY CLOUD: ENTERPRISE LEVEL, HYPER SCALE, AND TRUE HYBRID**

Microsoft is the only cloud provider that combines a hyper scale cloud offering, a truly hybrid platform and enterprise-level support and SLAs for your cloud workloads.

### **COMPLETE SET OF INTEGRATED CLOUD OFFERINGS**

Microsoft has a complete set of integrated cloud offerings, from infrastructure as a service (IaaS), to Platform as a Service (PaaS) and all its Software as a Service (SaaS) offerings. As an example, a PaaS development can easily integrate with a VM on Azure IaaS as well as application services like SharePoint and CRM Online.

### **BROADEST PARTNER ECOSYSTEM**

[Microsoft Partner Network](#) includes over almost half a million organizations worldwide. By working with this broad partner ecosystem, we can offer better solutions and better services to our customers.

### **NATIVE SSO AMONG SERVICES AND ON-PREMISES**

Being able to offer Single Sign On is key among multiple cloud services, and on-premises applications are key for employee productivity and IT management. Microsoft natively offers SSO among its cloud services, REST API for custom applications, and federation and directory sync services with AD and other directories.

### **BEST AND MOST INNOVATIVE ENTERPRISE CLOUD PRODUCTIVITY SOLUTION**

No other cloud provider offers such a complete suite of productivity services. Office 365 is recognized as the

leading cloud productivity platform. Our customers can access the productivity platform through the browser or through the Office application, used by one billion users worldwide.

### **INTEGRATED BUT SEPARATED ENTERPRISE AND CONSUMER CLOUD OFFERINGS**

Not all competitors in this space offer the consumer value Microsoft provides. Others have only one consumer platform that they extend to the enterprise, mixing SLAs and involving the greater risk of sharing private information in a public environment.

### **ENTERPRISE MOBILITY**

The Enterprise Mobility Suite (EMS) is the first comprehensive offering in the industry to recognize that success in enterprise mobility is not just about devices. A complete mobility strategy requires the cohesive management of data, identity, and devices. With an integrated platform for universal device management, identity/access management, and data protection, EMS reduces licensing complexity and makes it easier to extend your existing productivity infrastructure to the cloud.

### **ANALYTICS AND BUILT-IN INTELLIGENCE**

Microsoft has a comprehensive set of services, infrastructure, and tools to build powerful, intelligent apps. Build intelligent solutions at scale using cognitive APIs, bots, machine learning, and blockchain as a service (BaaS) capabilities that you'll only find with Azure. Then, turn your data into a competitive advantage using business analytics solutions, such as demand forecasting and inventory optimization.

Game-changing efficiency



Scale costs with performance and optimize your apps

Global flexibility



Scale apps globally on hybrid platforms or in the cloud

Layers of security



Secure your data and apps with built-in tools

Intelligence visualized

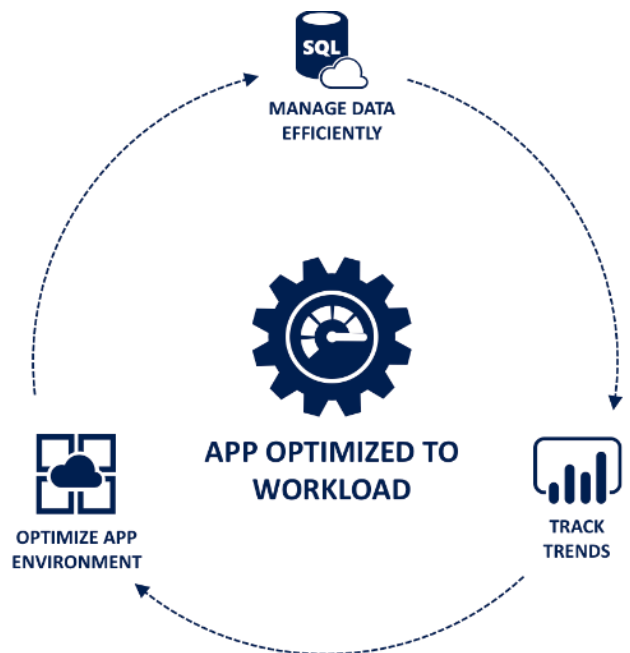
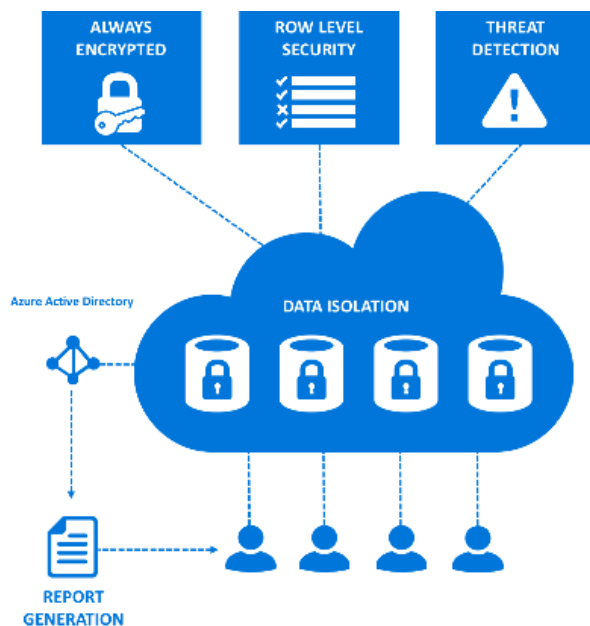


Engage users with rich visualizations and analytics

**ACHIEVE GAME-CHANGING EFFICIENCY**

Take advantage of Azure to reclaim the time you spend managing hardware and updates. Consolidate your customers into single multitenant installations that reduce variety and complexity, reduce operating costs, and scales with you. And use monitoring tools and machine learning to create the operational environment that your SaaS application requires.

Ensure consistent performance with reduced operating costs. Gain insights into your business with real-time analysis of usage patterns. Create an operational environment tailored to your SaaS application.



**PROTECT YOUR CUSTOMERS' DATA**

Create the secure environment your customers demand, with a built-in 99.99% high-availability SLA to ensure consistent performance and intelligent layers of security to prevent unauthorized access to your customers' data. Building your applications on Azure also gives you the most comprehensive compliance coverage of any cloud provider.

Detect threats and protect customers' data with detection and authentication tools. Secure the cloud application environment with deeper visibility and controls. Ensure operations with high availability and disaster recovery.

## COMPLIANCE CERTIFICATIONS & ATTESTATIONS

Microsoft offers the most comprehensive set of [compliance offerings](#) of any cloud service provider. All of Microsoft's services are independently verified to meet legal and compliance requirements, financially backed, and offer transparent information on their availability. Microsoft was the first cloud provider to adhere to ISO 27018 and ISO 22301.

	Regulatory and Compliance Domain	Office 365	Microsoft Azure	Microsoft Dynamics CRM	Microsoft Intune
Broadly Applicable	ISO 27018:2014	✓	✓	✓	✓
	ISO 27001:2013	✓	✓	✓	✓
	SOC 1 Type 2 (SSAE 16/ISAE 3402)	✓	✓	✓	✓
	SOC 2 Type 2 (AT Section 101)	✓	✓	✓	✓
	CSA STAR 1	✓	✓	✓	No
United States Government	FedRAMP Moderate	✓	✓	✓	No
	CJIS Security Policy, Version 5.3	✓	✓	✓	No
	DISA SRG Level 2 P-ATO	✓	✓	✓	No
	FDA 21 CFR Part 11	✓	✓	✓	No
	ITAR	✓	✓	No	No
Industry Specific	IRS 1075	✓	✓	No	No
	HIPAA BAA	✓	✓	✓	✓
	PCI DSS Level 1	N/A	✓	N/A	N/A
	FERPA	✓	✓	✓	N/A
	CDSA	N/A	✓	N/A	N/A
Region/Country Specific	EU Model Clauses	✓	✓	✓	✓
	UK G-Cloud v6	✓	✓	✓	✓
	Australia Gov ASD	✓	✓	✓	No
	Singapore MTCS	✓	✓	✓	No
	Japan FISC	✓	✓	No	No
	New Zealand GCIO	✓	✓	✓	✓
	EU-US Privacy Shield	✓	✓	✓	✓
China (MLPS, TRUCS, GB 18030)	✓	No	No	No	

## COMMITTED TO OPEN SOURCE

With Azure, you have choices. [Choices that help you maximize your existing investments.](#) Get support for infrastructure as a service (IaaS) on Linux and Java and PHP Web application platforms. Develop and test your Linux and open source components in Azure. You bring the tools you love and skills you already have, and run virtually any application, using your data source, with your operating system, on your device. [Much of the Azure tooling and frameworks your technical teams use is open source and hosted in GitHub.](#)

Many cloud options do not offer the infrastructure to support OSS systems, but Azure's support for and integration with most open source solutions made the company's plan not only possible but also easy. Once implemented, with open source software and the fixed cost of Azure, cost planning would become simpler, which means business forecasting would become easier and much more accurate.

## Looking Ahead

In addition to the accomplishments and accolades, it is important to look ahead to what is coming next from Microsoft by using Microsoft's [Cloud platform roadmap](#). You and your customers can get a sense of the new technologies that are on the horizon and be well prepared to launch innovative efforts in concert with new capabilities from the Microsoft Cloud.

Azure App Service on Linux and Web App for Containers were designed with the intention of supporting OSS workloads inside Azure App Service. Azure App Service on Linux provides multiple built-in images, catering to developers who want to use FTP or GIT, deploy .NET Core, Node, PHP or Ruby applications to Azure App Service running on Linux. Web App for Containers provides developers more control over the packages, runtime frameworks, and tooling using custom Docker images.

Web App for Containers was designed to leverage years of Microsoft's Azure App Service PaaS innovations and allows developers to just focus on composing their containers without worrying about managing and maintaining an underlying container orchestrator. Container orchestration is obfuscated away from developers and handled as part of the managed services.

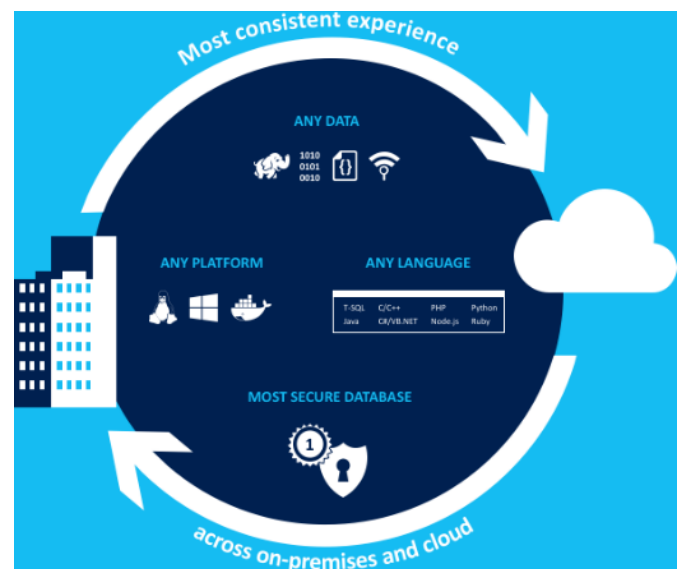


# Azure as the Platform for SaaS

## A complete platform for SaaS developers

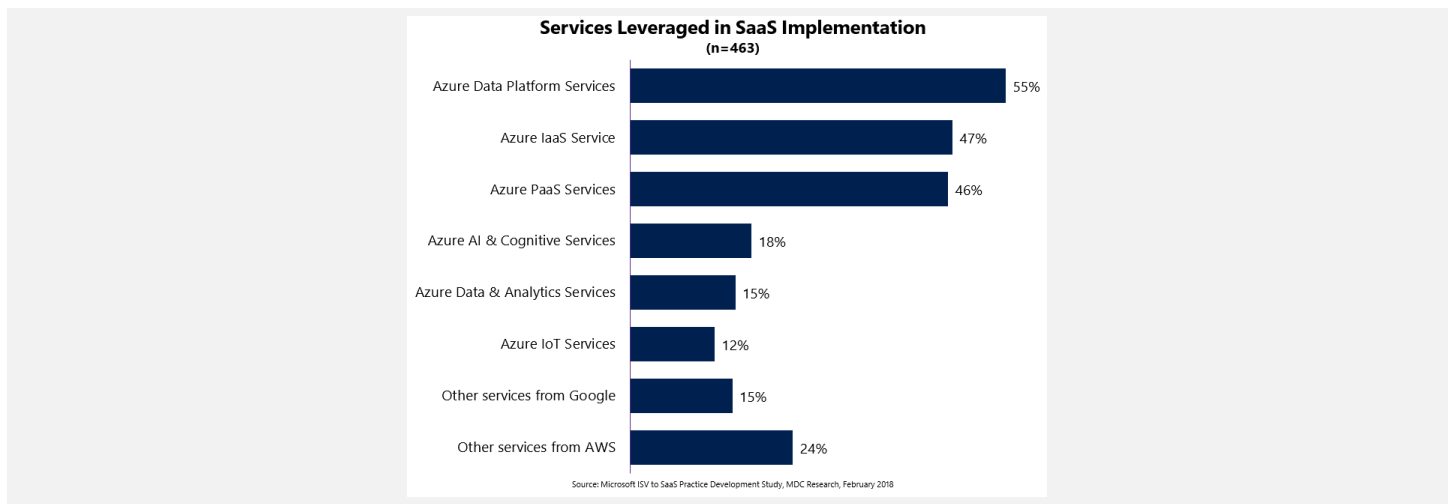
Microsoft Azure is an ever-expanding set of cloud services designed to help organizations meet their business challenges. It provides the freedom to build, manage, and deploy applications on a massive, global network using your favorite tools and frameworks. No other company has such a complete portfolio, from IaaS to PaaS and SaaS, from productivity and social solutions to ERP, from smartphones to PPIs. The Microsoft Azure platform provides you with a customizable application platform, data isolation without the overhead, global distribution of data and content to end-users, integrated identity and access, and the option to easily embed business intelligence, enabling SaaS developers to efficiently and cost-effectively deliver SaaS experiences through three main avenues:

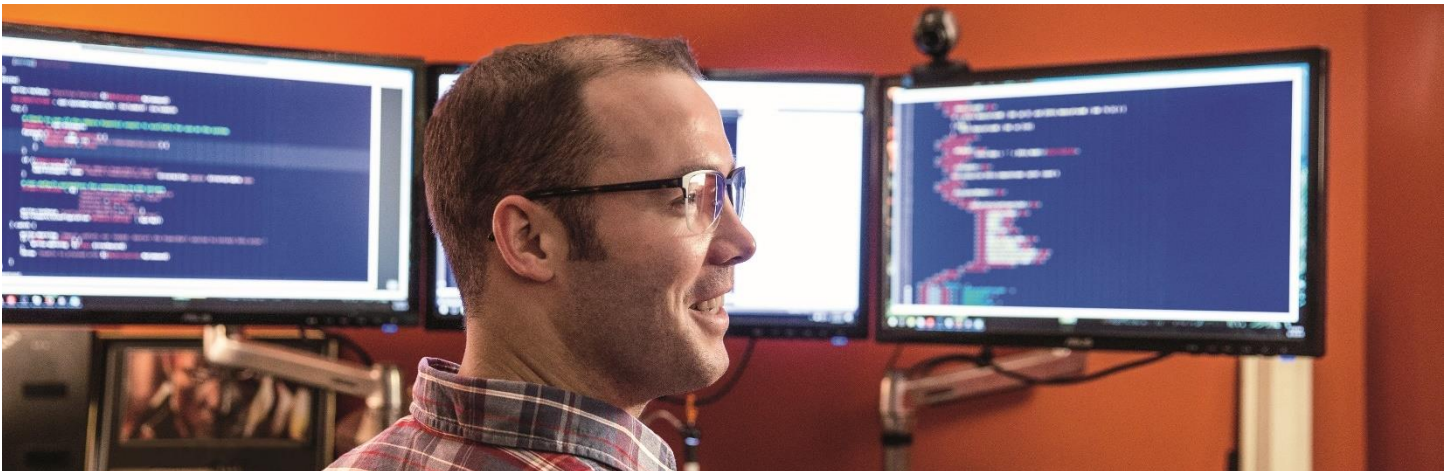
1. **Cost savings:** Azure makes it easy for developer to use existing code and tools to deploy their applications onto the cloud. Applications can be containerized and deployed. Hybrid approaches present the opportunity to leverage existing data and systems, while still benefiting from Azure resources and services.
2. **Reach and engagement:** On-demand capacity with serverless computing allows developers to quickly add functionality to applications, with little to no development work. Massive scale can be achieved using microservices on Azure Service Fabric. Breakthrough capabilities can be delivered using AI.
3. **Talent availability and productivity:** Microsoft fully embraces open source, and Azure provides services to accommodate any programming model, any language, and any data.



## Selecting the Right Azure Services

The range of services available to you when building your SaaS application on Azure is vast. The graphic below shows the top services leveraged during SaaS implementation by partners surveyed by MDC Research.





Below, several Azure features and benefits are described.

### COST SAVINGS

Azure helps your developers to be more productive by providing much of the “plumbing” that they would otherwise need to build themselves. With capabilities such as autoscaling and authentication/authorization tools, you can add advanced features and functionality to your applications with little to no effort. You can integrate services like Azure Search or Cognitive Services that will enhance your applications and please your users.

- **Azure Functions** – Azure Functions is a serverless compute service that enables you to run code on-demand without having to explicitly provision or manage infrastructure. Use Azure Functions to run a script or piece of code in response to a variety of events. With Azure Functions, you can write just the code you need for a solution, without worrying about building a full application or the infrastructure to run it. A function is a unit of code logic that is triggered by an HTTP request, an event in another Azure service, or based on a schedule. Using functions, you can build small pieces of functionality quickly and host them in an elastic environment that automatically manages scaling. You can write Azure Functions in C#, F#, Node.js, Java, PHP, and a growing list of languages.
- **Azure Search** – Search is a common feature in most applications, yet it has traditionally been a difficult function to implement. Azure Search provides a lot of the plumbing to do search. You spin up an Azure Search instance, create an index that helps you search, and fill it with data – that’s it.
- **Azure Bot Service** – The Azure Bot Service makes it easy for you to create a bot – a piece of software that can automatically and autonomously interact with users.
- **Cognitive Services** – Cognitive Services let you build intelligent applications with powerful algorithms using just a few lines of code. Infuse your applications, websites and bots with intelligent algorithms to see, hear, speak, understand and interpret your user needs through natural methods of communication.
- **Logic Apps** – Automate the access and use of data across clouds without writing code. Azure Logic Apps simplifies how you build automated scalable workflows that integrate applications and data across cloud services and on-premises systems. You can orchestrate business logic with Logic Apps, automating a business process or integrating with SaaS applications. Like Azure Functions, Logic Apps can be activated by an outside source, such as a new message on an Azure Storage Queue. You weave together API calls to connectors to create a workflow that can involve resources in the cloud and on-premises.
- **Machine Learning** – Azure Machine Learning Studio is a collaborative, drag-and-drop tool you can use to build, test, and deploy predictive analytics solutions on your data.

### REACH AND ENGAGEMENT

[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)

Azure offers a unique set of fully managed Platform as a Service (PaaS) offerings, that deliver these foundational elements including: Azure App Service, Azure Service Fabric, Azure Active Directory, Power BI Embedded, and Azure SQL Database. It is the only application development platform that delivers a comprehensive and integrated suite of fully managed services and is recognized as a Leader in [Gartner's Magic Quadrant for Enterprise Application Platform as a Service](#), worldwide for the third consecutive year.

**Azure App Service** – Azure App Service is a collection of hosting and orchestrating services that share features and capabilities, allowing you to build and deploy powerful web and mobile applications, for any platform and any device, that connect to data anywhere, in the cloud or on-premises. It offers auto-scaling and high availability, supports both Windows and Linux. You can develop in your favorite language, be it .NET, .NET Core, Java, Ruby, Node.js, PHP, or Python. You can run and scale applications with ease on Windows or Linux VMs (see App Service on Linux). You can also take advantage of its DevOps capabilities, such as continuous deployment from VSTS, GitHub, Docker Hub, and other sources, package management, staging environments, custom domain, and SSL certificates.

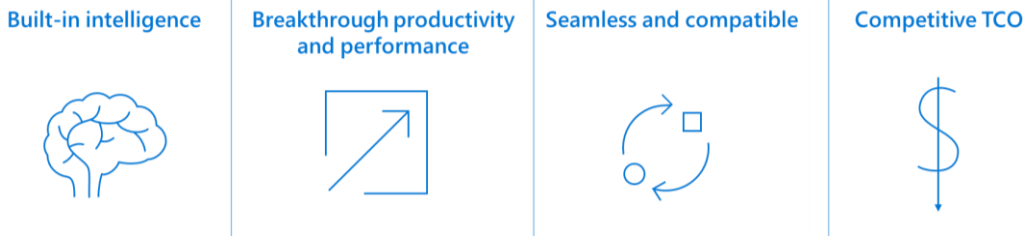
**Azure Service Fabric** – Azure Service Fabric is a distributed systems platform that makes it easy to package, deploy, and manage scalable and reliable microservices and containers. Developers and administrators can avoid complex infrastructure problems and focus on implementing mission-critical, demanding workloads that are scalable, reliable, and manageable.

**Azure Active Directory (Azure AD)** – For SaaS applications that require seamless federated identity and access, Azure Active Directory provides identity and

access management capabilities by combining directory services, advanced identity governance, a rich standards-based platform for developers, and application access management. With Azure Active Directory, developers can enable single sign-on to any SaaS application developed on Azure. Azure Active Directory hosts almost 9.5 million directories from organization all over the world and 600 million user accounts that every day generate 1.3 billion authentications.

**Power BI Embedded** – For developers looking to transform the experience of their SaaS application, Microsoft recently introduced Power BI Embedded. Power BI Embedded allows application developers to embed stunning, fully interactive reports into customer facing applications without the time and expense of having to build controls from the ground-up. This service helps the end-user of an application seamlessly get contextual analytics within an application. Application developers can choose from a broad range of modern data visualizations out of the box, or easily build and use custom visualizations to meet the applications' unique functional and branding needs. Power BI Embedded offers consistent data visualization experiences on any devices – desktop or mobile.

**Azure SQL Database** – Azure SQL Database is the intelligent, fully-managed relational cloud database service that provides the broadest SQL Server engine compatibility, so you can migrate your SQL Server databases without changing your apps. Accelerate app development and make maintenance easy and productive using the SQL tools you love to use. Take advantage of built-in intelligence that learns app patterns and adapts to maximize performance, reliability, and data protection.



- **Tune and protect your database with built-in intelligence.** As your application runs, SQL Database continuously learns your unique application patterns, adaptively tunes your performance, and automatically implements recommendations – freeing you to focus on your application.
- **Protect and Secure Your Application’s Data.** SQL Database helps you build secure applications in the cloud by providing built in protection and security features - without implementing custom code. With Azure’s physical and operational security, Azure SQL Database can help you meet the most stringent regulatory compliances such as ISO/IEC 27001/27002, Fed RAMP/FISMA, SOC, HIPPA and PCI DSS.
- **Azure SQL Database Managed Instance.** SQL Database Managed Instance provides the broadest SQL Server engine compatibility and native virtual network (VNET) support so you can migrate your SQL Server databases to SQL Database Managed Instance without changing your apps. Managed Instance combines the SQL Server surface area with the operational and financial benefits of an intelligent, fully-managed service. Managed Instance is best for migrating a large number of existing SQL Server databases from on-premises or virtual machines to SQL Database.
- **Azure SQL Database Elastic Pools.** Prior to SQL Database elastic pools, developers were forced to make tradeoffs between database isolation and

DevOps efficiency. Now, with the general availability of SQL Database elastic pools, in addition to the intelligent capabilities built into the service, developers can manage few to thousands of databases as one while still maintaining data isolation. Elastic pools are an ideal solution for multitenant environments as each tenant is assigned a database and each database in the elastic pool gets the computing resources only as needed – eliminating the complexity of developing custom application code or over-provisioning and managing individual databases to isolate data. Elastic pools include auto-scaling database resources, intelligent management of the database environment with insights and recommendations, and a broad performance and price spectrum to meet various needs.

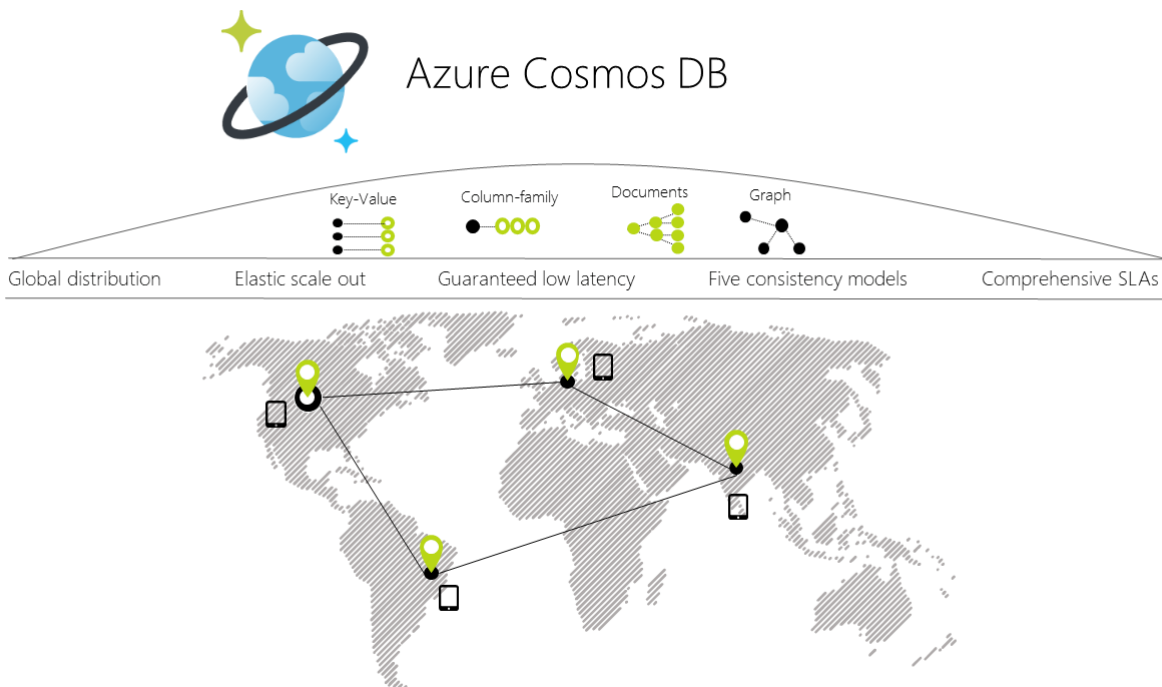
Since its preview of last year, many SaaS developers have adopted pools in their applications and are benefiting from the transition to elastic pools.

- **Redefine multitenancy with customer isolation and greater efficiency.** If you’re a SaaS application developer writing a multi-tenant application servicing many customers, you often make tradeoffs in performance, management, security, and customer isolation. With Azure SQL Database Elastic Pools, you no longer have to make that compromise. Elastic Pools help you manage and monitor multitenant applications and gain isolation benefits of one-customer-per-database.

**TALENT AVAILABILITY AND PRODUCTIVITY**

Azure provides a platform built for hosting any data, on any platform, written in any language. Azure platforms such as Azure App Service, Azure Service Fabric, Azure Container Service (AKS), and Azure SQL enable you to easily deploy your applications onto the cloud and integrate with modern DevOps tools. Containers and AKS allow you to quickly modernize your applications, and how them on the cloud. For new SaaS offerings, serverless technologies, such as Azure Functions, and microservices in Azure Service Fabric, along with PaaS services, such as Azure App Service, eliminate the need for your developers to maintain the underlying system software or virtual configurations. This burden is lifted from your developers by shifting those responsibilities to Azure, freeing them to focus entirely on business value. SaaS brings you real business benefits.

- **Azure Container Service** – Azure Container Service (AKS) allows you to host containers. With this service, you can scale and manage your containers using orchestrators like Mesosphere DC/OS, Docker Swarm, and Kubernetes. This service is a great way to begin moving your containers to the cloud.
- **Azure Cosmos DB** – Azure Cosmos DB is Microsoft's globally distributed, multi-model database. With the click of a button, Azure Cosmos DB enables you to elastically and independently scale throughput and storage across any number of Azure's geographic regions. It offers throughput, latency, availability, and consistency guarantees with comprehensive service level agreements (SLAs), something no other database service can offer. This geographic distribution also provides controls to maintain data within geo-political boundaries, when required by regulatory requirements.



# Azure Solutions for SaaS Requirements

SaaS applications have some basic, fundamental requirements, each addressed by existing Azure services.

Azure offers a host of services for supporting rich, flexible, scalable, and secure multi-tenant SaaS applications. Many of these services were developed based on Microsoft's own experiences gained by developing SaaS applications, such as Office 365 and Dynamics CRM. Azure is a platform which is secure and compliant, offering the most comprehensive set of compliance offerings (including certifications and attestations) of any cloud service provider.

## Azure compliance

The largest compliance portfolio in the industry



### CONNECT TO ANY SERVICE & UNLOCK YOUR DATA

Connect your web or mobile application to enterprise systems or SaaS in minutes with built-in connectors. Azure allows you to choose from more than 50 connectors for enterprise systems such as SAP, Siebel, and Oracle to popular enterprise SaaS services like Salesforce and Office 365 to popular internet services such as Facebook, Twitter, and Dropbox.

### INTEGRATE MORE EASILY

Logic Apps lets you integrate data across clouds and automate business processes in minutes using a visual

design experience. Easily integrate your logic with any mobile or web application via standard REST APIs. Build sophisticated enterprise application integration, B2B solutions using Electronic Data Interchange (EDI) and business policies (rules engine).

### INCREASE DEVELOPER PRODUCTIVITY

Optimized for DevOps, with continuous integration support for Visual Studio Team Services and GitHub, so you can focus on rapidly improving your applications without worrying about infrastructure. Deploy application updates with built-in staging, roll-back, and in-production testing capabilities.

### RELY ON ENTERPRISE-GRADE SERVICES

Azure App Service has full enterprise-grade security and management. Provide delegated and role-based administration; easily secure and manage data flowing to your mobile applications; and protect your assets with built-in backup and restore capability. Fully PCI-compliant with dedicated environments, and the ability to deploy across public and private clouds.

As a single integrated service, Azure App Service makes it easy to compose the above application types into a single solution, allowing you to easily build applications that target both web and mobile clients using the same back end and integrate with on-premises systems as well as popular SaaS services.

### MANAGE AT SCALE

Using built in monitoring tools your applications are easily manageable at scale, with services such as Azure Monitor, Application Insights, Log Analytics, and Event Grid.

# Azure Solutions for SaaS Automation and Orchestration

Automation and orchestration are extremely important functions to a successful Azure practice.

Your ability to automate routine tasks allows you to lower your delivery costs and offer superior SLAs – driving a virtuous cycle of efficiency and repeat business. Automation is the key to creating the right balance between cost, reliability, speed, and time to market. Automation can also offer significant benefits to the customer as it can optimize Azure spending and increase reliability for workloads that have varying resource requirements.

Some of the key customer challenges and questions you may face include:

- Customer lacks technical expertise required to efficiently manage PCs, servers, software, user access, and policies
- Customer lacks a unified toolset for implementing an appropriate configuration management work stream
- Customer lacks a unified management plan and instead carries out changes on live equipment on an ad hoc basis
- Lack of resources and knowledge to maintain their own system and integrate automation capabilities
- Automation tools are perceived as too complicated and too expensive to implement
- Lack of familiarity with dev-ops approach to operations - or unable to bring the cultural change required to adopt dev-ops as a way of doing things
- Fear and uncertainty surrounding the loss of control associated with automation
- IT environments are not mature or well defined enough to warrant automation

## CONTINUOUS INNOVATION THROUGH DEVOPS

For Dev-ops on Azure it is important to have a strong understanding of the command line tools and Azure

Resource Manager templates as well as services like Chef or Azure Automation DSC to enable configuration management for a stronger offering. With these tools in your toolbelt you can automate tasks normally done through the Azure management portal and control large amounts of resources with fewer people.

## KEY SERVICES FOR THIS OFFERING

- Template and script authoring
- Automatic start and stop of virtual machines (cost optimization)
- Automatic scale down of services
- Continuous deployment and Integration
- Configuration management

## RESOURCES

In a dev-ops world, customers expect you to provide continuous integration, deployment, and automation for all their applications. Everything from code deployment to testing, staging to release, can be automated. This is an opportunity for you to help your customers leverage the full dev-ops experience of developing on Azure.

- [Azure Automation](#)
- [Azure Automation DSC](#)
- [Azure PowerShell](#)
- [Azure CLI](#)
- [VSTS DevOps and ALM](#)
- [Chef, Puppet, Docker and Linux VMs](#)
- [Using Jenkins and Storage for Continuous Integration](#)

## 3<sup>RD</sup> PARTY RESOURCES

- [Chef](#)
- [Puppet](#)
- [Jenkins](#)
- [Ansible](#)
- [SaltStack](#)

# SaaS Architectures Made Possible with Azure

## MICROSERVICES

A term you may have heard about cloud-based development is [microservices](#). Microservices are an application development and deployment approach perfectly suited to the agility, scale, and reliability requirements of modern cloud applications. The term “microservice” emphasizes the fact that applications should be composed of services small enough to truly implement a single role. Each has well-defined contracts (API contracts) for other microservices to communicate and share data with it. Microservices must also be able to version and update independently of each other. This results in a fine-grained, loosely coupled application that can easily be distributed across multiple host machines for scale and reliability. This loose coupling is key to supporting rapid and reliable evolution of an application. What would have been a single tier of a monolithic application decomposes into many discrete microservices, each independent and isolated.

Azure Service Fabric solves distributed systems problems, such as reliability, scalability, management, and latency, typically associated with the microservices approach. It is a mature, feature-rich microservices application platform with built-in support for lifecycle management, stateful and stateless performance at scale, hybrid deployments, 24x7 availability, and cost efficiency.

## SINGLE-TENANT APPLICATIONS

In single-tenant applications, the whole application is installed repeatedly, once for each tenant. Each instance of the app is a standalone instance, so it never interacts with any other standalone instance. Each instance of the app has only one tenant, and therefore needs only one database. The tenant has the database all to itself.

## MULTI-TENANT APPLICATIONS

Microsoft has provided a sample SaaS application, and a series of management scripts and tutorials that demonstrate the range of SaaS-focused design and management patterns that can accelerate SaaS application development on Azure and SQL Database. These patterns extend the benefits of SQL Database, making it the most effective and easy-to-manage data platform for a wide range of data-intensive multi-tenant SaaS applications.

## DATABASE-PER-TENANT MODEL DELIVERS TENANT ISOLATION

The discussion around patterns starts with the consideration of what [data model](#) to use to satisfy your business and customers’ requirements. Multi-tenant applications have traditionally been implemented using a multi-tenant database. While multi-tenant databases remain effective for some applications, particularly where the amount of data stored per tenant is small, many SaaS applications benefit from the isolation inherent in using a database per tenant. The fully-managed nature of SQL Database and the use of elastic pools have made managing massive numbers of databases practical. Many ISVs are now running SaaS applications on SQL Database with tens of thousands of tenant databases in elastic pools. A database-per-tenant model allows these customers to achieve levels of tenant isolation not possible with a multi-tenant database, with improvements in data security, privacy, performance management, extensibility, and more.





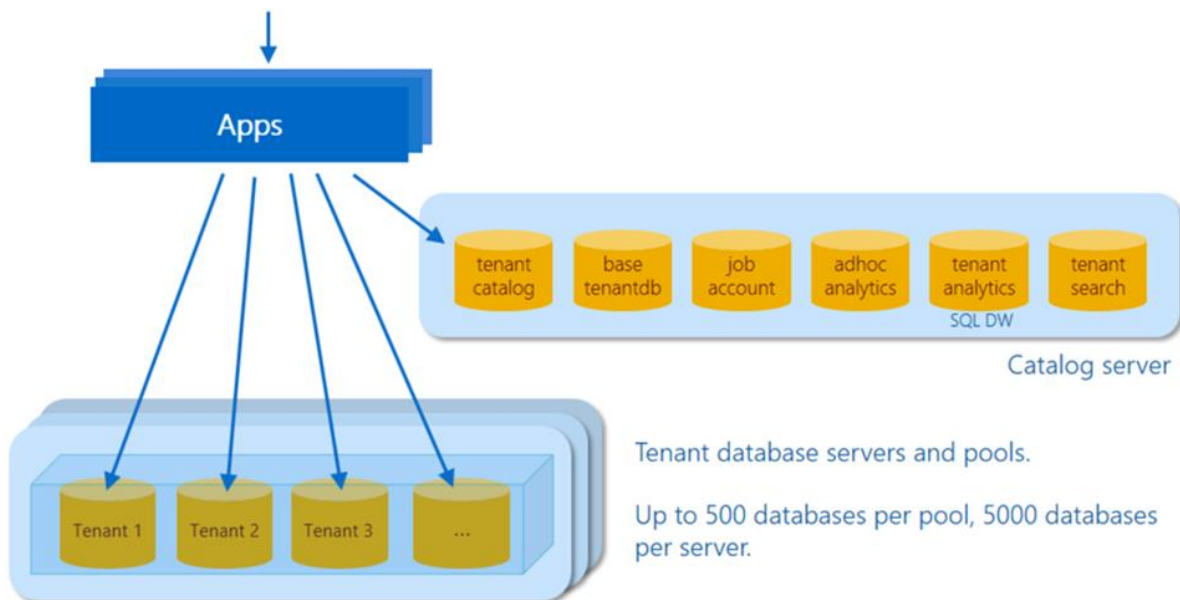


## Learning from Customer Experience

By working closely with our partners, and learning from their experience, Microsoft has harvested a set of design and management patterns applicable to any business domain that simplify the adoption of a database-per-tenant approach and its use at scale. Based on these patterns, a sample SaaS application and a set of management scripts, backed by easy-to-follow tutorials, is now available, with all code on [GitHub](#) and the [tutorials](#) online.

You can install the sample application in less than 5 minutes and explore the patterns first-hand by playing with the application and looking at how it's built using the Azure portal, SQL Server Management Studio, and Visual Studio. By studying the application and management scripts, and working through the tutorials, you can jump start your own SaaS application project.

The sample application is a simple event listing and ticketing SaaS application, where each venue has its own database with events, ticket prices, customers, and ticket sales, all securely isolated from other venues' data. The application uses a canonical SaaS application architecture for the data layer. Each tenant is mapped to its database using a catalog database, which is used for lookup and connectivity. Other databases are installed to enable other scenarios as you explore the various tutorials.



### SAAS SCENARIOS EXPLORED

The application and management scripts address many common SaaS-related scenarios, including:

- Tenant registration, including database provisioning and initialization, and catalog registration
- Routing and connection from the application to the correct tenant database
- Database performance monitoring, alerting and management, including cross-pool monitoring and alerting
- Schema management, including deployment of schema changes and reference data to all tenant databases
- Distributed query across all tenant databases, allowing ad hoc real-time query and analysis
- Extract of tenant data into an analytics database or data warehouse
- Restoring a single tenant database to a point in time

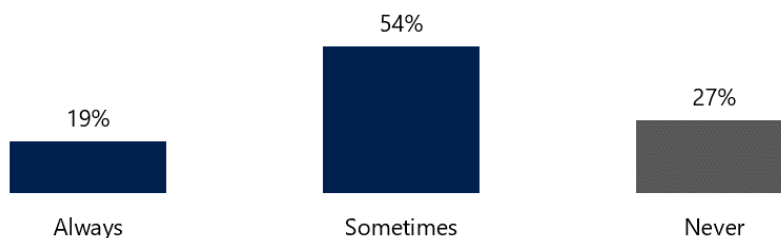
A load generator simulates unpredictable tenant activity, allowing you to explore resource management scenarios, including scaling pools to handle daily or weekly workload patterns, load-balancing pools, and managing large variations in individual tenant workloads. A ticket-generator allows you to explore analytics scenarios with significant amounts of data.

The application also benefits from other SQL Database features that are especially relevant in a database-per-tenant context, including automatic intelligent index

### APIs

SaaS APIs provide a mechanism for other SaaS and on-premises application to easily integrate and interact with data and services. Azure makes implementation of APIs easy, using API Apps to provide focused capabilities for use by other SaaS applications and applications for providing horizontal solutions (used across industries). In the MDC Research survey, 73% of partner ISVs reported developing open APIs for application integration sometimes or always.

### Open Platforms with APIs for 3<sup>rd</sup> Party Developers (n=463)



Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

tuning, that optimizes tenant database performance based on each tenant’s actual workload profile.

### INTEGRATED WITH OTHER AZURE SERVICES FOR AN END-TO-END SAAS SCENARIO

Several other Azure services are also showcased as part of the application, including Azure App Service and Traffic Manager in the application layer, Log Analytics (OMS) for monitoring and alerting at scale, SQL Data Warehouse for cross-tenant analytics, and Azure Resource Management (ARM) templates for deployment.

The application will be extended over time to include more scenarios, from additional management patterns to deeper integration with other Azure services, including Power BI, Azure Machine Learning, Azure Search, and Active Directory, to build out a complete E2E SaaS scenario. We also want to explore the same scenarios with a multi-tenant database model in due course.

These SaaS patterns are also informing planning for future improvements to the SQL Database service.

### RESOURCES

- [Wingtip Tickets application documentation](#)
- [Deploy and explore a multi-tenant SaaS application](#)
- [Microservices architecture](#)
- [Microservices reference implementation](#)
- [Build your application business](#)
- [Multi-tenant SaaS database tenancy patterns](#)

# Troubleshooting Resources

Use these resources to assist with troubleshooting in your Azure-focused practice.



## MSDN SUPPORT FORUMS

[MSDN support forums](#) are moderated by Microsoft staff and others in the community. This is a great location for asking troubleshooting questions for Azure.

## STACK OVERFLOW

Stack Overflow is the largest online community for programmers to learn, share their knowledge, and advance their careers. This a great community-based resource for assisting developers with troubleshooting code-related issues on Azure.

## SERVER FAULT

Server Fault is a question and answer site for system and network administrators. This a great community-based resource for assisting IT Professionals with troubleshooting infrastructure-related issues on Azure.

**AZURE TROUBLESHOOTING RESOURCES**

**TROUBLESHOOTING AZURE INFRASTRUCTURE AS A SERVICE**

[Troubleshooting RDP Connections](#)

[Reset Remote Desktop Connections](#)

[Troubleshoot Creating a new VM](#)

[Troubleshooting Specific RDP errors](#)

[Troubleshoot restarting or resizing a VM](#)

[Troubleshoot Application Access](#)

[Troubleshoot Allocation failures on Windows](#)

[Troubleshooting SSH connections](#)

[Troubleshooting Application Access on Linux](#)

[Troubleshooting Allocation issues on Linux](#)

[Troubleshooting Resource Manager Deployment issues with Linux](#)

[Redeploying a Virtual Machine](#)

[Troubleshooting ARM Template Deployment Errors](#)

[Troubleshooting and monitoring Azure Storage](#)

[End-to-End Storage Troubleshooting](#)





# Define and Design the Solution Offer

## Understand the SaaS Business Model

The SaaS business model encompasses two key elements: value creation and value capture.

An ISV's business model reflects strategic choices as to how to compete in the marketplace, how to deliver a differentiated product or service, and how to capture economic value. In Keystone's research<sup>6</sup>, the business model encompasses two key elements: value creation and value capture. Value creation represents benefits the software delivers to end customers, such as the product's feature set, its performance, and ease of use. Value capture represents how much of the value ISVs can retain. An ISV's value capture strategy is a product of the company's pricing model and its cost model in serving its customers.

As you consider SaaS, you must consider market position, service level, and customer satisfaction, which means addressing:

- Where you will position yourself in the market?
- What kind of customers you want to attract?
- How many customers you want to serve with your SaaS?
- What benefits will they get at different service levels?
- How long your customer lifespan will be?
- Whether you are service businesses (B2B), direct customers (B2C), or both?

Thinking about these issues will enable you to understand the value of your SaaS offering and will make

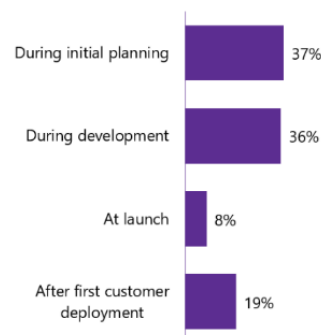
[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)

it easier to think about pricing tiers and bundles. Many companies find they have to revisit this over time and change their strategies to match the needs of the market.

A business plan is a critical asset that can help you envision and think through the details of your practice, identify gaps you will need to address, and explain the fundamentals of your practice to others. Leverage the [Develop a Business Plan](#) guide for details, profitability scenario overviews, business plan templates, and financial models.

It is also important to incorporate marketing, sales and channel strategy into the planning phase. As shown in the chart below, 37% of partners surveyed started planning marketing, sales, and channel strategy during initial planning phase, almost two thirds (63%) of partners reported not starting planning for these early enough. The earlier in the planning phase marketing and sales are incorporated, the more likely the ISV is to see success from these efforts.

**SaaS Offering Marketing Timing**  
(n=463)



Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

# Assessing for Readiness

Start by offering a cloud readiness assessment.

2016 marked an inflection point for cloud adoption for both SMB and enterprise customers. Most customers today have already started taking cloud seriously. However, not every customer is savvy enough to build a robust cloud strategy. Many don't have granular visibility into their IT infrastructure – and are not able to quantify the benefits in cost, agility, speed, and time to market that cloud brings. Others, while aware of the benefits, don't know where to start and are unsure of how ready their staff, systems, tools, and processes are for public cloud. For ISVs with legacy, on-premises software it may make sense to begin with a cloud assessment. A cloud assessment can help you identify the best approach to take in developing your SaaS practice, determining which workloads are ready to move to Azure, and in what fashion (lift-and-shift, re-platform, or replacement with a new deployment model). The cloud assessment can also help you to develop an understanding of the readiness of your existing customers. Customers require a partner who can provide the proper roadmap and guidance to optimizing their workloads in Microsoft Azure.

## SOME OF THE KEY CUSTOMER CHALLENGES AND QUESTIONS YOU MAY FACE INCLUDE THE FOLLOWING

- How do I get more speed, agility and performance for my IT assets?
- How do I decide between hosted private cloud vs public cloud deployments?
- How do I factor in both for my short to medium term IT strategy?
- How do I decide the first applications to take to cloud?
- Do I need to train my staff again after a cloud migration? What other changes do I need to make in my IT staffing?
- How do I control 'shadow IT', or 'zombie applications' or workloads that are consuming more resources than the value they are delivering?

## A CLOUD READINESS ASSESSMENT USUALLY COVERS TOPICS SUCH AS

- What the estimated ROI for migrating workloads to Azure would be
- The readiness needs of the customer to support the workload in Azure
- Which applications and workloads should stay on-premises
- Hybrid cloud connectivity requirements

## RESOURCES

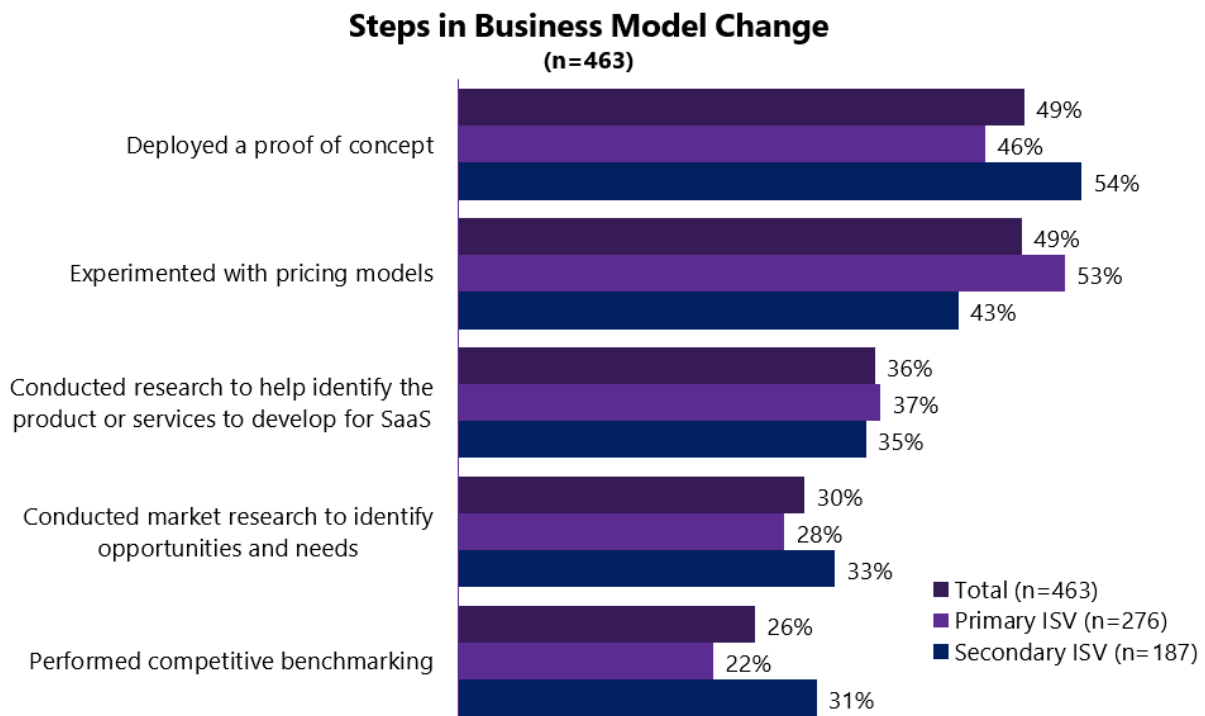
- [Azure Virtual Machines Readiness Assessment](#)
- [Azure Channel Pricing Calculator](#)
- [Operations Management Suite Application Dependency Monitor](#)



# Implement a Proof of Concept

One of the key services in your development arsenal is the Proof of Concept (PoC).

In our research, 49% of partners having a SaaS practice indicated that they deployed a proof of concept to start their SaaS practice.

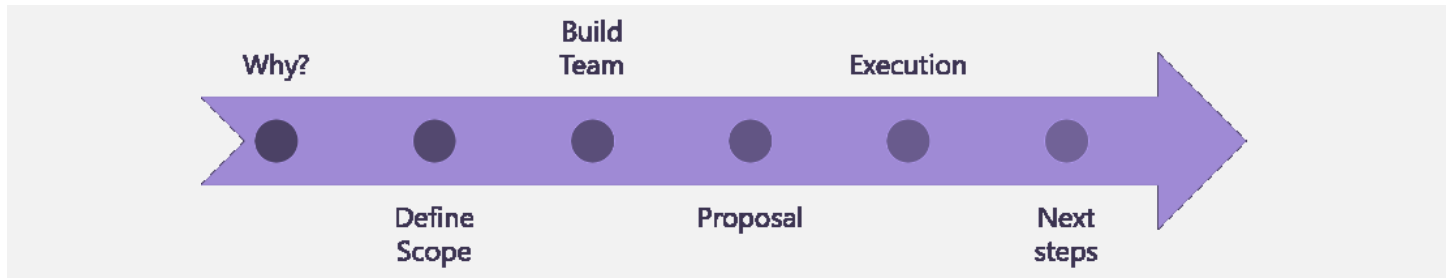


Source: Microsoft ISV to SaaS Practice Development Study, MDC Research, February 2018

The key to developing a successful PoC is to avoid common traps, such as premature optimization, and spending too much time hardening the application for rock solid performance and stability. The proof of concept is a level of complexity and usability below a minimum viable product (MVP), as it is used to validate the customer requirements, and the proposed solution. If you can start your PoC from an available template, such as a Visual Studio project template, or from pre-existing code from another of your projects, this will be a great way to jump start your development process. Bear in mind that the PoC lacks a lot of the functionality of the final delivered software. User interface elements, for instance, may be there just for illustrative purposes and lack functionality. APIs may have desired endpoints stubbed out that define the methods and functionality that it will provide, but the implementations are missing. Resist the urge to develop the final product atop the PoC, as you will likely alter your use of technology, the requirements may change, and you will likely start from a more stable development foundation.

The benefits of developing the PoC are twofold: it helps your development team fully understand the requirements of building a SaaS application, instead of just reading through the documents, and it also helps the customer truly understand what they want. Oftentimes, customers will have a concept in mind of what they want, but they aren't aware of what they don't know, that can influence their concept later in the development process. The PoC helps identify these issues early on. Having a PoC on hand gives you the opportunity to communicate to the user the look and feel of the final product much more vividly than using design documents and design reviews. Seeing the PoC allows the customer to adjust their requirements to match exactly what they want, and to better define their expectations for the final deliverable.

PROOF OF CONCEPT HIGH LEVEL FLOW



**Why Perform a Proof of Concept?**

Proof of concepts (PoC) serve several purposes. One of the primary aims is to overcome customer objections by demonstrating that the solution will solve the problem it's being designed for. The PoC also can serve as evidence that your practice can use for future engagements with the same customer or with new customers. Many times, the output of a PoC can be added to your practice's intellectual property list for demonstrations, or used to accelerate future solutions. Proof of concepts are one of the key tools when trying to displace the competition by rapidly showing value and hopefully a quick return on investment.

**POC Execution**

First, identify the technical resources needed for the PoC. This will include the technical implementation team, as well as project management for tracking the progress of the engagement. Beyond identification of resources, ensure all members of your team and your customer's technical team (if they are participating) are clear on responsibilities. During the PoC it is important that the initial design follows best practices and is designed for production (just scaled down) from the beginning. Communication is critical, so ensure that the progress of the PoC is communicated to all stakeholders on a regular basis.

**Define Scope**

A proper PoC is defined with a clear and concrete scope. Conduct an application design session (ADS) to align business and technical requirements and set clear goals. This should include:

- Identify workloads and features to demonstrate.
- Determine what you want to prove and which objections need to be overcome.
- Clearly demarcate responsibilities and set up organization.
- Set up subscriptions, define payment, and perform cost estimates of the PoC.
- Agree on the next step if success criteria are met.

**Next Step**

At the end of the PoC, create a report that explains the overall status of the PoC and any issues identified during the PoC. The report should elaborate on the pros and cons of the delivery and clearly explain the value prop of moving forward with a real implementation to the stakeholders along with expected production costs over time. Assuming the stakeholders agree to move forward, put a plan into place to deploy the PoC into production while ensuring that the PoC is designed for production usage.



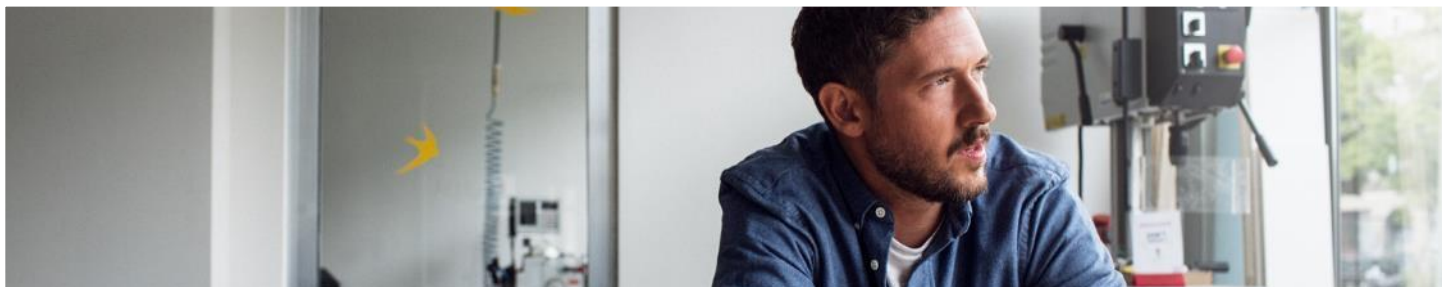
# Understanding Intellectual Property

Intellectual property (IP) includes the proprietary elements you develop in-house, own, maintain and sell directly or as value add to project and managed services.

Productizing IP and creating repeatable processes has been a very successful strategy for many partners. Some partners are achieving gross margins in excess of 70% by productizing IP and selling it to their customers on a recurring revenue basis. Productizing IP helps you create stickiness with customers and opens opportunities to sell your solutions through the partner channel. If you don't want to create your own IP, you can also look to the partner ecosystem for incremental solutions that can be bundled with Microsoft's offerings to round out your total SaaS solution.

## The Importance of Developing Intellectual Property

### Implementing IP in your Cloud Offerings



Tips to get you started with productizing your IP and going to market:

1. **Define your solution.** Through our research process, when we asked partners how they determined what IP they were going to build, we often got the same answer, which is that they realized most of their customers were asking for the same thing or something very similar, and rather than continuing to do high-cost custom work for every customer, they decided to productize what their customers were asking for. Bring your sales, marketing, technical and delivery teams together to brainstorm and define what your solution will look like.
2. **Determine what will differentiate your solution** from others in the market. It is vital that you think about your differentiation strategy. What is going to make your solution better than other solutions like it in the industry?
3. **Maintain rights to the IP.** It is critical that you maintain the IP rights to the solutions and get customers to agree to the terms through your customer agreements
4. **Establish a recurring revenue model.** The beauty of deploying IP in the cloud space is that you can light up the recurring revenue model, which will have a positive impact on the valuation of your business and will help even out your cash flows in the future.
5. **Consider your channel strategy.** One of the advantages of productizing your IP is that it opens a lot of doors to sell your solution through channel partners.
6. **Consider sourcing strategy.** In order to develop IP, it is not necessary to build your own development organization. There are thousands of companies in the world that do software development as a service. But remember to secure rights to your IP in this case.

For an even deeper dive into cloud profitability, see Blue Rooster's [story](#) on how they transitioned from a project services to an IP focused partner in just nine months, and these additional resources: [IP Development](#) and [Create Stickiness with IP](#).



## Protect Your SaaS Intellectual Property

Microsoft's [Azure IP Advantage program](#) represents the industry's most comprehensive protection against intellectual property (IP) risks, particularly revolving around IP infringement. The Microsoft Azure IP Advantage program includes the following benefits:

- Best-in-industry intellectual property protection with uncapped indemnification coverage will now also cover any open source technology that powers Microsoft Azure services, such as Kubernetes or Docker used to power containerized solutions in Azure.
- Patent Pick: Makes 10,000 Microsoft patents available to customers that use Azure services for the sole purpose of enabling them to better defend themselves against patent lawsuits against their services that run on top of Azure. These patents are broadly representative of Microsoft's overall patent portfolio and are the result of years of cutting-edge innovation by our best engineers around the world.
- Springing License: Microsoft is pledging to Azure customers that if Microsoft transfers patents in the future to non-practicing entities, they can never be asserted against them.

With these changes, Microsoft now offers our customers industry-leading protection against intellectual property risk in the cloud.

### CONSIDERATIONS FOR YOUR SAAS IP

Fundamentally, in order to benefit from the Microsoft Azure IP Advantage program, some parts of an ISV's solution need to run in Azure, such that minimal spending requirements are met. To be eligible for Microsoft Azure IP, an ISV's spending must meet the following requirements:

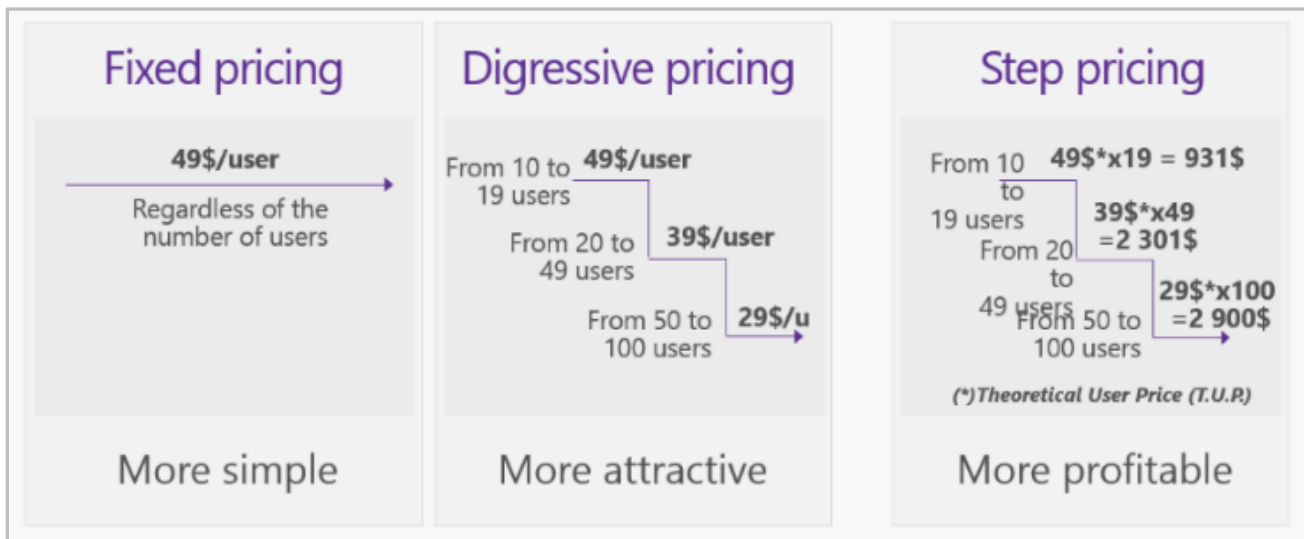
- For patent pick eligibility: (i) have an Azure usage of \$1,000 USD per month over the past three months; (ii) have not filed a patent infringement lawsuit against another Azure customer for their Azure workloads in the last 2 years; and (iii) show evidence of a current patent litigation that occurred after February 8, 2017. Legal transactional costs apply.
- For springing license eligibility: ISVs must have an Azure usage of \$1,000 USD per month over the past three months.

# Define Your SaaS Pricing Strategy

Pricing your SaaS offering is no longer determined simply by cost plus margin.

Pricing SaaS offerings is different in today's marketplace. Increasingly it is about return on value (ROV) — the added benefits (e.g., better per-unit price, improved service characteristics) an ISV's customer gets by being a better customer (e.g., buying contracts with longer durations, making upfront payments, etc.). Customers will only pay as much as the value they estimate they will get from the offering. With SaaS, pricing presents a means for ISVs to closely align pricing to the value customers receive. Of the ISVs that changed pricing models, they reported an improved ability to capture net new revenue from heavy users that previously represented value left on the table in a traditional licensing model (Keystone: The Shift to SaaS, June 1, 2017).

Because price is part of an ISV's value proposition and solution offer, pricing is something they can be proud of and share early, removing any customer concerns. Pricing is now a result of the product, and it begins with the SaaS offerings value proposition. To understand how to price an offer, let's review the pricing strategies to see the benefit they bring to a solution offer.



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## FIXED PRICING

Pricing is the consequence of the product and aligns to the accepted industry/application standard. Think of this as reference pricing; as in customers have seen similar products sold for this amount, so you price your offer so that it is similar. What's the standard price for a mobile phone application? \$0.99. If you charge more, you are breaking from the industry accepted, standard pricing. This is an old way to look at pricing. Buyers today will accept this model, but they do not prefer it and it provides minimal help in getting your offer purchased. Let's look at the other options that you should consider for your SaaS practice.

## DIGRESSIVE PRICING

Virtuous pricing is about using the price as a sales weapon. The goal of virtuous pricing is to create a virtuous sales cycle within your customers, where each sale encourages the next sale within the customer organization. It fosters product adoption and proliferation. Let's begin with a counter example of what is not virtuous pricing — a fixed price per user. For your SaaS practice, this could be pricing per client that consumes your SaaS web service. Here, you have a simple pricing structure (which is important), but there is nothing to encourage more aggressive purchasing by the customer.

Enter digressive pricing, which drops the per-unit price with the purchase of more units. Your customers get a discount per unit price the more they buy. This can help create a virtuous sales cycle within the customer because now the customer is looking for way to bring their cost per unit (e.g., user, client, etc.) down. For example, assume one line of business has already purchased 19 users from you at \$49 per user for your SaaS web service. Now, there are discussions within another line of business within the same customer organization to purchase a similar product from a competitor or to purchase yours. Your existing customer is incentivized to lobby on your behalf because if the other line of business purchases your product, their cost per user will drop to \$39 per user. And the cycle can continue as each new group evaluates your solution offering.

There is a way to adjust digressive pricing slightly to make it significantly more profitable — step pricing. This method sets the price for each step as the top number of users in the range. Building on the example from digressive pricing, let’s say that the customer purchased 15 users. They would pay for the equivalent of 19 users since that is the price for this range of units. Why is this more profitable? Because your customer is effectively paying you for the 4 users they are not using (yet) — which goes straight into your profits. What’s more is you have amplified the virtuous sales cycle because the customer wants to get as close to the maximum number of users for the step as possible to get the lowest possible cost per unit within the step.

**STEP PRICING**

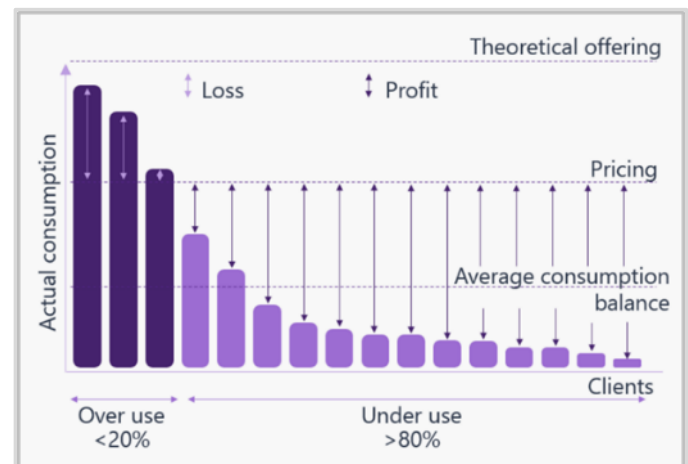
This is one of the most powerful business pricing strategies.

You have probably already experienced it, although you may not have realized. Flat rate pricing is leveraged by banks, insurance companies, etc., every time you pay premiums. While it can have varying levels of sophistication (banks and insurance firms use sophisticated versions of this based on significant work by their actuaries), the model can be described and implemented in a simple fashion. The basic idea is that you provide a certain quantity of value for a set cost that all customers pay. Let’s say your SaaS practice built a custom SaaS web service that helps predict a sales

outcome. Some customers may come close to (or even exceed) using the full value of what they pay - for example, they are the big box retailers who depend on your custom web service to customize the consumer’s experience. The rest (the smaller chains and boutique online stores) are nowhere close (they have smaller traffic, and as such each individually is making fewer requests against your custom SaaS web service). A well-crafted model identifies the average consumption across all your customers and creates a situation where over 80% of the customers are using less than what they are paying for (and ideally less than the average consumption) and fewer than 20% are using more.

You set your price to be above the average consumption. By doing so, clients in the 80% who use less than what they pay for (the smaller chains and boutique online stores) generate your profit. The further they are below the average consumption, the more profit they generate.

For the 20% who use more than they pay for (the big box stores), you might take a loss on them individually. However, in the aggregate, the long tail represented by the 80% of customers who do not fully use what they pay for more than covers the cost of your heavy consumers, and these heavy consumers are likely to be your biggest champions. So, there are tangential benefits to supporting their cost. Pricing models built around flat rate pricing have shown between 1.5 and 3 times as much profit as traditional models.



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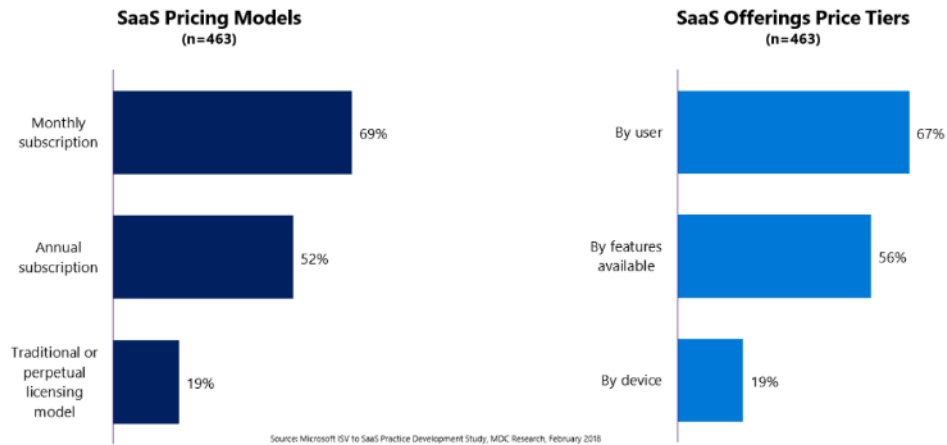
## UPFRONT PAYMENT

Another consideration of your pricing strategy is whether to allow your customers to pay for a subscription period upfront, usually for a discount.

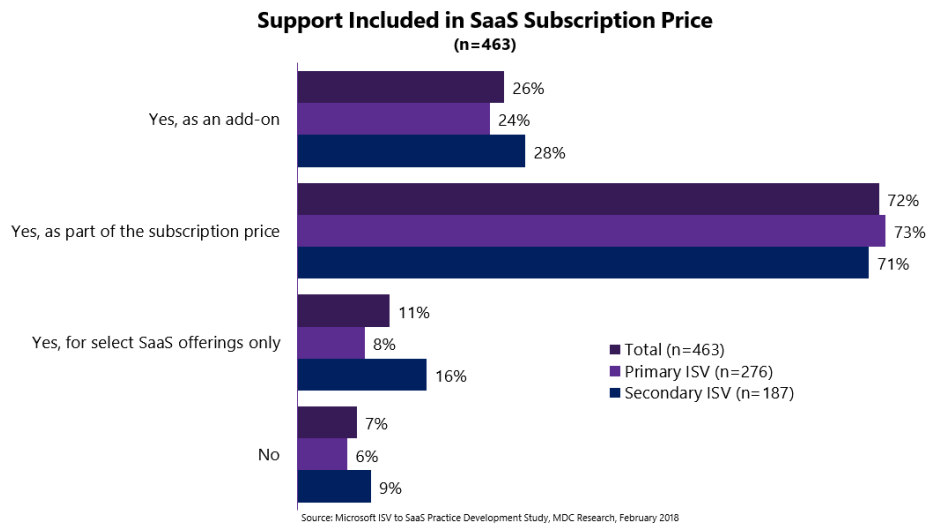
Reasons for doing so, including providing some working capital to get resources going in the early days of your practice, mitigate the risk that a customer abandons a project without any payment and ensure the customer is as invested in a project as you are. It can also serve to minimize financial impact to your practice when the customer has requested longer payment terms. A common approach is to offer discounted rates for annual pre-payments, where the customer pays for the whole year upfront and in return gets a discount over what it would otherwise cost for the year if paying monthly.

# How are SaaS Partners Pricing?

In our survey of SaaS ISVs, over two thirds of the partners surveyed utilize monthly subscriptions and tier pricing by user, using mostly two dimensions: number of users or devices and the depth of features available.



72% of ISVs include support in as part of their subscription price, with another 26% including it as an add-on. However, 80% consider customizations to be outside the scope of support and charge an extra fee on a project basis for customer requested custom modifications.



## EXAMPLE OF A SAAS OFFERING (BASIC, PRO, PREMIUM OPTIONS)

Basic	Pro	Basic
<ul style="list-style-type: none"> <li>Model Hosting</li> </ul>	<ul style="list-style-type: none"> <li>Model Hosting</li> <li>Performance Monitoring</li> <li>Quarterly Retraining</li> </ul>	<ul style="list-style-type: none"> <li>Model Hosting</li> <li>Performance Monitoring</li> <li>Perpetual Retraining</li> </ul>
<p><b>\$200</b> per 1M API calls/mo</p>	<p><b>\$500</b> per 1M API calls/mo</p>	<p><b>\$1,500</b> per 1M API calls/mo</p>

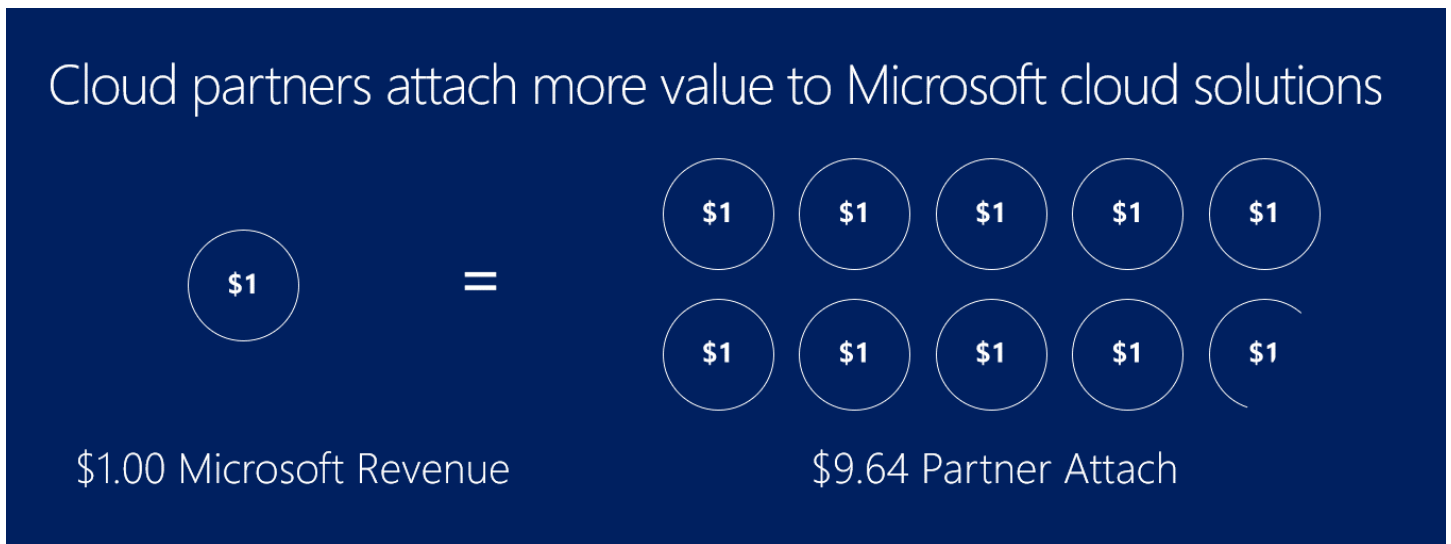
# Identify Partnership Opportunities

## Committed to Partners

Microsoft brings unique strengths around relationships and partnering.

From the diverse range of partner focused training Microsoft produces on sales, marketing and technical topics, to the business investment funds it makes available to help partners succeed in their customer engagements, to unique programs like the FastTrack for Azure program that help you discover what's possible, create plans for success, and onboard new customers and capabilities, Microsoft is committed to enabling partner success in SaaS.

Research shows this commitment to partners also appears in partner revenue. In a recent IDC study, partners reported earning \$9.64 in revenue for every \$1 of Microsoft revenue generated in 2017. This is expected to continue through 2022 and include a mix of software (45%), services (50%), and hardware (5%), that are sold in relation to Microsoft solutions.



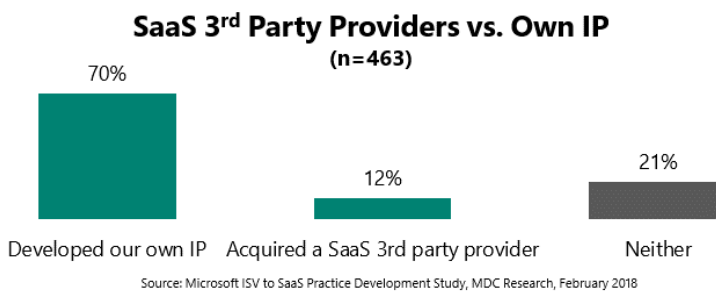
Source: IDC eBook, sponsored by Microsoft, The Microsoft Digital Transformation Series, Part 1: The Digital Transformation Opportunity, 2018

## Partner to Partner

Building smart partner relationships lets you focus on what you do best.

It is tempting to want to do everything related to your business, but the fact remains you will never have enough time. This is a primary reason to seek out compatible partners that can help you to:

- Complete your solution
- Build credibility
- Partner for infrastructure
- Leverage joint marketing
- Add-on to sales
- Broaden your customer base



70% of the ISV partners surveyed by MDC Research indicated that they have developed their own IP, and 44% of those include a license for that IP in their offering.

Finding the right type of partnerships is key to finding success in today's competitive market. Some partner combinations meld together well to create success. To help you find the right mix, here's an example of a partner recipe we know works:

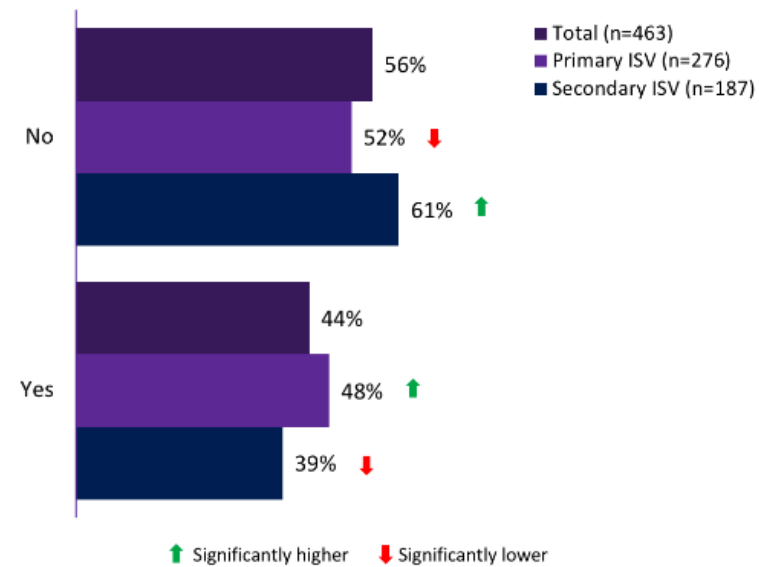
ISV + channel-based MSP partners = international success

[Find out what's in it for the Partners and customer and the secret of success.](#)

## PARTNER FOR IP

When looking at a SaaS transition, and considering the [Microsoft Partner Network](#), it is important to note that you do not have to build everything in house. There is a vast network of providers who have existing IP they are willing to share or license, so it is worthwhile to consider partnering to acquire needed IP. 44% of the ISVs surveyed by MDC Research include licensing of their IP with their SaaS offerings.

### IP License Included



## PARTNER ACROSS DOMAINS

With a SaaS practice, selling your SaaS solution to partners with expertise in other domains can be lucrative.





## Make Connections with Dynasource.com

It's hard to beat the value of partner-to-partner conversations and networking. Luckily, there are communities to help you expand your network and make an even bigger impact on your business.

[Dynasource](#) is a global, two-sided marketplace that allows partners to connect with other firms that have complementary expertise and capabilities. If you have excess capacity, increase your billability and profitability by finding partners that can drive utilization of your staff. If you lack the capacity, Dynasource can help you connect with partners that have the expertise to enable and expand your solutions. By connecting through Dynasource and working together, you can meet customer demand for needs across the Microsoft portfolio and grow your business.

### **TRANSFORM THROUGH COLLABORATION**

After you've created a profile on Dynasource, you can search the Dynasource Microsoft Partner Community for qualified resources that can collaborate with your team on an opportunity. This allows you to transform your cloud business and expand your offerings at a pace that works for you.

### **INCREASE DEMAND FOR YOUR RESOURCES**

Business is not always predictable but retaining quality staff is essential to your success. With Dynasource, you can make your resources and capabilities available to partners who can utilize them today, making your workforce agile and billable.

### **GET STARTED NOW**

In order to join Dynasource, all you'll need is general information about your business. Once you create a profile, you can search for other resources and jobs, as well as create and post your own. You can control the availability of your resources and what level of information you would like to share about your capabilities. With the Dynasource premium membership, you can request connections with other members and resources.

# Microsoft FastTrack for Azure

## Microsoft FastTrack

FastTrack helps you discover what's possible, plan for successful rollouts, and onboard new users and capabilities at your own pace.

FastTrack is Microsoft's customer success service designed to help you realize business value faster with the Microsoft Cloud. FastTrack for Azure provides direct access to assistance from Azure engineers, who will work hand-in-hand with your team to help them build Azure solutions, quickly and confidently. FastTrack ensures that you have a full suite of best practices, tools, remote assistance, and resources at your disposal during your SaaS transformation.

### THE MICROSOFT FASTTRACK SERVICE CAN HELP YOU

- Define the business vision to plan and develop Azure solutions successfully
- Assess your architectural needs
- Provide guidance, design principals, tools and resources to help you build, deploy, and manage your Azure solutions
- Periodically check in to ensure deployment is on track and help remove blockers
- Match you will skilled partners for deployment services

FastTrack engagements are adapted to your specific requirements, but each leverages the same framework:



By way of example, here is a summary of what a FastTrack engagement works like, in this case in an e-mail migration scenario.

	ENVISION	ONBOARD	DRIVE VALUE
CUSTOMER	<p>Preceding a transition, it's common for an individual or team within the company to work with key business stakeholders to identify the best time for the move to occur.</p>	<p>Using this pre-planning report, local teams working with a certified partner can mitigate these unique situations to ensure the transition is seamless.</p>	<p>Preceding a transition, it's common for an individual or team within the company to work with key business stakeholders to identify the best time for the move to occur.</p>
PARTNER	<p>Microsoft-certified partners can assist with the project management of this scheduling and pre-deployment planning, especially in larger installations where multiple teams, facilities, and internal server resources are required to be moved.</p>	<p>Microsoft-certified partners can assist with the project management of this scheduling and pre-deployment planning, especially in larger installations where multiple teams, facilities, and internal server resources are required to be moved.</p>	<p>Through this three-way partnership with the company, Microsoft partner, and FastTrack team, the email migration has taken place in a cost-effective manner with high speed, volume, and confidence, ensuring your employees' productivity is not affected and that they can take immediate advantage of Office 365.</p>
FASTTRACK CENTER	<p>The FastTrack Center then works with your internal team or partner to create a pre-deployment assessment, helping to identify any employees accounts that might have problems during the migration. Common situations that can be resolved prior to the migration include addressing accounts with locally stored contact lists, local email rules, or mailboxes exceeding 50 GB in size.</p>	<p>On the day of migration, the FastTrack Center uses a variety of internal and licensed third-party tools with the power of the Microsoft Azure cloud to move up to thousands of mailboxes per hour. This service is provided as part of the FastTrack Center offering. Companies can choose from a wide variety of migration times, such as on a Friday evening after normal work hours. Migration may happen all at once or over several separate sessions.</p>	<p>After a set of employees' mailboxes has been migrated to Office 365, the FastTrack team provides a detailed report on employees moved and any issues identified.</p>

### RESOURCES

- [FastTrack for Azure](#)
- [Sign in to the FastTrack portal](#)

# Join the Microsoft Partner Network

## Partnering with Microsoft

The [Microsoft Partner Network](#) is the start of your journey. One of the first steps to partnering with Microsoft for your Azure practice is to join the Microsoft Partner Network if you are not already a member. As a partner, you will gain access to resources like training, whitepapers, and marketing material described in this playbook. It's also where you will set up your users to gain Microsoft Partner competencies and access to your partner benefits.

### TO BECOME A MICROSOFT PARTNER

The Microsoft Partner Network provides three types of memberships. Each type provides a set of benefits to help you grow your business. As you achieve your goals, participate in the program at the level that suits your unique needs, so you can access more benefits and develop your relationship with Microsoft and other Microsoft Partners.

- **Network Member:** Receive a set of no-cost introductory benefits to help you save time and money. Use our resources to help build your business as a new partner and discover your next step.
- **Microsoft Action Pack (MAP):** This affordable yearly subscription is for businesses looking to begin, build, and grow their Microsoft practice in the cloud-first, mobile-first world through a wide range of software and benefits.
- **ISV Resource Hub:** The [ISV Resource Hub](#) provides a collection of resources specifically designed to help ISVs bring innovative apps to customers. From an ISV Starter Kit to helping you find customers for your finished app, the resource hub can help you take your app from an idea to a market-ready solution.
- **Competency:** Get rewarded for your success with increased support, software, and training.

### TAKE THE NEXT STEP WITH A COMPETENCY

As a competency partner, you can earn both gold and silver competencies in one or more areas. Earn a silver competency to help your business demonstrate its expertise or a gold competency to showcase your best-in-class capabilities within a Microsoft solution area. Later in this playbook we'll review the competencies relevant for launching a successful Microsoft Azure practice.

### CLOUD ENABLEMENT DESK

The goal of the [Cloud Enablement Desk](#) is to assist partners in obtaining their first Silver Cloud Competency. Partners will be assigned a Cloud Program Specialist (CPS) for up to six months on their way to obtaining their first Silver Cloud Competency.

The Cloud Enablement Desk program requirements include:

- Partner must have an MPN ID.
- Partner must agree to and sign Conditions of Satisfaction that state partner is actively trying to achieve Silver Cloud Competency status and include the name of the primary contact person.
- Partner cannot have an existing Microsoft account management relationship.

## Microsoft Partner Programs

Join the partner program designed for your SaaS practice.

The following program builds upon your membership in the [Microsoft Partner Network](#) and provides you with additional benefits and incentives as you prove your practice by earning competencies, passing assessments and winning customers in your practice focus area.

### FASTTRACK FOR AZURE

FastTrack for Azure provides direct assistance from Azure engineers, working hand-in-hand with partners, to help customers build Azure solutions, quickly and confidently. FastTrack brings best practices and tools from real customer experiences to guide customers from setup, configuration, and development to production of Azure solutions.

# Define Engagement Process

## Pre-and Post-Sales

For your practice, you should define the technical effort required before the sale (pre-sales) and required in support of a sale (post-sales). You will need to decide on the technical pre-sales and post-sales requirements for your solution offer.

### PRE-SALES

The technical effort required to make the sale involves:

- Discuss the customer requirements and address their objections.
- Develop technical pitch decks.
- Technical demo: This demo may be generic or may need customization to better meet the requirements of the customer. The goal of the technical demo is to inspire confidence in your ability to deliver the desired solution by demonstrating you have “already done something like it before.”

### POST SALES

The technical effort required after the sale includes:

- Addressing follow-on customer concerns about the technology or implementation.
- Furnish training to increase awareness of the solution that will be implemented.
- Providing a technical demo more customized for the customer to better understand their needs before moving on to the next phase of the project.
- Following up with the customer to ensure implementation is on track and meeting expectations.

In the resources section, you will find a list of presentations designed for SaaS that can be used for technical briefings or sales pitches. You should customize each presentation to explain how your unique offering makes the overall solution a true differentiator.

For guidance with these sales efforts, consider the [Microsoft Partner University](#) learning paths:

- Web Application Solutions
- Hybrid Cloud Management and Security
- Data Platform Solutions (SQL Server 2016)
- Advanced Analytics
- Business Intelligence

### SUPPORT

Microsoft also provides support for technical presales and deployment services. See the section Supporting your Customer for more information on available resources using Partner Advisory Hours.

### RESOURCES

Pitch decks and preparing your technical pre-sales is a critical factor with any successful delivery.

- [SAP on Azure Technical Pitch Deck](#)
- [Microsoft Applications Technical Pitch Deck](#)
- [Business Continuity and Disaster Recovery Pitch Deck](#)
- [Backup and Archival Technical Data Deck](#)
- [Disaster Recovery Technical Data Deck](#)



## Identify Equipment, Services, and Tools

Equip your team for success. For your SaaS practice, the following tools are recommended:

### AZURE SUBSCRIPTIONS

You can [add your team members as administrators](#) to your company's Azure subscription. There are various admin levels, depending on your needs. Make good use of resource groups to group Azure resources together for each solution, or even development phases. This helps you keep track of costs, which resources are logically related for a solution/phase and implement role-based security for your administrators.

### DEVELOPER TOOLS

Your developers, testers, database administrators, and even SE/SAs can make good use of development tools. Some of the most popular tools are Visual Studio, Visual Studio Code, Eclipse, IntelliJ IDEA, etc. You will likely use a combination of these tools, plus 3<sup>rd</sup> party plug-ins, depending on the breadth of technologies you employ, and the needs of your team.

### VISUAL STUDIO TEAM SERVICES (VSTS)

[VSTS](#) is a great web-based resource that allows you to manage your source code, track issues and milestones, and perform other useful functions like automated, server-side load testing. You can use Team Foundation Services (TFS) or Git repositories and integrate automated build processes/CI as part of your development workflow.

### APPLICATION TELEMETRY AND TESTING TOOLS

Whether you are distributing early builds of your mobile application to testers, collecting user telemetry and error reporting, load testing, or tracking key user interactions within your applications, the quality and usefulness of

your solutions will greatly benefit from telemetry and testing tools such as [Application Insights](#), [HockeyApp](#), and [Xamarin Test Cloud](#).

### LINUX, WINDOWS OR MAC OSX WORKSTATIONS

When you are developing solutions for the cloud, you have virtually unlimited potential to reach millions of users around the globe. Coinciding with this great diversity of customers is a technically diverse set of hardware and software platforms. Much of today's modern development consists of multi-platform native applications, or multi-browser web applications. The major development frameworks and languages, such as .NET, Java, Python, and JavaScript can target these major platforms. Whether you are developing for these platforms natively, or testing your web or hybrid solution, it is beneficial to have access to as many as your budget will allow.

### BROADBAND INTERNET CONNECTION

Naturally, any work on cloud applications requires performant and stable internet connectivity.

### RESOURCES

One way you can acquire some of the listed tooling is by leveraging your Microsoft Internal Use Rights that come as a benefit of your MPN Action Pack subscription or Competency attainment. The complete list of cloud service or on-premises product licenses granted by your MPN core and competency benefits is available in the [License Table for Competency Partners](#).

# Calculate Your Azure Practice Costs

## Azure Practice Costs

Your practice relies on Azure services to deliver customer success, so understanding the Azure-related expenses incurred in delivering a customer solution is critical. How do you calculate these Azure costs?

Using the [Azure Pricing Calculator](#) to estimate Azure costs, you can build an estimate online and then export it to Excel for further refinement and analysis. This tool will give you the retail rates (also known as the Pay-As-You-Go option) for the Azure services, so treat it like the “high end” of your consumption estimate.

Become familiar with the discounted pricing and Azure credits:

- **Graduated Pricing:** Services like Azure Blob storage have tiered pricing based upon the volume used. For example, if you use less than 50 TB per month it costs \$0.0184 per GB, but if you use significantly more it can drop to \$0.017 per GB.
- **Enterprise Agreement:** By making a 3-year monetary commitment, Azure services are available at a discount off retail rates. To learn more, see [Enterprise Agreements](#).
- **Azure Credits:** Microsoft Partners can receive Azure credits as a part of their benefit. For example, partners with the Silver Cloud Platform Competency receive \$350 USD per month in Azure credits; those with Gold Cloud Platform Competency receive \$600 USD per month in Azure credits.

It can be helpful to identify items which are used elastically versus items that have a fixed monthly cost. Significant savings can be achieved via elastic use of resource because you can turn them off (or pause them) when they are not in use.

For example:

- **Elastic:** SQL Data Warehouse used only during month end calculations. It can be paused the rest of the month. Another example of elastic use is to leverage auto-scale capabilities of the resource, such as auto-scaling the number of Azure App Service instances down in the evenings and back up during the workday.
- **Fixed:** Azure App Service hosting your website in a Web App. This Azure App Service needs to run 24x7 because your visitors will arrive at all hours.

Finally, if you don't understand how much of a given resource you will use, consider building a scaled down proof-of-concept to get a first estimate.

## Cost Management

Manage your cloud spend with transparency and accuracy.

[Cost Management](#) licensed by Cloudyn, a Microsoft subsidiary, helps you make the most of Azure and other clouds by providing you the tools to monitor, allocate, and optimize your cloud costs so you can accelerate future investment with confidence.

- Monitor and visualize cloud usage and costs
- Gain rich operational and financial insights
- Improve organizational accountability
- Optimize your cloud efficiency



# Define Potential Customers

## Build your prospect hit list.

Your goal is to build the list of prospects that could potentially turn into customers. To accomplish this, create an awareness campaign to draw attention to your practice, highlight your product offerings, and use your success to earn additional business with your customers and the industry at large.

Use these awareness activities to help generate new customers:

### WEBINARS AND PODCASTS

A great way to transfer knowledge, establish yourself as an expert, and pique the interest of potential customers.

### REFERRALS

Ask for referrals in email and phone calls when talking with existing customers, partners, and vendors who might know someone who is ready for your services.

### WHITE PAPERS

These are a great way to build credibility with decision makers. Technical staff often expect a white paper to help them understand underlying architecture and technology of your solutions.

### NEWS ARTICLES

Leverage public relation efforts to drive publicity around your technology, things your company is doing in the market, and other topics of current interest.

### SOCIAL MEDIA

Social media such as Twitter, LinkedIn, etc., is a place to build awareness, reputation, and customer satisfaction — and gain new customers.

### REVISIT EXISTING CUSTOMERS

If SaaS represents a new practice within a going business concern, the easiest way to acquire new customers for your SaaS practice is to introduce the SaaS practice to your existing customers.



# Identify Solution Marketplaces

Microsoft provides two distinct Marketplace storefronts that allow partners to list offers, enable trials, and transact directly with Microsoft’s customers and ecosystem: [Azure Marketplace](#) and [AppSource](#). These storefronts allow customers to find, try, and buy applications and services and help publishers grow their businesses by increasing access to Microsoft’s customers and partner ecosystem.

The Marketplace storefronts are aligned to audiences and Microsoft cloud products to help customers find exactly what they need. Each storefront offers specialized publishing options, to help you maximize your publishing investment summarized by the following table.

	AZURE MARKETPLACE	APPSOURCE
Target Audience	IT Professionals, Developers (specialist roles include DBAs, SecOps, DevOps, etc.)	Line of Business Decision-Makers (specialist roles include Procurement, Manufacturing, Accounting, etc.)
Built to Extend	Azure	Azure, Dynamics 365, Office 365, PowerBI, and Power Apps
Types of Solutions and Services	Infrastructure Solutions and Professional Services	Finished Line of Business Apps and Professional Services
Publishing Options	Contact Me, Consulting Services Offer, Trial, Virtual Machine, Solution Templates, and Managed Apps	Contact Me, Consulting Services Offer, or Trial
In-app Experience	Azure Portal and CLI	Office 365, Dynamics 365, Power BI, Office client apps

## AZURE MARKETPLACE

Azure Marketplace is an online store that enables you to offer your solutions to enterprises and Azure customers around the world. Within a single, unified platform, customers can easily search, purchase, and deploy your solutions on Azure with just a few clicks.

[Azure Marketplace](#) is the source for thousands of software applications and services certified by Microsoft to run on Azure. Azure Marketplace supports offers that include virtual machines, developer services, and solution templates.

Azure Marketplace gives your solutions exposure through the marketplace page and the listings integrated with the Azure Portal. For example, HDInsight Applications are integrated into the steps users take to deploy an HDInsight cluster (so users could layer your application atop their HDInsight cluster) but are also available via the Marketplace blade of the Azure Portal.

The process of getting your solution listed in the Azure Marketplace is referred to as getting Microsoft Azure Certified. This comes with benefits, many of which include select benefits from the MPN Silver Cloud Platform Competency.



**CERTIFY APPLICATIONS AND SERVICES**

Solutions sold in the Azure Marketplace must be [Microsoft Azure Certified](#). This provides assurance to your customers that your offers have been tested for usability, readiness, and compatibility with Azure.

- Access broad-reaching Microsoft marketing channels and receive co-marketing assistance and promotion outside of your Azure Marketplace listing.
- Leverage technical and business planning support to help you maximize your ROI.
- Utilize a self-service portal that contains ready-to-use marketing resources to enhance your communications and messaging.
- Take advantage of resources, such as the Sales Accelerator Toolkit and credits for display, and search advertising to help drive customer adoption.

**APPSOURCE**

[AppSource](#) helps users find and evaluate SaaS apps unique to their industry and line-of-business role, built by ISV partners on top of Dynamics, Office, and the Azure platform. Users can also discover content packs and add-ins for Microsoft business apps, like Dynamics CRM, Power BI, and Office.

AppSource offerings range from complete applications to add-ins and extensions to Microsoft and partner solutions. It is intended as a showcase for your applications that work with Azure, PowerBI, Dynamics, Office and more. Customers can try out your application in a self-service fashion or enable them to request a trial from you. As a partner, you can also be listed in the Partner listing to market your practice services to customers.



**Increase your visibility**

Once you identify and select the marketplace to target for promoting or selling your services, follow these steps.

Each marketplace is different in their approach to performing the integration, but your organization will likely need to go through the following:

**CREATE THE COMMERCIALS**

This involves putting the basic contracts in place and providing information about your company and the descriptions about the product or service you will list. In some cases, you may need to wait to be approved and onboarded before you can proceed.

**PACKAGE AND INTEGRATE**

In this technical step, you will work with the marketplace APIs to integrate your offering. At this stage you are typically able to test your marketplace offering and make sure everything works as expected and looks correct.

**SUBMIT FOR APPROVAL**

Once your integration is complete, you will need to submit your integrated package for review before it is made publicly available. You may need to iterate on this step as you get your package compliant with the marketplace requirements.

**SHARE**

A marketplace can help increase your visibility. But without additional effort to call attention to your listing in the marketplace, a customer’s ability to find you in the most popular marketplaces may be like finding the proverbial needle in a haystack. Make sure you publicize this offer, list it on your website, and ensure that your existing customers are aware, so they can help point others to it.

- [How to Publish an Offer in the Azure Marketplace](#)
- [AppSource Review Guidelines](#)

Microsoft  
Partner  
Network

# Hire & Train

## Grow Your ISV Business with SaaS

[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)



# Executive Summary



In the previous section, you evaluated the various services your business can pursue as you set up or build your SaaS practice. Now that you've identified some avenues of success, you may be wondering how to build and train your team.

First, we'll help you define the members of your team and the skills they should bring to the table. If you need to hire to fill gaps, we provide you with detailed job descriptions you can use, as well as ideas on where to look for resources, the factors you should look for in a candidate's skillset, and what you should expect to pay by role and region.

A big focus of this section is the critical piece of ensuring all your practice resources are trained and continue to receive ongoing training. We cover not just the technical training, but also sales and marketing training.

Additionally, we'll give you details on the specific Microsoft certifications your technical resources should be working towards, both for their own professional development and to earn your organization Microsoft Partner Network competencies.

## Top 5 things to do

You're crafting your game plan to build your team, make sure you nail down these 5 tasks before you move to the next section.

- ✓ Define the members and roles required
- ✓ Identify capability and skills gaps
- ✓ Decide which skills to hire and train
- ✓ Hire to fill gaps in your team
- ✓ Train and certify your team



## Create a Hiring Plan

Human resources are a critical asset to any services-based practice. Starting a new practice requires you to start with an evaluation of your existing team members (if any) and then make the decision of whether to hire new employees or bring your existing team up to speed.

The following sections describe the recommended resources across sales, technical and support functions that you will likely need. In many practices that are just getting started you may not be able to fill all roles with individual professionals. In this situation one person will likely be required to fulfill the duties of multiple roles.

### Partner Skillsets

Referrals and LinkedIn are top sources for identifying skilled labor. Once a candidate is identified, work history, cultural fit, and years of experience become the important considerations.

Roles associated with cloud practices typically have at least 3 years of experience. Furthermore, most companies engage in at least annual ongoing staff learning efforts like conferences/events and online training. A median of 8.5% of technical resource time is spent on training.





## Hire, Build, and Train Your Team

All practices need a team to support technical and business functions. Given the interdisciplinary nature of SaaS, practices delivering SaaS solutions need to be carefully structured to balance breadth of disciplines with depth of resources of a particular discipline.

### Technical Resources (Architecture, Infrastructure, and Development)

These roles form the heart of your solution. Hiring the right people can turn your vision into reality.

The **Cloud Architect (CA)** drives customer initiatives in collaboration with customers. The CA is a technical, customer-facing role that is accountable for the end-to-end customer cloud deployment experience. CAs own the technical customer engagement, including architectural design sessions, specific implementation projects and/or proofs of concepts. The ideal candidate will have experience in customer-facing roles and success leading deep technical architecture and application design discussions with senior customer executives to drive cloud deployment. A computer science or related engineering degree is required.

The **Data Architect (DA)** drives customer initiatives leveraging Azure data and analytics services (e.g., ranging from SQL Server to SQL Database and SQL Data Warehouse to Cortana Intelligence Suite) to solve the biggest and most complex data challenges faced by enterprise customers. The DA is a technical, customer facing role, accountable for the end-to-end customer deployment and usage experience for Azure data services. DAs own the Azure technical customer engagement including: architectural design sessions, implementation projects and/or proofs of concept and

pilots. The Data Architect is proficient in distributed computing principles and familiar with key architectures including Lambda and Kappa architectures, and has a broad experience designing solutions using a broad set of data stores (e.g., HDFS, Azure Data Lake Store, Azure Blob Storage, Azure SQL Data Warehouse, Apache HBase, Azure DocumentDB), messaging systems (e.g., Apache Kafka, Azure Event Hubs, Azure IoT Hub) and data processing engines (e.g., Apache Hadoop, Apache Spark, Azure Data Lake Analytics, Apache Storm, Azure HDInsight). The ideal candidate will have experience in customer facing roles and success leading deep technical architecture and design discussions with senior executives. Five plus years of experience with deep understanding of databases and analytics, including relational databases, data warehousing, big data, business intelligence and analytics. Five plus years of success in consultative/complex technical sales and deployment projects. Technical BS degree in Computer Science or Math background desirable.

The **Senior Developer** has a history of designing, owning and shipping software, as well as excellent communication and collaboration skills. With a focus on cloud-based application development, the candidate must have demonstrable experience architecting and deploying applications to cloud platforms, the ability to effectively integrate disparate services as needed, and decide when to implement IaaS, SaaS, and PaaS components. As a mentor to junior developers, the senior software developer should have a solid understanding of the software development cycle, from architecture to testing. They should have a passion for quality and be a creative thinker. A senior developer will write secure, reliable, scalable, and maintainable code, and then effectively debug it, test it and support it live. This person should also be comfortable owning a feature and making decisions independently. Another aspect of a senior software developer is that they can effectively gather customer requirements and ask clarifying questions when needed. This person must be able to translate these requirements to actionable tasks they will perform, or delegate to members of the team.

The **Developer** enjoys the challenge of building applications that solve today's business needs. This person must be willing to keep up to date with the fast-moving cloud services landscape to remain an effective member of the development team. A software developer should work equally well on a team or independently, given a set of project requirements or tasks. This requires the developer to possess excellent communication and collaboration skills. The developer should understand the aspects of the software development cycle, from architecture to testing. This person will design, build, and maintain efficient, reusable, and reliable code. This person should have experience with participating in projects using agile methodologies, such as the Scrum approach to agile software development.



The **Automation Engineer** is primarily responsible for managing all aspects of DevOps, and is proficient in tools for source control, continuous integration, and team management. This is a technical, customer-facing role, who must be comfortable collaborating with architects, developers, and other IT staff members to manage code releases. This person should be capable of assisting with all stages of testing, developing interface stubs and simulators and performing script maintenance and updates. Automation engineers build automated deployments through the use of configuration management technology, and deploy new modules, upgrades and complete fixes within the production environment. Routine application maintenance tasks are an ongoing. They cross and merge the barriers that exist between software development, testing and operations teams and keep existing networks in mind as they design, plan and test. This person should have five or more years of experience with modern DevOps tools, such as Jenkins and VSTS. The ideal candidate has five or more years of experience in working with and automating the builds and deployments for enterprise cloud solutions.

The **Data Scientist** is responsible for identifying the insight opportunities present in the customer's data and helping shape the data pipeline that deliver the insights by applying advanced analytics (e.g., machine learning) in collaboration with the customer. The Data Scientist is a technical, customer facing role, who along with the Big Data Engineer is accountable for the end-to-end data pipeline envisioning and development that starts with addressing issues of data acquisition and data sampling, data exploration and data quality assessment, data wrangling to massage the data so it is better suited to applying advanced analytics, and visualizing or reporting on such data to make the insights available to the customer's business. The ideal candidate will have experience in customer facing roles and has a cross-disciplinary background consisting of statistics and software development. A technical BS degree in Computer Science or Math background is highly desirable. Three or more years customer facing experience desired.

The **Data Engineer** is responsible for helping to select, deploy and manage the systems and infrastructure required of a data processing pipeline in support of the customer requirements. Primary responsibilities revolve around DevOps and include implementing ETL (extract, transform and load) pipelines, monitoring/maintaining data pipeline performance. The Data Engineer is proficient in distributed computing principles and familiar with key architectures including Lambda and Kappa architectures, and has a broad experience across a set of data stores (e.g., HDFS, Azure Data Lake Store, Azure Blob Storage, Azure SQL Data Warehouse, Apache HBase, Azure DocumentDB), messaging systems (e.g., Apache Kafka, Azure Event Hubs, Azure IoT Hub) and data processing engines (e.g., Apache Hadoop, Apache Spark, Azure Data Lake Analytics, Apache Storm, Azure HDInsight). The ideal candidate has three or more years of experience working on solutions that collect, process, store and analyze huge volume of data, fast moving data or data that has significant schema variability.

The **Identity Solution Engineer** is responsible for the design, implementation, integration, support, and monitoring of enterprise identity and access control solutions, which is an important role given the need to integrate SaaS solutions securely within the context of existing approaches to enterprise identity and access controls. The ideal candidate should have a diverse understanding of the current state of security best practices, including identity and access control, mobile technology, and best practices throughout a variety of industries. In addition, this individual must have a strong knowledge of identity standards and protocols, as well as a deep skillset with Windows Server Active Directory and industry security solutions.

The **Information Security Analyst** assesses and provides security advice on your cloud infrastructure, including network, service, and application components. This role conducts risk assessments, architectural reviews, provides cyber security subject matter expertise, and assists in the building and design of secure solutions. Additional duties may include network and application penetration testing, and support for cyber security investigations as well as on-call response for cyber security incidents. A computer science or related engineering degree is required, or the equivalent combination of education, professional training, or work experience.

## Sales Resources

You have a vision for developing the next great cloud solution, but even the best products need a sales strategy to gain maximum market traction. Consider hiring for the following sales positions for broad reach. The **Solution Sales Manager** (SSM) is a senior leader within the enterprise sales organization. The SSM leads, develops and manages a team of high performing sales and technical pre-sales/post-sales resources to drive solution opportunity revenue and market share by leveraging the Microsoft cloud offerings. Ten or more years of sales experience is required for this position. Qualifications include people management, business development, competitive selling, and ability to thrive in complex, ambiguous, and dynamic environments.

The **Cloud Solutions Sales Manager** is a solution sales leadership role that is responsible for delivering sustainable new business growth across segments; providing thought-leadership; and driving customer acceleration to cloud across the enterprise sales and marketing teams. The Solution Sales Manager is a great sales coach and leader, has a challenger mentality, is savvy in sales leadership practice, and contributes with vision and flawless execution of solution sales across workloads and solution areas.

The **Technical Sales Manager** (TSM) is a senior leader within the enterprise sales organization. A TSM drives revenue and market share by leading a team of technical sellers that provide customers with insights and solutions. The Technical Sales Manager will manage, coach, and lead a team of solution architects and tech sales professionals to uncover and support the business and IT goals of customers by driving the technical decision and providing business value with the Microsoft cloud platform, thus securing long-term sustainable growth. A computer science degree or related field is required for this role. Additional qualifications include strategic insight, project management, analytical problem solving, customer/partner relationship building, and exceptional product and technical expertise.



## Marketing Resources

Marketing is a key function of the successful practice, and partners who invest in marketing resources succeed to a greater degree than those who do not. The following is a key marketing position you should consider for your practice.

The **Product Marketing Manager** complements the Product Manager, executing on key campaigns and customer outreach. This Product Marketing Manager creates the brand and accompanying messaging and owns social media as well as traditional marketing vehicles such as web sites, demos and data sheets. Product Marketing Managers create the go-to-market strategy for the company and help set pricing. Launch activities are orchestrated through this role as well as technical and industry trade show attendance. Public relations may be handled directly by the Product Marketing Manager or the role may work with an agency or centralized group on this.

## Leadership Roles

Consider the following management positions if your development effort will involve eight or more technical staff. However, in smaller teams, senior-level employees sometimes take on management duties along with their other responsibilities, removing the need for dedicated managers.

The **Chief Data Officer** (CDO) drives the definition of balancing data governance, protection with data discovery and analytics. This role establishes the organization's data analytics platform strategy, selection of appropriate technologies and focuses on strategic and timely talent acquisition. An important responsibility of the CDO is in creating a learning culture within the organization by providing for and fostering an environment for learning.

The **Data Protection Officer** assesses and advises across the company group for data protection and privacy matters related to security. This role is a subject matter expert in the handling of personal data and ensures there are policy and compliance processes to comply with local data protection legislation. Expert knowledge of global and national data protection law and practices, as well as the General Data Protection Regulation (GDPR) is a requirement, as well as the ability to fulfil the tasks referred to in Article 39 of the GPDR. Experience in conducting data privacy compliance, reviews, and audits is beneficial.

The **Product Manager** (or Product Management team) establishes and sustains the business case for the project and plays a key role in identifying and setting priorities across the target audience. This includes ensuring that business expectations are clearly articulated and understood by the project team, and that the functional specifications respond to business priorities. Product Management owns the vision statement for the project. The vision statement is an informal document that communicates the expectations and assumptions on which the project is based. Product Management is also responsible for high-level project communications such



as business projections, project costing, and contract negotiation. Product Management communicates the high-level milestones to the target audience and other team members.

The **Program Manager** or Program Management team "owns" the specification for an application's features and functionality and coordinates the day-to-day communication required to develop and deliver the application effectively and consistently within organizational standards. Program Management has a key communication and coordination role. With input from other team leads, Program Management assists Product Management in articulating the vision for the project. Using this vision, Program Management drafts the initial version of the functional specification and is considered the keeper of the functional specification. Program Management is responsible for all activities associated with analysis, specification, and architecture. Program Management is also responsible for defining how the project will interoperate with external standards, maintaining external technical coordination and communication, and managing the master schedule.



## Support Resources

A lot of effort goes on behind the scenes, or in positions that involve post-sales customer engagement. To ensure long-term success of your projects, consider hiring some of these support roles.

The **Customer Success Manager** is passionate about engaging your customers and helping them expand their use cases. They have excellent relational skills and can create win/win environments for all parties they work with. In their day-to-day responsibilities, they own the overall relationship with assigned clients, by increasing adoption and ensuring retention and satisfaction. They make a large impact on your cloud application development business by establishing a trusted and strategic advisor relationship with each assigned client, driving continued value of your products and services. The Customer Success Manager will help drive sales by working to identify or develop upsell opportunities. Additionally, they will advocate customer needs and issues cross-departmentally, and program manage account escalations. Qualifications include prior experience in Customer Success, or equivalent history of increasing customer satisfaction, adoption, and retention.

The **Quality Assurance (QA) / Test Technician** is extremely thorough and detail-oriented and should work well with established processes. The primary goal of this role is to help avoid defects in your final product or solution. This person will be involved throughout the development process and use their intuition to problem solve and identify technical, procedural, and ease of use concerns. They must take meticulous notes, be organized about recording process steps, and work well with others, since they will be coordinating with your technical and management teams to ensure that the correct measures are put into place to align the final product with the initial goal.

The **User Support Specialist** assists your customers who are having technical issues with your product, or who need help realizing the full benefit of your solution to help them deliver their cloud-based workloads. They will likely be in a position to help customers navigate the operational challenges of cloud computing, so thoroughly training them on both your product and the infrastructure on which it is built is paramount to their success, and ultimately, your customers' satisfaction. Qualifications include technical support experience and great communication and interpersonal skills (soft skills). Experience with cloud technologies is a major plus.



## Job Descriptions for Your Technical Team

The following tables provides detailed job descriptions you can utilize to hire the key technical resources. All technical skills, non-technical skills, certifications and technologies listed are potential items a candidate should have, but no candidate will have all the items listed.

### Cloud Architect

A Cloud Architect (CA) drives high-priority customer initiatives in collaboration with customers and your sales team. The CA is a technical, customer-facing role that is accountable for the end-to-end customer cloud deployment experience. CAs own the Azure technical customer engagement, including: architectural design sessions, specific implementation projects and/or proofs of concepts. The ideal candidate will have experience in customer-facing roles and success leading deep technical architecture and application design discussions with senior customer executives to drive cloud deployment. Bachelor's degree in computer science or related field preferred.

#### Technical Skills

Solid understanding of modern authentication protocols and a background in cyber security. Deep understanding of cloud computing tech, business drivers, and emerging computing trends. Deep technical experience in enterprise mobile, identity & access control, and security solutions. Working knowledge with AGILE development, SCRUM and Application Lifecycle Management (ALM) with one or more of the following programming languages: PowerShell, Bash, .NET, C++, Java, JSON, PHP, Perl, Python, Ruby on Rails, HTML, CSS, JavaScript, Responsive Web Design.

#### Non-Technical Skills

Proven track record of building deep technical relationships with senior executives and growing cloud consumption share in large or highly strategic accounts, driving decisions, resolving conflicts & ensuring follow through. Presentation skills with a high degree of comfort with both large and small audiences. Prior work experience in a consulting/architecture position within a software/services company. Problem-solving mentality leveraging internal and/or external resources. Exceptional verbal and written communication.

**Certifications**

MCSE Cloud Platform and Infrastructure, CompTIA Security+, CISSP, MCSA Cloud Platform Solutions Associate, MCSA Linux on Azure Solutions Associate, AWS Certified Solution Architect. Exam priorities: [Architecting Microsoft Azure Solutions 70-535](#) [70-398: Planning for and Measuring Devices in the Enterprise](#).

**Project Experience Types / Qualities**

5+ years of architecture, design, implementation, and/or support of highly distributed applications (i.e. having an architectural sense for ensuring availability, reliability, etc.). 2+ years of experience in "migrating" on premise workloads to the cloud. 5+ years of success in consultative/complex technical sales and deployment projects (where necessary, managing various stakeholder relationships to get consensus on solution/projects). Oversight experience on major transformation projects and successful transitions to implementation support teams.

**Technologies**

Enterprise Mobility Suite, Intune, Azure Information Protection, Azure Active Directory, Octa, Auth0, LDAP, OAuth, SAML, Cloud App Security, Firewalls, Office 365, Windows Server Active Directory, Azure AD Connect, Active Directory Federation Services (ADFS), Mobile Iron, Airwatch, iOS, Android, Windows, Azure Virtual Machines, Virtual Networks, ExpressRoute, Operations Management Suite, Azure Site Recovery, Azure Backup, Azure App Service, Azure Storage, Azure Import/Export, Azure SQL Database, Azure Web Jobs, Azure ExpressRoute, MySQL, SQL Server, SQL Server IaaS, SharePoint on Azure, AWS EC2, S3, AWS DirectConnect.



## Data Architect

A Data Architect (DA) drives customer initiatives leveraging Azure data and analytics services (e.g., ranging from SQL Server to SQL Database and SQL Data Warehouse to Cortana Intelligence Suite) to solve the biggest and most complex data challenges faced by enterprise customers. The DA is a technical, customer facing role, accountable for the end-to-end customer deployment and usage experience for Azure data services. DAs own the Azure technical customer engagement including: architectural design sessions, implementation projects and/or proofs of concept and pilots. The Data Solution Architect is proficient in distributed computing principles and familiar with key architectures including Lambda and Kappa architectures, and has a broad experience designing solutions using a broad set of data stores (e.g., HDFS, Azure Data Lake Store, Azure Blob Storage, Azure SQL Data Warehouse, Apache HBase, Azure DocumentDB), messaging systems (e.g., Apache Kafka, Azure Event Hubs, Azure IoT Hub) and data processing engines (e.g., Apache Hadoop, Apache Spark, Azure Data Lake Analytics, Apache Storm, Azure HDInsight). The ideal candidate will have experience in customer facing roles and success leading deep technical architecture and design discussions with senior executives.

Five plus years of experience with deep understanding of databases and analytics, including relational databases, data warehousing, big data, business intelligence and analytics.

Five plus years of success in consultative/complex technical sales and deployment projects. Technical BS degree in Computer Science or Math background desirable.

### Technical Skills

Advanced analytics, analysis services (tabular, multi-dimensional), application architecture, application development, application lifecycle management (ALM), big data, business intelligence, capacity planning, cloud archival, cloud data analytics, cloud disaster recovery, cloud storage, cloud systems management, cloud systems operations, cloud transformation, compliance (PCI, HIPPA, etc.), data architecting, data cleansing, data migration (cross platform / upgrade), data modeling (physical and logical), data movement, data potency, data transformation, data warehouse design, database and server virtualization, database architecture, database design, database lifecycle management, database management, database sharding, database tuning, diagnostics, distributed application design, distributed application development, distributed database design, event sourcing, HADR / replication, health checks, identity and security, information architecture, information management, in-memory database architecture, IoT, Kappa architectures, Lambda architectures, MapReduce, master data management, mission critical DB design and architecture, modern applications, monitoring, performance tuning, polyglot resiliency, predicative analytics, reporting services design and deployment, resiliency (clustering, etc.), scalability (up and out, high performance), security architecture, security compliance, technical migration upgrades, technology architecture.

### Non-Technical Skills

Consultative sales, collaboration, stakeholder management, relationship management, technical oversight, technical recommendations, problem solving, risk management, architecture design session, program management, proof of concept design, technical demonstration.

**Technologies**

AML, Analytics, APS, AWS, AWS Athena, AWS Glue, AWS QuickSight, AWS RDS, AWS VM, AWS Redshift, AWS S3, Azure Active Directory, Azure Data Catalog, Azure Data Factory, Azure Data Lake, Azure Storage, Azure DocumentDB, Azure SQL Data Warehouse, Azure Import/Export, Azure HDInsight, Azure Machine Learning, Azure SQL Database, Azure Search, Azure Stream Analytics, Azure Event Hubs, Azure IoT Hub, Azure Web Jobs, Azure Cognitive Services, Birst, BizTalk, Business Objects, Cassandra, Cloudera, Cognos, Cortana Intelligence, CouchDB, Data warehouse, Database, DB2, Docker, Excel, Flume, IBM Bluemix, Google App Engine, Greenplum, Hadoop, HANA, HBase, Hive, Hortonworks, IBM, IBM Teradata, Informix, IoT Solutions, Java, Kafka, Machine Learning, MapR, MapReduce, ML, MongoDB, MariaDB, MySQL, Netezza, Networking, NoSQL, Oracle, Oracle Exadata, Oracle SOA, PBI, Pig, Power BI, PostgreSQL, Python, Qlik Tech, REST, Revolution R, Samza, SAP HANA, SAS, Security, Spark, , SQL Server, SQL Server IaaS, SQL Server Integration Services, Storage, Storm, Streaming, Sybase, Tableau, Teradata, TSQL, Virtualization, webMethods, WebSphere, YARN.

**Programming/Scripting Languages:** C#, DMX, DAX, MDX, SQL, T-SQL, Java, Scala, Python, PowerShell, R, Ruby.

**Platforms:** Linux (Red Hat, Ubuntu, Debian, etc.), Windows.

**Certifications**

MCSE Business Intelligence, MCSA Cloud Platform Solutions Associate, MCSA Linux on Azure Solutions Associate, MCSE Cloud Platform and Infrastructure, MCSE Data Management and Analytics, AWS Certified Solution Architect, AWS Certified Developer, AWS Certified Developer, Big Data, Certified Analytics Professional, Certificate in Engineering Excellence Big Data Analytics and Optimization (CPEE), Cloudera Certified Developer, Cloudera Certified Specialist, Data Warehousing, IBM Certified Data Architect/Engineer, Mining Massive Datasets, Graduate Certificate (Stanford), Oracle, Salesforce.com, SAP, SAS Certified Big Data Professional.

**Project Experience Types/Qualities**

Advanced analytics (including machine learning), database modernization, coordinate and execute pilots, prototypes or proof of concepts, provide validation on specific scenarios, document and share technical best practices, further customer investment, hybrid solutions on premises or in the cloud, industry-visible, large project relative to size of customer, lift and shift, migrations and upgrades (SQL, etc.), on-premises to cloud, production environment, projects where data is born in the cloud, cross-platform SQL Server migration, size of project team (complexity), significant challenges, IOT – Connected Devices, IOT- Command and Control, IOT- Data Ingestion, batch analytics, interactive analytics, real-time/streaming analytics.



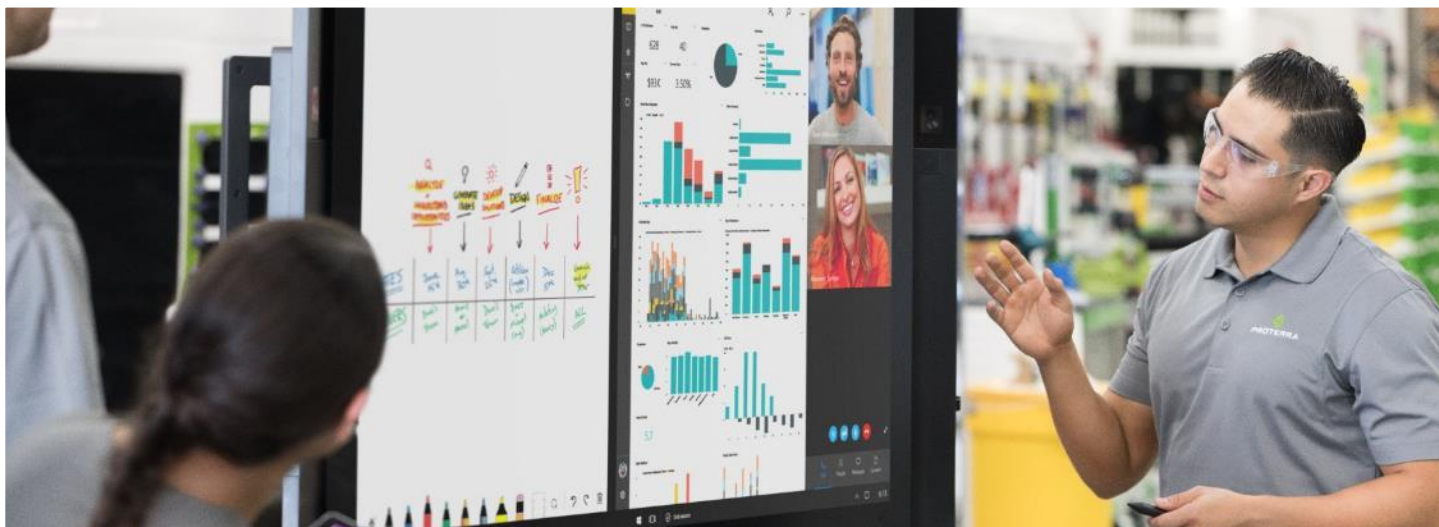
## Senior Developer

A Senior Software Developer has a history of designing, owning and shipping software, as well as excellent communication and collaboration skills. With a focus on cloud-based application development, the candidate must have demonstrable experience architecting and deploying applications to cloud platforms, the ability to effectively integrate disparate services as needed, and decide when to implement IaaS, SaaS, and PaaS components. As a mentor to junior developers, the senior software developer should have a solid understanding of the software development cycle, from architecture to testing. They should have a passion for quality and be a creative thinker. A senior developer will write secure, reliable, scalable, and maintainable code, and then effectively debug it, test it and support it live. This person should also be comfortable owning a feature and making decisions independently, and should have leadership experience with agile methodologies, such as the Scrum approach to agile software development. Another aspect of a senior software developer, is that they can effectively gather customer requirements, and ask clarifying questions when needed. This person must be able to translate these requirements to actionable tasks they will perform, or delegate to members of the team. The ideal candidate will have experience in customer facing roles and success leading deep technical architecture and design discussions with senior executives. Eight plus years of experience with deep understanding of web technologies, API consumption/development, full lifecycle application development, database development (relational and/or NoSQL), and enterprise/cloud architecture. Technical BS degree in Computer Science desirable.

### Technical Skills

API development, Application architecture, application development, application lifecycle management (ALM), caching, capacity planning, cloud archival, cloud disaster recovery, cloud storage, cloud systems management, cloud systems operations, cloud transformation, compliance (PCI, HIPPA, etc.), data architecting, data migration (cross platform / upgrade), data modeling (physical and logical), data movement, data transformation, database and server virtualization, database architecture, database design, database lifecycle management, database management, dev ops, diagnostics, distributed application design, distributed application development, distributed database design, event sourcing, HADR / replication, health checks, identity and security, information architecture, information management, IoC, mission critical DB design and architecture, modern applications, monitoring, package management (npm, NuGet, etc.), performance tuning, polyglot resiliency, reporting services design and deployment, responsive design, RESTful services, resiliency (clustering, etc.), scalability (up and out, high performance), security architecture, security compliance, source code repository management (git, TFS, svn, etc.), technical migration upgrades, technology architecture, testing / TDD, unstructured data formats (e.g. JSON), structured data formats (e.g. XML), UI / UX

<b>Non-Technical Skills</b>	<p>Collaboration, stakeholder management, relationship management, technical oversight, technical recommendations, problem solving, risk management, architecture design session, program management, proof of concept design, technical demonstration, excellent communication skills</p>
<b>Technologies</b>	<p>AWS API Gateway, AWS EC2, AWS SWF, AWS, AWS RDS, AWS VM, AWS Redshift, AWS S3, Angular, Aurelia, Azure Active Directory, Azure App Service Environment, Azure Data Catalog, Azure Data Factory, Azure Data Lake, Azure Logic App, Azure Mobile App, Azure Storage, Azure DocumentDB, Azure SQL Data Warehouse, Azure Functions, Azure Import/Export, Azure SQL Database, Azure Search, Azure Event Hubs, Azure Web App, Azure Web Jobs, Azure Cognitive Services, BizTalk, Business Objects, Cassandra, CDN, Cortana Intelligence, CouchDB, Data warehouse, Database, DB2, Docker, Excel, IBM Bluemix, Google App Engine, HTML, IBM, IBM Teradata, IoT Solutions, Java, Media Services, MongoDB, Microsoft Dynamics CRM, Microsoft SharePoint, MySQL, MVC, MVVM, Mobile Development, Networking, Node.js, NoSQL, Oracle, Oracle Exadata, Oracle SOA, PostgreSQL, Python, REST, Security, SQL Server, SQL Server IaaS, SQL Server Integration Services, Storage, Sybase, T-SQL, UWP, Virtualization, Web Services, WCF, WPF, XML</p> <p><b>Programming/Scripting Languages:</b> .NET (C#, F#, VB.NET), Java, Python, JavaScript, Scala, Go, Ruby, PHP, SQL, T-SQL, PowerShell</p> <p><b>Platforms:</b> Linux (Red Hat, Ubuntu, Debian, etc.), Windows</p>
<b>Certifications</b>	<p>MCSE Enterprise Devices and Apps, MCSE Business Intelligence, MCSA Cloud Platform Solutions Associate, MCSA Linux on Azure Solutions Associate, MCSE Cloud Platform and Infrastructure, Certified ScrumMaster, AWS Certified Solution Architect, AWS Certified Developer</p>
<b>Project Experience Types/Qualities</b>	<p>API consumption and development, coordinate and execute pilots, prototypes or proof of concepts, provide validation on specific scenarios, document and share technical best practices, further customer investment, hybrid solutions on premises or in the cloud, industry-visible, CI / Continuous Deployment, large project relative to size of customer, lift and shift, migrations and upgrades (SQL, etc.), on-premises to cloud, production environment, projects where data is born in the cloud, cross-platform SQL Server migration, server-side/desktop development, service architecture, size of project team (complexity), significant challenges, source code repository management, team lead / scrum master, web application development</p>



## Developer

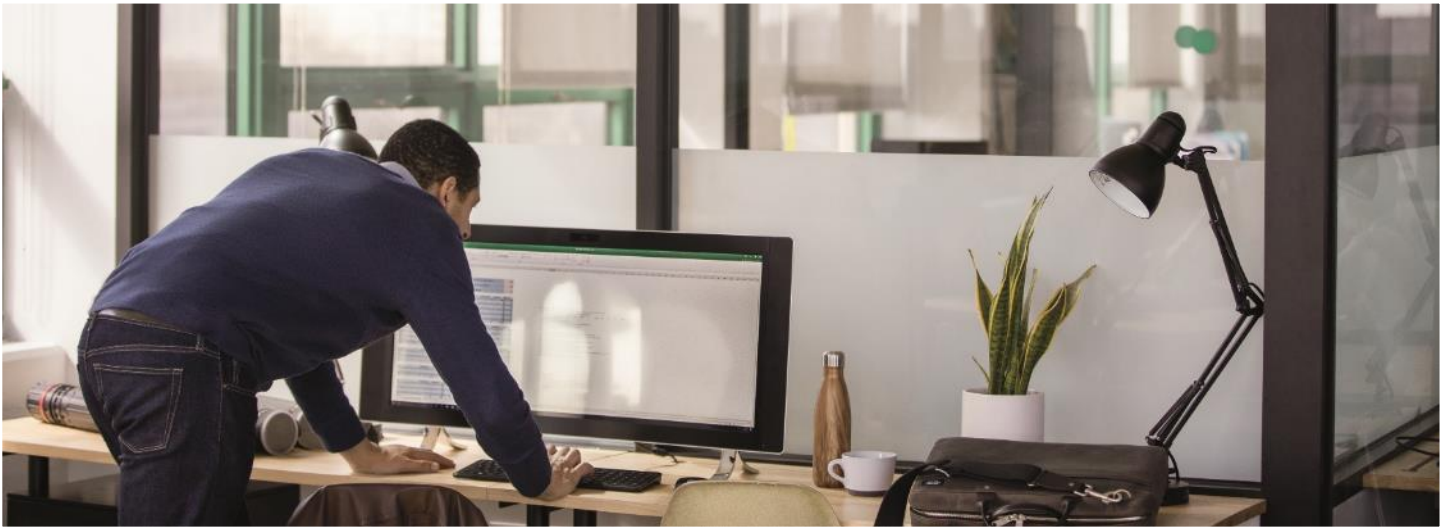
A Software Developer enjoys the challenge of building applications that solve today's business needs. This person must be willing to keep up to date with the fast-moving cloud services landscape to remain an effective member of the development team. A software developer should work equally well on a team or independently, given a set of project requirements or tasks. This requires the developer to possess excellent communication and collaboration skills. The developer should understand the aspects of the software development cycle, from architecture to testing. This person will design, build, and maintain efficient, reusable, and reliable code. This person should have experience with participating in projects using agile methodologies, such as the Scrum approach to agile software development. Five plus years of experience with deep understanding of web technologies, API consumption/development, full lifecycle application development, database development (relational and/or NoSQL), and enterprise/cloud architecture. Technical BS degree in Computer Science desirable.

### Technical Skills

API development, Application architecture, application development, application lifecycle management (ALM), caching, cloud storage, cloud systems management, cloud systems operations, cloud transformation, compliance (PCI, HIPPA, etc.), data architecting, data migration (cross platform / upgrade), data modeling (physical and logical), data movement, data transformation, database and server virtualization, database architecture, database design, database lifecycle management, database management, dev ops, diagnostics, distributed application design, distributed application development, distributed database design, event sourcing, health checks, identity and security, information architecture, information management, IoT, mission critical DB design and architecture, modern applications, monitoring, package management (npm, NuGet, etc.), performance tuning, polyglot resiliency, reporting services design and deployment, responsive design, RESTful services, security architecture, security compliance, source code repository (git, TFS, svn, etc.), technical migration upgrades, technology architecture, testing / TDD, unstructured data formats (e.g. JSON), structured data formats (e.g. XML), UI / UX



<b>Non-Technical Skills</b>	<p>Collaboration, problem solving, architecture design session, proof of concept design, technical demonstration, good communication skills</p>
<b>Technologies</b>	<p>AWS API Gateway, AWS EC2, AWS SWF, AWS, AWS RDS, AWS VM, AWS Redshift, AWS S3, Angular, Aurelia, Azure Active Directory, Azure App Service Environment, Azure Data Catalog, Azure Data Factory, Azure Data Lake, Azure Logic App, Azure Mobile App, Azure Storage, Azure DocumentDB, Azure SQL Data Warehouse, Azure Functions, Azure Import/Export, Azure SQL Database, Azure Search, Azure Event Hubs, Azure Web App, Azure Web Jobs, Azure Cognitive Services, BizTalk, Business Objects, Cassandra, CDN, Cortana Intelligence, CouchDB, Data warehouse, Database, DB2, Docker, Excel, IBM Bluemix, Google App Engine, HTML, IBM, IBM Teradata, IoT Solutions, Java, Media Services, MongoDB, Microsoft Dynamics CRM, Microsoft SharePoint, MySQL, MVC, MVVM, Mobile Development, Networking, Node.js, NoSQL, Oracle, Oracle Exadata, Oracle SOA, PostgreSQL, Python, REST, Security, SQL Server, SQL Server IaaS, SQL Server Integration Services, Storage, Sybase, T-SQL, UWP, Virtualization, Web Services, WCF, WPF, XML</p> <p><b>Programming/Scripting Languages:</b> .NET (C#, F#, VB.NET), Java, Python, JavaScript, Scala, Go, Ruby, PHP, SQL, T-SQL, PowerShell</p> <p><b>Platforms:</b> Linux (Red Hat, Ubuntu, Debian, etc.), Windows</p>
<b>Certifications</b>	<p>MCSE Enterprise Devices and Apps, MCSE Business Intelligence, MCSA Cloud Platform Solutions Associate, MCSA Linux on Azure Solutions Associate, MCSE Cloud Platform and Infrastructure, AWS Certified Solution Architect, AWS Certified Developer</p>
<b>Project Experience Types/Qualities</b>	<p>API consumption and development, coordinate and execute pilots, prototypes or proof of concepts, provide validation on specific scenarios, document and share technical best practices, further customer investment, hybrid solutions on premises or in the cloud, industry-visible, CI / Continuous Deployment, large project relative to size of customer, lift and shift, migrations and upgrades (SQL, etc.), on-premises to cloud, production environment, projects where data is born in the cloud, cross-platform SQL Server migration, server-side/desktop development, service architecture, size of project team (complexity), significant challenges, source code repository management, team lead / scrum master, web application development</p>



## Automation Engineer (DevOps)

An Automation Engineer is primarily responsible for managing all aspects of DevOps, and is proficient in tools for source control, continuous integration, and team management. This is a technical, customer-facing role, who must be comfortable collaborating with architects, developers, and other IT staff members to manage code releases. This person should be capable of assisting with all stages of testing, developing interface stubs and simulators and performing script maintenance and updates. Automation engineers build automated deployments through the use of configuration management technology, and deploy new modules, upgrades and complete fixes within the production environment. Routine application maintenance tasks are an ongoing. They cross and merge the barriers that exist between software development, testing and operations teams and keep existing networks in mind as they design, plan and test. This person should have five or more years of experience with modern DevOps tools, such as Jenkins and VSTS. The ideal candidate has five or more years of experience in working with and automating the builds and deployments for enterprise cloud solutions.

### Technical Skills

API development, Application architecture, application development, application lifecycle management (ALM), caching, cloud storage, cloud systems management, cloud systems operations, cloud transformation, compliance (PCI, HIPPA, etc.), data migration (cross platform / upgrade), data movement, database and server virtualization, dev ops, diagnostics, distributed application design, distributed application development, distributed database design, event sourcing, health checks, identity and security, modern applications, monitoring, package management (npm, NuGet, etc.), performance tuning, reporting services deployment, responsive design, RESTful services, security architecture, security compliance, source code repository (git, TFS, svn, etc.), technical migration upgrades, technology architecture, testing / TDD, unstructured data formats (e.g. JSON)

### Non-Technical Skills

Collaboration, problem solving, architecture design session, proof of concept design, technical demonstration, good communication skills

**Technologies**

VSTS, Release Management, Puppet, Docker, Kubernetes, Chef, PowerShell, AWS API Gateway, AWS EC2, AWS SWF, AWS, AWS RDS, AWS VM, AWS Redshift, AWS S3, Azure App Service Environment, Azure Import/Export, Azure Data Factory, Java, Python, REST, Security, Storage, Virtualization, Web Services

**Programming/Scripting Languages:** .NET (C#, F#, VB.NET), Java, Python, JavaScript, Scala, Go, Ruby, PHP, SQL, T-SQL, PowerShell

**Platforms:** Linux (Red Hat, Ubuntu, Debian, etc.), Windows

**Certifications**

MCSE Enterprise Devices and Apps, MCSE Business Intelligence, MCSA Cloud Platform Solutions Associate, MCSA Linux on Azure Solutions Associate, MCSE Cloud Platform and Infrastructure, AWS Certified Solution Architect, AWS Certified Developer

**Project Experience Types/Qualities**

Coordinate and execute pilots, prototypes or proof of concepts, provide validation on specific scenarios, document and share technical best practices, further customer investment, hybrid solutions on premises or in the cloud, industry-visible, CI / Continuous Deployment, large project relative to size of customer, lift and shift, migrations and upgrades (SQL, etc.), on-premises to cloud, production environment, projects where data is born in the cloud, cross-platform SQL Server migration, server-side/desktop development, service architecture, size of project team (complexity), significant challenges, source code repository management, team lead / scrum master, web application development



## Identity Solution Engineer

The Identity Solution Engineer is responsible for the design, implementation, integration, support, and monitoring of enterprise identity and access control solutions. The ideal candidate should have a diverse understanding of the current state of security best practices, including identity and access control, mobile technology, and best practices throughout a variety of industries. In addition, this individual must have a strong knowledge of identity standards and protocols as well as a deep skillset with Windows Server Active Directory and industry security solutions. The candidate must have prior experience formulating, planning, and implementing an identity and access control strategy, including formulating policies for the “bring your own device” (BYOD) policy and remote access. The ideal candidate will have a strong understanding of network infrastructure, such as firewalls, proxies, and cross-site connectivity options. Bachelor’s degree in computer science or related field preferred.

### Technical Skills

Solid understanding of modern authentication protocols and a background in cyber security. Deep understanding of cloud computing technologies, business drivers, and emerging computing trends. Experience with Windows Server Active Directory and other LDAP-based directory services. Experience with Azure AD and Azure Infrastructure as a Service (Virtual Machines, Virtual Networks). Integration and migration experience with Skype for Business, Exchange, SharePoint & Office 365. Experience with Windows, Linux, iOS, Android, Blackberry. Experienced troubleshooter, analyzing log files, network traffic, permissions issues, identifying problems with performance and scale. Developer experience with .NET, Java, HTML, CSS, JavaScript.

### Non-Technical Skills

Proven track record of driving decisions collaboratively, resolving conflicts, and ensuring follow through. Presentation skills with a high degree of comfort with both large and small audiences. Problem-solving mentality leveraging internal and/or external resources. Exceptional verbal and written communication. Basic understanding and knowledge of PCI and SOX regulatory standards.

**Technologies**

Azure Active Directory, Office 365, Windows Server Active Directory Domain Services, ADLDS, Rights Management Server, Microsoft Identity Manager (FIM/MIM), Active Directory Federation Services (ADFS), Active Directory Certificate Services (ADCS), Web App Proxy, Site Minder, Octa, Auth0, WebSphere, Enterprise Mobility Suite, Intune, Azure Information Protection, Azure Active Directory, OAuth, SAML, Cloud App Security, Citrix XenMobile, MobileIron, Airwatch, Blackberry, Firewalls, Office 365, Windows, Linux, iOS, Android, System Center Configuration Manager, Exchange, Skype for Business, SharePoint

**Certifications**

MCSE Cloud Platform and Infrastructure, MCSA Cloud Platform Solutions Associate, MCSA Linux on Azure Solutions Associate, CompTIA Security+, CISSP, AWS Certified Solution Architect. Exam priorities: [Identity with Window Server 2016](#), [70-533 Implementing Azure Infrastructure Solutions](#), [70-398: Planning for and Measuring Devices in the Enterprise](#).

**Project  
Experience  
Types / Qualities**

3–5+ years senior (tier 3) level support with identity management as part of responsibilities.

5–8 years of experience with identity architecture and management.

3–5 years deploying, migrating, or managing an Office 365 environment.



## Data Scientist

A Data Scientist is responsible for identifying the insight opportunities present in the customer's data and helping shape the data pipeline that deliver the insights by applying advanced analytics (e.g., machine learning) in collaboration with the customer. The Data Scientist is a technical, customer facing role, who along with the Big Data Engineer is accountable for the end-to-end data pipeline envisioning and development that starts with addressing issues of data acquisition and data sampling, data exploration and data quality assessment, data wrangling to massage the data so it is better suited to applying advanced analytics, and visualizing or reporting on such data to make the insights available to the customer's business. The ideal candidate will have experience in customer facing roles and has a cross-disciplinary background consisting of statistics and software development. A technical BS degree in Computer Science or Math background is highly desirable. Three or more years of customer facing experience desired.

### Technical Skills

Advanced analytics, algorithm development, analysis services (tabular, multi-dimensional), backpropagation, bagging, boosting, Bayes, big data, business intelligence, classification, clustering, cloud data analytics, data architecting, data cleansing, data migration (cross platform / upgrade), data modeling (physical and logical), data movement, data potency, data transformation, data warehouse design, database architecture, database design, decision trees, descriptive analytics, forests, genetic programming, image processing, inverse deduction, machine learning, neural networks, predicative analytics, prescriptive analytics, recommendation, regression, rules, support vector machines, statistics, text mining.

### Non-Technical Skills

Consultative requirements gathering, collaboration, stakeholder management, relationship management, technical oversight, technical recommendations, problem solving, risk management, architecture design session, program management, proof of concept design, technical demonstration.

### Technologies

AWS Machine Learning, AWS Lex, AWS QuickSight, AWS RDS, AWS Rekognition, AWS Redshift, AWS S3, Azure Data Catalog, Azure Data Factory, Azure Data Lake, Azure Storage, Azure DocumentDB, Azure SQL Data Warehouse, Azure Import/Export, Azure HDInsight, Azure Machine Learning, Azure SQL Database, Azure Search, Azure Cognitive Services, Cassandra, Cloudera, Cognos, Cortana Intelligence, Data warehouse, Database, DB2, Excel, Flume, IBM Bluemix, Hadoop, HBase, Hive, Hortonworks, Machine Learning, MapR, Microsoft R, ML, MongoDB, MariaDB, MySQL, NoSQL, Oracle, Oracle Exadata, Oracle SOA, Pig, Power BI, PostgreSQL, Python, Qlik Tech, Revolution R, SAP HANA, SAS, Spark, SQL Server Analysis Services, SQL Server, SQL Server IaaS, SQL Server Integration Services, Sybase, Tableau, TSQL.

**Programming/Scripting Languages:** R, Scala, Python, DMX, DAX, MDX, SQL, T-SQL, Java

**Platforms:** Linux (Red Hat, Ubuntu, Debian, etc.), Windows.

### Certifications

MCSA in Machine Learning, having passed the following exams: [70-773: Analyzing Big Data with Microsoft R](#), [70-774: Perform Cloud Data Science with Azure Machine Learning](#)

Other certifications include: Master or PhD in Data Science, Statistics or Probability from accredited universities, Certified Analytics Professional (CAP), Certification of Professional Achievement in Data Sciences, Cloudera Certified Professional: Data Scientist (CCP:DS), edX Verified Certificate in Data Science Curriculum, EMC Data Science Associate, MCSE Business Intelligence, MCSE Data Management and Analytics, Revolution R Enterprise Professional, SAS Certified Data Scientist.

### Project Experience Types/Qualities

Advanced analytics (including machine learning), automating data munging, building visualizations, machine learning modeling, distributed training, training on large data sets, operationalizing models, significant challenges.



## Data Engineer

A Data Engineer is responsible for helping to select, deploy and manage the systems and infrastructure required of a data processing pipeline in support of the customer requirements. The Data Engineer is not typically a customer facing role. The primary responsibilities include implementing ETL (extract, transform and load) pipelines, monitoring/maintaining data pipeline performance. The Big Data Engineer is proficient in distributed computing principles and familiar with key architectures including Lambda and Kappa architectures, and has a broad experience across a set of data stores (e.g., HDFS, Azure Data Lake Store, Azure Blob Storage, Azure SQL Data Warehouse, Apache HBase, Azure DocumentDB), messaging systems (e.g., Apache Kafka, Azure Event Hubs, Azure IoT Hub) and data processing engines (e.g., Apache Hadoop, Apache Spark, Azure Data Lake Analytics, Apache Storm, Azure HDInsight). The ideal candidate has three or more years' experience deploying, monitoring and managing solutions that collect, process, store and analyze huge volume of data, fast moving data or data that has significant schema variability.

### Technical Skills

DevOps and DataOps, Advanced analytics, analysis services (tabular, multi-dimensional), application architecture, application lifecycle management (ALM), big data, business intelligence, capacity planning, cloud archival, cloud data analytics, cloud disaster recovery, cloud storage, cloud systems management, cloud systems operations, cloud transformation, compliance (PCI, HIPPA, etc.), data architecting, data cleansing, data migration (cross platform / upgrade), data movement, data potency, data transformation, database and server virtualization, database architecture, database design, database lifecycle management, database management, database sharding, database tuning, diagnostics, distributed application design, distributed database design, event sourcing, HADR / replication, health checks, identity and security, information architecture, information management, in-memory database architecture, IoT, Kappa architectures, Lambda architectures, MapReduce, master data management, mission critical database design and architecture, modern applications, monitoring, performance tuning, polyglot resiliency, predicative analytic pipelines, reporting services design and deployment, resiliency (clustering, etc.), scalability (up and out, high performance), security architecture, security compliance, technical migration upgrades, technology architecture.

### Non-Technical Skills

Technical recommendations, problem solving, risk management, proof of concept design, technical demonstration, consultative requirements clarification and issue troubleshooting.

### Technologies

Azure Machine Learning, Analytics, APS, AWS, AWS Athena, AWS Glue, AWS QuickSight, AWS RDS, AWS VM, AWS Redshift, AWS S3, Azure Active Directory, Azure Data Catalog, Azure Data Factory, Azure Data Lake, Azure Storage, Azure DocumentDB, Azure SQL Data Warehouse, Azure Import/Export, Azure HDInsight, Azure SQL Database, Azure Search, Azure Stream Analytics, Azure Event Hubs, Azure IoT Hub, Azure Web Jobs, Azure Cognitive Services, Birst, Business Objects, Cassandra, Cloudera, Cognos, Cortana Intelligence, CouchDB, Data warehouse, Database, DB2, Docker, Excel, Flume, IBM Bluemix, Google App Engine, Greenplum, Hadoop, HANA, HBase, Hive, Hortonworks, IBM, IBM Teradata, Informix, IoT Solutions, Java, Kafka, Machine Learning, MapR, MapReduce, ML, MongoDB, MariaDB, MySQL, Netezza, Networking, NoSQL, Oracle, Oracle Exadata, Oracle SOA, PBI, Pig, Power BI,



PostgreSQL, Python, Qlik Tech, REST, Revolution R, Samza, SAP HANA, SAS, Security, Spark, SQL Server, SQL Server IaaS, SQL Server Integration Services, Storage, Storm, Streaming, Sybase, Tableau, Teradata, TSQL, Virtualization, webMethods, WebSphere, YARN.

**Programming/Scripting Languages:** C#, DMX, DAX, MDX, SQL, T-SQL, Java, Scala, Python, PowerShell, R, Ruby.

**Platforms:** Linux (Red Hat, Ubuntu, Debian, etc.), Windows.

### Certifications

MCSE Business Intelligence, MCSA Cloud Platform Solutions Associate, MCSA Linux on Azure Solutions Associate, MCSE Cloud Platform and Infrastructure, MCSE Data Management and Analytics, AWS Certified Solution Architect, Big Data, Certified Analytics Professional, Certificate in Engineering Excellence Big Data Analytics and Optimization (CPEE), Cloudera Certified Data Engineer, Data Warehousing, IBM Certified Data Architect/Engineer, Mining Massive Datasets Graduate Certificate (Stanford), Oracle, Salesforce.com, SAP, SAS Certified Big Data Professional.

### Project Experience Types/Qualities

Advanced analytics (including machine learning), automated data pipelines, database modernization, further customer investment, hybrid solutions on premises or in the cloud, industry-visible, large project relative to size of customer, lift and shift, migrations and upgrades (SQL, etc.), on-premises to cloud, production environment, projects where data is born in the cloud, cross-platform SQL Server migration, size of project team (complexity), significant challenges, IOT – Connected Devices, IOT- Command and Control, IOT- Data Ingestion, batch analytics, interactive analytics, real-time/streaming analytics.

# Recruiting Resources

## Top 10 Sources to Find Skilled Labor and What to Look For

Sourcing skilled labor can be a challenge. In our recent survey with MDC of 1,136 Azure partners, we found that referrals and LinkedIn rank among the top source of candidates. See the table below for the top 10 sources to identify skilled labor:

	Total (n=1136)	SMB (n=886)	Enterprise (n=250)
Referrals from employees or partnerships	70%	69%	73%
<a href="#">LinkedIn</a>	59%	57%	66%
Posting on website	47%	45%	54%
Local Universities	38%	36%	46%
Local Technical Communities	36%	35%	43%
Recruit from competitors	30%	29%	36%
Meet ups	29%	29%	30%
<a href="#">GitHub</a>	8%	8%	7%
<a href="#">Stack Overflow</a>	8%	8%	7%
Other job posting sites	6%	6%	4%

Source: Microsoft Cloud Practice Development Study, MDC Research, November 2016

Now that you have an understanding of where to look, what are the most important factors you should be examining about your potential hire's skillset? In the Microsoft Cloud Practice Development Study, we asked the Azure partners this question. What they told us was the top three most important factors were work history, cultural fit and years of experience.

	Total (n=1136)	SMB (n=886)	Enterprise (n=250)
Work history	69%	68%	74%
Cultural fit	43%	40%	53%
Years of experience	42%	41%	47%
Professional certifications	32%	34%	22%
Referrals	28%	29%	26%
Professional training received	20%	21%	16%
Reputation through community	16%	15%	19%
Formal education	13%	14%	11%
Contract to hire or other means to test skills "hands-on"	13%	13%	13%
Publications	3%	3%	2%
Awards received	2%	2%	2%
Attitude	0%	0%	1%
Other	4%	4%	4%

Source: Microsoft Cloud Practice Development Study, MDC Research, November 2016





# Training & Readiness

## Preparing and Training Technical Staff for the Cloud

For technical staff to function as change agents supporting current and emerging cloud technologies, their buy-in for the use and integration of these technologies is needed. For this, staff need three things:

- An understanding of their roles and any changes to their current position.
- Time and resources to explore the technologies.
- An understanding of the business case for the technologies.

Use the following resources as part of your Azure onboarding for new and existing staff:

- [Azure Training and Certification](#) provides free online training options including online courses, learning paths, hands-on labs as well as resources to help you find learning partners who can help you achieve your skills development goals using Microsoft Azure services.
- [Microsoft Azure Hands-on Labs](#) provides free, self-paced labs to help you stay current with Azure. The live environments are fully self-contained. You do not need your own Azure subscription to complete the labs, just login with a remote desktop (RDP) client and get started.
- [Microsoft Virtual Academy](#) offers training from the people who helped to build Microsoft Azure. From the basic overview to deep technical training, IT staff will learn how to leverage Microsoft Azure for their business.
- [Microsoft IT Pro Cloud Essentials](#) is a free annual subscription that includes cloud services, education, and support benefits. IT Pro Cloud Essentials provides IT implementers with hands-on experience, targeted educational opportunities, and access to experts in areas that matter most to increase knowledge and create a path to career advancement.
- [The Microsoft IT Pro Career Center](#) is a free online resource to help map your cloud career path. Learn what industry experts suggest for your cloud role and the skills to get you there.
- [Microsoft Learning](#) offers a wide variety of official curriculum on-demand, as well as [edX courses that are taught by Microsoft experts](#), and help you learn through hands-on experiences with a broad reach of Azure technologies.
- [The Microsoft Partner Network \(MPN\) Learning Portal](#) provides a centralized interface with training opportunities and certification options organized by products, competencies, certifications, and job role.

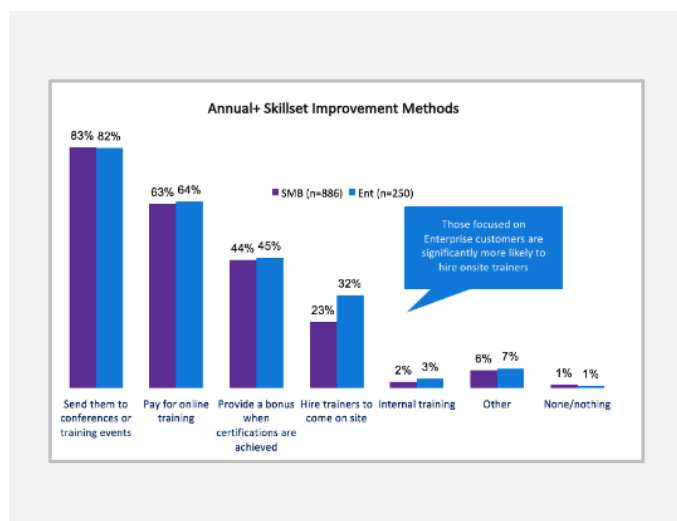
Follow a learning curriculum at your own pace to build the skills you need most to stay relevant. Suggested resources to help onboard your team for training success are available in this section.

## General Technical Training

Whether you need to fill a skills gap or are looking to improve your team's skill surface area, technical training is critical to your success.



In our research, we found conferences and paid online training are the most common learning mechanisms.



Source: Microsoft Cloud Practice Development Study, MDC Research, November 2016

### CLOUD AND ENTERPRISE PARTNER RESOURCES

The [Cloud and Enterprise Partner Resources Portal](#) provides a source of sales and technical training for partner practices and key areas of specialization. Resources include customer success stories, sales and technical training, tools, engines, and resources available to help build your skills around selling, deploying, and architecting cloud infrastructure and management, cloud application development, data platform and analytics, and security and compliance solutions.

### MPN LEARNING PORTAL

The [Microsoft Partner Network \(MPN\) Learning Portal](#) provides a centralized interface with training opportunities and certification options organized by products, competencies, certifications, and job role.

### CLOUD + ENTERPRISE UNIVERSITY ONLINE

Leverage the [Cloud + Enterprise University Online](#) to build knowledge, stay sharp, and prove your expertise on selling and supporting Microsoft cloud solutions through our live and on demand webcasts and virtual, instructor-led courses—giving you the flexibility to train at your own pace.

### MICROSOFT INSPIRE CONFERENCE RECORDINGS

Even if you missed the annual live event, the [Microsoft Inspire Conference](#) provides many of its sessions as on-demand recordings — no conference pass required.

### PARTNER COMMUNITY EVENTS, CALLS & WEBINARS

The [Microsoft Partner Enablement Blog](#) maintains a schedule of trainings available to partners. Visit often and plan your training calendar.

### SMART PARTNER MARKETING

Leverage the [Microsoft Smart Partner Marketing](#) site as your starting point for training marketing resources.

## Additional Resources

[Microsoft Learning Partners](#) are available worldwide to help enable your team for Microsoft Azure via live instructor-led training. This can be scheduled as a dedicated delivery at your location or virtually using remote learning technologies. Many courses are scheduled as open-enrollment courses, which doesn't require you to schedule a dedicated class.

- [Pluralsight](#) is a key Microsoft partner that offers Azure training. Gain the know-how and confidence your job demands through these free online courses, delivered in partnership with Pluralsight.
- [Opsgility](#) is a key Microsoft partner that offers Azure training. Find more than 70 online classes focused on Azure with full learning paths for Azure certification. Opsgility also offers a full set of instructor-led Azure trainings that focus on architects, developers, dev ops, operations, sales and decision makers.
- [O'Reilly Safari](#) provides subscription access to more than 40,000 books, videos, and interactive tutorials from over 200 of the world's best publishers, including O'Reilly, Pearson, Harvard Business Review, and Packt. It also offers live online training courses led by instructors from O'Reilly's network of tech innovators and expert practitioners.





# Competencies and Certifications

## MPN Competencies

One of the next steps is to ensure you align the technical team to the MPN competency for your practice.

**The competencies most applicable to the SaaS ISV practice are:**

- [Application Development](#)
- [Cloud Platform](#)

The following tables summarize the **skill requirements** needed by people in your organization to achieve either

a gold or silver competency for the competencies relevant to a SaaS practice. Some competencies have alternative options your organization can elect to meet in order to achieve the competency. You only need to meet the requirements of one option in any given competency.

APPLICATION DEVELOPMENT COMPETENCY	SILVER REQUIREMENTS	GOLD REQUIREMENTS
<p><b>Application Builder Option</b></p>	<p>Two individuals must pass one of the following exams:</p> <p><b>Web and Mobile Client App Dev</b> Focus:</p> <ul style="list-style-type: none"> <li>• <a href="#">Exam 70-480: Programming in HTML5 with JavaScript and CSS3</a></li> <li>• <a href="#">Exam 70-483: Programming in C#</a></li> <li>• <a href="#">Exam 70-486: Developing ASP.NET MVC Web Applications</a></li> </ul> <p><b>Universal Windows Platform</b> Focus:</p> <ul style="list-style-type: none"> <li>• <a href="#">Exam 70-357: Developing Mobile Apps</a></li> </ul>	<p>Four individuals must each hold a current version of the following certification:</p> <ul style="list-style-type: none"> <li>• <a href="#">MCSD: App Builder</a></li> </ul>

	<p><b>Azure App Dev Focus:</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Exam 70-532: Developing Microsoft Azure Solutions</a></li> <li>• <a href="#">Exam 70-533: Implementing Microsoft Azure Infrastructure Solutions</a></li> <li>• <a href="#">Exam 70-487: Developing Microsoft Azure and Web Services</a></li> </ul>	
CLOUD PLATFORM COMPETENCY	SILVER REQUIREMENTS	GOLD REQUIREMENTS
<p><b>Azure Consumption Option</b></p>	<p>One individual must pass one of the following assessments:</p> <ul style="list-style-type: none"> <li>• <a href="#">Technical Assessment for Cloud Platform</a></li> <li>• <a href="#">Technical Assessment for Remote Desktop Services on Azure</a></li> <li>• <a href="#">Technical Assessment for Using Azure for Data Analytics and Data Platform Solutions</a></li> <li>• <a href="#">Technical Assessment for Using Microsoft Azure for Application Development</a></li> <li>• <a href="#">Technical Assessment for Using Azure for Internet of Things Solutions</a></li> </ul> <p>Or, one individual must pass one of the following exams:</p> <ul style="list-style-type: none"> <li>• <a href="#">Exam 70-532: Developing Microsoft Azure Solutions</a></li> <li>• <a href="#">Exam 70-533: Implementing Microsoft Azure Infrastructure Solutions</a></li> <li>• <a href="#">Exam 70-535: Architecting Microsoft Azure Solutions</a></li> <li>• <a href="#">Exam 70-473: Designing and Implementing Cloud Data Platform Solutions</a></li> <li>• <a href="#">Exam 70-475: Designing and Implementing Big Data Analytics Solutions</a></li> </ul>	<p>Two individuals must pass one of the following assessments:</p> <ul style="list-style-type: none"> <li>• <a href="#">Technical Assessment for Cloud Platform</a></li> <li>• <a href="#">Technical Assessment for Remote Desktop Services on Azure</a></li> <li>• <a href="#">Technical Assessment for Using Azure for Data Analytics and Data Platform Solutions</a></li> <li>• <a href="#">Technical Assessment for Using Microsoft Azure for Application Development</a></li> <li>• <a href="#">Technical Assessment for Using Azure for Internet of Things Solutions</a></li> </ul> <p>Or, two individuals must pass one of the following exams:</p> <ul style="list-style-type: none"> <li>• <a href="#">Exam 70-532: Developing Microsoft Azure Solutions</a></li> <li>• <a href="#">Exam 70-533: Implementing Microsoft Azure Infrastructure Solutions</a></li> <li>• <a href="#">Exam 70-535: Architecting Microsoft Azure Solutions</a></li> <li>• <a href="#">Exam 70-473: Designing and Implementing Cloud Data Platform Solutions</a></li> <li>• <a href="#">Exam 70-475: Designing and Implementing Big Data Analytics Solutions</a></li> </ul>



- [MCSA: Linux on Azure](#)

[MCSA: Linux on Azure](#)

## Certifications

Increase readiness and marketability with MCSA, MCSD, or MCSE certifications.

There are numerous assessments and certifications your team should consider as motivation for advancing their skills, creating proof points for your practice, earning [certification badges](#), and enabling you to achieve Microsoft Partner Network Competencies.

### MCSA, MCSD, AND MCSE CERTIFICATIONS

MCSA CERTIFICATIONS AND DESCRIPTIONS	REQUIRED EXAMS
<p><b><u>MCSA: MACHINE LEARNING</u></b> Demonstrate your expertise in operationalizing Microsoft Azure machine learning and Big Data with R Server and SQL R Services.</p>	<ul style="list-style-type: none"> <li>• <a href="#">70-773: Analyzing Big Data with Microsoft R</a></li> <li>• <a href="#">70-774: Perform Cloud Data Science with Azure Machine Learning</a></li> </ul>
<p><b><u>MCSA: CLOUD PLATFORM</u></b> Demonstrate your expertise in Microsoft cloud-related technologies to reduce IT costs and deliver more value for the modern business.</p>	<ul style="list-style-type: none"> <li>• <a href="#">70-532: Developing Microsoft Azure Solutions</a></li> <li>• <a href="#">70-533: Implementing Microsoft Azure Infrastructure Solutions</a></li> </ul>
<p><b><u>MCSA: LINUX ON AZURE</u></b> Demonstrate your ability to design, architect, implement, and maintain complex cloud-enabled Linux® solutions that leverage Microsoft Azure open source capabilities. This certification also validates your Linux system administration skills to show that you are fluent in today's cloud-native world.</p>	<ul style="list-style-type: none"> <li>• <a href="#">70-533: Implementing Microsoft Azure Infrastructure Solutions</a></li> <li>• <a href="#">Linux Foundation Certified System Administrator</a></li> </ul>
<p><b><u>MCSA: ANALYZING AND VISUALIZING DATA WITH POWER BI</u></b> Demonstrate your expertise in analyzing data with both Power BI and Excel.</p>	<ul style="list-style-type: none"> <li>• <a href="#">70-778: Analyzing and Visualizing Data with Power BI</a></li> <li>• <a href="#">70-779: Analyzing and Visualizing Data with Microsoft Excel</a></li> </ul>
<p><b><u>MCSA: WEB APPLICATIONS</u></b> Demonstrate your expertise at implementing modern web applications.</p>	<ul style="list-style-type: none"> <li>• <a href="#">70-480: Programming in HTML5 with JavaScript and CSS3</a></li> <li>• <a href="#">70-483: Programming in C#</a></li> <li>• <a href="#">70-486: Developing ASP.NET MVC Web Applications</a></li> </ul>

## MCSD CERTIFICATIONS AND DESCRIPTIONS

### **MCSD: APP BUILDER**

The Microsoft Certified Solutions Developer (MCSD): App Builder certification validates that you have the skills needed to build modern mobile and/or web applications and services.

## REQUIRED EXAMS

Pre-requisites:

- [MCSA: Web Applications](#)
- [MCSA: Universal Windows Platform](#)

Choose one of the following Azure exams:

- [70-532: Developing Microsoft Azure Solutions](#)
- [70-535: Architecting Microsoft Azure Solutions](#)
- [70-487: Developing Microsoft Azure and Web Services](#)
- [70-488: Developing Microsoft SharePoint Server 2013 Core Solutions](#)
- [70-489: Developing Microsoft SharePoint Server 2013 Advanced Solutions](#)
- [70-496: Administering Microsoft Visual Studio Team Foundation Server](#)
- [70-497: Software Testing with Visual Studio](#)
- [70-498: Delivering Continuous Value with Visual Studio Application Lifecycle Management](#)

## MCSE CERTIFICATIONS AND DESCRIPTIONS

### **MCSE: CLOUD PLATFORM AND INFRASTRUCTURE**

The Microsoft Certified Solutions Expert (MCSE): Cloud Platform and Infrastructure certification validates that you have the skills needed to run a highly efficient and modern data center, with expertise in cloud technologies, identity management, systems management, virtualization, storage, and networking.

## REQUIRED EXAMS

Pre-requisites:

- [MCSA – Window Server 2016](#)
- [MCSA – Cloud Platform](#)
- [MCSA – Linux on Azure](#)
- [MCSA – Windows Server 2012](#)

Choose one of the following Azure exams:

- [70-532: Developing Microsoft Azure Solutions](#)
- [70-533: Implementing Microsoft Azure Infrastructure Solutions](#) (recommended)
- [70-535: Architecting Microsoft Azure Solutions](#)
- [70-473: Designing and Implementing Cloud Data Platform Solutions](#)
- [70-475: Designing and Implementing Big Data Analytics Solutions](#)
- [70-744: Securing Windows Server 2016](#)
- [70-745: Implementing a Software-Defined Datacenter](#)
- [70-413: Designing and Implementing a Server Infrastructure](#)
- [70-414: Implementing an Advanced Server Infrastructure](#)
- [70-537: Configuring and Operating Hybrid Cloud with Microsoft Azure Stack](#)

**MCSE: DATA MANAGEMENT AND ANALYTICS**

Demonstrate your broad skillset in SQL administration, building enterprise-scale data solutions and leveraging business intelligence data — both on-premises and in cloud environments.

Pre-requisites (one of the following):

- [MCSA – SQL Server 2012/2014](#)
- [MCSA – SQL Server 2016 Database Administration](#)
- [MCSA – SQL Server 2016 Database Development](#)
- [MCSA – SQL Server 2016 Business Intelligence Development](#)
- [MSCA: Machine Learning](#)
- [MCSA: BI Reporting](#)
- [MCSA: Data Engineering with Azure](#)

Choose one of the following Azure exams:

- [70-473: Designing and Implementing Cloud Data Platform](#)
- [70-475: Designing and Implementing Big Data Analytics Solutions](#)
- [70-464: Developing Microsoft SQL Server Databases](#)
- [70-465: Designing Database Solutions for Microsoft SQL Server](#)
- [70-466: Implementing Data Models and Reports with Microsoft SQL Server](#)
- [70-467: Designing Business Intelligence Solutions with Microsoft SQL Server](#)
- [70-762: Developing SQL Databases](#)
- [70-767: Implementing a Data Warehouse using SQL](#)
- [70-768: Developing SQL Data Models](#)
- [70-773: Analyzing Big Data with Microsoft R](#)
- [70-774: Perform Cloud Data Science with Azure Machine Learning](#)
- [70-775: Perform Data Engineering on Microsoft HDInsight](#)

# Operationalize

Microsoft  
Partner  
Network

## Grow Your ISV Business with SaaS

[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)



# Executive Summary



In the previous section, we reviewed how you should hire, train, and equip your staff. In this section, we will guide you through the steps to operationalize your business plan.

We will walk you through the options for leveraging your internal use benefits. These provide you complimentary software licenses and subscriptions for use within your organization. We will also show you how to deepen relationships with your customer by re-selling these benefits as an overall package along with your custom software, creating a new revenue stream for your business.

This section also provides guidance on how to operate your business, from how to build materials to support your sales and marketing efforts to the key contracts you will want to put in place.

Whether you're building products, providing managed services, or performing project work for customers, your success may be impacted by your ability to manage your customer records, your projects, and your support trouble tickets. We provide guidance on what tools and systems you should consider implementing.

We will also cover how you can increase visibility for your practice by reviewing the Microsoft marketplaces and how to get listed on them as well as provide guidance on the social offerings your practice should setup.

We conclude this section with checklists and templates you can use to standardize your customer engagement process.

## Top 5 things to do

Get your practice off the ground by putting your plan into action. These are the top 5 things you should do to get the momentum going.

- ✓ Implement processes
- ✓ Claim your internal use benefits
- ✓ Set up key contracts and tools
- ✓ Establish customer support process
- ✓ Standardize your engagements using checklists



## Implement a Solution Delivery Process

The process you follow in delivering your solution to your customer is just as important as the technologies you use to deliver it.

When it comes to delivering solutions for a SaaS Practice, choose from among the following (or incorporate the aspects from the below) that best fit your needs and your team

### Scrum Process

The [Scrum](#) process works great if you want to track product backlog items (PBIs) and bugs on the Kanban board, or break PBIs and bugs down into tasks on a task board. This process supports the Scrum methodology as defined by the [Scrum organization](#). Tasks in this process support tracking remaining work only.

### Agile Process

Choose [Agile](#) when your team uses Agile planning methods, including Scrum, and tracks development and test activities separately. This process works great if you want to track user stories and bugs on the Kanban board, or track bugs and tasks on the task board. You can learn more about Agile methodologies at the [Agile Alliance](#). Tasks support tracking Original Estimate, Remaining Work, and Completed Work.

## Create Repeatable Processes

Repeatable processes make for profitable practices. Use the following example checklist to kick start your own checklist to use when executing a new engagement.

- Hold initial requirements meeting
- Identify product owner/manager(s)
- Follow-up meeting to clarify and establish next steps
- Discuss MVP (minimal viable product) criteria
- Establish development process (Agile, Scrum, etc.)
- Identify milestones and tasks; share with customer
- Provide cost estimates for development, cloud services, and ongoing maintenance/support
- Address customer objections to proposed technology and services
- Acquire data (or sample of data) for initial data assessment and proof of concept development.
- Host project artifacts (issues, code, etc.) to share with internal team and customer (e.g. Visual Studio Team Services)
- Follow up with customer and provide status/demos on a regular basis (e.g. 2 week sprint)
- Coordinate a final handoff to customer
- Conduct project debrief with customer
- Organize internal project post-mortem
- Customer conducts acceptance test

# Claim Your Internal Use Benefits

A key benefit of being a Microsoft Partner is access to Internal Use Rights, providing your SaaS practice access to complimentary credits and licenses of Microsoft products and services, including Microsoft Azure, Office 365 and Visual Studio.

## AZURE CREDITS

Providing access to Azure for your SaaS development team is one of the key first steps to preparing for a successful SaaS practice. Microsoft provides several ways for your organization to gain access to Microsoft Azure for the development of new services, testing workloads, delivering services, or learning in general. For example, use your credits to enable your team to use the Visual Studio Virtual Machines or perform scale out training using Azure App Service.

Members of the [Microsoft Action Pack](#) program receive \$100 monthly Azure credits.

Microsoft Partners with the Application Development Competency get Azure credits as a part of the Visual Studio subscription’s core benefit (see the next section on Visual Studio).

Microsoft Partners with a Cloud Platform Competency at the Silver or Gold level get even more — \$6,000 per year and \$12,000 per year, respectively.

## OFFICE 365 BENEFITS

As a Microsoft Partner, your core benefits include access to the Microsoft Office 365 Demo tenant that you can use to sell Microsoft Office 365, Power BI Pro, Microsoft Dynamics CRM Online and Project Online. You also get 25 seats of Office 365 E3 at the silver level or 100 seats

of Office 365 E3 at the gold level from your core benefits.

As a Microsoft Partner with the Small & Midmarket Cloud Solutions competency, in addition to your core benefits, you get 10 seats of Office 365 E3 at the silver level and 25 seats of Office 365 at the gold level.

As a Microsoft Partner with the Cloud Productivity or Communications Competency, you get 25 seats to Office 365 E5 and 100 seats with the Gold competency.

## VISUAL STUDIO

If you have Visual Studio subscriptions, each one has a set amount of Azure credits built in that you can use. The amount varies depending on the type of subscription purchased. You can also use software available in your MSDN subscription on Azure Virtual Machines for development and test at no extra charge.

\$50 AZURE CREDIT	\$100 AZURE CREDIT	\$150 AZURE CREDIT
<ul style="list-style-type: none"> <li>• Visual Studio Professional – annual</li> <li>• Visual Studio Professional with MSDN</li> <li>• Visual Studio Test Professional with MSDN</li> </ul>	<ul style="list-style-type: none"> <li>• MSDN Platforms</li> </ul>	<ul style="list-style-type: none"> <li>• Visual Studio Enterprise – annual</li> <li>• Visual Studio Enterprise with MSDN</li> <li>• Visual Studio Enterprise with MSDN (MPN)</li> </ul>



## Ways to Purchase Azure

There are a few ways you can purchase Azure.

### ENTERPRISE AGREEMENTS

Another option for getting access to your technical professionals is to purchase an Enterprise Agreement (EA). This arrangement is ideal for larger organizations that require the ability to create subscriptions for different departments, and even implement charge-back based on the department. Azure subscriptions within an EA agreement are managed through the Azure EA portal and allow for delegated administration and the ability to set quotas at the department or subscription level. For more information on how to get started with purchasing an enterprise agreement for Azure usage or adding Azure to an existing EA, visit:

<https://azure.microsoft.com/en-us/pricing/enterprise-agreement/>.

### PAY AS YOU GO AND TRIAL ACCOUNTS

You can also create a free trial with Azure and allow it to convert to a pay-as-you-go subscription. An Azure free trial is valid for 30 days and allows up to \$200 in Azure credits. After the initial 30 days, any Azure usage is billed directly to you on your credit card. You can start a free trial by browsing <http://azure.microsoft.com> and clicking the free trial link.

### OPEN LICENSE

You can also purchase Azure through a reseller using the Microsoft Open License Program. Open Value is the recommended program for small to midsize organizations with five or more desktop PCs who want to simplify license management, manage software costs, and get better control over their investment. It also includes Software Assurance, providing access to valuable benefits such as training, deployment planning, software upgrades, and product support to help you boost the productivity of your entire organization. For more information on the Microsoft Open Licensing program, visit: <https://www.microsoft.com/en-us/licensing/licensing-programs/open-license.aspx>.





## Key Contracts and Tools for Your Practice

Practices need to use a set of legal documents to ensure compliance and deliverables, and an implementation process, to track the progress of a project both in terms of progress against a project plan and project budget, as well as protect your IP.

### KEY CONTRACTS

Leverage the [Key Contracts for Your Practice guide](#), to learn more about developing service level agreements, master services agreements, a statement of work, and a mutual non-disclosure agreement.

### MICROSOFT PROJECT ONLINE

[Microsoft Project Online](#) is a flexible online solution for project portfolio management (PPM) and everyday work. Delivered through Office 365, Project Online provides powerful project management capabilities for planning, prioritizing, and managing projects and project portfolio investments — from almost anywhere on almost any device. Project Online can be used by administrators, portfolio managers and viewers, project and resource managers, and team leads and members.

### VISUAL STUDIO TEAM SERVICES

[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)

[Visual Studio Team Services](#) provides various tools for tasks like running agile teams, providing support for Kanban boards, handling work item backlogs, scrum boards, source control, continuous integration and release management. Source control functionality provides Git support, which enables integration with GitHub if such integration is desired.

While Visual Studio Team Services will help you manage the technical aspects of your project, cost-containment requires a different set of tools.

### MICROSOFT DYNAMICS 365 FOR PROJECT SERVICE AUTOMATION

[Microsoft Dynamics 365 for Project Service Automation](#) provides users with the capabilities required for setting up a project organization, engaging with customers, project scheduling and costing, managing and approving time and expenses, and closing projects. It is specially targeted to address the needs of a Project Services based practices, as it is designed for professionals who manage projects and the associated customer engagement process end to end.

### GITHUB

[GitHub](#) provides the hosted environment for the SaaS implementation team to version control and share their source code, notebooks and other artifacts both privately (e.g., internally to a team) and publicly (e.g., an open source project) and collaborate on development projects.



## Collaboration Tools and File Sharing

Collaborating with customers through the lifecycle of a project or the duration of a managed services agreement is critical. There are several services that can help you share project plans or set up lists for shared data.

### JUPYTER NOTEBOOKS

Jupyter Notebooks were introduced in the earlier section of the Team Data Science Process. These online, web-based notebooks enable the SaaS implementation team to share code and collaborate on data wrangling, data understanding, data preparation, model training and model evaluation. They also provide convenient mechanism to share results (in the form of notebooks that include rich text, tabular data and charts) with customers and other stakeholders in a read-only fashion.

### MICROSOFT TEAMS

[Microsoft Teams](#) is the latest collaboration tool from Microsoft and is designed to make your content, tools, people, and conversations available in a single location.

### YAMMER

[Yammer](#) is an enterprise social network collaboration offering to help teams collaborate and share files with each other.

### ONEDRIVE FOR BUSINESS

[OneDrive for Business](#) is an enterprise file sharing service that is designed for automatic synchronization of files between your computer and the cloud. OneDrive makes it easy to share files with your customers or partners.

### SKYPE FOR BUSINESS

[Skype for Business](#) is an enterprise online meeting and conference service designed for business communications.

### SURFACE HUB

[Microsoft Surface Hub](#) is a Skype Online-integrated collaborations device, or “meeting room in a box.” In addition to the built-in team experiences like Skype for Business, Microsoft Office, and Whiteboard, Microsoft Surface Hub is customizable with a wide array of applications. Universal apps built for Windows 10 shine on Microsoft Surface Hub and scale to the large screen. You can also connect apps from your personal device and drive them from Microsoft Surface Hub.

## Using CRM to Grow Your Business

CRM solutions streamline processes and increase profitability in your sales, marketing, and service divisions.

A strong CRM solution is a multifaceted platform where everything crucial to developing, improving, and retaining your customer relationships is stored. Without the support of an integrated CRM solution, you may miss growth opportunities and lose revenue because you're not maximizing your business relationships. Imagine misplacing customer contact information, only to learn that your delay pushed your client into the arms of a competitor. Or, picture your top two salespeople pursuing the same prospect, resulting in an annoyed potential customer and some unfriendly, in-house competition. Without a centralized program where your people can log and track customer interactions, your business falls behind schedule and out of touch.

### THE FUNDAMENTALS OF CUSTOMER RELATIONSHIP MANAGEMENT

CRM tools make the customer-facing functions of business easier. They help you:

- Centralize customer information
- Automate marketing interactions
- Provide business intelligence
- Facilitate communications
- Track sales opportunities
- Analyze data
- Enable responsive customer service

Running a successful business is no simple task. When marketing campaigns, data analysis, meetings, customer care, and more, all happen simultaneously, you need a powerful CRM solution to bring all these functions together in one place.

As a sales professional, you'll be working with the following types of records:

**ACCOUNTS:** Account records contain information about the companies you do business with.

**CONTACTS:** Contact records contain information about the people you know and work with. Usually, multiple contacts are associated with one account. Contacts could include people responsible for making purchasing decisions or paying invoices, support technicians, or anyone you work with at the company.

**LEADS:** Leads are potential sales, and you or your company can get leads from many different sources. For example, you can generate sales leads from marketing campaigns, inquiries from your website, mailing lists, social media posts, or in person at a trade convention.

**OPPORTUNITIES:** When you qualify a lead, it becomes an opportunity, or a deal that you're getting ready to close.

[Microsoft Dynamics 365](#) can be customized, so you can also work with records relevant to your field and the way your organization does business, including [sales](#), [customer service](#), [field service](#), [project service automation](#), and [marketing](#).



# Define Customer Support Program and Process



## Support Overview

It has been said that an unhappy customer represents an opportunity to make a customer for life. Studies have found when a customer gets to the point of a complaint, they are very emotionally engaged. If you can turn that negative around to a positive, you may just have a customer for life.

When it comes to support, there are two perspectives you should consider. First, how will you support your customers when they have engaged you for project services, managed services, or are utilizing your intellectual property. Second, where do you go for [Azure support from Microsoft](#) for a solution you are building, or because you need assistance on behalf of your customer?

### THE ITEMS YOU WILL NEED TO WORK THROUGH INCLUDE:

- [Defining your support model](#)
- [Provisioning your support infrastructure](#)
- [Defining and implementing your escalation process](#)
- [Selecting and enabling your support options for Azure](#)

We cover each of these topics in the pages that follow, and additional resources are available on the [ISV Resource Hub](#).

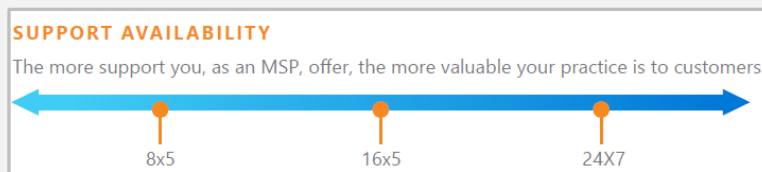


## Supporting Your Customers

Let's begin with the first scenario in which you support your customers directly. It should go without saying that one of the most important functions for your MSP practice will be supporting your customer once their applications and data are firmly in the cloud or sitting in a hybrid deployment. No matter how well a cloud or hybrid environment is planned, provisioned, operated, or monitored, problems will arise — and those problems will need to be remediated. It's your job as an MSP to offer support to your customers to deal with outages, breaches, inefficiencies, and disaster scenarios. MSPs need to consider the level of support that makes sense for their practice — in terms of resources and revenue — as well as what makes sense to the customers they serve.

### SUPPORT MODEL

How do you package and sell your support? The typical options are to provide support either on a retainer basis (where the customer pays a monthly fee for up to a certain number of "use it or lose it" support hours) or per incident (where the customer pays a fee every time they utilize your support). You must also define your support availability so your customers have a realistic expectation of when they can access your service.



### SUPPORT INFRASTRUCTURE

How will you manage customer support requests and track them to closure? Many MSPs offer premium support offerings such as a Technical Account Manager who is responsible for tracking, reporting, and escalating an issue.

### ESCALATION PROCESS

How does a customer get help at the right technical level? For your support process to make economic sense, avoid having your most skilled and most expensive resources (e.g., architects, senior developers, data scientists, etc.) answer every support call. For your particular solution offering, consider implementing a tiered support offering of junior-level resources that are equipped to handle common issues. These resources should be equipped to escalate a customer support case to a more senior-level resource once the common issues have been ruled out. You will need to decide how many levels of tiered support to offer, but two to three tiers are most common. When defining your escalation process, do not forget about the basics. For example, how do customers get in touch with you for support in the first place? This could be a dedicated support telephone number, forum or chat room, Twitter handle, email address, etc.



# Support Options from Microsoft

How do you receive support for your implementation efforts or on behalf of your customer?

## SIGNATURE CLOUD SUPPORT

[Microsoft Signature Cloud Support](#) is provided as benefit to Silver and Gold Partners. It primarily provides support for issues occurring in Azure subscriptions you own or on which you are a co-admin. It is not intended for use in supporting issues in subscriptions owned by your customers.

## MICROSOFT ADVANCED SUPPORT FOR PARTNERS

[Microsoft Advanced Support for Partners](#) is the ideal solution for partners who are growing their cloud business. Not quite ready for Premier Support, but need a higher level of service than the [Microsoft Partner Network](#) core benefits provide? The Advanced Support program delivers the right level of support to meet you in the middle while your business grows. With Advanced Support for Partners, you get cloud support at an accessible price point, which helps you be a great ally to your customers and grow your business faster. The program includes valuable proactive and reactive services delivered by experienced Services Account Managers and Partner Technical Consultants. Advanced Support for partners enables you to provide support on behalf of your end customers, in addition to providing support on subscriptions you own directly. Designed from the feedback of over 1,500 partners like you, Microsoft Advanced Support for Partners addresses the

specific needs of Cloud Solutions Providers (CSPs), born-in-the-cloud partners, and all other partners selling Microsoft cloud services.

## MICROSOFT PREMIER SUPPORT FOR PARTNERS

[Microsoft Premier Support for Partners](#) delivers a managed support offering for you and your customers — proactive support services for developing, deploying, and supporting Microsoft technology whether on-premises, hybrid, or in the cloud. As the only partner program with complete, end-to-end managed support across the full Microsoft platform, Premier Support for Partners also provides a powerful marketing tool to gain competitive advantage in the marketplace.

Microsoft offers a range of paid [Azure support plan](#) options for customers from developers starting their journey in the cloud to enterprises deploying business-critical, strategic applications on Microsoft Azure. These options are available in tiers — **Premier, Professional Direct, Standard and Developer Support Plans** — that are available for purchase directly for those who are not Microsoft Partners. In addition to these paid plans, Azure offers **core support**, which is free and provides support via forums, and help with account billing or management questions.

## SUBMITTING AZURE SUPPORT REQUESTS

Support requests need to be submitted using the Azure Portal. First you must log in to the subscription for which you want to receive support. Next, submit a support request. Once submitted, you can manage the incident from the Azure Portal.

## PARTNER ADVISORY HOURS

Partner advisory hours are used as currency for technical presales and advisory services offered by the Microsoft Partner Services team.

As part of your company's [Microsoft Partner Network](#) membership, your organization receives partner advisory hours for attaining a Microsoft competency, membership in Microsoft Cloud Accelerate, and subscribing to Microsoft Action Pack Develop and Design.

PARTNER LEVEL	NETWORK MEMBER	ACTION PACK	SILVER	GOLD
	0 hours	5 hours (after first cloud sale)	20 hours	50 hours

### THESE HOURS CAN BE USED TO

- Deploy the latest Microsoft technologies internally
- Build skills and knowledge
- Close deals faster
- Get expert advice
- Chalk talks

## SUPPORT OPTIONS

PARTNER-FACING OPTIONS	RESPONSE TIME
Signature Cloud Support	Less than 2 hours
Microsoft Advanced Support for Partners	Less than 1 hour
Microsoft Premier Support for Partners	Less than 1 hour
Partner Advisory Hours	N/A

CUSTOMER-FACING OPTIONS	RESPONSE TIME
Premier	Less than 1 hour
Professional-Direct	Less than 1 hour
Standard	Less than 2 hours
Developer	Less than 8 hours
Core	N/A



# Manage and Support a SaaS solution deployed in Azure

## Support Resources

Supporting an Azure deployment involves transitioning from deployment focus to ongoing health and occasional troubleshooting. Microsoft Azure offers several services to help manage and monitor workloads running in Azure, documentation for troubleshooting the services for your practice, and the [Azure Community](#) where you can ask questions, get answers, and connect with Microsoft engineers and Azure community experts.

## KEEPING AN EYE ON COSTS

If your SaaS solution is deployed to Azure, there are a lot of ways you can both forecast spend and keep track of your actual costs.

- You can get estimated costs before adding Azure services by using the [Azure Pricing Calculator](#). This calculator includes all Azure services, including those relevant to the SaaS practice like Azure App Service, Azure Service Fabric, and Cognitive Services.
- Once you have resources deployed to Azure, you should regularly check the Subscription blade in the [Azure Portal](#) for cost breakdown and burn rate. From here, you use the Cost analysis feature to analyze the cost breakdown by resource.
- You can also report on your Azure costs programmatically by using the [Azure Billing APIs](#). There are two APIs available that when used together enable you to estimate spend by resource: the Azure Resource Usage API enables you to get your Azure consumption data, and with the Azure Resource RateCard API you can get the pricing information for each Azure resource.
- There are other situations, such as for an EA, a sponsored Azure subscription, or subscriptions acquired thru a CSP provider. These have their own portals for analyzing consumption and costs. For details on how to monitor these, view [this Azure billing and cost management article](#).

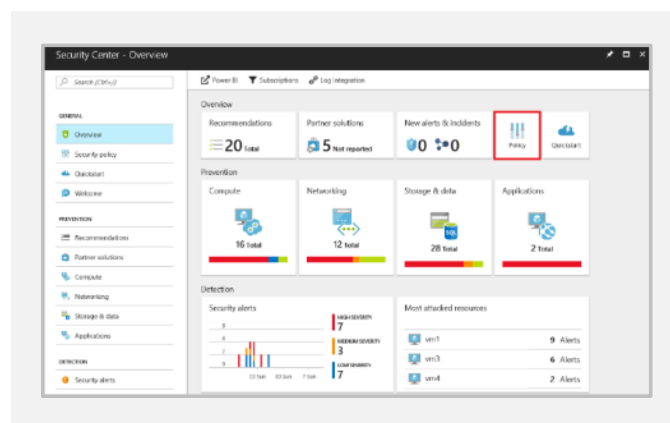


## AZURE SECURITY CENTER

[Azure Security Center](#) helps you prevent, detect, and respond to threats with increased visibility into and control over the security of your Azure resources. It provides integrated security monitoring and policy management across your Azure subscriptions, helps detect threats that might otherwise go unnoticed, and works with a broad ecosystem of security solutions. Azure Security Center should be part of any managed service practice to assist with monitoring and support.

Security Center delivers easy-to-use and effective threat prevention, detection, and response capabilities that are built in to Azure. Some of its key capabilities are:

- Monitor the security state of your Azure resources
- Defines policies for your Azure subscriptions and resource groups based on your company's security requirements, the types of applications that you use, and the sensitivity of your data
- Uses policy-driven security recommendations to guide service owners through the process of implementing needed controls
- Rapidly deploy security services and appliances from Microsoft and partners
- Automatically collect and analyze security data from your Azure resources, the network, and partner solutions like antimalware programs and firewalls
- Leverages global threat intelligence from Microsoft products and services, the Microsoft Digital Crimes Unit (DCU), the Microsoft Security Response Center (MSRC), and external feeds
- Apply advanced analytics, including machine learning and behavioral analysis
- Provides prioritized security incidents/alerts
- Offers insights into the source of the attack and impacted resources
- Suggests ways to stop the current attack and help prevent future attacks



## AZURE ADVISOR

[Azure Advisor](#) analyzes your resource configuration and usage telemetry to detect risks and potential issues. It then draws on Azure best practices to recommend solutions that will reduce your cost and improve the security, performance, and reliability of your applications.

## OMS LOG ANALYTICS

Even if you are not offering OMS as part of your core offering, using [Log Analytics](#) for support and monitoring can be a huge time saver. Log Analytics can help you collect and analyze data generated by resources in your cloud and on-premises environments. It gives you real-time insights using integrated search and custom dashboards to readily analyze millions of records across all your workloads and servers regardless of their physical location.

## ENGAGING MICROSOFT SUPPORT

If you are a CSP or have sold support as part of your managed services solution you are the front-line support for your customer. At some point, you may need to contact Microsoft to escalate an issue. Microsoft offers several options via forum support or via paid options as discussed in the preceding [Support Options from Microsoft](#) section.

# Support Ticket Setup and Tracking

## Customer Support

Setting up tickets, tracking issue resolution, and managing customer success are fundamentals of your practice.

Providing support to your customers from your practice is a non-trivial, omni-channel effort. Consider using Azure Machine Learning to monitor the performance of production deployed models. We suggest you implement [Microsoft Dynamics 365 for Customer Service](#) to help you quickly set up and start managing your overall customer support efforts.



### **MICROSOFT DYNAMICS 365 FOR CUSTOMER SERVICE**

Microsoft Dynamics 365 for Customer Service is designed to manage the efforts of your customer

support teams. It provides licensed users with access to core customer service capabilities for a significantly lower price than comparable offerings from other vendors, including enterprise case management, Interactive Service Hub, Unified Service Desk, SLAs and Entitlements, and other service group management functionality.

### **CREATE CONSISTENCY AND LOYALTY**

Provide the seamless service your customers expect by meeting them where they are with the information they need, every time.

- Give customers great service on their channel of choice.
- Make help easy by providing relevant, personalized service.
- Proactively address issues by detecting customers' intent and social sentiment.

### **MAKE YOUR AGENTS' JOBS EASIER**

Give your agents complete information — in a single customer service software app — to make smart decisions and provide great service.

- Reveal customers' case histories, preferences, and feedback.
- Provide guidance on entitlements and service-level agreements.
- Display it all in a single interface tailored to their job and skillset.

### **GET AN ADAPTIVE ENGINE**

Respond quickly to customer and market changes within an agile, cloud-based environment that has digital intelligence built in.

- Adapt and customize easily using configuration, not code.
- Extend your functionality through a single interface.
- Rely on advanced analytics and a trusted cloud platform.

# Implement Intellectual Property Offerings

## Implementing IP in Your SaaS Practice Offerings

Consider these tips to start productizing your IP and go to market.

### DEFINE YOUR SOLUTION

When we ask partners how they determined what IP they were going to build, we often get the same answer, which is that they realized most of their customers were asking for the same thing or something very similar. And rather than continuing to do high-cost custom work for every customer, they decided to productize what their customers were asking for. Bring your sales, marketing, technical, and delivery teams together to brainstorm and define what your solution will look like.



### DETERMINE WHAT WILL DIFFERENTIATE YOUR SOLUTION FROM OTHERS IN THE MARKET

It is important that you think about your differentiation strategy. What is going to make your solution better than other similar solutions in the industry?

### MAINTAIN RIGHTS TO THE IP

As partners make the transition from project or custom services to packaged IP, it is critical they revise their customer agreement(s) so the partner can maintain the IP rights to the solutions.

### PROTECT YOUR IP

As we mentioned in Understanding Intellectual Property, you should engage legal counsel to help you protect and maintain ownership of the IP you create. Key to partner success with IP is taking care with licenses, contracts and terms of use and the acquisition of patents.

### ESTABLISH A RECURRING REVENUE MODEL

The beauty of deploying IP in the cloud space is that you can light up the recurring revenue model, which will have a positive impact on the valuation of your business and even help your cash flows in the future.

### CONSIDER YOUR CHANNEL STRATEGY

One of the advantages of productizing your IP is that it opens a lot of doors to sell your solution through channel partners.

## Resources

- [Building IP to Drive Margins](#)
- [Create Stickiness with IP](#)

# Setup Social Offerings

## Blogging, Meetups, and More

Contributing to the technical community can help you increase credibility for your practice. It has the side benefit of strengthening the technical acumen of your delivery team by having them focus on a specific subject for a public-facing deliverable. Below are some suggested options to get started.

### BLOGGING

Technical blogging is a great way to increase the skills of your technical team, as well as grow stature in the community at large with your organization. Blog posts should be well thought out and simple to digest. Visual aids such as diagrams or nicely formatted source code snippets go a long way towards readability.

### MEETUPS, USER GROUPS & ASSOCIATIONS

Speaking at user groups and association events is another valuable tool to increase the skills of your team. Similar to blog posts, its great practice for honing vital communication skills with your team, as well as a great opportunity to dig deeper into a specific subject related to your practice. For a SaaS practice, consider the following:

- [Meetup.com SaaS Meetups](#)
- [Cloud Software Association – SaaS Connect](#)

### GLOBAL AZURE BOOTCAMP

Each user group will organize their own one-day deep dive class on Azure the way they see fit. The result is that thousands of people get to learn about Azure and join online under the social hashtag #GlobalAzure! This is a great opportunity to attend, participate as a speaker (reach out to your local organizer to see how you can

help) or host your own. For more information, visit <http://global.azurebootcamp.net/>.

### WEBINARS

Webinars are another resource to extend your teams skills. Similar in scope to speaking at a meetup or user group, the webinar allows a much broader reach as attendees from all over the globe can attend.

### MICROSOFT MVP COMMUNITY

For more than two decades, the Microsoft MVP Award is our way of saying thank you to outstanding community leaders. The contributions MVPs make to the community, ranging from speaking engagements and social media posts to writing books and helping others in online communities, have incredible impact. Among other benefits, MVPs get early access to Microsoft products and direct communication channels with product teams, and are invited to the Global MVP Summit, an exclusive annual event hosted in Microsoft's global HQ in Redmond. They also have a very close relationship with the local Microsoft teams in their area, who are there to support and empower MVPs to address needs and opportunities in the local ecosystem.

Contributing to the Azure community not only helps the reputation of your practice, but it can also hone much-needed skills for your delivery team.



Microsoft  
Partner  
Network

# Go to Market & Close Deals

## Grow Your ISV Business with SaaS

[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)



# Executive Summary

In previous sections in the playbook, we covered topics from how to build your practice by selecting products or services to specialize in, to building and training your team help turn your ideas into reality, to bringing your special offering to market and finding and keeping great customers. So, what's left to do? In this section, we'll discover strategies to compel potential customers that may be sitting on the fence to take action, from creating a good value proposition to building marketing and sales materials that tell your story.

It has been said that your current customers are your best customers. Do you know who your best customers are? What do they have in common? And how do you find more like them? We'll start by helping you build foundational marketing materials such as marketing personas, points of differentiation, value propositions, and customer business needs.

Once you've built the foundation, we'll look at how you can put these materials to work. We'll go through the different ways you can attract new customers and look at best practices. How do you put it all together? We'll discuss why integrated marketing campaigns work the best, and the tools you need to run them, such as a CRM system and marketing automation.

But marketing is only half of the story. Your sales team is the other half. Don't forget how the two work together and what marketing can do to support sales. The job of the marketing team is to build out not only customer facing materials, but also compelling materials that can be used to train and arm your sales team.

The sales end of the bargain is to close the sale. One way to do this is by writing a winning proposal. Another way is to build a proof of concept or prototype of your product or service offering, which could help a prospect understand what it is you're offering or solidify their vision of what you can help make possible. Microsoft is committed to helping your business grow and provides both co-selling and co-marketing opportunities.

Finally, don't miss the Microsoft resources available in the [Go-to-Market and Close Deals guide](#), which you can leverage to help build your marketing materials and campaigns, as well as resources to help your team close the deal.

## Top 5 things to do

Add value to your practice and turn your prospective customers into lasting ones. These are the top 5 things you should do to go to market and get deals done.

- ✓ Identify your customer business needs
- ✓ Write a compelling value proposition
- ✓ Leverage marketing to find customers
- ✓ Build marketing and sales materials
- ✓ Collaborate with partners

# Marketing Your SaaS Offerings

## Plan your customer's journey to buying

SaaS has drastically changed the way buyers are purchasing software. Trials and free previews of SaaS applications often allow buyers to research and interact with products long before engaging sales people. By the time they do engage with sales, they've often already made some decisions.

To help illustrate this, just think about the way a buyer might go about buying a new car. Before going to the car dealership, the buyer will likely read about various car models on the internet, read reviews, and make some decisions. When the buyer is ready to visit a dealership, they already know what they want and how much they are willing to pay for that car. This poses a challenge for sellers. How can you get prospects to engage with you earlier in the process? Through marketing.

Another way partner businesses are changing is that when selling cloud-based solutions, you can gain recurring revenue streams. Recurring revenues provide business stability and confidence for business owners and managers, allowing them to make business decisions that may not be as easy when revenues are irregular and lumpy. While these recurring revenues are smaller on a per-transaction basis than buyers' large capital expenditures, you adjust for this. You'll need a higher volume of transactions. To support that, you'll need a higher volume of high quality sales leads (through modern marketing techniques) coming in to create larger sales pipelines. Clients who are buying on a recurring basis represent great opportunities for you to upsell and cross-sell additional products and services.

Marketing is not an option anymore. Marketing helps you educate, identify, and engage with prospects earlier in the sales process. By identifying prospects who indicate interest in your products and services via their behavior (website visits, clicks, downloads, etc.), marketing can deliver high-quality leads.

Inbound marketing techniques such as search engine optimization and pay-per-click advertising make it easy for prospects to find you. Outbound marketing techniques, such as e-mail and telemarketing, enable you to tell prospects about your company's solutions.

Marketing is the toolset that addresses all these changes. Marketing today is digital and has the power to reach more people. Again, it's not to say that more traditional, non-digital marketing is ineffective. But to be found by prospective buyers that you don't have a relationship with, you need to employ digital marketing techniques. Modern marketing is focused on the prospects' and clients' views of the world.

### RESOURCES

- [ISV Resource Hub](#)
- [Planning your Cloud Business Transition: Sales Video](#)
- [Strategies for Unlocking Digital Transformation](#)
- [Smart Partner Marketing Resources](#)



What is different about the SaaS buyer? Savvy SaaS buyers are aware of the benefits of SaaS and may have already made up their mind about purchasing your product before ever approaching your sales teams. They are looking for partners to help them solve a domain specific problem. It is up to the ISV to recognize the opportunity to leverage the differentiating features of their product and sell SaaS.

### DO'S AND DON'T FOR MARKETING SAAS

**DO** target your existing customers with envisioning sessions and PoCs before marketing to win new customers

**DO** emphasize how the solution augments human ingenuity

**DO** lead with SaaS as the value proposition

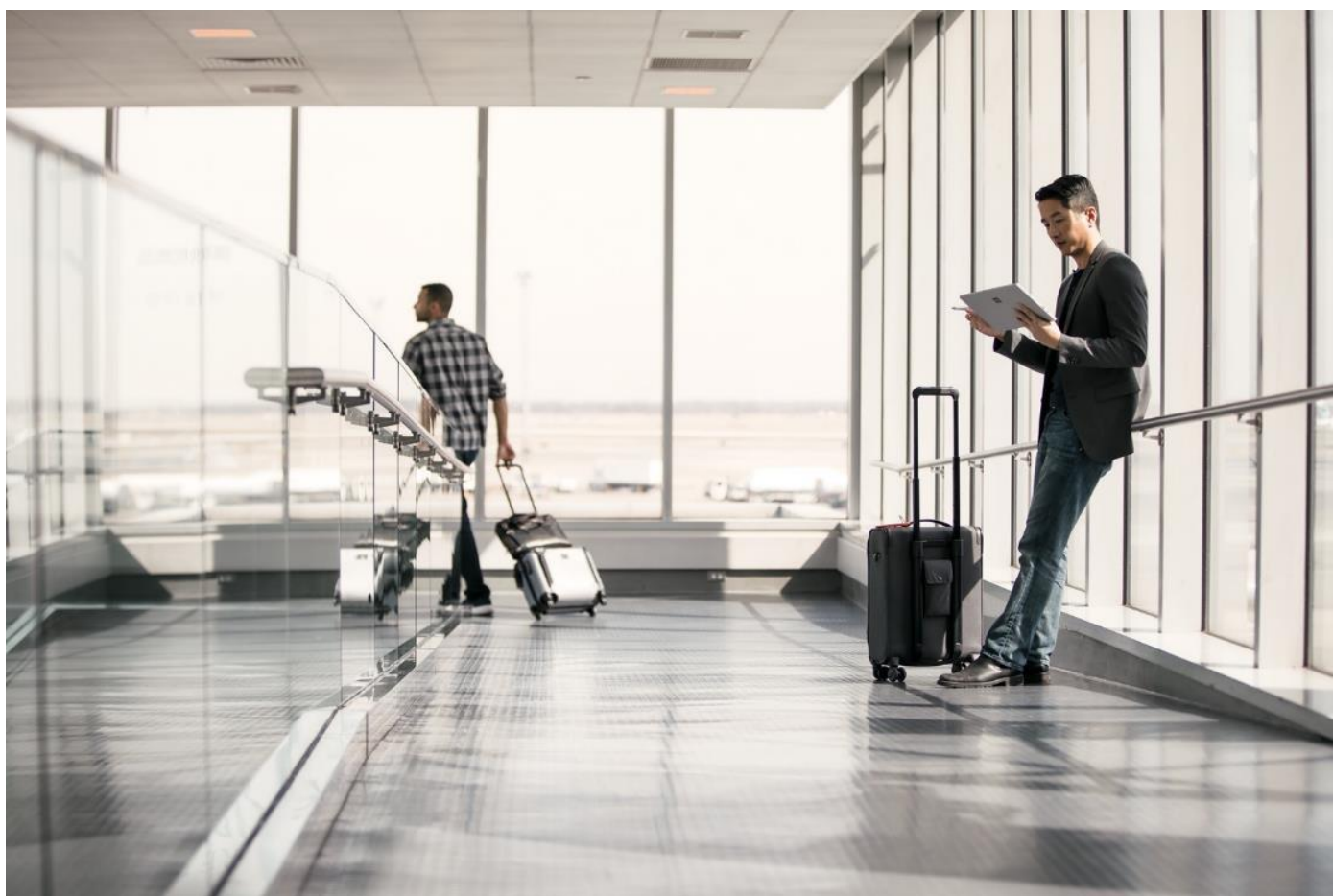
**DO** help them envision the possibilities enabled with the use of intelligent technology

**DO** expect customers to ask for a SaaS solution

**DO** explain how SaaS might benefit the customer's digital transformation

**DON'T** describe the benefits solely in terms of the "cool" technology (e.g., "Win with reduced infrastructure complexity and costs, predictive analytics, any-device access and value-added features")

**DON'T** overpromise the capabilities of SaaS



# Guide: Go-to-Market and Close Deals

Leverage the Microsoft resources available in the [Go-to-Market and Close Deals guide](#), for details on marketing to the cloud buyer, aligning marketing goals with business goals, developing value propositions, and marketing and sales assets, resources, and best practices.



Microsoft  
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# Optimize & Grow

## Grow Your ISV Business with SaaS

[aka.ms/practiceplaybooks](https://aka.ms/practiceplaybooks)



# Executive Summary

So far, we've covered strategies for building your SaaS practice, finding and keeping customers providing them with ongoing support.

In this section, we'll focus on how to optimize your practice, strengthen your relationship with customers, and evaluate your performance to help you continue to delight prospects and customers.

Are your customers delighted by your services and products? Delighted and not just satisfied? In this section, you'll learn why customer lifetime value is so important, and how to create more customers for life.

We'll share how to get to know your customers better by following their journey with secret shopping and analysis. We'll also explore the use of a "land and expand" strategy and see how getting to know your customers better can lead to incremental opportunities to provide additional services.

You will also discover ways you can keep your solutions top of mind for prospects and customers through nurture marketing, and how to grow and improve your lead generation practice through a well-planned referral marketing program. We'll show you how to make the

most of your renewal process, and how to get ahead of deadlines.

We will help you learn how to grow your business by identifying the best customer personas and creating "look-alike" prospects, deepening your expertise in key verticals and marketing that expertise, and collaborating with other partners to offer your customers a more comprehensive level of service and support.

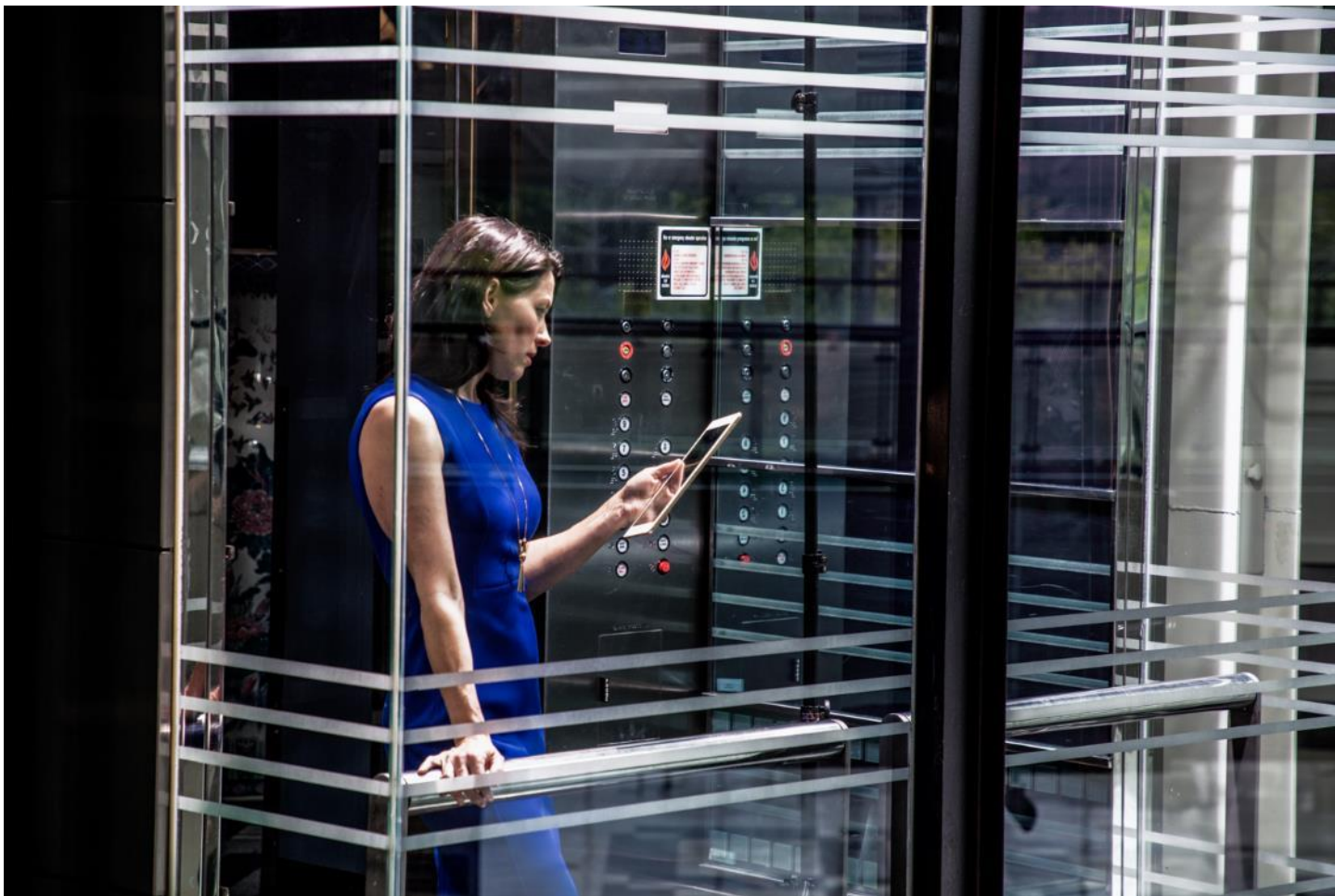
We will end by discussing how important it is to create advocates for your company. This includes turning a customer into a fan and collecting testimonials to create case studies that can be used in future marketing campaigns. Map your customer's experience and ask for feedback to ensure you are turning satisfied customers into delighted customers who cannot wait to tell your story!

Use the strategies we provide in this section and in the [Optimize and Grow guide](#) to optimize and grow your practice.

## Top 5 things to do

Learn from your customers and experience to optimize your practice and expand to new markets through strategic partnerships. These are the top 5 things you should do to optimize and grow your practice.

- Gather feedback from your customers
- Nurture existing customers
- Turn customers into advocates
- Generate referrals with marketing
- Nurture strategic partnerships



## Continuous Delivery

Practice Continuous Delivery (of New Features).

Continuous Delivery (CD) is a great option for SaaS projects that require multiple and frequent contributions to be integrated. [Azure DevOps Projects](#) provides support to build any Azure application, on any Azure service, with automatic full CI/CD pipeline integration. CD in Visual Studio Team Services simplifies setting up a robust deployment pipeline for your application to publish the most recent updates to Azure App Service. The pipeline can be configured to build, runs tests, and deploy to a staging slot and then to production. VSTS also includes tight integration with other DevOps tools, such as Jenkins, to provide similar capabilities to teams running those tools.

As product improvements are made to SaaS applications based on customer feedback, data collection, or new product or feature integration, CD provides a powerful and easy way to quickly and seamlessly integrate those changes into your production environment. Using modern DevOps tools, and Azure functionality, it is possible to deploy to production without experiencing any downtime for application users.

It is also possible to use the CD process to conduct A/B testing with select groups of users, to test out new functionality, and act on user feedback before deploying the changes to all users.

# Guide: Optimize and Grow

Leverage the Microsoft resources available in the [Optimize and Grow guide](#), for details on building customer lifetime value, executing nurture marketing efforts, optimizing and growing from feedback, refining your customer value proposition, growing partnerships, and measuring results.



# SaaS ISV Playbook Summary

Thank you for taking the time to review this playbook. We hope you have gained new insight on building a SaaS practice, and how to successfully grow your practice by taking advantage of unique offerings from Microsoft, engaging with your customers, and forming strategic partnerships.

Our goal, when creating this playbook, was to organize resources and provide insight that you can use to quickly accelerate or optimize your Azure focused practice. To this end, we laid out the practice's opportunity, then provided relevant information on business strategies and technical topics to capitalize on the opportunity, within five sections that you can review in order, or individually at any time.

In the first section, **Define Your Strategy**, we helped you define the strategy upon which your practice will be built. The key actions we prompted you to take are: identify your unique value proposition, define and price your offer, build your business plan, leverage the Microsoft Partner Network, and plan your support options.

In the second section, **Hire & Train**, we focused on the importance of hiring the right team, and then providing appropriate and ongoing training and certifications.

In the third section, **Operationalize**, we suggested you put your plan into action. Leverage your internal use benefits to get your Microsoft licenses and subscriptions, create your key contracts, setup your support process, setup your social offerings and organize your engagement process into checklists.



The fourth section, **Go to Market & Close Deals**, emphasized getting your practice off the ground by defining your sales process, building materials to support sales and marketing, finding new customers, and then nurturing and investing in them to build lasting relationships. We also provided you tells to help you in the sales process with the pitch and negotiation.

The final section, **Optimize & Grow your Practice**, stressed the importance of learning from your customers and your experience in providing solutions to them to optimize your practice and expand to new vertical markets through strategic partnerships. The top five actions we provided for you in this section were: Gather feedback from your customers, learn from your project successes and failures, create case studies and a marketing plan to expand into new vertical markets, maximize your efficiency and profit to fuel growth, and establish and nurture strategic partnerships.

## FEEDBACK

Share feedback on how we can improve this and other playbooks by emailing [playbookfeedback@microsoft.com](mailto:playbookfeedback@microsoft.com).