

MICROSOFT AZURE

G-CLOUD 15 – SERVICE DEFINITION



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Introduction

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1. Introduction

1.1 Service Definition summary

This Service Definition outlines Microsoft Azure offered by Vodafone. It's organised to provide an overview of the service including some architectural details of how Vodafone has constructed our offering, details on how we provide you support and a description on how the service is billed.

1.2 What is Microsoft Azure Public Cloud from Vodafone?

Microsoft Azure offered by Vodafone brings you the breadth and depth of the Azure portfolio, a leading provider of Public Cloud services globally.

Microsoft Azure is an ever-expanding set of cloud services to help your organisation meet your business challenges. It allows you to build, manage and deploy applications on a global basis.

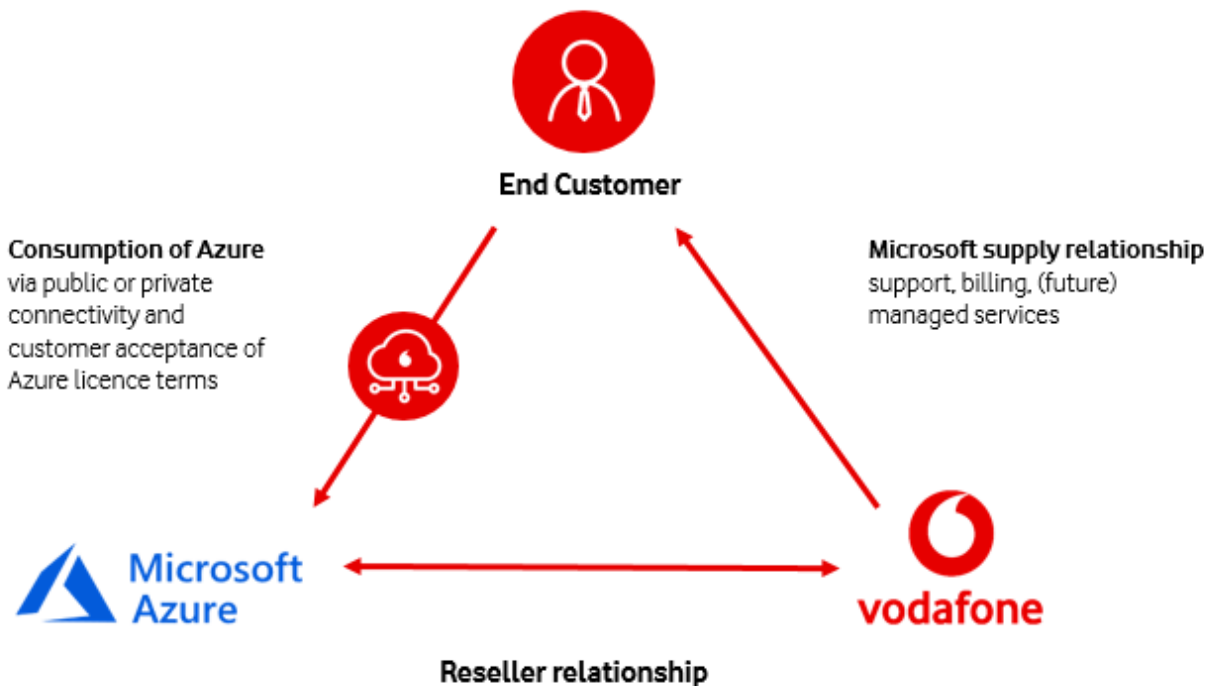
Azure provides a broad set of infrastructure services, such as computing power, storage options, networking and databases, delivered as a utility: on-demand, available in seconds, with pay-as-you-go pricing.

1.3 How does it work?

Vodafone is a member of the Microsoft [Cloud Solution Provider Program](#) (CSP Program) and has been reselling Microsoft Cloud services since 2010 with the introduction of the predecessor to Office 365 (known as BPOS – Business Productivity Online Suite) for sale to Vodafone customers in the UK, Germany and Spain.

As an authorised reseller, we are able to offer customers access to the Azure catalogue with Vodafone providing the supply relationship, billing, support and other associated services, including a portfolio of Managed Services.

At a high level, the relationship between the customer, Vodafone and Microsoft can be pictorially represented as follows:



1.4 Key benefits

The key customer benefits of Microsoft Azure from Vodafone include:

- Quick and secure hosting of your applications
- Flexibility to select all the services you need
- No long-term contracts or up-front commitments
- Scalable, reliable and secure global computing infrastructure
- Your application can scale up or down based on demand
- End-to-end approach to secure flexible infrastructure
- One bill, one provider
- Platform Support – single service support team for all your services
- Single Point of Contact
- Vodafone Cloud Connect for connectivity
- Vodafone Cloud Assessment to provide insights on cloud usage, cost and security
- Customer Propositions, broad portfolio of customer ready solutions to address common customer business problems.
- A locally available services offerings that span multiple clouds, coupled with expert knowledge that helps to adopt, understand and bring cloud to the next level by lowering the risk and complexity of operating in the cloud
- Combine with other Vodafone services – Managed Hosting, Private Cloud, Co-location



Product description

2

2. Product description

2.1 Overview

(a) As previously mentioned, Vodafone is member of the Microsoft [Cloud Solution Provider Program](https://www.microsoft.com/licensing/docs/customeragreement) (CSP Program). As an authorised reseller we are able to offer customers access to the Azure catalogue with Vodafone providing the supply relationship, billing, support and other associated services. Customers will however need to accept the Microsoft Cloud Agreement applicable to their geographic location. The Cloud Agreement templates can be found here:

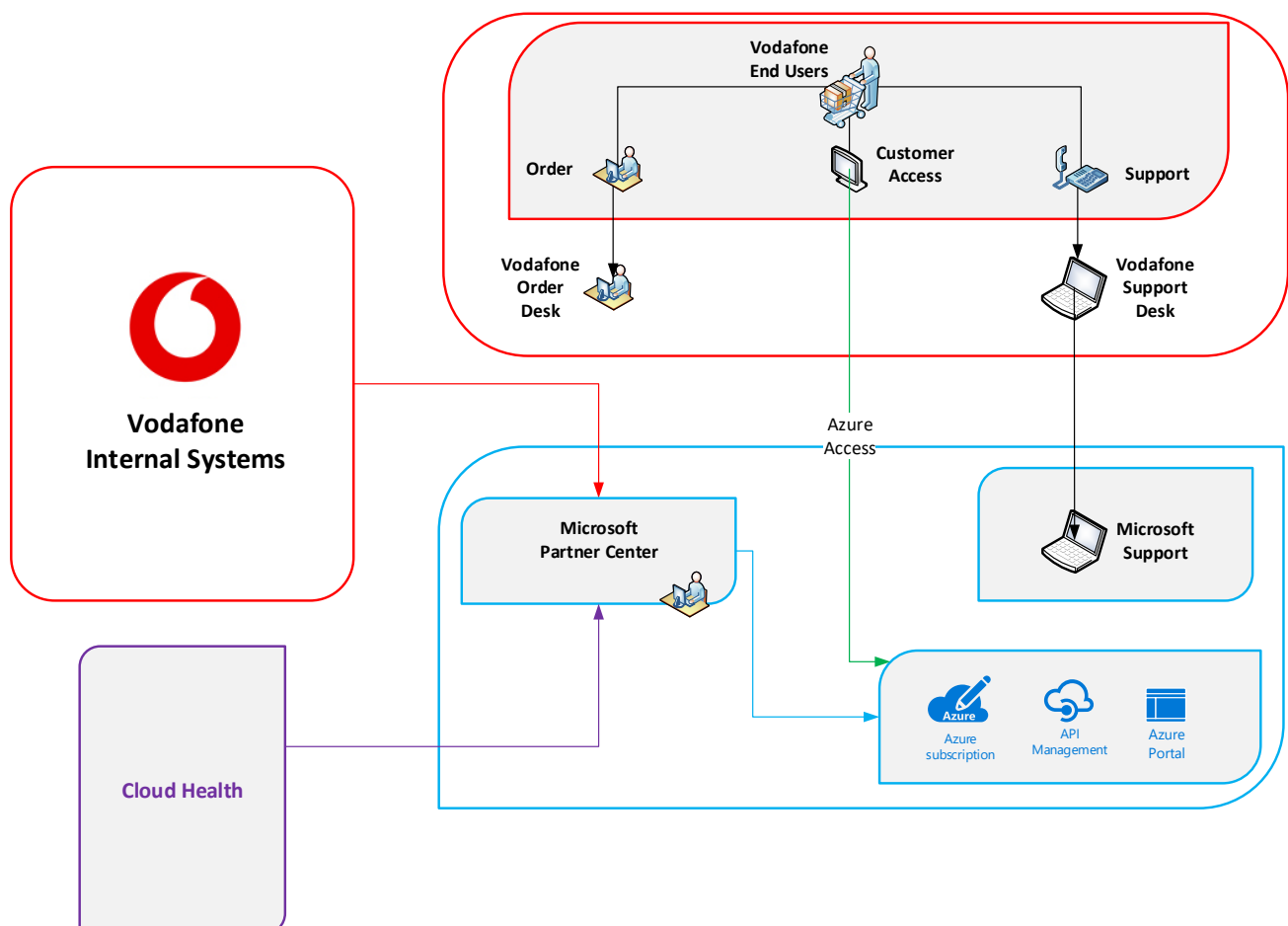
<https://www.microsoft.com/licensing/docs/customeragreement>

As an authorised reseller we are able to offer customers access to the Azure catalogue with Vodafone providing the supply relationship, billing, support and other associated services.

Microsoft Azure offered by Vodafone can be broken down into three primary categories as follows:

- **Azure Platform Services:** access to the Azure catalogue
- **Azure Platform Support:** Vodafone provided support services on 24x7 basis, broadly equivalent to Azure Professional Direct support.
- **Vodafone Cloud Assessment:** detailed usage, spend and security analysis provided monthly or optionally the ability to use a state of the art platform to deep dive into the details in real time.

An overview of the Vodafone service delivery model is provided below.



2.2 Azure Product Catalogue available to Vodafone customers

Microsoft Azure is an ever-expanding set of cloud services to help your organisation meet your business challenges. It's the freedom to build, manage and deploy applications on a massive, global network using your favourite tools and frameworks.

Further information can be found here: <https://azure.microsoft.com/en-gb/overview/what-is-azure/>

The Azure catalogue is extensive and evolving all the time, this section provides a summary of the primary services available at the point this Service Definition was published but should not be regarded as exhaustive.

The Azure catalogue as presented on <https://azure.microsoft.com/en-us/services/> is summarised by category below. Please follow the link to see the latest service details:

COMPUTE					
 Virtual Machines Get full control over a server in the cloud and maintain it as your business requires	 Cloud Services Managed virtual machines with stateless web and worker roles	 Service Fabric Build highly scalable, reliable stateless and stateful applications composed of microservices	 Batch For running large scale parallel and high performance computing (HPC) applications	 Scheduler Create jobs that run reliably on simple or complex schedules to invoke any type of service	 Remote App Access Windows apps from any device and any location that run within Remote App VMs
WEB & MOBILE					
 Web Apps Managed web platform, get started for free and scale as you go using many tools/ languages	 Mobile Apps Add backend capabilities to mobile apps, with native client support on most device platforms	 API Apps Create and surface your app logic as APIs for other services and apps to consume	 Logic Apps Build/execute business processes by linking your own custom APIs with an API Gallery/Marketplace	 API Management Publish and manage APIs to developers, partners and employees securely and at scale	 Notification Hubs Deliver millions of cross platform push notifications from any application backend, anywhere
STORAGE & BACKUP				DATA	
 Storage Blobs & Files Store binary application data and web content – store for dedicated and shared virtual disks for VM's	 Backup Managed service that handles backup/restore of Windows Server machines/backup agent	 Import / Export For massive data transfer – ship encrypted disks to move data in/out of blob storage	 Site Recovery Coordinate replication and recovery of System Center private clouds	 StorSimple Automated, policy driven solution to extend on-premises primary storage for backup and disaster recovery	 SQL Database Managed relational database service with high availability and selectable performance levels
HYBRID INTEGRATION			MANAGEMENT		
 Storage Queues Simple message queue for application de-coupling architecture for scale out	 BizTalk Services Build EDI and Enterprise App Integration (EAI) solutions in the cloud	 Hybrid Connections Connect apps in Azure with on-premises resources without a VPN or dedicated line	 Service Bus Messaging capabilities (pub/sub, queues) and on-premises to cloud connectivity solution	 Automation Run durable PowerShell scripts to automate frequent, long running, complex Azure tasks	 Portal Web based experience to provision, control and monitor all Azure services



2.3 Azure Services Catalogue

Offering	Description	Further Details
AI and Machine Learning	With the flexible Azure platform and a wide portfolio of AI productivity tools, you can build the next generation of smart applications where your data lives, in the intelligent cloud, on-premises and on the intelligent edge. Achieve more with the comprehensive set of flexible and trusted AI services – from pre-built APIs, such as Cognitive Services and Conversational AI with Bot tools, to building custom models with Azure Machine Learning for any scenario. The Azure AI platform also features enterprise-grade AI infrastructure that runs AI workloads anywhere at scale. Modern AI tools designed for developers and data scientists help you create AI solutions easily, with maximum productivity.	https://azure.microsoft.com/en-gb/overview/ai-platform/
Analytics	A comprehensive set of solutions that turn your data into actionable insights. Getting the most value from big data calls for analytics solutions that go beyond the capabilities of traditional data-processing applications. Azure offers a comprehensive set of big-data solutions that help you gather, store, process, analyse and visualise data of any variety, volume or velocity, so you can discover new opportunities and take quick action.	https://azure.microsoft.com/en-gb/product-categories/analytics/
Compute	Access cloud compute capacity, virtualisation and scale on demand – and only pay for the resources you use	https://azure.microsoft.com/en-gb/product-categories/compute/

	Whether you're building new applications or deploying existing ones, Azure compute provides the infrastructure you need to run your apps. Tap in to compute capacity in the cloud and scale on demand. Containerize your applications, deploy Windows and Linux virtual machines (VMs), and take advantage of flexible options for migrating VMs to Azure. With comprehensive support for hybrid environments, deploy how and where you want to. Azure compute also includes a fully-fledged identity solution, so you gain managed end-point protection and Active Directory support that helps secure access to on-premises and cloud apps. Deploy great apps and save with pay-as-you-go pricing, and the Azure Hybrid Benefit. We can also provide access to Reserved Instances for even more flexibility.	
Containers	Choose the cloud platform designed for your container needs. Develop, update and manage your containerised applications faster with end-to-end developer and CI/CD tools. Store images in Docker Hub or Azure Container Registry and deploy to your preferred targets. Deploy containers using widely adopted orchestrator, or choose a fully managed container platform.	https://azure.microsoft.com/en-gb/overview/containers/
Databases	Fully managed intelligent database services Wherever your data is, Microsoft Azure will help you unlock its potential. Support rapid growth and save more time for innovation with a portfolio of secure, enterprise-grade, fully managed database services that support open-source database engines. Azure database services are fully managed, freeing up valuable time you'd otherwise spend managing your database so you can focus on new ways to delight your users and unlock opportunities. Enterprise-grade performance with built-in high availability means you can scale quickly and reach global distribution without worrying about costly downtime. And developers can take advantage of industry-leading innovations such as built-in security with automatic monitoring and threat detection, automatic tuning for improved performance, and turnkey global distribution. On top of all of this, your investment is protected by financially backed SLAs. Whatever you build, we'll help you get it to market quickly, distribute it widely, and manage it easily and confidently.	https://azure.microsoft.com/en-gb/product-categories/databases/
Developer Tools	Build, debug, deploy and manage cloud applications – using any platform or language Microsoft offers a comprehensive set of development tools for any developer – using any platform or language – to deliver cloud applications. Code with the language of your	https://azure.microsoft.com/en-gb/product-categories/developer-tools/

Microsoft Azure offered by Vodafone – Service Definition

	choice using a range of SDKs and take advantage of fully featured integrated development environments (IDEs) and editors with advanced debugging capabilities and built-in Azure support.	
DevOps	Deliver innovation faster with simple, reliable tools for continuous delivery Whether your DevOps implementation is just beginning or you're looking to integrate with your existing toolchains and processes, building an end-to-end continuous delivery pipeline is faster and more secure with Azure DevOps technologies. Spend less time maintaining your toolset and more time focusing on customer value. Building, releasing, testing and monitoring cloud and mobile applications is simple and reliable with DevOps technologies that enable you to continuously deliver innovation using any toolchain.	https://azure.microsoft.com/en-gb/product-categories/devops/
Identity	Identity and access management (IAM) Secure access to your resources with Azure identity and access management solutions. Protect your applications and data at the front gate with Azure identity and access management solutions. Defend against malicious login attempts and safeguard credentials with risk-based access controls, identity protection tools and strong authentication options – without disrupting productivity.	https://azure.microsoft.com/en-gb/product-categories/identity/
Integration	Seamlessly integrate apps, data and processes for your enterprise. Build new, integrated solutions that connect apps and services on premises and in the cloud. Bring your business workflows together so they're consistent and scalable. Expose your APIs for developers and create opportunities for new business models.	https://azure.microsoft.com/en-gb/product-categories/integration/
Internet of Things	Drive your digital transformation by gaining insights from your connected devices. Turn those insights into action with powerful applications built on the industry-leading platform for IoT development. From manufacturing to transportation to retail, start fuelling new revenue and business opportunities with IoT solutions designed for industry needs.	https://azure.microsoft.com/en-gb/overview/iot/
Management and Governance	Get built-in Azure management and governance tools that help your system administrators and developers keep your resources secure and compliant, both on-premises and in the cloud. Monitor infrastructure and applications, provision and configure resources, update apps, analyse threats, back up resources, build disaster recovery, apply policies, automate processes and even manage costs – throughout your IT lifecycle.	https://azure.microsoft.com/en-gb/product-categories/management-tools/
Azure Marketplace	The Azure Marketplace is the Microsoft destination for software that has been certified and optimized to run on Azure.	https://azuremarketplace.microsoft.com

Microsoft Azure offered by Vodafone – Service Definition

	Find solutions you want, from open source container platforms to threat detection to blockchain. Find apps and services that meet your needs, from open source container platforms to threat detection to blockchain. Provision end-to-end solutions quickly and reliably.	
Media	A suite of media centre services such as encoding, streaming, content distribution and protection and media analytics.	https://azure.microsoft.com/en-gb/services/ (go to Media) https://azure.microsoft.com/en-gb/services/media-services/
Migration	Azure can help you with cost-effective, flexible cloud migration paths. Get all the tools and resources you need to migrate your apps, data and infrastructure at your own pace, with confidence. Tools to assist with migration from on premise to Cloud. Assessment, Migrations, Optimising, Secure and Manage	https://azure.microsoft.com/en-gb/migration/
Mobile	A suite of services and tools to enable engaging mobile experiences for you and your customers across iOS, Android and other platforms,	https://azure.microsoft.com/en-gb/services/ (go to Mobile) https://azure.microsoft.com/en-gb/services/app-service/
Networking	Connect cloud and on-premises infrastructure and services, to provide your customers and users the best possible experience Support your hybrid or all-in cloud strategy using networking services built on one of the largest fibre network backbones. Get the most from your Azure or open-source solutions and workloads with highly reliable performance and secure connectivity.	https://azure.microsoft.com/en-gb/product-categories/networking/
Security	Strengthen the security of your cloud workloads with built-in services Protect data, apps and infrastructure quickly with built-in security services in Azure that include unparalleled security intelligence to help identify rapidly evolving threats early – so you can respond quickly. Implement a layered, defence-in-depth strategy across identity, data, hosts and networks. Unify security management and enable advanced threat protection across hybrid cloud environments.	https://azure.microsoft.com/en-gb/product-categories/security/
Storage	Massively scalable, secure cloud storage for your data, apps and workloads Get secure cloud storage that protects your data infrastructure while you build apps and create better services for your customers. Integrate your on-premises data with your cloud data to form crucial insights. Scale globally and run your most demanding workloads while meeting compliance and privacy requirements.	https://azure.microsoft.com/en-gb/product-categories/storage/
Web	Build powerful, intelligent web applications Quickly build and deploy your web applications using a fully managed platform, without the burden of managing infrastructure.	https://azure.microsoft.com/en-gb/product-categories/web/

2.4 Azure capabilities not currently available to Vodafone customers

This section details a number of additional minor limitations on the Microsoft Azure offered by Vodafone service that mean some Azure capabilities are unfortunately not available to Vodafone customers at this time. A future release of Microsoft Azure offered by Vodafone may further refine this position.

2.4.1 Vodafone limitations

Capabilities not currently available from Vodafone are detailed in the table below:

Offering	Description	Further Details
Bring Your Own Azure Account (BYO)	Vodafone does not support Azure services where the customer retains the supply relationship with Azure directly. Azure accounts can be migrated to Vodafone from other CSP resellers in order for Vodafone to provide billing and support services.	N/A

2.4.2 Microsoft CSP Channel Reseller limitations

As a member of the Microsoft [Cloud Solution Provider Program](https://docs.microsoft.com/en-us/azure/cloud-solution-provider/overview/azure-csp-available-services) (CSP Program) we are able to offer customers access to the majority of the Azure catalogue as per the listing here: <https://docs.microsoft.com/en-us/azure/cloud-solution-provider/overview/azure-csp-available-services>.

Please note: you should take careful note of the small number of Azure services not available to CSP customers in the Comments section of this [web page](#):

Filter by title

Azure CSP Documentation

- Overview
 - Azure CSP overview
 - Available Azure services**
 - Partner Center overview
 - Partner shared services
 - Azure CSP management options
- > Manage Azure CSP customers
- > Customer support in Azure CSP
- > Azure CSP billing
- > Integration with Azure CSP
- > Migration to Azure CSP

Azure Monitor	X
Azure Managed Applications	X
Azure Migrate	X
Management Groups	X

Comments

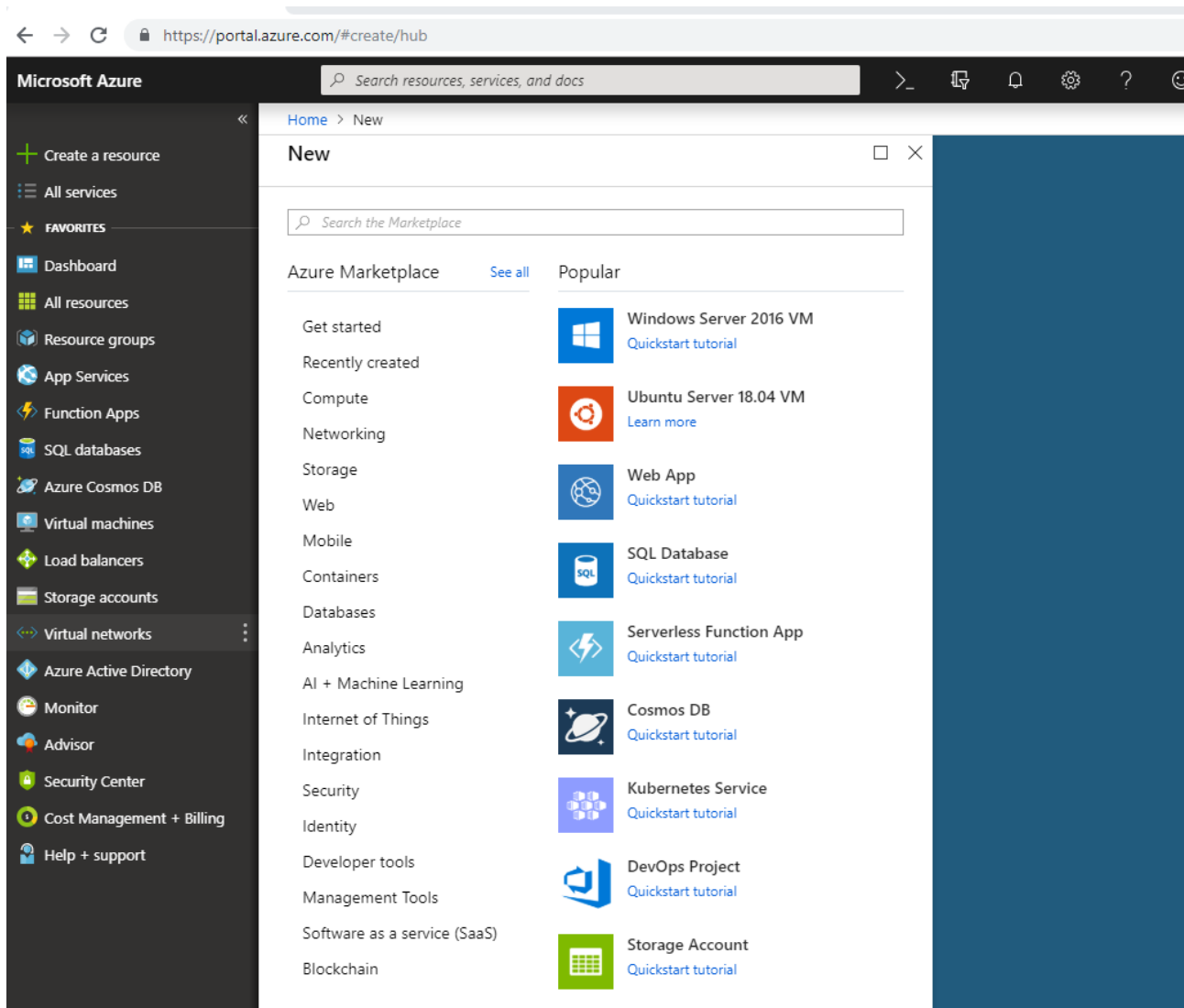
- Some Azure network services are not region-specific. They can be deployed inside a global Azure subscription and used for national cloud purposes. These services include:
 - Azure Content Delivery Network
 - Azure DNS
 - Azure Traffic Manager
- Non-Azure Resource Manager services** and the **Azure classic portal**. Services that **are not available in Azure CSP include:**
 - VMs, virtual networks, and storage accounts that were created by using the classic deployment model.
 - Azure Cloud Services:** Consider switching to Azure Resource Manager-based VMs, App Service, and virtual machine scale sets.
 - Mobile Services:** Use [Mobile Apps feature of Azure App Service](#) instead.

Microsoft Azure offered by Vodafone – Service Definition

Please contact your Vodafone account manager if clarification on the availability of a particular Azure service is required.

2.5 Microsoft Azure Portal

Microsoft provide customers with a self-service console which can be found here: <https://portal.azure.com/>



Within this console authorised administrators, developers or business users can request new IT services as well as manage specific cloud and IT resources, while ensuring compliance with business policies. Requests for any IT service, including infrastructure, applications, desktops and many others, are processed through a common service catalogue to provide a consistent user experience.

A user guide for the Azure portal can be found here: <https://docs.microsoft.com/en-us/azure/>

2.6 Azure as an Unmanaged Service

The initial release of Azure Public Cloud from Vodafone will be as **an unmanaged service**. The Vodafone description of an un-managed Azure services is as follows:

- Azure resources consumed by the customers will not be designed, architected, implemented and/or managed by Vodafone. The customer is expected to self-serve using existing Azure tools and methods such as the Azure Portal, APIs etc.
- Operating system support (Microsoft Windows, RedHat Linux etc) is not provided for virtual machines.
- No Operational Support System (OSS) tooling is deployed (monitoring, backup, patch management and anti-malware).

The customer is responsible for managing resources created within the Azure environment. Azure provides a broad set of services that help IT administrators, systems administrators, and developers more easily manage and monitor their hybrid infrastructure resources. Using these fully-managed services, you can automatically provision, configure, and manage your Azure or on-premises resources at scale. You can also monitor infrastructure logs and metrics using real-time dashboards and alarms.

Optionally Vodafone can provide a range of Professional and Managed Services as outlined in section 10 of this document.

2.7 Azure Regions and Availability Zones

Azure has more global regions than any other cloud provider – offering the scale needed to bring apps closer to users around the world, preserving data residency and offering comprehensive compliance and resiliency options for customers.

An **Azure Region** is a set of data centres deployed within a latency-defined perimeter and connected through a dedicated regional low-latency network.

With more global regions than any other cloud provider, Azure gives customers the flexibility to deploy apps where they need to. Azure is generally available in 42 regions around the world, with plans announced for 12 additional regions.

Availability Zones are physically separate locations within an Azure region. Each Availability Zone is made up of one or more data centres equipped with independent power, cooling and networking.

Availability Zones allow customers to run mission-critical apps with high availability and low-latency replication.

See <https://azure.microsoft.com/en-gb/global-infrastructure/regions/> for more information.



2.8 Vodafone Cloud Assessment

Our customers and market research¹ both highlight a number of challenges for enterprises that operate in a multi cloud world. Vodafone Cloud Assessment addresses a number of repeated themes that are cited as challenges, most notably:

1. Security
2. Managing Costs
3. Control / Governance

Vodafone Cloud Assessment will give you a 360-degree view of your Azure usage to help better insight, analyse your spend and drive positive business outcomes:

- | | |
|--------------------|--|
| Finance | <ul style="list-style-type: none"> • Optimize cost management and budgeting • Eliminate wasted spend • Drive accountability • Break down costs and allocate to business groups |
| IT Ops | <ul style="list-style-type: none"> • Stay on budget & run efficiently • Focus on innovating (vs. fire drills and maintenance) • Maintain high availability, security, scalability |
| Engineering | <ul style="list-style-type: none"> • Combat lack of visibility, insight into usage analysis • Helps to develop / build / scale at speed • Easier capacity planning • Justify investments and spend |

¹ Source: <https://assets.rightscale.com/uploads/pdfs/RightScale-2018-State-of-the-Cloud-Report.pdf>

Vodafone Cloud Assessment is delivered with the help of CloudHealth. CloudHealth is a platform which provides extremely granular reporting across your entire Cloud estate and it can also provide actionable recommendations.

2.8.1 Vodafone Cloud Assessment

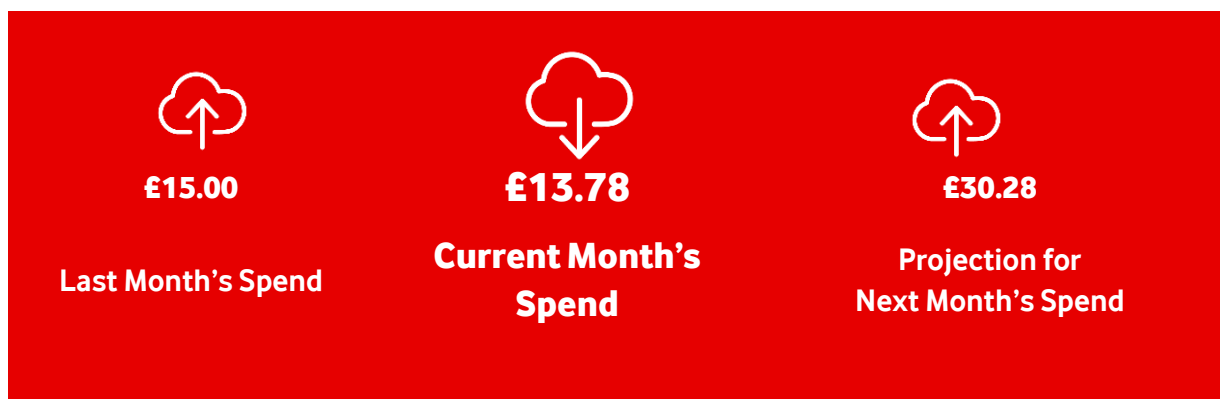
Vodafone Cloud Assessment is a chargeable element of the core Azure offering from Vodafone and will address the cloud adoption challenges for enterprise customers: costs management, security, governance, rightsizing.

Vodafone will provide you the following reports to you via email on a monthly basis:

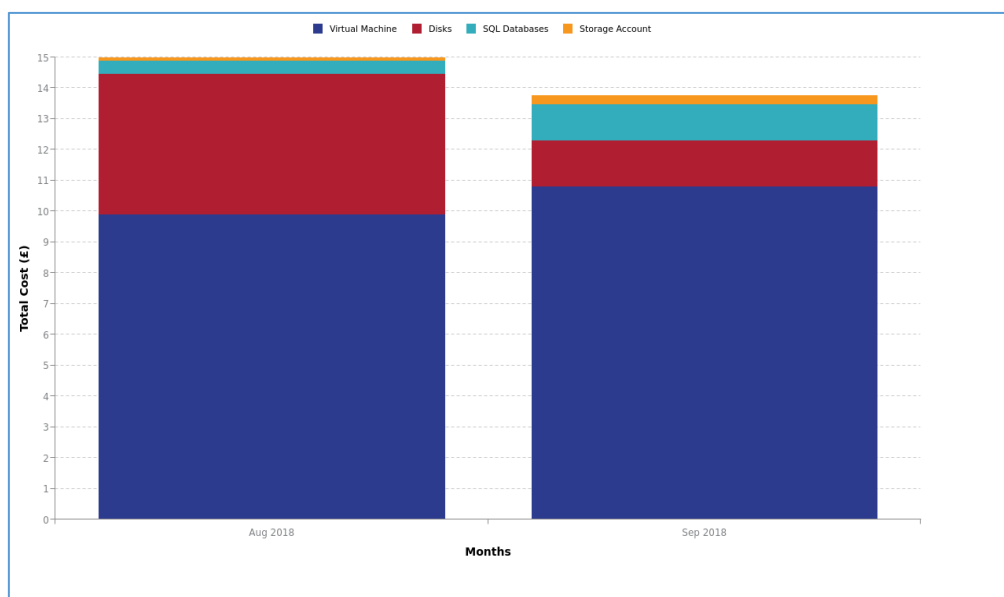
- Saving opportunities report
- Security risk exposure report
- Cloud governance report
- Instance right sizing report
- Reserved instance potential savings report

A brief preview of some of the reports contained within Vodafone Cloud Assessment follows. A full mock-up of the full report is available separately.

Cost Summary:



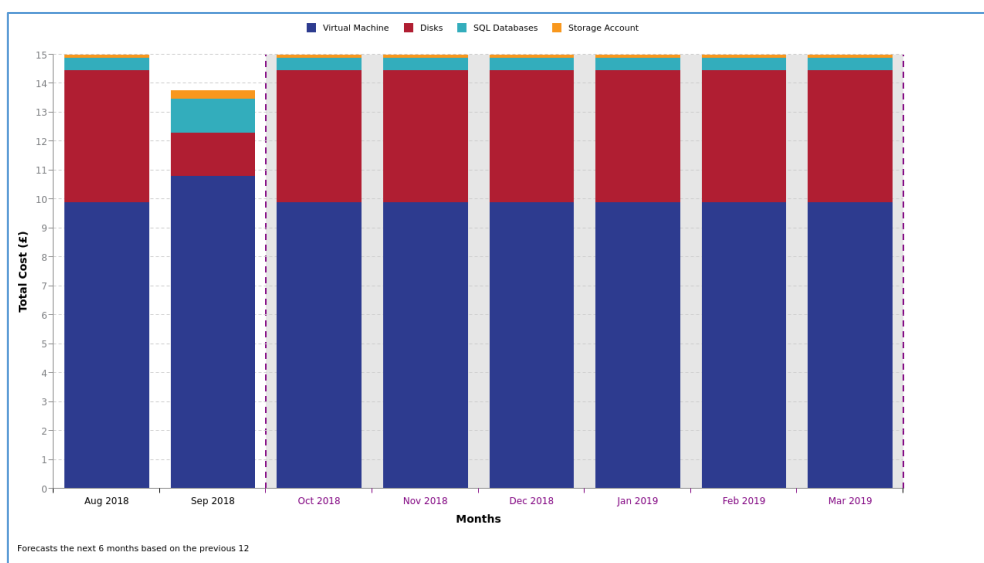
Cost History by Month and Service Items



The graph provides a monthly historical trend of spending by type of Microsoft Azure service and the table below provides a more in-depth breakdown:

SUBTOTAL	SERVICE CATEGORY	2018-08
DIRECT CHARGES (4)		15.00
	Disks	4.55
	Virtual Machine	9.91
	SQL Databases	0.43
	Storage Account	0.11
	Total	15.00

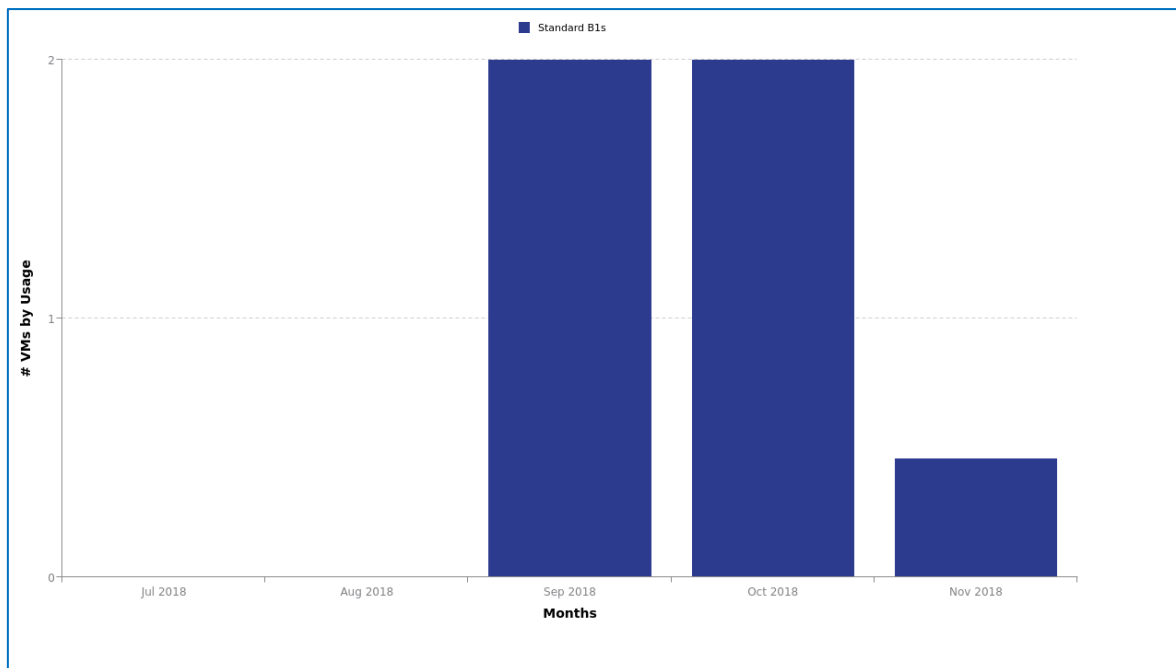
Projected Costs For The Next 6 Months



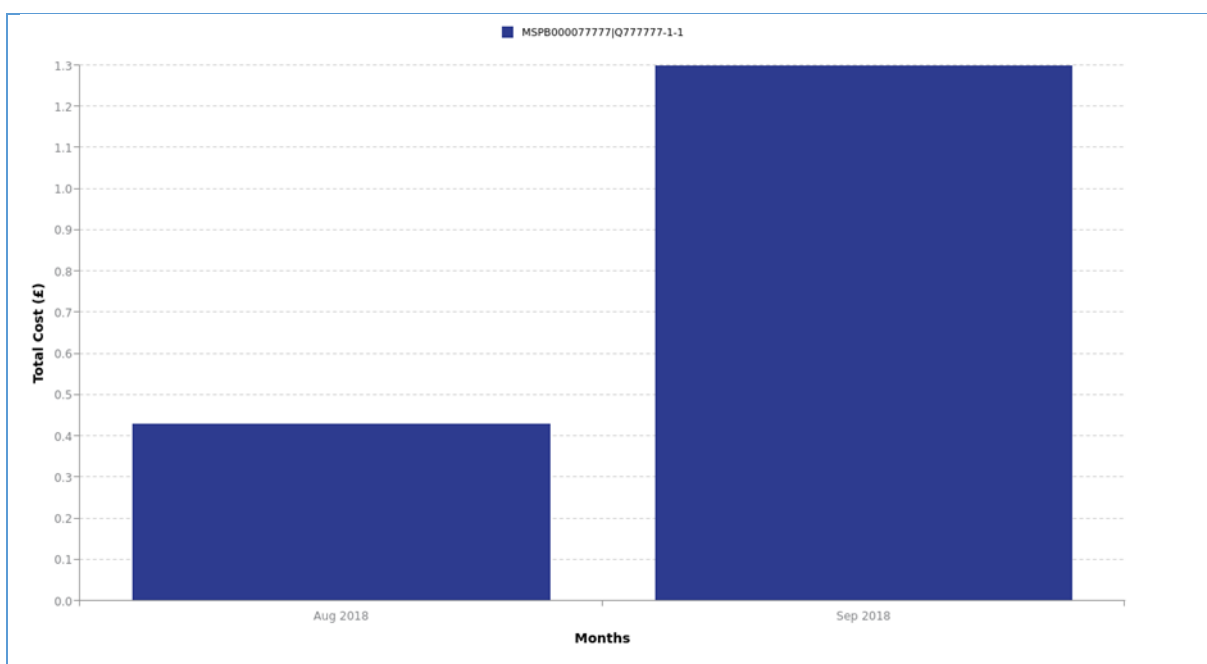
The shaded areas of the graph indicate the projected costs for the next six months and the table below provides a more in-depth breakdown:

SUBTOTAL	SERVICE CATEGORY	2018-10	2018-11	2018-12	2019-01	2019-02	2019-03
DIRECT CHARGES (4)		15.00	15.00	15.00	15.00	15.00	15.00
	Disks	4.55	4.55	4.55	4.55	4.55	4.55
	Virtual Machine	9.91	9.91	9.91	9.91	9.91	9.91
	SQL Databases	0.43	0.43	0.43	0.43	0.43	0.43
	Storage Account	0.11	0.11	0.11	0.11	0.11	0.11
	Total	15.00	15.00	15.00	15.00	15.00	15.00

Virtual Machine Usage Summary



SQL Database Usage by Months and Subscription

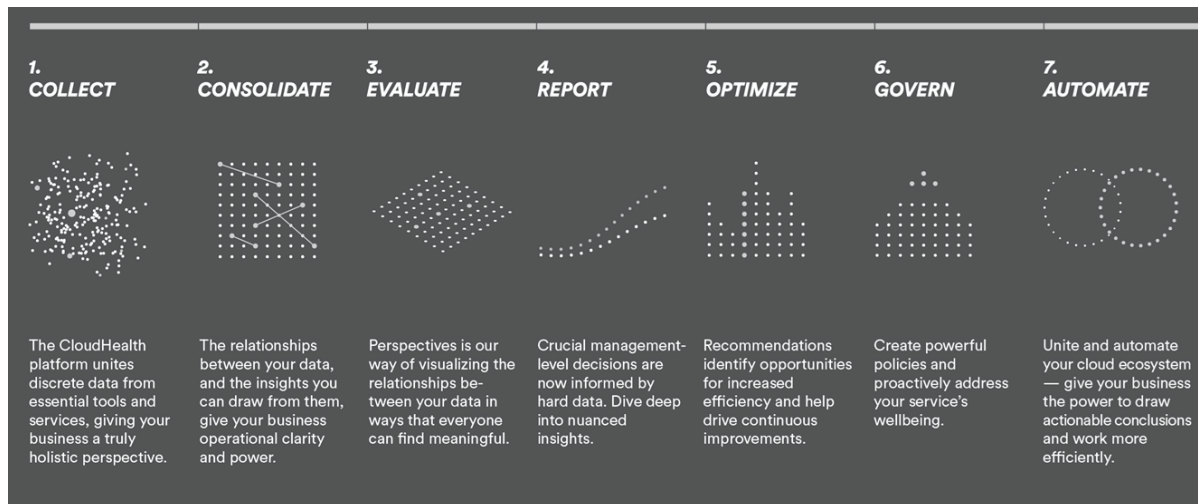


The table below provides a more in-depth breakdown of the last six months:

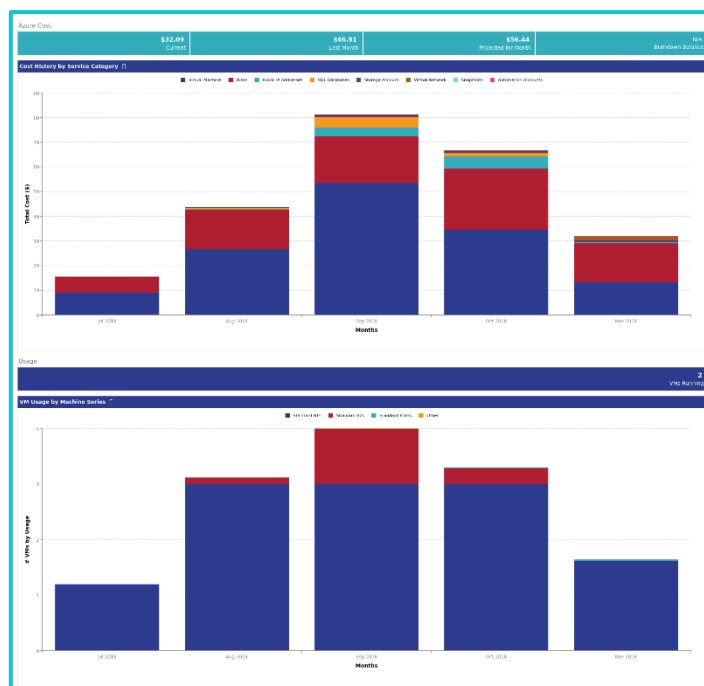
SUBSCRIPTION	2018-08	2018-09	TOTAL
MSPB00007777 Q777777-1-1	0.43	1.30	1.73
TOTAL	0.43	1.30	1.73

In addition to the monthly report, Vodafone will provide self-serve visibility through full access to the CloudHeath online platform which provides highly granular access to analyse and optimise your Azure usage.

It delivers you full control through a unique reporting capability, real time information, the ability to deep dive on cost and usage and a recommendations engine.



CloudHealth portal:





Product architecture

3

3. Product architecture

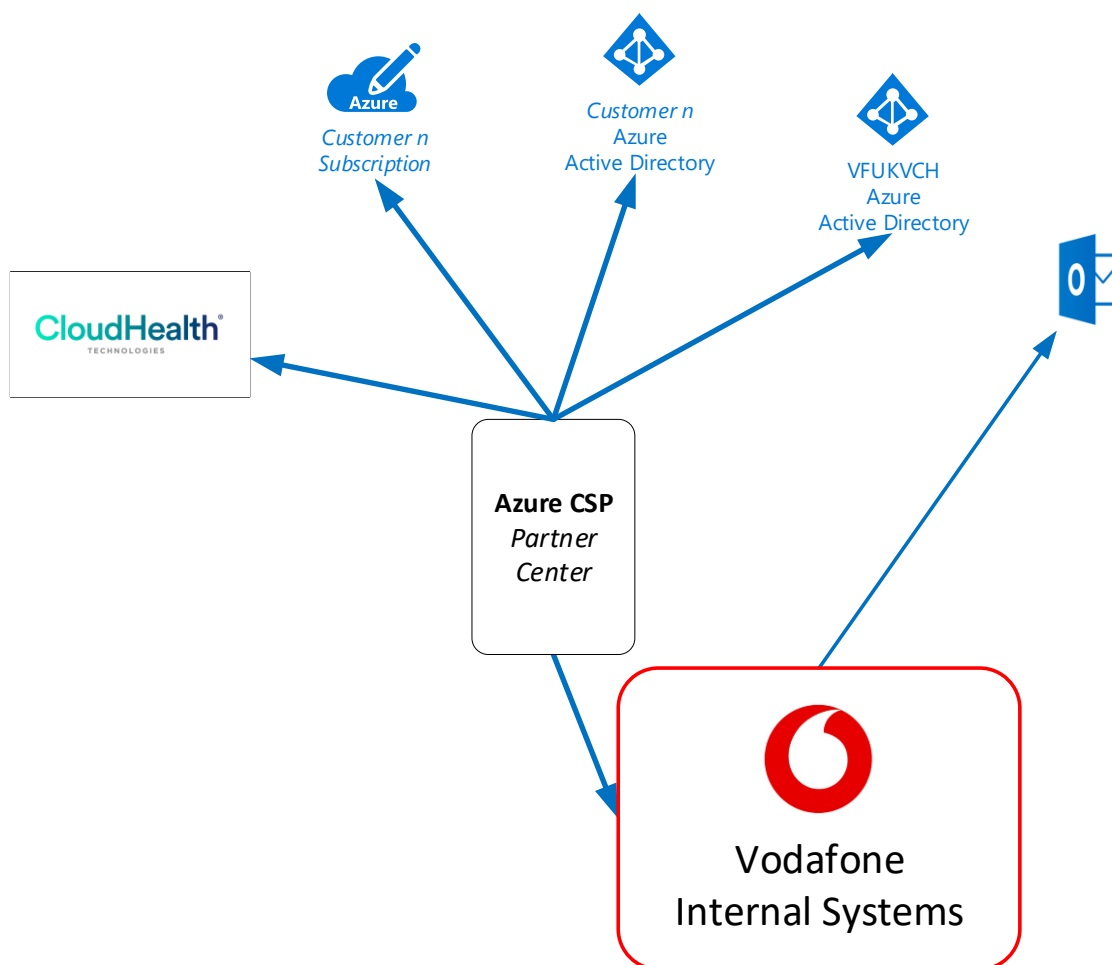
3.1 Overview

As a reseller, Vodafone is using a range of Microsoft Azure tools to manage the reseller account structure and services provided to our customers. These tools include Microsoft Partner Centre, Azure Active Directory, Microsoft Azure subscriptions.

The Microsoft Azure public cloud provides a self-service web portal (Azure Resource Manager also known as ARM) and application programming interfaces (Azure Resource Management REST API) for the provision and management of Azure services. Both the API and web portal are available over the public Internet to Vodafone and our customers. Please note that the Azure classic portal is not provided as part of this product.

3.2 Microsoft Partner Centre

The Microsoft Partner Centre provides Vodafone with the ability to provision customers and assign offerings such as Azure subscriptions to customers. The picture below details the interaction between the various systems which require direct and indirect to access to Partner centre.



Below is a summary of the services which Partner Centre provides (direct and in-direct):

1. Tenant administration (create, modify and delete).

2. Offer assignment (e.g. Azure Subscription).
3. Billing data in the form of a reconciliation files.
4. Usage data, which can be used to provide fraud detection events.
5. Azure service alerts, to provide information regarding the status of Microsoft Azure.
6. Customer global admin password reset.
7. Sandbox Partner Centre tenancy for testing and proof of concepts

Please note that the majority of Partner Centre features are also available through the Microsoft Partner Centre REST and Partner Centre Managed API.

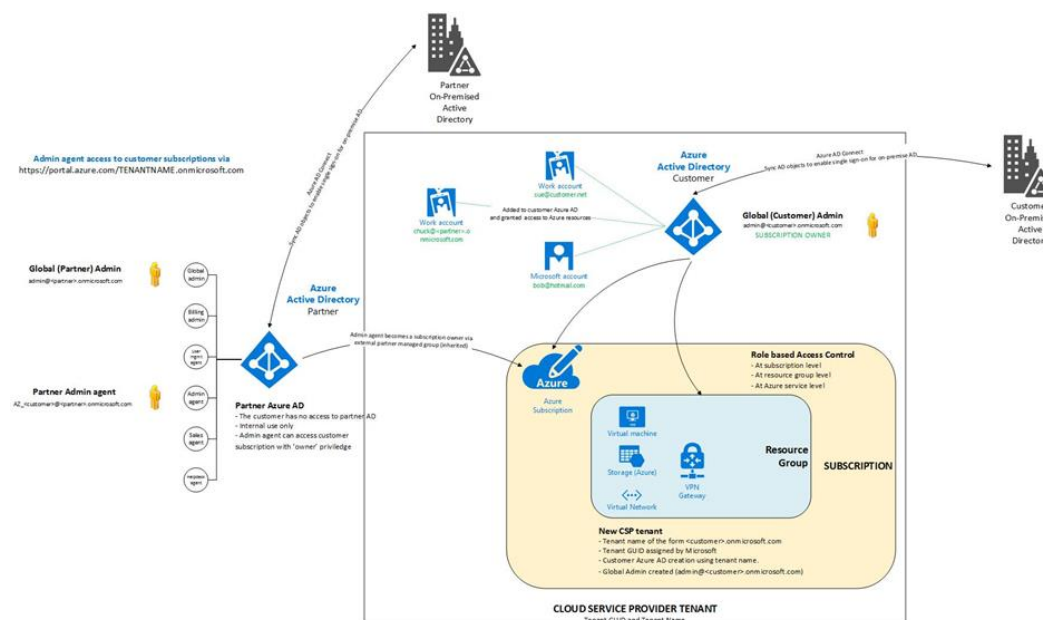
3.3 Azure Active Directory

The Azure Active Directory (Azure AD) is Microsoft's multi-tenant cloud based directory and identity management service. Azure AD can provide single sign-on into Microsoft Azure and SaaS applications such as Office 365.

Azure AD also includes a full suite of identity management capabilities including multi-factor authentication, device registration, self-service password management, self-service group management, privileged account management, role based access control, application usage monitoring, rich auditing and security monitoring and alerting.

When a new customer is created within Microsoft Partner Centre, an Azure AD instance is also created, this provides customers with an identity source. A customer may also choose to synchronise their on premises Active Directory domain within the Azure AD, allowing a customer to authenticate with their organisational accounts.

The diagram below, details the relationship between the customer and partner Azure AD's and an Azure subscription.



3.3.1 Vodafone Management AAD

Vodafone have a new Azure Active Directory provisioned for the Partner Portal which will not be linked with the Vodafone on premise AD or Azure AD.

The Azure Portal will be restricted to Vodafone Global Administrators only, Vodafone has implemented multiple conditional access elements and security controls to harden this environment.

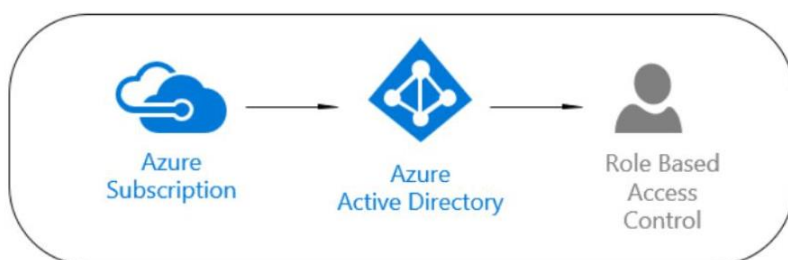
3.3.2 Customer AAD Access

By default, Vodafone customers have no access to their Azure subscription and the CSP Partner (Vodafone) must grant the customer with access to the directory. The suggested subscription permissions will be using AoBo (Admin on Behalf of).

Each Vodafone customer is provisioned each subscription with 1 Global Administrator which will be a separate account from the subscription owner. The customer is provisioned each subscription with 1 subscription owner which will be a separate account from the Azure AD Global administrator.

3.4 Microsoft Azure Subscriptions

The logical structure of a subscription and associated administration is shown below:



Each tenant is provided with a minimum of one Azure subscription, but may have multiple subscriptions. The subscription acts as a logical master container for all Azure resource groups. In Azure, you logically group related resources such as storage accounts, virtual networks, and virtual machines (VMs) to deploy, manage, and maintain them as a single entity. This approach makes it easier to deploy applications while keeping all the related resources together from a management perspective, or to grant others access to that group of resources.

Each Vodafone customer has full access to the Azure service catalogue and can provision, cease and modify services as they see fit.

3.5 Fraud Detection

Within a public cloud environment, the risk of fraud is increased should a set of privileged credentials become compromised. Therefore, Vodafone has developed specific tools and implemented a mechanism to flag a sudden potentially fraudulent increase in Azure usage within a customer account. Investigations will be carried out for every potentially fraudulent usage alert we detect; this will include contacting the customer to understand if usage levels are the result of genuine activity or unexpected. The customer may suspend their account or any End User's right to access or use any portion of the Services immediately. In case of suspension of the account, the customer has 90 days to reactivate the account or otherwise lose access.

Vodafone will not issue any credits or refunds in the case of suspended excess charge in lieu of fraudulent activity on the customer account.

3.6 Audit Logs

Vodafone has implemented a module in our cloud management toolset to store all Vodafone Sign-In and Audit logs for the purpose of Security Assurance.

A record of activity can be retained to provide documented logging in the event of security queries.

3.7 Daily/Weekly Cost Estimation

Vodafone has implemented a module in our cloud management toolset to minimise the risk of customer 'bill shock' which provides a customer with a view of their running total (cost) for the current billing period (updated at least every week) of their total Azure subscription usage.





Account set-up

4

4. Account set-up

4.1 The Vodafone Proposal for Microsoft Azure services

The Vodafone proposal for Microsoft Azure services will be based on our assessment of your needs and will encompass the following price estimates and possibly more for any other related Vodafone services:

Product	Charge Type	Structure
Azure Platform Services	Monthly Usage Charge	An estimate of the Azure usage charges for compute, storage, network and other Azure resources you have indicated that you require.
Azure Platform Support	Monthly Recurring Charge (flat fee)	Direct support service from Vodafone created on the knowledge and expertise of Microsoft aligned to their Professional Direct package.
Vodafone Cloud Assessment	Monthly usage charge	3% of the total of Azure Platform Services charges. Optional.

4.2 Usage Estimate

Microsoft Azure offer a pay-as-you go approach for pricing without the need for complex licensing. As part of our sales process our Sales Specialist will gauge your needs and provide you with a proposal which contains an estimate of your likely costs by using the [Azure Pricing Calculator](#) shown below. This is purely an estimate and your actual charges will depend upon the services you actually provision using the Azure Management Console.

Vodafone prices for Azure Platform Services will mirror the prices you would get if you were a direct Microsoft Azure customer. You'll be invoiced in your local currency.

4.3 Minimum Commit

No minimum commit terms apply to your usage of Azure services directly unless they form part of the Azure offering. However, if you are purchasing other services from Vodafone minimum commit terms may well apply as part of our overall proposal to you. Our proposal will include the charges for any associated services such as Vodafone Cloud Connect, Vodafone Private Cloud etc.

4.4 Credentials

We will aim to provide you with credentials for your Azure account within 2 working days of you accepting our proposal and providing a signed order to us. You can use these to directly log-on to the Azure portal here: <https://portal.azure.com>

4.5 Azure Terms and Conditions

As mentioned previously, Microsoft requires you to adhere to the Microsoft Customer Agreement directly, these govern the use of the Azure services and can be found here:

<https://www.microsoft.com/licensing/docs/customeragreement>



Customer support

5. Customer support

5.1 Support

Vodafone will provide you with support for Microsoft Azure. Our Hosting Solutions Support team provides a 24x365 Service Desk and Incident Management team. Support will be provided in English. The Vodafone operational model for support is ITIL based.

If you think there is a fault or problem with your public cloud environment, you are able to raise a fault via your usual Vodafone support route.

Vodafone teams may contact the customer to work on the resolution of the fault. Customers must ensure that the correct contact details are submitted with their request. Vodafone's support model for Microsoft Azure will triage issues into Microsoft if Vodafone is unable to resolve the issue.

Whilst an overview of our support services is provided here, please see the Public Cloud Support Service contact details as below:

Contact number: 03333 041 278

E-mail: assure.services@vodafone.com

5.2 Microsoft Azure Platform Support

As part of the service offering the customer will be provided with Platform Support from Vodafone. This is broadly equivalent to Microsoft Professional Direct Support from Microsoft as described here:

<https://azure.microsoft.com/en-gb/support/plans/>

The Vodafone charges for Microsoft Azure Platform Support will adopt a similar charging principal to the Azure direct charging model for Professional Direct Support which is a monthly recurring flat fee and details as follows:

Microsoft Azure Professional Direct Support Element	Azure Description	Vodafone Implementation
Customer Service, Self-Help and Communities	24x7 access to billing and subscription support, online self-help, documentation, whitepapers, and support forums	Customers get direct access
Best Practices	Access to full set of Azure Advisor recommendations	Customers get direct access
Health status and Notifications	Access to personalised Service Health Dashboard & Health API	Customers get direct access
Technical Support	24x7 access to Support Engineers via email and phone	Via Vodafone in the first instance
Who can open cases	Unlimited contacts/ Unlimited cases	Via Vodafone in the first instance, no support console or API access is provided.
Case Severity/ Response Times*	Minimal business impact (Sev C):	Refer to Incident Priority Categories below

	<4 business hours - Moderate business impact (Sev B): <2 hours - Critical business impact (Sev A): <1 hour	
Architecture Support	Architectural guidance based on best practice delivered by ProDirect Delivery Manager	Not available to Vodafone customers.
Operations Support	Onboarding services, service reviews, Azure Advisor consultations	Not available to Vodafone customers.
Training	Azure Engineering-led web seminars	Not available to Vodafone customers. Microsoft Azure online training links can be shared.
Third-Party Software Support	Interoperability & configuration guidance and troubleshooting	Support not provided by Vodafone. Support for Marketplace capabilities are provided directly by the Marketplace vendors

*This is backed by Azure who will make every reasonable effort to respond to your initial request within the corresponding timeframes.

5.3 Incident Priority Categories

Vodafone's usual Target Resolution Times* cannot be guaranteed for this service as Azure does not provide fixed resolution times to Vodafone. Vodafone will however honour our Service Level Targets** for provision of updates to customers.

Vodafone will be offering a pass-through model to customers on individual product availability SLAs as outlined in Section 7.1 of this document.

Vodafone will assign a severity level to each incident that you log, and will provide updates to you as defined in table below:

Priority	Description	Vodafone Target Resolution Time* (cannot be guaranteed for Azure)	Service Level Target** (for updates)
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P1 - Critical Service Affecting	The impact is of the highest priority and results in significant disruption to the business. There are no workarounds or manual processes available to minimise the problem. Dedicated Vodafone engineer assigned. Business Impact: Critical Impact on ability to operate within the Azure platform	4 hours	1 hour (email and telephone)
P2 – Major Service Affecting	Major service impact, a serious Incident where service is severely degraded or impaired but can be circumvented, loss or impairment of a major component affecting multiple users at a site, or multiple sites receiving degraded service. Medium size of customer base impacted. There are no workarounds or manual processes available to minimize the problem. Dedicated Vodafone engineer assigned. Business Impact: Significant Impact on ability to operate Azure services	4 hours	2 hours (email and telephone)
P3 – Minor Service Affective	The Incident has minor impact on service. There is an issue with the service but there is no severe impact on usage of the service and an alternative may or may not be available. Workaround or manual process is available. Business Impact: Minor Impact on the ability to operate Azure services	48 hours	Twice every 24 hours (email)
P4 – Non Service Affecting	An Incident where there is limited inconvenience or where a user would like to make a service request which does not require immediate action. Business Impact: No Impact on the ability to operate Azure services	N/A	Once every 24 hours (email)

5.4 Azure Service Health

As part of the service offering you have access to Azure Service Health that provides personalised guidance and support when issues in Azure services affect you. It can notify you, help you understand the impact of issues and keep you updated as the issue is resolved. It can also help you prepare for planned maintenance and changes that could affect the availability of your resources.

Further information on Azure Service Health can be found here:

<https://azure.microsoft.com/en-gb/features/service-health/>



5.5 Maintenance Event Notification

From time to time, Azure will need to update their systems in order to continually update and improve Azure services. Microsoft Azure will apply patches and upgrades to services and instances in a transparent and sometimes disruptive (reboot) manner. The mechanism and process will vary depending on the Azure service. Disruptions to services and the ability to manage said disruptions (to a degree) is made available within the Azure Service Health Dashboard, an example is shown below:

The screenshot displays the Azure Service Health - Service Issues dashboard. The left sidebar contains navigation links for Service Issues, Planned maintenance, Health advisories, History, Health history, Resource health, Resource health, Alerts, and Health alerts. The main content area shows a table of service issues. The first issue is 'Virtual Machines - West US' with tracking ID 'H97W-2J0'. The issue details section, highlighted with a red box, includes the tracking ID, impacted services (Virtual Machines), impacted regions (West US), and a last update message. The last update message states: 'Starting at 20:16 UTC on 16 Mar 2018 you have been identified as a customer using Virtual Machines in West US who may intermittently experience higher than expected latency or degraded performance when trying to access or use a subset of Virtual Machines hosted in this region. Engineers are aware of this issue and are actively investigating.'

The Service issues view shows any ongoing problems in Azure services that are impacting your resources. You can understand when the issue began, and what services and regions are impacted. You can also read the most recent update to understand what Azure is doing to resolve the issue.

You can get a link for the issue to use in your problem management system. You can download PDF and sometimes CSV files to share with people who don't have access to the Azure portal.

Service Health integrates with Azure Monitor to alert you via emails, text messages, and webhook notifications when your business-critical resources are impacted. Set up an activity log alert for the appropriate service health event. Route that alert to the appropriate people in your organization using Action Groups. For more information, see [Configure Alerts for Service Health](#).

Vodafone will make use of the Azure Service Health API to notify Vodafone operation and support teams that there is a platform related issue within Microsoft Azure.

5.6 Service Limit Increases

Microsoft provides default service limits on Azure services details of which can be found here: <https://docs.microsoft.com/en-us/azure/azure-subscription-service-limits>.

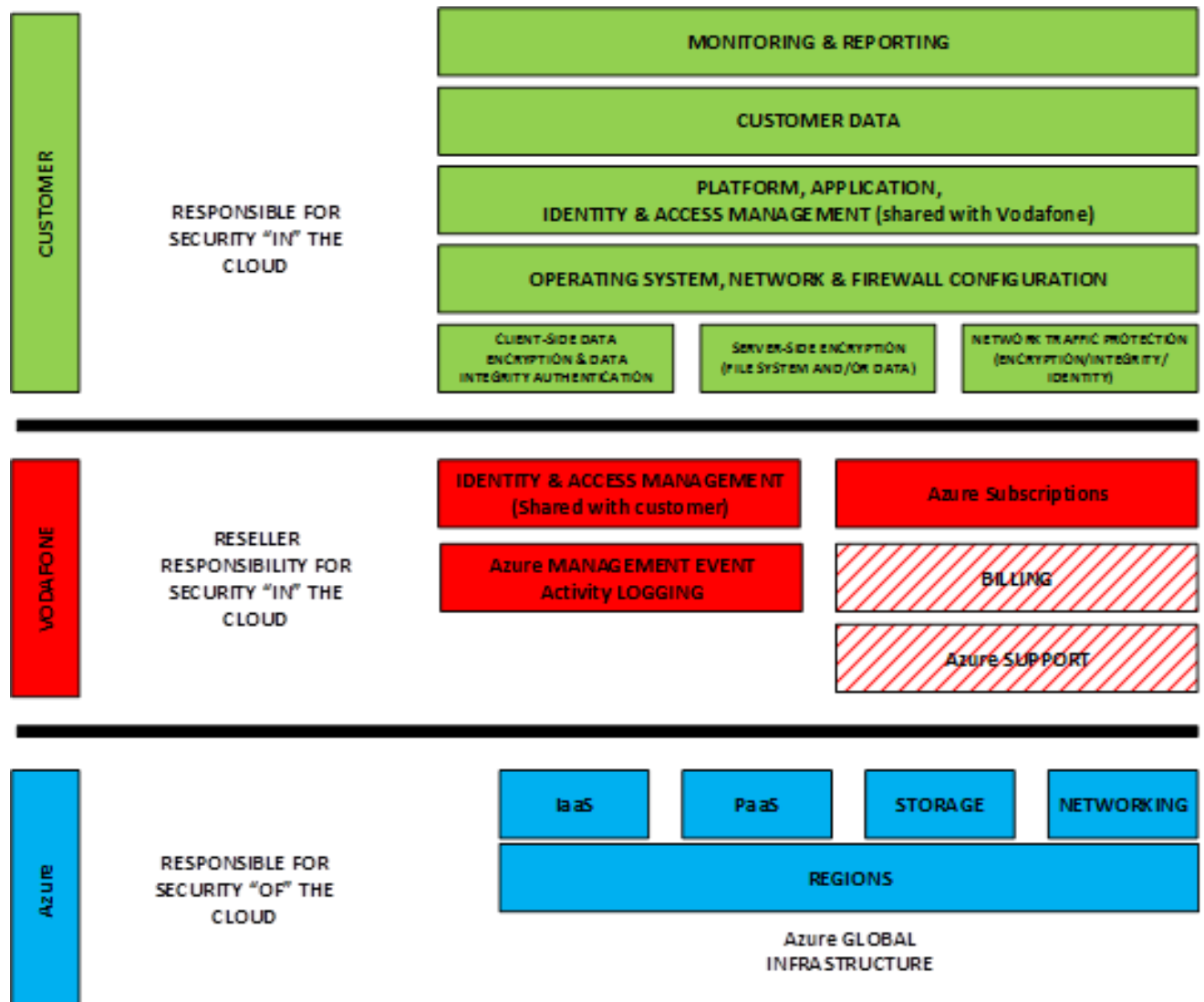
Many services contain limits that cannot be changed. If a customer would like to request an increase in limits, please contact Vodafone support. These increases are not granted immediately, so it may take a couple of days for your increase to become effective.



5.7 Shared Responsibility Model

The following diagram outlines the shared responsibility between you, Vodafone and Microsoft Azure.

For Vodafone, the Red boxes indicate Vodafone responsibilities using Azure tools, and the pink shared boxes are responsibilities provided and owned by Vodafone.





Billing

6

6. Billing

6.1 Billing Currency

Your Azure usage charges will be calculated in local currency and will mirror exactly the prevailing Azure retail prices. Vodafone will calculate the total charge in local currency and apply it to your bill.

6.2 Pricing Structure

The pricing structure for Microsoft Azure from Vodafone is as follows:

Product	Type	Structure
Azure Platform Services	Monthly Usage Charge	Usage charges for compute, storage, network and other Azure resources used. Priced in local currency in accordance with current Azure retail prices. No currency conversion is needed for billing.
Azure Platform Support	Monthly Recurring Charge	Direct support service from Vodafone created on the knowledge and expertise of Microsoft aligned to their Professional Direct package.
Vodafone Cloud Assessment	Monthly Usage Charge	Cloud Assessment : 3% of total Azure Platform Services charges

6.2.1 Microsoft Azure Platform Services Charges

Microsoft Azure offers you a pay-as-you-go approach for pricing for over 70 cloud services. With Azure you pay only for the individual services you need, for as long as you use them, and without requiring long-term contracts or complex licensing. Azure pricing is similar to how you pay for utilities like water or electricity. You only pay for the services you consume, and once you stop using them, there are no additional costs or termination fees.

Azure offers a broad set of global compute, storage, database, analytics, application, and deployment services that help organizations move faster, lower IT costs, and scale applications. Pricing for all services is unique and there are not any complex dependencies or licensing requirements.

For additional information on pricing of individual services please see here:

<https://azure.microsoft.com/en-gb/pricing/>

6.2.2 Microsoft Azure Platform Support Charges

Vodafone will charge you as flat fee every month without any limitation on number of support tickets or events. The support package aligns with Microsoft Azure Professional Direct.

6.2.3 Vodafone Cloud Assessment Charges

Vodafone will calculate your Cloud Assessment charges by using the total of your Azure Platform Services charges.

6.3 Billing Line Items

The following billing line items will appear on your Vodafone bill where MRC = Monthly Recurring Charge, NRC = Non Recurring Charge, MRA = Monthly Recurring Amortisation, ARR MRC = Arrears Monthly Recurring Charge.

Usage Charges:

Azure Platform Services



Including all services consumed on the Azure platform, the following billing line items may appear on your Vodafone bill in this section:

- Azure Charge – any charges incurred from Azure
- Azure Credit – any credits received from Azure
- Azure One Time Fee – Any upfront payment
- Azure Marketplace Charge – any charges incurred from Azure Marketplace
- Azure Marketplace Credit – any credit from Azure Marketplace

Start/End date: covers the bill period, except where a subscription has been purchased where the actual subscription period is displayed

Rental Charges:

Including any regular recurring charges, the following billing line items may appear on your Vodafone bill in this section:

- Azure Platform Support – MRC (a single total is presented)

Other Charges:

Including any one time charges, the following billing line items may appear on your Vodafone bill in this section:

- Azure Change Request Charge – NRC
- Azure One-Off Charge – NRC

6.4 Billing Data

Vodafone will make available the following data available to you monthly.

Report	Description	Format
Azure Statement Summary	Summary invoice of Azure costs for a given monthly period.	PDF
Azure Statement Summary	As above but in CSV format.	CSV
Azure Statement	A more detailed statement which provides a summary of Azure service usage for the applicable month. Azure usage is rolled up into a monthly total.	CSV
Azure Detailed Billing Report	As above, but service usage is represented on an hourly basis.	CSV
CDR Download	Additional level of usage detail between that presented on the bill and Azure hourly usage	Online

6.5 Azure Tags

Any metadata tags that you assign to any of your Azure resources are not reflected in the Vodafone bill. They are however present within the Azure Detailed Billing Report and within the reporting provided within your Vodafone Cloud Assessment service.

6.6 Accessing your Vodafone bills

Your Vodafone bills can be accessed here: <https://myenterprise.vodafone.com/>.





Service Level Agreements

7

7. Service Level Agreements

7.1 Microsoft Azure Service Level Agreements

Azure services are backed by an individual service level agreement (SLA). Listed below are examples of the more popular Azure SLA's:

Compute (Virtual Machines)	https://azure.microsoft.com/en-gb/support/legal/sla/virtual-machines	Storage	https://azure.microsoft.com/en-gb/support/legal/sla/storage
Databases (SQL Database)	https://azure.microsoft.com/en-gb/support/legal/sla/sql-database	ExpressRoute	https://azure.microsoft.com/en-gb/support/legal/sla/expressroute

Microsoft reserve the right to change the terms of the above SLAs in accordance with the Microsoft Cloud Agreement. The Microsoft Cloud Agreement be found under; <https://docs.microsoft.com/en-us/partner-center/agreements>.

Please note that Vodafone will not provide availability reporting of Azure services as part of the initial release of the service.

In the instance where a customer requires a service credit for an Azure service that has failed to meet its service level agreement, the customer will need to provide the necessary credit request information, which Vodafone would use to raise a support case with Azure.

For example, a Virtual Machine credit request requires the following detail:

- the dates and times of each unavailability incident that the customer is claiming for.
- the affected instance IDs or the affected Storage volume IDs
- logs that document the errors and corroborate your claimed outage (any confidential or sensitive information in these logs should be removed or replaced with asterisks).





Related Products

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8. Related products

8.1 Related Vodafone Products

Related Vodafone products include:

Offering	Description	Further Details
Vodafone IP-VPN	Vodafone IP-VPN is a private, MPLS-based WAN service. It enables you to converge your wide area communications onto a single secure, resilient and future-proof IP-VPN. With coverage in over 150 countries, we can connect you to a fast and seamless data network that fully supports your global communications strategy.	http://www.vodafone.com/business/global-enterprise/global-connectivity/ip-virtual-private-network
Vodafone IP-VPN Cloud Connect	Connecting to public cloud service with Vodafone offers you a flexible, scalable and cost-effective way to access extra computing power and storage on demand. You only pay for the resources you use, so it's easier to reduce costs and control your capital expenditure. Vodafone IP-VPN Cloud Connect gives you high performance, high availability connectivity, via a secure private network that isolates your information from other customer traffic. In effect, it's a seamless extension of your network and Data Centre capability. Vodafone IP-VPN Cloud Connect is an on-demand service, so both the network and public cloud resources can expand or contract rapidly, to match your business needs.	http://www.vodafone.com/business/global-enterprise/global-connectivity/vodafone-ip-vpn-cloud-connect
Vodafone Hosted Private Cloud	Vodafone Hosted Private Cloud gives you a reliable, secure and scalable IT platform with assured data sovereignty. You can benefit from a lower cost of ownership, with the performance and agility required to ensure your business is ready to respond to market opportunities. And a self-service portal gives you the flexibility to provision your resources in just minutes.	http://www.vodafone.com/business/cloud-and-hosting-services/private-cloud
Vodafone Managed Hosting	Vodafone Managed Hosting services shoulder your burden. We take responsibility for your IT estate, delivering assured efficiency, cost-savings and freedom to focus on your core business. With a range of technologies from the world's leading vendors we'll create and deploy your ideal infrastructure solution. We ensure your applications and people perform at peak efficiency, with enterprise-grade security and compliance as standard. Our bespoke solutions are cost effective with predictable monthly billing, underpinned by a reliable, secure, global network.	http://www.vodafone.com/business/cloud-and-hosting-services/managed-hosting



Vodafone Co-location Services	New projects, infrastructure, applications and cloud all change demand for IT space and power, putting your data centres under pressure. As your business evolves, you need flexibility to cope with the constant growth in applications and data. But as you move to cloud, predicting future needs is difficult. Running your own data centre estate can also be expensive and complex. With compliance, security and resilience to think about, it's a constant drain on IT staff's time and budgets. Vodafone Co-location Services move your essential infrastructure into purpose-built data centres, conveniently located across the world with the highest levels of security, resilience, flexibility and network performance.	http://www.vodafone.com/business/cloud-and-hosting-services/co-location-services
Vodafone Professional and Managed Services	Our Professional and Managed Services are designed to offer advice and support as you assess your IT landscape. Whether you need a more strategic review of your infrastructure or you don't have the right skills in-house to achieve your IT strategy - whatever you need, Vodafone has the tools and expertise to help. Our Professional Services team can provide all the advice and support you need to assess what you're going to need from your IT. Whether you're looking to build on your current systems or move to a cloud-based infrastructure, we can help you define, plan and implement a more streamlined and cost-effective service. See section 10 for more information.	http://www.vodafone.com/business/cloud-and-hosting-services/professional-services





Compliance

9

9. Compliance

9.1 Microsoft Trust Centre

The Microsoft Trust Centre at <https://www.microsoft.com/en-us/trustcenter/default.aspx> is your primary source of information on how Microsoft addresses Security, Privacy, Compliance and Transparency.

Security. Find out how Microsoft builds services from the ground up to help safeguard your data.	https://www.microsoft.com/en-us/trustcenter/security
Privacy. Explore the policies and processes that Microsoft has to help keep your data private and in your control.	https://www.microsoft.com/en-us/trustcenter/privacy
Compliance. An overview of Microsoft's industry-verified conformity with global standards.	https://www.microsoft.com/en-us/trustcenter/compliance
Transparency. Microsoft policies and practices published in a clear and easy to understand manner.	https://www.microsoft.com/en-us/trustcenter/about/transparency

9.2 Vodafone Standards Compliance

Standard	Description
UK Government Cyber Essentials Scheme	Basic technical protection from cyber-attacks. Please refer to https://www.cyberaware.gov.uk/cyberessentials/files/requirements.pdf Azure Cyber Essentials Plus: https://www.microsoft.com/en-us/trustcenter/compliance/UK-CEPlus http://www.cyberessentials.org/validator/verify.php?certificate=3701681465632838
PCI DSS v3.2	The Vodafone solution will not prevent the customer from achieving PCI DSS compliance when using Azure services as part of a solution which will process payment cards. The Vodafone implementation of the solution, will adhere (where applicable) to the standards detailed in the PCI Prioritized Approach Tool (spreadsheet) https://www.pcisecuritystandards.org/document_library
ISO 27001	Azure services must be ISO 27001 compliant. Refer to the Azure compliance web site: https://www.microsoft.com/en-us/TrustCenter/Compliance/ISO-IEC-27001 https://d0.awsstatic.com/certifications/iso_27001_global_certification.pdf



Professional and Managed Services for Azure

10. Professional and Managed Services for Azure

10.1 Scope

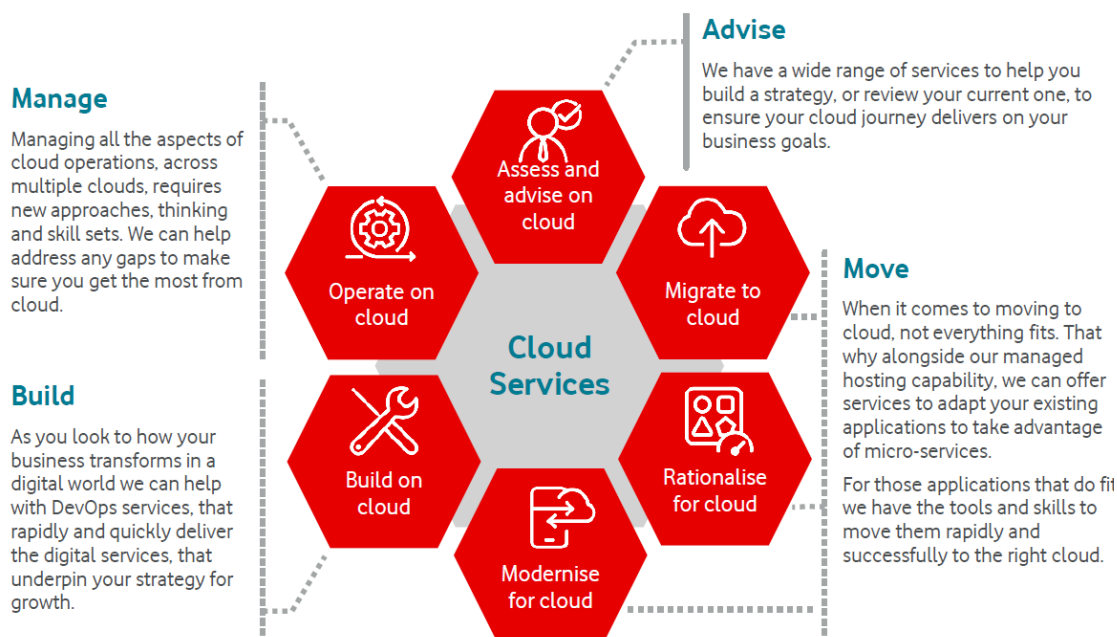
A Wide Portfolio of Cloud Services

Vodafone is happy to offer a range of Professional and Managed Services to help remove the boundaries of IT management. These services can encompass AWS and other Public Clouds as well as our Private Cloud and Managed Hosting offers.

Transforming your IT to align with a cloud world can be a challenging task, balancing the value that cloud brings, against the cost of disruption to your business. Leveraging the experience and depth of capability that Vodafone has through our own and IBM's, provides the skills to ensure a successful transformation that not only delivers on your TCO goals, but delivers on your business strategy as well.

Our IBM Venture

Vodafone Business and IBM have joined forces in a venture that combines the best of global connectivity and multi-cloud to help you succeed in the digital world. You can call on IBM's world-class consulting and advisory services specific to your industry to help you achieve the digital transformation results you want. Combined with Vodafone's Network, 5G and Edge capability, this brings new opportunities for you in a digital world.



Please refer to our Service Catalogue and Services Descriptions for more detail on our Professional and Managed Services offerings.

These services currently include, but are not limited to the following:

Service Group	Sub Category	Description
Professional Services	Application	Managed Application Testing Services
Professional Services	Application	Cloud Readiness Assessment Services
Professional Services	Application	Application Modernisation Services
Professional Services	Infrastructure	Design and Configuration of Cloud Environments
Professional Services	Application	Application Assessment Services
Professional Services	Application	Application Assessment Services – Automated Data Collection and Analytics
Professional Services	Infrastructure	Migration Services
Managed Services	Infrastructure	Integrated Managed Infrastructure (IMI) for Public Cloud Includes management of: Compute, Virtual Network, PaaS, Storage, Database Engines, Middleware Applications Service Governance and Reporting, Implementation services.
Managed Services	Security	Testing Services including Offensive Security Testing Services, Dynamic Scans per Application, Application Penetration Testing, Cloud Security Strategy Assessment, Dev Ops Assessment,
Managed Services	Security	Managed Security Services including Incident Response and Intelligence Services, Security Incident Event Management, Managed Firewall, Proxy Services, Vulnerability Management



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