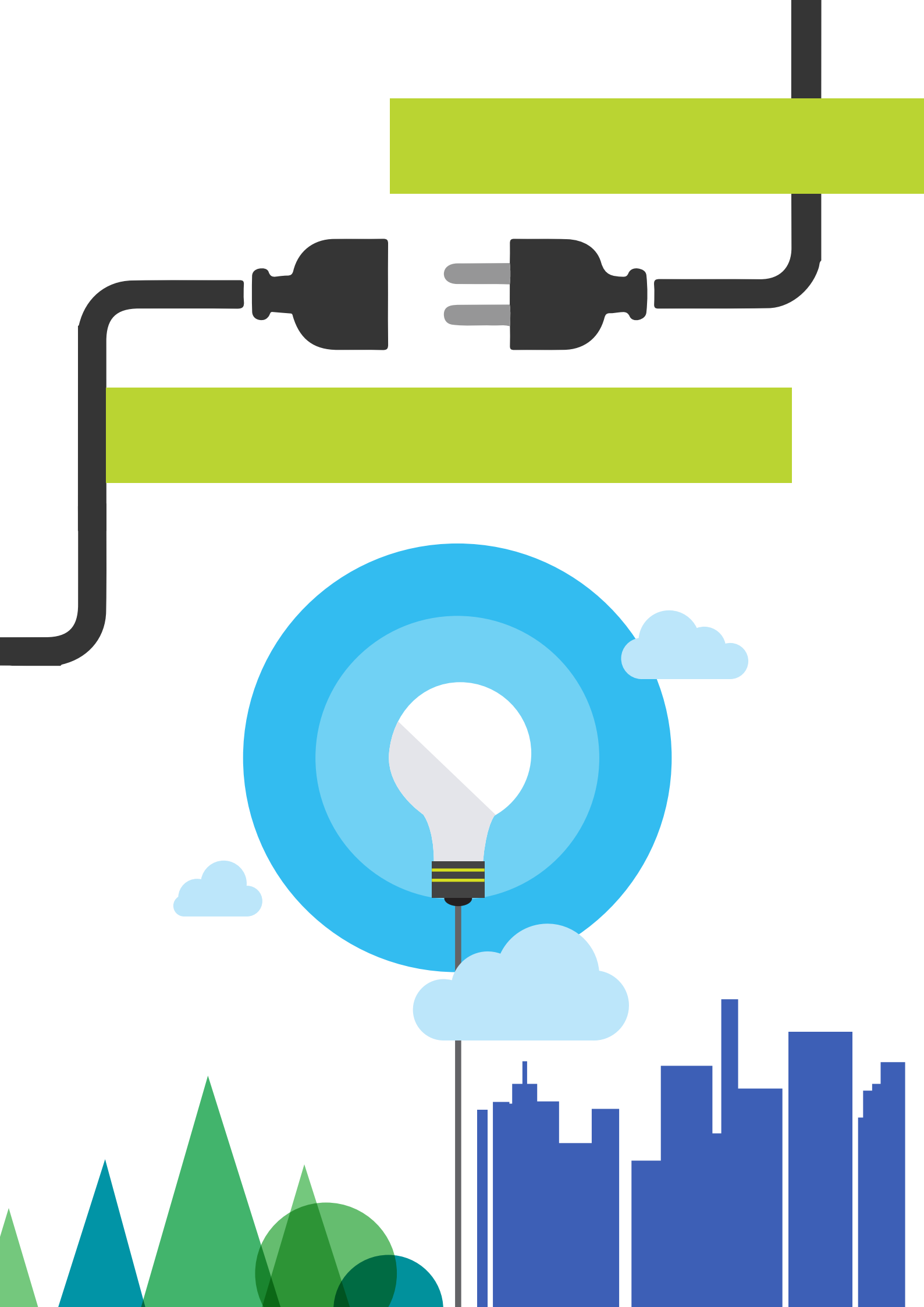Microsoft

All you need to know about
Microsoft Azure

Brought to you by Westcon-Comstor

The industry leading information technology value added distributor.

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Delivering Results Together

Table of **Contents**:

Microsoft   Azure

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PART 1:
What is Cloud Computing

Cloud computing is the delivery of computing services that extend to servers, storage, databases, networking, software, analytics, and more—over the Internet. Companies offering these services are called "cloud providers" and they typically charge for "cloud computing services" based on a consumption or usage model, similar to how you're billed for water or electricity at home.

Uses of Cloud Computing

Most people don't even realise they are working in the cloud.
If you use an online service to send email, edit documents, watch movies or TV, listen to music, play games, or store pictures and other files, you are more than likely working in the cloud.

The first cloud computing services are barely a decade old, but already a variety of organisations—from tiny startups to global corporations, government agencies to non-profits—are embracing the technology for all sorts of reasons.

Here are a few of the things you can do with the Cloud:

Create
new apps
and services

Store
backup, and
recover data

Host
websites
and blogs

Stream
audio
and video

Deliver
software
on demand

Analyse
data for
patterns
and make
predictions

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Azure

Microsoft

Top Benefits of Cloud Computing

Cloud computing is a big shift from the traditional way businesses think about IT resources.

What is it about cloud computing?
Why is cloud computing so popular?

Here are 6 common reasons organisations are turning to Cloud Computing services:

Cost
Cloud computing eliminates the capital expense of buying hardware and software and setting up and running on-site datacentres—the racks of servers, the round-the-clock electricity for power and cooling, the IT experts for managing the infrastructure. It adds up fast.

1

2

Global Scale
The benefits of cloud computing services include the ability to scale elastically. In cloud speak, that means delivering the right amount of IT resources—for example, more or less computing power, storage, bandwidth—right when it is needed, and from the right geographic location.

Performance
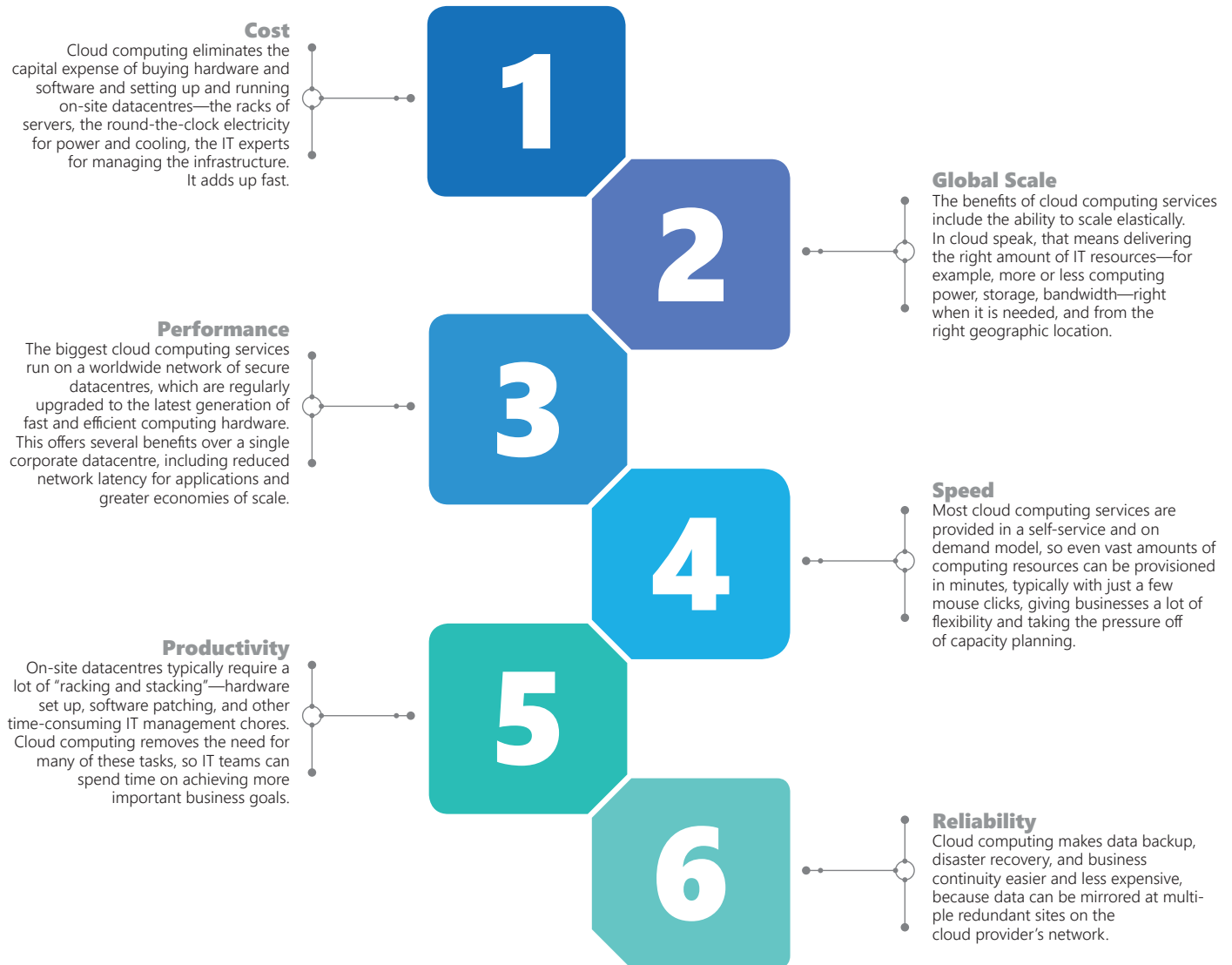The biggest cloud computing services run on a worldwide network of secure datacentres, which are regularly upgraded to the latest generation of fast and efficient computing hardware. This offers several benefits over a single corporate datacentre, including reduced network latency for applications and greater economies of scale.

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4

Speed
Most cloud computing services are provided in a self-service and on demand model, so even vast amounts of computing resources can be provisioned in minutes, typically with just a few mouse clicks, giving businesses a lot of flexibility and taking the pressure off of capacity planning.

Productivity
On-site datacentres typically require a lot of "racking and stacking"—hardware set up, software patching, and other time-consuming IT management chores. Cloud computing removes the need for many of these tasks, so IT teams can spend time on achieving more important business goals.

5

6

Reliability
Cloud computing makes data backup, disaster recovery, and business continuity easier and less expensive, because data can be mirrored at multiple redundant sites on the cloud provider's network.

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Types of cloud services: IaaS, PaaS, SaaS

Most cloud computing services fall into three broad categories: infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (Saas). These are sometimes called the cloud computing stack, because they build on top of one another. Knowing what they are and how they're different, makes it easier to accomplish your business goals.

| SAAS	PAAS	IAAS
Software as a Service	Platform as a Service	Infrastructure as a Service
Email CRM Collaborative ERP	Application Development Decision Support Web Streaming	Caching Legacy File Networking Technical Security System Mgmt
CONSUME	**BUILD ON IT**	**MIGRATE TO IT**
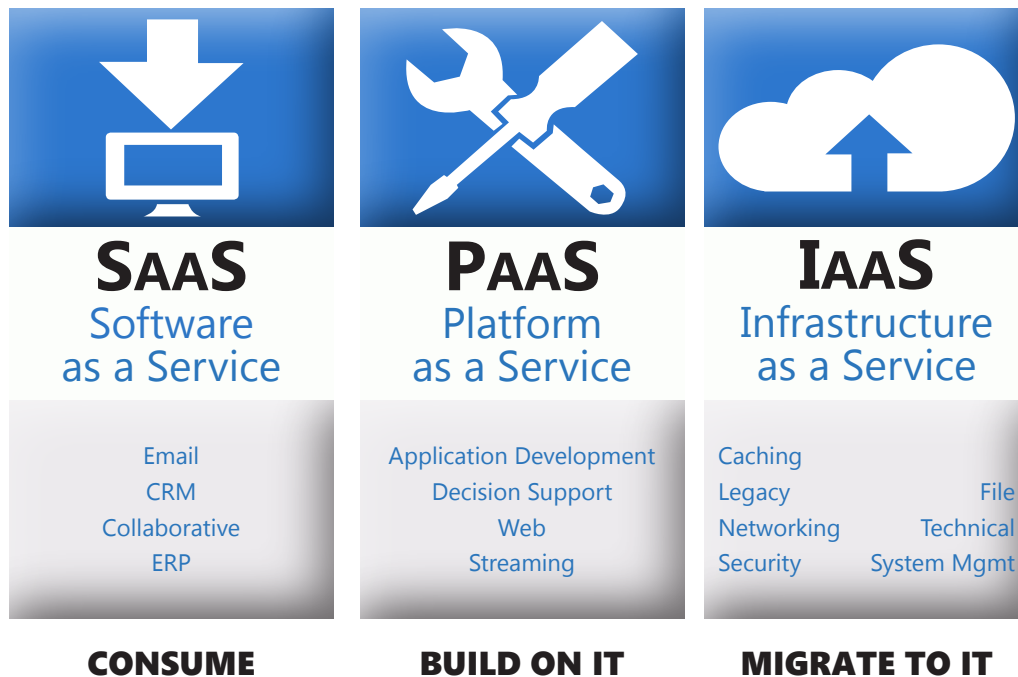
Infrastructure-as-a-service (IaaS)

The most basic of the cloud computing services. With IaaS, you rent IT infrastructure—servers and virtual machines (VMs), storage, networks, operating systems—from a cloud provider on a pay-as-you-go basis.

Platform as a service (PaaS)

Platform-as-a-service (PaaS) refers to cloud computing services that supply an on-demand environment for developing, testing, delivering, and managing software applications. PaaS is designed to make it easier for developers to quickly create web or mobile apps, without worrying about setting up or managing the underlying infrastructure of servers, storage, networking, and databases needed for development.

Software as a service (SaaS)

Software-as-a-service (SaaS) is a method for delivering software applications over the Internet, on demand and typically on a subscription basis. With SaaS, cloud providers host and manage the software application and underlying infrastructure, and handle any maintenance, like software upgrades and security patching. Users connect to the application over the Internet, usually with a web browser on their phone, tablet, or PC.
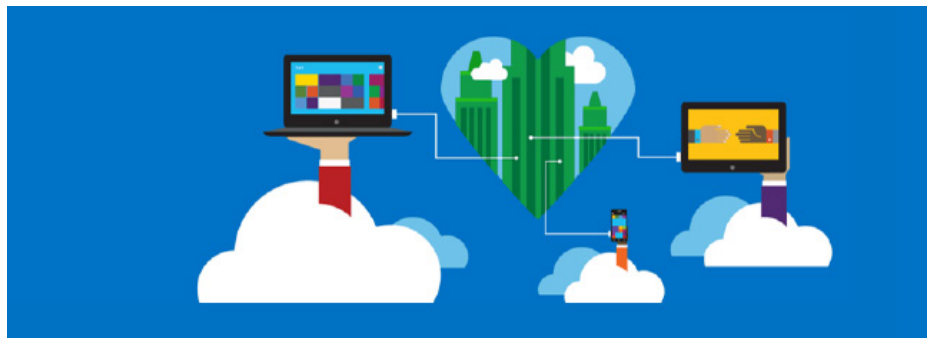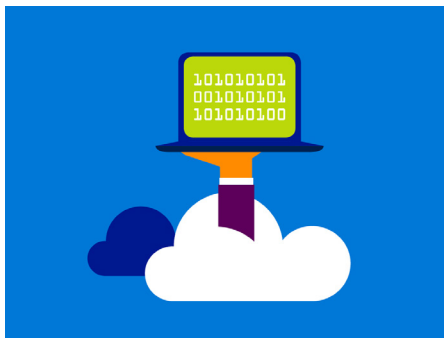
Types of cloud deployments: Public, Private, Hybrid

Not all clouds are the same. There are three different ways to deploy cloud computing resources: public cloud, private cloud, and hybrid cloud.
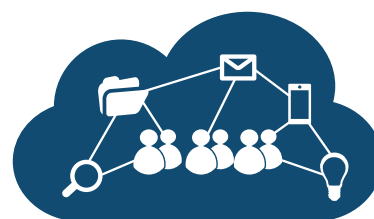
Private
- Single tenant implementation
- Owned and operated by IT organization
- Define your own data management policies
- Self-service and automation capabilities provide new agility

Hybrid
- Combination for Private & one or more public clouds
- Allows IT organizations to become brokers of services

Public
- Multi-tenant implementation
- Owned and operated by Service Provider
- Boend by multi-tenant data management policies
- Similar self-service and automation capabilities as Private Cloud

Public Cloud

Public clouds are owned and operated by a third-party cloud service provider, which deliver their computing resources like servers and storage over the Internet. Microsoft Azure is an example of a public cloud. With a public cloud, all hardware, software, and other supporting infrastructure is owned and managed by the cloud provider. You access these services and manage your account using a web browser.

Private Cloud

A private cloud refers to cloud computing resources used exclusively by a single business or organisation. A private cloud can be physically located on the company's on-site datacentre. Some companies also pay third-party service providers to host their private cloud. A private cloud is one in which the services and infrastructure are maintained on a private network.

Hybrid Cloud

Hybrid clouds combine public and private clouds, bound together by technology that allows data and applications to be shared between them. By allowing data and applications to move between private and public clouds, hybrid cloud gives businesses greater flexibility and more deployment options.

How cloud computing works

Cloud computing services all work a little differently, depending on the provider. But many provide a friendly, browser-based dashboard that makes it easier for IT professionals and developers to order resources and manage their accounts. Some cloud computing services are also designed to work with REST APIs and a command-line interface (CLI), giving developers multiple options

PART 2:
What is Azure Backup, Archive and Disaster Recovery?

Data and the availability of data is arguably the most important IT function for any business. Decisions are made based on information extracted from data, therefore it is of the utmost importance to have data available and secure. Backup, Archive and DR all revolve around data warehousing and data management.

In fact you can use Azure to back up (or protect) and restore your data in the Microsoft cloud. Azure Backup replaces your existing on premise or off-site backup solution with a cloud-based solution that is reliable, secure, and cost-effective. Azure Backup offers multiple components that you download and deploy on the appropriate computer, server, or in the cloud. The component, or agent, that you deploy depends on what you want to protect. All Azure Backup components no matter whether you're protecting data on-premises or in the cloud) can be used to back up data to a Recovery Services vault in Azure.

Azure Backup

An underlying technology of Microsoft's Operations Management Suite, is a scalable solution that protects your application data with zero capital investment and minimal operating costs…Azure Backup can retain your data for up to 99 years to meet regulatory requirements Azure is a comprehensive set of cloud services that developers and IT professionals use to build, deploy, and manage applications through a global network of datacentres. Integrated tools, DevOps, and a marketplace support you in efficiently building anything from simple mobile apps to internet-scale solutions.
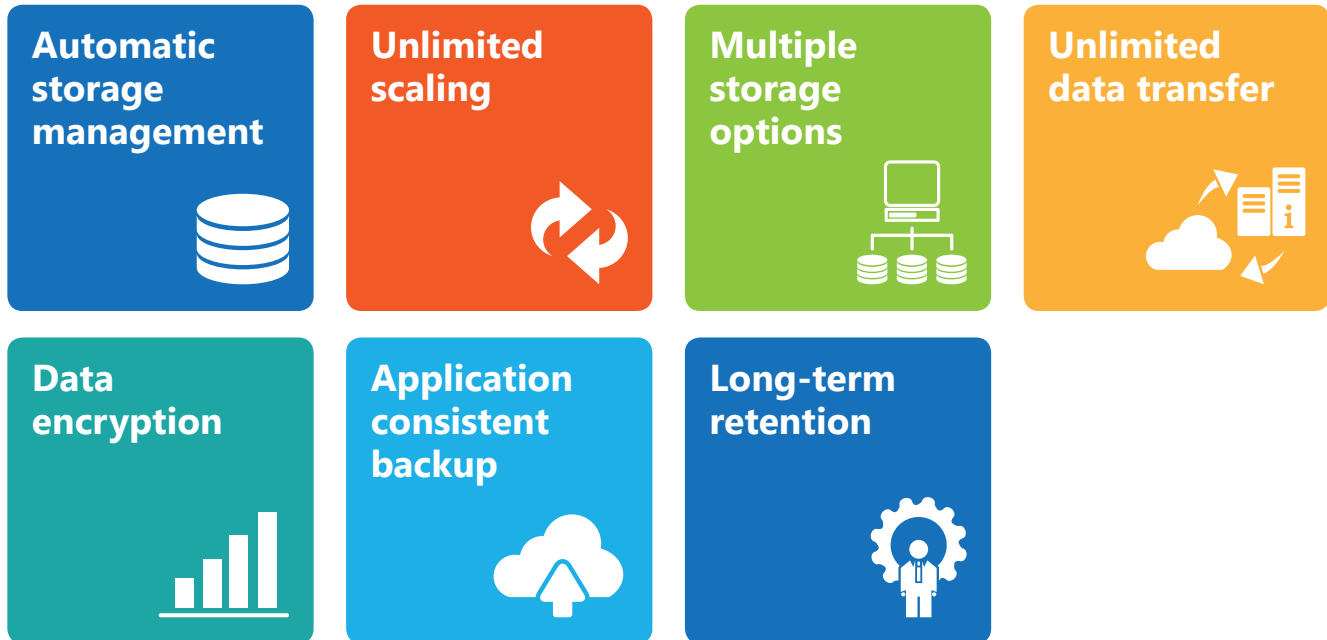
Why do companies need Backup, Archive and DR?

Traditional backup solutions have evolved to treat the cloud as an endpoint, or static storage destination, similar to disks or tape. It is limited and doesn't take full advantage of an underlying cloud platform, which translates to an expensive, inefficient solution.

Other solutions are expensive because you end up paying for the wrong type of storage, or storage that you don't need. Other solutions are often inefficient because they don't offer you the type or amount of storage you need, or administrative tasks require too much time

In contrast, Azure Backup delivers these key benefits:

Automatic storage management	**Unlimited scaling**	**Multiple storage options**	**Unlimited data transfer**
Data encryption	**Application consistent backup**	**Long-term retention**	

Backup and Archive
Protect your data and applications no matter where they reside to avoid costly business interruptions.

Increase Capacity, Reduce Costs

Keep pace with the exponential growth of your enterprise data while lowering deployment and management costs. With a low-cost, massively-scalable, tiered backup storage solution in the cloud, you'll reduce forecasting risks while transforming capital expenditure commitments to a pay-as-you-go cloud model.

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Get hassle-free Backup and Data Archiving

Improve your organisation's productivity by spending less time managing and maintaining your on-premises backup storage infrastructure and software. Simplify backup and data archiving with backup-as-a-service and hybrid storage solutions that easily restore data and applications from the cloud.

Rest assured your Compliance Goals are met

Take advantage of policies designed to meet your business or regulatory compliance requirements. Benefit from the most comprehensive compliance portfolio available, get more than 99 years of retention for your backup data, and pick any Azure region around the globe for your backup and archive location.

Keep Remote and Branch Offices running smoothly

Move your backup storage to the cloud to save on infrastructure investments for remote and branch offices. Replace expensive intranets with low-cost internet and archive data in your preferred Azure datacentre region across the globe, so that your data is close to your branch office—maintaining enterprise-grade security for data in transit and at rest.

Disaster Recovery
Protect all your major IT systems while ensuring apps work when you need them most.

Protect all of your Major IT Systems. Affordably.

Achieve low recovery point objective (RPO) and recovery time objective (RTO) targets for every major system in your organisation, simply and cost-effectively. Eliminate the hassle and cost of secondary datacentres and tap into nearly infinite capacity at a moment's notice with a cloud-based data recovery solution designed for the needs of enterprises.

Unify Data Management, Security, and Protection

Achieve business goals for continuity and compliance throughout the lifecycle of your apps. Help secure your data with industry leading protection offered by encryption features.
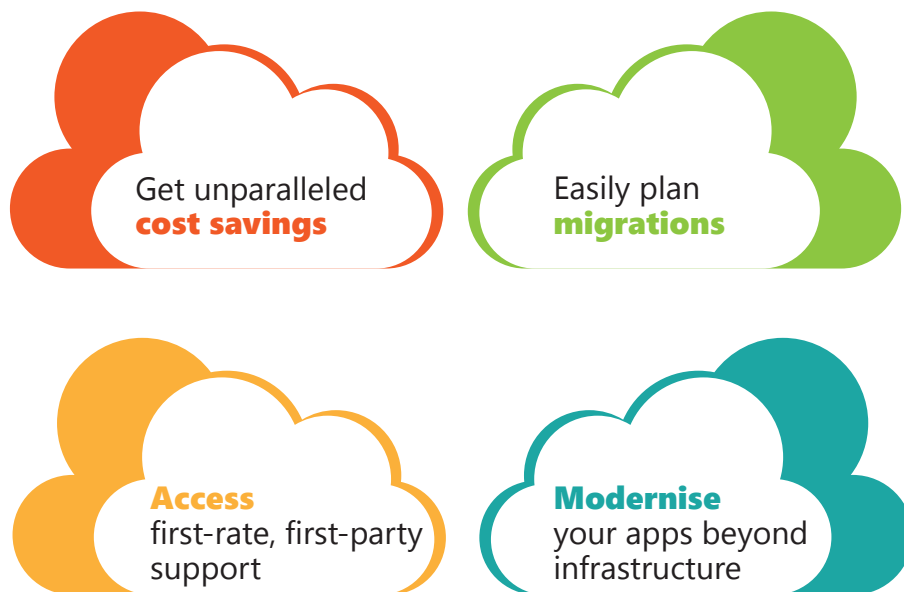
Ensure Apps work when you need them the most

Rest assured during an outage or disaster scenario with a disaster recovery solution that protects and natively supports the widest range of enterprise applications of any cloud disaster recovery provider. Fail over your apps—and your entire datacentre—with automated recovery plans in a matter of hours instead of weeks or months.

Perform tests any time for Complete Confidence

When a disaster hits, the last thing you want is to run into a problem. Test your business continuity plans, or run dev-test copies of production workloads in Azure whenever you need to, and without impacting users. Plus, test new versions of applications with copies of live data, and then seamlessly put the new version into production in your datacentre.

- 8 -

Choose Azure for your Windows Server apps, and stay with the technology leader you trust

Take advantage of your current investments and skills by running Microsoft software in Azure available from Westcon-Comstor — including Windows Server, SQL Server, SharePoint, and Dynamics.

Get unparalleled **cost savings**

Easily plan **migrations**

Access first-rate, first-party support

Modernise your apps beyond infrastructure

Enjoy more choices in the cloud

With Azure, you have choices. Choices that help you maximise your existing investments. Get support for infrastructure as a service (IaaS) on Linux, 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.

Choose from flexible pricing options

Microsoft's commitment to open source extends to its flexible pricing options. Move to the cloud at your pace and choose a pricing model that works for you. For development and testing, you can provision and discard ephemeral Linux virtual machines and pay by the minute—only for what you use. With the Azure Compute pre-purchase plan, if you have steady state workloads with known computer needs, you can pre-purchase Azure compute capacity with discounts of up to 56 percent.

Add value with technologies that work well with each other

Complement what you've already built by using Azure. Augment your open source application with identity and access management through Azure Active Directory, or cloud-powered insights through Azure Data Lake Analytics. Connect your SharePoint sites with PHP portals. Run Linux batch processes to support your .NET applications. And tap a growing ecosystem of open source solutions available from Azure Marketplace that enable rapid deployment in the cloud.

Future-proof what you build

Microsoft has stated that open source is a part of its day-to-day approach to cloud innovation. As a result it is delivering new container capabilities with Docker integration and constantly looking for ways to improve developer and user experiences with SDKs for open source languages and an open API. It is also committed to sharing cloud learnings with customers and resellers, thanks to Linux and open source support in Azure Resource Manager and Azure Stack.

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Easily build and deploy anywhere

Use your team's existing skillsets and tools you know and love to build intelligent apps and deploy without a change in code. Build once, deploy anywhere: in the cloud, on premises, and to edge devices, with the confidence of global distribution to more datacentres than any other provider.

Create an impact using an open platform

Choose your favourite technologies, including open source. Azure supports a range of deployment options, popular stacks and languages, and a comprehensive set of data engines. Capitalise on this flexibility, plus the performance, scale, and security delivered by Microsoft technologies to build apps for any scenario.

Develop apps with built-in intelligence

Building intelligent apps using Azure is easy, because no other platform brings analytics and native AI to your data wherever it lives and in the languages you use. Take advantage of a rich set of cognitive APIs to easily build new experiences into your apps for human-like intelligence.

PART 3:
SharePoint on Azure

Deploy SharePoint servers rapidly and scale as needed with a cost-effective infrastructure.

Deploy SharePoint rapidly and scale as needed

Spin up infrastructure for your SharePoint servers in minutes. Set up development or test farms, or scale out your production SharePoint deployments, by instantly adding more resources. Simplify deployment and configuration with ready-to-deploy images and templates that are based on tried and tested configurations, and reduce the time to deploy complex SharePoint farms from days, to minutes.

Host your SharePoint sites cost effectively

Pay-as-you-go pricing and per-minute billing from Azure helps you save money. For development and testing, take advantage of Azure benefits for Visual Studio subscribers to reduce software licensing costs. When testing, spin up additional servers as needed for scale and load testing over short periods of time and remove them when you're finished. Using resources that you need—and no more—helps you be more cost effective.

Seamlessly move virtual machines across premises

A virtual machine in Azure running Windows or SQL Server is no different than a server running on-premises. Easily move virtual machines between on-premises physical servers, servers at your hosting providers, and Azure. With this portability, quickly and easily replicate your SharePoint dev-test environments or secondary production sites in Azure. And of course, move them back on-premises when the need arises.

Run Microsoft applications where they run best

As a Microsoft partner your Westcon-Comstor team suggests that you bet on the cloud that was built by the same company that built SharePoint and SQL Server. These applications have been battle-tested to perform well on Azure. Use your existing licenses with license mobility and the Azure Hybrid Benefit, and get first-class, first-party support across Azure, SharePoint, and SQL Server. Running SharePoint on Azure ensures your solution is on the same cloud that runs Office 365 and Microsoft Dynamics CRM Online, helping you to easily integrate across these.

Dynamics on Azure

Fuel business growth by bringing together enterprise resource planning (ERP) and cloud services.

Fast	Increase	Grow	Drive
Make smarter decisions. Faster.	the speed of doing business	at your own pace	Business Performance

Make smarter decisions. Faster.

Give your entire company access to the business intelligence (BI) they need—whenever and wherever they need it. By integrating BI into your company's office tools, you'll transform your data to enable greater insights for faster, more informed decisions.

Increase the speed of doing business

Transform and adapt quickly to keep your organisation at the forefront of your market. Simplify changes to your business process development and deployment with a consistent and user-friendly ERP solution.

Grow at your own pace

Grow how, where, and when you need to. Whether you're introducing new products, expanding into new markets, or growing your business through acquisition, get the agility and flexibility of the cloud to scale at the right pace for you.

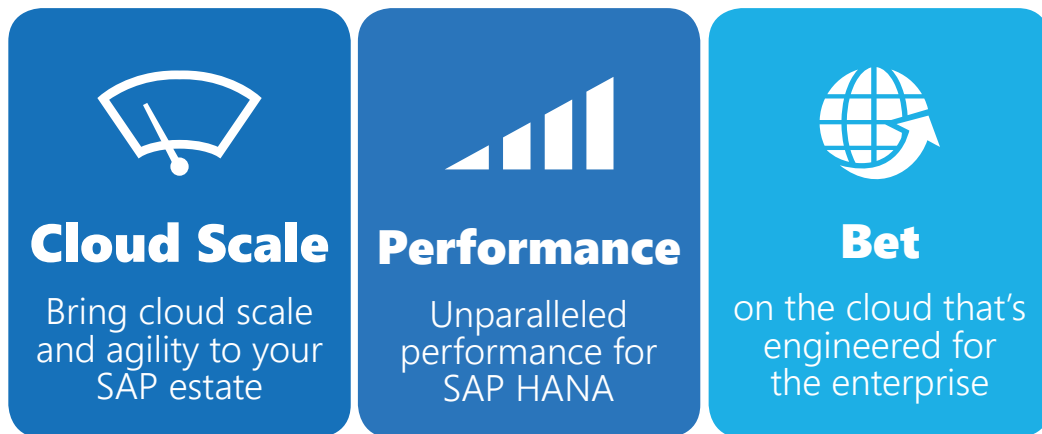## Drive business performance

Better plan and anticipate your business needs. Increase the visibility of organisational risks with a single, holistic view to help your IT department expand the business in ways not possible before—while continuing to provide security, scalability, and reliability.

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Azure

Microsoft
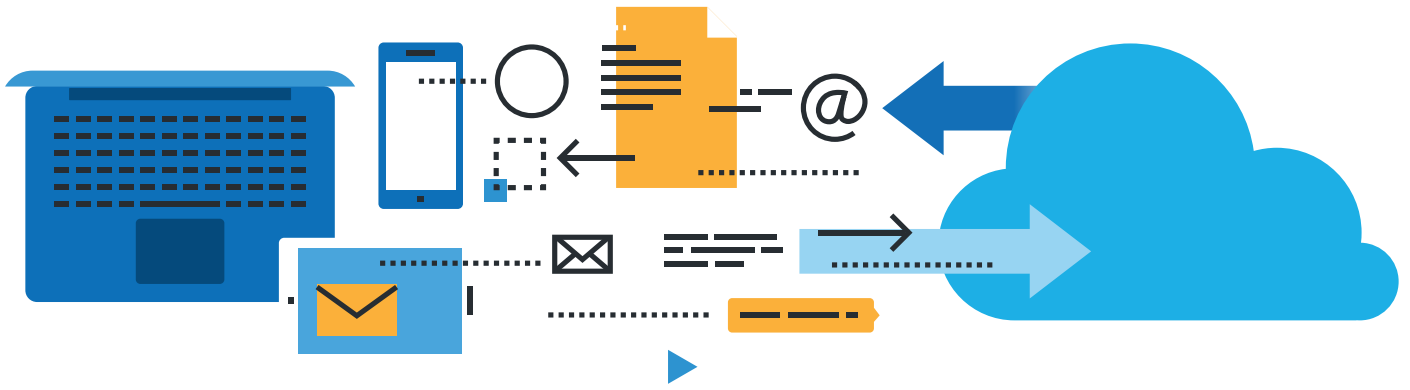
SAP on Azure
Bring cloud scale and agility to your mission-critical SAP workloads.

Cloud Scale	Performance	Bet
Bring cloud scale and agility to your SAP estate	Unparalleled performance for SAP HANA	on the cloud that's engineered for the enterprise

Bring cloud scale and agility to your SAP estate

Reliably run your mission critical SAP and other workloads on the cloud platform built for enterprises – Azure. With the expanded partnership between Microsoft and SAP, run a broad array of SAP applications across dev-test and production scenarios in Azure—and be fully supported. From SAP NetWeaver to SAP S4/HANA, Linux to Windows, SAP HANA to SQL Server, between these – all your bases are covered.
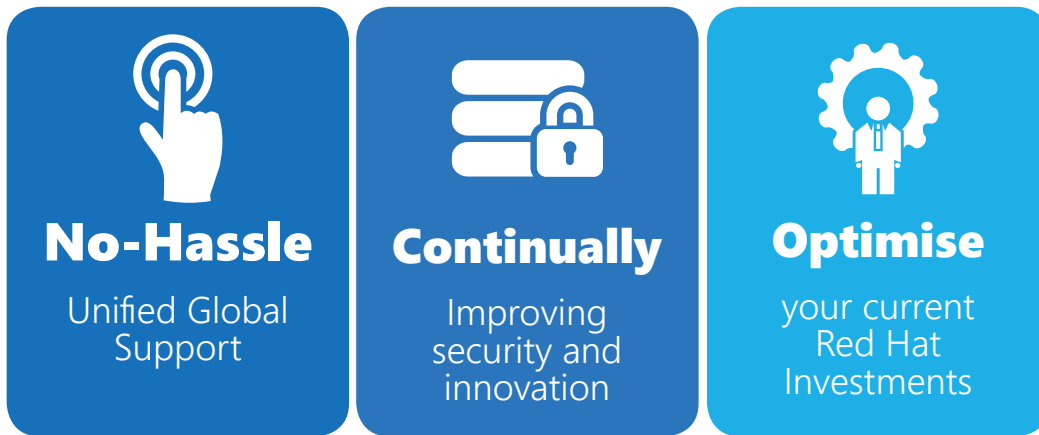
Get unparalleled performance for SAP HANA

Run SAP HANA on Azure with SAP HANA Enterprise Cloud and get the best of both worlds. Azure provides best-in-class infrastructure, and SAP provides end-to-end managed services for in-memory applications, database, and platform. You'll see the broadest choice and industry-leading performance when running your SAP workloads on Azure. Spanning Azure Virtual Machines and purpose-built hardware that's specifically tuned for SAP HANA, scale your SAP HANA workloads up to 20 TB for OLTP and 60 TB for OLAP. Azure lets you run the largest SAP HANA workloads of any global scale cloud provider.

Bet on the cloud that's engineered for the enterprise

With the broadest global footprint, largest compliance portfolio, enterprise-grade SLAs, and world-class support, Azure provides a robust, resilient, and reliable environment for not just your SAP applications, but also other workloads. A rich ecosystem of partners will be able to assist you to implement your SAP enterprise solutions. Bet your business on the cloud that's designed for enterprise needs, and join the 90 percent of Fortune 500 companies that already have.

Red Hat on Azure
Achieve hybrid cloud agility for your enterprise with Red Hat solutions on Azure.

No-Hassle
Unified Global Support

Continually
Improving security and innovation

Optimise
your current Red Hat Investments

Get no-hassle, unified global support

When you deploy Red Hat solutions on Azure, our partnership provides you the industry's only coordinated support that includes co-location of multi-lingual support engineers across 18 regions, a seamless and coordinated escalation and resolution process, plus an integrated ticketing process that saves you time, hassle, and stress.

Count on continually improving security and innovation

According to IDC, the majority of digital transformation initiatives will be unable to scale due to lack of strategic architecture1. With Red Hat solutions on Azure, your organisation can leap forward without boundaries using solutions that get better all the time—and work better together. Our joint security response team actively monitors emerging threats, and our joint engineering teams keep making improvements that add more value to your deployments.

Optimise your current Red Hat investments with Azure

Maximise the value to your existing Red Hat investment by transitioning to the cloud, and gain all that Azure has to offer, including the ability to scale quickly and easily, pay only for what you use, and save on compute power. Plus, use the Java, Linux, and other skills that your team already has to speed your digital transformation.

Administer and secure complex hybrid infrastructures more easily

IT operations managers can streamline costs and build scalable, adaptable environments—preparing their organisations for a more agile future. Accelerate your innovation with unique hybrid capabilities including:

- Interoperability and portability across hybrid infrastructure
- Simple, unified management
- Consistent application development and deployment across environments

Moving your Red Hat subscription to Azure

It's easier than you think. You can:

- Provision a Red Hat Enterprise Linux virtual machine on Azure with a Marketplace image.
- Migrate current subscriptions for use on select Red Hat certified cloud providers, including Microsoft Azure.
- Use Red Hat Cloud Access to move your Red Hat subscriptions to Azure in just three steps.

PART 4:
Azure Solutions

Digital Marketing

Connect with customers worldwide with digital campaigns that are personalised and scalable.

Create personalised and timely customer experiences

Different customers have different content needs. The Microsoft Azure digital marketing platform rapidly launches and updates a customer's marketing site based on user behaviour, customer feedback, or competitor moves. And, impactful digital marketing campaigns also require connecting with your customers at the right time and place. Build companion mobile apps to share contextual content and special offers with your customers on the go.

Optimise with data, not best guesses

You have one goal—increase campaign performance to win new customers and drive more revenue for your business. Customer behaviour provides insight into what's working and what isn't. When equipped with marketing campaign tools, you can use data and predictive analytics to understand customer profiles and improve overall effectiveness of your campaigns.

Stay ahead of the competition

Time to market is critical for marketing campaigns. Your development team can quickly build digital marketing experiences using their existing skills and tools. And with the support of content management solutions, your campaign owner can create content directly on the website. Preview changes in real time and push them live in seconds.

Be prepared when your campaign takes off

When your campaign is wildly successful, make sure you're ready for the highest level of customer demand. To get maximum performance on regional campaigns, deploy them in datacentres closer to your customers. While some services charge for ongoing maximum capacity, Azure will scale up and down automatically to save your campaign budget.

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Mobile

Reach your customers everywhere, on every device, with a single mobile app build.

Build once reach customers on any platform	Ship high quality apps faster	Simplify app development	Enrich your apps

Build once and reach customers on any platform

Write in one language and target any device, whether it's Android, iOS, or Windows. Expand your audience while you take advantage of your team's current skills. And, save time by reusing code from existing development projects.

Ship high quality apps faster—with confidence

Automate the lifecycle of your iOS, Android, Windows, macOS, and tvOS apps. Connect your Git repository and within minutes build in the cloud, test on real devices, distribute to beta testers and app stores, and monitor real-world usage with crash and analytics data.

Simplify app development with continuous learning

Streamline end-to-end app development with continuous integration and delivery—create quality apps your customers love. Automatically test your apps on real devices, distribute builds to beta testers, and deploy them to app stores. Collect real-time insights to continuously improve your apps. Make every release better than your last.

Enrich your apps with proven mobile services

No two mobile apps are the same, but they all have building blocks in common. Use Microsoft's tried-and-tested MBaaS solutions to accelerate your time to market. Let your developers focus on the app logic and let us take care of the plumbing.

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Azure

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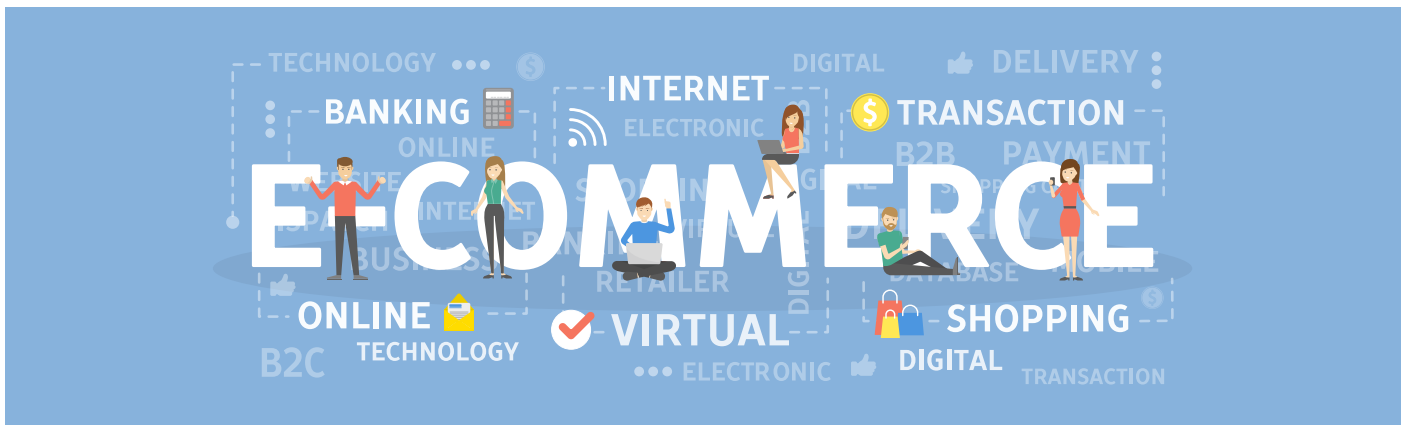
E-commerce

Give customers what they want with a personalised, scalable, and secure shopping experience.

Give customers what they want	Transact more sales	Optimise every point	Focus on driving sales

Give customers what they want—and drive sales

Before you can sell it, people must want to buy it. Our e-commerce platform lets you analyse site traffic and browse-to-buy conversion rates to define special offers and new products based on customer behaviour. Create personalised shopping experiences with targeted content and offers, and increase satisfaction through ongoing engagement—before, after, and at the point of sale.

Transact more sales, more often, more securely

More customers mean more transactions. Make sure you're ready to handle every transaction smoothly by designing an e-commerce purchasing experience that's simple to navigate. Then, deploy it to a secured and compliant e-commerce platform. Have the capacity to meet customer demand. You need an e-commerce solution that adapts to the size and seasonality of your business. When demand for your products or services takes off—predictably or unpredictably—be prepared to handle more customers and more transactions automatically. Plus, take advantage of cloud economics by paying only for the capacity you use.

Optimise every point in your supply chain

Driving sales isn't the only way to increase your bottom line. Save money by streamlining your supply chain, reducing support costs, and increasing satisfaction with your suppliers and sellers through online self-service portals. Improve inventory management and reduce shipping costs using order information and historical customer data.

Focus on driving sales, not managing IT infrastructure

Your core business is selling. Not IT. Take advantage of pre-built services in the cloud to create an e-commerce solution that enhances your sales performance and leaves the infrastructure management to your cloud provider.

DevOps

Bring together people, processes and products to enable continuous delivery of value to your end users
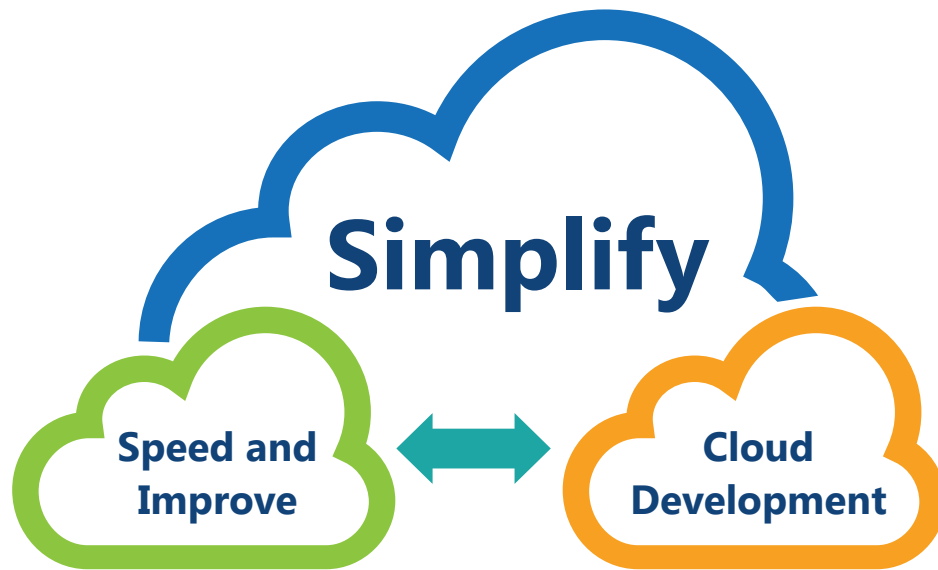
Continuous integration (CI)

Take advantage of continuous integration to improve software development quality and speed. When you use Visual Studio Team Services or Jenkins to build apps in the cloud and deploy to Azure, each time you commit code, it's automatically built and tested—so bugs are detected faster.

Continuous delivery (CD)

Ensure that code and infrastructure are always in a production-deployable state, with continuous delivery. By combining continuous integration and infrastructure as code (IaC), you'll achieve identical deployments and the confidence you need to manually deploy to production at any time.

Continuous deployment with CI/CD

With continuous deployment, you can automate the entire process from code commit to production if your CI/CD tests are successful. Using CI/CD practices, paired with monitoring tools, you'll be able to safely deliver features to your customers as soon as they're ready.

Increase reliability and repeatability

Automate provisioning and configuration of environments using IaC. Capture environment definitions as declarative code, such as JSON or YAML. Then, reliably provision an identical environment with DevOps tools including Azure Resource Manager, Terraform, or Ansible.
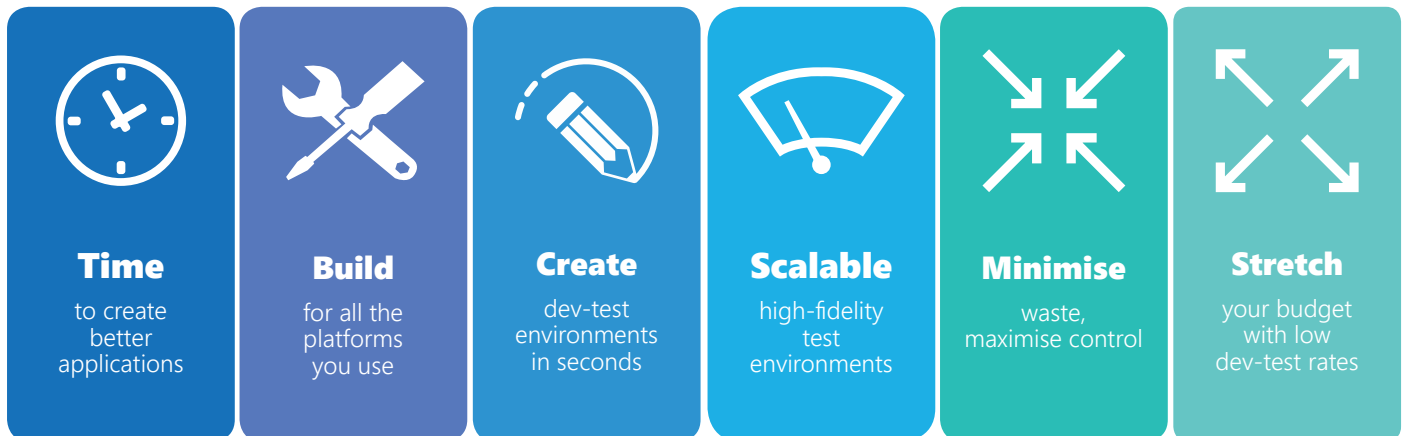
Get actionable insights

Monitor infrastructure health with Log Analytics and Azure Monitor and integrate into existing dashboards like Grafana or Kibana. Application Insights provides actionable insights through application performance management and instant analytics.

Enhance compliance and security

Using DevOps tools such as Chef Automate or Azure Policy, you can manage provisioned infrastructure and applications to ensure compliance. Combined with services like Azure Security Centre, you'll limit your exposure to threats and quickly find and remediate vulnerabilities.

Development and Test

Simplify and speed up the process of building and testing applications across every platform.

Time to create better applications	**Build** for all the platforms you use	**Create** dev-test environments in seconds	**Scalable** high-fidelity test environments	**Minimise** waste, maximise control	**Stretch** your budget with low dev-test rates

Get more time to create better applications

Let your developers do what they do best—build great applications. Using development testing solutions, you'll significantly reduce the time and hassle of managing development efforts so your team can maintain its focus on application development.

Build for all the platforms you use

Heterogeneous environments are the norm rather than the exception. Bring cross-platform functionality to your dev-test environment and use your preferred coding language to natively build and test your applications on the devices and platforms you use today—from Linux to Windows to iOS and Android.

Create dev-test environments in seconds, not weeks

Simplify and speed the process of running a dev-test environment. Provision virtual machines in seconds, instead of days or weeks. And unlike other cloud providers, you only pay by the minute. Spin up as many virtual machines as you need, network them, and allocate to your developers. Manage your environment with agility, whether you support self-provisioning by your developers, or maintain entralised control.

Scalable, high-fidelity test environments

Replicate real-world usage scenarios in your test environment—and test at production scale to catch and fix problems before you release. If your production environment also runs on Azure, you can create an exact clone and gain a precise view into how your application will behave in the real world.

Minimise waste, maximise control

Get visibility and control on usage of computing resources. Access real-time utilisation data to eliminate wastage and implement chargebacks to internal customers. Advanced automation helps reduce errors, unified management balances access and control, and enterprise-ready governance capabilities enable you to set limits and control costs.

Stretch your budget with low dev-test rates

Enjoy the freedom to experiment using low dev-test rates on Azure. Spin up what you need, when you need it, and explore scenarios before going into production. Reduced rates on Azure are available to Visual Studio subscribers running development and testing workloads, individually or as a team.

Microsoft   Azure

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Monitoring

Gain visibility into the health, performance, and utilisation of your applications, workloads, and infrastructure.

Health

Performance

Utilisation

Separate the signal from the noise in log analysis

Collect, correlate, and search your systems and application data to gain insights across on-premises and cloud infrastructures. Manage your SLA more efficiently and gain operational insight by reducing the time you spend searching for anomalies across your complex hybrid IT environment.

See the full picture in meaningful detail

Get a comprehensive view of applications and network dependencies across servers, processes, and services from Microsoft and others. Isolate problems and accelerate root-cause analysis across any platform, improving the availability and reliability of your applications.

Drive business intelligence through applications monitoring

Convert your rich IT insight to business intelligence that unlocks opportunity and helps focus your efforts. When you know how people are using applications on your network, you know what they need and where to invest for the greatest impact.

Business intelligence

Drive better, faster decision making by analysing your data for deeper insights.

Get the right insight into the right hands

Offer business analysts—and everyone in your organisation—powerful, self-service analytical and BI tools to drive better, faster decision making. Combine data from multiple sources to build tailored reports and create rich analytics that bring your data to life.

Integrate and manage business intelligence securely

Better integrate with existing systems by choosing a feature-rich, enterprise-ready BI platform. Maximize resources, monitor access to data and assets, help ensure security and compliance—and deliver a business intelligence solution designed for the needs of your organisation.

Bring data to life in your apps

Help your customers easily access valuable data on any device at any time. Embed fully interactive and up-to-date visual analytics directly in your apps with ease—without the time and expense of writing code.

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Azure

Microsoft

Big Data and Analytics
Bring together all of the data you need.

Data volumes are exploding—from traditional point-of-sale systems and e-commerce websites to new customer sentiment sources like Twitter and IoT sensors that stream data in real time using Apache Hadoop and Spark. By analysing a diverse dataset from the start, you'll make more informed decisions that are predictive and holistic rather than reactive and disconnected. Make the most informed decision possible by analysing all of the data you need in real time.

Hold onto your most valuable asset—big data

Keep your organisation's data indefinitely, no matter the size. Instead of making cost trade-offs on what data to hold onto, retain your data to meet regulatory and company standards at affordable prices—now possible with Hadoop and Spark technologies and the cloud.

Deliver a personalised experience to customers

Different people want different experiences. Delight your customers with a personalised experience that changes based on their behaviour, even offering recommended products that include dynamic discounts for a personalised shopping experience. Give suppliers a predictive list of things to purchase based on current order information and historical customer data.

Create a more cost-effective supply chain

Integrate big data from across the enterprise value chain and use advanced analytics in real time to optimise supply-side performance and save money. Embrace proactive measures with a live view into your supply chain—assess inventory levels, predict product fulfilment needs, and identify potential backlog issues.

Be more efficient in everything you do

Uncover insights buried in your data to optimise the way you do business. Whether organising human resources, managing supply chains, or forecasting staff and customer needs, understanding the factors that affect operational efficiency is essential to streamlining your business.

Data Warehouse
Handle exponential data growth without leaving security, scalability, or analytics behind

Enable transformative data insights
Transform your business through predictive analytics over all of your data with tools you already know and love—Power BI, Excel, and third-party BI tools. Plus, seamless compatibility with machine learning, ingestion, data movement, and data store services ensures transformative insights over all your data.

Scale with more freedom

No need to over-provision or over-pay. Decoupled storage and compute models give you more freedom to easily scale your environment. Plus, the ability to pause compute gives you even more budget flexibility for batched-based workloads. With Azure data warehouse solutions, you can ingest all your data with no trade-offs.

Get up and running quickly

Provision a data warehouse solution in 3 to 5 minutes. Azure uniquely scales your compute in seconds—delivering the promise of cloud elasticity to data warehousing. Use T-SQL skills to ingest and query data from on-premises and cloud sources—all for approximately 10x the value of traditional solutions.

Protect and help secure data

Gain multiple layers of data protection—starting with data encryption and auditing. Azure uniquely offers threat detection which functions like an alarm system over your data. Also, support for Azure Active Directory helps limit BI access to the appropriate subset of the data to further support compliance policies.

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What is Blockchain?

Blockchain is a transformational technology with the potential to extend digital transformation beyond a company's walls and into the processes it shares with suppliers, customers, and partners. At its core, blockchain is a data structure that is used to create a digital transaction ledger that, instead of resting with a single provider, is shared among a distributed network of computers.

The result is a more open, transparent, and verifiable system that will fundamentally change the way we think about exchanging value and assets, enforcing contracts, and sharing data. A growing number of enterprises are investing in blockchain as a secure and transparent way to digitally track the ownership of assets across trust boundaries, reimagine shared business processes, and create new models for cross-organisational collaboration.

A cryptographically secure, shared, distributed ledger
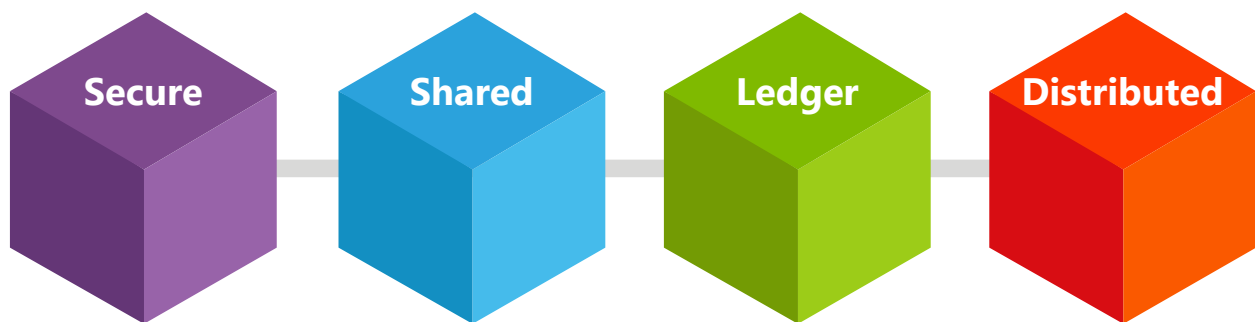
Cryptographically secure

Blockchain applies tried-and-true digital-signature technology to create transactions that reduce fraud and establish trust and accountability

Shared

Blockchain's gain value as they are shared. As more organisations or companies participate—even competitors—the more streamlined the process will be, and the greater the value.
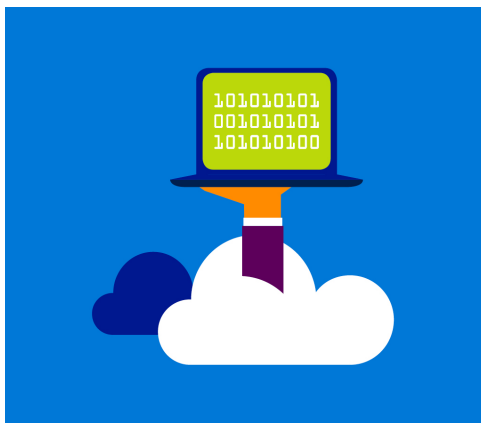
Ledger

A ledger is a write-once-read-many database that is an immutable record of every transaction. If a mistake is made, you must post a compensating transaction to correct it—no updating or deleting is allowed.

Distributed

The more replicas there are, the more authentic the ledger becomes.

Why blockchain on Azure?

Microsoft is bringing blockchain to the enterprise, working with customers, partners, and the blockchain community to continually advance its enterprise readiness. The vendor's mission is to help companies thrive in this new era of secure multiparty collaboration by delivering platforms and services that any company—including ledger startups, retailers, health providers, and global banks—can use to improve shared business processes.

As an open, flexible, and scalable platform, Azure supports a rapidly growing number of distributed ledger technologies that address specific business and technical requirements for security, performance, and operational processes. The Azure Data and AI platform provides unique off-chain data-management and analysis capabilities that no other platform offers. And the vast Microsoft partner ecosystem extends the capabilities of the platform and services in unique ways that fit specific workload and industry needs.

Azure provides a rapid, low-cost, low-risk, and fail-fast platform for organisations to collaborate on by experimenting with new business processes—and it's all backed by a cloud platform with the largest compliance portfolio in the industry.

Blockchain on your terms

Get started on the blockchain that best fits your scenario with easy-to-deploy templates for the most popular ledgers. Whether you're modelling your shared process through a single-member proof of concept or building a multimember consortium, Azure has tools that reduce the time you spend building and configuring your blockchain's network infrastructure, so you can focus on building your workflows and smart contracts.

Integrated with your business

Build and connect distributed applications, and integrate Blockchain with the cloud services and tools your organisation already uses to manage its shared business processes.

PART 6:
# Serverless Computing

The Promise of Serverless Computing

What if you could spend all your time building and deploying great apps,
and none of your time managing servers?

Serverless computing lets you do just that because the infrastructure you need to run and scale your apps, is managed for you. Focus your efforts on your business. Redirect resources from infrastructure management into innovating and bringing apps to market faster.

What is serverless computing?

Serverless computing is the abstraction of servers, infrastructure, and operating systems. When you build serverless apps you don't need to provision and manage any servers, so you can take your mind off infrastructure concerns. Serverless computing is driven by the reaction to events and triggers happening in near-real-time—in the cloud. As a fully managed service, server management and capacity planning are invisible to the developer, and billing is based just on resources consumed or the actual time your code is running in the environment.
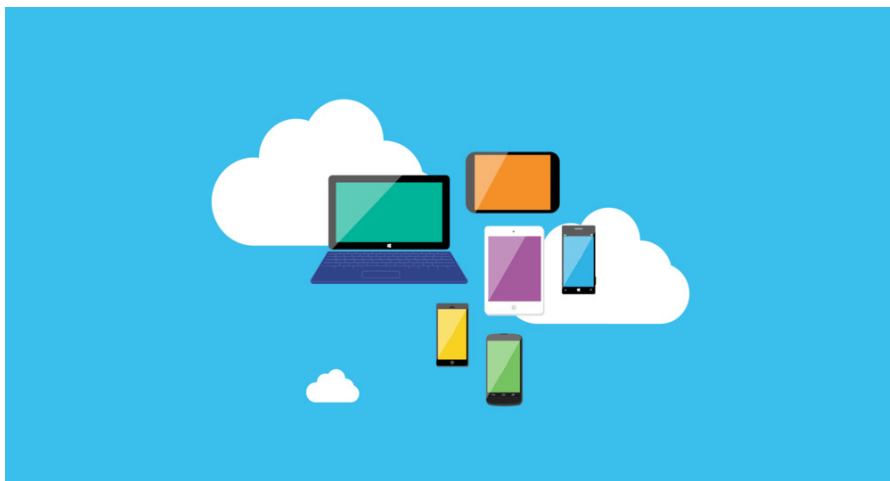
Why build serverless applications?

Benefit
from a fully managed service

Flexibility
scale concurrent functions instantly

Only Pay
for resources you use

Benefit from a fully managed service

Spare your team the burden of managing servers. By using fully managed services, you focus on your business logic and avoid administrative tasks. With serverless architecture you simply deploy your code, and it runs with high availability.

Scale flexibly

Serverless computing scales from nothing to handle to tens of thousands of concurrent functions almost instantly (within seconds), to match any workload, and without requiring scale configuration—it reacts to events and triggers in near-real time.

Only pay for resources you use

With serverless architecture, you only pay for the time your code is running. Serverless computing is event-driven, and resources are allocated as soon as they're triggered by an event. You're only charged for the time and resources it takes to execute your code—through sub-second billing.

Microsoft

Contact Westcon-Comstor today, we are a global leading company in Azure expertise.

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