



Azure Fundamentals

Lesson Objectives

At the end of this module you will be able to:

- ✓ Understand the fundamentals of Microsoft Azure
- ✓ Get an overview of Azure services
- ✓ Get an idea of Azure portal and its navigation



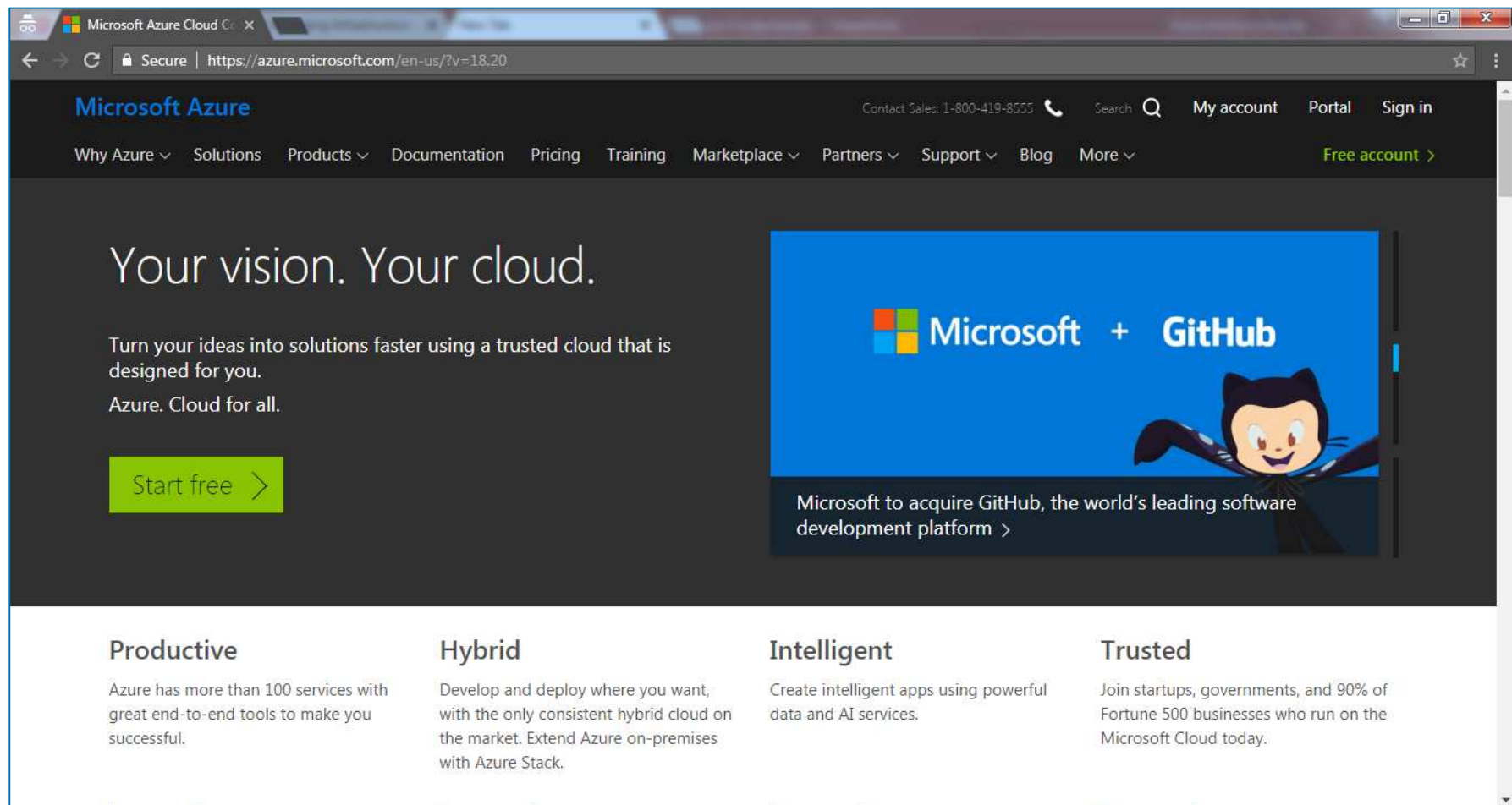
Microsoft Azure



- Microsoft Azure is a comprehensive cloud platform that enables solutions based on individual challenges and needs - with the benefits of a public cloud service.
- Azure can be described as a growing collection of integrated cloud services that developers and IT professionals can use to build, deploy, and manage applications through a global network of datacenters.



Getting Started with Azure

A screenshot of the Microsoft Azure website homepage. The browser window shows the URL https://azure.microsoft.com/en-us/?v=18.20. The page has a dark header with the Microsoft Azure logo, contact information, and navigation links. The main content area features the headline "Your vision. Your cloud." and a "Start free" button. To the right is a banner for the Microsoft + GitHub partnership. Below this are four columns: Productive, Hybrid, Intelligent, and Trusted, each with a brief description of Azure's capabilities in that area.

Microsoft Azure

Contact Sales: 1-800-419-8555 Search My account Portal Sign in

Why Azure Solutions Products Documentation Pricing Training Marketplace Partners Support Blog More


Free account >

Your vision. Your cloud.


Turn your ideas into solutions faster using a trusted cloud that is designed for you.

Azure. Cloud for all.

Start free >



Microsoft + GitHub



Microsoft to acquire GitHub, the world's leading software development platform >

Productive

Azure has more than 100 services with great end-to-end tools to make you successful.

Hybrid

Develop and deploy where you want, with the only consistent hybrid cloud on the market. Extend Azure on-premises with Azure Stack.

Intelligent

Create intelligent apps using powerful data and AI services.

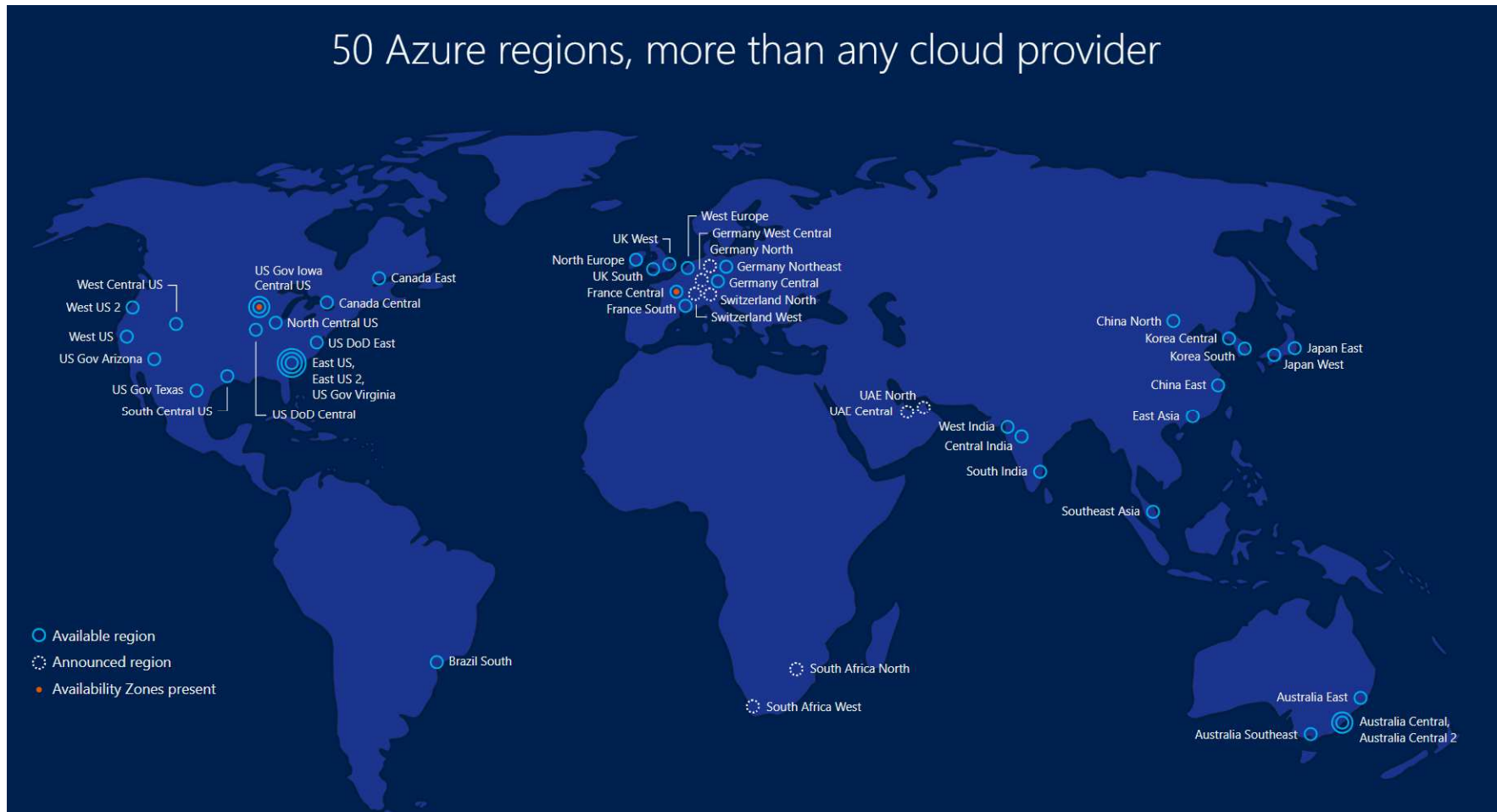
Trusted

Join startups, governments, and 90% of Fortune 500 businesses who run on the Microsoft Cloud today.

Azure Datacenters



50 Azure regions, more than any cloud provider



Source: azure.microsoft.com

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Confidence in the trusted cloud



- Azure has more comprehensive compliance coverage with more than 70 compliance offerings



ISO/IEC



CSA/CCM



ITAR



CJIS

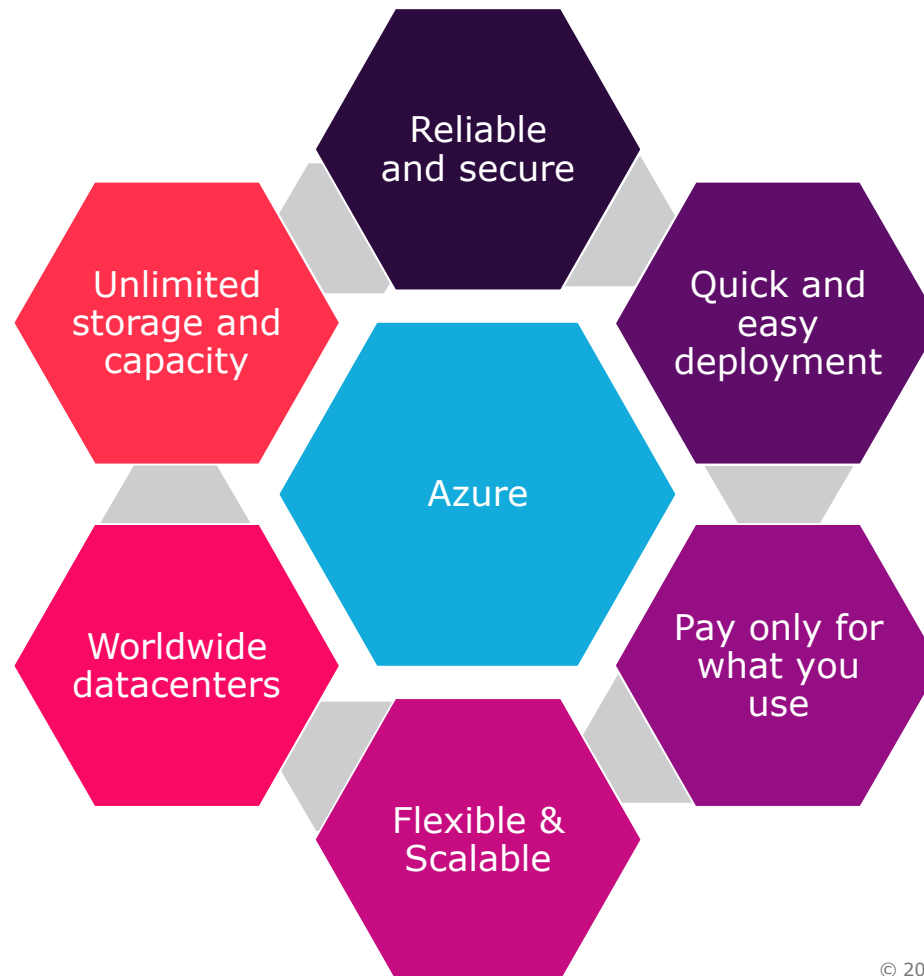


HIPAA



IRS
1075

Benefits of Microsoft Azure





Azure Services

- The world of Azure is large and changes fast. Currently there are 89 main services.

Monitoring

Security

Database

App Service

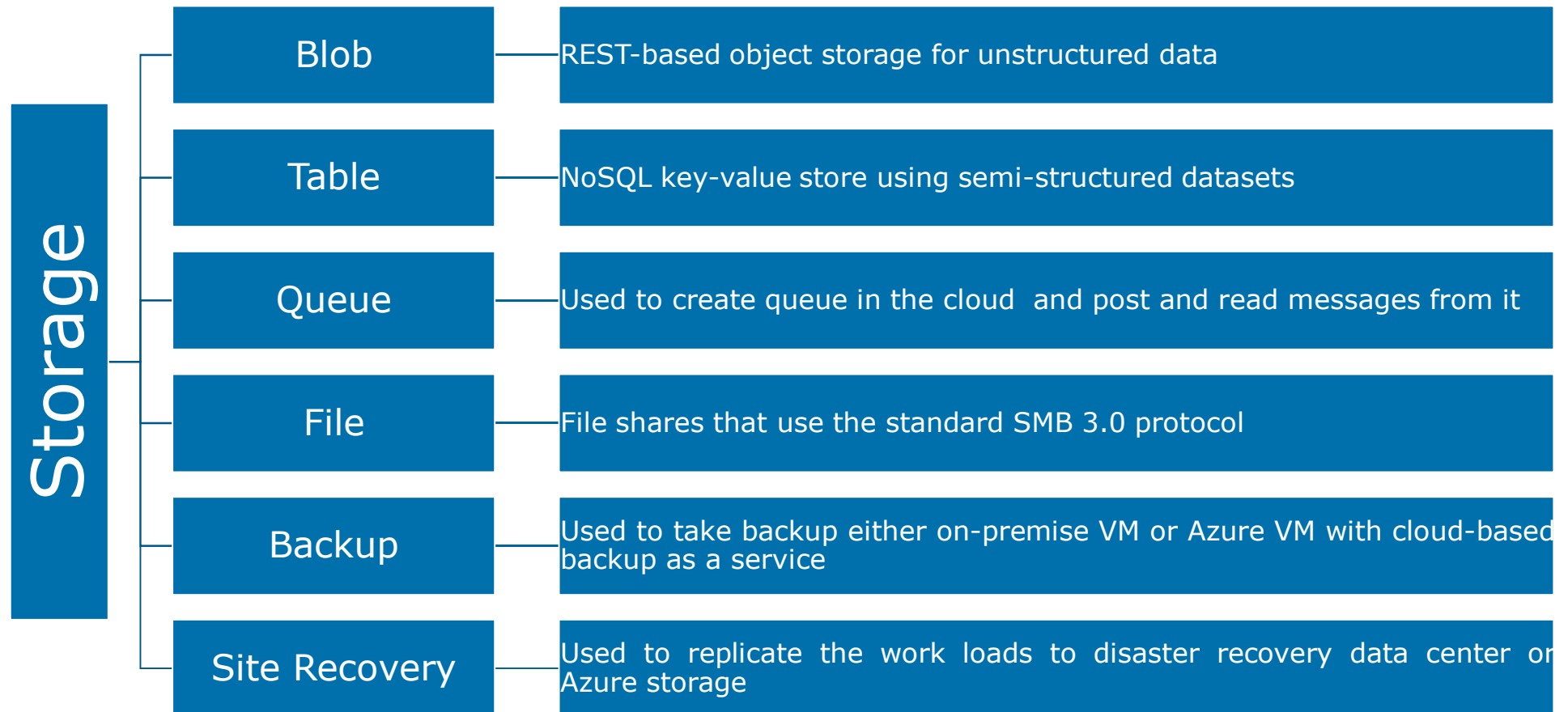
Compute

Network

Storage

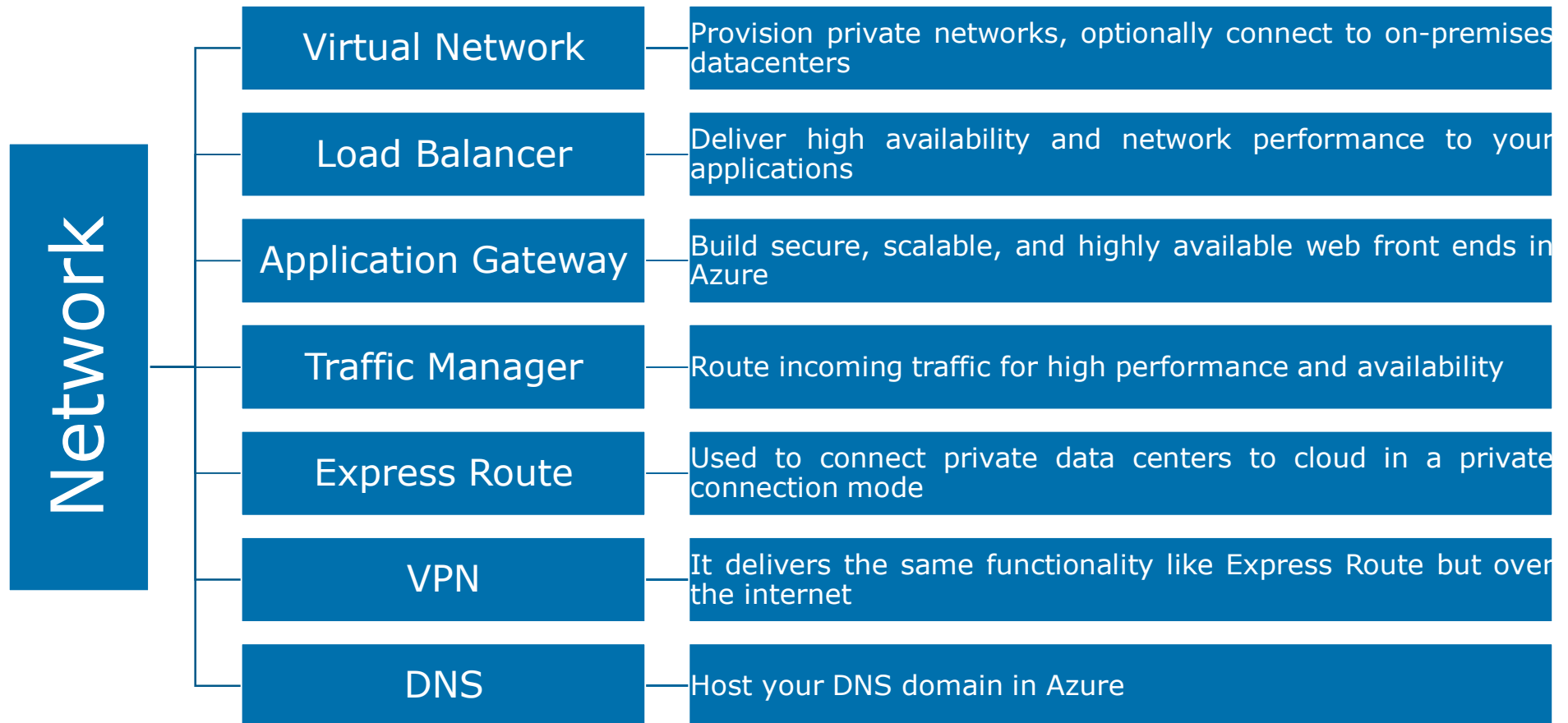


Azure Storage Service



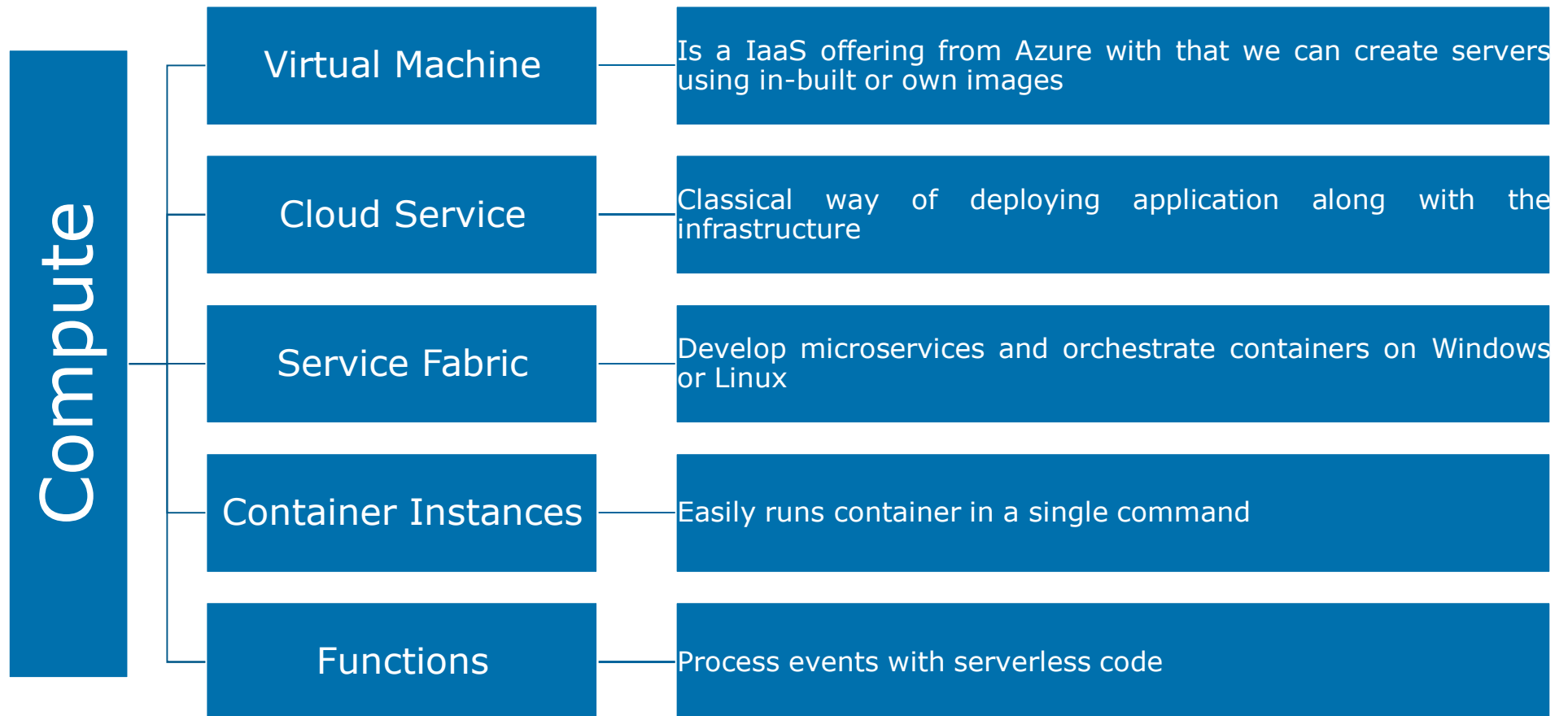


Azure Network Service



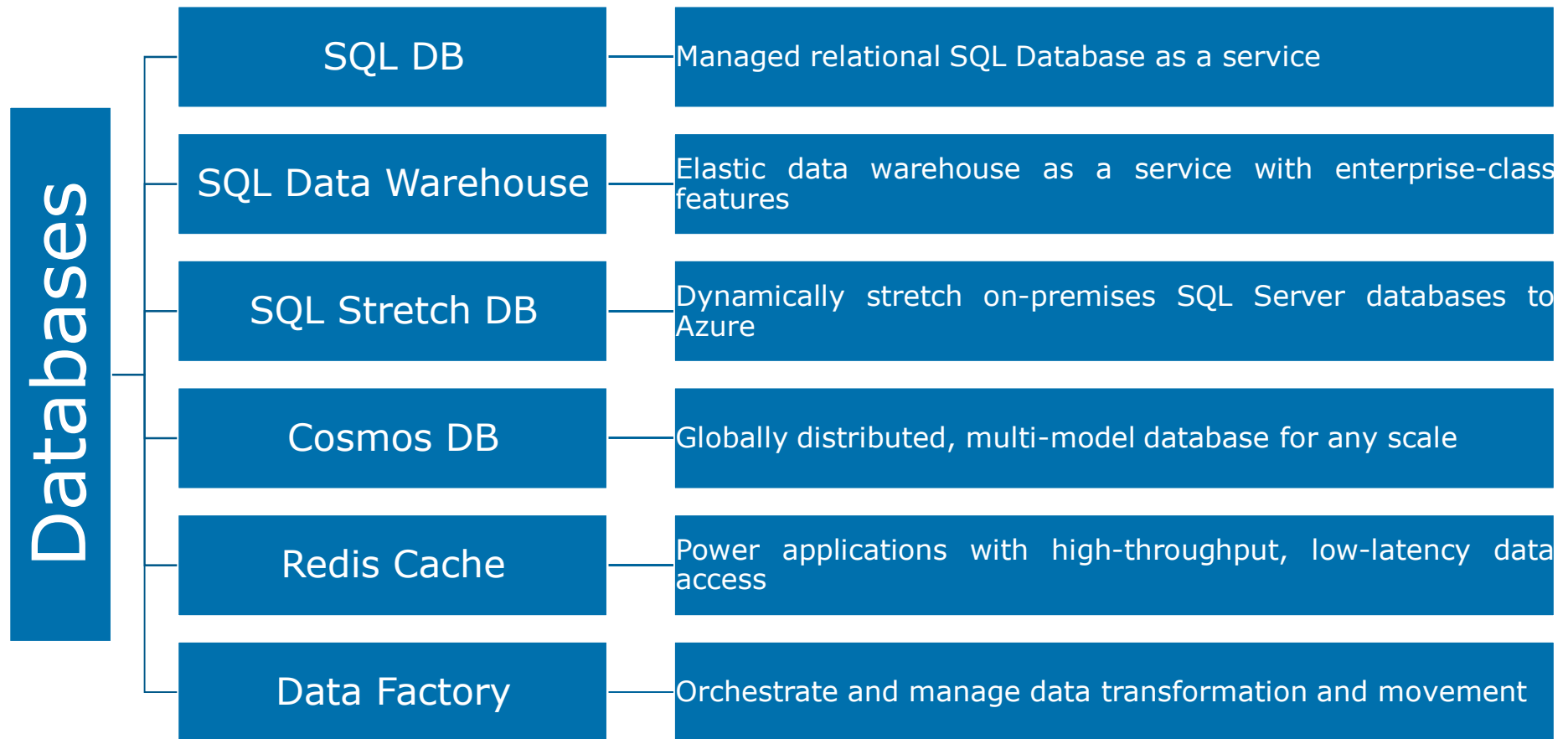


Azure Compute Service



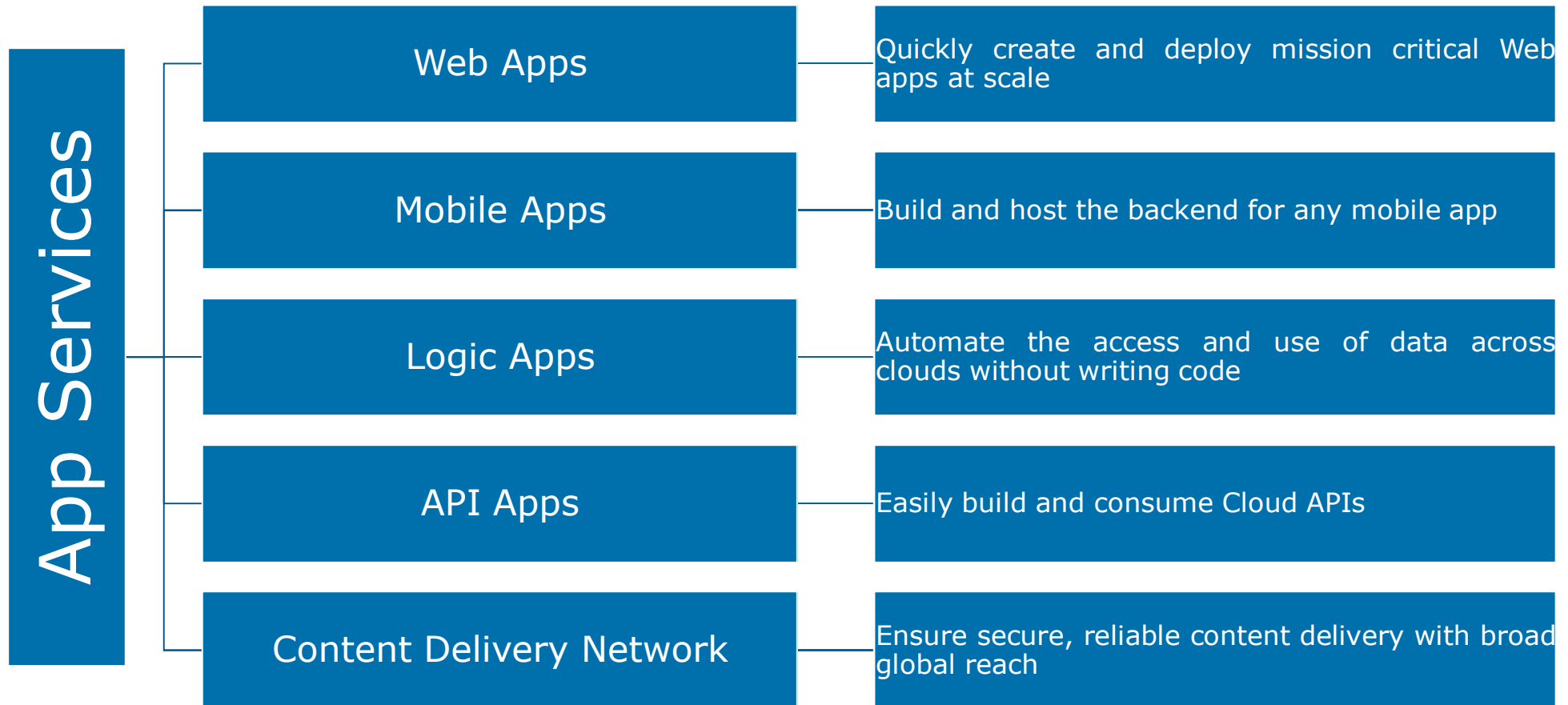


Azure Databases



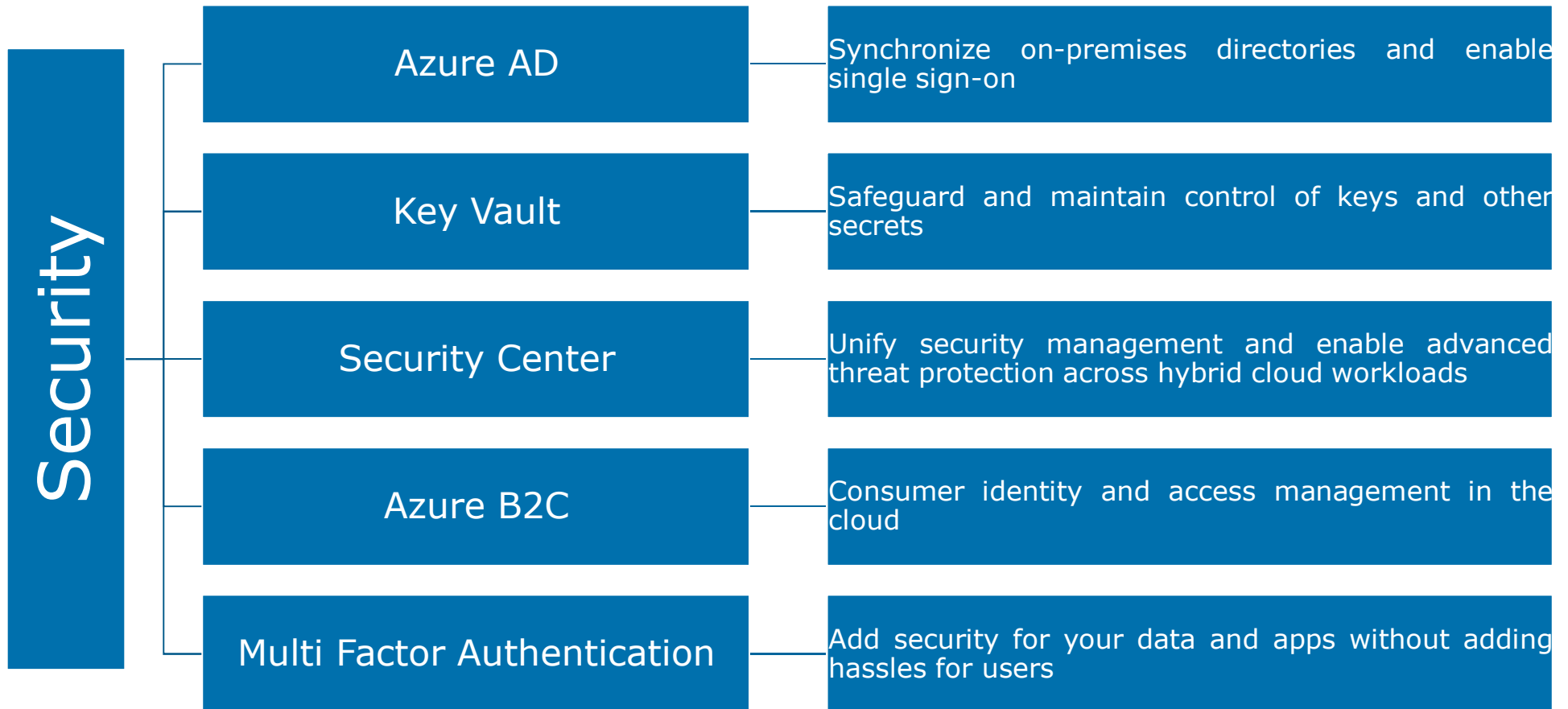


Azure App Services



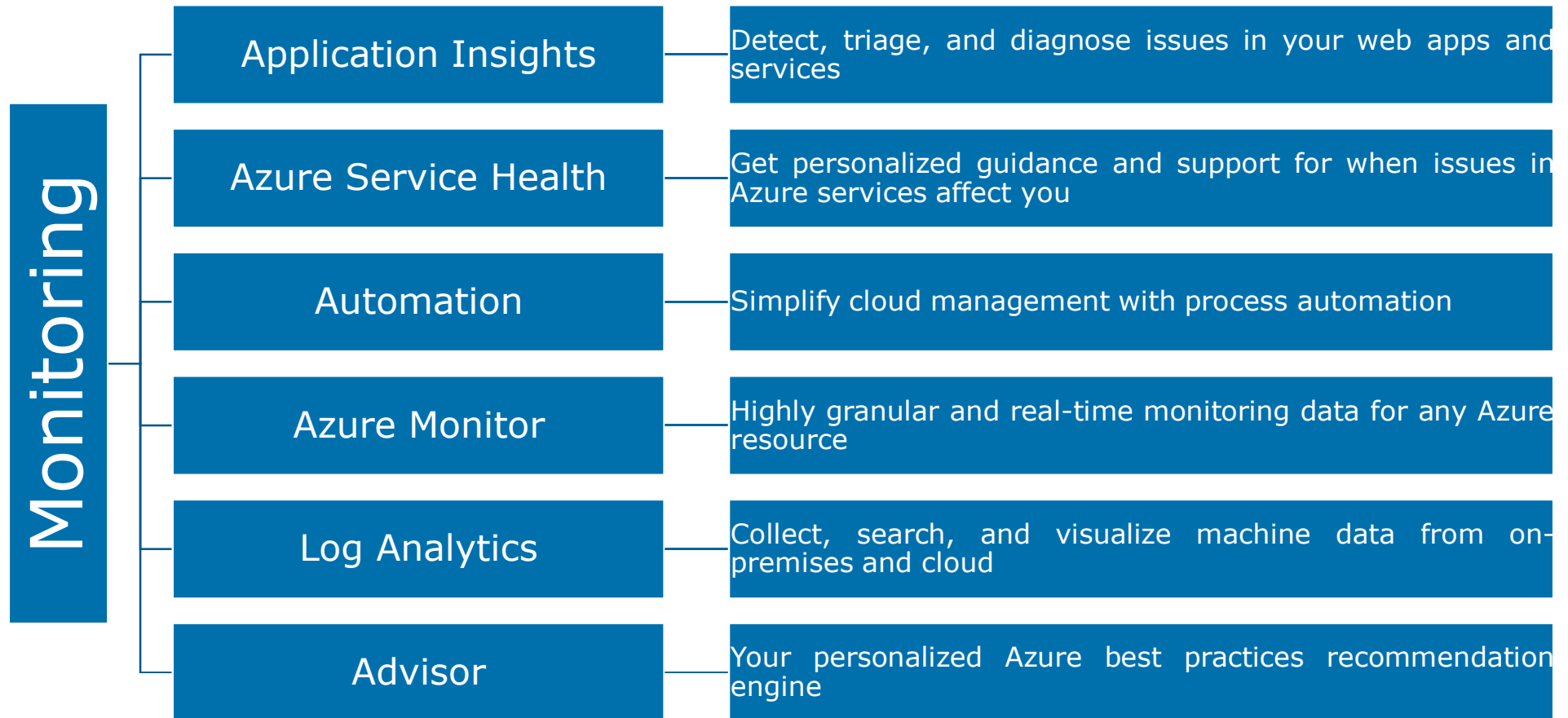


Azure Security





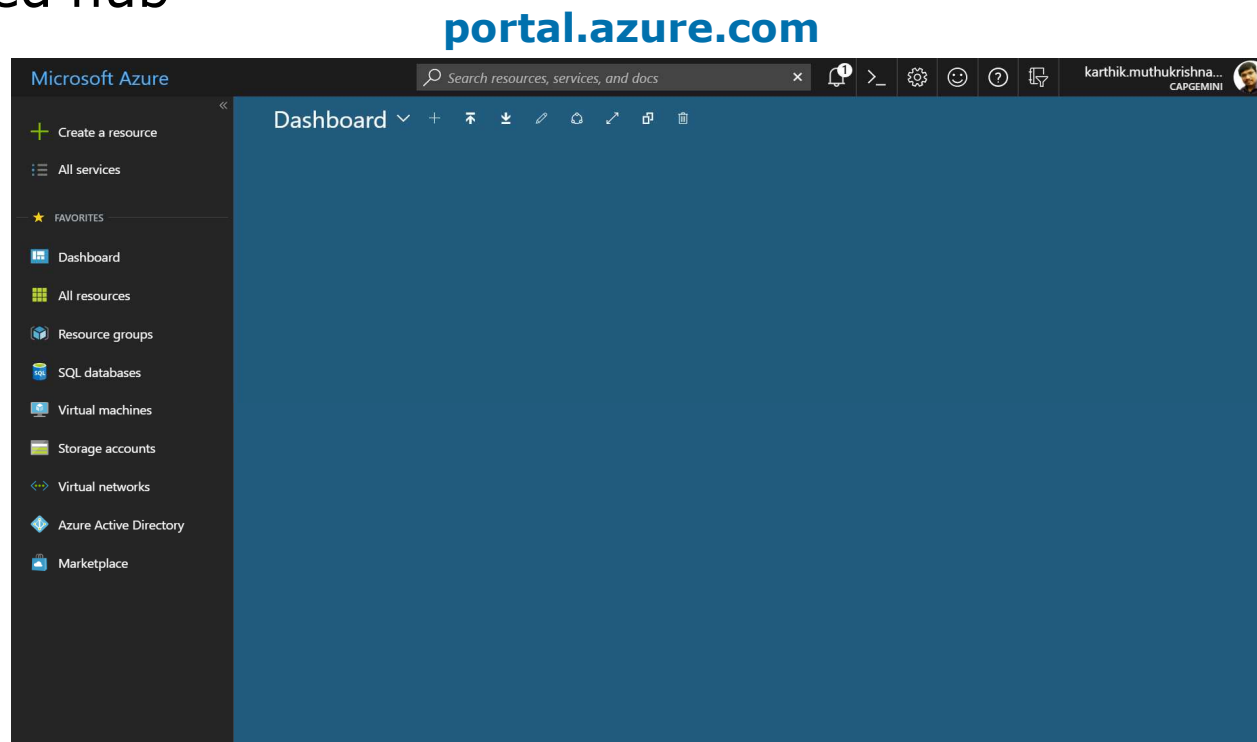
Azure Monitoring





Microsoft Azure Portal

- Azure portal helps us to view and manage all of your applications in one unified hub



Accessing All the Services



Microsoft Azure

Search resources, services, and docs

karthik.muthukrishna... CAPGEMINI

Create a resource

All services

FAVORITES

Dashboard

All resources

Resource groups

SQL databases

Virtual machines

Storage accounts

Virtual networks

Azure Active Directory

Marketplace

All services

All services

Filter

By category

Collapse all | Expand all

GENERAL (14)

- Dashboard
- Recent
- Subscriptions
- Cost Management + Billing
- Marketplace
- Service Health
- Tags
- All resources
- Management Groups
- Resource groups
- Reservations
- Help + support
- Templates
- What's new

PREVIEW

COMPUTE (20)

- Virtual machines
- Virtual machine scale sets
- Function Apps
- Container instances
- Service Fabric clusters
- Kubernetes services
- Virtual machines (classic)
- Container services
- App Services
- Batch accounts
- Cloud services (classic)
- Availability sets

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Notification Icon



The screenshot displays the Microsoft Azure portal interface. On the left is a dark sidebar with navigation options: 'Create a resource', 'All services', and a 'FAVORITES' section containing 'Dashboard', 'All resources', 'Resource groups', 'SQL databases', 'Virtual machines', 'Storage accounts', 'Virtual networks', 'Azure Active Directory', and 'Marketplace'. The top header includes the 'Microsoft Azure' logo, a search bar with the placeholder 'Search resources, services, and docs', and a user profile for 'karthik.muthukrishna... CAPGEMINI'. The main content area is a blue 'Dashboard' with various tool icons. On the right, a 'Notifications' panel is open, showing a message: '₹2,942.81 credit remaining' with a timestamp of '3:32 PM'. The message text states: 'Subscription "Visual Studio Professional" has a remaining credit of ₹2,942.81'. The notification panel includes a 'Dismiss' button and filters for 'Informational', 'Completed', and 'All'.

Portal Settings



The screenshot displays the Microsoft Azure portal interface. On the left is a dark sidebar with navigation links: 'Create a resource', 'All services', 'FAVORITES', 'Dashboard', 'All resources', 'Resource groups', 'SQL databases', 'Virtual machines', 'Storage accounts', 'Virtual networks', 'Azure Active Directory', and 'Marketplace'. The main area shows a blue 'Dashboard' header with various icons. On the right, the 'Portal settings' panel is open, showing options for subscription filters, inactivity settings, themes, high contrast, notifications, language, and regional format. At the bottom of the settings panel are links for 'Restore default settings', 'Export all settings', and 'Delete all settings and private dashboards', followed by 'Apply' and 'Cancel' buttons.

Microsoft Azure

Search resources, services, and docs

Dashboard

Create a resource

All services

FAVORITES

Dashboard

All resources

Resource groups

SQL databases

Virtual machines

Storage accounts

Virtual networks

Azure Active Directory

Marketplace

Portal settings

Looking for the global subscription filter? [click here](#)

Log me out when inactive

Never

Choose a theme

High contrast theme

None White Black

Toast notifications

Enable Disable

Allow double-click on dashboard to change theme

Enable Disable

Language (requires refresh)

English

Regional format (requires refresh)

English (United States)

[Restore default settings](#)

[Export all settings](#)

[Delete all settings and private dashboards](#)

Apply Cancel

Azure Search(resources, services, and docs)



The screenshot displays the Microsoft Azure portal interface. On the left is a dark sidebar with navigation links: 'Create a resource', 'All services', 'FAVORITES', 'Dashboard', 'All resources', 'Resource groups', 'SQL databases', 'Virtual machines', 'Storage accounts', 'Virtual networks', 'Azure Active Directory', and 'Marketplace'. The main content area shows the 'Subscriptions' page for 'Capgemini'. A search bar at the top of the main area contains the text 'Virtual Machine'. A search results dropdown is open, showing categories: 'RESOURCES' (0 results), 'RESOURCE GROUPS' (0 results), 'SERVICES' (with links to 'Free services', 'Virtual machines (classic)', 'Virtual machine scale sets', and 'Virtual machines'), 'MARKETPLACE' (with links to 'Red Hat Enterprise Linux 7.2', 'Ubuntu Server 16.04 LTS', 'SQL Server 2016 SP1 Enterprise on Windows Server 2016', and 'Windows Server 2016 Datacenter'), and 'DOCUMENTATION' (with links to 'Azure virtual machine scale sets overview', 'Azure virtual machine serial console', 'Introduction to Azure Data Science Virtual Machine for ...', and 'Quickstart - Create a Windows VM in the Azure portal ...'). Below the search results, a table is partially visible with columns 'CURRENT COST' and 'STATUS'. The first row shows a cost of '₹457.19' and a status of 'Active'. The URL 'https://portal.azure.com' is visible at the bottom left of the screenshot.

Azure Portal Help



The screenshot displays the Microsoft Azure Portal interface. At the top, the header includes the 'Microsoft Azure' logo, a search bar with the placeholder text 'Search resources, services, and docs', and navigation icons for notifications, settings, and user profile. The user profile section shows the name 'karthik.muthukrishna...' and the organization 'CAPGEMINI'. On the left, a sidebar lists navigation options: 'Create a resource', 'All services', and a 'FAVORITES' section containing 'Dashboard', 'All resources', 'Resource groups', 'SQL databases', 'Virtual machines', 'Storage accounts', 'Virtual networks', 'Azure Active Directory', and 'Marketplace'. The main content area is a solid blue rectangle labeled 'Dashboard'. On the right, a 'Help' sidebar is open, featuring a 'Help + support' button, a description of the help center, and links for 'What's new', 'Launch guided tour', 'Keyboard shortcuts', 'Show diagnostics', and 'Privacy + terms'.

Editing Azure Dashboard



Add, pin, move, and resize your tiles. [Done customizing](#)

Tile Gallery

Find tiles by
General

Categories
All

All resources

Resource groups

Marketplace

ARM Actions

ARM Data

Clock

Video

Quickstart tutorials

Dashboard

Chennai, Kolkata... [Edit](#)

3:52 PM

SATURDAY, MAY 12, 2018

Edit clock

Location:
(UTC+05:30) Chennai, Kolkata, Mumbai, N...

Time format:
12 hour 24 hour

Done Reset

Azure Portal Navigation(Blades)



The screenshot displays the Microsoft Azure portal interface. On the left, the navigation pane includes a 'Create a resource' button, 'All services', and a 'FAVORITES' section with links to Dashboard, All resources, Resource groups, SQL databases, Virtual machines, Storage accounts, Virtual networks, Azure Active Directory, and Marketplace. The main area shows three overlapping blades: 'SQL Database', 'Server', and 'New server'. The 'SQL Database' blade contains fields for Database name, Subscription (Visual Studio Professional), Resource group (Create new), Select source (Blank database), Server (Configure required settings), Want to use SQL elastic pool? (Not now), Pricing tier (Configure required settings), and Collation (SQL_Latin1_General_CP1_CI_AS). The 'Server' blade shows a 'Create a new server' button and 'No servers found'. The 'New server' blade contains fields for Server name, Server admin login, Password, Confirm password, Location (Southeast Asia), and a checkbox for 'Allow azure services to access server'. A 'Select' button is at the bottom of the 'New server' blade.

Azure Marketplace



Microsoft Azure

Search resources, services, and docs

Home > Marketplace > Everything

Marketplace

My Saved List 0

Everything

Filter

Search Everything

Red Hat Enterprise Linux 7.5

Red Hat

Red Hat Enterprise Linux 7 is the world's leading enterprise platform built to meet the needs of today's modern enterprise.

Create

Users interested in Virtual network also viewed

Windows Server 2016 Datacenter

Virtual network

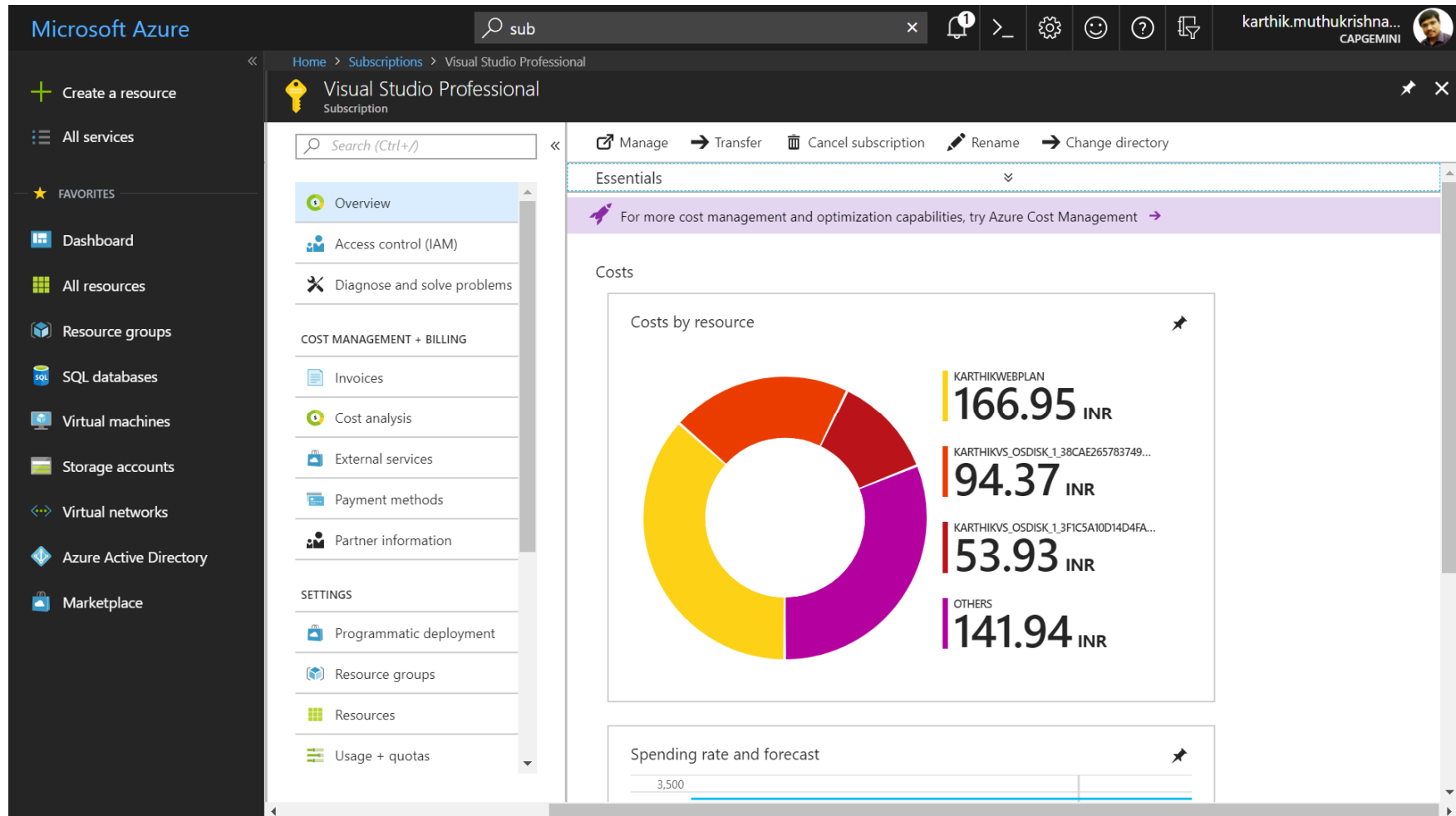
Network security

Storage account - Ultra Fast Blob

Windows Server 2012 R2

Load

Azure Subscription Details



Azure Free Services



Microsoft Azure







Free services

Home > Free services

Free services

Services free for 12 months with the Azure free account

Services that are included for free with your Azure free account. You can use these services within the limits listed below without getting charged. To learn more, see the [Azure free account FAQ](#)

 Windows Virtual Machine COMPUTE	 Linux Virtual Machine COMPUTE	 Azure Managed Disks STORAGE
750 hours B1S	750 hours B1S	64 GB x 2
Create Windows virtual machines with on-demand capacity in seconds. Learn more	Create Linux virtual machines with on-demand capacity in seconds. Learn more	Get premium, secured disk storage for Azure Virtual Machines with simplified management. Learn more
Create	Create	
 Azure Blob Storage STORAGE	 Azure File Storage STORAGE	 SQL Database DATABASES
5 GB LRS hot block	5 GB LRS File Storage	250 GB

Azure Developer Tools



- Although Azure portal is a great way to work with Azure resources, Microsoft offers a comprehensive set of development tools for any developer using any platform or language to deliver cloud applications.

Tool	Description
Visual Studio	Get all the power and capabilities you need to easily develop, debug, deploy, manage and diagnose cloud-scale applications on Azure, using a full-featured IDE
Visual Studio Code	Edit and debug code quickly with a lightweight code editor that runs on macOS, Linux and Window streamlined for building and deploying Node.js and Java apps to the cloud using serverless computing, containers or managed Web Apps
SDKs	Download and install language-specific SDKs and tools for your platform of choice, including .NET, Java, Node.js, Python and Go
CLIs	Use a Azure CLI / PowerShell command-line interface to create and manage services and automate everyday tasks in Azure
REST APIs	REST APIs allow us to interact with nearly every type of resource in Azure programmatically

Summary



- Microsoft Azure is an open, flexible, enterprise-grade cloud computing platform
- Azure gives customers the flexibility to deploy applications where they need to by providing more global regions than any other cloud provider
- Using Azure Portal you can view and manage all of your applications in one unified hub and stay on top of the things that matter most by pinning them to your dashboard



Summary



- Azure Marketplace is the premier destination for all your software needs which is certified and optimized to run on Azure
- The Azure CLI 2.0 is Microsoft's cross-platform command line experience for managing Azure resources
- Azure PowerShell provides a set of cmdlets that use the Azure Resource Manager model for managing your Azure resources.
- REST APIs allow us to interact with nearly every type of resource in Azure programmatically





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