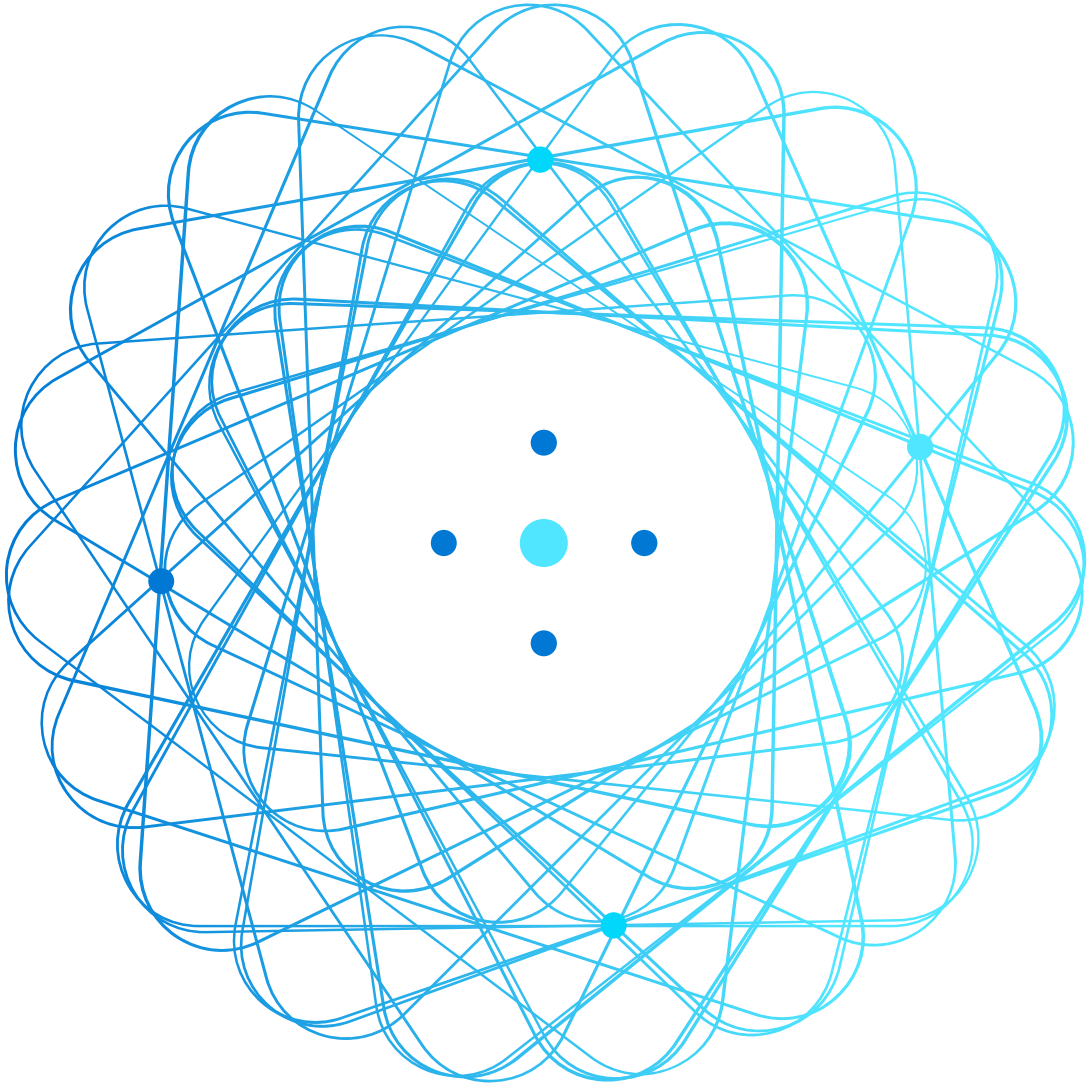
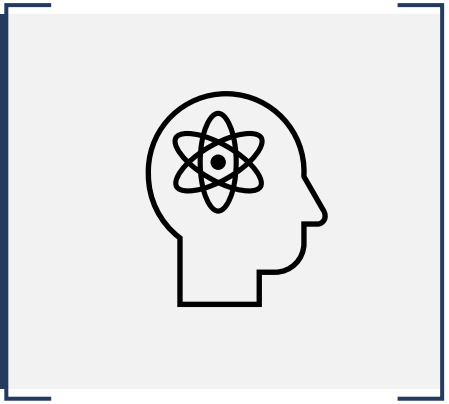
Microsoft Azure

AZ-900T0x Module 06: Azure pricing and lifecycle



Module Outline

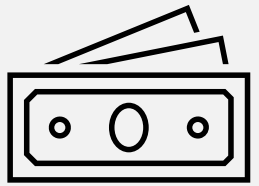


Module 06 – Outline

You will learn the following concepts:

- **Methods for managing costs**
  - Factors affecting costs
  - Options to reduce and control costs
  - Azure Cost Management
- **Service Level Agreements and Lifecycles**
  - Azure Service Level Agreement (SLA)
  - Factors impacting SLAs
  - Azure product and feature lifecycle

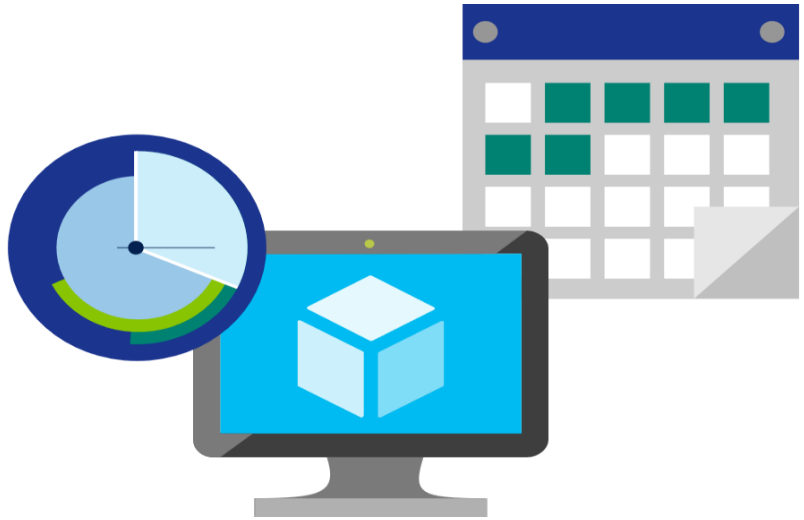
Planning and Cost Management



Planning and Cost Management - Objective Domain

- Identify factors that can affect costs (resource types, services, locations, ingress and egress traffic)
- Identify factors that can reduce costs (reserved instances, reserved capacity, hybrid use benefit, and spot pricing)
- Describe the functionality and usage of the Pricing calculator and the Total Cost of Ownership (TCO) calculator
- Describe the functionality and usage of Azure Cost Management

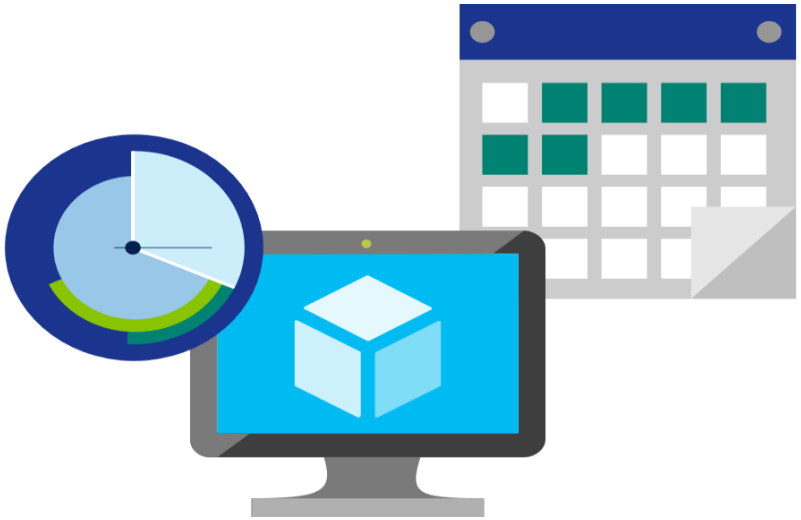
Factors affecting costs (part 1)



There are six primary factors affecting costs:

1) Resource Type	2) Services	3) Location
Costs are resource-specific, so the usage that a meter tracks and the number of meters associated with a resource, depend on the resource type.	Azure usage rates and billing periods can differ between Enterprise, Web Direct, and CSP customers.	The Azure infrastructure is globally distributed, and usage costs might vary between locations that offer Azure products, services, and resources.

Factors affecting costs (part 2)



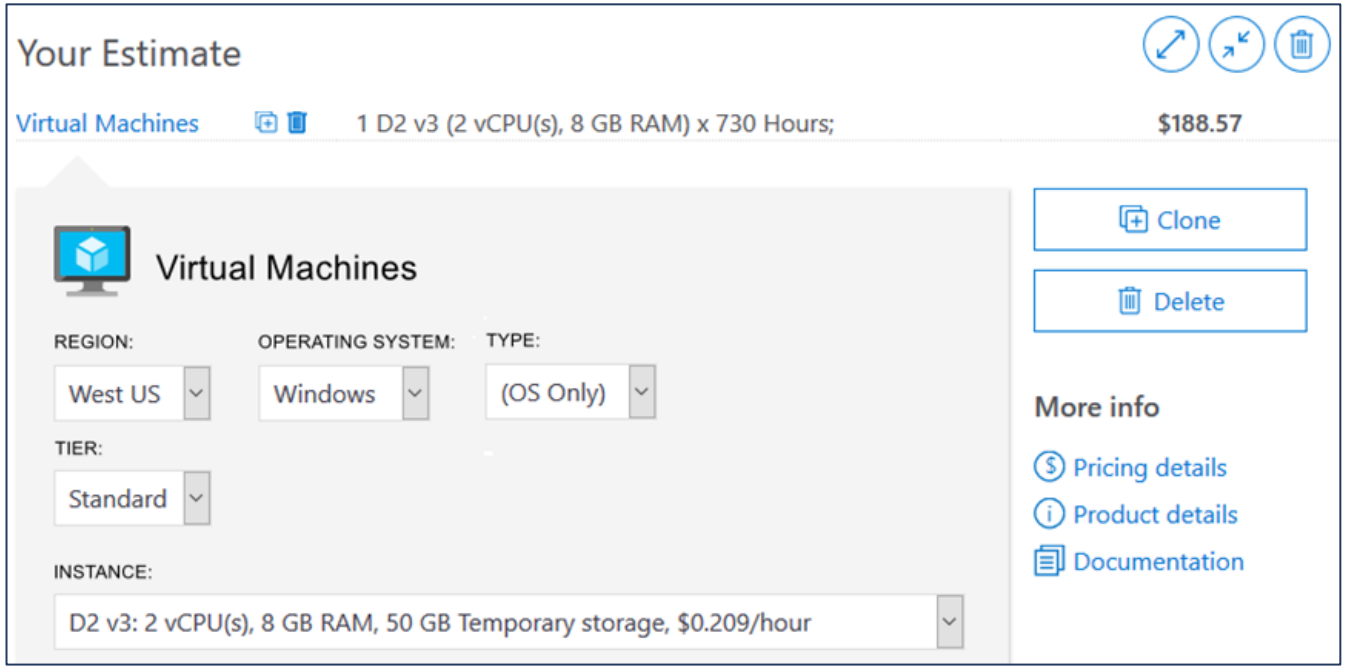
There are six primary factors affecting costs:

4) Bandwidth	5) Reserved Instances	6) Azure Hybrid Use Benefit
Some inbound data transfers are free, such as data going into Azure datacenters. For outbound data transfers, such as data going out of Azure datacenters, pricing is based on Zones.	With Azure Reservations, you commit to buying one-year or three-year plans for multiple products. Reservations can significantly reduce your resource costs up to 72% on pay-as-you-go prices.	For customers with Software Assurance, Azure Hybrid Benefit allows you to use your on-premises licenses on Azure at a reduced cost.

Pricing Calculator

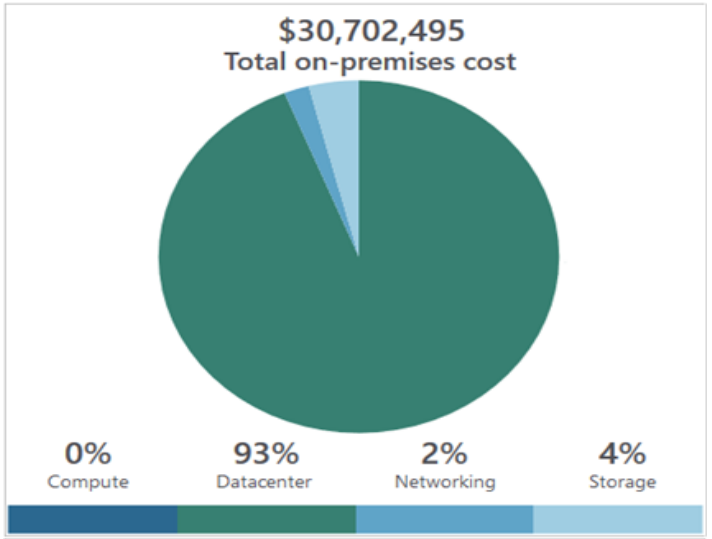
The **Pricing Calculator** is a tool that helps you estimate the cost of Azure products. The options that you can configure in the Pricing Calculator vary between products, but basic configuration options include:

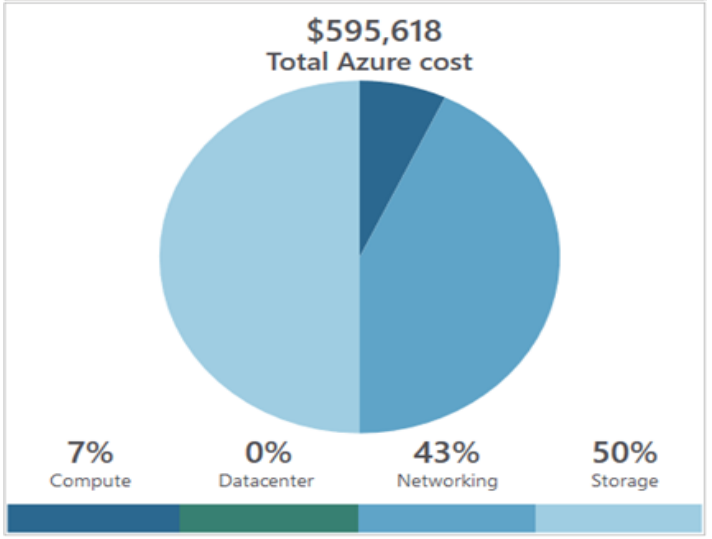
- Region
- Tier
- Billing options
- Support options
- Programs and offers
- Azure dev/test pricing



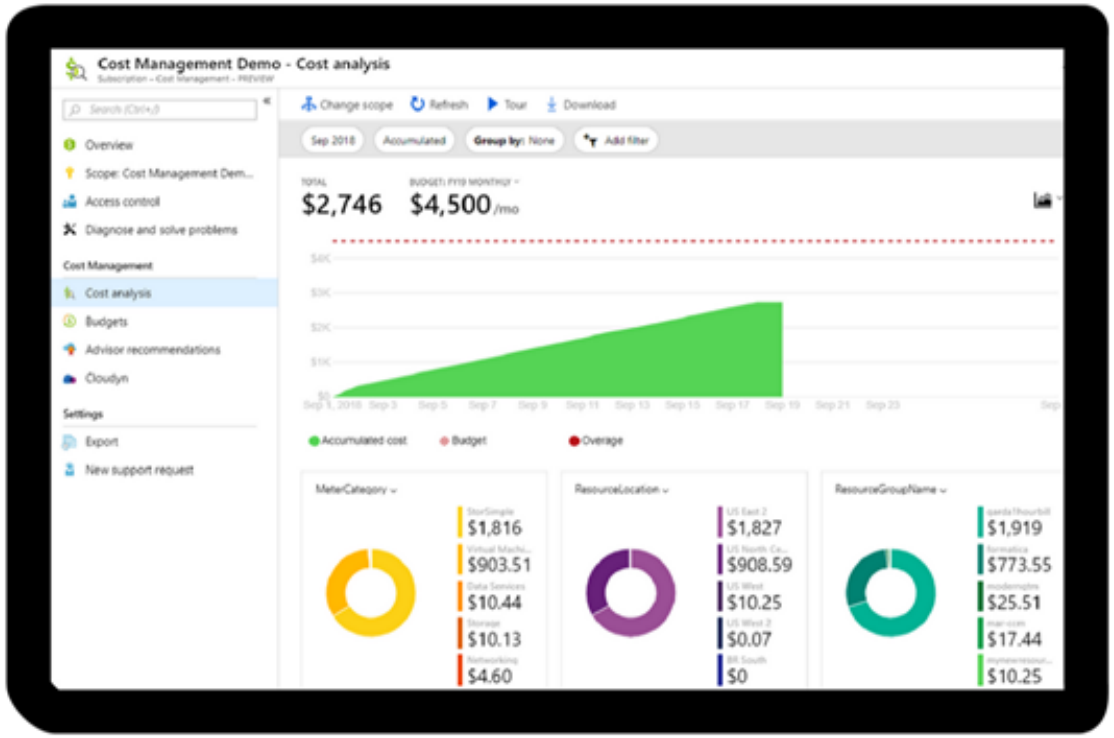
Total Cost of Ownership Calculator

- A tool to estimate cost savings you can realize by migrating to Azure.
- A report compares the costs of on-premises infrastructures with the costs of using Azure products and services in the cloud.





Azure Cost Management

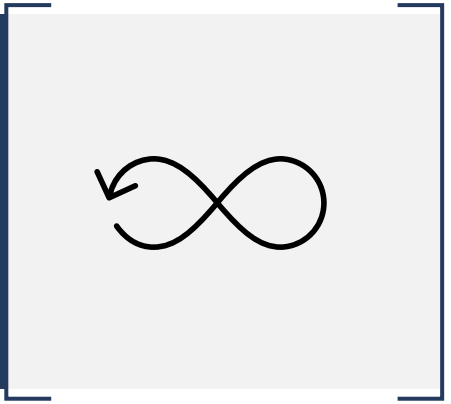


- Reporting – billing reports
- Data enrichment
- Budgets – set spend budget
- Alerting – when cost exceed limits
- Recommendation – cost recommendations

Minimizing costs

Perform	Perform cost analyses. Use the **Azure Pricing** and **TCO calculators.**
Monitor	**Monitor usage** with **Azure Advisor**. Implement recommendations.
Use	Use **spending limits**. Use via free trial customers and some credit-based Azure subscriptions.
Use	Use **Azure Reservations and Azure Hybrid Benefit (HUB)**.
Choose	Choose **low-cost locations** and regions. If possible, use low-cost locations.
Keep	**Keep up-to-date** with the latest Azure customer and subscription offers.
Apply	Apply tags to identify **cost owners**. Identify usage owners with tags.

Azure SLAs and service lifecycles



Azure SLAs and service lifecycles - Objective Domain

- Describe the purpose of an Azure Service Level Agreement (SLA)
- Identify actions that can impact an SLA (i.e. Availability Zones)
- Describe the service lifecycle in Azure (Public Preview and General Availability)

Service Level Agreements (SLAs)

Service Level Agreements (SLAs) describes Microsoft's commitments for uptime and connectivity.

- SLAs are based on individual products and services.
- Detailed agreements on the service provided, and any exceptions to the SLA.
- Free and preview features/services do not offer SLAs.

SLAs for Azure products and services

- Performance targets are expressed as uptime and connectivity guarantees.
- Performance-targets range from 99% to 99.999%.
- If a service fails to meet the guarantees, a percentage of the monthly service fees can be credited.

SLA	Downtime per month
99%	7h 18m 17s
99.5%	3h 39m 8s
99.9%	43m 49s
99.95%	21m 54s
99.99%	4m 22s
99.999%	26s

Actions that affect SLAs

Lower your SLA

- Adding more services
- Choosing free or non-SLA services

Raise your SLA

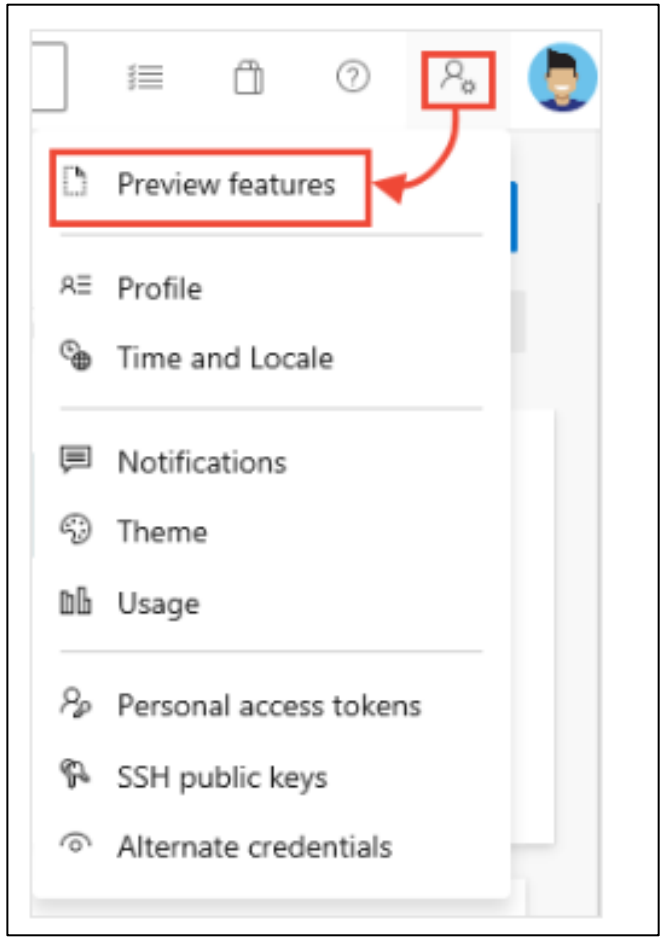
- Availability Zones
- Redundant systems

Many factors can raise or lower your SLA. Design decisions based on business goals will drive your SLA goals.

Azure Preview Program

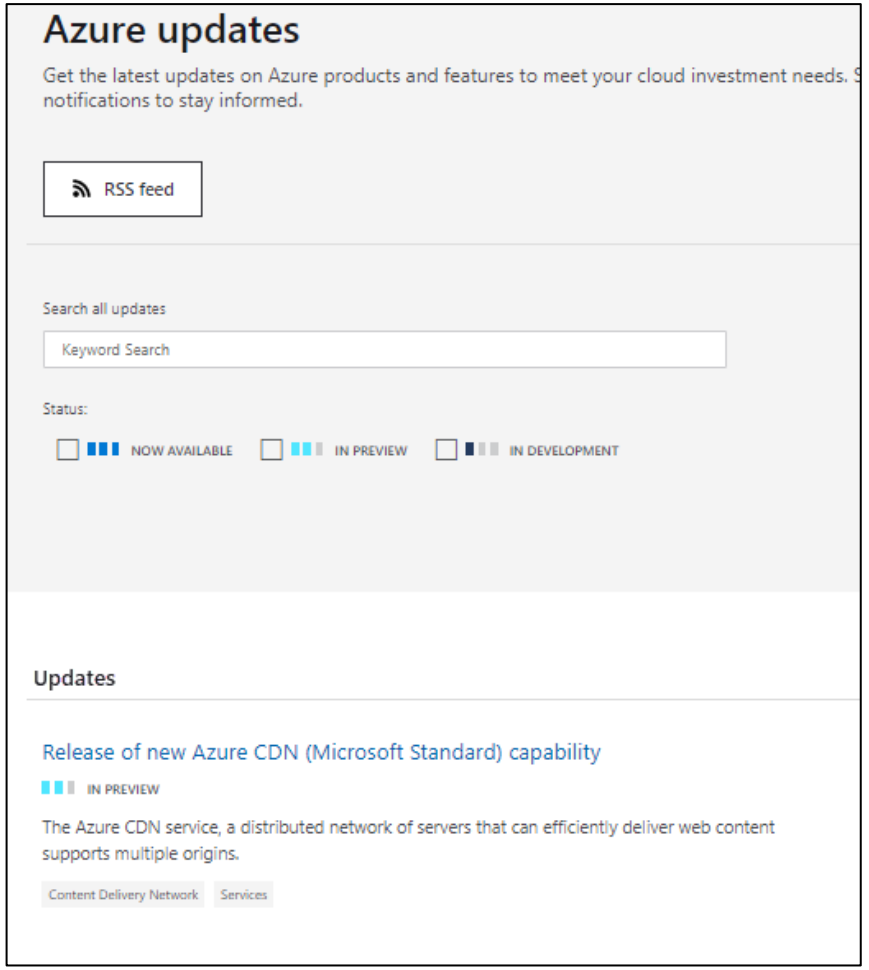
With Azure previews, users can test beta and other pre-release features, products, services, software, and regions to provide feedback.

- **Public Preview:** all Azure customers can evaluate the new features
- **Generally available (GA):** after public preview is completed, all customers can use the feature, and region availability will vary.

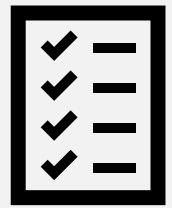


Monitoring service and feature updates

- Azure updates provides information about the Azure products, services, and features, in addition to product roadmaps and availability.
- View details about all Azure updates and their status.
- Browse and search for updates.
- Subscribe to Azure update notifications by RSS.



Knowledge Checks (5 min)



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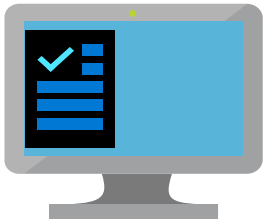

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a) Ingress
b) Egress
c) Both Ingress and Egress
d) Neither Ingress nor Egress

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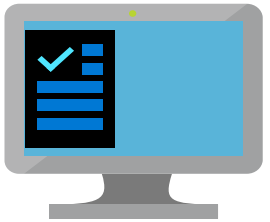

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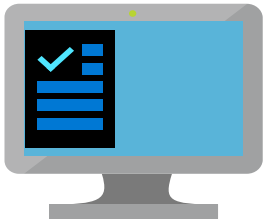

2. The Azure Pricing Calculator provides:

a) A bill for the selected configurations of products and services used in the past month.
b) A means to save money by committing to selected configurations of products and services over one or three years.
c) An estimate of the costs associated with selected configurations of products and services.
d) A tool to compare on-premise costs to Azure products and services.

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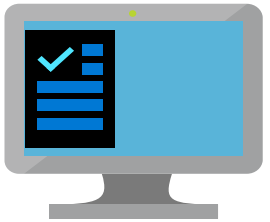

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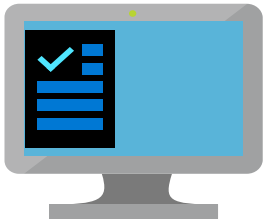

3. Application availability refers to what?

a) The Service Level Agreement (SLA) of the associated resource
b) Application support for an availability zone
c) The overall time that a system is functional and working
d) The Azure Region the application is deployed to

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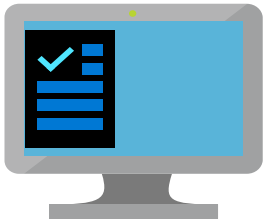

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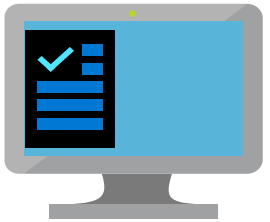

4. Which one of the following systems is used to determine Azure costs for each billing period?

a) The Azure website
b) Number of created virtual machines (VMs)
c) The Azure pricing calculator
d) Usage meters

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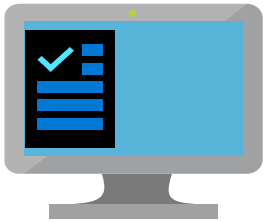

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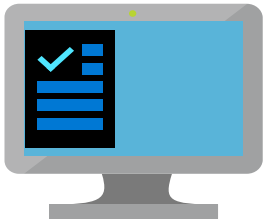
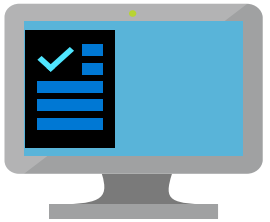


5. Complete the following sentence. As an Azure customer, Azure Reservations offer discounted prices if you:

a) Make upfront commitments on compute capacity.
b) Provision many resources
c) Have a free account
d) Set spending limits

Knowledge Check



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Module 06 Review

Microsoft Learn Modules
(docs.microsoft.com/Learn)

- Factors affecting costs
- Recognize Azure Cost Management
- Azure Service Level Agreement (SLA)
- Factors impacting SLAs
- Azure product and feature lifecycle