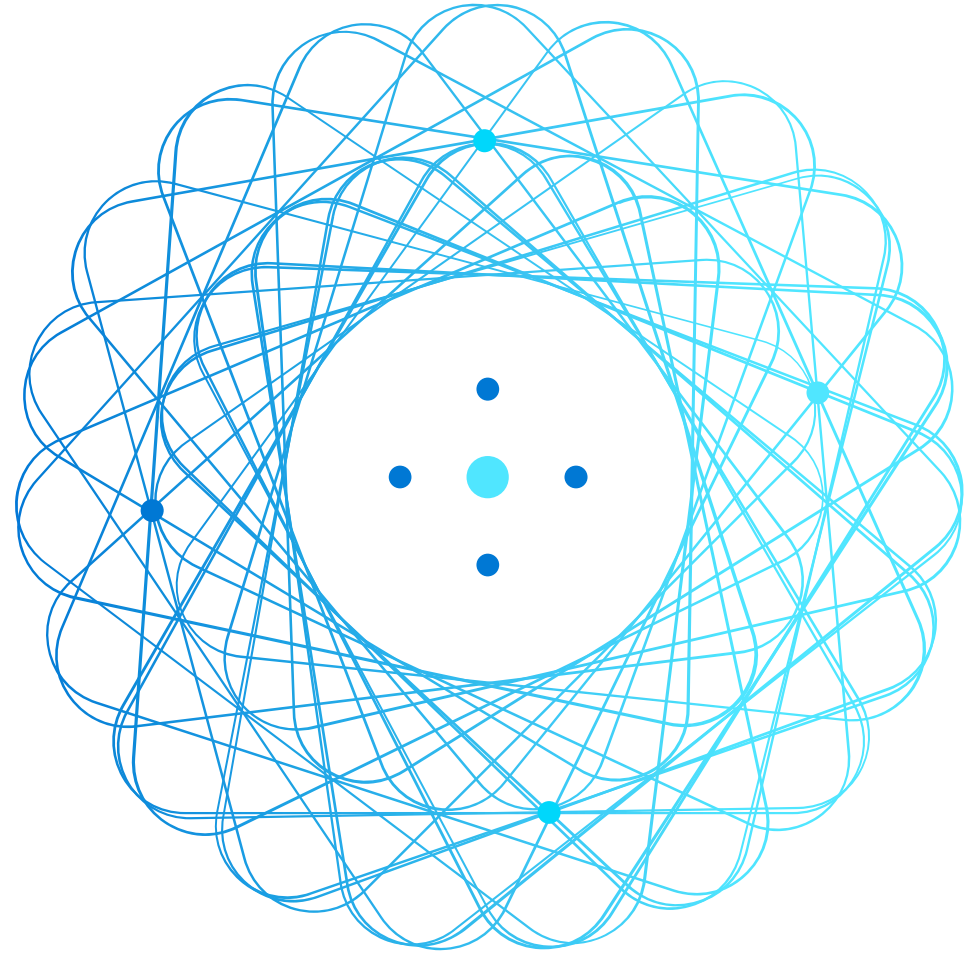


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Module 06:

Azure pricing and lifecycle



Module Outline



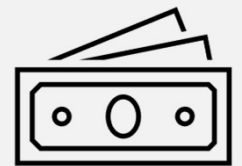
Module 06 – Outline

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



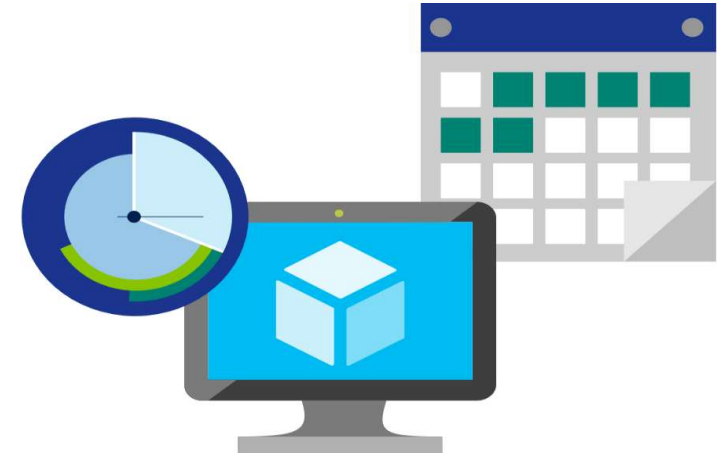
Planning and Cost Management



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

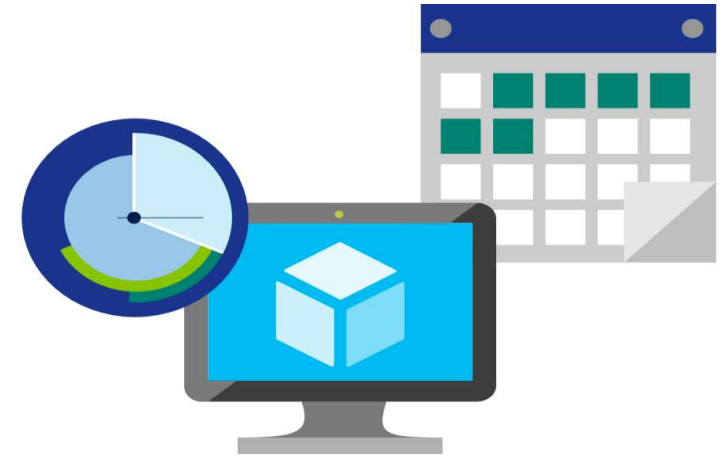
Factors affecting costs (part 1)



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)



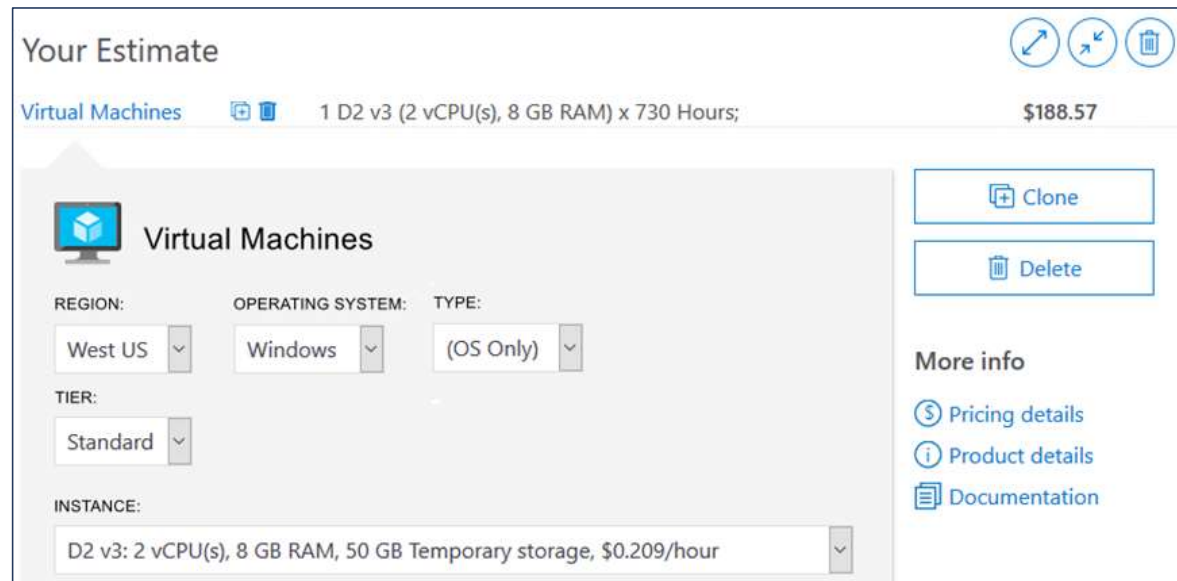
There are **six** primary factors affecting costs:

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

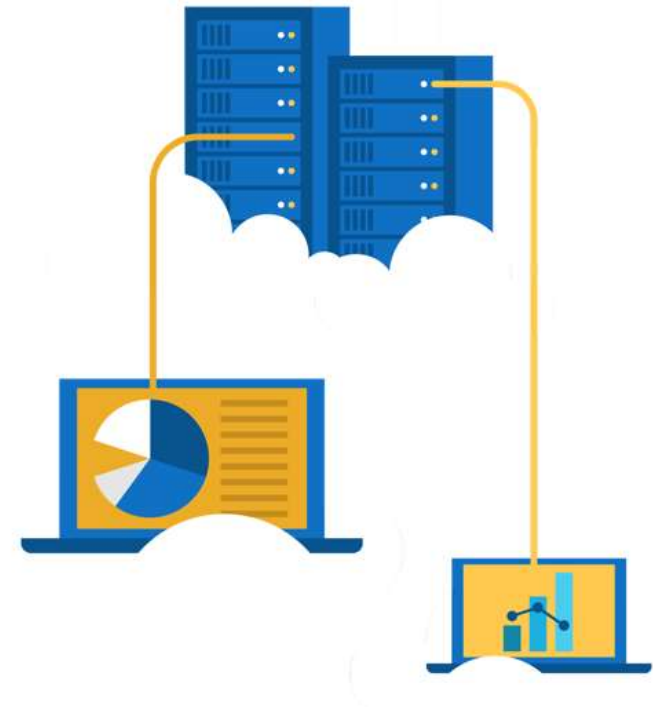


The screenshot displays the 'Your Estimate' section of the Azure Pricing Calculator. At the top, it shows 'Virtual Machines' with a plus and minus icon, followed by the configuration '1 D2 v3 (2 vCPU(s), 8 GB RAM) x 730 Hours;' and the total cost '\$188.57'. Below this, the 'Virtual Machines' section is active, showing configuration options: 'REGION:' set to 'West US', 'OPERATING SYSTEM:' set to 'Windows', 'TYPE:' set to '(OS Only)', 'TIER:' set to 'Standard', and 'INSTANCE:' set to 'D2 v3: 2 vCPU(s), 8 GB RAM, 50 GB Temporary storage, \$0.209/hour'. On the right side, there are 'Clone' and 'Delete' buttons, and a 'More info' section with links for 'Pricing details', 'Product details', and 'Documentation'.

Walkthrough - Use the Azure Pricing Calculator

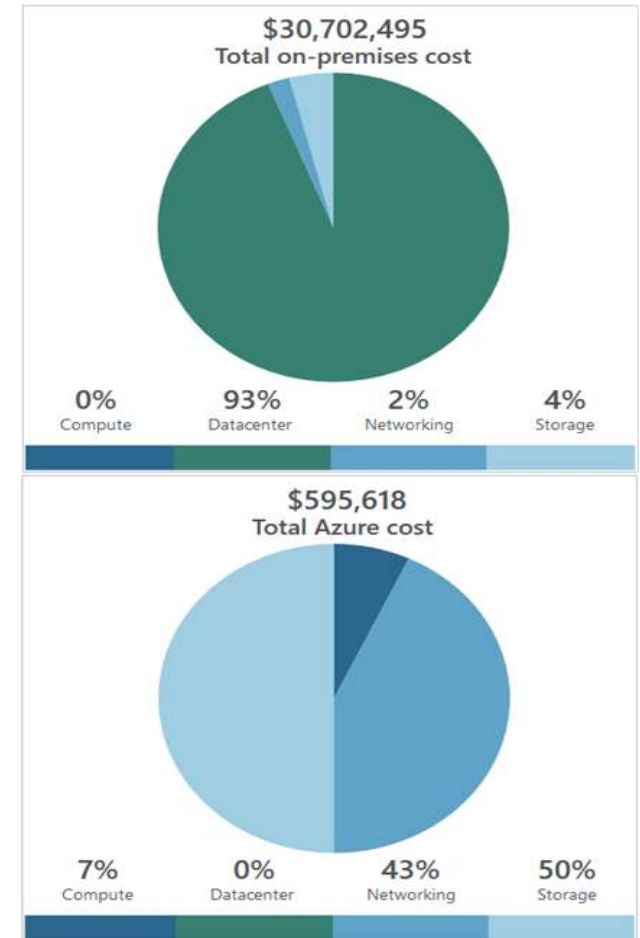
Use the Azure Pricing Calculator to generate a cost estimate for an Azure virtual machine and related network resources.

1. Configure the pricing calculator.
2. Review the pricing estimate.



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.



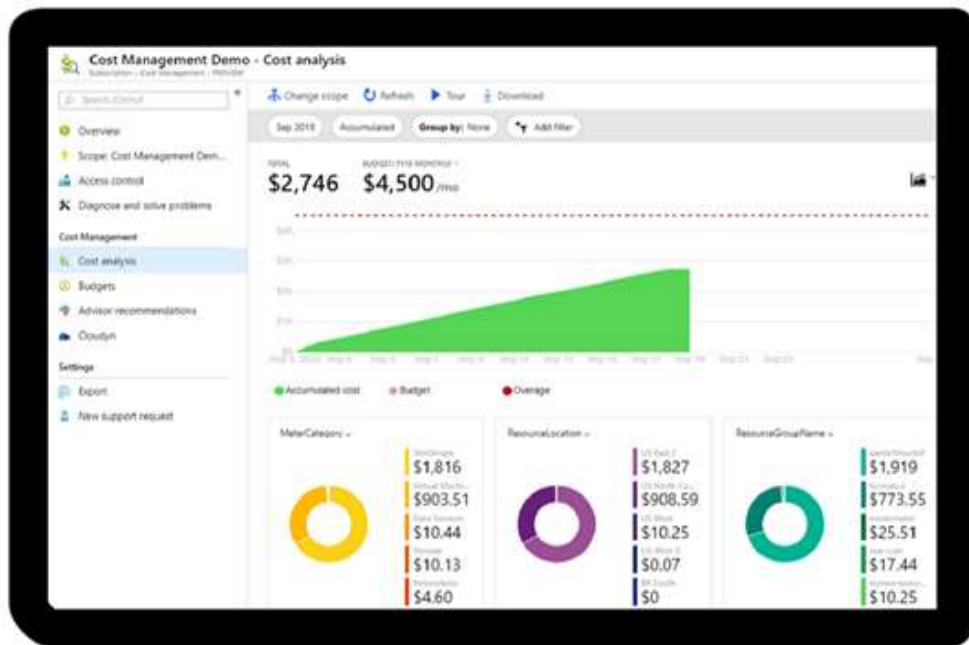
Walkthrough - Use the Azure TCO Calculator

Use the Total Cost of Ownership (TCO) Calculator to generate cost comparison report for an on-premises environment.

1. Configure the TCO calculator.
2. Review the results and save a copy.



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

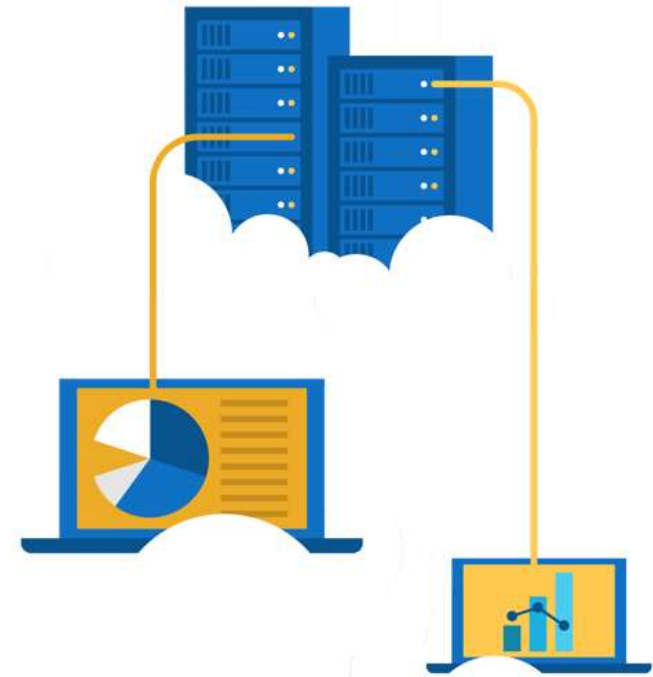
- Availability Zones
- Redundant systems

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

Walkthrough - Calculate a Composite SLA

Determine services SLA uptime percentages and then calculate the application composite SLA uptime percentage.

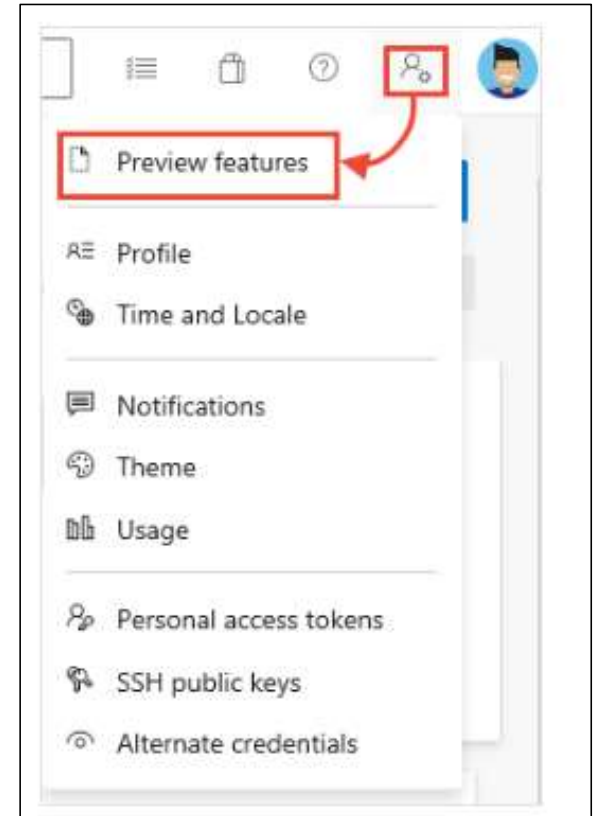
1. Determine the SLA uptime percentage values for an application.
2. Calculate the Application Composite SLA percentage uptime.



Azure Preview Program

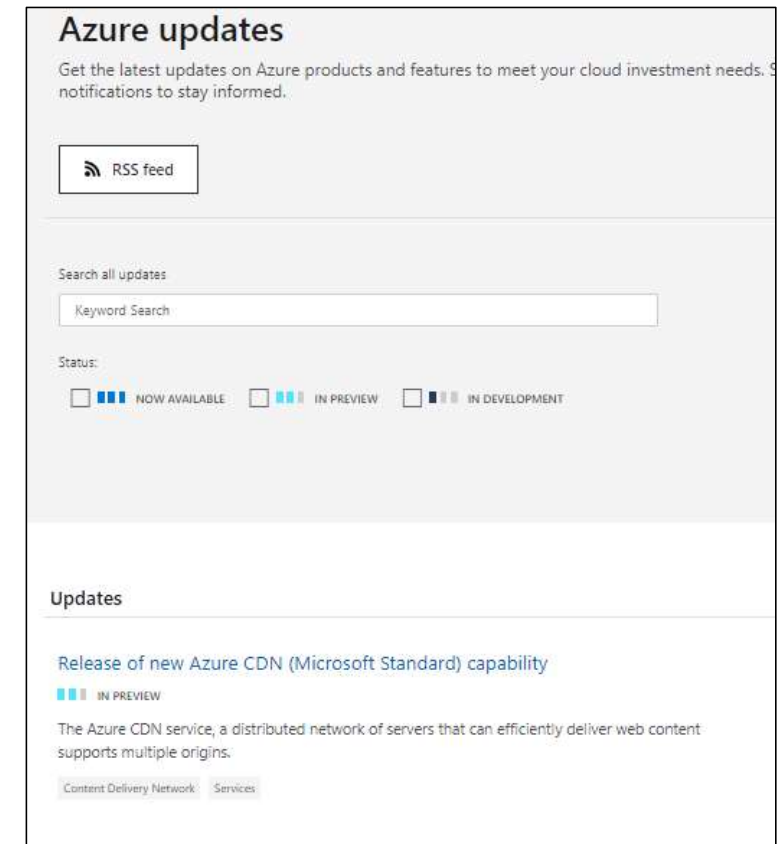
With Azure previews, users can test beta and other pre-release features, products, services, software, and regions to provide feedback.

- **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

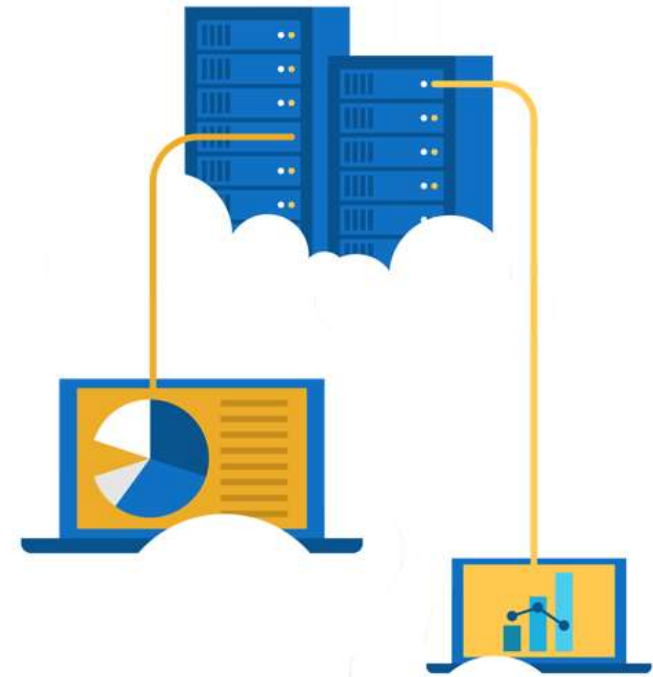
- Azure updates provides information about the Azure products, services, and features, in addition to product roadmaps and availability.
- View details about all Azure updates and their status.
- Browse and search for updates.
- Subscribe to Azure update notifications by RSS.



Walkthrough - Access Azure Preview features

Access and identify Azure preview services and features and view the latest Azure updates information.

1. Access preview services and features.
2. Review the Azure updates page.



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