

Introduction to Cloud Computing

LAB 02b

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BS-SE 7B

Task 1: Assign tags via the Azure portal

- Search for and select **Resource groups**. Select **Create**.

The screenshot shows the 'Create a resource group' page in the Microsoft Azure portal. The page is titled 'Create a resource group' and has three tabs: 'Basics', 'Tags', and 'Review + create'. The 'Basics' tab is selected. Below the tabs, there is a description of a resource group. The form contains three fields: 'Subscription' (set to 'Azure for Students'), 'Resource group name' (set to 'az104-rg2'), and 'Region' (set to '(Asia Pacific) Central India'). At the bottom, there are three buttons: 'Previous', 'Next', and 'Review + create'.

Microsoft Azure

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DEFAULT DIRECTORY

Home > Resource Manager | Resource groups >

Create a resource group ...

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Subscription * ⓘ Azure for Students

Resource group name * ⓘ az104-rg2

Region * ⓘ (Asia Pacific) Central India

Previous Next Review + create

The screenshot shows the 'Create a resource group' page in the Microsoft Azure portal, specifically the 'Review + create' step. The page has three tabs: 'Basics', 'Tags', and 'Review + create'. The 'Review + create' tab is selected. Below the tabs, there is a link for 'Automation Link'. The 'Basics' section shows a summary of the configuration: Subscription (Azure for Students), Resource group name (az104-rg2), and Region (Central India). The 'Tags' section shows a summary of the tags: Cost Center (000). At the bottom, there are three buttons: 'Previous', 'Next', and 'Create'.

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Create a resource group ...

Basics Tags Review + create

[Automation Link](#)

Basics

Subscription Azure for Students

Resource group name az104-rg2

Region Central India

Tags

Cost Center 000

Previous Next Create

Task 2: Enforce tagging via an Azure Policy

- In the Azure portal, search for and select **Policy**.

The screenshot shows the Microsoft Azure portal's Policy Overview page. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile. The left sidebar shows the Policy menu with options like Overview, Compliance, Remediation, Events, Authoring, Definitions, Assignments, Machine Configuration, and Exemptions. The main content area displays the Policy Overview with four key metrics: Policy Compliance (213 Compliant, 15 Non-compliant), Initiative Compliance (0 Compliant, 1 Non-compliant), Overall resource compliance (0%), and Pending Remediation (0). A 'Getting started' section on the right lists recommended assignments such as 'Inherit tags from Resource Group', 'Require tag on Resource Group', 'Not allowed resource types', 'Audit Windows VMs for security', and 'Enable Azure Monitor for VMs'.

- In the **Authoring** blade, select **Definitions**.

The screenshot shows the Microsoft Azure portal's Policy Definitions page. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile. The left sidebar shows the Policy menu with options like Overview, Compliance, Remediation, Events, Authoring, Definitions, Assignments, Machine Configuration, and Exemptions. The main content area displays the Policy definition for 'Require a tag and its value on resources'. The 'Essentials' section shows the Name, Version (preview), Description, Available Effects, Category, Definition location, Definition ID, Type, and Mode. The 'Definition' section shows the JSON definition for the policy.

```
1 {
2   "properties": {
3     "displayName": "Require a tag and its value on resources",
4     "policyType": "BuiltIn",
5     "mode": "Indexed",
6     "description": "Enforces a required tag and its value. Does not apply to resource groups.",
7     "metadata": {
8       "version": "1.0.1",
9       "category": "Tags"
10    },
11    "version": "1.0.1",
12    "parameters": {
13      "tagName": {
14        "type": "String",
15        "required": true
16      }
17    }
18  }
19 }
```

- **Select Assign policy.**

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Home > Policy | Definitions > Require a tag and its value on resources >

Assign policy

Basics Parameters Remediation Non-compliance messages Review + create

Exclusions ...

Resource selectors (Expand) Using resource selectors, you can further refine this assignment's applicability by targeting specific subsets of resources. Expand to learn more.

Basics

Policy definition * ...

Version (preview) * ...

Overrides (Expand) Using overrides, you can change the effects or referenced versions of definitions for all or a subset of resources evaluated by this assignment. Expand to learn more.

Assignment name *

Description

Policy enforcement ☒ Enabled

Previous Next Review + create

Scope

Management Group ☐ Tenant Root Group (d7e692a5-cccf-417c-b67f-0ded375904c4)
☐ az104-mg1 (az104-mg1)

Subscription

Resource Group

Select Cancel Clear All Selections Give feedback

- **Search for and select Storage Account, and select Create.**

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Home > Storage center

Storage center | Blob Storage

Default Directory (bsse2280155@szabist.onmicrosoft.com)

Create LCM rules for storage accounts in this list List all alerts for storage accounts Check security best practices for these storage accounts

Search

Summary Resources

Overview

All storage resources

Object storage

File storage

Block storage

Data management

Migration

Partner solutions

Management services

Help

+ Create Restore Manage view Refresh Export to CSV Open query Assign tags Delete Add to service group Group by none

You are viewing a new version of Browse experience. Click here to access the old experience.

Filter for any field... Subscription equals all Resource Group equals all Location equals all Add filter

No storage accounts to display

Create a storage account to store up to 500TB of data in the cloud. Use a general-purpose storage account to store object data, use a NoSQL data store, define and use queues for message processing, and set up file shares in the cloud. Use the Blob storage account and the hot or cool access tiers to optimize your costs based on how frequently your object data is accessed.

+ Create Learn more

Showing 1 - 0 of 0. Display count: auto

Add or remove favorites by pressing ctrl+shift+F

Give feedback

- Search for and select **Storage Accounts**, and select **Create**.

Microsoft Azure

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Home > Storage center | Blob Storage >

Create a storage account

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription *

Resource group * [Create new](#)

Instance details

Storage account name *

Region * [Deploy to an Azure Extended Zone](#)

Preferred storage type

i This helps us provide relevant guidance. It doesn't restrict your storage to this resource type. [Learn more](#)

Performance * ☒ **Standard:** Recommended for most scenarios (general-purpose v2 account)

☐ **Premium:** Recommended for scenarios that require low latency.

Redundancy *

☒ Make read access to data available in the event of regional unavailability.

[Previous](#) [Next](#) [Review + create](#) [Give feedback](#)

- Select **Review** and then click **Create**.
- You should receive a **Validation failed** message.

Microsoft Azure

Search resources, services, and docs (G+I)

Home > Storage center | Blob Storage >

Create a storage account

Validation failed. View error details

Basics Advanced Networking Data protection Encryption Tags **Review + create**

[View automation template](#)

Basics

Subscription	Azure for Students
Resource group	az104-rg2
Location	Central India
Storage account name	storageacc423
Preferred storage type	
Performance	Standard
Replication	Read-access geo-redundant storage (RA-GRS)

Errors

Summary Raw Error [Copy Full Error](#)

ERROR VIEW

Resource 'storageacc423' was disallowed by policy. (Code: RequestDisallowedByPolicy, Policy(s): Require Cost Center tag and its value on resources [Policy link](#))

WAS THIS HELPFUL? [Thumbs up](#) [Thumbs down](#)

[Explain with Copilot](#)

Troubleshooting Options

[New Support Request](#)

Give Feedback

[Tell us about your experience with the Errors page](#)

Task 3: Apply tagging via an Azure policy

- Search for and select **Policy**.
- In the **Authoring** section, click **Assignments**.

The screenshot shows the Microsoft Azure portal interface for the 'Policy | Assignments' section. The left sidebar contains navigation links: Overview, Compliance, Remediation, Events, Authoring, Definitions, Assignments (selected), Machine Configuration, and Exemptions. The main content area displays a table of policy assignments. The table has three columns: 'Assignment name', 'Scope', and 'Type'. There are three rows of assignments. The third row, 'Require Cost Center tag and its value on resources', is highlighted. Above the table, there are summary statistics: 'Total Assignments: 3', 'Initiative Assignments: 1', and 'Policy Assignments: 2'. There are also buttons for 'Edit columns' and 'Export to CSV'.

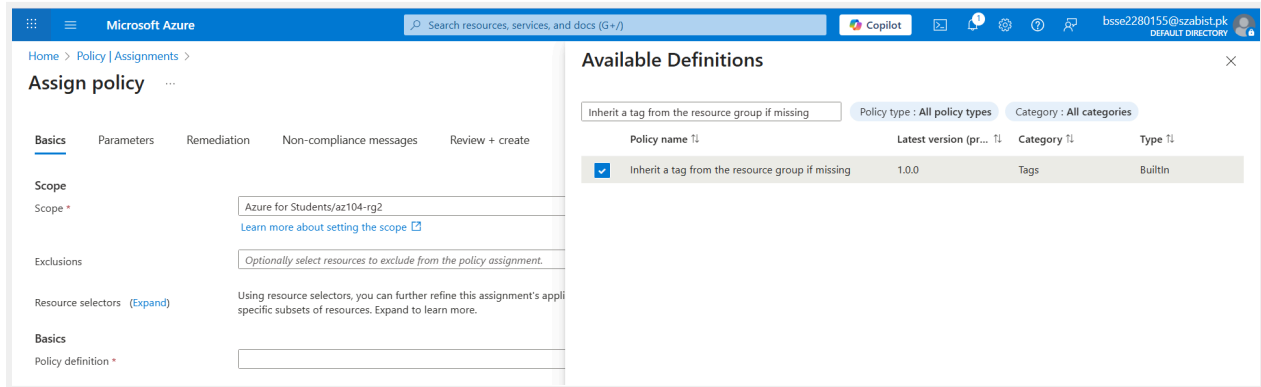
Assignment name	Scope	Type
Allowed resource deployment regions	Azure for Students	Policy
ASC Default (subscription: db878fcc-8781-42d0-a61d-55de3d976446)	Azure for Students	Initiative
Require Cost Center tag and its value on resources	Azure for Students/az104-rg2	Policy

- In the list of assignments, click the ellipsis icon in the row representing the **Require a tag and its value on resources** policy assignment and use the **Delete assignment** menu item to delete the assignment.

The screenshot shows the details of the 'Require Cost Center tag and its value on resources' policy assignment. The page title is 'Require Cost Center tag and its value on resources'. Below the title, there are several action buttons: 'Edit assignment', 'Delete assignment', 'Duplicate assignment', 'View compliance', 'View definition', 'Create exemption', and 'Create remediation task'. The 'Delete assignment' button is highlighted. A 'Delete assignment' dialog box is open, asking 'Do you want to delete the policy assignment 'Require Cost Center tag and its value on resources'?'. The dialog has 'Yes' and 'No' buttons. The background shows the 'Parameters' section of the policy assignment, which includes a table with columns 'Parameter ID', 'Parameter name', and 'Parameter value'.

Parameter ID	Parameter name	Parameter value
tagName	Tag Name	"Cost Center"
tagValue	Tag Value	"000"

- Click **Assign policy** and specify the **Scope**.



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Home > Policy | Assignments >

Assign policy

Basics Parameters Remediation Non-compliance messages Review + create

Scope

Scope *

Azure for Students/az104-rg2

[Learn more about setting the scope](#)

Exclusions

Optionally select resources to exclude from the policy assignment.

Resource selectors [\(Expand\)](#)

Using resource selectors, you can further refine this assignment's applied specific subsets of resources. Expand to learn more.

Basics

Policy definition *

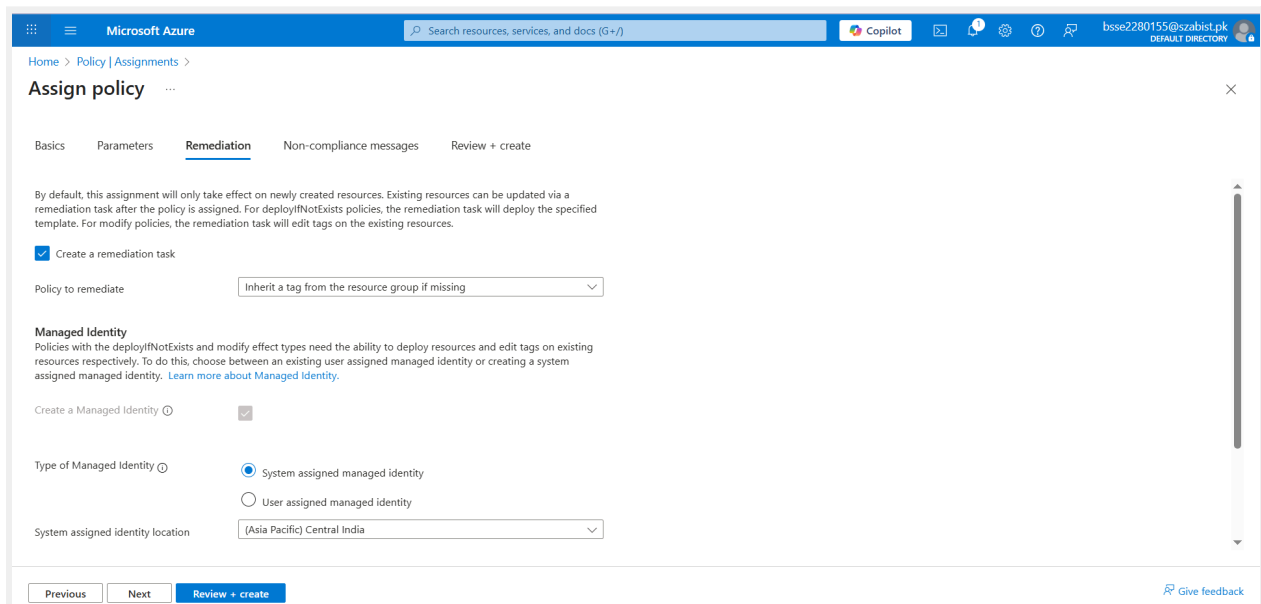
Available Definitions

Inherit a tag from the resource group if missing

Policy type: All policy types Category: All categories

Policy name	Latest version (pr...)	Category	Type
<input checked="" type="checkbox"/> Inherit a tag from the resource group if missing	1.0.0	Tags	Builtin

- Click **Review + Create** and then click **Create**.



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Home > Policy | Assignments >

Assign policy

Basics Parameters **Remediation** Non-compliance messages Review + create

By default, this assignment will only take effect on newly created resources. Existing resources can be updated via a remediation task after the policy is assigned. For deployIfNotExists policies, the remediation task will deploy the specified template. For modify policies, the remediation task will edit tags on the existing resources.

☒ Create a remediation task

Policy to remediate

Inherit a tag from the resource group if missing

Managed Identity

Policies with the deployIfNotExists and modify effect types need the ability to deploy resources and edit tags on existing resources respectively. To do this, choose between an existing user assigned managed identity or creating a system assigned managed identity. [Learn more about Managed Identity.](#)

Create a Managed Identity

☒

Type of Managed Identity

☒ System assigned managed identity

☐ User assigned managed identity

System assigned identity location

(Asia Pacific) Central India

Previous Next **Review + create**

[Give feedback](#)

- Search for and select **Storage Account** and click **Create**.

Microsoft Azure

Home > storageacc999_1764258272443 | Overview

Deployment

Search

Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

Your deployment is complete

Deployment name: storageacc999_1764258272443
Subscription: Azure for Students
Resource group: az104-rg2

Start time: 11/27/2025, 8:44:53 PM
Correlation ID: 2556b6a0-09ab-4cb1-beb2-e29849746334

Deployment details

Next steps

[Go to resource](#)

Give feedback

[Tell us about your experience with deployment](#)

Deployment succeeded

Deployment 'storageacc999_1764258272443' to resource group 'az104-rg2' was successful.

[Go to resource](#) [Pin to dashboard](#)

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- On the **Tags** blade, note that the tag **Cost Center** with the value **000** has been automatically assigned to the resource.

Microsoft Azure

Home > storageacc999_1764258272443 | Overview > storageacc999

Storage account

Search

Delete all Feedback

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. Tag names are case insensitive, but tag values are case sensitive. [Learn more about tags](#)

Do not enter names or values that could make your resources less secure or that contain personal/sensitive information because tag data will be replicated globally.

Name	Value
Cost Center	000

storageacc999 (Storage account)

Cost Center : 000

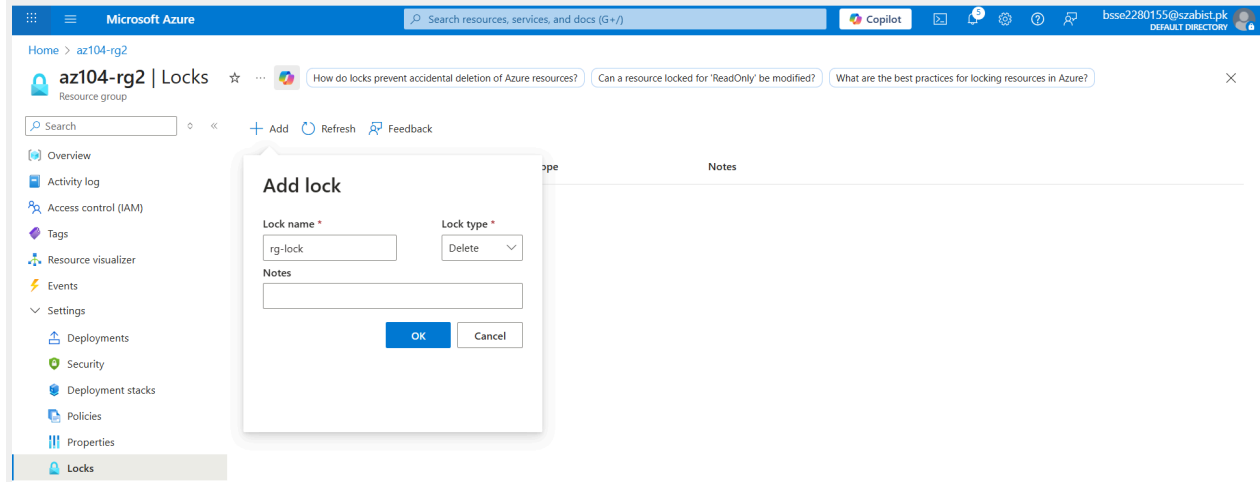
No changes

[Apply](#) [Discard changes](#)

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Task 4: Configure and test resource locks

- Search for and select your resource group.
- In the **Settings** blade, select **Locks**.



- Navigate to the resource group **Overview** blade, and select **Delete resource group**.
- You should receive a notification denying the deletion.

