

AZ-104 Administer Governance and Compliance



Learning Objectives

- Describe the core architectural components of Azure
- Azure Policy Initiatives
- Secure your Azure resources with role-based access control (RBAC)
- Lab 02a - Manage Subscriptions and RBAC
- Lab 02b - Manage Governance via Azure Policy

Describe the core architectural components of Azure



Learning Objectives – Subscriptions and Azure RM

- Identify Regions
- Implement Azure Subscriptions
- Identify Subscription Usage
- Obtain a Subscription
- Create Resource Groups
- Determine Service Limits and Quotas
- Create an Azure Resource Hierarchy
- Apply Resource Tagging
- Manage Costs
- Learning Recap

Manage Azure identities and governance (20–25%): Manage subscriptions and governance

- Configure resource locks
- Apply and manage tags on resources
- Manage resource groups
- Manage subscriptions
- Manage costs by using alerts, budgets, and Azure Advisor recommendations
- Configure management groups

Identify Regions

A region represents a collection of datacenters

Provides flexibility and scale

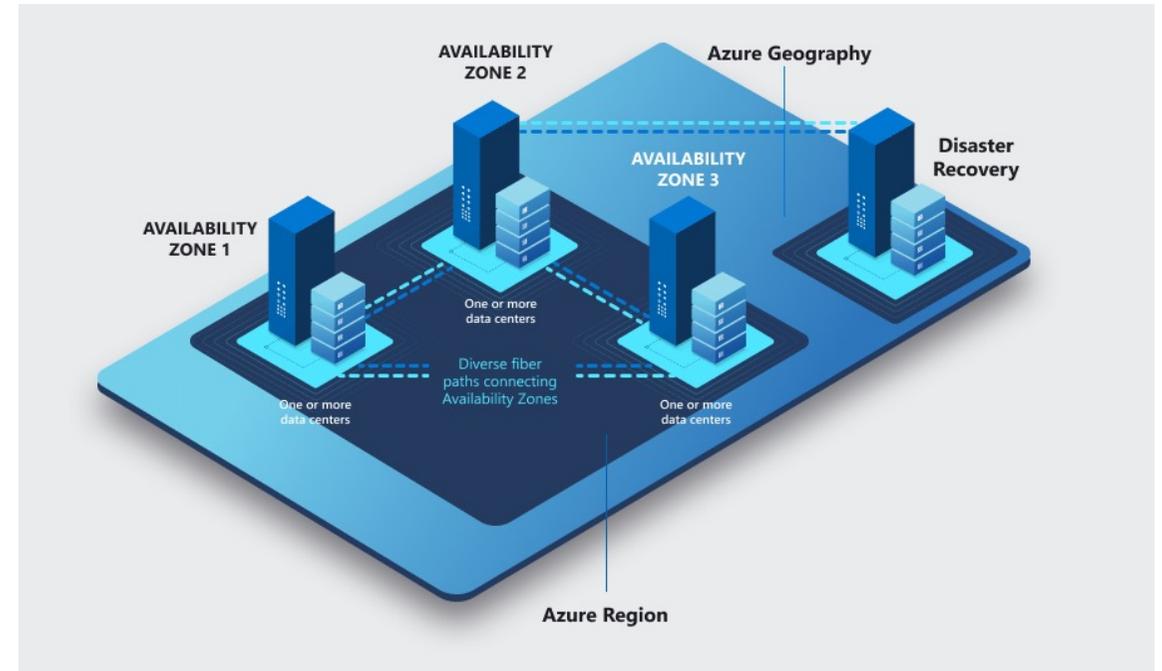
Preserves data residency

Select regions close to your users

Be aware of region deployment availability

There are global services that are region independent

Most regions are paired for high availability

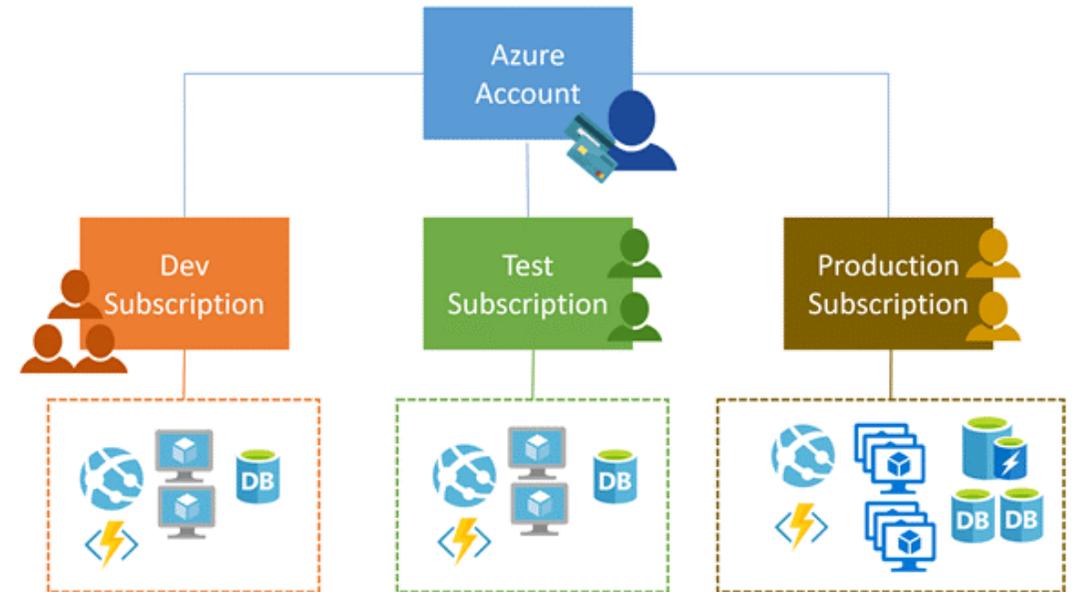


Implement Azure Subscriptions

Only identities in Entra ID, or in a directory that is trusted by Entra ID, can create a subscription

Logical unit of Azure services that is linked to an Azure account

Security and billing boundary*



Identify Subscription Usage

Subscription	Usage
Free	Includes a \$200 credit for the first 30 days, free limited access for 12 months
Pay-As-You-Go	Charges you monthly
CSP	Agreement with possible discounts through a Microsoft Cloud Solutions Provider Partner – typically for small to medium businesses
Enterprise	One agreement, with discounts for new licenses and Software Assurance – targeted at enterprise-scale organizations
Student	Includes \$100 for 12 months – must verify student access

Obtain a Subscription

Enterprise Agreement customers make an upfront monetary commitment and consume services throughout the year

Resellers provide a simple, flexible way to purchase cloud services

Partners can design and implement your Azure cloud solution

Personal free account – Start right away



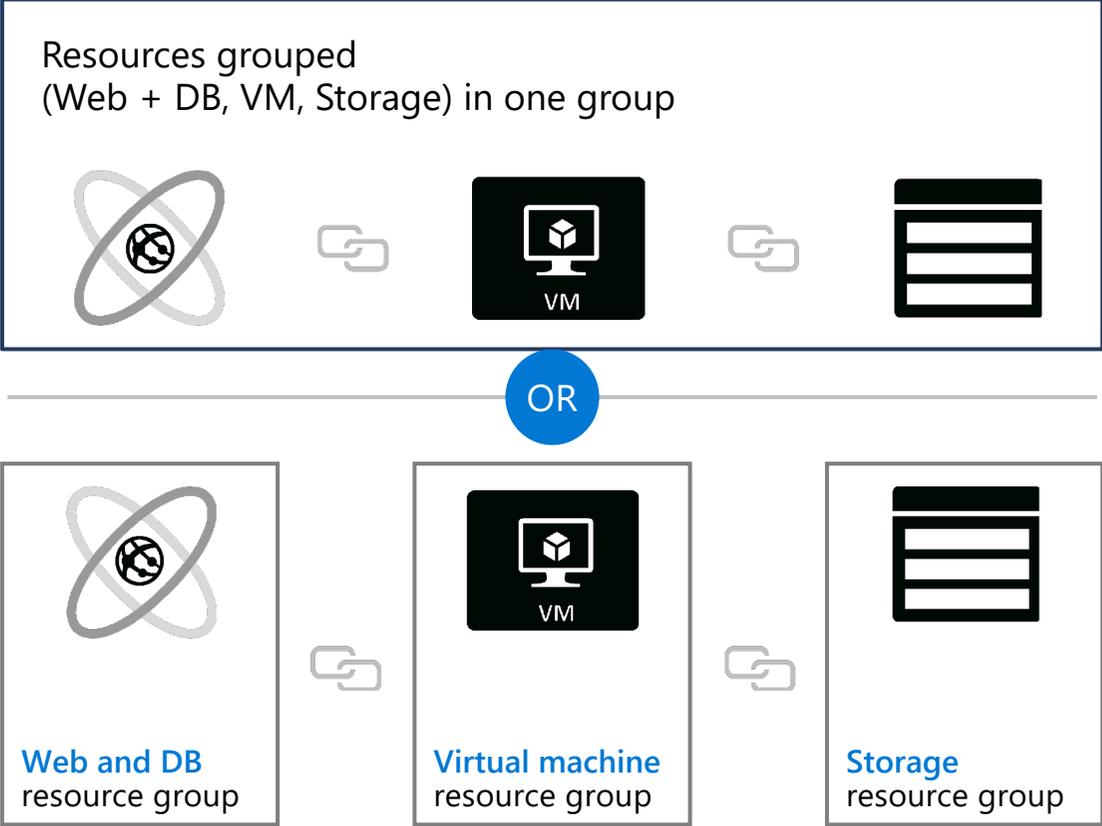
Create Resource Groups

Resources can only exist in one resource group

Groups can have resources of many different types (services) and from many different regions

Groups cannot be renamed or nested

You can move resources between groups



Determine Service Limits and Quotas

ASC DEMO | Usage + quotas ☆ ...
Subscription

Search

New Quota Request Refresh Download

Settings

- Programmatic deployment
- Resource groups
- Resources
- Preview features
- Usage + quotas
- Policies
- Management certificates
- My permissions

Quota name	Region	Subscription	Current Usage ↓	Adjustable
Total Regional vCPUs	West Europe	ASC DEMO	21% 21 of 100	Yes
Total Regional vCPUs	East US	ASC DEMO	19% 19 of 100	Yes
Standard Dv2 Family vCP...	West Europe	ASC DEMO	16% 16 of 100	Yes
Total Regional vCPUs	North Europe	ASC DEMO	13% 13 of 100	Yes
Total Regional vCPUs	Central US	ASC DEMO	13% 13 of 100	Yes
Standard BS Family vCPUs	North Europe	ASC DEMO	12% 12 of 100	Yes
Standard DSv2 Family vC...	Central US	ASC DEMO	10% 10 of 100	Yes
Total Regional vCPUs	West US	ASC DEMO	8% 8 of 100	Yes

Resources have a default limit
- a subscription quota

Helpful to track current usage,
and plan for future use

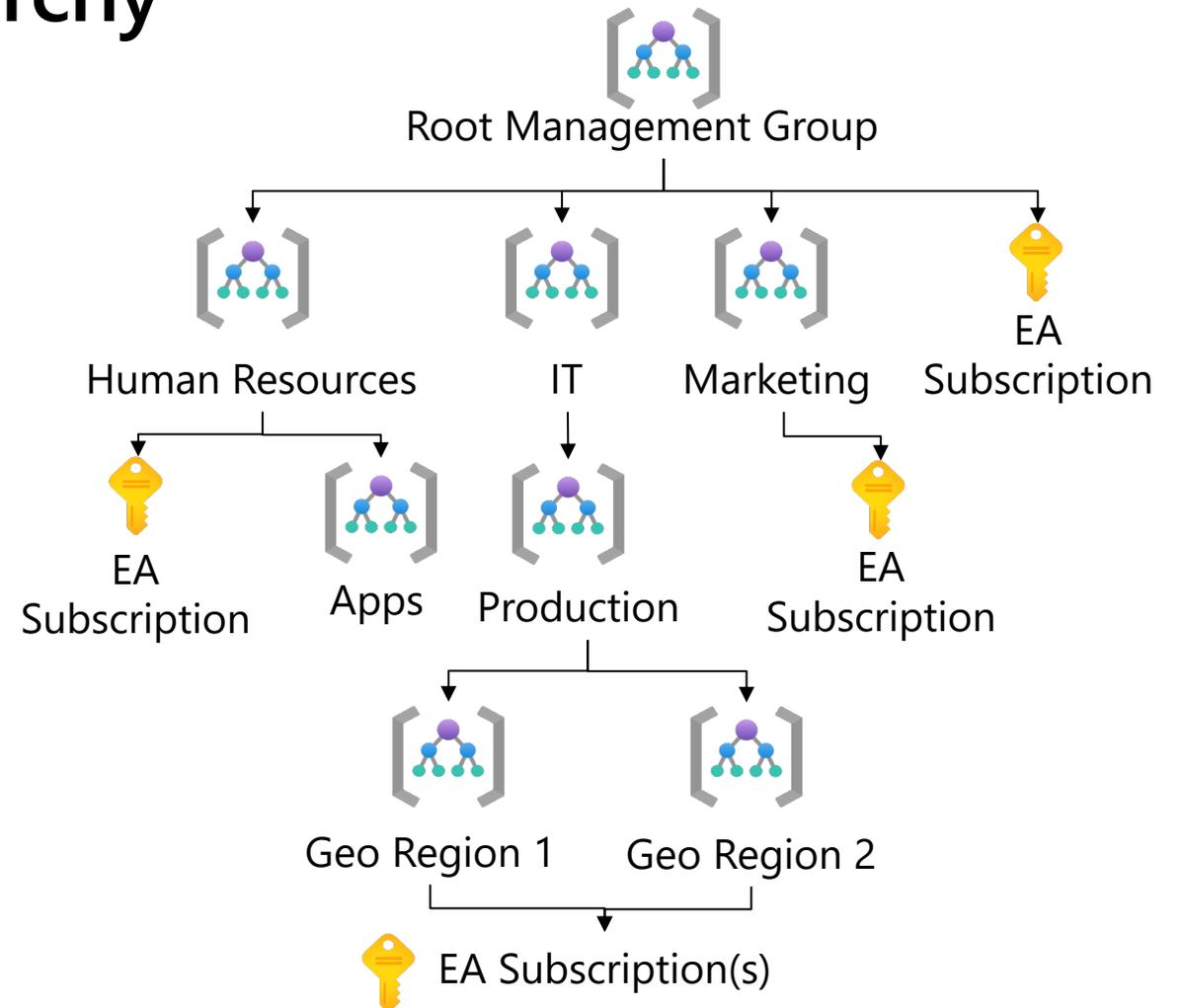
You can open a free support
case to increase limits to
published maximums

Create an Azure Resource Hierarchy

Management groups provides a level of scope above subscriptions

Target policies and spend budgets across subscriptions and inheritance down the hierarchies

Implement compliance and cost reporting by organization (business/teams)



* To prevent changes, apply resource locks at the subscription, resource group, or resources level

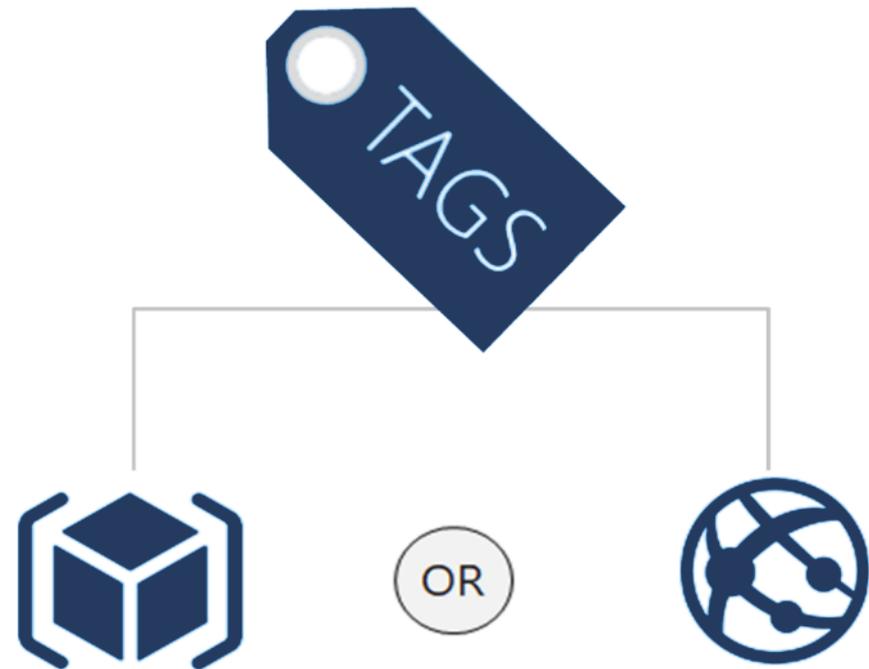
Apply Resource Tagging

Provides metadata for your Azure resources

Logically organizes resources

Consists of a name-value pair

Very useful for rolling up billing information

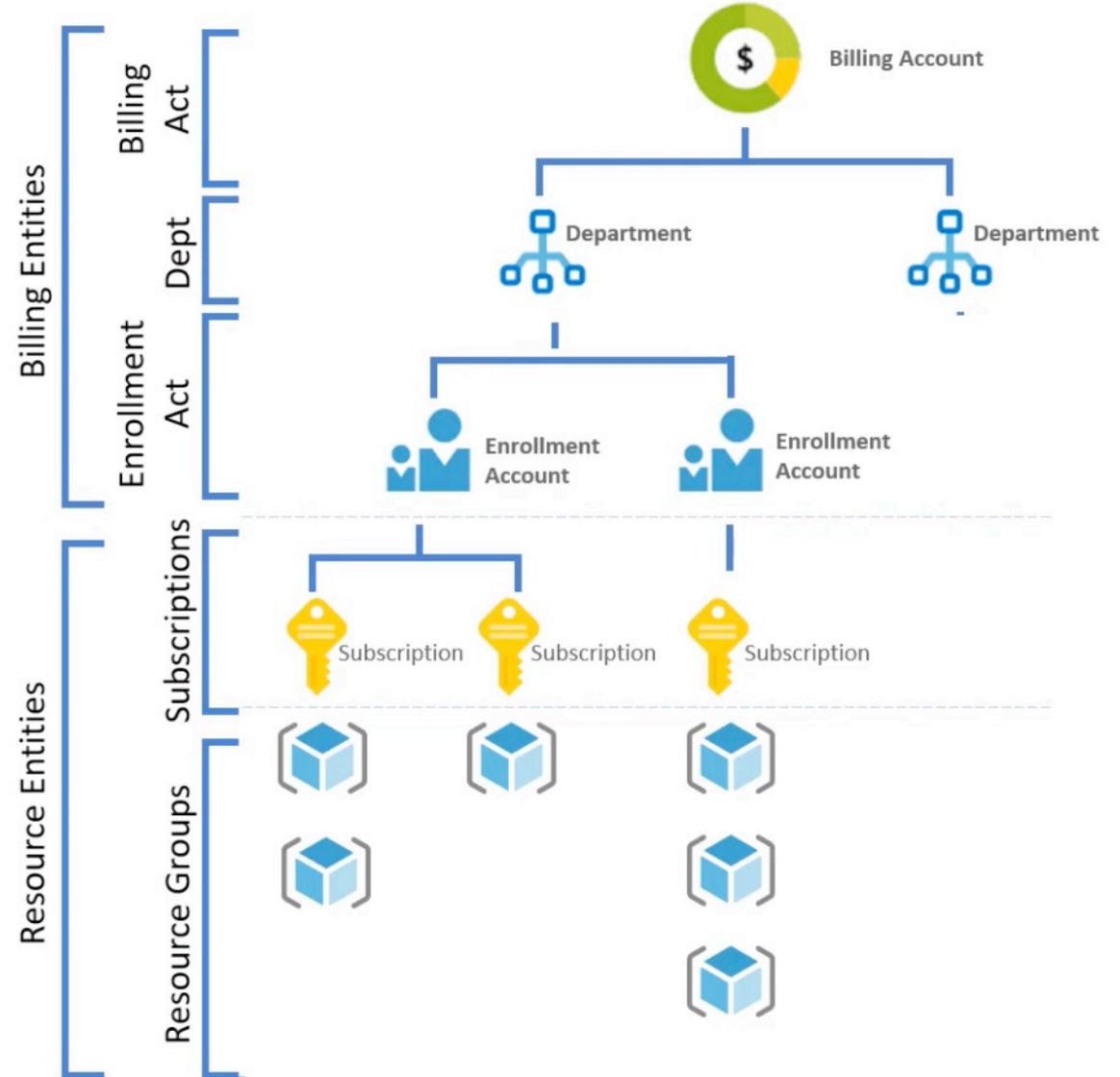


Owner: Joe
Department: marketing
Environment: production

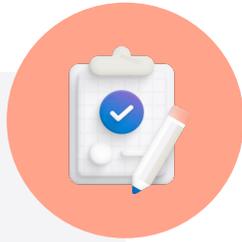
Cost-center: Marketing

Manage Costs

- Costs are resource-specific
- Usage costs may vary between locations
- Costs for inbound and outbound data transfers differ
- Pre-pay with Azure reserved instances
- Use your on-premises licenses with Azure Hybrid Benefit
- Optimize with alerts, budgets, and Azure Advisor recommendations



Learning Recap - Describe core architectural components



Check your
knowledge
questions and
additional
study

Reference modules

- [Describe the core architectural components of Azure](#)
- [Control and organize Azure resources with Azure Resource Manager](#)

Azure Policy Initiatives



Learning Objectives – Azure Policy initiatives

- Implement Azure Policy
- Implement Azure Policies
- Create Azure Policies
- Demonstration – Azure Policy
- Learning Recap

Manage Azure identities and governance (20–25%): Manage subscriptions and governance

- Implement and manage Azure Policy

Implement Azure Policies

A service to create, assign, and manage policies

Runs evaluations and scans for non-compliant resources

Advantages:

- Enforcement and compliance
- Apply policies at scale
- Remediation

Usage Cases

Allowed resource types – Specify the resource types that your organization can deploy

Allowed virtual machine SKUs – Specify a set of virtual machine SKUs that your organization can deploy

Allowed locations – Restrict the locations your organization can specify when deploying resources

Require tag and its value – Enforces a required tag and its value

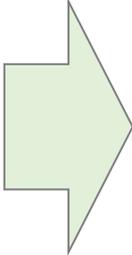
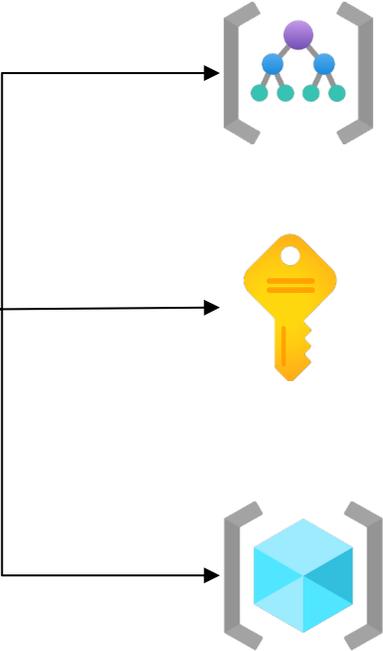
Azure Backup should be enabled for Virtual Machines – Audit if Azure Backup service is enabled for all Virtual machines

Create Azure Policies

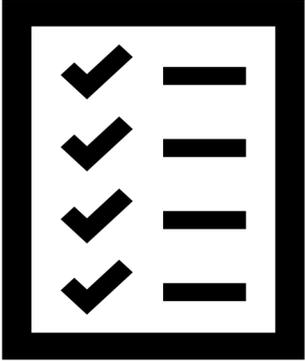
Define and create



Scope and assign



Assess compliance

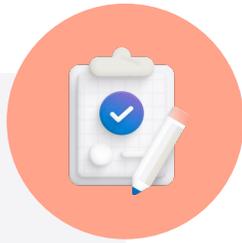


Demonstration – Azure Policy



- Assign a policy
- Create and assign an initiative definition
- Check for compliance
- Check for remediation tasks
- Remove your policy and initiative

Learning Recap – Configure Azure Policy



Check your
knowledge
questions and
additional
study

Reference modules

- [Introduction to Azure Policy](#)
- [Azure Policy initiatives](#)
- [Implement access management for Azure resources](#)

Secure your Azure resources
with Azure role-based access
control (Azure RBAC)



Learning Objectives - RBAC

- Compare Azure RBAC Roles to Entra ID Roles
- Create a Role Definition
- Create a Role Assignment
- Apply RBAC Authentication
- Demonstration – Azure RBAC
- Learning Recap

Manage Azure identities and governance (20–25%): Manage access to Azure resources

- Manage built-in Azure roles
- Assign roles at different scopes
- Interpret access assignments

Compare Azure RBAC Roles to Entra ID Roles

RBAC roles provide fine-grained access management

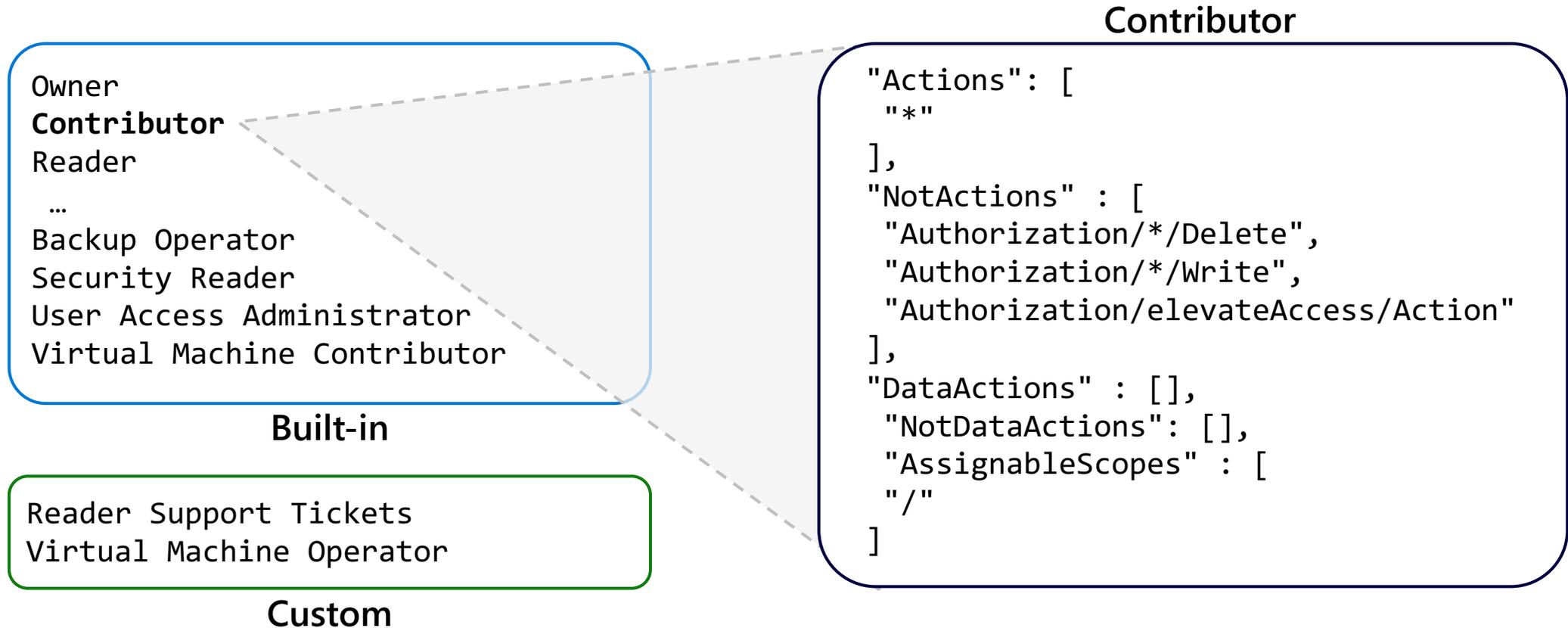
Azure RBAC roles	Entra ID roles
Manage access to Azure resources	Manage access to Entra ID objects
Scope can be specified at multiple levels	Scope is at the tenant level
Role information can be accessed in the Azure portal, Azure CLI, Azure PowerShell, Azure Resource Manager templates, REST API	Role information can be accessed in Azure portal, Microsoft 365 admin portal, Microsoft Graph PowerShell



There are many built-in roles, or you can create your own custom role

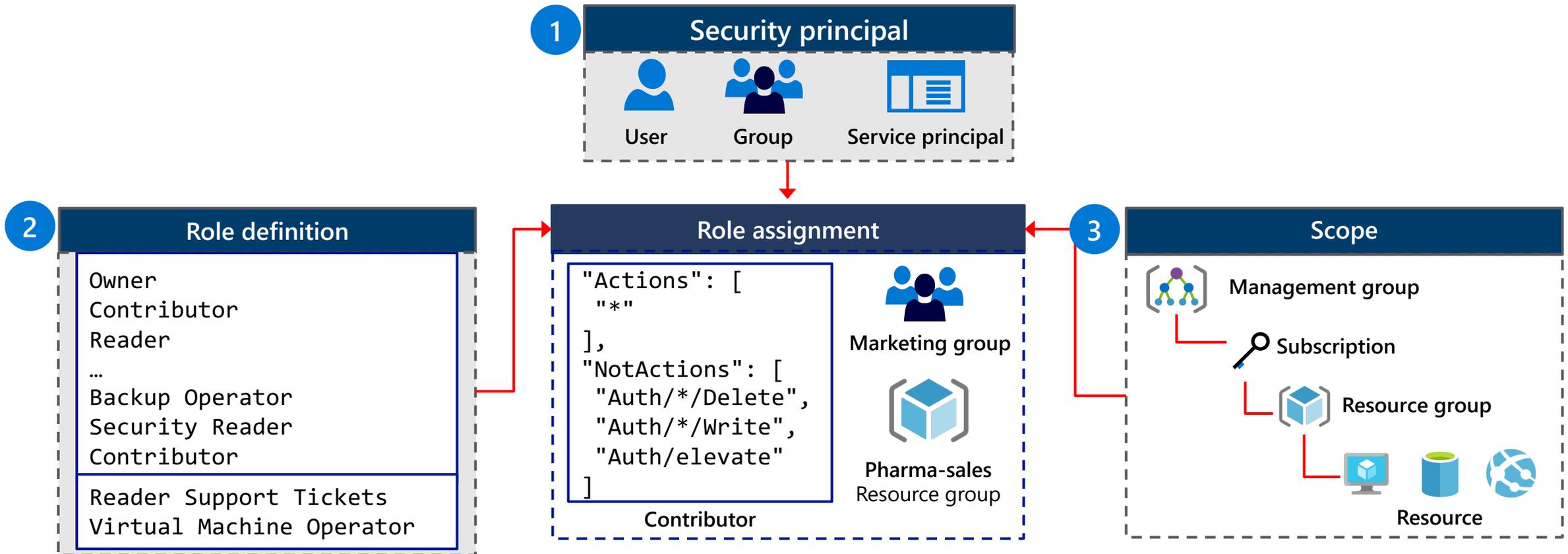
Create a Role Definition

Collection of permissions that lists the operations that can be performed

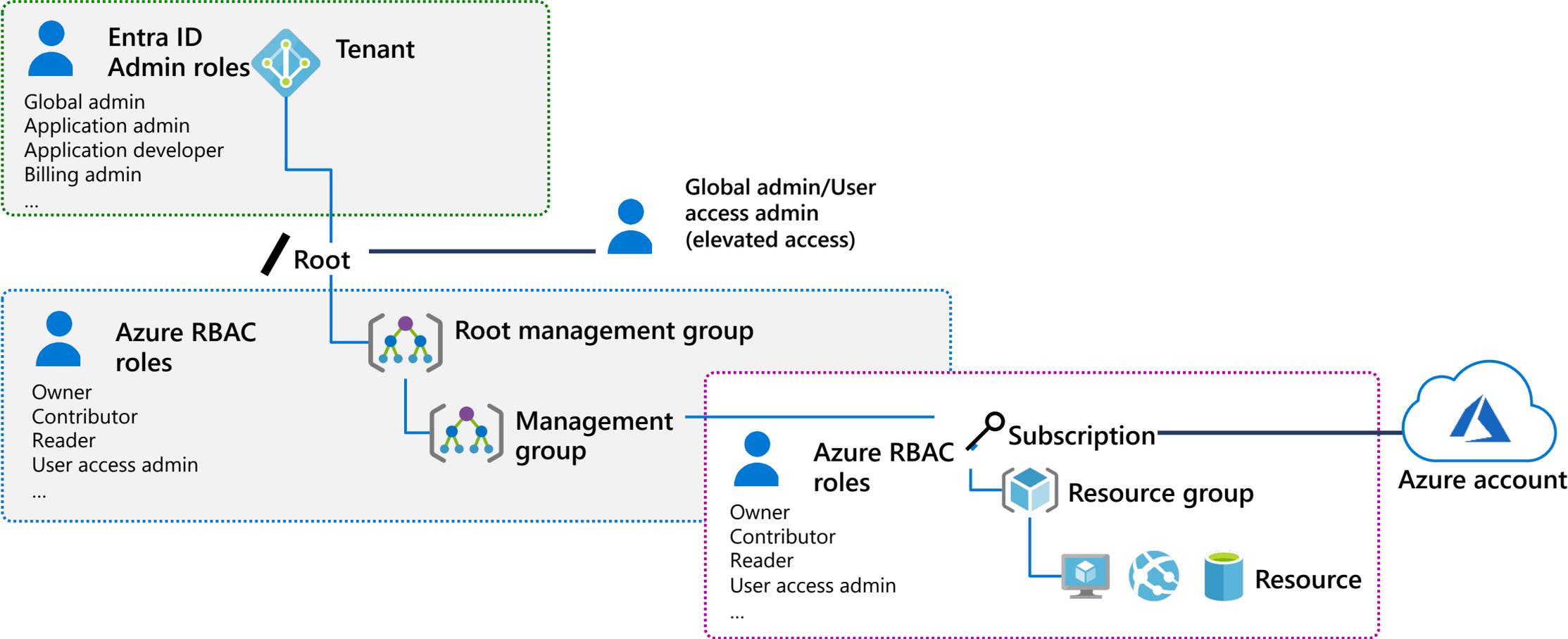


Create a Role Assignment

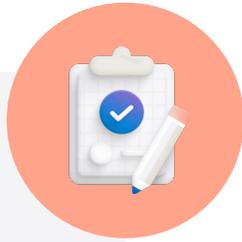
Process of binding a role definition to a user, group, or service principal at a scope for the purpose of granting access



Apply RBAC Authentication



Learning Recap– Secure resources with RBAC



Check your
knowledge
questions and
additional
study

Reference modules

- [Manage users and groups in Microsoft Entra ID](#)

Lab 02a - Manage Subscriptions and RBAC

Lab 02b - Manage Governance via Azure Policy



Lab 02a – Manage Subscriptions and Azure RBAC



In this lab, you learn about role-based access control.

You learn how to use permissions and scopes to control what actions identities can and cannot perform.

You also learn how to make subscription management easier by using management groups.

Job Skills

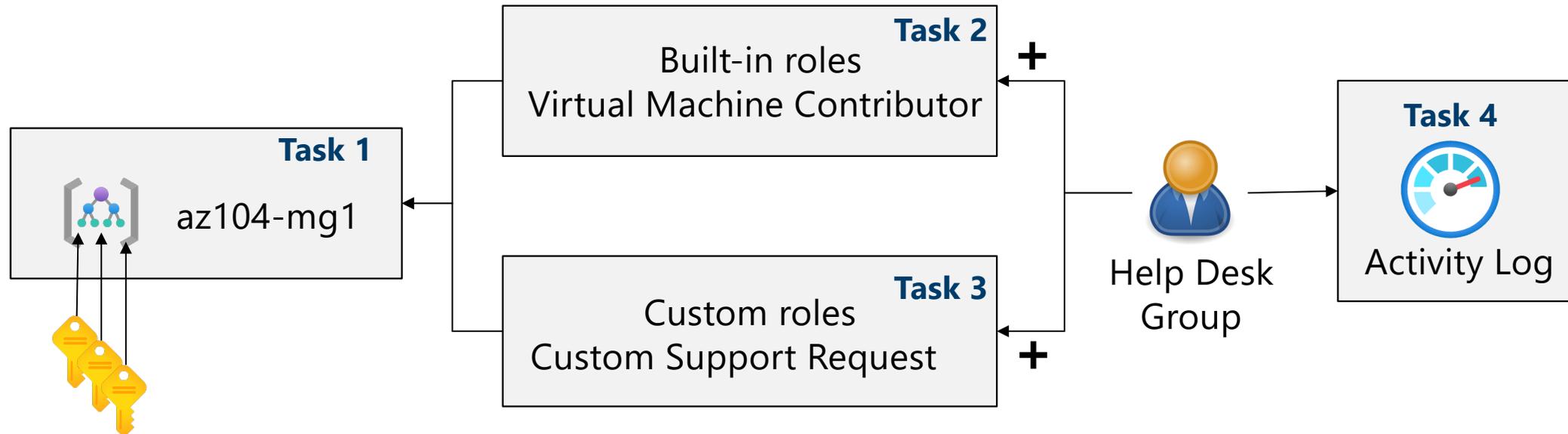
Task 1: Implement management groups.

Task 2: Review and assign a built-in Azure role.

Task 3: Create a custom RBAC role.

Task 4: Monitor role assignments with the Activity Log.

Lab 02a – Architecture diagram



Lab 02b – Manage Governance via Azure Policy



In this lab, you learn how to implement your organization's governance plans.

You learn how Azure policies can ensure operational decisions are enforced across the organization.

You learn how to use resource tagging to improve reporting.

Job Skills

Task 1: Create and assign tags via the Azure portal.

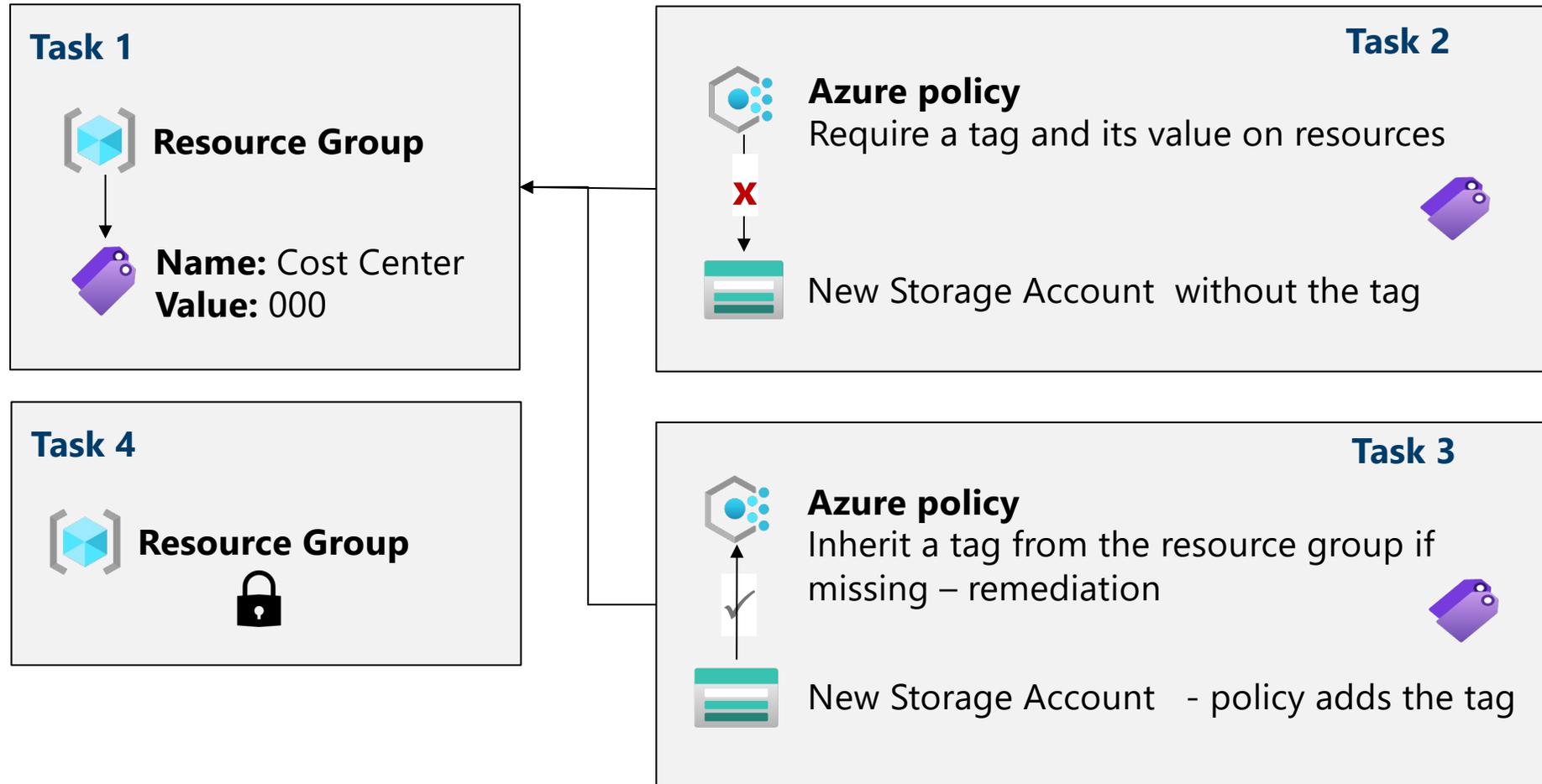
Task 2: Enforce tagging via an Azure Policy.

Task 3: Apply tagging via an Azure Policy.

Task 4: Configure and test resource locks.

Next slide for an architecture diagram 

Lab 02b – Architecture diagram



End of presentation

