

Managing Microsoft Azure Subscriptions

CONFIGURING MICROSOFT AZURE POLICIES



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Topics

**1. Configuring
Microsoft Azure
Policies**

**2. Configure Cost
Center Spending
Limits and Tagging**

**3. Assign Role-
based Access
Control**

**4. Manage Microsoft
Azure Resource
Providers**



Introduction



Resource Tagging

- Purpose
- How to tag resources

Microsoft Azure Policies

- Purpose
- Policy initiative definitions
- Exclusion scopes
- Built-in and custom policies

Downloadable Exercise Files

Network Fundamentals and Protocols
by Daniel Lachance

IPv4 is still the prevalent Internet protocol, but IPv6 is gaining traction. This course lays the foundation for security experts to secure network hardware and software.

[Resume Course](#) [Bookmark](#) [Add to Channel](#)

Table of contents Description Transcript **Exercise files** Discussion Learning Check Recommended

These exercise files are intended to provide you with the assets you need to create a video-based hands-on experience. With the exercise files, you can follow along with the author and re-create the same solution on your computer. We find this to be even more effective than written lab exercises.

[Download exercise files](#)



Resource Tagging



Tags are additional
metadata associated with
Microsoft Azure ARM
resources.

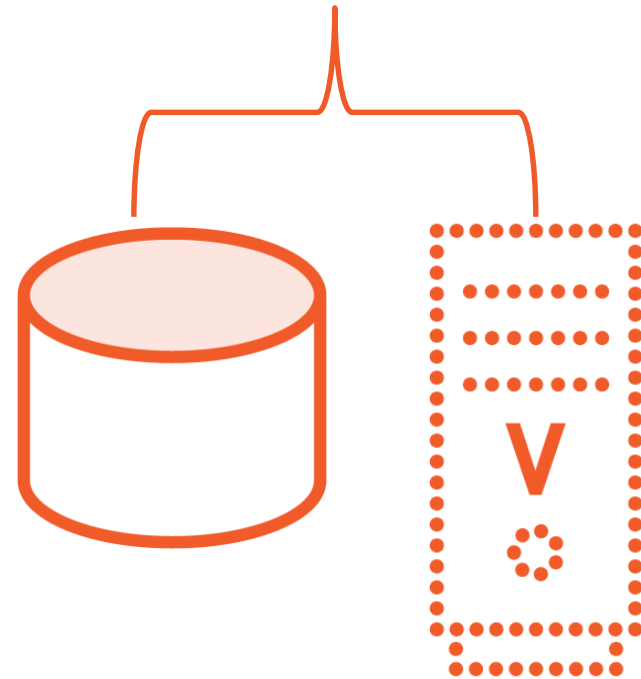


Tag Assignment

Individual Resources



Resource Groups



Tag Examples

Tag Key	Tag Value
Project	XYZ
Department	Sales-East
CostCenter	YHZ
LifeCyclePhase	Testing



Why Tag Resources?



Organize deployed Azure resources

Search by tag

Facilitates viewing related resources

Facilitates billing and cost management



Tag Management



Microsoft Azure portal

- Only after resource is created

Microsoft Azure PowerShell

Microsoft Azure CLI



Demo



Tag resources using the Microsoft Azure portal



Demo



Tag resources using Microsoft Azure PowerShell cmdlets



Demo



Tag resources using the Microsoft Azure CLI



Demo



Use a custom append policy to ensure tags are present



Microsoft Azure Policies



Microsoft Azure Policies
ensure proper cloud
governance by controlling
resource deployment and
usage.



Microsoft Azure Built-In Policies

Policy Name	Description
Require SQL Server 12.0	Ensures SQL servers are version 12.0
Allowed Storage Account SKUs	Controls Storage Account SKU sizes
Allowed Resource Types	Controls which types of resources can be deployed
Allowed Locations	Controls which locations that resources can be deployed into



Microsoft Azure Built-in Policies

Policy Name	Description
Allowed Virtual Machine SKUs	Limits virtual machine SKUs that can be deployed
Apply tag and its default value	If the specified tag is not provided by the user, apply a default value
Enforce tag and its value	Resource deployment succeeds only if a specific tag and value are supplied
Not allowed resource types	Lists resources that cannot be deployed



Custom Policies

JSON format

Used for granular resource control

- Limit load balancer creation to IT admins

Custom policies can be created

- Manually
- Copy existing policy
- GitHub



Policy Parameters

- Variable values are passed to the policy
- Enables policy reuse
 - Fewer policies are required
- String or array data type



Policy Assignment

Built-in and custom policies can be assigned

- Microsoft Azure portal
- PowerShell cmdlets
- Microsoft Azure CLI

Assignment permission requirement

- Microsoft.Authorization/
policyassignments/write



Policy Effects

Effect	Description
Append	Resource property additions including tags
Audit	Logging only; generates a warning
AuditIfNotExists	Auditing is enabled if resource does not exist
Deny	Existing non-compliant resources are marked as non-compliant, but not deleted
DeployIfNotExists	If the resource does not already exist, deploy it



Policy Assignment – Management Groups



- Used to organize Microsoft Azure subscriptions
- Up to 6 hierarchical levels can be created
- Subscriptions inherit settings
- Facilitates role-based access control (RBAC)
- Subscriptions can be moved to other parts of the hierarchy

Policy Assignment



- Subscription
 - Exclusions can apply to child items such as resource groups



- Resource group
 - Exclusions can apply to child items such as virtual machines

Policy Initiative Definitions



Policy Initiative Definitions

- Groups policies into a single unit
- Used when a single Azure governance goal consists of multiple checks
- Example:
 - Initiative Definition: Security Compliance



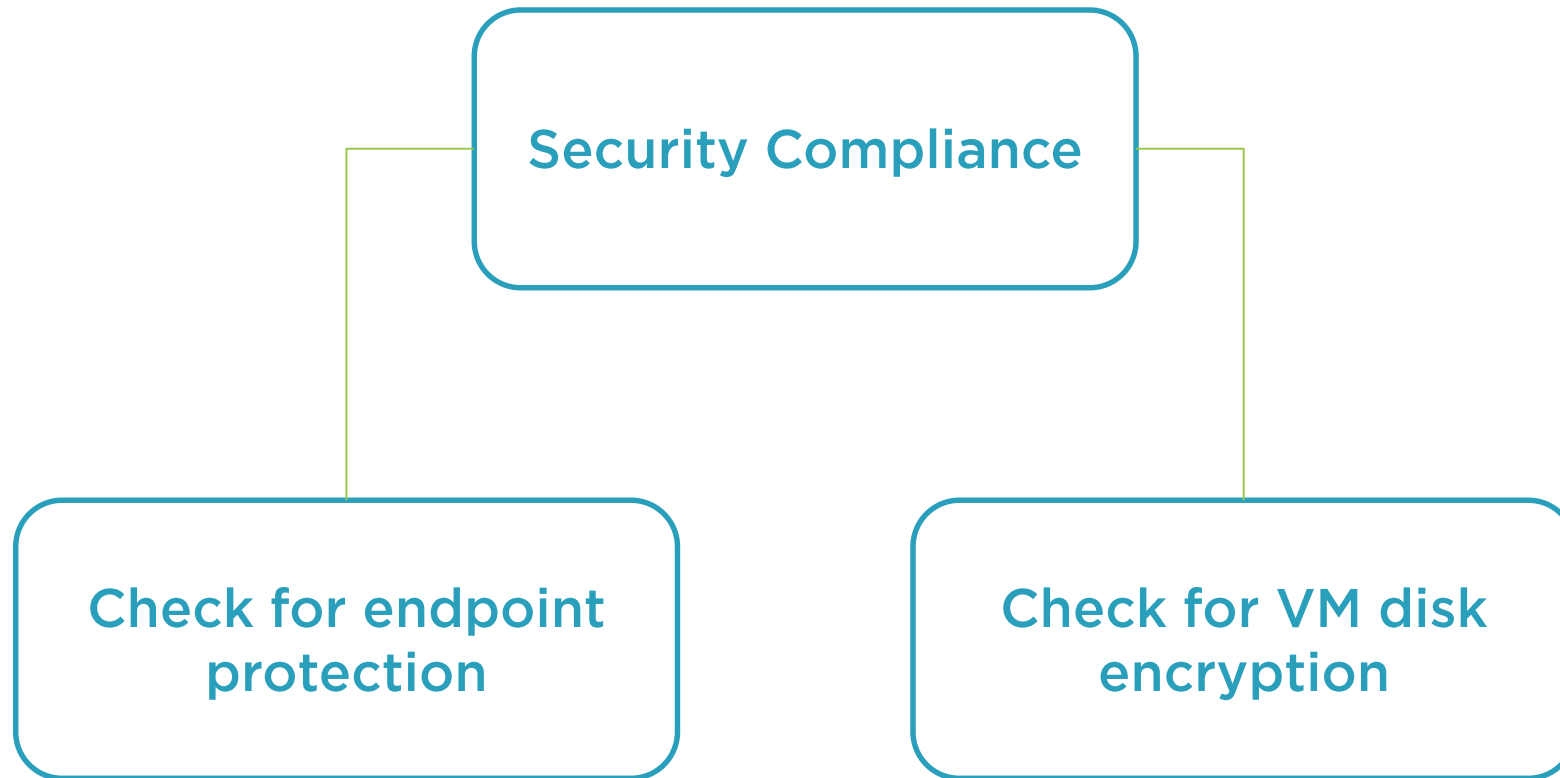
Assign Policy



Assign Initiative



Policy Initiative Definition Example



Microsoft Azure Policy Compliance

Policies apply to new and existing resources

Resources are scanned hourly for compliance with policies

Geo-compliance

- “Allowed Locations” built-in policy



Demo



Assign policies using the Microsoft Azure portal



Demo



Assign policies using Microsoft
Azure PowerShell cmdlets



Demo



**View policies and assignments
using the Microsoft Azure CLI**



Demo



Create and assign a custom policy



Summary



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