



# AZURE COST MANAGEMENT RESOURCE TAGGING BEST PRACTICES

## Azure offers a dynamic cloud platform in terms of enterprise-class deployment and management features.

However, in the real world, organizations face many challenges in creating a well-defined strategy to balance operational and cost efficiency in the cloud.



**Azure resource tagging is a core feature to unlock full visibility into incurred costs in your organizational context.**

Apply a consistent tag strategy inspired by this guide and/or linked resources to realize full insights from intellify azure cost management analytics 'out-of-the-box'.

# ORGANIZING RESOURCES USING AZURE TAGS



// USING TAGS IN AZURE

Azure tags are name-value pairs that are used to organize resources in Azure Portal. You can apply tags for individual resources or tag the resource group that they are part of. Implementing a proper tagging strategy can help organizations gain much better control over and visibility of the resources that are hosted in their Azure subscriptions.

The name-value pairs can be anything that helps identify the category that a specific resource belongs to. For example, you can add environment-related tags to VMs in order to determine whether the machine belongs to the test, QA, or production environment.

The possible tags in this use case could be Environment › Development, Environment › QA, or Environment › Production. You can easily sort your resources in the Azure portal using the tags to get a quick view of all the resources that come under your development, QA, and production environments.

# USING AZURE TAGS FOR COST MANAGEMENT



//GET INSIGHTS INTO AZURE COST IN AN ORGANIZATIONAL CONTEXT

The tags that you assign to resources can be utilized as part of Azure Cost Management analytics and will greatly improve insights into the costs that have been incurred for the tagged resources, and you can analyze it further by sorting the usage based on tags.

One possible use case would be if you want to chargeback Azure resource costs to their respective internal departments. The resources that are being used by the department can be tagged using a cost center name-value pair tag, and the costs that are incurred by the department can easily be isolated from the usage report using the assigned tag.

# AZURE TAGGING BEST PRACTICES



// DEFINE TAG GOVERNANCE AND STRATEGY (1/2)

Adding tags to your Azure resources is very simple and can be done using Azure Portal, Azure PowerShell, CLI, or ARM JSON templates. You can tag any resources in Azure, and using this service is free.

However, there are certain rules and limitations associated with tagging that users should be aware of:

- Each resource can have a maximum of 15 tags associated with it. Resources in this case can be individual resources like VM, Network, etc., or the resource group that they are part of.
- Resources that are deployed using the classic deployment model do not support tagging. It is an exclusive feature of the ARM model.
- The maximum number of characters for a tag name is 512. For storage accounts, this is limited even further to 128 characters.
- The maximum number of characters for a tag value is 256.
- You should use JSON strings via ARM templates when you want to assign multiple values to a tag name.
- There is no inheritance hierarchy for tags (e.g., tags applied at the resource group level are not inherited by any member resources).
- The tag name prefixes "Azure," "Windows," and "Microsoft" are reserved and cannot be used.

# AZURE TAGGING BEST PRACTICES



// DEFINE TAG GOVERNANCE AND STRATEGY (2/2)

While tagging can help you manage your resources more effectively, it is also important to adopt a good tagging strategy that will help you get the most out of this feature. The following best practice guidelines can be used for implementing a good tagging strategy:

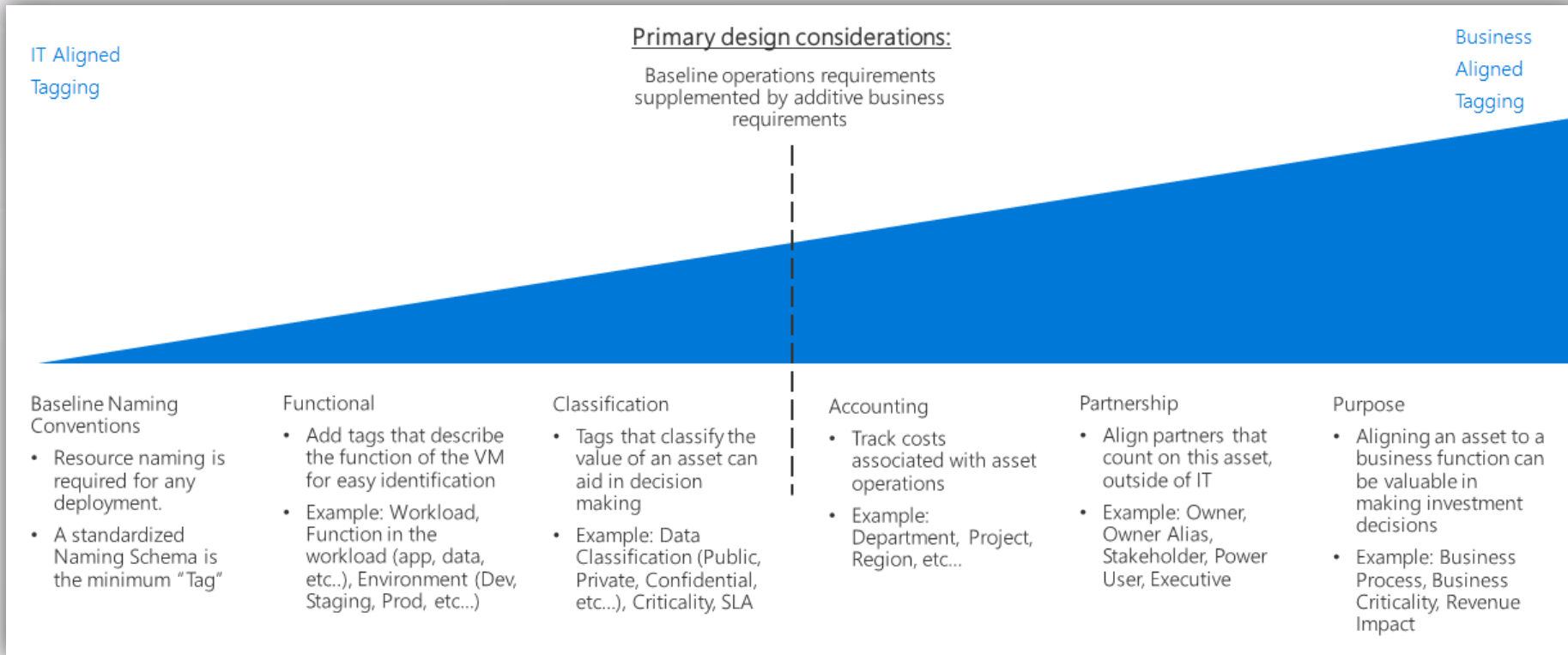
- The tags you are using should help you identify the context of the resource usage. They might be based on the project name, version, tier, environment, data profile, etc. The names and values should be tailored according to your organization's needs.
- Use a standard naming convention for resources in order to maintain consistency in your Azure environment. Define the standards that are applicable for tags and enforce them using Azure policies.
- Use tags early on, ideally when you create the resources. This will help you manage the resources more efficiently. Adding tags retroactively is inefficient, and it requires additional administrative overhead to streamline the process.
- Automate the tagging process using tools like PowerShell, CLI, ARM templates, etc. We recommend that you create standard, reusable templates or scripts to optimize the process.
- Monitor tagging practices and make amendments to naming conventions and processes as needed. Sanity checks on the environment should be conducted periodically in order to remove obsolete tags and avoid a "tag sprawl."



# RESOURCE TAGGING CONSIDERATIONS



//IT AND BUSINESS TAG ALIGNMENT



# RESOURCE TAGGING PATTERNS



// STANDARDIZED ORGANIZING YOUR AZURE CLOUD RESOURCES

TAG NAME	DESCRIPTION	EXAMPLES
<b>Functional</b>	Categorize resources in relation to their purpose within a workload, what environment they've been deployed to, or other functionality and operational details.	<ul style="list-style-type: none"><li>▪ app = catalogsearch1</li><li>▪ tier = web</li><li>▪ webserver = apache</li><li>▪ env = prod</li><li>▪ env = staging</li><li>▪ env = dev</li></ul>
<b>Classification</b>	Classifies a resource by how it's used and what policies apply to it.	<ul style="list-style-type: none"><li>▪ confidentiality = private</li><li>▪ SLA = 24hours</li></ul>
<b>Accounting</b>	Allows a resource to be associated with specific groups within an organization for billing purposes.	<ul style="list-style-type: none"><li>▪ department = finance</li><li>▪ program = business-initiative</li><li>▪ region = northamerica</li></ul>
<b>Partnership</b>	Provides information about what people (outside of IT) are related or otherwise affected by the resource.	<ul style="list-style-type: none"><li>▪ owner = jsmith</li><li>▪ contactalias = catsearchowners</li><li>▪ stakeholders = user1;user2;user3</li></ul>
<b>Purpose</b>	Aligns resources to business functions to better support investment decisions.	<ul style="list-style-type: none"><li>▪ businessprocess = support</li><li>▪ businessimpact = moderate</li><li>▪ revenueimpact = high</li></ul>



# MINIMUM SUGGESTED TAGS



//EXAMPLES OF TAGS

TAG NAME	DESCRIPTION	KEY AND EXAMPLE VALUES
<b>Workload name</b>	Name of the workload the resource supports.	<i>WorkloadName</i>  ControlCharts
<b>Data classification</b>	Sensitivity of data hosted by this resource.	<i>DataClassification</i>  Non-business, Public, General, Confidential, Highly confidential
<b>Business criticality</b>	Business impact of the resource or supported workload.	<i>Criticality</i>  Low, Medium, High, Business unit-critical, Mission-critical
<b>Business unit</b>	Top-level division of your company that owns the subscription or workload that the resource belongs to. In smaller organizations, this tag might represent a single corporate or shared top-level organizational element.	<i>BusinessUnit</i>  Finance, Marketing, Product XYZ, Corp, Shared
<b>Operations commitment</b>	Level of operations support provided for this workload or resource.	<i>OpsCommitment</i>  Baseline only, Enhanced baseline, Platform operations, Workload operations
<b>Operations team</b>	Team accountable for day-to-day operations.	<i>OpsTeam</i>  Central IT, Cloud operations, ControlCharts team, MSP-{Managed Service Provider name}

# ADDITIONAL COMMON TAGGING EXAMPLES



//THE FOLLOWING ARE A NUMBER OF TAGS COMMONLY USED ACROSS AZURE (1/2)

TAG NAME	DESCRIPTION	KEY AND EXAMPLE VALUES
<b>Application name</b>	Added granularity, if the workload is subdivided across multiple applications or services.	<i>ApplicationName</i> IssueTrackingSystem
<b>Approver name</b>	Person responsible for approving costs related to this resource.	<i>Approver</i> chris@contoso.com
<b>Budget required/approved</b>	Money allocated for this application, service, or workload.	<i>BudgetAmount</i> \$200,000
<b>Cost center</b>	Accounting cost center associated with this resource.	<i>CostCenter</i> 55332
<b>Disaster recovery</b>	Business criticality of the application, workload, or service.	<i>DR</i> Mission-critical", Critical, Essential
<b>End date of the project</b>	Date when the application, workload, or service is scheduled for retirement.	<i>EndDate</i> 2023-10-15

# ADDITIONAL COMMON TAGGING EXAMPLES



// THE FOLLOWING ARE A NUMBER OF TAGS COMMONLY USED ACROSS AZURE (2/2)

TAG NAME	DESCRIPTION	KEY AND EXAMPLE VALUES
<b>Environment</b>	Deployment environment of the application, workload, or service.	<i>Env</i>  ProdDevQAStageTest
<b>Owner name</b>	Owner of the application, workload, or service.	<i>Owner</i>  jane@contoso.com
<b>Requester name</b>	User who requested the creation of this application.	<i>Requester</i>  john@contoso.com
<b>Service class</b>	Service level agreement level of the application, workload, or service.	<i>ServiceClass</i>  DevBronzeSilverGold
<b>Start date of the project</b>	Date when the application, workload, or service was first deployed.	<i>StartDate</i>  2020-10-15

# AZURE COST MANAGEMENT RESOURCE LINKS



// RECOMMENDATIONS AND MATERIAL FROM MICROSOFT

## Governance and management

- Resource naming and tagging decision guide [link](#)
- Define your tagging strategy [link](#)

## Technical implementation

- Use tags to organize your Azure resources and management hierarchy [link](#)

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