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Governance & Enterprise
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إدارة الحوكمة والبنى المؤسسية

Standards & Guidelines for AWS Tagging

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Glossary

Acronyms	Definition
API	Application Programming Interface
AWS	Amazon Web Service
IAM	Identity and Access Management
EC2	Amazon Elastic Compute Cloud
VPC	Virtual Private Cloud
UTF-8	8-bit Unicode Transformation Format



1. Purpose

Tagging is a feature on Amazon Web Services (AWS) environment that helps managing organization’s instances, images, and other Amazon EC2 resources. It allows users to assign their own metadata to each resource in the form of “tags”.

The purpose of this document is to provide a unified standardization of AWS tags across government entities in order to facilitate systematic tracking, monitoring and reporting in different areas such as cost allocation, automation, operations support, access control and security risk management.

2. Intended Audience

Government users who are directly involved in creating, managing and monitoring AWS resources.

3. Introduction to Tags

A tag is a label that users can assign to an AWS resource. Each tag consists of a key and value, both of which users define.

Tags enable users to categorize their AWS resources in different ways, for example, by purpose, owner, or environment, etc. This is useful when there are many resources of the same type where users can quickly identify a specific resource based on the tags assigned to it.

Figure (a) shows how tagging simply works. In this example, the user assigned two tags to each instance; the first tag with a key indicating ministry owning the instance “**gob: ministry**” with value set to “**iga**” for Information and eGovernment Authority, while the second tag with a key indicating the type of hosting environment that the instance runs on, to show whether it is a **testing**, **production** or **development** environment.

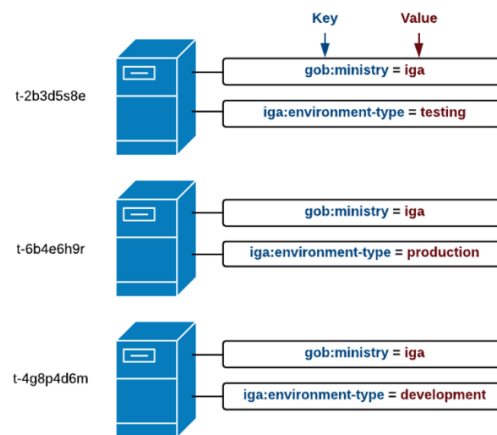


Figure (a)
Basic Tagging Example



4. Considerations to Best Practices

iGA has defined the AWS Tagging Standards based on AWS best practices, which include:

- Usage of a standardized, case-sensitive format for tags.
- Maintaining consistency across all resource types.
- Consideration to tag dimensions that support the ability to manage resource access control, cost tracking, automation, and organization.
- Implementation of automated tools to help manage resource tags. The [Resource Groups Tagging API](#) enables programmatic control of tags, making it easier to automatically manage, search, and filter tags and resources. It also simplifies backups of tag data across all supported services with a single API call per AWS Region.
- Consideration to the implications of future changes of tags, especially in relation to tag-based access control, automation, or upstream billing reports.

5. Naming Conventions

5.1 General Naming Guidelines

The following basic conventions for tag naming and usage should be considered while dealing with tags on AWS environment:

- Each resource can have a maximum of 50 tags.
- For each resource, each tag key must be unique, and each tag key can have only one value.
- The maximum tag key length is 128 Unicode characters in UTF-8.
- The maximum tag value length is 256 Unicode characters in UTF-8.
- Allowed characters can vary by AWS service. For information about what characters you can use to tag resources in a particular AWS service, see its documentation. In general, allowed characters in tags are letters, numbers, spaces representable in UTF-8, and the following characters: . : + = @ _ / - (hyphen).
- In terms of capitalization, iGA has decided to avoid capital letters in tag keys.
- The “aws:” prefix is reserved for AWS use. It is not possible to edit or delete tag keys or values when the tag has a tag key with the “aws:” prefix. Tags with the “aws:” prefix do not count against your tags per resource limit.



6. Tagging Guidelines

Tagging Guidelines are the core standardized reference that defines tag keys and their values for all AWS resources being implemented for on Government of Bahrain AWS environment.

6.1 Cost Allocation

A granular level of reporting on cost allocation tags can help Government of Bahrain identifying opportunities for cost optimization where instances of highest cost values can be easily tracked and monitored. The tags can also provide useful information on cost distribution across government entities, systems, national initiatives, hosting environment, compliance programs, etc.

Tags for Cost Allocation

Tag Key Name	Applicable Value / Examples
cost-center	Example: "012". This number corresponds to Government Entity's cost center. If you need to confirm your entity's code, please contact standards@iga.gov.bh .

6.2 Automation

Automation tags are used to opt in or opt out of automated tasks or to identify specific versions of resources to archive, update, or delete. An example of automation scenario could be running automated start/stop scripts that can turn off development environments during non-business hours, which can help reducing costs by automatically turning off unnecessary instances.

Tags for Automation:

Tag Key Name	Applicable Value / Examples
schedule	Example: "24", which means 24 hours availability
backup-plan	<workload-name>-plan

6.3 Operations Support

Operations support tags integrate support for AWS resources into day-to-day operations, including IT Service Management (ITSM) processes such as Incident Management. For example, backup and restore, as well as patching for operating systems.

Additionally, these tags can be utilized to make essential support information available any time, such as details on business owner or contact details of technical team responsible for supporting a particular instance.

Tags for Operations Support:



Tag Key Name	Applicable Value / Examples
department	computer-communication-networks
workload-name	name-of-the-work-load
technical-contact-name	ahmed-mohamed-ali
technical-contact-email	amali@xyx.gov.bh
technical-contact-phone	+97312345678
support-vendor-name	name-of-the-vendor
support-vendor-contact-name	contact-name-of-vendor-support
support-vendor-contact-email	emailid@vendordomain.com
support-vendor-contact-phone	+97312345678

7. Feedback and Comments

For feedback or any comments, please contact the Policies and Standards Team at iGA by email (standards@iga.gov.bh).

8. References & Useful Resources

- Cloud-First Policy
- AWS Landing Zone
- Government Entities Cost Center (available upon request)