

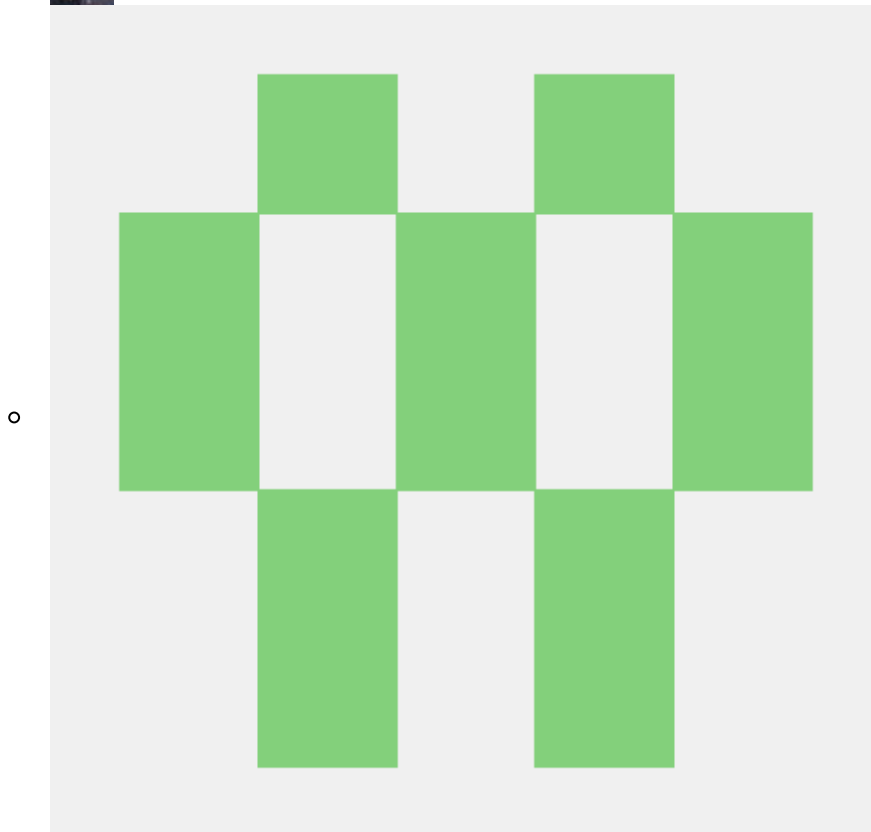


Recommended naming and tagging conventions



 docs.microsoft.com/en-us/azure/cloud-adoption-framework/ready/azure-best-practices/naming-and-tagging

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Organize your cloud assets to support operational management and accounting requirements. Well-defined naming and metadata tagging conventions help to quickly locate and manage resources. These conventions also help associate cloud usage costs with business teams via chargeback and showback accounting mechanisms.

Azure defines [naming rules and restrictions for Azure resources](#). This guidance provides detailed recommendations to support enterprise cloud adoption efforts.

Changing resource names can be difficult. Establish a comprehensive naming convention before you begin any large cloud deployment.

Note

Every business has different organizational and management requirements. These recommendations provide a starting point for discussions within your cloud adoption teams.

As these discussions proceed, use the following template to capture the naming and tagging decisions you make when you align these recommendations to your specific business needs.

Download the [naming and tagging conventions tracking template](#).

Naming and tagging resources

A naming and tagging strategy includes business and operational details as components of resource names and metadata tags:

The business side of this strategy ensures that resource names and tags include the organizational information needed to identify the teams. Use a resource along with the business owners who are responsible for resource costs.

The operational side ensures that names and tags include information that IT teams use to identify the workload, application, environment, criticality, and other information useful for managing resources.

Resource naming

An effective naming convention assembles resource names by using important resource information as parts of a resource's name. For example, using these [recommended naming conventions](#), a public IP resource for a production SharePoint workload is named like this:

`pip-sharepoint-prod-westus-001` .

From the name, you can quickly identify the resource's type, its associated workload, its deployment environment, and the Azure region hosting it.

Naming scope

All Azure resource types have a scope that defines the level that resource names must be unique. A resource must have a unique name within its scope.

For example, a virtual network has a resource group scope, which means that there can be only one network named `vnet-prod-westus-001` in a given resource group. Other resource groups could have their own virtual network named `vnet-prod-westus-001` . Subnets are scoped to virtual networks, so each subnet within a virtual network must be uniquely named.

Some resource names, such as PaaS services with public endpoints or virtual machine DNS labels, have global scopes, which means that they must be unique across the entire Azure platform.

Resource names have length limits. Balancing the context embedded in a name with its scope and length is important when you develop your naming conventions. For more information, see [naming rules and restrictions for Azure resources](#).

Recommended naming components

When you construct your naming convention, identify the key pieces of information that you want to reflect in a resource name. Different information is relevant for different resource types. The following list provides examples of information that are useful when you construct resource names.

Keep the length of naming components short to prevent exceeding resource name length limits.

Naming component	Description	Examples
Business unit	Top-level division of your company that owns the subscription or workload the resource belongs to. In smaller organizations, this component might represent a single corporate top-level organizational element.	fin , mktg , product , it , corp
Subscription type	Summary description of the purpose of the subscription that contains the resource. Often broken down by deployment environment type or specific workloads.	prod , shared , client
Application or service name	Name of the application, workload, or service that the resource is a part of.	navigator , emissions , sharepoint , hadoop
Deployment environment	The stage of the development lifecycle for the workload that the resource supports.	prod , dev , qa , stage , test
Region	The Azure region where the resource is deployed.	westus , eastus2 , westeurope , usgovia

Recommended naming components

Recommended resource-type prefixes

Each workload can consist of many individual resources and services. Incorporating resource type prefixes into your resource names makes it easier to visually identify application or service components.

This list recommends Azure resource type prefixes to use when you define your naming conventions.

General

Asset type	Name prefix
Resource group	rg-
Policy definition	policy-
API management service instance	apim-

General

Networking

Asset type	Name prefix
Virtual network	vnet-
Subnet	snet-
Network interface (NIC)	nic-
Public IP address	pip-
Load balancer (internal)	lbi-
Load balancer (external)	lbe-
Network security group (NSG)	nsg-
Application security group (ASG)	asg-
Local network gateway	lgw-
Virtual network gateway	vgw-
VPN connection	cn-
Application gateway	agw-
Route table	route-
Traffic Manager profile	traf-

Networking

Compute and Web

Asset type	Name prefix
Virtual machine	vm
Virtual machine scale set	vmss-

Asset type	Name prefix
Availability set	avail-
VM storage account	stvm
Azure Arc connected machine	arcm-
Container instance	aci-
AKS cluster	aks-
Service Fabric cluster	sf-
App Service environment	ase-
App Service plan	plan-
Web app	app-
Function app	func-
Cloud service	cld-
Notification Hubs	ntf-
Notification Hubs namespace	ntfns-

Compute and Web

Databases

Asset type	Name prefix
Azure SQL Database server	sql-
Azure SQL database	sqldb-
Azure Cosmos DB database	cosmos-
Azure Cache for Redis instance	redis-
MySQL database	mysql-
PostgreSQL database	psql-
Azure SQL Data Warehouse	sqldw-
Azure Synapse Analytics	syn-
SQL Server Stretch Database	sqlstrdb-

Databases

Storage

Asset type	Name prefix
Storage account	st
Azure StorSimple	ssimp

Storage

AI and Machine Learning

Asset type	Name prefix
Azure Cognitive Search	srch-
Azure Cognitive Services	cog-
Azure Machine Learning workspace	mlw-

AI and Machine Learning

Analytics and IoT

Asset type	Name prefix
Azure Analysis Services server	as-
Azure Databricks workspace	dbw-
Azure Stream Analytics	asa-
Azure Data Factory	adf-
Data Lake Store account	dls
Data Lake Analytics account	dla
Event hub	evh-
HDInsight - Hadoop cluster	hadoop-
HDInsight - HBase cluster	hbase-
HDInsight - Kafka cluster	kafka-
HDInsight - Spark cluster	spark-
HDInsight - Storm cluster	storm-

Asset type	Name prefix
HDInsight - ML Services cluster	mls-
IoT hub	iot-
Power BI Embedded	pbi-

Analytics and IoT

Integration

Asset type	Name prefix
Logic apps	logic-
Service Bus	sb-
Service Bus queue	sbq-
Service Bus topic	sbt-

Integration

Management and governance

Asset type	Name prefix
Blueprint	bp-
Blueprint assignment	bpa-
Key vault	
Log Analytics workspace	log-
Application Insights	appi-
Recovery Services vault	rsv-

Management and governance

Migration

Asset type	Name prefix
Azure Migrate project	migr-

Asset type	Name prefix
Database Migration Service instance	dms-
Recovery Services vault	rsv-

Migration

Metadata tags

When you apply metadata tags to your cloud resources, you can include information about those assets that couldn't be included in the resource name. You can use that information to perform more sophisticated filtering and reporting on resources. You want these tags to include context about the resource's associated workload or application, operational requirements, and ownership information. This information can be used by IT or business teams to find resources or generate reports about resource usage and billing.

What tags you apply to resources and what tags are required or optional differs among organizations. The following list provides examples of common tags that capture important context and information about a resource. Use this list as a starting point to establish your own tagging conventions.

Tag Name	Description	Key	Example value
Application name	Name of the application, service, or workload the resource is associated with.	<i>ApplicationName</i>	<i>{application name}</i>
Approver name	Person responsible for approving costs related to this resource.	<i>Approver</i>	<i>{email}</i>
Budget required/approved	Money allocated for this application, service, or workload.	<i>BudgetAmount</i>	<i>{}</i>
Business unit	Top-level division of your company that owns the subscription or workload the resource belongs to. In smaller organizations, this tag might represent a single corporate or shared top-level organizational element.	<i>BusinessUnit</i>	<i>FINANCE, MARKETING, {Product Name}, CORP, SHARED</i>
Cost center	Accounting cost center associated with this resource.	<i>CostCenter</i>	<i>{number}</i>

Tag Name	Description	Key	Example value
Disaster recovery	Business criticality of the application, workload, or service.	<i>DR</i>	<i>Mission-critical, Critical, Essential</i>
End date of the project	Date when the application, workload, or service is scheduled for retirement.	<i>EndDate</i>	<i>{date}</i>
Environment	Deployment environment of the application, workload, or service.	<i>Env</i>	<i>Prod, Dev, QA, Stage, Test</i>
Owner name	Owner of the application, workload, or service.	<i>Owner</i>	<i>{email}</i>
Requester name	User who requested the creation of this application.	<i>Requester</i>	<i>{email}</i>
Service class	Service level agreement level of the application, workload, or service.	<i>ServiceClass</i>	<i>Dev, Bronze, Silver, Gold</i>
Start date of the project	Date when the application, workload, or service was first deployed.	<i>StartDate</i>	<i>{date}</i>

Metadata tags

Example names

The following section provides some example names for common Azure resource types in an enterprise cloud deployment.

Example names: General

Asset type	Scope	Format	Examples
Subscription	Account/ Enterprise Agreement	<Business Unit>-<Subscription type>-<###>	<ul style="list-style-type: none"> • mktg-prod-001 • corp-shared-001 • fin-client-001

Asset type	Scope	Format	Examples
Resource group	Subscription	rg-<App or service name>-<Subscription type>-<###>	<ul style="list-style-type: none"> • rg-mktgsharepoint-prod-001 • rg-acctlookupsvc-share-001 • rg-ad-dir-services-shared-001
API management service instance	Global	apim-<App or service name>	apim-navigator-prod

Example names: General

Note

The example names above and elsewhere in this document reference a three digit padding (<###>). I.E. mktg-prod-001

Padding aids in human readability and sorting of assets when those assets are managed in a configuration management database (CMDB), IT Asset Management tool, or traditional accounting tools. When the deployed asset is managed centrally as part of a larger inventory or portfolio of IT assets, the padding approach aligns with interfaces those systems use to manage inventory naming.

Unfortunately, the traditional asset padding approach can prove problematic in infrastructure-as-code approaches which may iterate through assets based on a non-padded number. This approach is common during deployment or automated configuration management tasks. Those scripts would have to routinely strip the padding and convert the padded number to a real number, which slows script development and run time.

Which approach you choose to implement is a personal decision. The padding in this article is meant to illustrate the importance of using a consistent approach to inventory numbering, not which approach is superior. Before deciding on a number schema (with or without padding) evaluate which will have a bigger impact on long term operations: CMDB/asset management solutions or code-based inventory management. Then consistently follow the padding option that best fits your operational needs.

Example names: Networking

Asset type	Scope	Format	Examples
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Asset type	Scope	Format	Examples
Virtual network	Resource group	vnet-<Subscription type>-<Region>-<###>	<ul style="list-style-type: none"> vnet-shared-eastus2-001 vnet-prod-westus-001 vnet-client-eastus2-001
Subnet	Virtual network	snet-<subscription>-<subregion>-<###>	<ul style="list-style-type: none"> snet-shared-eastus2-001 snet-prod-westus-001 snet-client-eastus2-001
Network interface (NIC)	Resource group	nic-<##>-<vm name>-<subscription><###>	<ul style="list-style-type: none"> nic-01-dc1-shared-001 nic-02-vmhadoop1-prod-001 nic-02-vmtest1-client-001
Public IP address	Resource group	pip-<vm name or app name>-<Environment>-<subregion>-<###>	<ul style="list-style-type: none"> pip-dc1-shared-eastus2-001 pip-hadoop-prod-westus-001
Load balancer	Resource group	lb-<app name or role>-<Environment><###>	<ul style="list-style-type: none"> lb-navigator-prod-001 lb-sharepoint-dev-001
Network security group (NSG)	Subnet or NIC	nsg-<policy name or app name>-<###>	<ul style="list-style-type: none"> nsg-weballow-001 nsg-rdpallow-001 nsg-sqlallow-001 nsg-dnsblocked-001
Local network gateway	Virtual gateway	lgw-<Subscription type>-<Region>-<###>	<ul style="list-style-type: none"> lgw-shared-eastus2-001 lgw-prod-westus-001 lgw-client-eastus2-001
Virtual network gateway	Virtual network	vgw-<Subscription type>-<Region>-<###>	<ul style="list-style-type: none"> vgw-shared-eastus2-001 vgw-prod-westus-001 vgw-client-eastus2-001
Site-to-site connection	Resource group	cn-<local gateway name>-to-<virtual gateway name>	<ul style="list-style-type: none"> cn-lgw-shared-eastus2-001-to-vgw-shared-eastus2-001 cn-lgw-shared-eastus2-001-to-shared-westus-001
VPN connection	Resource group	cn-<subscription1><region1>-to-<subscription2><region2>-	<ul style="list-style-type: none"> cn-shared-eastus2-to-shared-westus cn-prod-eastus2-to-prod-westus
Route table	Resource group	route-<route table name>	<ul style="list-style-type: none"> route-navigator route-sharepoint
DNS label	Global	<A record of vm>.<region>.cloudapp.azure.com	<ul style="list-style-type: none"> dc1.westus.cloudapp.azure.com web1.eastus2.cloudapp.azure.com

Example names: Networking

Example names: Compute and Web

Asset type	Scope	Format	Examples
Virtual machine	Resource group	vm<policy name or app name><###>	<ul style="list-style-type: none"> • vmnavigator001 • vmsharepoint001 • vmsqlnode001 • vmhadoop001
VM storage account	Global	stvm<performance type><app name or prod name><region><###>	<ul style="list-style-type: none"> • stvmstcoreeastus2001 • stvmmpcoreeastus2001 • stvmstplmeastus2001 • stvmsthadoopeastus2001
Web app	Global	app-<App Name>-<Environment>-<###>.[{azurewebsites.net}]	<ul style="list-style-type: none"> • app-navigator-prod-001.azurewebsites.net • app-accountlookup-dev-001.azurewebsites.net
Function app	Global	func-<App Name>-<Environment>-<###>.[{azurewebsites.net}]	<ul style="list-style-type: none"> • func-navigator-prod-001.azurewebsites.net • func-accountlookup-dev-001.azurewebsites.net
Cloud service	Global	cld-<App Name>-<Environment>-<###>.[{cloudapp.net}]	<ul style="list-style-type: none"> • cld-navigator-prod-001.azurewebsites.net • cld-accountlookup-dev-001.azurewebsites.net
Notification hub	Resource group	ntf-<App Name>-<Environment>	<ul style="list-style-type: none"> • ntf-navigator-prod • ntf-emissions-dev
Notification Hubs namespace	Global	ntfns-<App Name>-<Environment>	<ul style="list-style-type: none"> • ntfns-navigator-prod • ntfns-emissions-dev

Example names: Compute and Web

Example names: Databases

Asset type	Scope	Format	Examples
Azure SQL Database server	Global	sql-<App Name>-<Environment>	<ul style="list-style-type: none"> • sql-navigator-prod • sql-emissions-dev
Azure SQL database	Azure SQL Database	sqlldb-<Database Name>-<Environment>	<ul style="list-style-type: none"> • sqlldb-users-prod • sqlldb-users-dev

Asset type	Scope	Format	Examples
Azure Cosmos DB database	Global	cosmos-<App Name>-<Environment>	<ul style="list-style-type: none"> • cosmos-navigator-prod • cosmos-emissions-dev
Azure Cache for Redis instance	Global	redis-<App Name>-<Environment>	<ul style="list-style-type: none"> • redis-navigator-prod • redis-emissions-dev
MySQL database	Global	mysql-<App Name>-<Environment>	<ul style="list-style-type: none"> • mysql-navigator-prod • mysql-emissions-dev
PostgreSQL database	Global	psql-<App Name>-<Environment>	<ul style="list-style-type: none"> • psql-navigator-prod • psql-emissions-dev
Azure SQL Data Warehouse	Global	sqldw-<App Name>-<Environment>	<ul style="list-style-type: none"> • sqldw-navigator-prod • sqldw-emissions-dev
SQL Server Stretch Database	Azure SQL Database	sqlstrdb-<App Name>-<Environment>	<ul style="list-style-type: none"> • sqlstrdb-navigator-prod • sqlstrdb-emissions-dev

Example names: Databases

Example names: Storage

Asset type	Scope	Format	Examples
Storage account (general use)	Global	st<storage name><###>	<ul style="list-style-type: none"> • stnavigatordata001 • stemissionsoutput001
Storage account (diagnostic logs)	Global	stdiag<first 2 letters of subscription name and number><region><###>	stdiagsh001eastus2001 stdiagsh001westus001
Azure StorSimple	Global	ssimp<App Name>-<Environment>	<ul style="list-style-type: none"> • ssimpnavigatorprod • ssimpemissionsdev

Example names: Storage

Example names: AI and machine learning

Asset type	Scope	Format	Examples
Azure Cognitive Search	Global	srch-<App Name>-<Environment>	<ul style="list-style-type: none"> • srch-navigator-prod • srch-emissions-dev
Azure Cognitive Services	Resource group	cog-<App Name>-<Environment>	<ul style="list-style-type: none"> • cog-navigator-prod • cog-emissions-dev
Azure Machine Learning workspace	Resource group	mlw-<App Name>-<Environment>	<ul style="list-style-type: none"> • mlw-navigator-prod • mlw-emissions-dev

Example names: AI and machine learning

Example names: Analytics and IoT

Asset type	Scope	Format	Examples
Azure Data Factory	Global	adf-<App Name>-<Environment>	<ul style="list-style-type: none"> • adf-navigator-prod • adf-emissions-dev
Azure Stream Analytics	Resource group	asa-<App Name>-<Environment>	<ul style="list-style-type: none"> • asa-navigator-prod • asa-emissions-dev
Data Lake Analytics account	Global	dla<App Name>-<Environment>	<ul style="list-style-type: none"> • dlanavigatorprod • dlaemissionsdev
Data Lake Storage account	Global	dls<App Name>-<Environment>	<ul style="list-style-type: none"> • dlsnavigatorprod • dlsemmissionsdev
Event hub	Global	evh-<App Name>-<Environment>	<ul style="list-style-type: none"> • evh-navigator-prod • evh-emissions-dev
HDInsight - HBase cluster	Global	hbase-<App Name>-<Environment>	<ul style="list-style-type: none"> • hbase-navigator-prod • hbase-emissions-dev
HDInsight - Hadoop cluster	Global	hadoop-<App Name>-<Environment>	<ul style="list-style-type: none"> • hadoop-navigator-prod • hadoop-emissions-dev

Asset type	Scope	Format	Examples
HDInsight - Spark cluster	Global	spark-<App Name>-<Environment>	<ul style="list-style-type: none"> spark-navigator-prod spark-emissions-dev
IoT hub	Global	iot-<App Name>-<Environment>	<ul style="list-style-type: none"> iot-navigator-prod iot-emissions-dev
Power BI Embedded	Global	pbi-<App Name>-<Environment>	<ul style="list-style-type: none"> pbi-navigator-prod pbi-emissions-dev

Example names: Analytics and IoT

Example names: Integration

Asset type	Scope	Format	Examples
Service Bus	Global	sb-<App Name>-<Environment>.[{servicebus.windows.net}]	<ul style="list-style-type: none"> sb-navigator-prod sb-emissions-dev
Service Bus queue	Service Bus	sbq-<query descriptor>	<ul style="list-style-type: none"> sbq-messagequery
Service Bus topic	Service Bus	sbt-<query descriptor>	<ul style="list-style-type: none"> sbt-messagequery

Example names: Integration

Is this page helpful?