**What Is Azure CLI?**

The Azure Command-Line Interface (CLI) is a cross-platform command-line tool to connect to Azure and execute administrative commands on Azure resources. It allows the execution of commands through a terminal using interactive command-line prompts or a script.

For interactive use, you first launch a shell such as cmd.exe on Windows, or Bash on Linux or macOS, and then issue a command at the shell prompt. To automate repetitive tasks, you assemble the CLI commands into a shell script using the script syntax of your chosen shell, and then you execute the script.

**Prerequisites:**

* Azure CLI. [Install the Azure CLI](https://learn.microsoft.com/en-us/cli/azure/install-azure-cli).
* The Azure CLI is available to install in **Windows**, **macOS** and **Linux environments**. It can also be run in a Docker container and Azure Cloud Shell.
* After installing, sign in for the first time. See [How to sign in to the Azure CLI](https://learn.microsoft.com/en-us/cli/azure/get-started-with-azure-cli#how-to-sign-into-the-azure-cli).
* Check your version by running **az --version.** Azure Cloud Shell always has the latest version of the Azure CLI preinstalled.

**Sign into the Azure CLI:**

Before using any Azure CLI commands with a local install, you need to sign in with **[az login](https://learn.microsoft.com/en-us/cli/azure/reference-index" \l "az-login)**.

* Run the **az login** command.
* If the Azure CLI can open your default browser, it initiates [authorization code flow](https://learn.microsoft.com/en-us/azure/active-directory/develop/v2-oauth2-auth-code-flow) and opens the default browser to load an Azure sign-in page.
* Sign in with your account credentials in the browser.
* After logging in, you receive a list of subscriptions associated with your Azure account. The subscription information with isDefault: true is the currently activated subscription after logging in.
* To select another subscription, use the [az account set](https://learn.microsoft.com/en-us/cli/azure/account" \l "az-account-set) command with the subscription ID of the desired account.

**Get the active tenant:**

Use **[az account tenant lis](https://learn.microsoft.com/en-us/cli/azure/account/tenant)**[t](https://learn.microsoft.com/en-us/cli/azure/account/tenant) or **[az account show](https://learn.microsoft.com/en-us/cli/azure/account" \l "az-account-show)** to get the active tenant ID.

az account tenant list

az account show

**Change the active tenant:**

To switch tenants, you have two options.

1. [**Change the active subscription**](https://learn.microsoft.com/en-us/cli/azure/manage-azure-subscriptions-azure-cli?tabs=bash#change-the-active-subscription)**:**

Azure subscriptions have both a name and an ID. You can switch to a different subscription using [az account set](https://learn.microsoft.com/en-us/cli/azure/account" \l "az-account-set) specifying the desired subscription ID or name.

# change the active subscription using the subscription name

az account set --subscription "My Demos"

# change the active subscription using the subscription ID

az account set --subscription "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"

1. Sign in as a user within the desired tenant. Use **[az login](https://learn.microsoft.com/en-us/cli/azure/reference-index" \l "az-login-examples)** to change the active tenant and update the subscription list to which you belong.

# sign in as a different user

az login --user <myAlias@myCompany.com> --password <myPassword>

# sign in with a different tenant

az login --tenant <myTenantID>

**Get subscription information:**

To see the subscription you're currently using or to get a list of available subscriptions, run the [az account show](https://learn.microsoft.com/en-us/cli/azure/account" \l "az-account-show) or [az account list](https://learn.microsoft.com/en-us/cli/azure/account" \l "az-account-list) command.

Here are examples showing how to get subscription information:

# get the current default subscription using show

az account show --output table

# get the current default subscription using list

az account list --query "[?isDefault]"

# get a subscription that contains search words or phrases

az account list --query "[?contains(name,'search phrase')].{SubscriptionName:name, SubscriptionID:id, TenantID:tenantId}" --output table

**What is a resource group?**

A resource group is a container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to add resources to resource groups based on what makes the most sense for your organization. Generally, add resources that share the same lifecycle to the same resource group so you can easily deploy, update, and delete them as a group.

**Manage Azure Resource Groups by using Azure CLI**

An Azure resource group is a container that holds related resources for an Azure solution. A resource group might contain storage, virtual machines, apps, dashboards, services, or almost anything you deal with in Azure.

**Create a resource group:**

To create a resource group, use the **[az group create](https://learn.microsoft.com/en-us/cli/azure/group" \l "az_group_create)** command:

**az group create --name MyResourceGroup --location eastus**

A resource group belongs to a single location. To see all the locations supported in your current subscription, run the **[az account list-locations](https://learn.microsoft.com/en-us/cli/azure/account" \l "az_account_list_locations)** command:

**az account list-locations**

To see all the resource groups for your current subscription, use the **[az group list](https://learn.microsoft.com/en-us/cli/azure/group" \l "az_group_list)** command:

**az group list --output table**

**Output formats for Azure CLI commands:**

| **--output** | **Description** |
| --- | --- |
| json | JSON string. This setting is the default |
| jsonc | Colorized JSON |
| table | ASCII table with keys as column headings |
| tsv | Tab-separated values, with no keys |
| yaml | YAML, a human-readable alternative to JSON |
| yamlc | Colorized YAML |
| none | No output other than errors and warnings |

**JSON output format (default)**

The following example displays the list of virtual machines in your subscriptions in the default JSON format.

**az vm list --output json**

**YAML output format**

The yaml format prints output as [YAML](http://yaml.org/), a plain-text data serialization format

**az vm list --output yaml**

**Table output format**

The table format prints output as an ASCII table, making it easy to read and scan.

**az vm list --output table**