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This page describes various ways to sign in to the gcloud CLI. The Google Cloud CLI is a command-line tool you can use for Google Cloud administration. Most services support the gcloud CLI. If you plan to use client libraries or third-party development tools that support Application Default Credentials (ADC) in a local development environment, you need to configure ADC in your local environment. For more information, see Set up Application Default Credentials for a local development environment. How you authenticate to and use the gcloud CLI depends on where you're running the tool: In a local environment Using Cloud Shell On Google Cloud compute resources Local environment For most use cases, you can use your user credentials to sign in to the gcloud CLI, but you can also use a service account. When you sign in to the gcloud CLI in a local environment, the tool places your access and refresh tokens in your home directory. Any user with access to your file system can use those credentials. For more information, see Mitigating compromised OAuth tokens for Google Cloud CLI. The following table describes your options for signing in to the gcloud CLI and how that affects the credentials used by the tool to authenticate and authorize to Google APIs.

Cloud Shell

When you use Cloud Shell, you don't need to sign in to the gcloud CLI, but you do need to authorize the use of your account before using any development tools from Cloud Shell. After you do that, the gcloud CLI uses your user credentials to access Google APIs. For more information, see Authorize with Cloud Shell.

Google Cloud compute resources

When you use the gcloud CLI on Google Cloud compute resources such as Compute Engine virtual machines, you don't need to initialize or sign in to the gcloud CLI, because it gets its credentials and configuration information from the hosting compute resource by using the metadata server. The gcloud CLI authentication configuration and ADC configuration When you sign in to the gcloud CLI, you use the gcloud auth login command to authenticate a principal to the gcloud CLI. The gcloud CLI uses that principal for authentication and authorization to manage Google Cloud resources and services. This is your gcloud CLI authentication configuration. When you use the gcloud CLI to configure ADC, you use the gcloud auth application-default login command. This command uses the principal you provide to configure ADC for your local environment. This is your ADC configuration. Your gcloud CLI authentication configuration is distinct from your ADC configuration. They can use the same principal or different principals. The gcloud CLI does not use ADC to access Google Cloud resources. The following table shows the two commands and what they do: Generally, you use the same account to sign in to the gcloud CLI and to configure ADC, but you can use different accounts if needed. What's next Except as otherwise noted, the content of this page is licensed under the Creative Commons Attribution 4.0 License, and code samples are licensed under the Apache 2.0 License. For details, see the Google Developers Site Policies.

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