Useful Google Cloud tools

So far, you've learned that cloud security analysts use a multitude of tools throughout their careers. Tools have different uses, like creating infrastructure, developing scripts, and monitoring and alerting for incidents. Tools also take different forms; some offer a command-line interface (CLI), and some offer graphical user interfaces (GUIs). Understanding these tools and how to use them will increase your effectiveness as a cloud security analyst. In this reading, you'll learn more about the Google Cloud tools you may encounter during your career.

Google Cloud tools

Google Cloud console

The Google Cloud console is a searchable web user interface where cloud security analysts can manage their resources from a single dashboard. The console is where analysts access tools, services, and products used in their cloud environment. They can also use the console to find documentation for those tools and services. For example, analysts can learn to troubleshoot their cloud environment or check out best practices for using tools.

Cloud Shell

Cloud Shell is a CLI for entering commands and developing shell scripts. Cloud security analysts can use Cloud Shell to perform a variety of tasks. For example, analysts can debug applications or view the credentials of account users. Cloud security analysts engage with these types of activities to help monitor and secure their cloud environment.

Cloud Functions

Google's Cloud Functions is a serverless product that uses functions to respond to event triggers. Functions are small pieces of executable code that serve a single purpose and run for a limited time. Cloud Functions is ideal for developers who want to focus only on writing code, and not on configuring the underlying infrastructure. For example, as part of maintaining the infrastructure, Google Cloud provides the necessary compute resources and scales them as needed. When the function isn't running, organizations aren't paying for compute resources.

Like with traditional cloud computing, cloud security analysts must be prepared to face security challenges with serverless computing. An advantage of both serverless computing and using functions is the possibility to create triggers. A trigger causes a function to run. Security analysts can use Cloud Functions to create event triggers that notify them of security events, like threats or vulnerabilities in applications.

Google Workspace

Google Workspace is a centralized place that stores Google apps, like Gmail, Google Drive, Docs, Calendar, and more. Google Workspace apps are collaborative. For example, teams can share their documents with other users, and grant them different levels of read or write access. Then, teams can collaborate in the same document at the same time, making version control easier.

Google Workspace is a commonly used tool across different organization types. Cloud security analysts may use a variety of Workspace apps to collaborate with DevSecOps teams and stakeholders.

Cloud Identity

Cloud Identity is an Identity as a Service (IDaaS) product that can help cloud security analysts manage identity and access management (IAM) in their cloud environment. Cloud Identity provides a central location where analysts can manage users and groups from Google Cloud's admin console. Analysts can also use Cloud Identity to enable single-sign on (SSO) and multifactor authentication (MFA), and enforce policies across user devices. Configuring IAM and enforcing controls like SSO and MFA are part of a cloud security analyst's responsibilities.

Compute Engine

Compute Engine is a service that allows cloud security analysts to create and deploy virtual machines (VMs) on Google's infrastructure. Similarly to VMs, when using Compute Engine, analysts select the type of server instance they need. Also, analysts can scale the number of server instances they need and only pay for what is used. Cloud security analysts monitor VMs for suspicious activity or misconfigurations to keep assets safe.

Key takeaways

Cloud security analysts work with a wide range of tools, including Google Cloud services. In this reading, you learned about just a few Google services you'll likely encounter throughout your career. Many cloud service providers offer similar services to those mentioned in this reading. For example, other providers may provide a CLI where you can develop scripts and interact with your services, or they may offer a solution that helps maintain different components of IAM.

Resources for more information

These links provide more information about Google Cloud tools:

- Google's Cloud Shell documentation
- Google Cloud's serverless computing offering: More information for Cloud Functions
- Google Workspace whitepaper

- Cloud Identity documentation
- Google Cloud's virtual machine solution: More information for Compute Engine