



Tenable Cloud Security Environment Sizing Guide

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Welcome

The following document provides instructions for running sizing scripts to detect the number of billable workloads across your multi-cloud environments:

- [AWS](#)
- [Microsoft Azure](#)
- [Google Cloud Platform \(GCP\)](#)

Important: The following guide can be used to evaluate the number of **billable resources** for Tenable Cloud Security. Please refer to [the documentation](#) to get more details about billable resource ratios and how to evaluate the number of Tenable One assets based on a given billable resource count.

AWS

This section includes instructions for executing a script for collecting sizing data for your AWS environment. It’s important to emphasize that the script takes a snapshot at a specific point in time, and doesn’t calculate the average number of resources over time. Once your accounts are on-boarded to Tenable CIEM or Tenable Cloud Security standard, the number of resources is evaluated for licensing purposes based on a daily snapshot of your environment. In addition, you should consider the organic growth of your cloud estate when looking at billable resources.

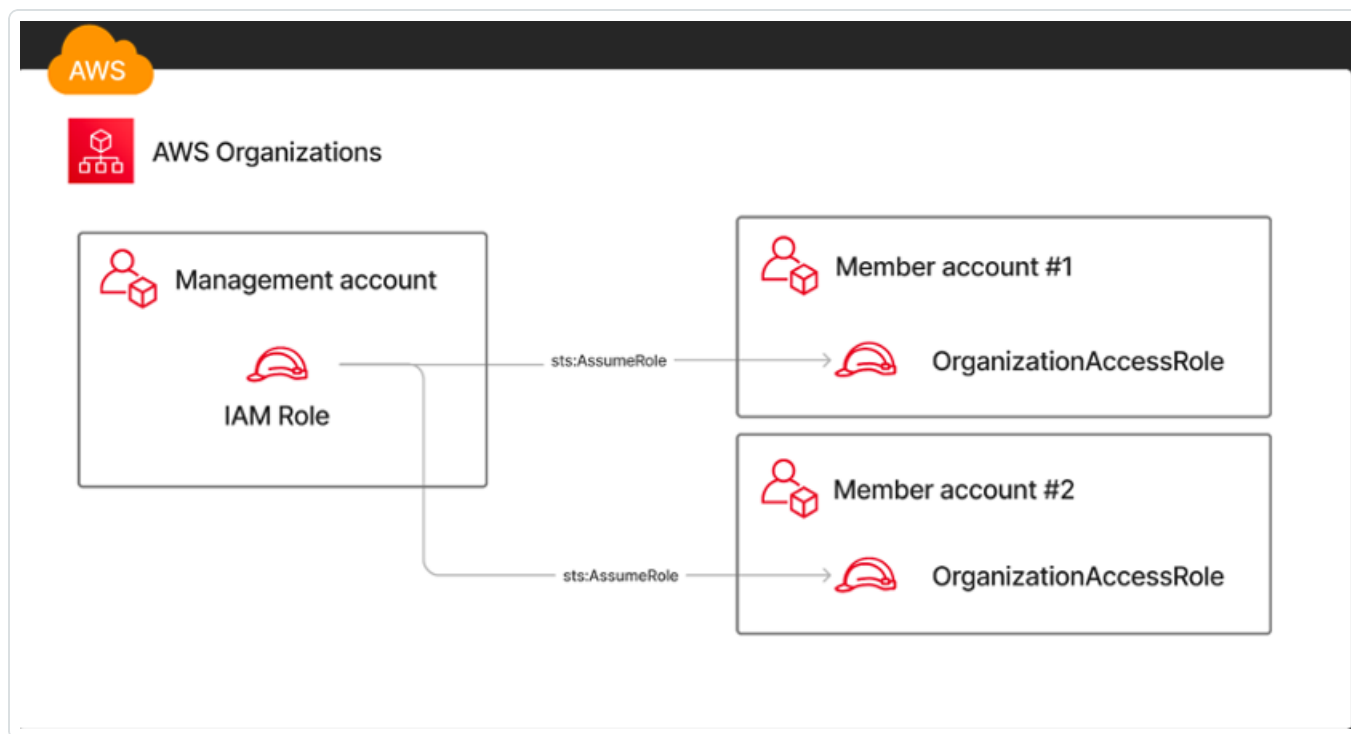
Billable resources

Category	Resource
Virtual Machines	EC2 Instances
Virtual Machines running Containers	EC2 Instances running ECS
Virtual Machines running Containers	EC2 Instances running EKS
Serverless Containers	ECS Services
Serverless Functions	Lambda Functions
Container Repositories	ECR Repositories
<div>Note: Only scanned repositories are considered for billing.</div>	

Prerequisites

Recommended Setup

The sizing script assumes the following architecture for scanning multiple accounts in a single [AWS Organization](#).



In the above diagram:

- The IAM Role used to run the sizing script belongs to the management account.
- That IAM Role needs permissions to `sts:AssumeRole` in all member accounts, as well as permissions to query resources in the management account (ECS / EKS / EC2 / Lambda / Organizations).

A list of minimum permissions is available in [Appendix A: Minimum Permissions for AWS](#).

In the example architecture, we use an IAM Role to query resources and assume roles in member accounts. However, the sizing script also supports using an IAM User that assumes roles in member accounts. That is achieved by using the `--user-access-key-id`, the `--user-secret-access-key`, or the `--profile-name` flags.

In addition, you can use a different role name than `OrganizationAccessRole` in the member accounts. That is achieved by using the `--organization-account-access-role-name` flag.

Note: You can still run the sizing script in individual accounts and share the results if you are not using AWS Organizations or don't have an organization role set up for all member accounts.

Command Line Interface (CLI)

To run the sizing script, install the following tools:

- [Python 3](#)
- [pip](#)

Permissions

Running the script requires an identity (IAM User or IAM Role) with the following permissions:

- [sts:assumeRole](#) permissions to an [OrganizationAccountAccessRole](#) IAM Role (or similar).
- Permission to read all resources in the management account.

If you do not have an IAM Role accessible by a centralized account, you can instead run the script on individual accounts.

Download

Download the sizing script from the following URL and extract the .zip contents:

<https://tenable-utilities.s3.us-east-2.amazonaws.com/Sizing/AWS.zip>

Instructions

To collect the number of billable workloads for your AWS environment, install the required packages and then choose an option for how to run the sizing script.

Install required packages using pip

To install the required packages with pip, run the following command:

```
pip3 install -r requirements.txt
```

Run the Sizing Script

Option 1: Run the sizing script using default credentials

To run the script with the default AWS CLI credentials, run the following command:

```
python3 sizing.py -o <outputDir>
```

Option 2: Run the sizing script using IAM User access key and secret

Run the following command:

```
python3 sizing.py -i <keyId> -k <keySecret> -o <outputDir>
```

Where *keyId* is the AWS Access Key ID for an IAM User in the management account of the [AWS Organization](#) and *keySecret* is the secret for the same Access Key.

Option 3: Run the sizing script using a named profile

If you are using [named profiles](#) to execute AWS CLI scripts, run the following command, using the `--profile-name` (or `-p`) parameter:

```
python3 sizing.py -p <profileName> -o <outputDir>
```

Review Errors and Warnings

Review the script output for errors and warnings. Ensure the number of resources matches your expectations. Some resources may be inaccessible due to permission errors or other issues.

Results

After reviewing for errors/warnings, share the resulting output file(s) with your Tenable representative to receive details about pricing estimates for your organization and to discuss any other issues you may have.

Microsoft Azure

This section includes instructions for executing a sizing script to count billable workloads in your Azure environment. It's important to emphasize that the script takes a snapshot at a specific point in time, and doesn't calculate the average number of resources over time. Once your accounts are on-boarded to Tenable CIEM or Tenable Cloud Security standard, the number of resources is evaluated for licensing purposes based on a rolling 3-month average. In addition, you should consider the organic growth of your cloud estate when looking at billable resources.

Billable resources

Category	Resource
Virtual machines	Virtual machines
Virtual machines	Scale Set virtual machines
Virtual machines running Containers	Virtual machines running AKS
Virtual machines running Containers	Container Instances
Serverless Functions	App Services
Container Repositories	Azure Container Registry Repositories
Note: Only scanned repositories are considered for billing.	

Prerequisites

Command Line Interface (CLI)

To run the sizing script, install the following tools:

- [Python 3](#)
- [pip](#)

Permissions

The identity used to run the sizing script is required to have the [Reader](#) built-in role assigned on the root management group (to collect data from all subscriptions). Alternatively, you may execute the

script multiple times for every subset of the organization you would like to get sizing information for.

Download

Download the sizing script from the following URL and extract the .zip contents:

<https://tenable-utilities.s3.us-east-2.amazonaws.com/Sizing/Azure.zip>

Instructions

To collect the number of billable workloads for your Azure environment, perform the following steps:

Install required packages using pip

To install the required packages with pip, run the following command:

```
pip3 install -r requirements.txt
```

Run the Sizing Script

To execute the sizing script, run the following command:

```
python3 sizing.py -t %TenantId% -o %OutputDir%
```

Where *%OutputDir%* is the output path for the script and *%TenantId%* is the required Azure AD Tenant ID for sizing.

Review Errors and Warnings

Review the script output for errors and warnings. Ensure the number of resources matches your expectations. Some resources may be inaccessible due to permission errors or other issues.

Results

After reviewing for errors/warnings, share the resulting output file(s) with your Tenable representative to receive details about pricing estimates for your organization and to discuss any other issues you may have.

Google Cloud Platform (GCP)

This section includes instructions for executing a sizing script to count billable workloads in your GCP environment. It's important to emphasize that the script takes a snapshot at a specific point in time, and doesn't calculate the average number of resources over time. Once your accounts are on-boarded to Tenable Cloud Security, the number of resources is evaluated for licensing purposes based on a rolling 3-month average. In addition, you should consider the organic growth of your cloud estate when looking at billable resources.

Billable resources

Category	Resource
Virtual Machines	Virtual machine Instances
Virtual Machines running Containers	Virtual machine Instances running GKE
Serverless Containers	Cloud Run services
Serverless Containers	GKE clusters running in Autopilot mode
Serverless Functions	Cloud Functions
Container Repositories	Atrifact Registry Repositories

Note: Only scanned repositories are considered for billing.

Prerequisites

To perform the following steps, you need to be a user with Viewer permissions to all projects within the organization.

Command Line Interface (CLI)

To run the sizing script, install the following tools:

- [Python 3](#)
- [pip](#)
- [gcloud](#)

Permissions

The identity you use to run the sizing script should have the following [role bindings on the organization scope](#):

- [Browser](#)
- [Cloud Asset Viewer](#)
- [Service Usage Consumer](#)

You must also enable the [Cloud Asset API](#) in the [quota project](#) used for running the script.

Download

Download the sizing script from the following URL and extract the .zip contents:

<https://tenable-utilities.s3.us-east-2.amazonaws.com/Sizing/GCP.zip>

Instructions

To collect the number of billable workloads for your GCP environment, perform the following steps:

Install required packages using pip

To install the required packages with pip, run the following command:

```
pip3 install -r requirements.txt
```

Run the Sizing Script

To execute the sizing script, run the following command:

```
python3 sizing.py -oid <organization_id> -qpid <project_id> -o <output_dir>
```

Where *<organization_id>* is the required GCP organization ID for sizing, *<project_id>* is the [quota project ID](#) (API quota is this project), and *<output_dir>* is the output path for the script.

Optional parameters:

- `-pid <project_id>` is the individual project id you would like to size.
- `-fid <folder_id>` is the id of the folder you would like to size (cannot be used with `-pid`).

Review Errors and Warnings

Review the script output for errors and warnings. Ensure the number of resources matches your expectations. Some resources may be inaccessible due to permission errors or other issues.

Results

After reviewing for errors/warnings, share the resulting output file(s) with your Tenable representative to receive details about pricing estimates for your organization and to discuss any other issues you may have.

Additional Resources

The following billable resources are outside the scope of this sizing guide. Ensure you have an estimate available or hold until you have fully onboarded your environment to get a complete estimate.

Category	Resource
Virtual Machines Note: These only apply to scanned resources.	Kubernetes Nodes
Virtual Machines running Containers Note: These only apply to scanned resources.	Kubernetes Nodes
Virtual Machines running Containers Note: These only apply to scanned resources.	Self-managed Kubernetes Nodes (on AWS/Azure/GCP)
Container Repositories Note: Only scanned repositories are considered for billing.	Container Repositories
Container Repositories Note: If the same container repository is being scanned via CI/CD and as part of the registry, it is billed as two separate resources.	Container Repositories detected via CI/CD

Appendix A: Minimum Permissions for AWS

Management Account

The following permissions are required for the identity used to run the script from the management account:

```
[
  "ec2:DescribeInstances",
  "lambda:ListFunctions",
  "ecs:ListServices",
  "organizations:ListAccounts",
  "organizations:DescribeOrganization",
  "ecs:ListClusters"
  "ecr:DescribeRepositories"
]
```

Member Accounts

The following permissions are required for the IAM Roles assumed in the member accounts:

```
[
  "ec2:DescribeInstances",
  "lambda:ListFunctions",
  "ecs:ListServices",
  "ecs:ListClusters"
  "ecr:DescribeRepositories"
]
```