Monitoring Amazon Web Services

Amazon Web Services PowerPack version 106

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Chapter 1

Introduction

Overview

This manual describes how to monitor Amazon Web Services using the Dynamic Applications in the *Amazon Web Services* PowerPack.

This manual also describes the reports you can generate and the dashboards you can view after you collect data from Amazon Web Services.

NOTE: To view Amazon Web Services dashboards, you will first need to install the *Amazon Web Services: Dashboards* PowerPack. For more information, see the ***AWS Dashboards*** chapter.

NOTE: For more information about setting up a ScienceLogic appliance on an Amazon Web Services EC2 instance, see the ***Installation and Initial Configuration*** manual.

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What is AWS?

Amazon Web Services (AWS) is Amazon's "Infrastructure As A Service" offering. AWS includes multiple products (called ***Services***) including virtual servers, DNS, private cloud, content delivery, storage, and database products.

What is an AWS Region?

An AWS region is an individual data center located in a specific geographic locale. Regions have a canonical naming scheme of:

country/continent-direction-number

For example, the 'us-east-1' region is located in the United States, on the east coast, and it is the #1 data center in that region.

AWS regions are also commonly referred to by the city or state in which the data center is located. For example, us-west-2 is commonly referred to as "Oregon", ap-northeast-1 is commonly referred to as "Tokyo", etc.

The Dynamic Applications in the *Amazon Web Services* PowerPack create a "region" component device for each discovered region. The component devices for regions include both the region name and city/state description. For example, the Dynamic Applications might discover a component device called "Oregon: us-west-2". Component devices that represent AWS services reside under the appropriate "region" component device and appropriate "zone" component device.

What is an AWS Zone?

All instances of an AWS service reside in one or more Zones. A zone is a physical network and power partition (air-gap firewall) within a regional data center. Some AWS instances, like EC2 instances, are in a single zone. Other AWS instances, like an SNS queue, exist in all zones simultaneously.

The AWS naming convention for a zone is:

region[a-z]

For example, zone 'a' for the region 'us-east-1' is named 'us-east-1a'.

When a user deploys a service instance, the user can specify a "zone preference", but the final zone for that service instance is decided by AWS, not the user.

The Dynamic Applications in the *Amazon Web Services* PowerPack create a "zone" component device for each discovered zone.

AWS services with a specific zone affinity reside under the appropriate zone component device. For example, the Dynamic Applications in the PowerPack might discover the zone "us-west-1b" and create a component device called ""us-west-1b".

AWS services reside under the appropriate "region" component device and appropriate "zone" component device. The Dynamic Applications in the PowerPack create a "multi-zoned" component device for services that are inherently zone agnostic such as the Simple Queue Service (SQS).

Component devices that represent Zones are a named container with no associated performance metrics.

What Does the Amazon Web Services PowerPack Monitor?

To collect data from Amazon Web Services, the ScienceLogic Data Collector or All-In-One Appliance connects via HTTPS to the URLs listed in the following AWS document: http://docs.aws.amazon.com/general/latest/gr/rande.html.

The *Amazon Web Services* PowerPack includes Dynamic Applications that can monitor performance metrics and collect configuration data for the following AWS Services and components:

- AutoScale
- CloudFront
- CloudTrail
- Direct Connect
- DynamoDB (DDB)
- ElastiCache
- Elastic Beanstalk
- Elastic Block Store (EBS)
- Elastic Compute Cloud (EC2)
- Elastic Load Balancers (ELB)
- Elastic Map Reduce (EMR)
- Glacier
- Lightsail
- OpsWorks
- RedShift
- Relational Data Store (RDS)
- Route53
- Security Groups
- Simple Notification Service (SNS)
- Simple Queue Service (SQS)
- Simple Storage Service (S3)
- Storage Gateways (ASG)
- Storage Gateway Volumes
- Virtual Private Cloud Service (VPC)

NOTE: The CloudFront service is not monitored for GovCloud accounts.

NOTE: To monitor performance metrics for an AutoScale group, you must activate detailed instance monitoring for that group. For instructions on how to perform this task, see http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/as-instance-monitoring.html.

The Dynamic Applications in the PowerPack also monitor:

- The general health of each AWS service
- Current billing metrics for each service aligned with the account
- Custom, application-specific performance metrics configured on the account
- The state of any AWS Alarms set on metrics in Cloudwatch

In addition to Dynamic Applications, the PowerPack includes the following features:

- Event Policies and corresponding alerts that are triggered when AWS component devices meet certain status criteria
- Device Classes for each of the AWS component devices monitored
- Reports and dashboards that display information about AWS instances and component devices
- A sample credential for discovering AWS component devices

Dynamic Applications: Naming Scheme and Roles

The Dynamic Applications in the *Amazon Web Services* PowerPack are divided in to four types:

- ***Discovery***. These Dynamic Applications poll AWS for new instances of services or changes to existing instances of services.
- ***Instance***. These Dynamic Applications retrieve configuration information about each service instance and retrieve any changes to that configuration information.
- ***Performance***. These Dynamic Applications poll AWS for performance metrics.
- ***Health***. These Dynamic Applications collect the RSS status update messages from the Amazon Health Status page (http://status.aws.amazon.com/).

Service Discovery Dynamic Applications are responsible for searching the AWS cloud for instances of specific service. Typically, a Service Discovery Dynamic Application will then align Discovery Dynamic Applications for each AWS service it discovers, Performance Dynamic Applications for each discovered service, and Configuration Dynamic Applications for each discovered service.

For example, the Dynamic Application "AWS EC2 Service Discovery" will create a component device for the EC2 service and align the Dynamic Applications "EC2 Service Performance", "EC2 Service Health", and "EC2 Instance Discovery" to that component device.

The Dynamic Application "EC2 Instance Discovery" will create component devices for each EC2 instance and align the Dynamic Applications "EC2 Instance" (a Configuration Dynamic Application), "EC2 Instance Performance", and "EBS Discovery" to that component device.

The general Dynamic Application hierarchy is:

- Account Discovery
    - Region Discovery
        - Zone Discovery
            - Service Discovery
                - Service Performance
                - Service Health
                - Instance Discovery
                    - Instance Config
                    - Instance Performance

AWS Account Discovery

The Dynamic Application "AWS Account Discovery" is the root Dynamic Application that retrieves the user's account permissions. The "Account" component device uses the full user ID as the device name.

The "AWS Account Discovery" Dynamic Application aligns the Dynamic Applications "AWS Region Discovery" and "AWS Region Instance" to the account component device. These Dynamic Applications discover the AWS Regions that contain services for the user.

The "AWS Account Discovery" Dynamic Application retrieves account-specific performance statistics such as total number of API calls and custom (application-specific) performance metrics.

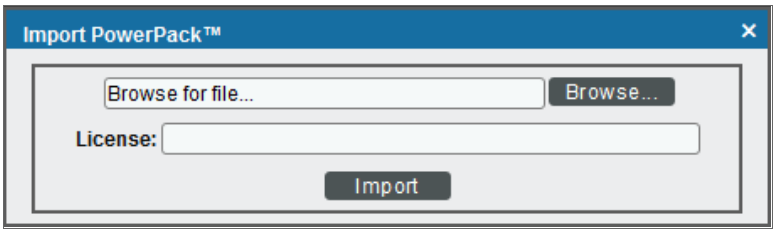
Installing the Amazon Web Services PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *Amazon Web Services* PowerPack.

To download and install a PowerPack:

TIP: By default, installing a new version of a PowerPack overwrites all content in that PowerPack that has already been installed on the target system. You can use the ***Enable Selective PowerPack Field Protection*** setting in the **Behavior Settings** page (System > Settings > Behavior) to prevent new PowerPacks from overwriting local changes for some commonly customized fields. (For more information, see the ***System Administration*** manual.)

1. Download the PowerPack from the ScienceLogic Customer Portal.
2. Go to the **PowerPack Manager** page (System > Manage > PowerPacks).
3. In the **PowerPack Manager** page, click the **[Actions]** button, then select *Import PowerPack*.
4. The **Import PowerPack** dialog box appears:



5. Click the **[Browse]** button and navigate to the PowerPack file.
6. When the **PowerPack Installer** modal page appears, click the **[Install]** button to install the PowerPack.

NOTE: If you exit the **PowerPack Installer** modal page without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPack Manager** page. However, the imported PowerPack will appear in the **Imported PowerPacks** modal page. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

Monitoring Consolidated Billing Accounts

Consolidated billing is an option provided by Amazon that allows multiple AWS accounts to be billed under a single account. For more information about consolidated billing, see http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/consolidated-billing.html.

If a consolidated billing account is monitored by the ScienceLogic platform, the billing metrics associated with that account include only the consolidated amounts, per service. If you use consolidated billing and want to collect billing metrics per-account, you must discover each account separately. To monitor only the billing metrics for an AWS account, you can create credentials that include only billing permissions.

ScienceLogic Events and AWS Alarms

In addition to the ScienceLogic platform collecting metrics for AWS instances, you can configure CloudWatch to send alarm information to the platform via email. The platform will generate an event for each alarm.

For instructions on how configure CloudWatch and the platform to generate events based on CloudWatch alarms, see the *Configuring Inbound CloudWatch Alarms* chapter.

Chapter 2

Configuring AWS Monitoring

Overview

The following sections describe the steps required to discover Amazon Web Services and component devices in the ScienceLogic platform using the *Amazon Web Services* PowerPack:

- *Configuring Amazon Web Services for Monitoring*
- *Creating an AWS Credential*
- *Testing the AWS Credential*
- *Creating an AWS Virtual Device*
- *Aligning the AWS Dynamic Applications*
- *Viewing AWS Component Devices*
- *Configuring the AWS Dashboards*
- *Amazon API Throttling Events*
- *Configuring AWS to Report Billing Metrics*
- *Enabling Custom Metrics Collection*

Configuring Amazon Web Services for Monitoring

To use the AWS Dynamic Applications, you must configure a credential that allows the ScienceLogic platform to connect to the AWS REST API. The *Amazon Web Services* PowerPack includes a credential template.

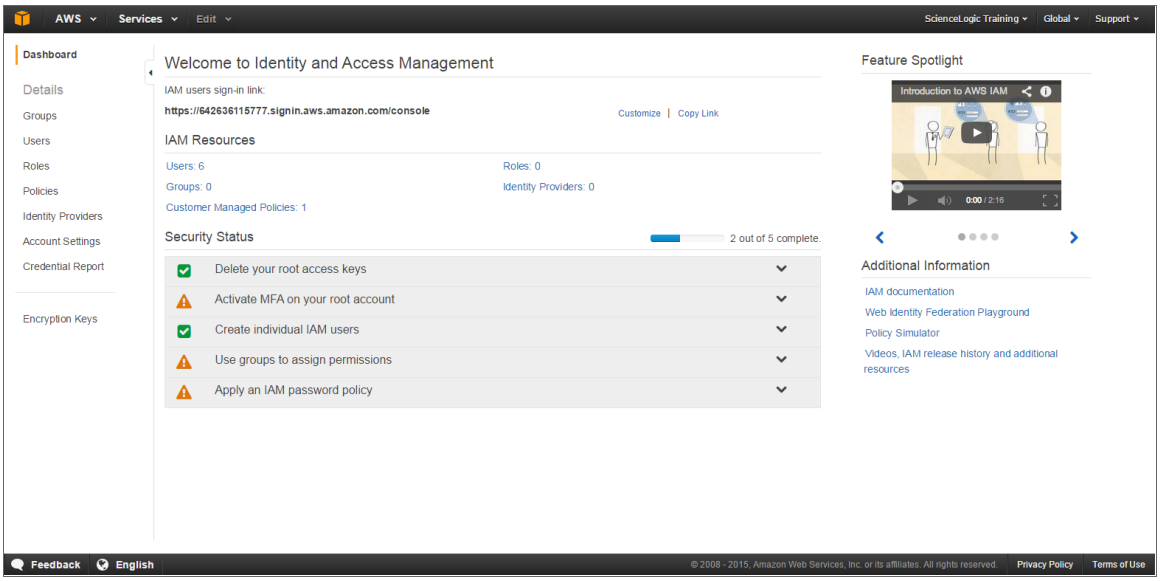
To use the credential template included in the PowerPack, you must download the security credentials for a user associated with your AWS account. The user must meet the following requirements:

- The Dynamic Applications in the *Amazon Web Services* PowerPack require, at minimum, the actions that are in the ReadOnlyAccess AWS Managed policy. To set this user policy, see https://console.aws.amazon.com/iam/home?region=us-east-1#/policies/arn:aws:iam::aws:policy/ReadOnlyAccess$serviceLevelSummary?section=policy_versions.
- To collect billing metrics, the user must have read permission in the us-east-1 zone. For instructions on how to configure your AWS account to report billing metrics, see the *Configuring AWS to Report Billing Metrics* section.
- If you are using multiple users to monitor AWS, each instance of a service must be visible to only one of those users. If an instance is visible to multiple users that are used to monitor AWS in the ScienceLogic platform, the device record for that instance will repeatedly switch between the component trees of the accounts that have visibility to that instance.

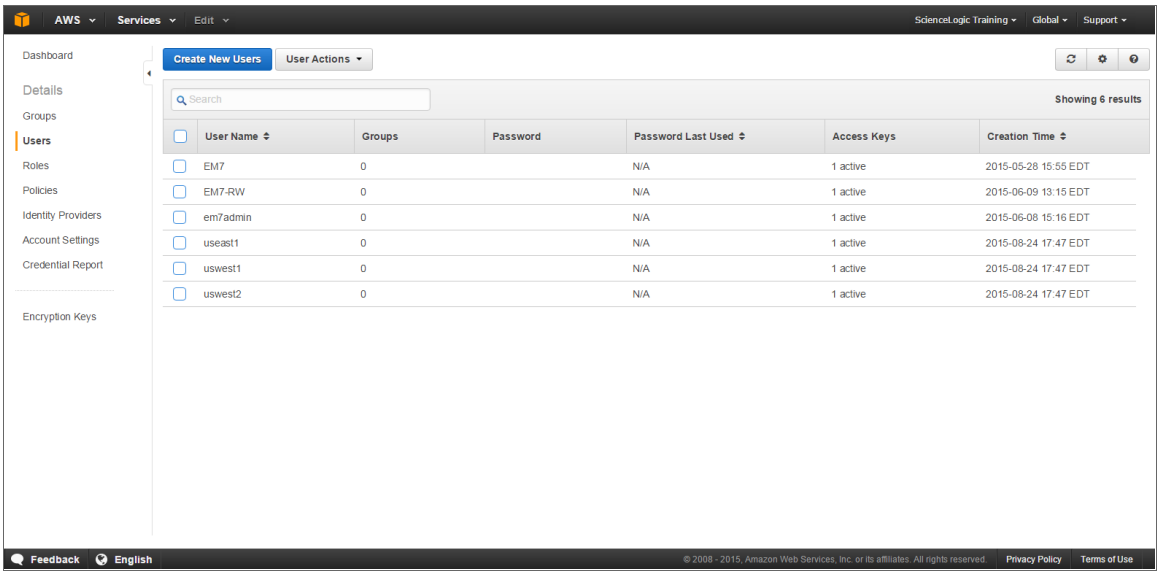
To create a read-only user account, perform the following steps:

1. Open a browser session and go to aws.amazon.com.
2. Click **[My Account]** and then select *AWS Management Console*. If you are not currently logged in to the AWS site, you will be prompted to log in:

3. In the **AWS Management Console**, under the **Security & Identity** heading, click **[Identity & Access Management]**.
4. After logging in, the **Identity & Access Management Dashboard** page appears:

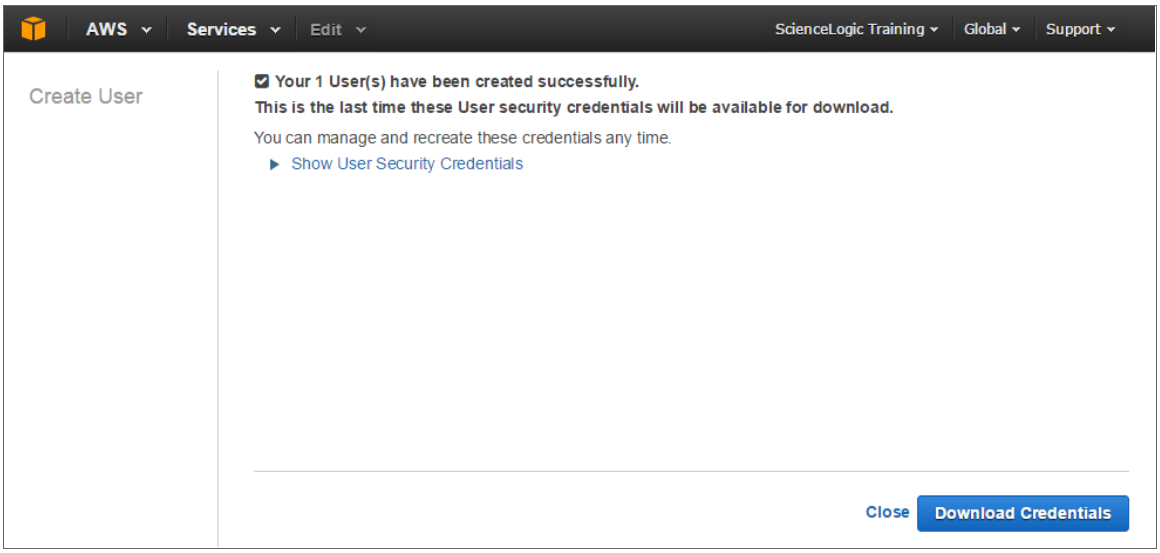


5. To create a user account for the ScienceLogic platform, click **[Users]** on the Dashboard menu.

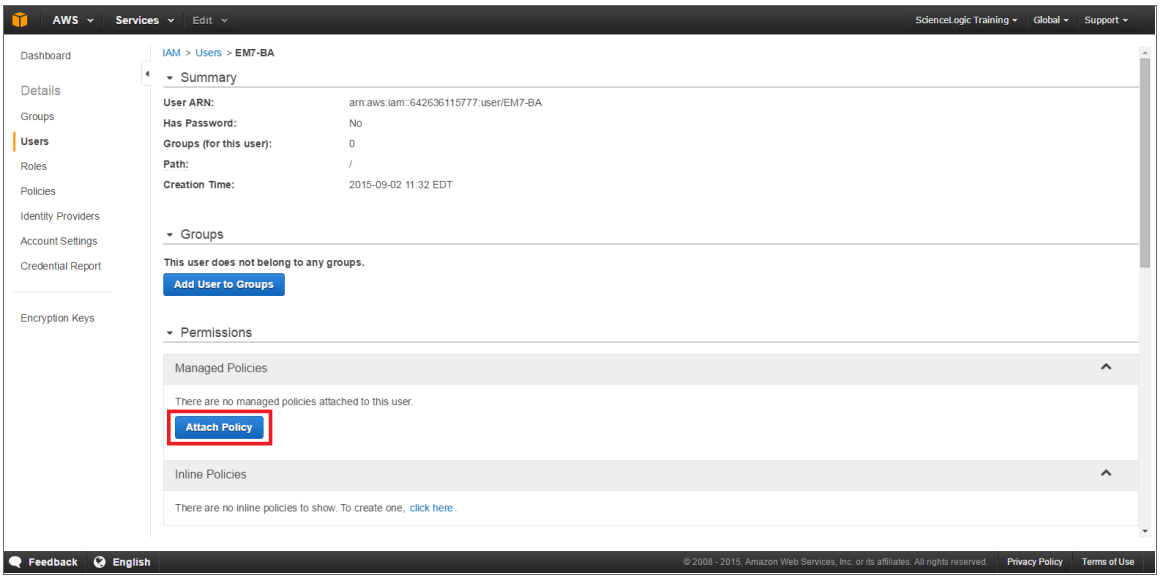


6. Click the **[Create New Users]** button.
7. Enter a username for the new user, e.g. "EM7", and make sure the ***Generate an access key for each user*** checkbox is selected.

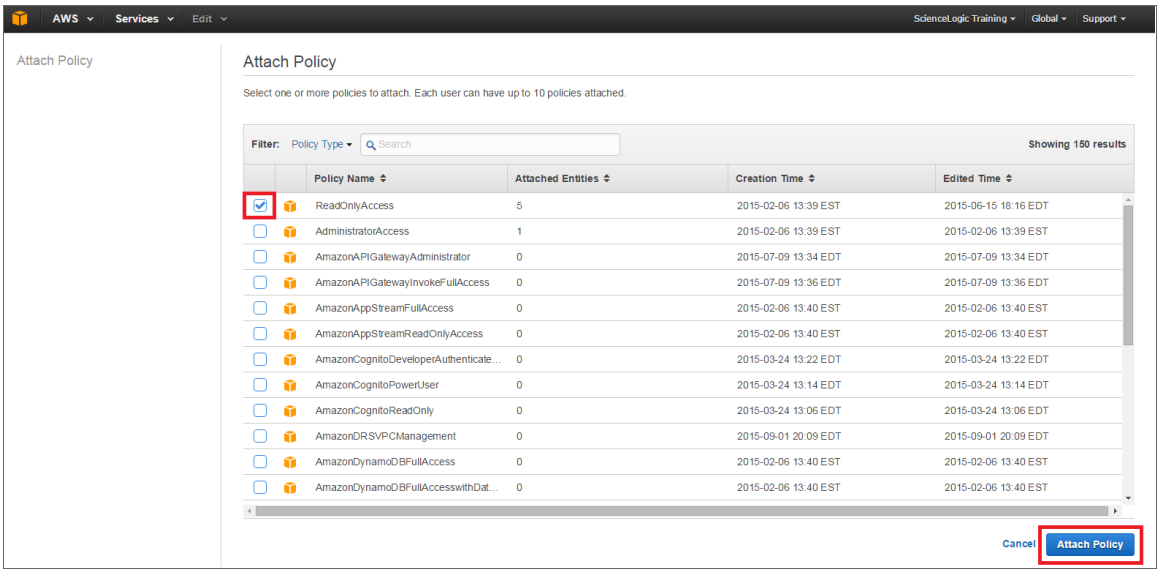
8. Click the **[Create]** button to generate your user account. The **Create User** page appears:



9. Click the **[Download Credentials]** button to save your Access Key ID and Secret Key as a CSV (comma-separated value) text file, and then click **[Close]**.
10. After creating a user, you must assign it a set of permissions policies. Click the username of the user account you created. The user's account information appears:



11. Under the **Permissions** heading, click the **[Attach Policy]** button. The **Attach Policy** page appears:



12. Select the checkbox for *Read Only Access* or select the policy based on the definition supplied by ScienceLogic.
13. Click the **[Attach Policy]** button.

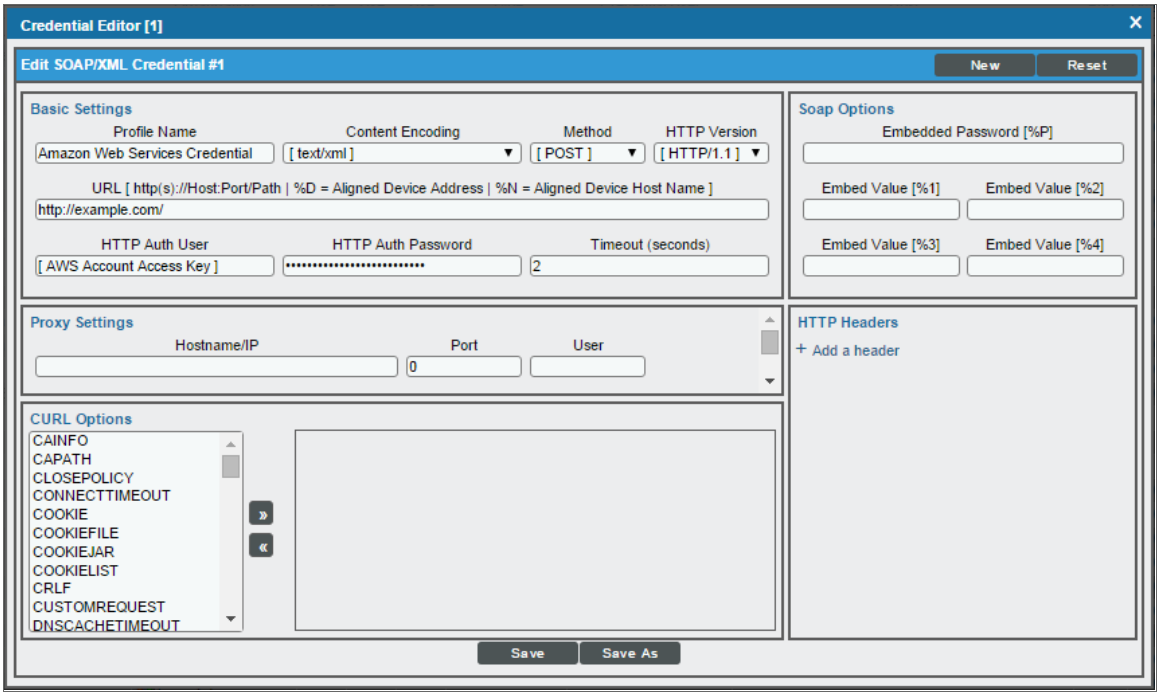
Creating an AWS Credential

To use the Dynamic Applications in the *Amazon Web Services* PowerPack, you must first define an AWS credential in the ScienceLogic platform. The PowerPack includes a sample SOAP/XML credential (**Amazon Web Services Credential**) you can use as a template.

To define an AWS credential:

1. Go to the **Credential Management** page (System > Manage > Credentials).

2. Click the wrench icon ( ) for the ***Amazon Web Services Credential***. The **Credential Editor** modal page appears:



3. Enter values in the following fields:

Basic Settings

- ***Profile Name***. Type a new name for your AWS credential.
- ***HTTP Auth User***. Type your ***Access Key ID***.
- ***HTTP Auth Password***. Type your ***Secret Access Key***. The characters appear as asterisks to protect your password privacy.

Proxy Settings

NOTE: The *Amazon Web Services* PowerPack supports the ability to discover and monitor Elastic Compute Cloud (EC2), Elastic Load Balancer (ELB), OpsWorks, Route53, and Virtual Private Cloud (VPC) services through a proxy server. The ***Proxy Settings*** fields are required only if you are discovering AWS services through a proxy server. Otherwise, you can leave these fields blank.

- ***Hostname/IP***. Type the host name or IP address of the proxy server.
- ***Port***. Type the port on the proxy server to which you will connect.
- ***User***. Type the username used to access the proxy server.
- ***Password***. Type the password used to access the proxy server.

SOAP Options

- ***Embed Value [%1]***. To monitor a GovCloud account, type "us-gov-west-1". To monitor the Beijing region, type "cn-north-1". Otherwise, leave this field blank.

4. Click the **[Save As]** button, and then click **[OK]**.

Testing the AWS Credential

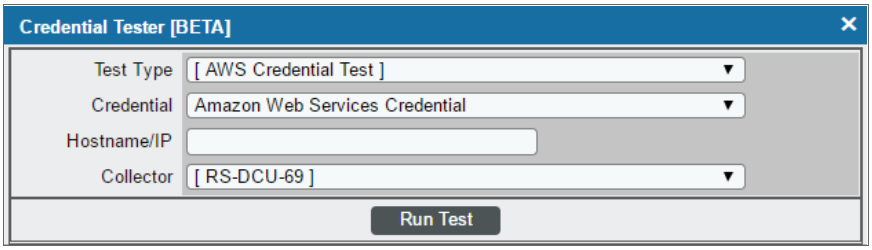
The ScienceLogic platform includes a Credential Test for Amazon Web Services. Credential Tests define a series of steps that the platform can execute on demand to validate whether a credential works as expected.

The AWS Credential Test can be used to test a SOAP/XML credential for monitoring AWS using the Dynamic Applications in the *Amazon Web Services* PowerPack. The AWS Credential Test performs the following steps:

- ***Test Reachability***. Performs an ICMP ping request to the URL for the EC2 service in the region specified in the credential. If a region is not specified in the credential, the us-east-1 region is used.
- ***Test Port Availability***. Performs an NMAP request to TCP port 443 on the URL for the EC2 service in the region specified in the credential. If a region is not specified in the credential, the us-east-1 region is used.
- ***Test Name Resolution***. Performs an nslookup request on the URL for the EC2 service in the region specified in the credential. If a region is not specified in the credential, the us-east-1 region is used.
- ***Make connection to AWS account***. Attempts to connect to the AWS service using the account specified in the credential.
- ***Scan AWS services***. Verifies that the account specified in the credential has access to the ec2, iam, and s3 services.

To test the AWS credential:

1. Go to the **Credential Test Management** page (System > Customize > Credential Tests).
2. Locate the **AWS Credential Test** and click its lightning bolt icon ( ). The **Credential Tester** modal page appears:

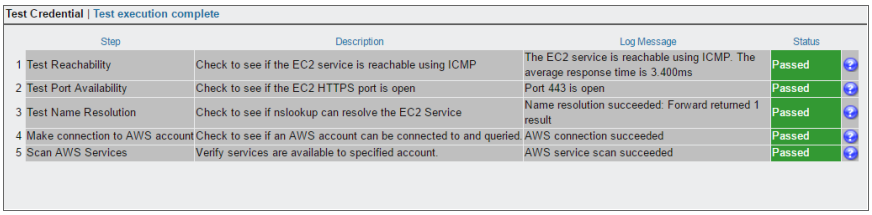


3. Supply values in the following fields:

- ***Test Type***. This field is pre-populated with the credential test you selected.

- ***Credential***. Select the credential to test. This drop-down list includes only credentials that you have access to that can be tested using the selected credential test.
- ***Hostname/IP***. Leave this field blank.
- ***Collector***. Select the All-In-One Appliance or Data Collector that will run the test.

4. Click the **[Run Test]** button to run the credential test. The **Test Credential** window appears:



The **Test Credential** window displays a log entry for each step in the credential test. The steps performed are different for each credential test. The log entry for each step includes the following information:

- ***Step***. The name of the step.
- ***Description***. A description of the action performed during the step.
- ***Log Message***. The result of the step for this credential test.
- ***Status***. Whether the result of this step indicates the credential or the network environment is configured correctly (Passed) or incorrectly (Failed).
- ***Step Tip***. Mouse over the question mark icon ( ) to display the tip text. The tip text recommends what to do to change the credential or the network environment if the step has a status of "Failed".

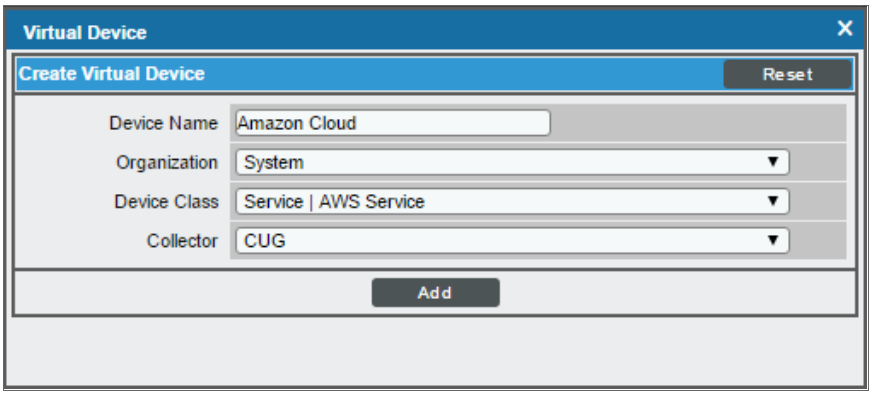
Creating an AWS Virtual Device

Because the Amazon Web Service does not have a specific IP address, you cannot discover an AWS device using discovery. Instead, you must create a ***virtual device*** that represents the Amazon Web Service. A virtual device is a user-defined container that represents a device or service that cannot be discovered by the ScienceLogic platform. You can use the virtual device to store information gathered by policies or Dynamic Applications.

To create a virtual device that represents your Amazon service:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager).

2. Click the **[Actions]** button, then select *Create Virtual Device*. The **Virtual Device** modal page appears:



3. Enter values in the following fields:

   - ***Device Name***. Enter a name for the device. For example, you could enter "Amazon Cloud" in this field.
   - ***Organization***. Select the organization for this device. The organization the device is associated with limits the users that will be able to view and edit the device.
   - ***Device Class***. Select *Service | AWS Service*.
   - ***Collector Group***. Select the collector group that will monitor the device.

4. Click the **[Add]** button to create the virtual device.

Aligning the AWS Dynamic Applications

You must manually align the following Dynamic Applications with the AWS Virtual Device:

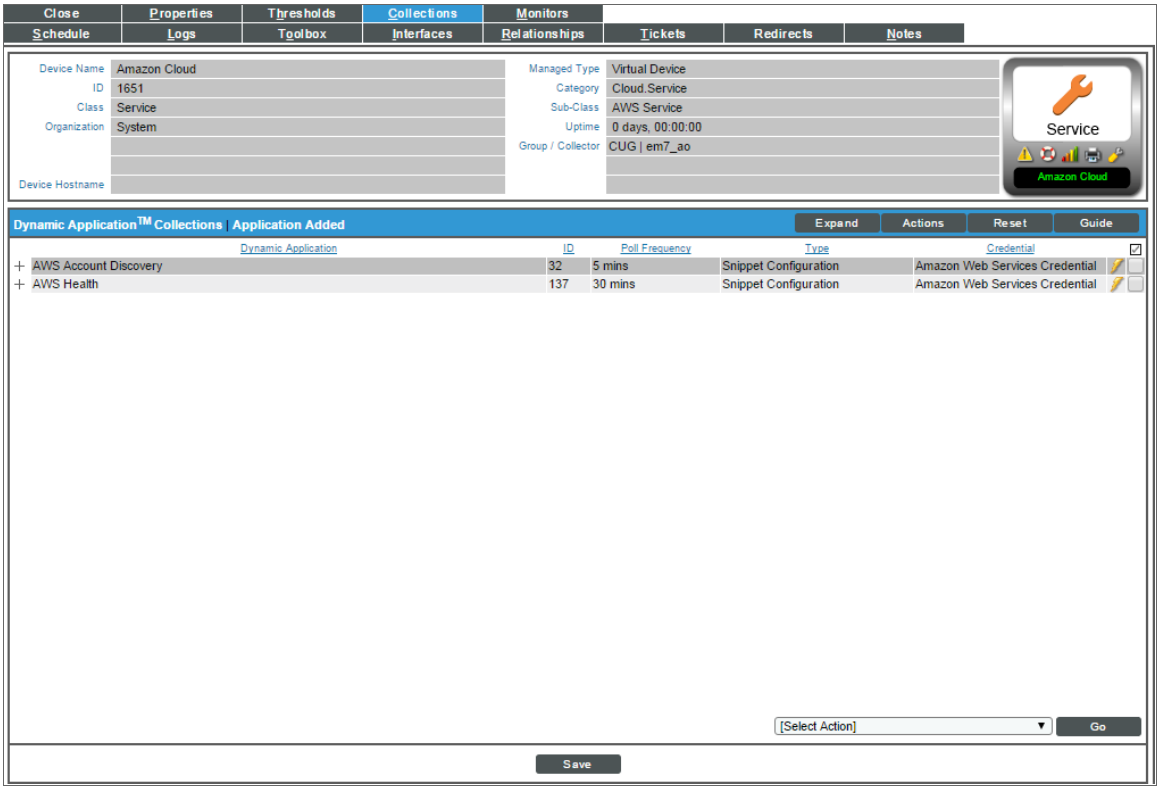
- AWS Health
- AWS Account Discovery

You will need to manually align only the "AWS Health" and "AWS Account Discovery" Dynamic Applications. The other AWS applications will be automatically aligned.

To align the Dynamic Applications to your virtual device, perform the following steps:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager).
2. Click the wrench icon ( ) for your virtual device.

3. In the **Device Administration** panel, click the **[Collections]** tab. The **Dynamic Application Collections** page appears:



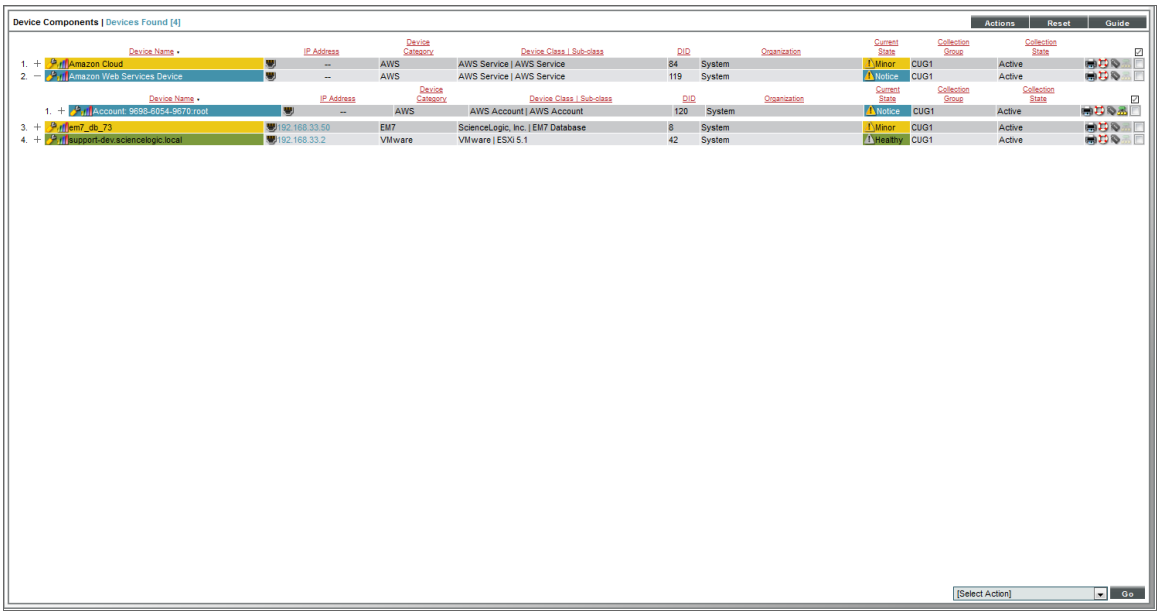
4. Click the **[Actions]** button, and then select *Add Dynamic Application* from the menu.
5. In the **Dynamic Application Alignment** modal page, select *AWS Health* in the ***Dynamic Applications*** field.
6. In the ***Credentials*** field, select the *credential you created for your AWS service*.
7. Click the **[Save]** button to align the Dynamic Application.
8. Repeat steps 4 - 7 for the "AWS Account Discovery" Dynamic Application.

Viewing AWS Component Devices

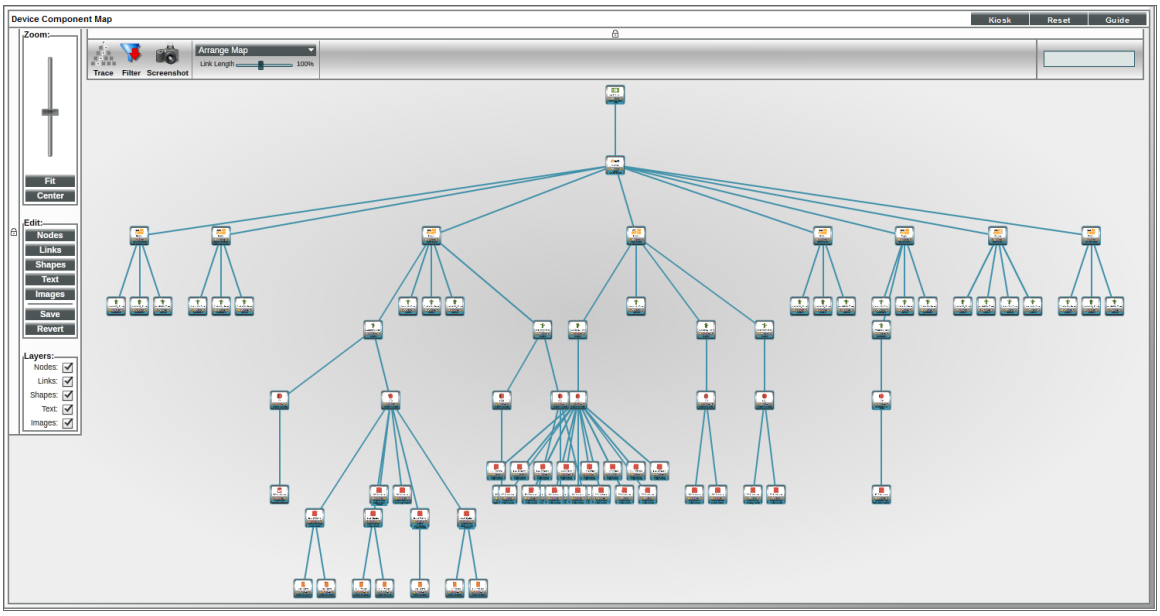
When the ScienceLogic platform performs collection for the AWS virtual device, the platform will create component devices that represent each element in your AWS infrastructure and align other Dynamic Applications to those component devices. Some of the Dynamic Applications aligned to the component devices will also be used to create additional component devices. All component devices appear in the **Device Manager** page just like devices discovered using the ScienceLogic discovery process.

In addition to the **Device Manager** page, you can view the AWS service and all associated component devices in the following places in the user interface:

- The **Device Components** page (Registry > Devices > Device Components) displays a list of all root devices and component devices discovered by the ScienceLogic platform in an indented view, so you can easily view the hierarchy and relationships between child devices, parent devices, and root devices. To view the component devices associated with an AWS service, find the AWS virtual device and click its plus icon (+):



- The **Component Map** page (Views > Device Maps > Components) allows you to view devices by root node and view the relationships between root nodes, parent components, and child components in a map. This makes it easy to visualize and manage root nodes and their components. The ScienceLogic platform automatically updates the **Component Map** as new component devices are discovered. The platform also updates each map with the latest status and event information. To view the map for an AWS service, go to Views > Device Maps > Components, and select the map from the list in the left NavBar. To learn more about the **Component Map** page, see the ***Views*** manual.



Relationships Between Component Devices

In addition to the parent/child relationships between component devices, relationships are automatically created by the Dynamic Applications in the *Amazon Web Services* PowerPack between the following component devices:

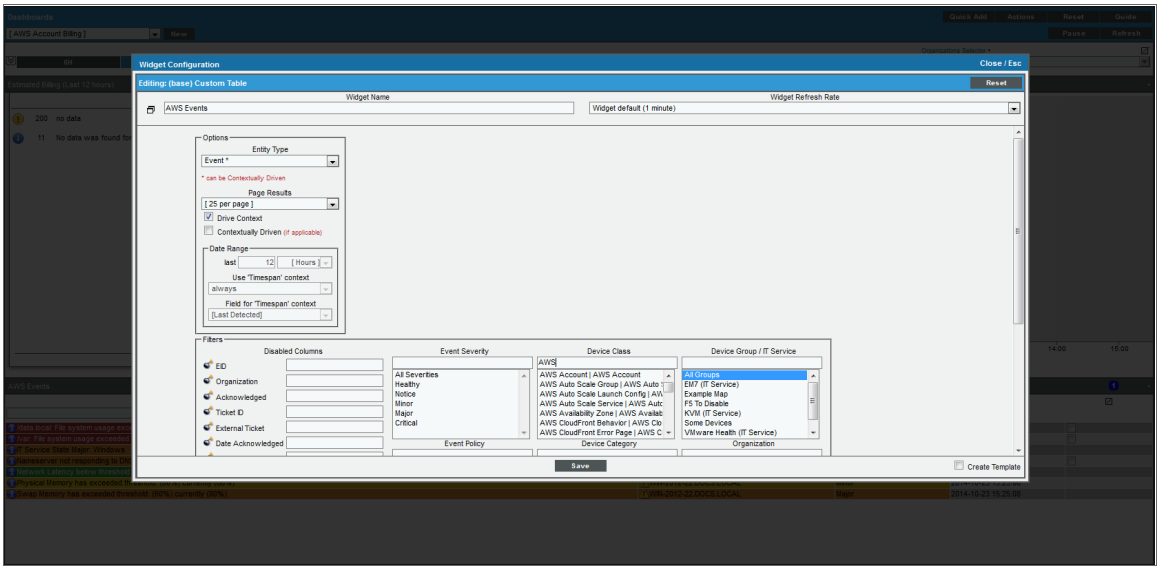
- AWS Application ELBs and AWS Availability Zones
- AWS Application ELBs and AWS Security Groups
- AWS Application ELBs and AWS VPC Instances
- AWS Auto Scale Groups and AWS Auto Scale Launch Configurations
- AWS EC2 Instances and AWS Auto Scale Groups
- AWS EC2 Instances and AWS EBS Volumes
- AWS EC2 Instances and AWS Elastic Beanstalk Applications
- AWS EC2 Instances and AWS ELB Instances
- AWS EC2 Instances and AWS EMR Instances
- AWS EC2 Instances and AWS OpsWorks Instances
- AWS EC2 Instances and AWS Security Groups
- AWS EC2 Instances and AWS VPC Instances

- AWS EC2 Instances and AWS VPC Subnets
- AWS EC2 Instances and the Cisco Cloud Center application
- AWS VPC Instances and other intra-account AWS VPC Instances
- AWS Route Tables and AWS Subnets
- AWS Route Tables and AWS Virtual Private Gateways
- AWS S3 Instances and AWS CloudTrail Instances
- AWS Security Groups and AWS VPC Instances
- AWS SNS Instances and AWS CloudTrail Instances
- AWS SNS Instances and AWS Glacier Instances

Configuring the AWS Dashboards

The AWS Account Billing and AWS Health Status dashboards must have their (base) Custom Table widgets manually configured to filter only AWS service-specific events. To do this:

1. Go to Dashboards > AWS Account Billing.
2. Click the down-arrow in the upper-right of the AWS Events widget, and then select *Configure* from the **Options** menu. The **Widget Configuration** modal page appears.
3. In the ***Device Class*** filter, enter "AWS" to show only AWS device classes:



4. Control-click on the following items in the ***Device Class*** field:
   - AWS DDB Service
   - AWS EC2 Service
   - AWS ELB Service

- AWS EMR Service
- AWS RDS Service
- AWS SNS Service
- AWS SQS Service
- AWS Storage Gateway Service

5. Click the **[Save]** button.
6. Repeat steps 1 - 5 for the AWS Health Status dashboard.

Amazon API Throttling Events

By default, the ScienceLogic platform will use the Collector Group aligned with the root AWS virtual device to retrieve data from AWS devices and services.

If the platform must collect data from a large set of AWS devices and services, the platform might generate Notify events with a message ending in the text "Retry #1- 6". The platform generates these events when the Amazon API throttles collection in response to a large number of requests to the API. Even though the platform is generating Notify "Retry" events, the platform is still collecting data from AWS. This issue commonly occurs when a specific Amazon data center edge is close to capacity.

If the ScienceLogic platform generates the Minor event "Collection missed on <device> on 5 minute poll", this indicates that the platform was unable to retrieve that specific datum from the Amazon cloud during the most recent five-minute polling cycle. If you frequently see the "Collection missed" event across your cloud, you must contact Amazon support to whitelist the IP address of your Data Collector. This will prevent further throttling from occurring.

Configuring AWS to Report Billing Metrics

To use the "AWS Billing Performance Percent" Dynamic Application, your AWS account must meet the following requirements:

- The user account you supplied in the AWS credential must have permission to view the us-east-1 zone.
- Your AWS account must be configured to export billing metrics to the CloudWatch service.

If your AWS account is not configured to export billing metrics to the CloudWatch service, the AWS Billing Performance Percent Dynamic Application will generate the following event:

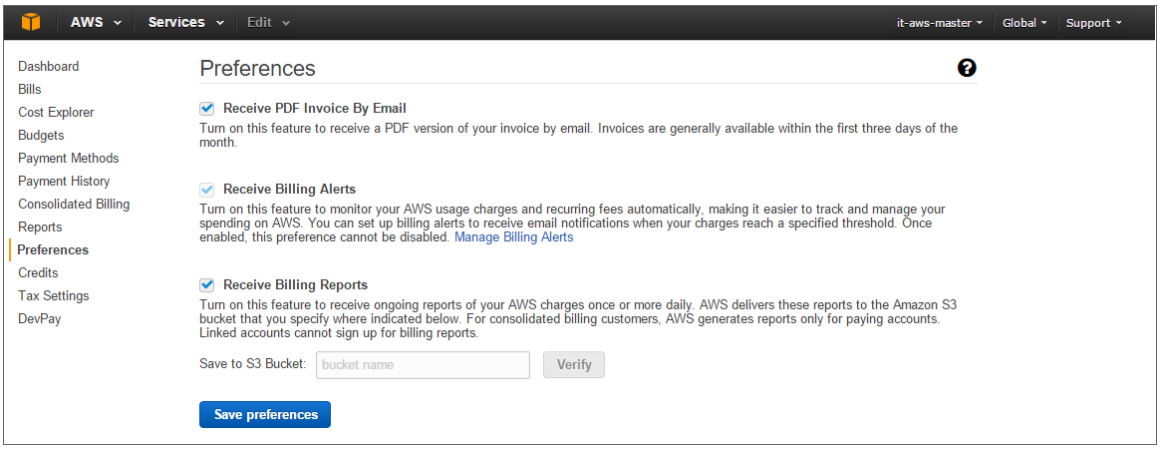
```
No billing metrics can be retrieved. Your AWS account is not configured to export
billing metrics into CloudWatch.
```

To configure your AWS account to export billing metrics to the CloudWatch service, perform the following steps:

1. Open a browser session and go to aws.amazon.com.

2. Click **[My Account]** and then select *Billing & Cost Management*. If you are not currently logged in to the AWS site, you will be prompted to log in:

3. After logging in, the **Billing & Cost Management Dashboard** page appears. In the left navigation bar, click **[Preferences]**. The **Preferences** page appears:



4. Select the ***Receive Billing Alerts*** checkbox.

> **CAUTION:** If you enable this option, this option cannot be disabled.

5. Click the **[Save Preferences]** button.

Enabling Custom Metrics Collection

AWS enables users to publish their own custom metrics to CloudWatch using the AWS command-line interface (CLI) or an application programming interface (API). The *Amazon Web Services* PowerPack includes Dynamic Applications that collect data for custom AWS metrics (which are not in the "AWS" cloud namespace). However, these Dynamic Applications are disabled by default and must be enabled for use.

> **NOTE:** For more information about publishing custom metrics in AWS, see http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/mon-scripts.html.

To enable these Dynamic Applications:

1. Go to the **Dynamic Applications Manager** page (System > Manage > Applications).
2. Click the wrench icon () for the "AWS Custom Metrics" Dynamic Application. The **Dynamic Applications Properties Editor** page appears.
3. In the ***Operational State*** field, select *Enabled*.
4. Click the **[Save]** button.
5. Repeat steps 1 - 4 for the "AWS Custom Metrics Cache" Dynamic Application.

Chapter 3

Configuring Inbound CloudWatch Alarms

Overview

In addition to the ScienceLogic platform collecting metrics for AWS instances, you can configure CloudWatch to send alarm information to the platform via email. The platform will generate an event for each alarm. This chapter describes how to configure CloudWatch and the platform to generate events based on CloudWatch alarms.

The *Amazon Web Services* PowerPack includes three pre-defined event policies for CloudWatch alarms:

- Emails indicating an alarm state will generate a Major-severity event using the "AWS: EmailAlarmAlarm" event policy.
- Emails indicating an insufficient data state will generate a Notice-severity event using the AWS: "EmailAlarmNoInfo" event policy.
- Emails indicating an OK state will generate a Healthy-severity event using the "AWS: EmailAlarmOK" event policy.

These events are aligned to devices in the following way:

- If the CloudWatch alarm is generated for a specific AWS instance, the event in the ScienceLogic platform will be aligned to the component device for that instance.
- If an alarm is not aligned to a specific instance, the event in the ScienceLogic platform will be aligned to the component device for the AWS account. You can optionally specify a different device with which these events will be aligned.

NOTE: Because the AWS services make new data points available at varying time intervals, there might be a difference in the data points collected by the ScienceLogic platform when compared to data presented in CloudWatch at a given time. The difference between the ScienceLogic platform and CloudWatch is typically less than 1%.

Prerequisites

Before you perform the configuration steps in this chapter, you must:

- Configure the platform to receive inbound email. For instructions on how to configure inbound email, see Chapter 2 in the ***Inbound Email*** manual.
- Configure an email alias to which AWS will send email. The recipients for this alias must include:
    - The Events-from-Email address for the ScienceLogic platform. This email address is in the following format:

      ```
      notify@domain-name-of-ScieceLogic-platform
      ```

      Where "domain-name-of-ScienceLogic-platform" is one of the fully qualified domain names of the Database Server or All-In-One Appliance, i.e., one of the domain names you entered in the ***Authorized Email Domains*** field in the **Email Settings** page.

    - An email account to which you have access. This account will be used during the configuration steps to confirm with Amazon that you want to receive emails. This email address can be removed from the alias after the configuration is complete.

Configuring CloudWatch to Send Alarms for a Metric

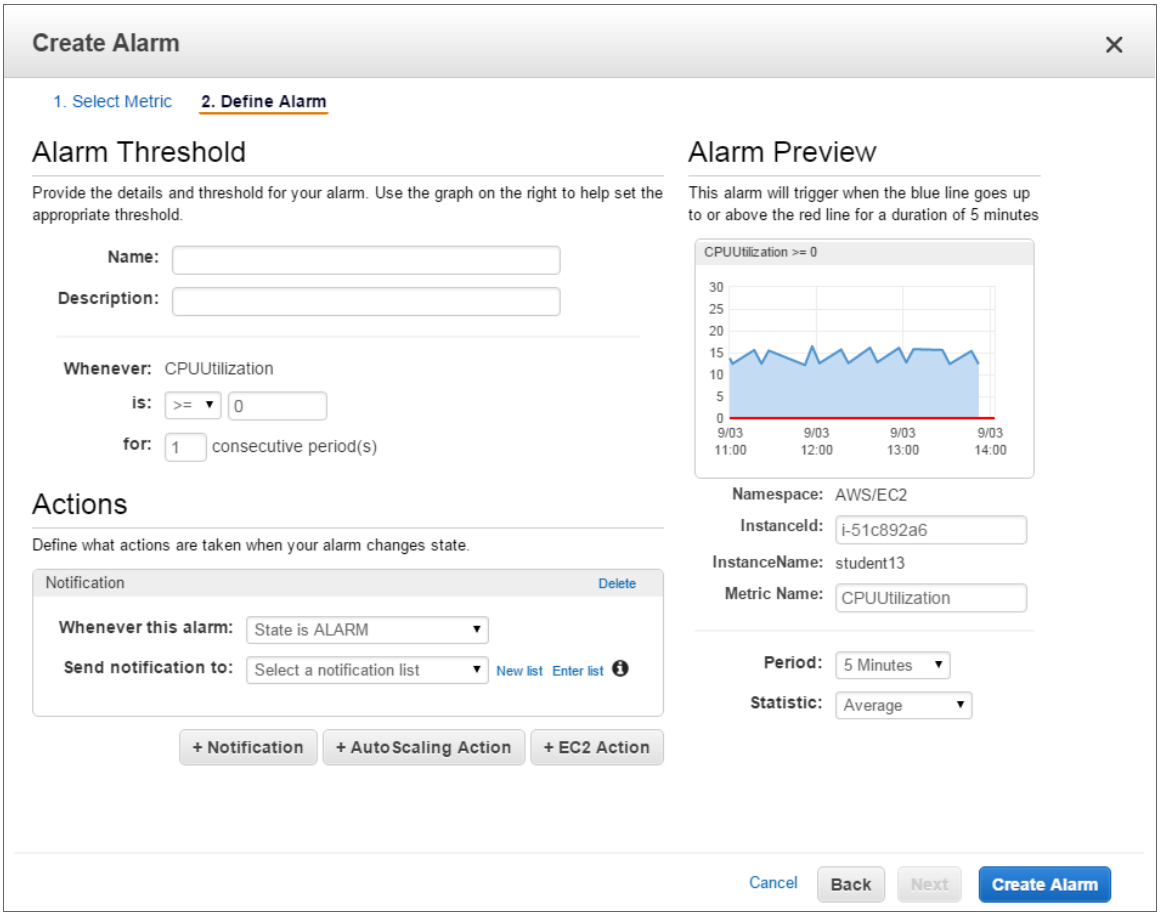
To configure CloudWatch to send alarms to the ScienceLogic platform for a metric, perform the following steps:

1. Open a browser session and go to aws.amazon.com.

2. Click **[My Account]** and then select *AWS Management Console*. If you are not currently logged in to the AWS site, you will be prompted to log in:

3. In the **AWS Management Console**, under the **Management Tools** heading, click **[CloudWatch]**.
4. Click the **[Browse Metrics]** button.
5. Select the metric for which you want CloudWatch to send alarms.
6. Select the instances for which you want CloudWatch to send alarms for this metric.

7. Click the **[Create Alarm]** button. The **Create Alarm** page is displayed:



8. Specify a Name and Description for the alarm.
9. If you have previously configured an alarm for the ScienceLogic platform, select the notification list for the platform in the ***Send notification to*** field. Otherwise, select the **[New list]** link to the right of the ***Send notification to*** field and supply values in the following fields:

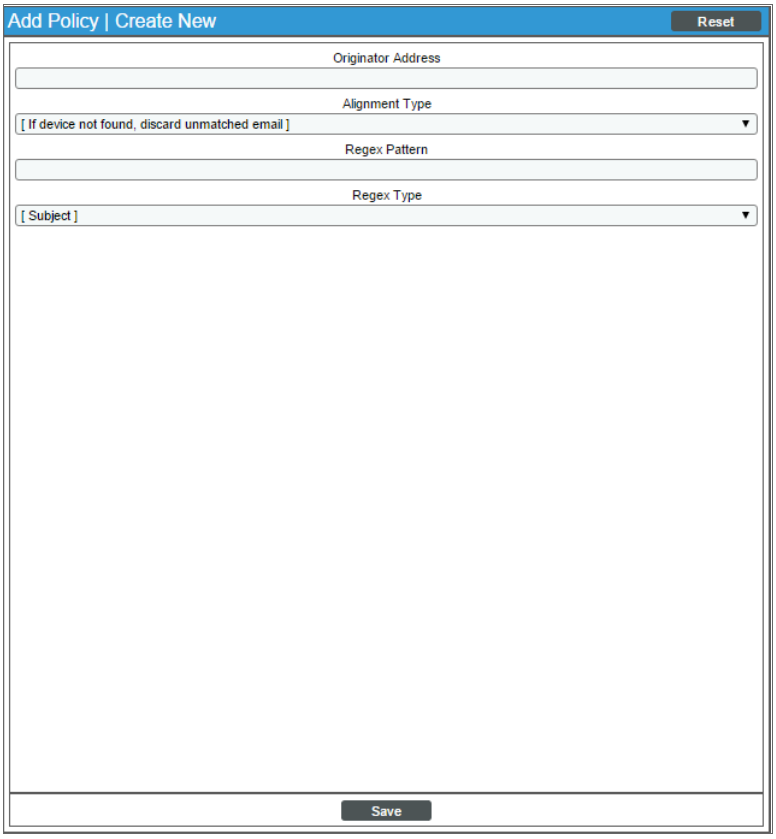
    - ***Send notification to***. Enter a name for the new notification list. If you add additional alarms, you can select the name you enter in this field instead of re-entering the email address.
    - ***Email list***. Enter the email alias you configured for the ScienceLogic platform email address.

10. Supply values in the other fields in this page as desired.
11. Click the **[Create Alarm]** button.
12. Log in to the email account you configured to receive email from the email alias.
13. Open the confirmation email from Amazon and click the **[Confirm subscription]** link.

Configuring the platform to Receive CloudWatch Alarms

For each AWS account for which you want the platform to receive CloudWatch alarms, perform the following steps:

1. Go to the **Emailer Redirection** page (Registry > Events > Inbound Email).
2. Click the **[Create]** button. The **Add Policy** page is displayed:



3. Supply values in the following fields:
   - ***Originator Address***. Enter "no-reply@sns.amazonaws.com".
   - ***Alignment Type***. Select *If device not found, align unmatched email with default element*.
   - ***Regex Pattern***. Enter "InstanceId =".
   - ***Regex Type***. Select *Body*.
4. Click the binoculars icon ( ) in the ***Default Element*** field. The **Element Alignment** page is displayed.
5. In the **Element Alignment** page, search for the component device for the AWS account.

> **NOTE:** Events for CloudWatch alarms that are not associated with a specific instance will be associated with this device. If you want those events to be associated with a different device, search for and select that device.

6. Click the name field for the component device for the AWS account. The **Element Alignment** page will close and the component device will be displayed in the ***Default Element*** field.
7. Click the **[Save]** button.

Chapter 4

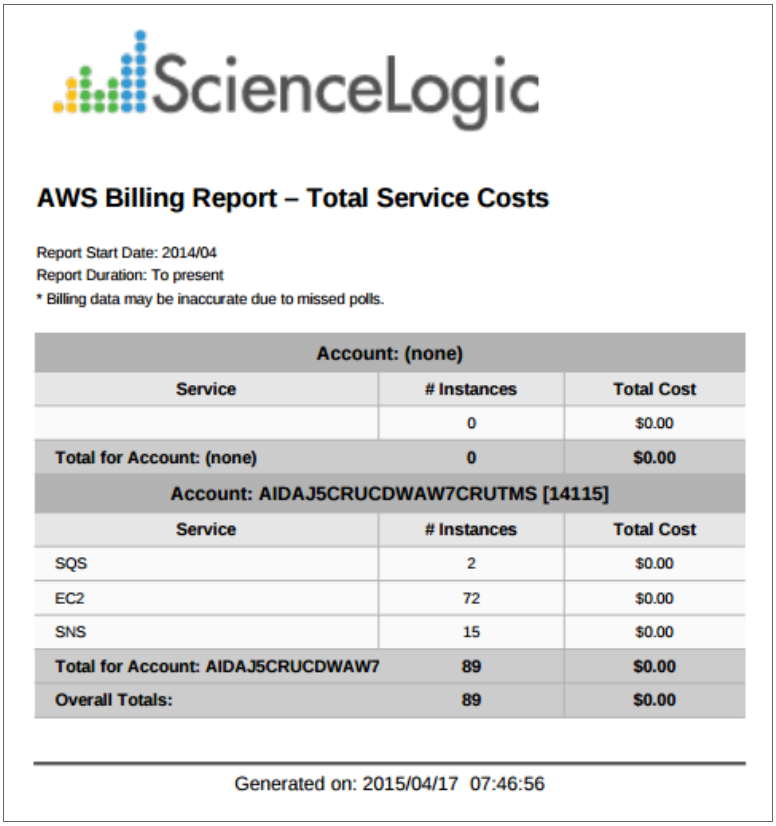
AWS Reports

Overview

This chapter describes the reports that are included in the *Amazon Web Services* PowerPack.

AWS Billing Report

This report displays service costs for Amazon Web Services. The report includes Total, Monthly, Quarterly, and Annual costs.



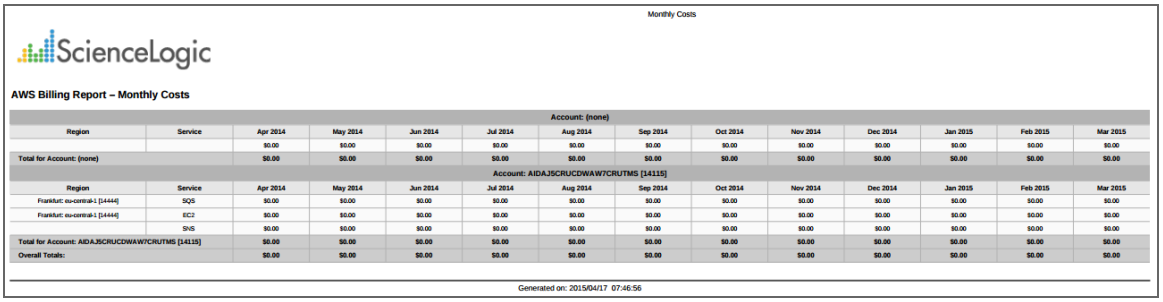
ScienceLogic

AWS Billing Report – Total Service Costs

Report Start Date: 2014/04
Report Duration: To present
* Billing data may be inaccurate due to missed polls.

Account: (none)		
Service	**# Instances**	**Total Cost**
	0	$0.00
Total for Account: (none)	**0**	**$0.00**
Account: AIDAJ5CRUCDWAW7CRUTMS [14115]		
Service	**# Instances**	**Total Cost**
SQS	2	$0.00
EC2	72	$0.00
SNS	15	$0.00
Total for Account: AIDAJ5CRUCDWAW7	**89**	**$0.00**
Overall Totals:	**89**	**$0.00**

Generated on: 2015/04/17 07:46:56



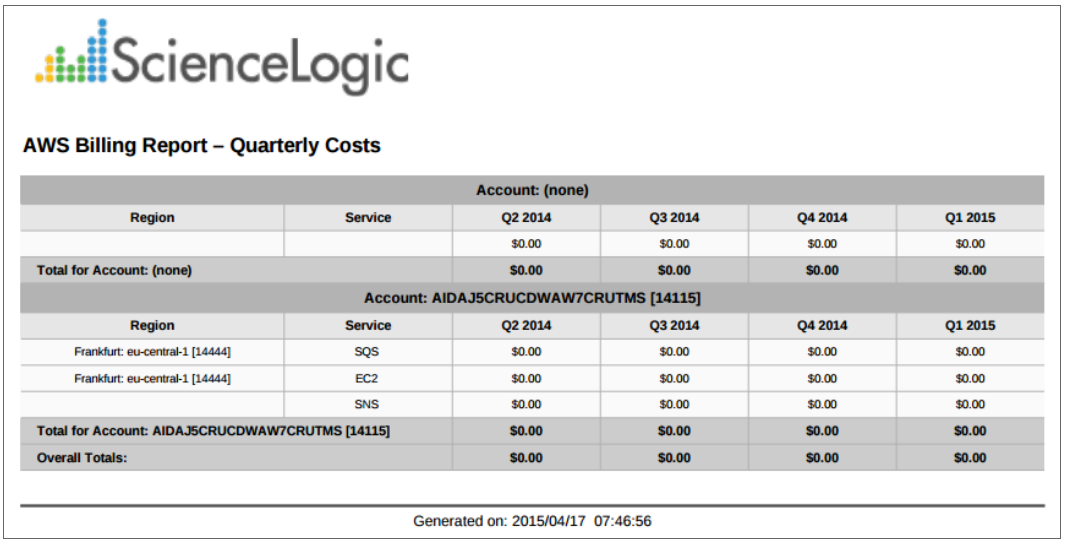
Monthly Costs

ScienceLogic

AWS Billing Report – Monthly Costs

Account: (none)													
Region	Service	Apr 2014	May 2014	Jun 2014	Jul 2014	Aug 2014	Sep 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015	Mar 2015
		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total for Account: (none)		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Account: AIDAJ5CRUCDWAW7CRUTMS [14115]													
Region	Service	Apr 2014	May 2014	Jun 2014	Jul 2014	Aug 2014	Sep 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015	Mar 2015
Frankfurt: eu-central-1 [14444]	SQS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Frankfurt: eu-central-1 [14444]	EC2	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	SNS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total for Account: AIDAJ5CRUCDWAW7CRUTMS [14115]		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Overall Totals:		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

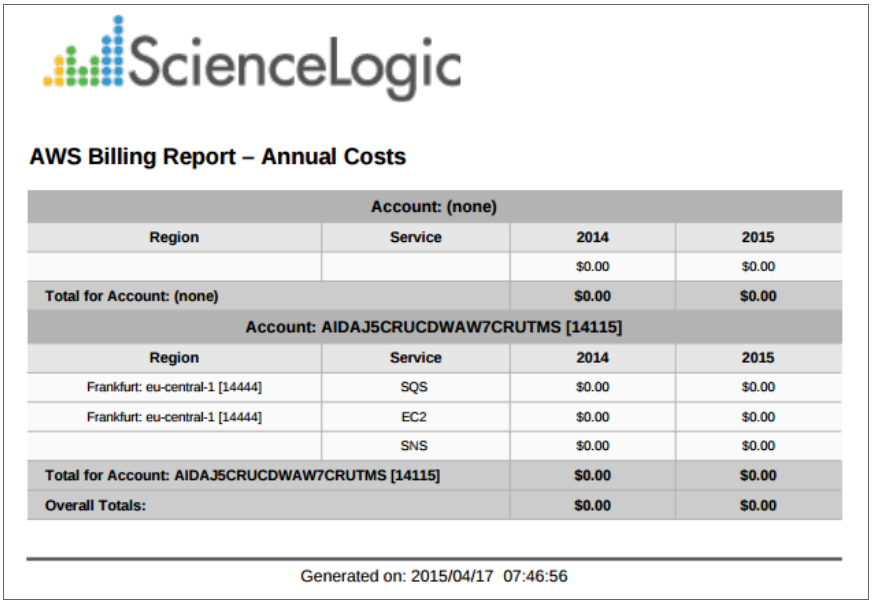
Generated on: 2015/04/17 07:46:56



AWS Billing Report – Quarterly Costs

Account: (none)					
Region	**Service**	**Q2 2014**	**Q3 2014**	**Q4 2014**	**Q1 2015**
		$0.00	$0.00	$0.00	$0.00
Total for Account: (none)		**$0.00**	**$0.00**	**$0.00**	**$0.00**
Account: AIDAJ5CRUCDWAW7CRUTMS [14115]					
Region	**Service**	**Q2 2014**	**Q3 2014**	**Q4 2014**	**Q1 2015**
Frankfurt: eu-central-1 [14444]	SQS	$0.00	$0.00	$0.00	$0.00
Frankfurt: eu-central-1 [14444]	EC2	$0.00	$0.00	$0.00	$0.00
	SNS	$0.00	$0.00	$0.00	$0.00
Total for Account: AIDAJ5CRUCDWAW7CRUTMS [14115]		**$0.00**	**$0.00**	**$0.00**	**$0.00**
Overall Totals:		**$0.00**	**$0.00**	**$0.00**	**$0.00**

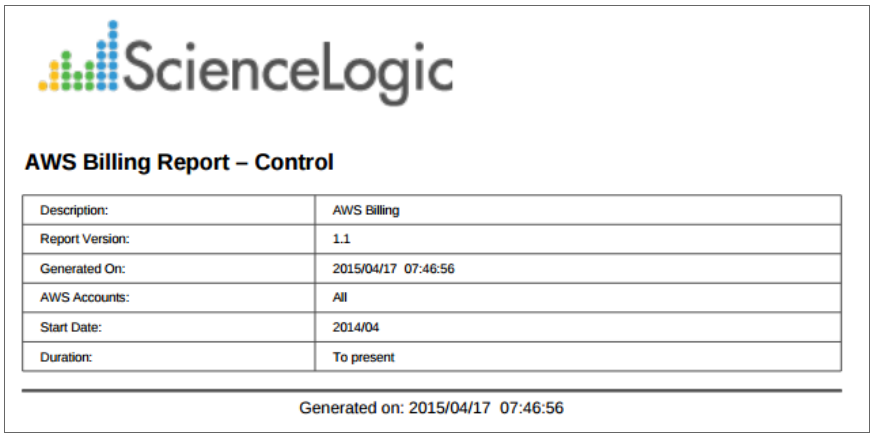
Generated on: 2015/04/17 07:46:56



AWS Billing Report – Annual Costs

Account: (none)			
Region	**Service**	**2014**	**2015**
		$0.00	$0.00
Total for Account: (none)		**$0.00**	**$0.00**
Account: AIDAJ5CRUCDWAW7CRUTMS [14115]			
Region	**Service**	**2014**	**2015**
Frankfurt: eu-central-1 [14444]	SQS	$0.00	$0.00
Frankfurt: eu-central-1 [14444]	EC2	$0.00	$0.00
	SNS	$0.00	$0.00
Total for Account: AIDAJ5CRUCDWAW7CRUTMS [14115]		**$0.00**	**$0.00**
Overall Totals:		**$0.00**	**$0.00**

Generated on: 2015/04/17 07:46:56



AWS Billing Report – Control

Description:	AWS Billing
Report Version:	1.1
Generated On:	2015/04/17 07:46:56
AWS Accounts:	All
Start Date:	2014/04
Duration:	To present

Generated on: 2015/04/17 07:46:56

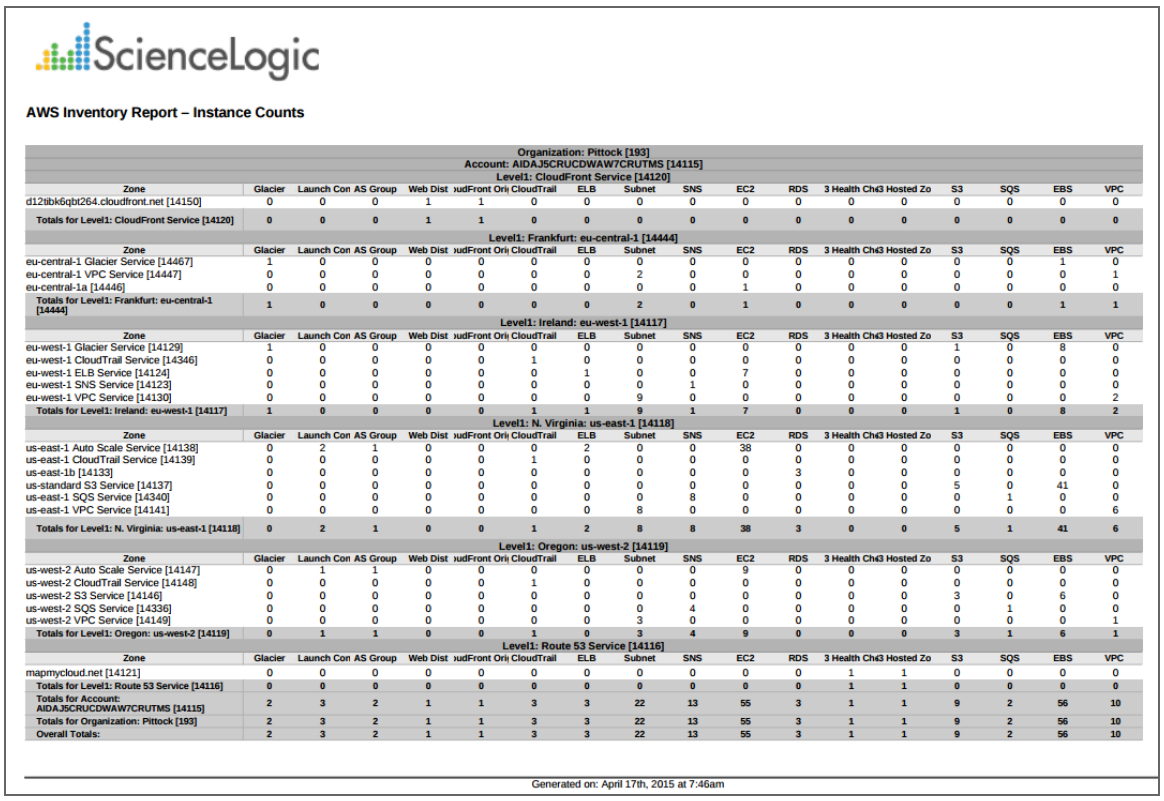
The following input options are available when generating the report:

- ***AWS Accounts***. Select the AWS Account(s) for which you want to generate the report. The *All Accounts* checkbox is selected by default. De-selecting this checkbox allows you to select one or more specific accounts for which to generate a report.
- ***Report Span***. Select a span from one to 36 months for the report, or specify a specific starting date for the report.

This description covers the latest version of this report as shipped by ScienceLogic. This report might have been modified on your ScienceLogic system.

AWS Inventory Report

This report displays an inventory of AWS instance counts. The report includes the number of each kind of instance in every zone associated with the chosen accounts. It also includes a count of each EC2 instance size in each zone.

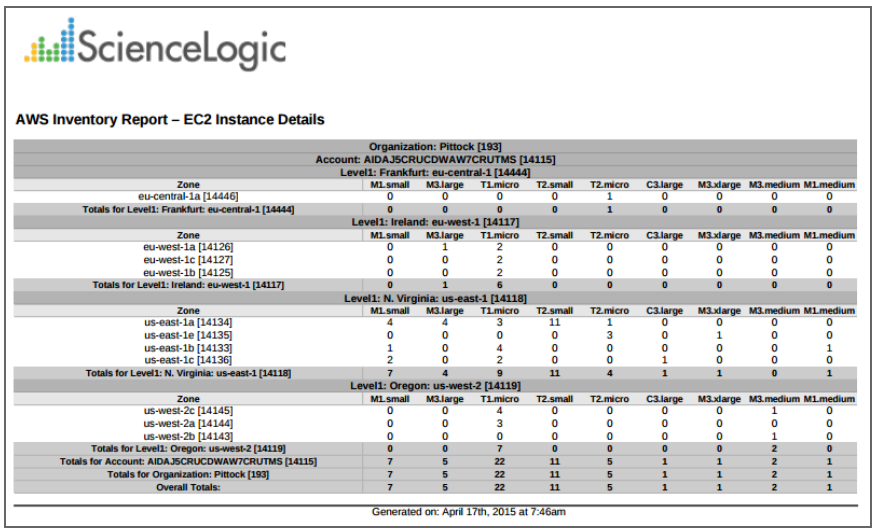


ScienceLogic

AWS Inventory Report – Instance Counts

Zone	Glacier	Launch Con	AS Group	Web Dist	udFront Ori	CloudTrail	ELB	Subnet	SNS	EC2	RDS	3 Health Ch	3 Hosted Zo	S3	SQS	EBS	VPC
Organization: Pittock [193]																	
Account: AIDAJ5CRUCDWAW7CRUTMS [14115]																	
Level1: CloudFront Service [14120]																	
d12tibk6qbt264.cloudfront.net [14150]	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Totals for Level1: CloudFront Service [14120]	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Level1: Frankfurt: eu-central-1 [14444]																	
Zone	**Glacier**	**Launch Con**	**AS Group**	**Web Dist**	**udFront Ori**	**CloudTrail**	**ELB**	**Subnet**	**SNS**	**EC2**	**RDS**	**3 Health Ch**	**3 Hosted Zo**	**S3**	**SQS**	**EBS**	**VPC**
eu-central-1 Glacier Service [14467]	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
eu-central-1 VPC Service [14447]	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1
eu-central-1a [14446]	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Totals for Level1: Frankfurt: eu-central-1 [14444]	1	0	0	0	0	0	0	2	0	1	0	0	0	0	0	1	1
Level1: Ireland: eu-west-1 [14117]																	
Zone	**Glacier**	**Launch Con**	**AS Group**	**Web Dist**	**udFront Ori**	**CloudTrail**	**ELB**	**Subnet**	**SNS**	**EC2**	**RDS**	**3 Health Ch**	**3 Hosted Zo**	**S3**	**SQS**	**EBS**	**VPC**
eu-west-1 Glacier Service [14129]	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	8	0
eu-west-1 CloudTrail Service [14346]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
eu-west-1 ELB Service [14124]	0	0	0	0	0	0	1	0	0	7	0	0	0	0	0	0	0
eu-west-1 SNS Service [14123]	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
eu-west-1 VPC Service [14130]	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	2
Totals for Level1: Ireland: eu-west-1 [14117]	1	0	0	0	0	1	1	9	1	7	0	0	0	1	0	8	2
Level1: N. Virginia: us-east-1 [14118]																	
Zone	**Glacier**	**Launch Con**	**AS Group**	**Web Dist**	**udFront Ori**	**CloudTrail**	**ELB**	**Subnet**	**SNS**	**EC2**	**RDS**	**3 Health Ch**	**3 Hosted Zo**	**S3**	**SQS**	**EBS**	**VPC**
us-east-1 Auto Scale Service [14138]	0	2	1	0	0	0	2	0	0	38	0	0	0	0	0	0	0
us-east-1 CloudTrail Service [14139]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
us-east-1b [14133]	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
us-standard S3 Service [14137]	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	41	0
us-east-1 SQS Service [14340]	0	0	0	0	0	0	0	0	8	0	0	0	0	0	1	0	0
us-east-1 VPC Service [14141]	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	6
Totals for Level1: N. Virginia: us-east-1 [14118]	0	2	1	0	0	1	2	8	8	38	3	0	0	5	1	41	6
Level1: Oregon: us-west-2 [14119]																	
Zone	**Glacier**	**Launch Con**	**AS Group**	**Web Dist**	**udFront Ori**	**CloudTrail**	**ELB**	**Subnet**	**SNS**	**EC2**	**RDS**	**3 Health Ch**	**3 Hosted Zo**	**S3**	**SQS**	**EBS**	**VPC**
us-west-2 Auto Scale Service [14147]	0	1	1	0	0	0	0	0	0	9	0	0	0	0	0	0	0
us-west-2 CloudTrail Service [14148]	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
us-west-2 S3 Service [14146]	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	6	0
us-west-2 SQS Service [14336]	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0
us-west-2 VPC Service [14149]	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1
Totals for Level1: Oregon: us-west-2 [14119]	0	1	1	0	0	1	0	3	4	9	0	0	0	3	1	6	1
Level1: Route 53 Service [14116]																	
Zone	**Glacier**	**Launch Con**	**AS Group**	**Web Dist**	**udFront Ori**	**CloudTrail**	**ELB**	**Subnet**	**SNS**	**EC2**	**RDS**	**3 Health Ch**	**3 Hosted Zo**	**S3**	**SQS**	**EBS**	**VPC**
mapmycloud.net [14121]	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Totals for Level1: Route 53 Service [14116]	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Totals for Account: AIDAJ5CRUCDWAW7CRUTMS [14115]	2	3	2	1	1	3	3	22	13	55	3	1	1	9	2	56	10
Totals for Organization: Pittock [193]	2	3	2	1	1	3	3	22	13	55	3	1	1	9	2	56	10
Overall Totals:	2	3	2	1	1	3	3	22	13	55	3	1	1	9	2	56	10

Generated on: April 17th, 2015 at 7:46am



ScienceLogic

AWS Inventory Report – EC2 Instance Details

Zone	M1.small	M3.large	T1.micro	T2.small	T2.micro	C3.large	M3.xlarge	M3.medium	M1.medium
Organization: Pittock [193]									
Account: AIDAJ5CRUCDWAW7CRUTMS [14115]									
Level1: Frankfurt: eu-central-1 [14444]									
eu-central-1a [14446]	0	0	0	0	1	0	0	0	0
Totals for Level1: Frankfurt: eu-central-1 [14444]	0	0	0	0	1	0	0	0	0
Level1: Ireland: eu-west-1 [14117]									
Zone	**M1.small**	**M3.large**	**T1.micro**	**T2.small**	**T2.micro**	**C3.large**	**M3.xlarge**	**M3.medium**	**M1.medium**
eu-west-1a [14126]	0	1	2	0	0	0	0	0	0
eu-west-1c [14127]	0	0	2	0	0	0	0	0	0
eu-west-1b [14125]	0	0	2	0	0	0	0	0	0
Totals for Level1: Ireland: eu-west-1 [14117]	0	1	6	0	0	0	0	0	0
Level1: N. Virginia: us-east-1 [14118]									
Zone	**M1.small**	**M3.large**	**T1.micro**	**T2.small**	**T2.micro**	**C3.large**	**M3.xlarge**	**M3.medium**	**M1.medium**
us-east-1a [14134]	4	4	3	11	1	0	0	0	0
us-east-1e [14135]	0	0	0	0	3	0	1	0	0
us-east-1b [14133]	1	0	4	0	0	0	0	0	1
us-east-1c [14136]	2	0	2	0	0	1	0	0	0
Totals for Level1: N. Virginia: us-east-1 [14118]	7	4	9	11	4	1	1	0	1
Level1: Oregon: us-west-2 [14119]									
Zone	**M1.small**	**M3.large**	**T1.micro**	**T2.small**	**T2.micro**	**C3.large**	**M3.xlarge**	**M3.medium**	**M1.medium**
us-west-2c [14145]	0	0	4	0	0	0	0	1	0
us-west-2a [14144]	0	0	3	0	0	0	0	0	0
us-west-2b [14143]	0	0	0	0	0	0	0	1	0
Totals for Level1: Oregon: us-west-2 [14119]	0	0	7	0	0	0	0	2	0
Totals for Account: AIDAJ5CRUCDWAW7CRUTMS [14115]	7	5	22	11	5	1	1	2	1
Totals for Organization: Pittock [193]	7	5	22	11	5	1	1	2	1
Overall Totals:	7	5	22	11	5	1	1	2	1

Generated on: April 17th, 2015 at 7:46am

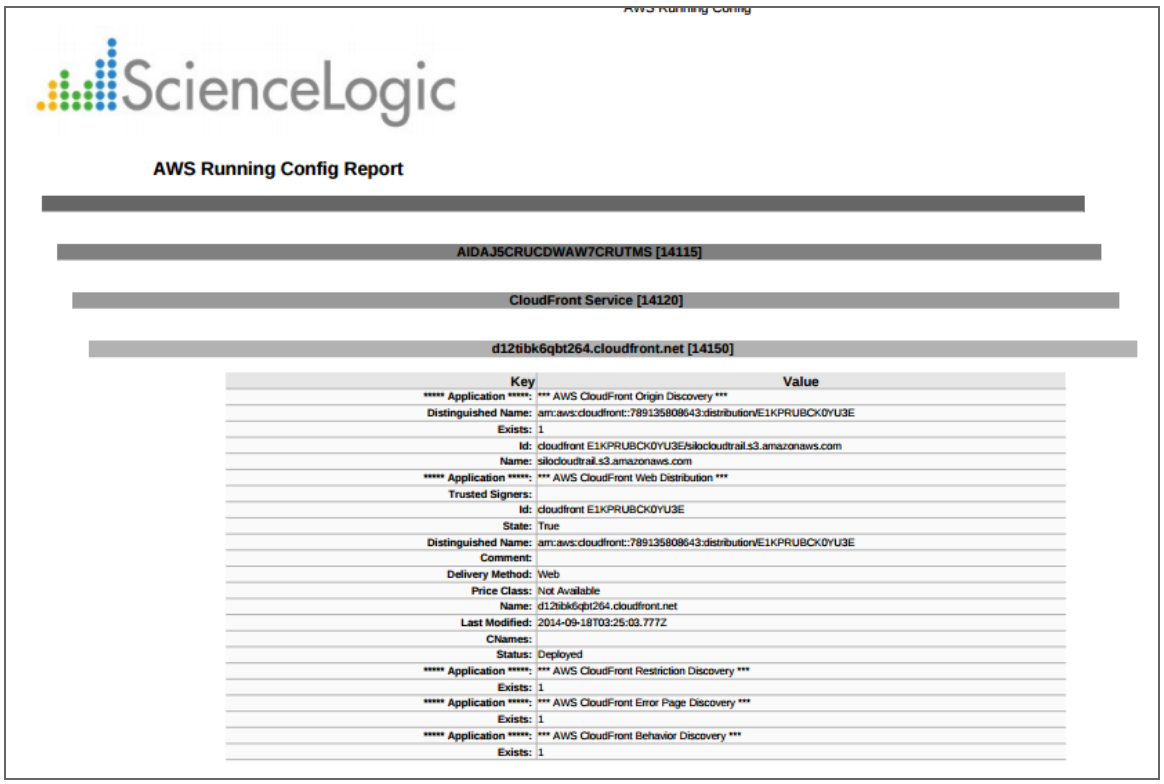
The following input options are available when generating the report:

- ***Organizations***. Select the organization for which you want to generate the report. The *All Organizations* checkbox is selected by default. De-selecting this checkbox allows you to select one or more specific organizations for which to generate a report.
- ***AWS Accounts***. Select the AWS Account(s) for which you want to generate the report. The *All Accounts* checkbox is selected by default. De-selecting this checkbox allows you to select one or more specific accounts for which to generate a report.
- ***Filter on EC2 Instance Config Data***. Select the EC2 instances that will be included in the report based on the configuration data reported for each EC2 instance:
    - Choose up to four configuration parameters for EC2 instances.
    - For each selected configuration parameter, enter a value to match against and select how that value should be matched.
    - In the ***Comparison Operator*** field, select whether an EC2 instance must match all configuration parameters (*and*) or only one configuration parameter (*or*) to be included on the report.
- ***Report Options***. Select the *Include Terminated Instances* checkbox to include all terminated instances.

This description covers the latest version of this report as shipped by ScienceLogic. This report might have been modified on your ScienceLogic system.

AWS Running Config Report

This report displays the running config of all AWS instances for one to all organizations across a number of AWS billing accounts.



AWS Running Config Report

AIDAJ5CRUCDWAW7CRUTMS [14115]

CloudFront Service [14120]

d12tibk6qbt264.cloudfront.net [14150]

Key	Value
***** Application *****:	*** AWS CloudFront Origin Discovery ***
Distinguished Name:	arn:aws:cloudfront::789135808643:distribution/E1KPRUBCK0YU3E
Exists:	1
Id:	cloudfront E1KPRUBCK0YU3E/silocloudtrail.s3.amazonaws.com
Name:	silocloudtrail.s3.amazonaws.com
***** Application *****:	*** AWS CloudFront Web Distribution ***
Trusted Signers:	
Id:	cloudfront E1KPRUBCK0YU3E
State:	True
Distinguished Name:	arn:aws:cloudfront::789135808643:distribution/E1KPRUBCK0YU3E
Comment:	
Delivery Method:	Web
Price Class:	Not Available
Name:	d12tibk6qbt264.cloudfront.net
Last Modified:	2014-09-18T03:25:03.777Z
CNames:	
Status:	Deployed
***** Application *****:	*** AWS CloudFront Restriction Discovery ***
Exists:	1
***** Application *****:	*** AWS CloudFront Error Page Discovery ***
Exists:	1
***** Application *****:	*** AWS CloudFront Behavior Discovery ***
Exists:	1

The following input options are available when generating the report:

- ***Organizations***. Select one, multiple, or all organizations to include in the report.
    - *All Organizations*. This checkbox is selected by default. De-selecting this checkbox allows you to select one or more specific organizations for the report.
    - *Organizations*. If you unchecked the ***All Organizations*** checkbox, select one or more organizations to include in the report.
- ***AWS Accounts***. Select one, multiple, or all AWS Accounts to include in the report.
    - *All Accounts*. This checkbox is selected by default. De-selecting this checkbox allows you to select one or more specific AWS accounts for the report.
    - *Accounts*. If you unchecked the ***All Accounts*** checkbox, select one or more AWS Accounts to include in the report.

- ***Filter on EC2 Instance Config Data***. Select the EC2 instances that will be included on the report based on the configuration data reported for each EC2 instance:
    - Choose up to four configuration parameters for EC2 instances.
    - For each selected configuration parameter, enter a value to match against and select how that value should be matched.
    - In the ***Comparison Operator*** field, select whether an EC2 instance must match all configuration parameters (*and*) or only one configuration parameter (*or*) to be included in the report.
- ***Report Options***. Select the *Include Terminated Instances* checkbox to include all terminated instances.

This description covers the latest version of this report as shipped by ScienceLogic. This report might have been modified on your ScienceLogic system.

Chapter 5

AWS Dashboards

Overview

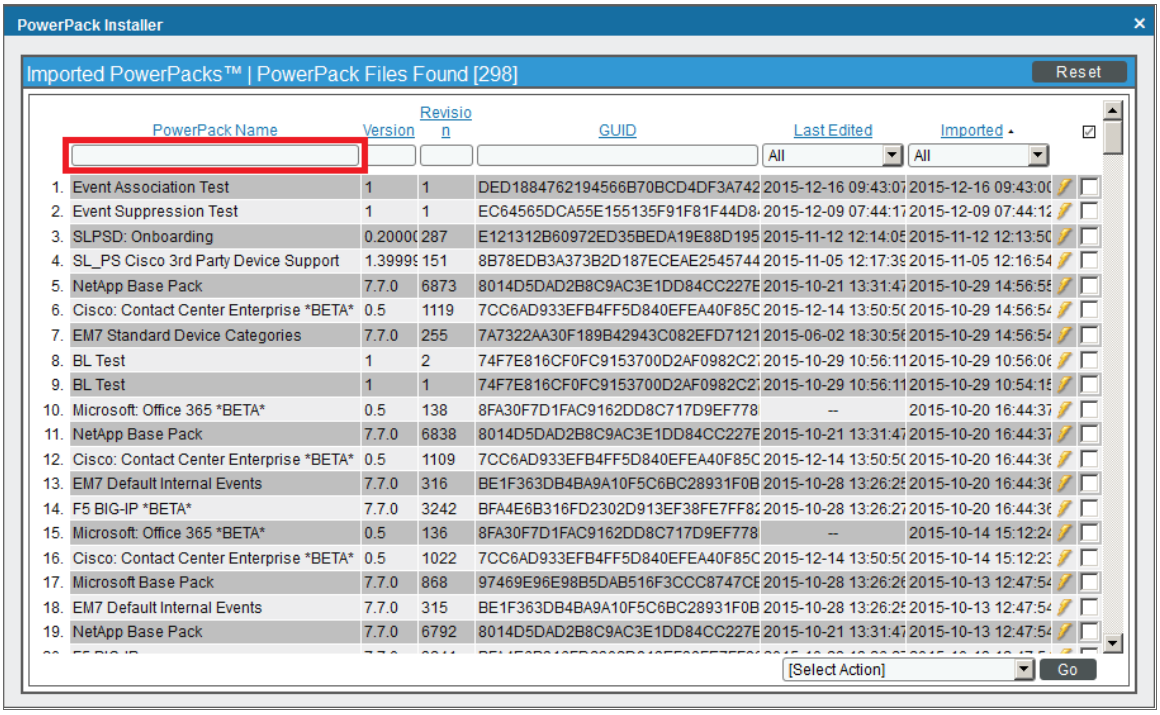
The ScienceLogic platform includes several dashboards for Amazon Web Services in the *Amazon Web Services: Dashboards* PowerPack. This chapter describes how to install these dashboards and also includes a description of each dashboard.

Installing the Amazon Web Services: Dashboards PowerPack

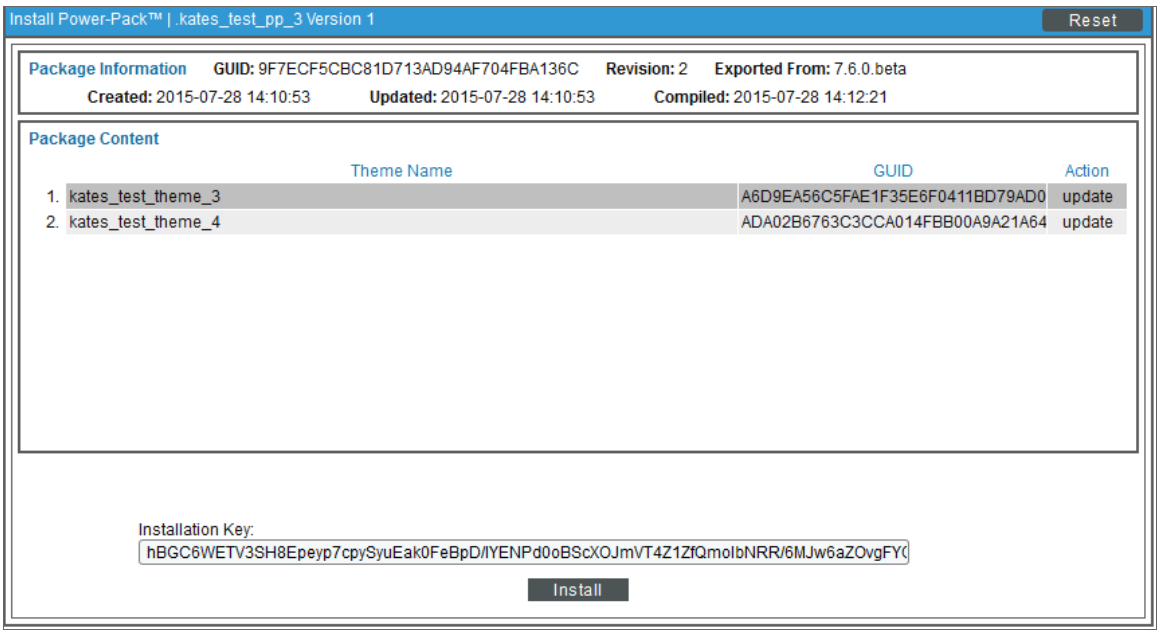
To view the Amazon Web Services dashboards in the ScienceLogic platform, you must first install the *Amazon Web Services: Dashboards* PowerPack. To do so:

1. Go to the **PowerPack Manager** page (System > Manage > PowerPacks).
2. Click the **[Actions]** button, then select *Install PowerPack*. The **Imported PowerPacks** modal page appears.

3. Use the search filter in the ***PowerPack Name*** column heading to locate the PowerPack you want to install. To do so, enter text to match, including special characters, and the **Imported PowerPacks** modal page displays only PowerPacks that have a matching name.



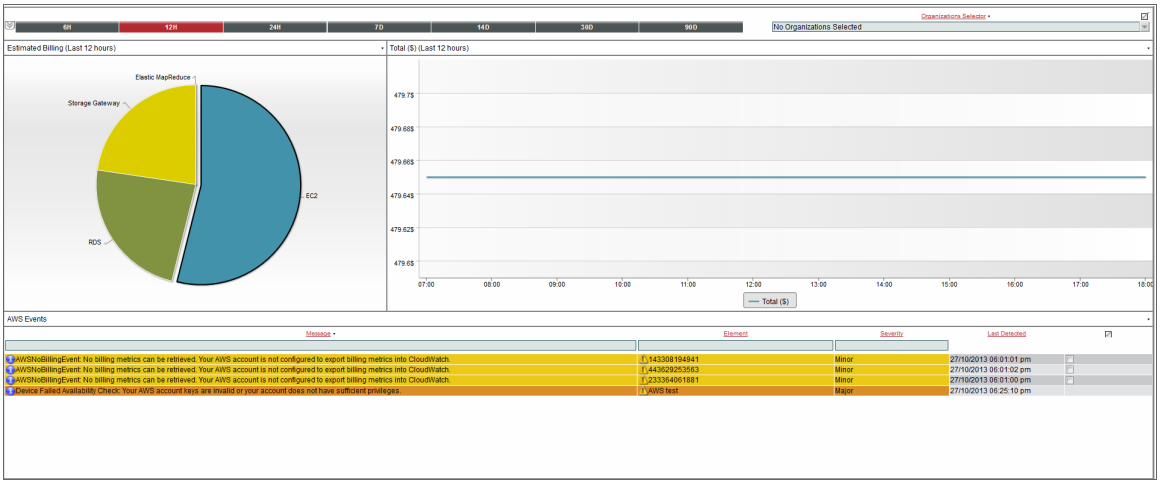
4. Click the lightning-bolt icon ( ) for the PowerPack that you want to install.
5. The **Install PowerPack** modal page appears. To install the PowerPack, click **[Install]**.



6. The PowerPack now appears in the **PowerPack Manager** page. The contents of the PowerPack are automatically installed in your ScienceLogic system.

AWS Account Billing Dashboard

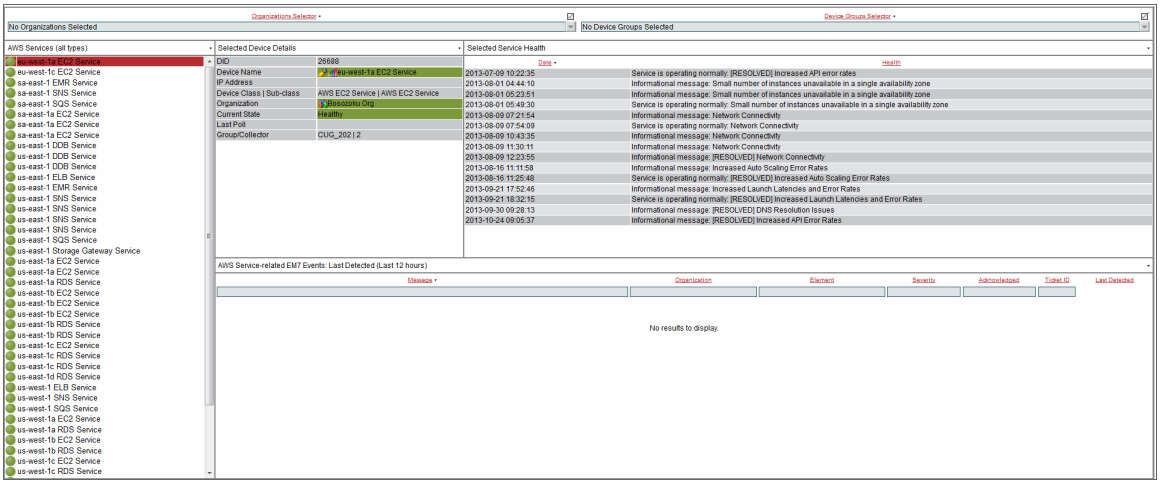
The AWS Account Billing Dashboard displays:



- A pie chart that shows the estimated billing amount for each service over the selected time period.
- A performance graph that shows the estimated billing amount for the selected service, over time. To select a service, click on the pie-chart segment for that service.
- A table that shows the currently active AWS events.
- A time span selector that controls the amount of data shown in the pie chart and the performance graph.
- An organization selector that limits the data in the pie chart and performance graph to include only instances associated with the selected organizations.

AWS Health Status Dashboard

The AWS Health Status Dashboard displays:



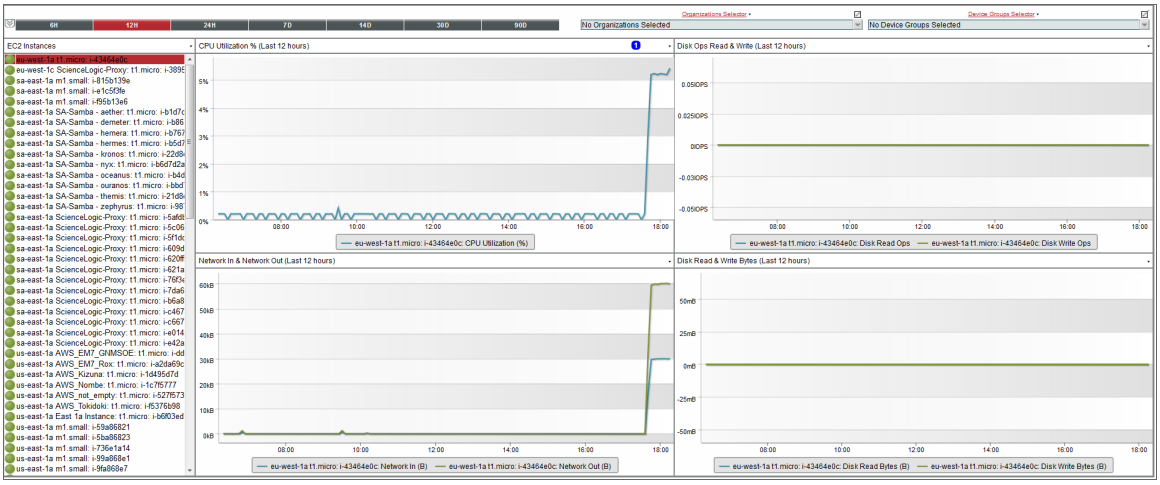
- A traffic light widget that displays a list of AWS services. To populate the other widgets in this dashboard, select a service.
- A tear-sheet widget that displays information and links for the selected service.
- A service health widget, that displays log messages about the health of the service.
- A table that displays currently active events for the service.
- An organization selector and a device group selector that control which services are shown in the traffic light widget.

AWS Service Instance Performance Dashboards

The *Amazon Web Services: Dashboards* PowerPack includes a dashboard for each service type. Each dashboard displays performance metrics for instances of an AWS service. The following dashboards are included:

- AWS DDB Performance
- AWS EBS Performance
- AWS EC2 Performance
- AWS ELB Performance
- AWS EMR Performance
- AWS RDS Performance
- AWS SQS Performance
- AWS Storage Gateway Performance

Each performance dashboard includes:



- A traffic light widget that shows the status of all instances for the service.
- Four performance graphs that show applicable metrics when you select an instance from the traffic light widget.
- A time span selector that controls the amount of data shown in the performance graphs.
- An organization selector and device group selector that control which instances are shown in the traffic light widget.

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800-SCI-LOGIC (1-800-724-5644)

International: +1-703-354-1010